

**Speed Reducer Catalog** 



## **Speed Reducer Overview**

Cotta Speed Reducers are designed for use with the commercial offerings of major Industrial engine manufacturers. The reducers are furnished with bell housings to mount directly to the engine's SAE flywheel housing.

Speed Reducers are available in increasing sizes from nominally 100 HP to 2200 HP and with flywheel housing sizes from SAE 4 to 00. At approximately 2200 HP capacity the gearboxes become physically too large to direct engine mount at which point independent mount gearboxes are offered.

Speed Reducers can be coupled to the engine by a variety of methods including clutches, drive plates, or torsional couplings depending upon the application requirements.

Some of the reducers are suitable for driving side pull loads using belts or chains on the output shaft. Consult with Cotta Engineering before selecting a gearbox for use with a side pull load.

This catalog is organized into a standard-ratio section and a high-ratio section with each sorted from smallest to largest by power capacity. These gearboxes are considered "standards" but are not the only reducers available. Cotta offers modified standard boxes as well as full-custom and purpose-built.

Cotta Speed Reducers have a standard location of the output shaft at 6 o'clock to the input. Alternate locations such as 3, 9, and 12 o'clock are available on many units.

In order to make an initial selection of a Speed Reducer you will need the following information:

- **Engine HP**
- Transmitted (load) HP
- Engine flywheel housing size
- Coupling option (clutch, torsional coupling, etc)
- Output rotation (same as engine, or opposite)
- Side load or in-line
- **Application**

An application worksheet to help you summarize and submit the required information is available from the Cotta web site. Click here.

## Speed Reducer Tabulation

	MAX INPUT	MAX	ОИТРИТ І	ROTATION	RATIO	SAE BELL HSG	INPUT
MODEL	TORQUE (Ib-ft) INPUT SPEED (RPM)	SAME AS INPUT	ANTI INPUT	RANGE	SIZE #	COUPLING SAE SIZE	
AR2053A	400	3000		Х	1.0 to 3.94	4, 3, 2	To SAE 11 in.
AR2053E	300	3000	X		1.5 to 4.0	4, 3, 2	To SAE 11 in.
SR700A	650	2500		X	1.5 to 2.0	1	To SAE 14 in.
SR700E	650	2500	X		1.43 to 1.95	1	To SAE 14 in.
SR2A	800	3000		X	1.0 to 3.07	1, 2, 3	To SAE 11 in.
SR2E	600	3000	Х		1.42 to 3.0	1, 2, 3	To SAE 14 in.
SR3A	1400	3000		Х	1.0 to 3.04	0, 1, 2	To SAE 18 in.
SR3E	900	3000	Х		1.2 to 3.0	0, 1, 2	To SAE 18 in.
GR15A	1450	2350		X	1.08 to 2.46	00, 1/2, 0, 1	To SAE 24 in.
GR15E	1450	2300	X		1.28 to 2.43	00, 1/2, 0, 1	To SAE 24 in.
GR16A	1650	2200		Χ	1.5 to 3.0	00, 1/2, 0, 1	To SAE 24 in.
GR16E	1650	2200	X		1.5 to 3.0	00, 1/2, 0, 1	To SAE 24 in.
GR1600A	3000	2200		X	1.35 to 3.07	00, 1/2, 0, 1	To SAE 24 in.
GR1600E	2600	2200	Х		1.28 to 3.0	00, 1/2, 0, 1	To SAE 24 in.
GR3200A	5500	2200		X	1.19 to 2.89	00, 0	To SAE 24 in.
GR3200E	4500	2200	X		1.2 to 3.13	00, 0	To SAE 24 in.
		H	ligh Ratio	Speed F	Reducers		
SR12A	750	2500		Х	1.03 to 3.87	0, 1, 2	To SAE 18 in.
SR12E	750	2500	Х		1.3 to 3.92	0, 1, 2	To SAE 18 in.
SR2030A	750	2500		Х	3.45 to 5.17	0, 1, 2, 3	To SAE 18 in.
SR2030E	750	2500	Х		3.22 to 5.20	0, 1, 2, 3	To SAE 18 in.
SR972A	1000	2200		Х	3.49 to 6.25	0, 1	To SAE 18 in.
SR972E	1000	2200	Х		3.09 to 6.25	0, 1	To SAE 18 in.
SR2031	1150	2500	Х		3.5 to 7.05	0, 1	To SAE 18 in.
GR975200	2400	2200	X		3.49 to 6.58	00, 0, 1	To SAE 24 in.



## Table of Contents

Speed Reducer Overview	MODEL GR1600A
Speed Reducer Tabulation	GR1600A DRAWING30
Table of Contents	
	GR1600E DRAWING32
MODEL AR2053A5	MODEL GR3200A
AR2053A DRAWING6	GR3200A DRAWING34
MODEL AR2053E	MODEL GR3200E
AR2053E DRAWING8	GR3200E DRAWING36
MODEL SR700A9	
SR700A DRAWING10	High Ratio Speed Reducer Section 37
MODEL 700E	
SR700E DRAWING12	MODEL SR12A
MODEL SR2A	SR12A DRAWING39
SR2A DRAWING14	MODEL SR12E
MODEL SR2E15	SR12E DRAWING41
SR2E DRAWING16	MODEL SR2030A
MODEL SR3A	SR2030A DRAWING43
SR3A DRAWING18	MODEL SR2030E
MODEL SR3E19	SR2030E DRAWING45
SR3E DRAWING20	MODEL SR972A
MODEL GR15A	SR972A DRAWING47
GR15A DRAWING22	MODEL SR972E
MODEL GR15E	SR972E DRAWING49
GR15E DRAWING24	MODEL SR2031E
MODEL GR16A	SR2031E DRAWING51
GR16A DRAWING26	MODEL GR97520052
MODEL GR16E	GR975200 DRAWING53
CR16F DRAWING 28	



## MODEL AR2053A SPEED REDUCER

### **Product Description**

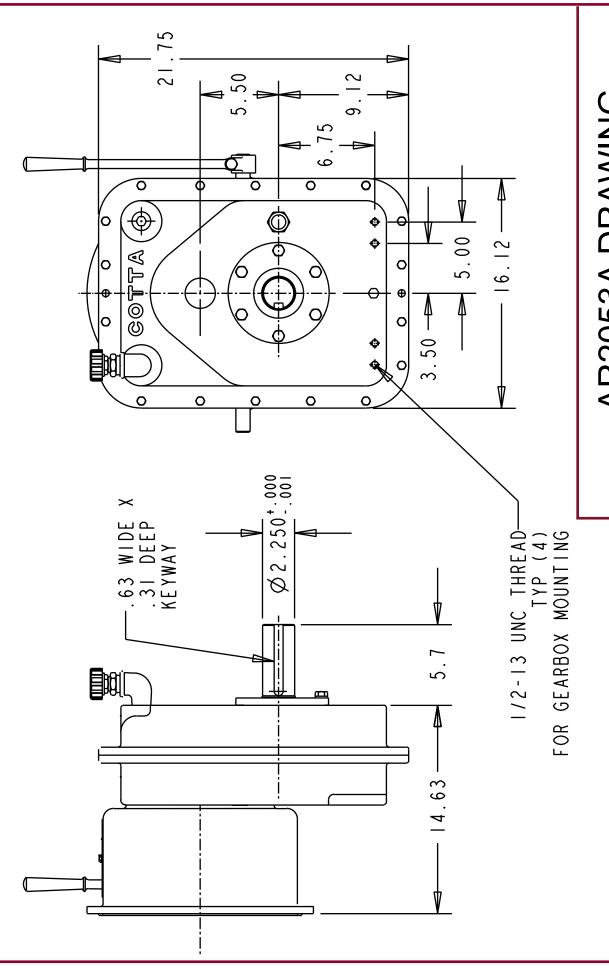
Model AR2053A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite input
MAX INPUT TORQUE:	500 lb-ft.
MAX INPUT SPEED:	3000 rpm or as otherwise limited by input coupling or clutch.
RATIOS:	1.0 to 3.0 std. 3.94 by special order
OUTPUT SHAFT SIZE:	2.25" dia., X 5" long. 5/8" X 5/16" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#2, #3, #4
*FLYWHEEL COUPLINGS:	Clutches, couplings, and drive plates up to SAE 11".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per dwg.
LUBRICATION:	Splash standard, pump optional.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	400 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





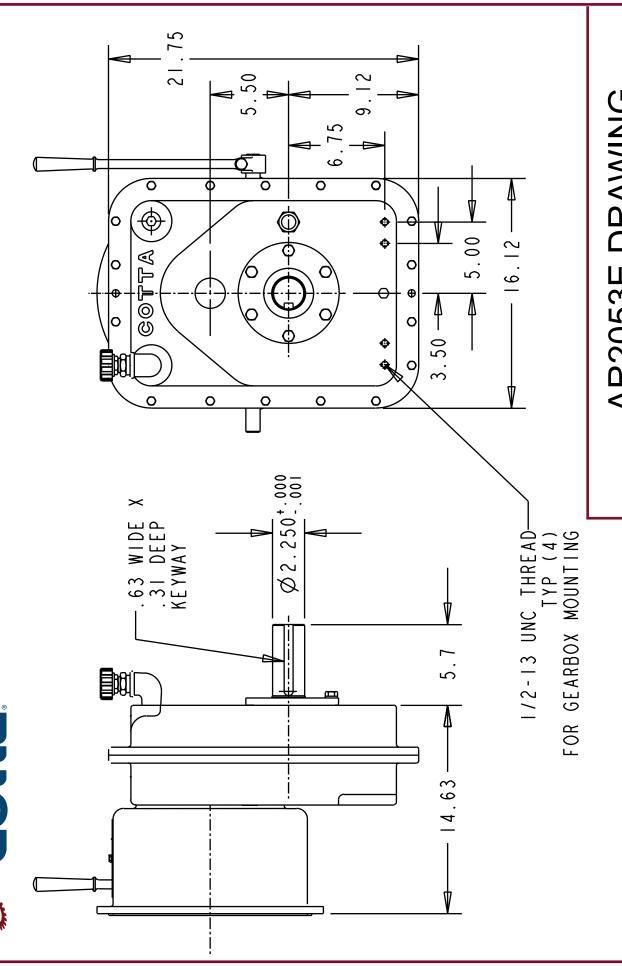
## MODEL AR2053E SPEED REDUCER

### **Product Description**

Model AR2053E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input
MAX INPUT TORQUE:	350 lb-ft.
MAX INPUT SPEED:	3000 rpm unless otherwise limited by input clutch or coupling.
RATIOS:	1.16 to 3.71. 4.0 by special order
OUTPUT SHAFT SIZE:	2.25" dia., X 5" long. 5/8" X 5/16" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#2, #3, #4
*FLYWHEEL COUPLINGS:	Various clutches and couplings through SAE 11".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per dwg.
LUBRICATION:	Splash standard, pump optional.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	415 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





## MODEL SR700A SPEED REDUCER

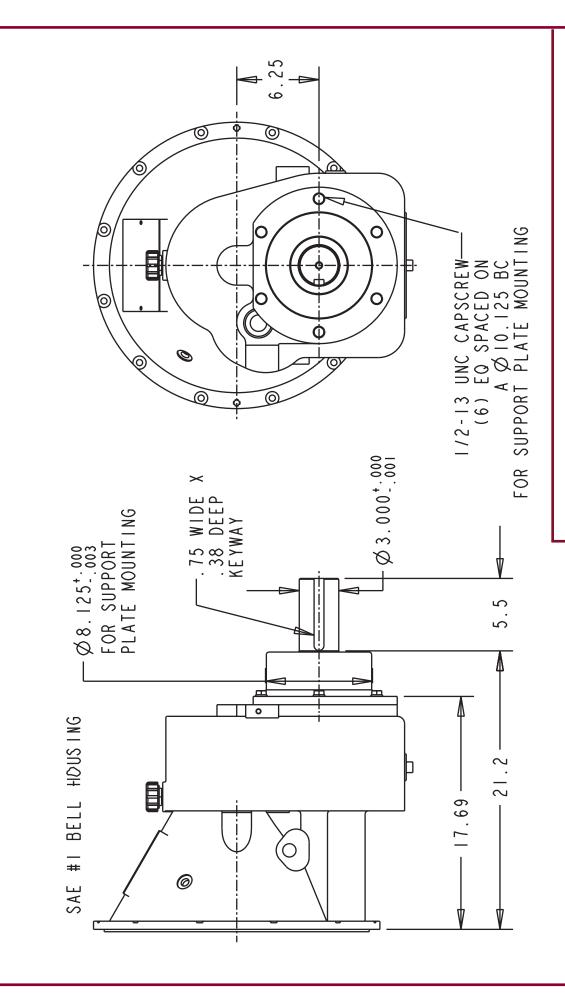
## **Product Description**

Model SR700A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	650 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.5 to 2.0
OUTPUT SHAFT SIZE:	3"dia., 5.5" long, 3/8" X 3/4" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock
SAE HOUSINGS:	#1, no optional sizes.
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 14".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Splash. Pump optional if required.
COOLING:	Oil/water shell-and-tube cooler furnished if required.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	510 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





# **SR700A DRAWING**



## MODEL 700E SPEED REDUCER

### **Product Description**

Model SR700E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

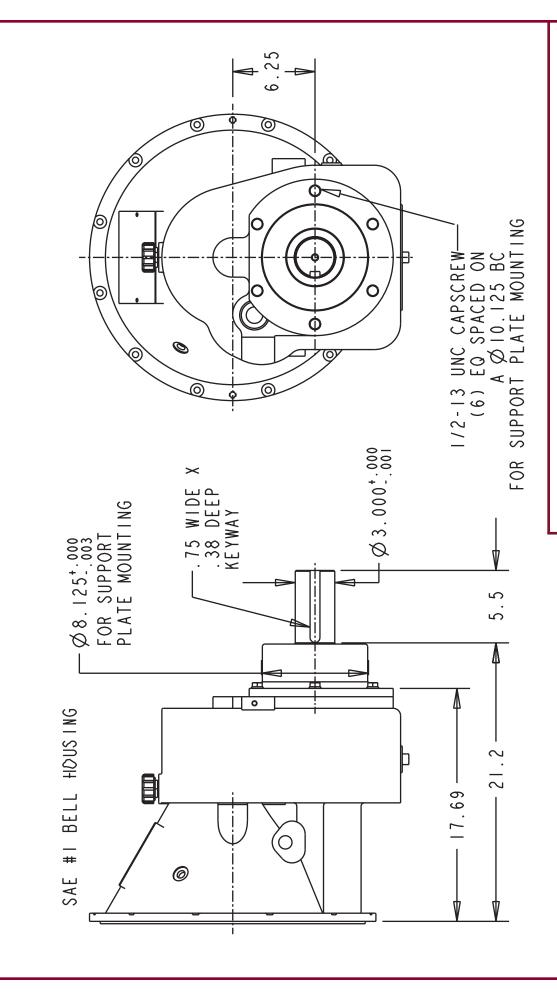
OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	650 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.43 to 1.95
OUTPUT SHAFT SIZE:	3"dia., 5.5" long, 3/8" X 3/4" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock
SAE HOUSINGS:	#1, no optional sizes.
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 14".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Splash. Pump optional if required.
COOLING:	Oil/water shell-and-tube cooler furnished if required.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	510 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





# SR700E DRAWING



## MODEL SR2A SPEED REDUCER

## **Product Description**

Model SR2A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite input
MAX INPUT TORQUE:	800 lb-ft.
MAX INPUT SPEED:	3000 rpm or as otherwise limited by input clutch or coupling
RATIOS:	1:1 to 3:1 Others by special design
OUTPUT SHAFT SIZE:	3" dia., 5.5"long, 3/8" X 3/4" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std., 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#1, #2, #3
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 14 inch.
REAR SUPPORT:	Required, customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	775 lbs.

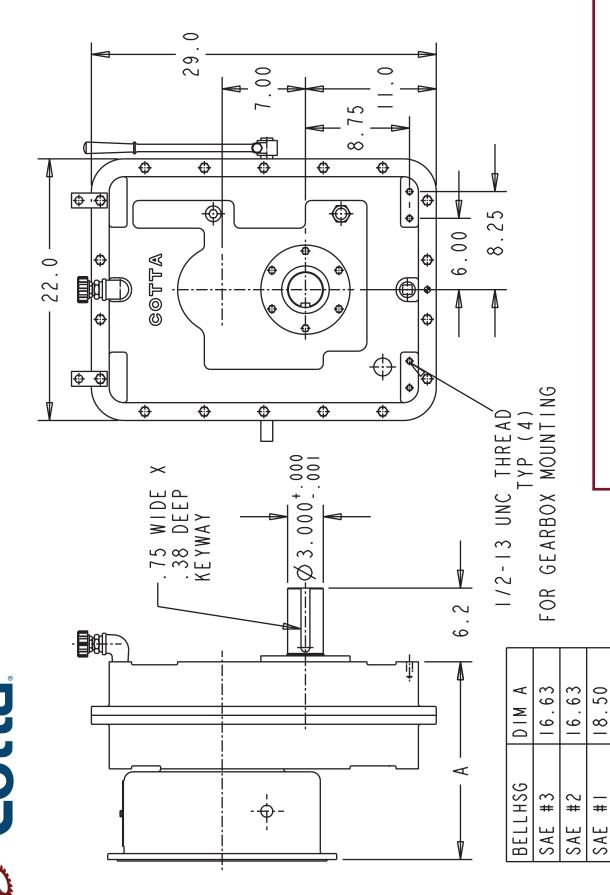
<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.

## Cotta

This drawing shows general arrangement and approximate space claim. Do not design or lay out using this drawing. Use only certified drawings provided by Cotta Engineering





## MODEL SR2E SPEED REDUCER

## **Product Description**

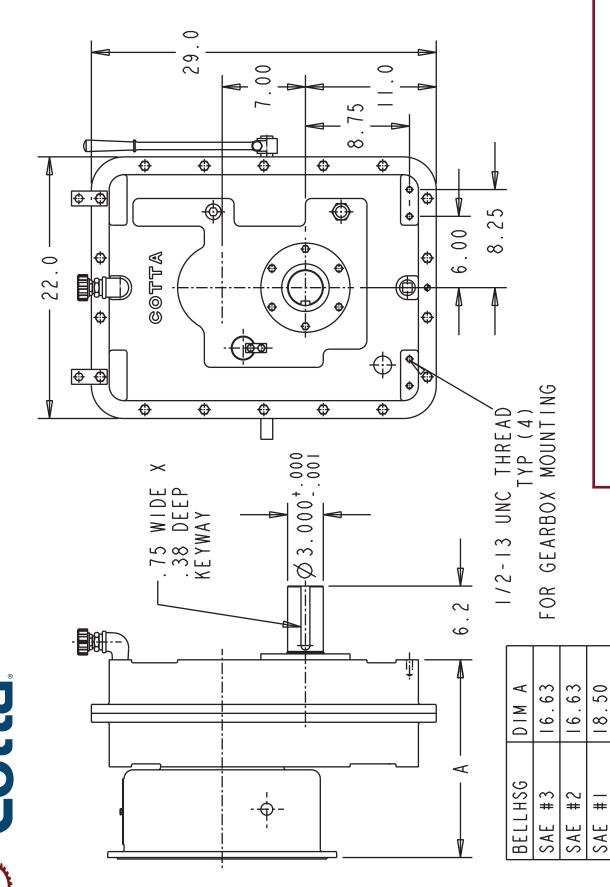
Model SR2E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	600 lb-ft.
MAX INPUT SPEED:	3000 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	1.42 TO 3.0. Others by special design.
OUTPUT SHAFT SIZE:	3" dia., 5.5" long, 3/4" X 3/8" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#1, #2, #3
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 14 inch.
REAR SUPPORT:	Required, customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	800 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.

## Cotta

This drawing shows general arrangement and approximate space claim. Do not design or lay out using this drawing. Use only certified drawings provided by Cotta Engineering



SR2E DRAWING



## MODEL SR3A SPEED REDUCER

## **Product Description**

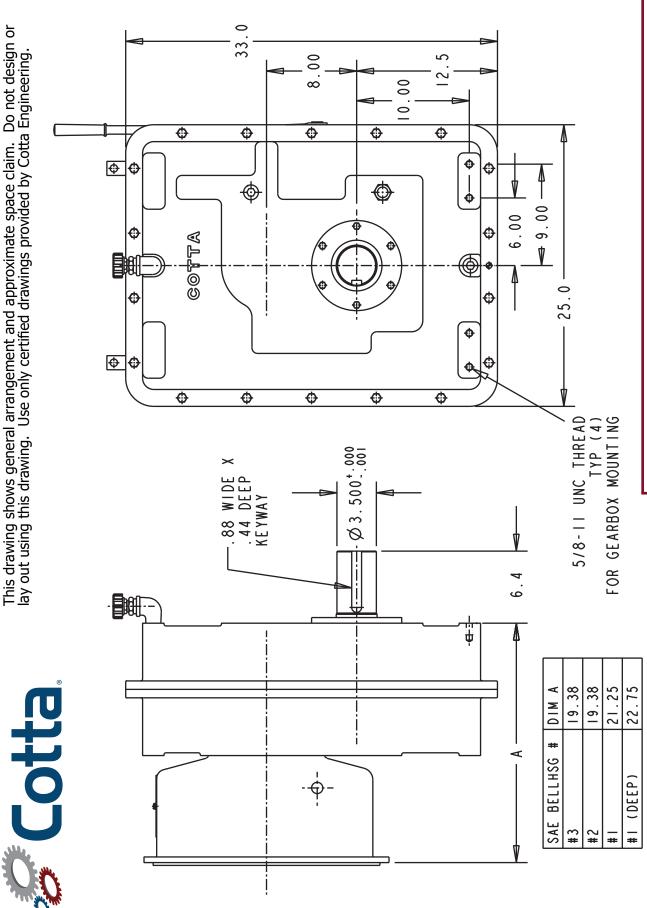
Model SR3A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	1400 lb-ft.
MAX INPUT SPEED:	3000 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	1.02 to 3.04. Others by special design.
OUTPUT SHAFT SIZE:	3.5" dia., 5" long, 7/8" X 7/16" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1, #2
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18 inch.
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler supplied if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	940 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



## SR3A DRAWING



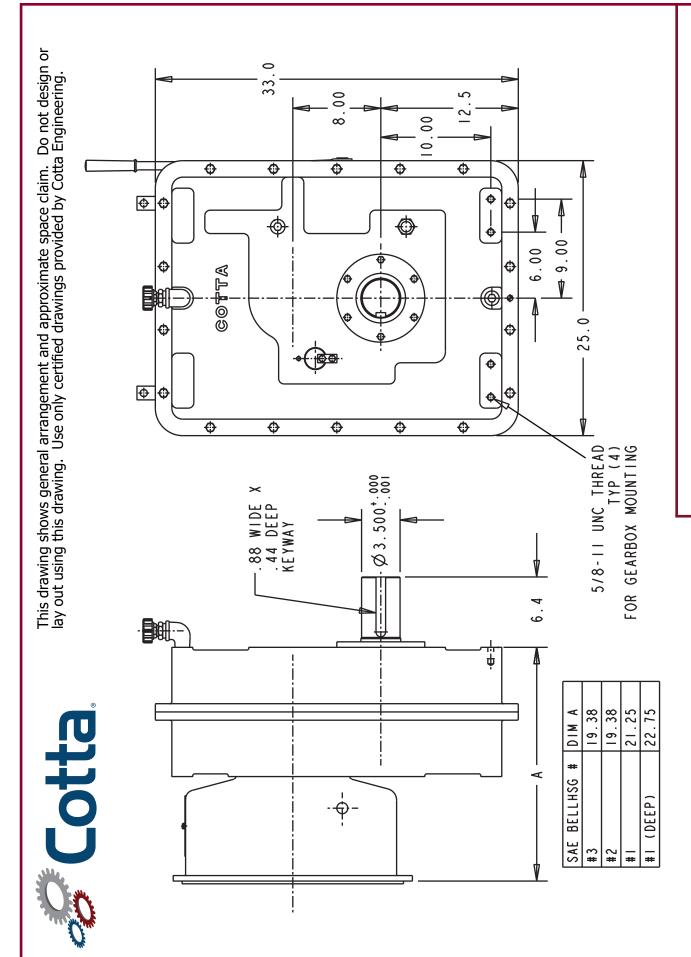
## MODEL SR3E SPEED REDUCER

## **Product Description**

Model SR3E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	900 lb-ft.
MAX INPUT SPEED:	3000 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	1.2 to 3.0
OUTPUT SHAFT SIZE:	3.5" dia., 5" long, 7/8" X 7/16" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional.
SAE HOUSINGS:	#0, #1, #2
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied.
COOLING:	Oil/water shell-and-tube cooler supplied if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	975 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



## SR3E DRAWING



## MODEL GR15A SPEED REDUCER

## **Product Description**

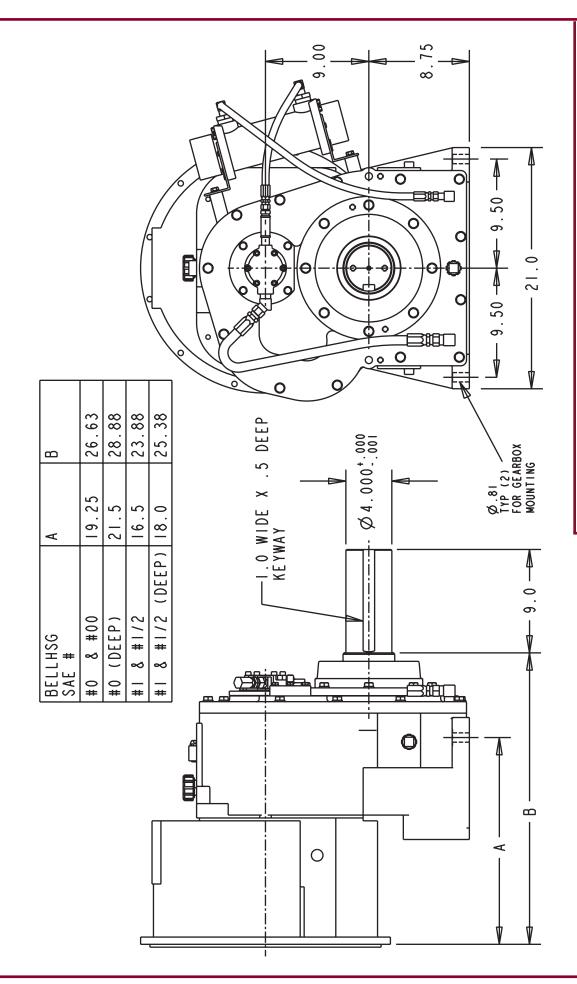
Model GR15A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	1450 lb-ft.
MAX INPUT SPEED:	2350 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.08 TO 2.46
OUTPUT SHAFT SIZE:	4" dia., 9" long, 1" x 1/2" keyway
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional.
SAE HOUSINGS:	#00, #0, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1200 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



## **GR15A DRAWING**



## MODEL GR15E SPEED REDUCER

## **Product Description**

Model GR15E is a single-stage reduction gear designed for direct mount to an industrial engine by means of an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input
MAX INPUT TORQUE:	1450 lb-ft.
MAX INPUT SPEED:	2300 rpm or as otherwise limited by input coupling or clutch
RATIO RANGE:	1.28 to 2.43
OUTPUT SHAFT SIZE:	4" dia., 9" long, 1" X 1/2" keyway
OUTPUT SHAFT LOCATION:	6"o'clock std., 12, 3, and 9 o'clock by special design
SAE HOUSINGS:	#00, #0, #1/2, #1
*FLYWHEEL COUPLINGS:	Clutches, couplings, and drive plates up to SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral lube pump supplied.
COOLING:	Oil\water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1330 lbs.

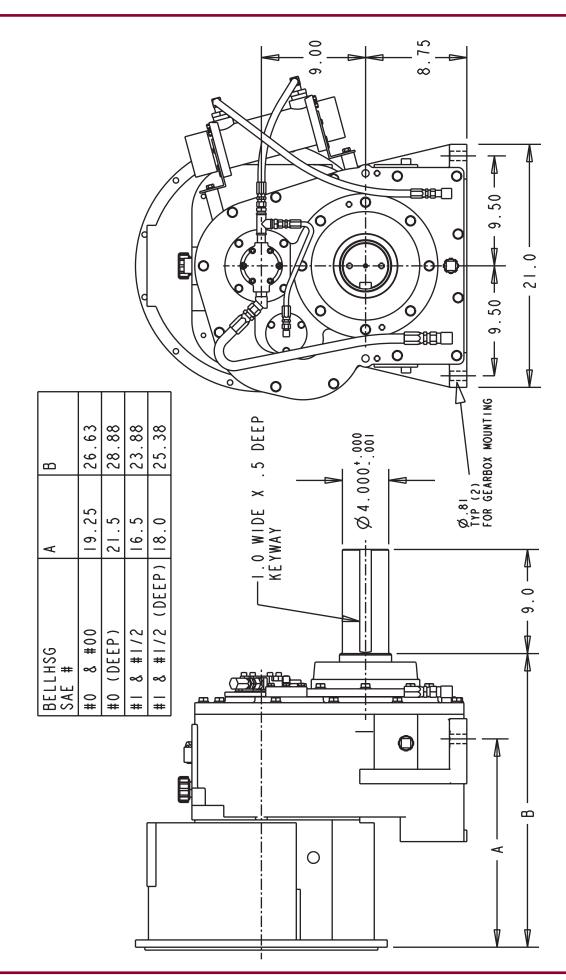
<< Prev TOC TAB Next>>

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





## **GR15E DRAWING**



## MODEL GR16A SPEED REDUCER

### **Product Description**

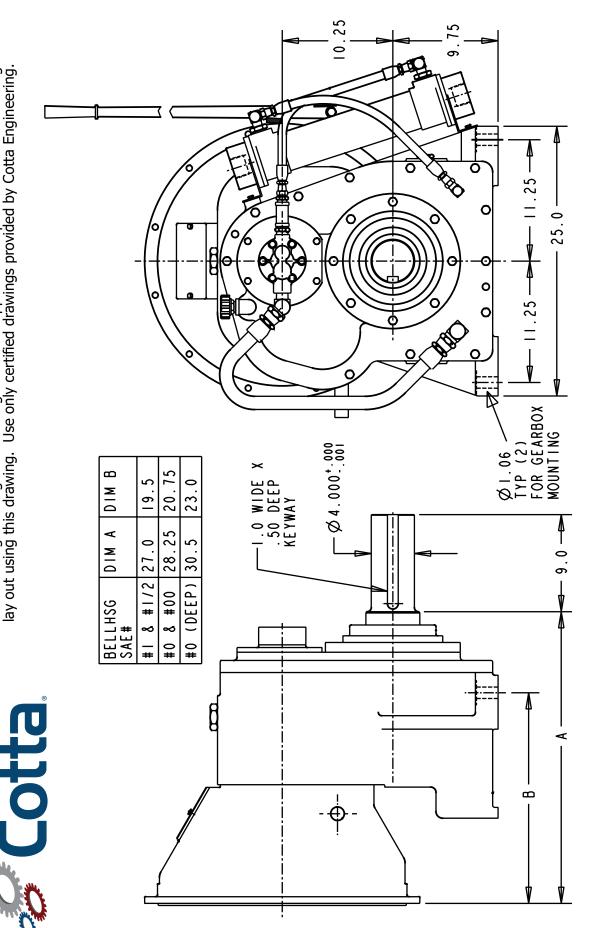
Model GR16A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	1650 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.50 to 3.0
OUTPUT SHAFT SIZE:	4.000" dia., 9" long, 1" X 1/2" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0, #1/2, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1400 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



## **GR16A DRAWING**



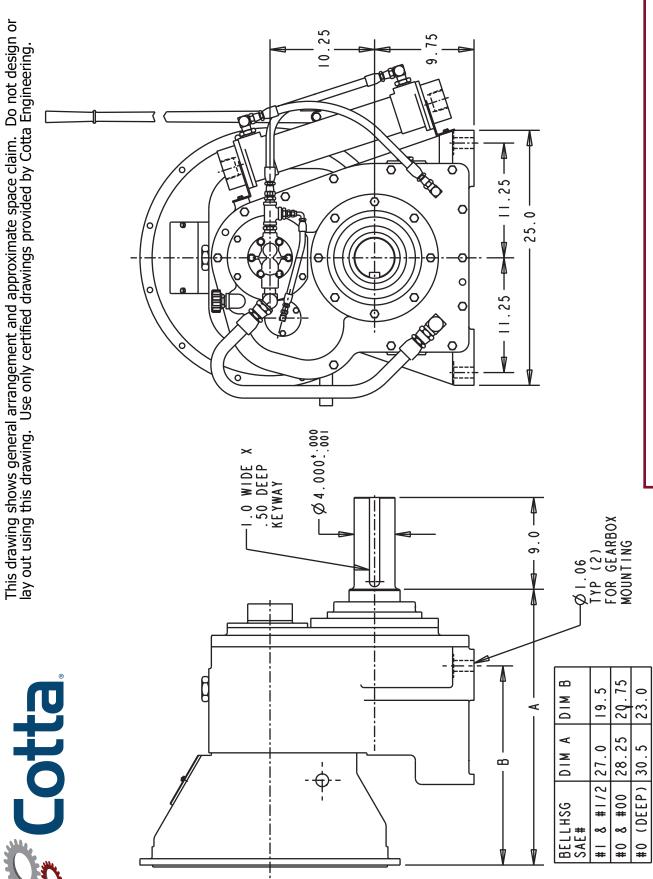
## MODEL GR16E SPEED REDUCER

### **Product Description**

Model GR16E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	1650 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.50 to 3.0
OUTPUT SHAFT SIZE:	4.000" dia., 9" long, 1" X 1/2" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0, #1/2, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1500 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



## **GR16E DRAWING**



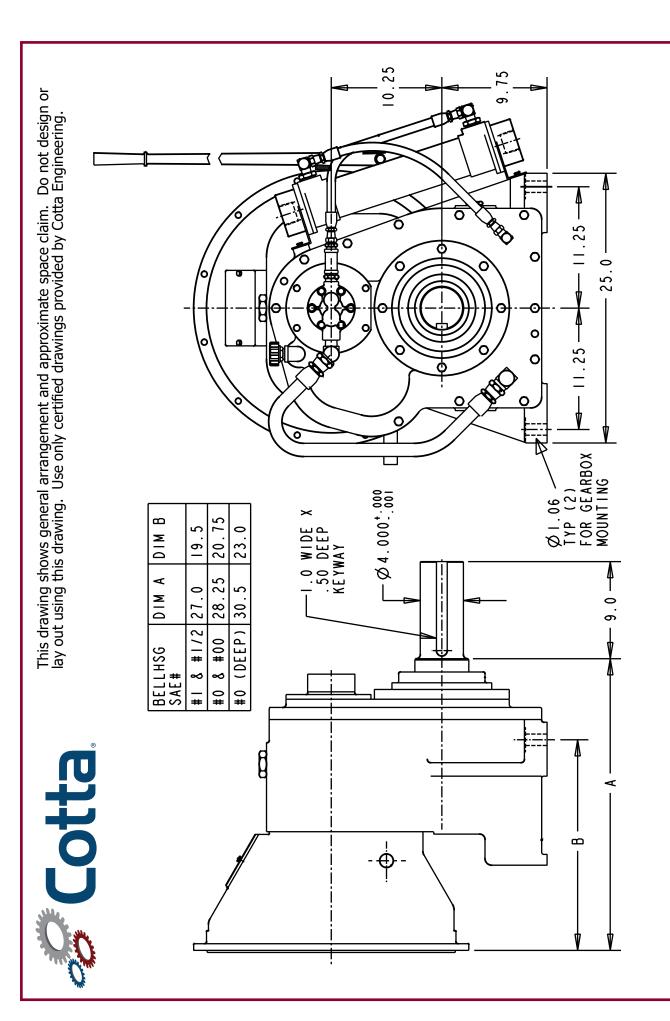
## MODEL GR1600A SPEED REDUCER

## **Product Description**

Model GR1600A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	3000 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.35 to 3.07
OUTPUT SHAFT SIZE:	4.000" dia., 9" long, 1" X 1/2" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0, #1/2, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1400 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



# **GR1600A DRAWING**



## MODEL GR1600E SPEED REDUCER

### **Product Description**

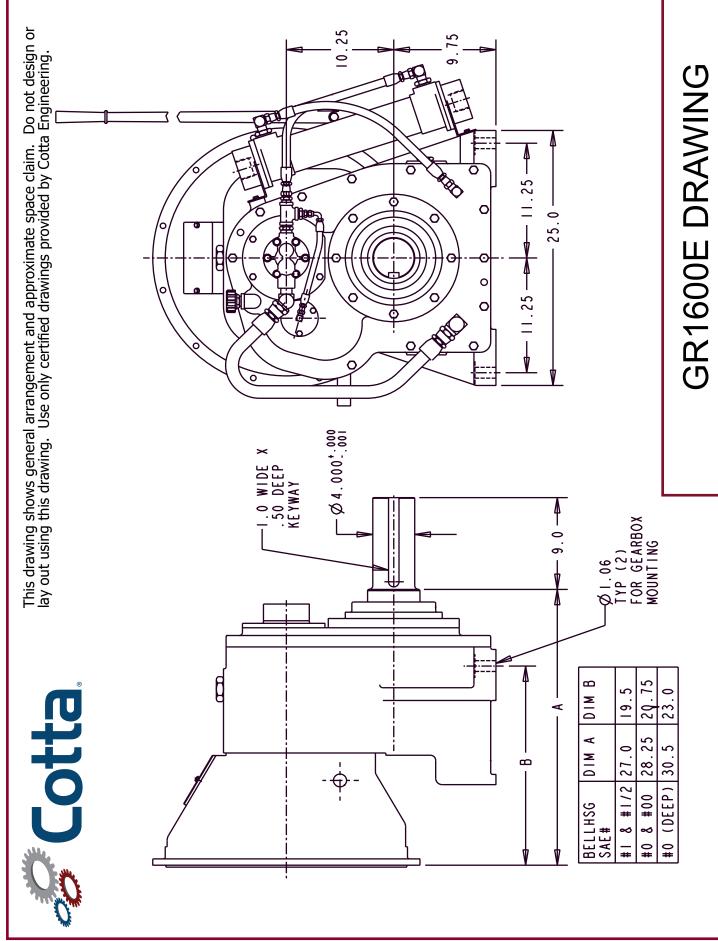
Model GR1600E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	2600 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.28 to 3.0
OUTPUT SHAFT SIZE:	4.000" dia., 9" long, 1" X 1/2" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0, #1/2, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	Yes. Contact Cotta for specs and limits.
***APPROXIMATE WEIGHT:	1500 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





## MODEL GR3200A SPEED REDUCER

## **Product Description**

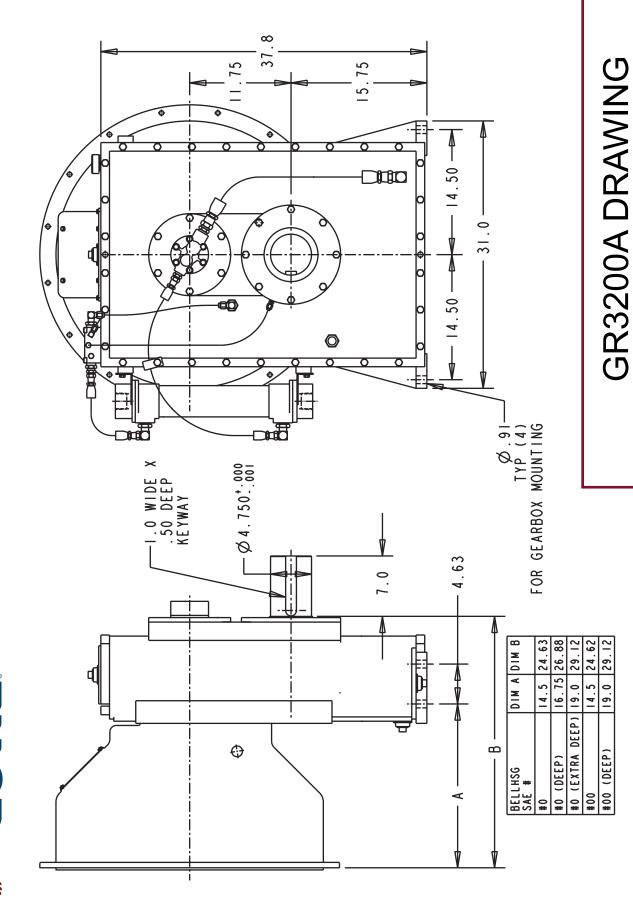
Model GR3200A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	5500 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.19 to 2.89
OUTPUT SHAFT SIZE:	4.750" dia., 7" long1.25" X .4375" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24"
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	1800 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





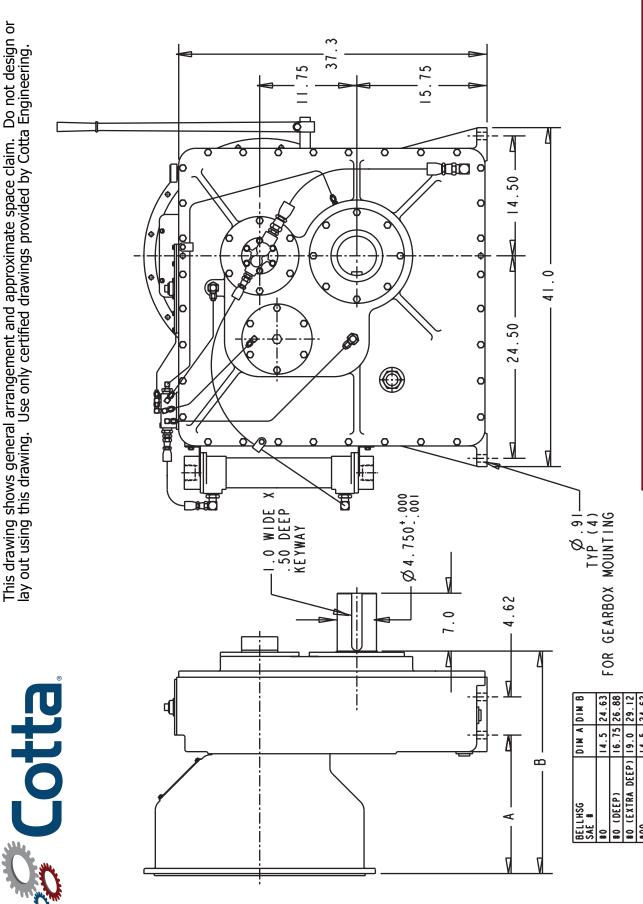
## MODEL GR3200E SPEED REDUCER

## **Product Description**

Model GR3200E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	4500 lb-ft.
MAX INPUT SPEED:	RPM or as otherwise limited by input clutch or coupling.
RATIOS:	1.20 to 3.13
OUTPUT SHAFT SIZE:	4.750" dia., 7" long, with 1.25" X .4375" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Integral foot mounts provided.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	2000 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



**GR3200E DRAWING** 

### High Ratio Speed Reducer Section





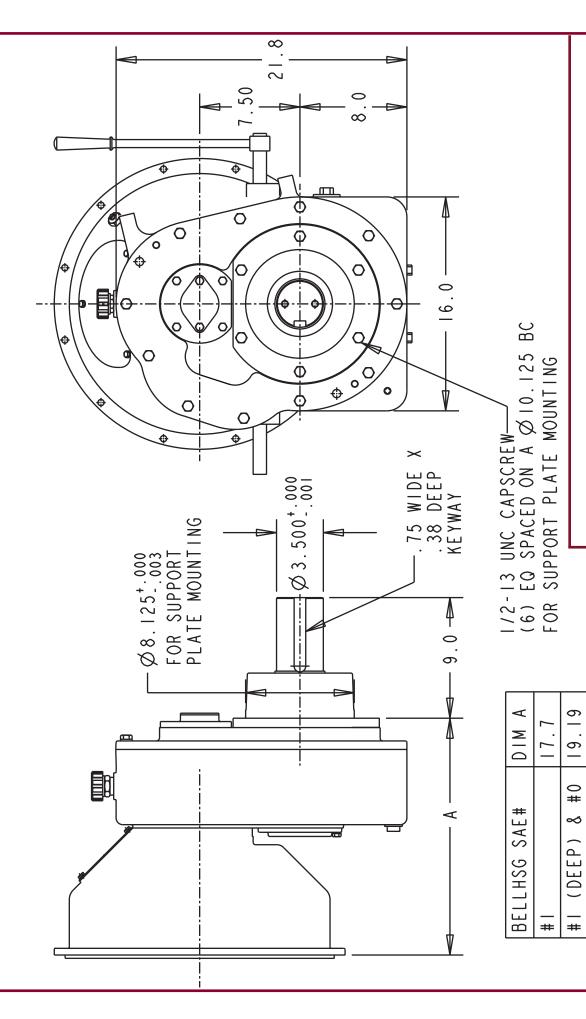
### MODEL SR12A SPEED REDUCER

### **Product Description**

Model SR12A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	750 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.03 to 3.87
OUTPUT SHAFT SIZE:	3.000" dia., 5.5" long, with 3/4" X 3/8" keyway. 3.500" dia., 5.5 long, 7/8" X 7/16" keyway above 3.45 ratio.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1, #2
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18 inch.
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Splash standard, pump optional.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	750 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



**SR12A DRAWING** 



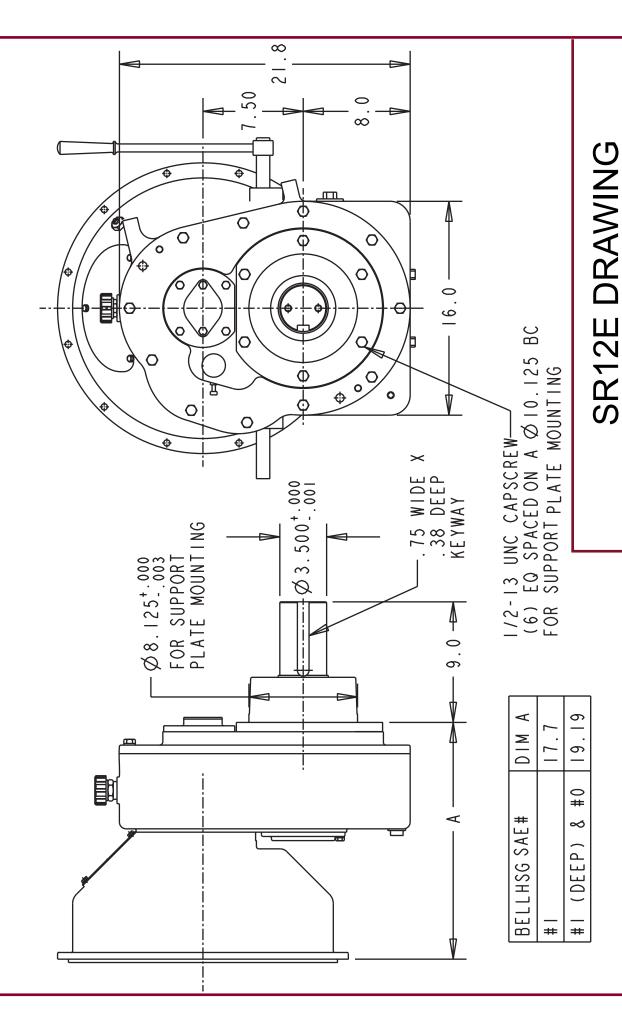
## MODEL SR12E SPEED REDUCER

### **Product Description**

Model SR12E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	750 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	1.30 to 3.92
OUTPUT SHAFT SIZE:	3.000" dia., 5.5" long, with 3/4" X 3/8" keyway. 3.500" dia., 5.5" long, 7/8" X 7/16"keyway above 3.45 ratio.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1, #2
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18 inch.
REAR SUPPORT:	Required Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	815 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





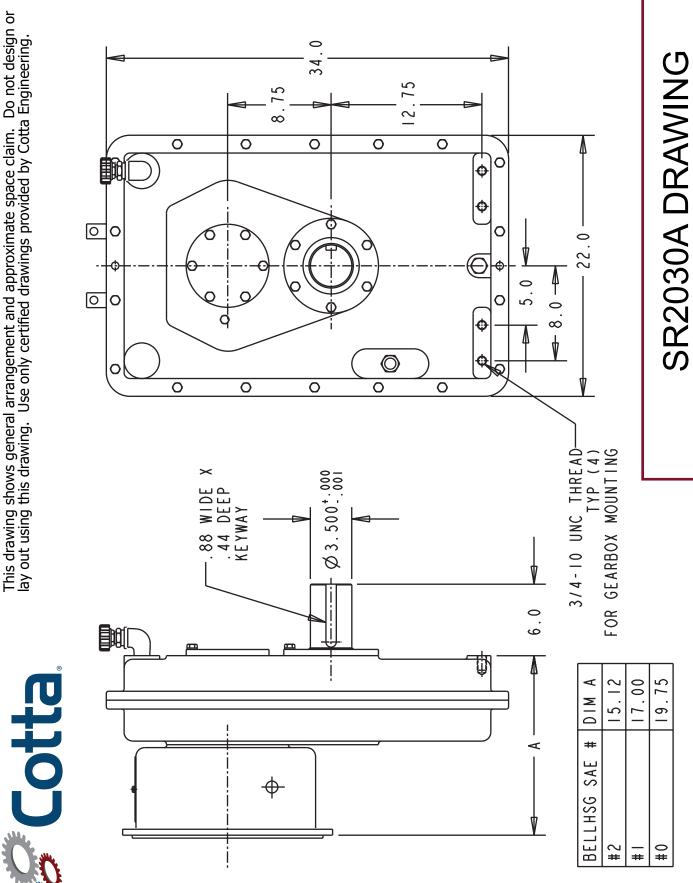
### MODEL SR2030A SPEED REDUCER

### **Product Description**

Model SR2030A is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Opposite to input.
MAX INPUT TORQUE:	750 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	3.45 to 5.17
OUTPUT SHAFT SIZE:	3.500" dia., 5.5" long 7/8" X 7/16" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1, #2, #3
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	900 lbs.

- \* Flywheel coupling selection requires Cotta technical review and approval.
- \*\* Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.
- \*\*\* Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





### MODEL SR2030E SPEED REDUCER

### **Product Description**

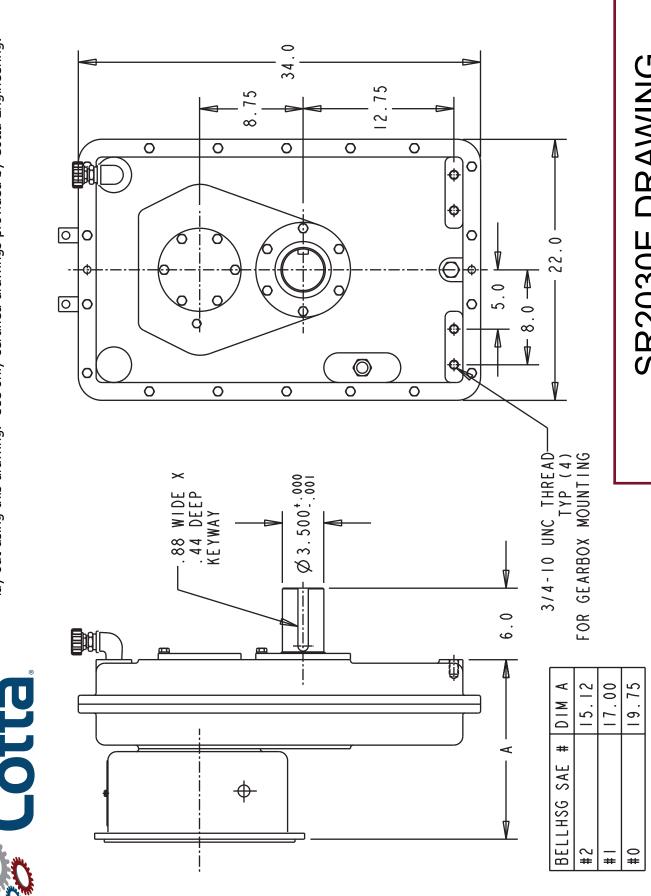
Model SR2030E is a single-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). This unit incorporates an idler shaft to provide output rotation same as input. Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	750 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	3.22 to 5.20
OUTPUT SHAFT SIZE:	3.500" dia., 5.5" long 7/8" X 7/16" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1, #2, #3
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	900 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



SR2030E DRAWING



### MODEL SR972A SPEED REDUCER

### **Product Description**

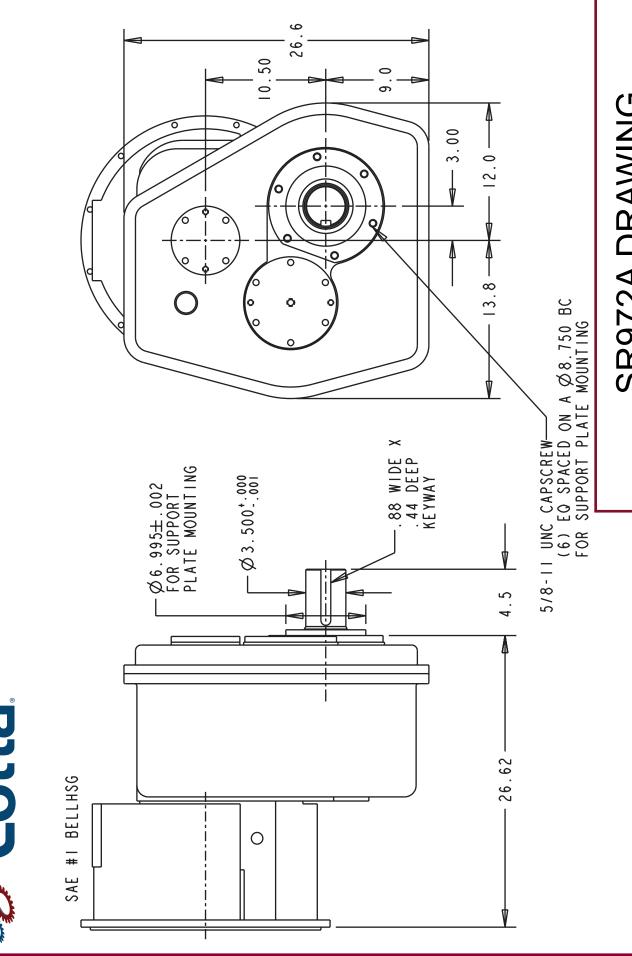
Model SR972A is a two-stage reduction gearbox (plus countershaft) designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	.Opposite to input.
MAX INPUT TORQUE:	1000 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIO RANGE:	3.49 to 6.25
OUTPUT SHAFT SIZE:	3.500" dia., 4.5" long, 7/8" X 7/16" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock.
SAE HOUSINGS:	#0, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied.
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	1200 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.





### MODEL SR972E SPEED REDUCER

### **Product Description**

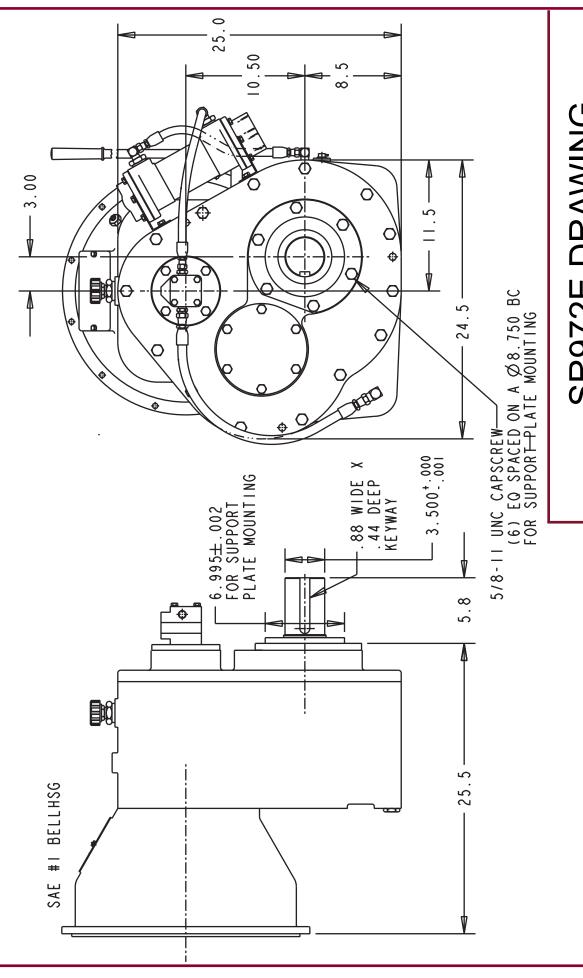
Model SR972E is a two-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	1000 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	3.09 to 6.25
OUTPUT SHAFT SIZE:	3.500" dia., 4.5" long, 7/8" X 7/16" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#0, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	1190 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



# SR972E DRAWING



### MODEL SR2031E SPEED REDUCER

### **Product Description**

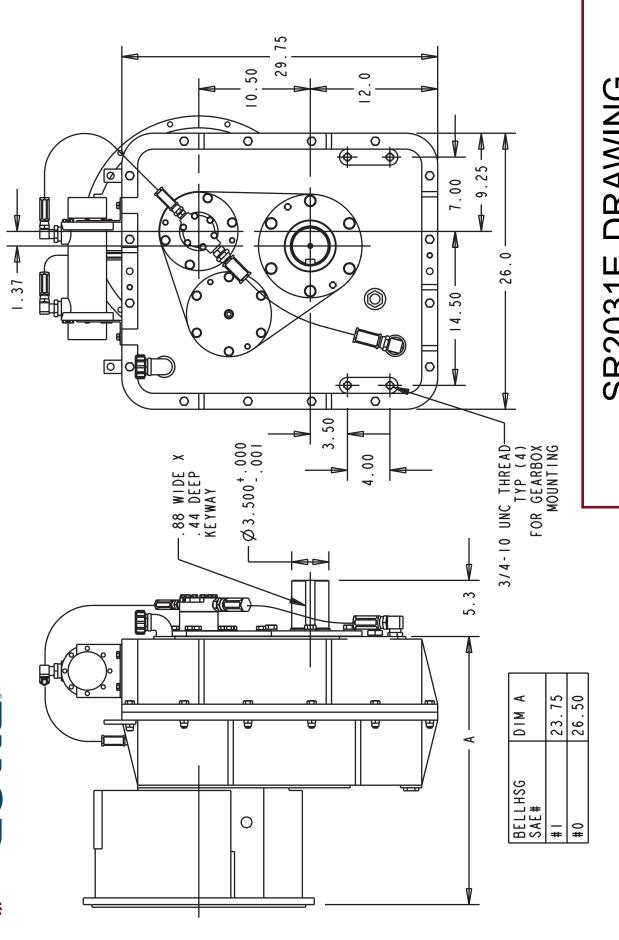
Model SR2031 is a two-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	1150 lb-ft.
MAX INPUT SPEED:	2500 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	3.5 to 7.05
OUTPUT SHAFT SIZE:	3.500" dia., 4.5" long 7/8" X 7/16" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock to input.
SAE HOUSINGS:	#0, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 18".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube cooler furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	1420 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.



SR2031E DRAWING



### MODEL GR975200 SPEED REDUCER

### **Product Description**

Model GR975200 is a two-stage reduction gearbox designed for direct mounting to industrial engines via an SAE flange and driven in standard engine rotation (CW facing input shaft). Tabulated below are nominal power and speed capacity together with standard options. Contact Cotta to discuss other options or specialized requirements.

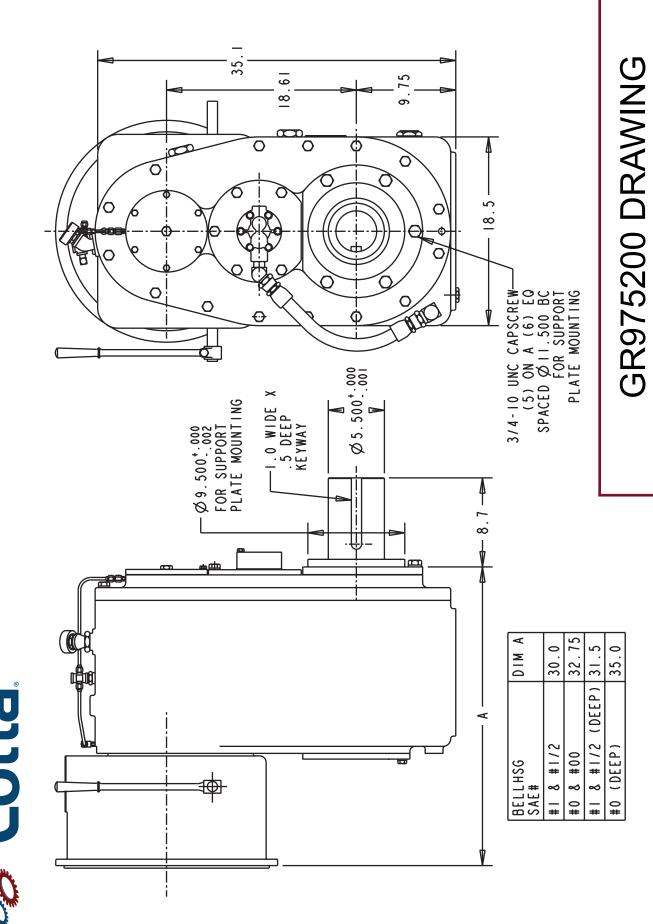
OUTPUT ROTATION:	Same as input.
MAX INPUT TORQUE:	2400 lb-ft.
MAX INPUT SPEED:	2200 RPM or as otherwise limited by input clutch or coupling.
RATIOS:	3.49 to 6.58.
OUTPUT SHAFT SIZE:	5.5" dia., 8" long, with 1.0" X .5" keyway.
OUTPUT SHAFT LOCATION:	6 o'clock std, 12, 3, and 9 o'clock optional
SAE HOUSINGS:	#00, #0, #1
*FLYWHEEL COUPLINGS:	Various clutches, couplings, and drive plates through SAE 24".
REAR SUPPORT:	Required. Customer supplied item. Mounting holes provided per drawing.
LUBRICATION:	Integral Lube pump supplied
COOLING:	Oil/water shell-and-tube furnished if required. Various options.
**SIDE LOAD CAPABLE:	No. Contact Cotta for recommendations.
***APPROXIMATE WEIGHT:	2300 lbs.

<sup>\*</sup> Flywheel coupling selection requires Cotta technical review and approval.

<sup>\*\*</sup> Some speed reducers output shafts are suitable for chain or belt side pull drives while others are not. Provide complete application details to Cotta for recommendations and approval.

<sup>\*\*\*</sup> Weight listed is an average. Actual weight can vary substantially with options such as SAE housing size and flywheel coupling choices.

# Cotta





# ISO 9001 Quality Management



### Global Supplier of Power Transmission Systems and Components

Cotta Transmission Company, LLC 1301 Prince Hall Drive Beloit, WI 53511

608-368-5600 www.cotta.com Member American Gear Manufacturers Association

