



**Series 2000  
Right Angle  
Helical  
Bevel Gear  
Drives and  
Gear Motors  
Interchange**

## Introducing New Gearing Solutions from Boston Gear

This well recognized Altra Industrial Motion brand has utilized its gearing expertise to offer the innovative Series 2000 product line.

Boston Gear products have a reputation for superior engineering, quality manufacturing and reliable performance.

As an industry leader, we have extensive experience and application knowledge in industries including material handling, food processing, packaging, bottling, and metals.

For more information about Series 2000 Gear Drives or Gear Motors call:  
888-243-3447



## SERIES 2000 RIGHT ANGLE HELICAL BEVEL GEAR DRIVES AND GEAR MOTORS

**Loaded with unique performance and convenience features to meet a wide variety of application requirements.**

*We asked OEMs, end users and distributors what mattered most when it came to gear motor design. Their responses helped guide us in the development of the new Series 2000 Gear Motor product line.*

### SERIES 2000 ADVANTAGES

- Altra's Competitive Displacement Product Offering
  - Designed with critical dimensions equivalent to select competitive gear drives
- Enhanced performance
  - High torque with ratings in accordance with AGMA standards provide long life and potential downsizing
  - Tested to an effective 25,000 hours. Proven ratings vs. theoretical
- Design Flexibility
  - Large assortment of shaft options for more application flexibility
  - Variety of optional hollow bore sizes available for quick delivery
  - Variety of input styles including NEMA and IEC C-FACE motor mounts
- Fast and Easy Installation
  - Unique mounting registers for quick, precision alignment
  - Keyless tapered bushing provides quick and secure installation of drive shaft
- Low Maintenance
  - Unique rounded surfaces allow for easier cleaning
  - Premium acrylic paint emulsion pigmented with alloy 316 stainless steel flake provides high corrosion & abrasion resistance for long term durability
  - Integrated O-rings at mounting interfaces provide high leak and ingress resistance
  - Automatic entrapment of wear debris for longer life
  - Large diameter oil fill/drain holes for fast oil changes
  - Synthetic lubrication extends gear life

*Series 2000 Gear Drives and Gear Motors are Dimensional Drop-In Replacements for SEW Eurodrive™ KA Series products*

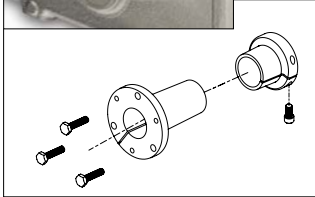
### APPLICATION EXAMPLES:

- Cheese slicers
- Dairy and bakery mixers
- Spiral heating and cooling racks
- Potato chip salter
- Produce drying bins (tumblers)
- Meat forming (links, patties, grinding)
- Meat carcass processing
- Bottling lines
- Unit conveyors
- Palletizers

## C-Face and Projecting Input Shaft



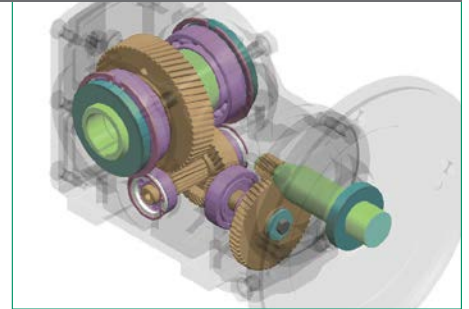
The **Original Domed Crown™** unique rounded housing prevents foreign matter adherence and fluid accumulation



Optional keyless **Tapered Bushing** (shown above) provides longer shaft life and faster installation

Stainless steel shafts also available

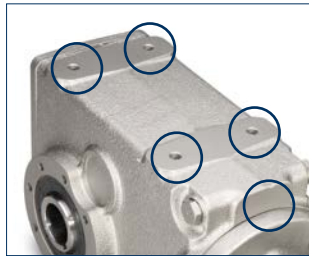
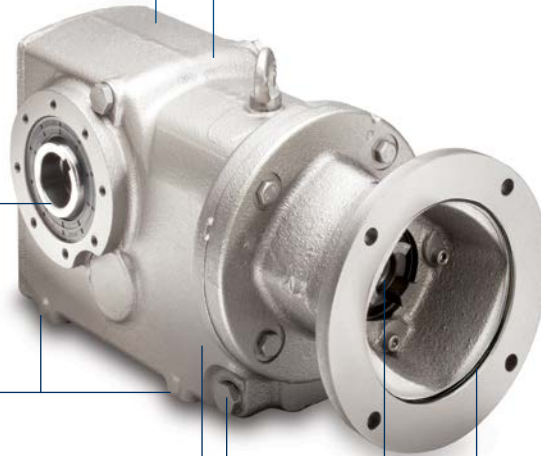
Unique Two-Tuff premium acrylic paint (standard)  
Washdown epoxy paint (optional)



### Energy Efficient Design

With efficiency of 98% per gear mesh, Series 2000 helical bevel reducers are ideal for use in applications with:

- continuous or high duty cycle operations
- high-ratio reduction
- limited access applications where long life is a necessity



Unique **Mounting Registers** allow for quick precision alignment

High-efficiency synthetic oil (Standard)

Larger diameter oil fill/drain holes for faster oil changes

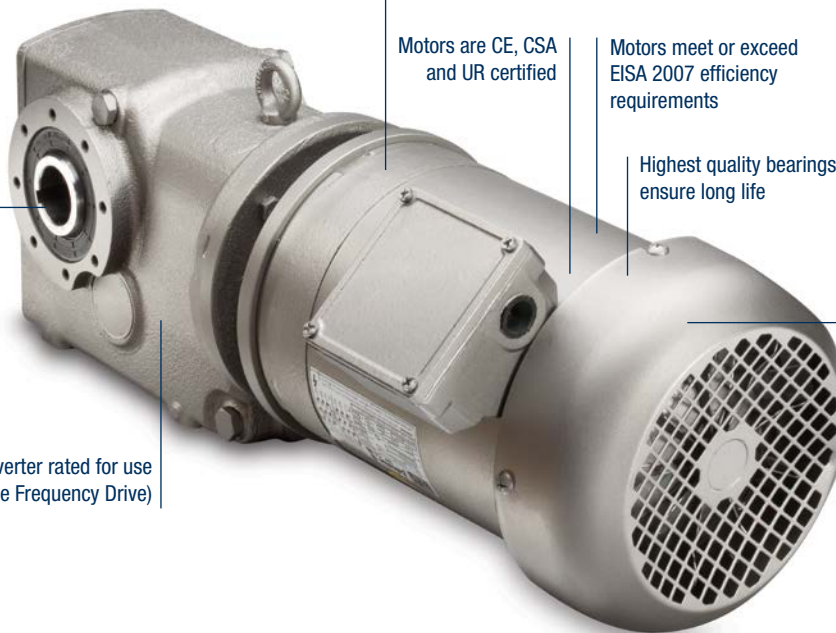
Integrated O-rings

NEMA or IEC C-Face motor input with 3-Jaw coupling



Projecting input shaft and stainless steel shafts available

## Integral Gear Motors



Optional output flange available on C-face or integral design models

Gear Motors are Inverter rated for use with a VFD (Variable Frequency Drive)

Class 1, Div 2, Groups B/C/D/T3C rated enclosure

Motors are CE, CSA and UR certified

Motors meet or exceed EISA 2007 efficiency requirements

Highest quality bearings ensure long life

Specially designed fans and fan covers provide quieter operation

## OUTPUT TORQUE COMPARISON

2033R Series													
Ratio	5.36	6.42	6.76	7.96	8.91	10.67	12.14	13.02	15.32	17.15	20.54	23.36	24.99
Output Torque Rating (lbf-in)	1,325	1,409	1,428	1,462	1,514	1,526	1,484	1,532	1,679	1,704	1,831	1,840	1,844
Improvement Over SEW	10%	11%	11%	10%	11%	9%	8%	9%	10%	10%	10%	9%	9%

2043R Series													
Ratio	5.62	6.58	7.36	8.63	9.06	10.56	11.77	12.19	13.65	15.99	16.80	19.58	21.81
Output Torque Rating (lbf-in)	2,149	2,301	2,414	2,371	2,431	2,539	2,539	3,326	3,385	3,504	3,512	3,534	3,549
Improvement Over SEW	12%	11%	12%	2%	1%	7%	6%	10%	10%	6%	8%	3%	3%

2063R Series													
Ratio	7.28	8.37	9.66	10.63	12.41	13.22	15.19	17.53	19.29	22.53	23.60	27.27	30.21
Output Torque Rating (lbf-in)	3,906	4,179	4,435	4,456	4,488	6,389	6,714	7,059	7,216	7,432	7,445	7,779	7,913
Improvement Over SEW	8%	11%	7%	3%	-1%	11%	11%	10%	11%	11%	9%	11%	12%

2073R Series													
Ratio	7.24	8.48	9.56	10.84	12.35	13.52	15.84	17.86	20.24	23.08	25.20	29.12	30.40
Output Torque Rating (lbf-in)	7,938	8,298	8,731	9,006	9,006	12,781	13,224	13,592	13,668	13,746	13,796	13,318	13,418
Improvement Over SEW	11%	9%	7%	6%	5%	10%	10%	9%	6%	3%	6%	0%	2%

2093R Series													
Ratio	7.54	8.71	10.42	11.99	13.85	16.56	18.96	22.37	24.74	27.90	30.81	34.22	38.29
Output Torque Rating (lbf-in)	17,257	24,667	27,706	35,584	37,646	38,187	38,591	39,078	39,371	39,717	40,000	40,297	39,250
Improvement Over SEW	10%	6%	11%	6%	0%	2%	5%	5%	7%	5%	7%	9%	8%

28.83	29.96	35.85	37.79	44.46	49.79	59.61	67.80	72.54	83.69	97.81	106.38
1,854	1,856	1,868	1,871	1,881	1,887	1,898	1,905	1,909	1,917	1,925	1,930
10%	6%	5%	10%	7%	7%	6%	8%	8%	7%	10%	9%

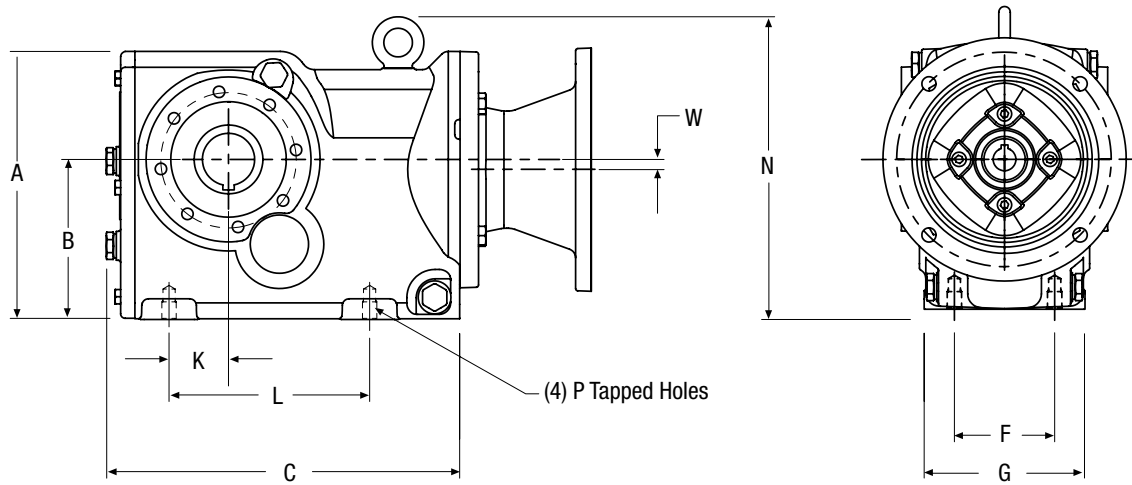
24.42	25.91	29.30	30.23	35.39	39.61	46.41	48.75	56.83	63.30	70.89	75.20	85.12	90.86	104.37	121.48	131.87
564	3,572	3,588	3,592	3,612	3,626	3,645	3,651	3,669	3,681	3,694	3,700	3,714	3,721	3,735	3,751	3,759
1%	2%	4%	10%	3%	2%	3%	4%	2%	7%	5%	9%	6%	6%	6%	6%	5%

35.61	38.39	44.32	48.77	56.97	59.67	68.95	76.37	90.04	101.43	108.03	123.54	143.20
7,565	7,546	7,579	7,601	7,635	7,651	7,674	7,696	7,724	7,746	7,751	7,774	7,796
7%	9%	5%	5%	6%	9%	7%	7%	6%	6%	6%	7%	10%

34.84	38.39	40.04	45.16	51.18	58.34	63.71	73.62	76.87	88.08	97.05	113.56	127.32	135.28	154.02	177.76	192.18
13,505	14,027	14,049	14,111	14,173	14,238	14,280	14,348	14,368	14,430	14,473	14,542	14,591	14,616	14,670	14,038	14,384
2%	8%	4%	3%	4%	4%	6%	6%	6%	7%	7%	9%	6%	9%	6%	9%	10%

41.87	47.93	56.55	62.55	70.54	77.89	86.52	96.80	105.13	123.40	139.49	152.36	176.05
40,861	41,234	41,686	41,958	42,281	42,459	41,517	42,392	41,435	41,750	42,155	42,315	37,398
8%	8%	10%	10%	11%	12%	10%	12%	9%	10%	12%	12%	-2%

**DIMENSIONAL COMPARISON**



Size	Brand	Model	A	B	C	G	F	L	K	P	W
30	Boston	2033R	6.40	3.94	8.46	4.01	2.36	4.61	1.38	M10	0.33
	SEW	KA37	6.46	3.94	8.27	3.94	2.36	4.61	1.38	M10	0.33
	Nord*	SK92672	6.50	3.94	11.02	6.14	4.72	5.12	1.38	0.43	-2.68
	Dodge	BF38 (flanged)	6.58	3.94	9.21	3.94	2.36	4.61	1.38	M10	0.37
40	Boston	2043R	7.37	4.41	9.71	4.42	2.76	5.51	1.57	M10	0.28
	SEW	KA47	7.28	4.41	9.57	4.33	2.76	5.51	1.57	M10	0.28
	Nord*	SK901	7.64	4.41	9.37	5.59	4.72	5.12	1.38	0.43	0.39
	Dodge	BF48 (flanged)	7.36	4.41	10.37	4.33	2.76	5.51	1.58	M10	0.43
60	Boston	2063R	8.91	5.51	11.12	5.12	3.46	5.98	1.65	M12	0.80
	SEW	KA67	8.90	5.51	10.79	5.12	3.46	5.98	1.65	M12	0.79
	Nord*	SK902	9.29	5.51	11.42	6.77	5.51	4.72	1.18	0.55	0.55
	Dodge	BF68 (flanged)	9.09	5.51	12.15	5.51	3.46	5.98	1.65	M12	0.26
70	Boston	2073R	11.25	7.09	12.91	6.06	4.02	6.69	1.89	M16	1.23
	SEW	KA77	11.26	7.09	12.28	6.06	4.02	6.69	1.89	M16	1.23
	Nord*	SK903	11.61	7.09	12.56	7.87	6.50	5.91	1.57	0.71	0.94
	Dodge	BF88 (flanged)	11.61	7.09	14.64	6.69	4.53	6.69	1.89	M16	0.79
90	Boston	2093R	16.14	10.43	17.56	9.35	6.30	9.77	3.27	M20	1.27
	SEW	KA97	16.30	10.43	17.13	8.90	6.30	9.77	3.27	M20	1.27
	Nord*	SK905	16.73	10.43	18.11	11.53	9.45	9.45	2.95	1.02	1.61
	Dodge	BF128 (flanged)	16.65	10.43	20.77	10.04	7.68	9.76	3.27	M20	0.79

Note: Nord does not have a 'bolt-up' model

**Interchange Guide**

**BASE PART NUMBERS**

2000 Series	SEW K Series	Model Description
RF2033R	KA37 AM	C-Face, Hollow Output Shaft
RF2043R	KA47 AM	C-Face, Hollow Output Shaft
RF2063R	KA67 AM	C-Face, Hollow Output Shaft
RF2073R	KA77 AM	C-Face, Hollow Output Shaft
RF2093R	KA97 AM	C-Face, Hollow Output Shaft
RF2033RFG	KAF37 AM	C-Face, Hollow Output Shaft, Output Flange (B5 type)
RF2043RFG	KAF47 AM	C-Face, Hollow Output Shaft, Output Flange (B5 type)
RF2063RFG	KAF67 AM	C-Face, Hollow Output Shaft, Output Flange (B5 type)
RF2073RFG	KAF77 AM	C-Face, Hollow Output Shaft, Output Flange (B5 type)
RF2093RFG	KAF97 AM	C-Face, Hollow Output Shaft, Output Flange (B5 type)
RF2033RTG	KAF37TA AM	C-Face, Hollow Output Shaft, Torque Arm (left)
RF2043RTG	KAF47TA AM	C-Face, Hollow Output Shaft, Torque Arm (left)
RF2063RTG	KAF67TA AM	C-Face, Hollow Output Shaft, Torque Arm (left)
RF2073RTG	KAF77TA AM	C-Face, Hollow Output Shaft, Torque Arm (left)
RF2093RTG	KAF97TA AM	C-Face, Hollow Output Shaft, Torque Arm (left)
RF2033RTJ	KAF37TB AM	C-Face, Hollow Output Shaft, Torque Arm (right)
RF2043RTJ	KAF47TB AM	C-Face, Hollow Output Shaft, Torque Arm (right)
RF2063RTJ	KAF67TB AM	C-Face, Hollow Output Shaft, Torque Arm (right)
RF2073RTJ	KAF77TB AM	C-Face, Hollow Output Shaft, Torque Arm (right)
RF2093RTJ	KAF97TB AM	C-Face, Hollow Output Shaft, Torque Arm (right)
RF2033R ... TP15	KT37 AM	C-Face, Hollow Output Shaft, Tapered
RF2043R ... TP20	KT47 AM	C-Face, Hollow Output Shaft, Tapered
RF2063R ... TP24	KT67 AM	C-Face, Hollow Output Shaft, Tapered
RF2073R ... TP28	KT77 AM	C-Face, Hollow Output Shaft, Tapered

**INPUT NEMA SUFFIX NUMBERS**

2000 Series	SEW K Series	Model Description
<b>Input Designation</b>		<b>AM Suffix</b>
B5	AM56	C-Face Nema size 56C
B7	AM145	C-Face Nema size 140TC
B9	AM182	C-Face Nema size 180TC

**MOTOR NUMBERS**

2000 Series	SEW K Series	Model Description
<b>Replace RF with:</b>	<b>Replace AM with:</b>	
GE	DT71C4	0.33 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GF	DT71D4	0.50 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GG	DT80K4	0.75 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GH	DT80N4	1.0 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GJ	DT90S4	1.5 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GK	DT90L4	2 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GL	DT100LS4	3 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GM	DT100L4	5 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GN	DV132S4	7.5 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GP	DV132M4	10 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz
GR	DV160M4	15 HP motor, TEFC, 208-230/460VAC, 3Phase, 60Hz

Note: Boston offers a Base Mounting Feet option comparable (but not dimensionally interchangeable) to the K Series. Boston does not have an interchange for the 57, 87, 107, 127, 157, 167 and 187 sizes. For the KH (shrink-disc model), Boston would recommend Tapered Hollow Output option. For the KV (spline output shaft model), Boston would specify a custom unit (outside of the standard product line). For the KZ (B14 output flange model), Boston would specify a custom unit (outside of the standard product line).

**EXAMPLES:**

SEW Reducer: **KA37 AM 56**

To add a motor, replace AM with **DT71C4**

SEW Gearmotor: **KA37 DT71C4 56**

Reducer: **RF 2033R B5**

To add a motor, replace RF with **GE**

Gearmotor: **GE 2033R B5**

## Boston Gear Facilities

### North America

701 Carrier Drive  
Charlotte, NC 28216 - USA  
704-588-5610

*Enclosed and Open Gearing,  
Electrical and Mechanical  
P.T. Components*

### Customer Service

1-800-825-6544

### For Application Support

1-800-816-5608

## The Brands of Altra Industrial Motion

### Couplings

**Ameridrives**  
[www.ameridrives.com](http://www.ameridrives.com)

**Bibby Turboflex**  
[www.bibbyturboflex.com](http://www.bibbyturboflex.com)

**Guardian Couplings**  
[www.guardiancouplings.com](http://www.guardiancouplings.com)

**Huco**  
[www.huco.com](http://www.huco.com)

**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Gearred Cam Limit Switches

**Stromag**  
[www.stromag.com](http://www.stromag.com)

### Electric Clutches & Brakes

**Inertia Dynamics**  
[www.idicb.com](http://www.idicb.com)

**Matrix**  
[www.matrix-international.com](http://www.matrix-international.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Warner Electric**  
[www.warnerelectric.com](http://www.warnerelectric.com)

### Linear Products

**Warner Linear**  
[www.warnerlinear.com](http://www.warnerlinear.com)

### Engineered Bearing Assemblies

**Kilian**  
[www.kilianbearings.com](http://www.kilianbearings.com)

### Heavy Duty Clutches & Brakes

**Industrial Clutch**  
[www.indclutch.com](http://www.indclutch.com)

**Twiflex**  
[www.twiflex.com](http://www.twiflex.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Belted Drives

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Gearing

**Bauer Gear Motor**  
[www.bauergears.com](http://www.bauergears.com)

**Boston Gear**  
[www.bostongear.com](http://www.bostongear.com)

**Delroyd Worm Gear**  
[www.delroyd.com](http://www.delroyd.com)

**Nuttall Gear**  
[www.nuttallgear.com](http://www.nuttallgear.com)

### Overrunning Clutches

**Formsprag Clutch**  
[www.formsprag.com](http://www.formsprag.com)

**Marland Clutch**  
[www.marland.com](http://www.marland.com)

**Stieber**  
[www.stieberclutch.com](http://www.stieberclutch.com)

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