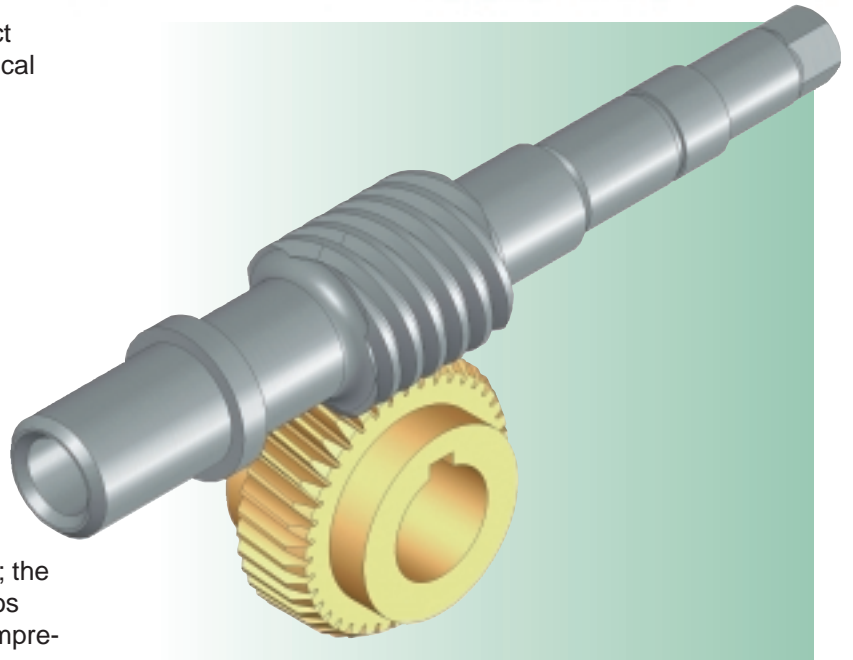


Special Ratios, Geometry, and Left Hand Gearing

Special ratios offered with the SE Encore product line afford design flexibility that goes beyond typical industry standards. These ratios use unique geometries to achieve a multitude of design requirements including:

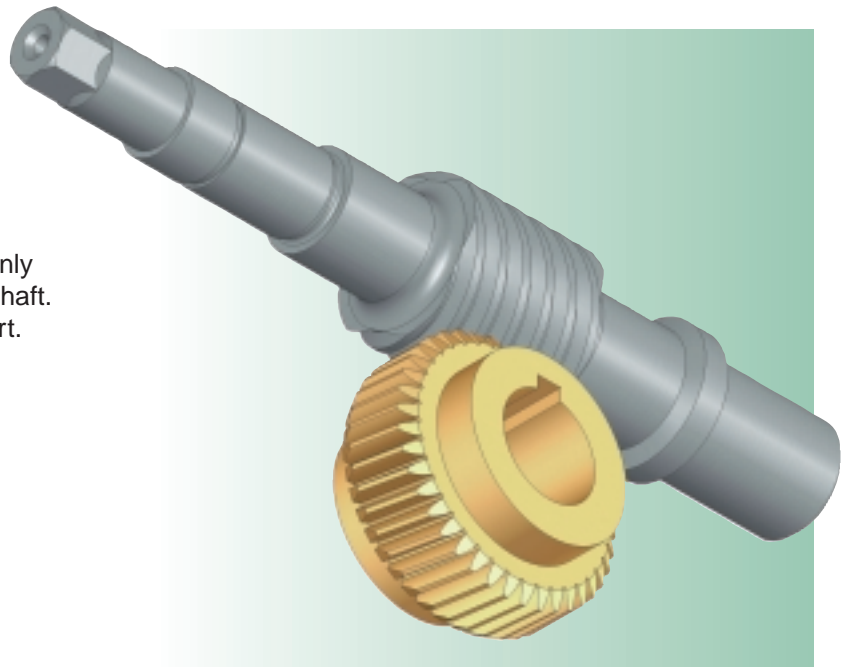
- Self-locking,
- Enhanced back driving,
- High shock load tolerance,
- Reduced backlash,
- Hunting tooth. (A special gear geometry that insures any given gear tooth recesses when viewed from a fixed input revolution count. It is often used in fixed, repetitive start/stop applications, where uniform worm gear tooth wear is desired).

A 4:1 reduction is a frequently used special ratio; the ratings are on pages 134-135. Other special ratios include 12.5:1 and 18:1. Page 133 contains a comprehensive chart of special ratios and gear designs available in the SE Encore product line. In addition to the ratios shown, other special ratios and gearing designs are available by contacting Winsmith.



LEFT HAND GEARING

Left hand gearing reverses the rotational direction of an output shaft and is used when other methods, such as changing the motor rotation, are ineffective. Left hand gearing is particularly useful when facilitating a dual drive split power design. The SE Encore ratings are not affected by choosing left hand gearing; the only difference is the rotation direction of the output shaft. Available left hand gearing are shown in the chart.



Special Ratios, Geometry, and Left Hand Gearing

SINGLE REDUCTION

RATIO	Size							
	E13	E17	E20	E24	E26	E30	E35	E43
3.5								
4								
4.1666								
5								
6								
6.3333								
6.4								
7								
7.5								
7.75								
8								
8.5								
9								
11								
12								
12.5								
13								
14								
15								
16								
17								
18								
20								
23								
24								
25								
29.5								
30								
31								
32								
35								
36								
37								
39								
40								
45								
50								
53								
57								
60								
70								
71								
82								
84								
90								

DOUBLE REDUCTION (WORM / WORM)

RATIO	Size							
	E13	E17	E20	E24	E26	E30	E35	E43
20								
25								
30								
37.5								
40								
56.25								
60								
73								
75								
80								
85								
90								
100								
112.5								
120								
125								
150								
187.5								
200								
225								
240								
250								
300								
350								
360								
375								
400								
450								
500								
540								
600								
625								
700								
735								
750								
800								
830								
900								
1000								
1200								
1250								
1500								
1600								
1660								
1800								
2000								
2400								
2460								
2475								
2500								
3000								
3200								
3500								
3600								
3960								
4000								
4100								
4800								
4920								
5000								
7920								
8000								
8200								

DOUBLE REDUCTION (HELICAL / WORM)

RATIO	Size							
	E13	E17	E20	E24	E26	E30	E35	E43
38								
44.5								
45.6								
126.7								
151.9								
355.7								
405								
405.3								
486.1								
506.6								
592.9								
607.6								

LEGEND: SPECIAL RATIO SPECIAL GEOMETRY LEFT HAND GEARING



2D DRAWINGS & 3D MODELS
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