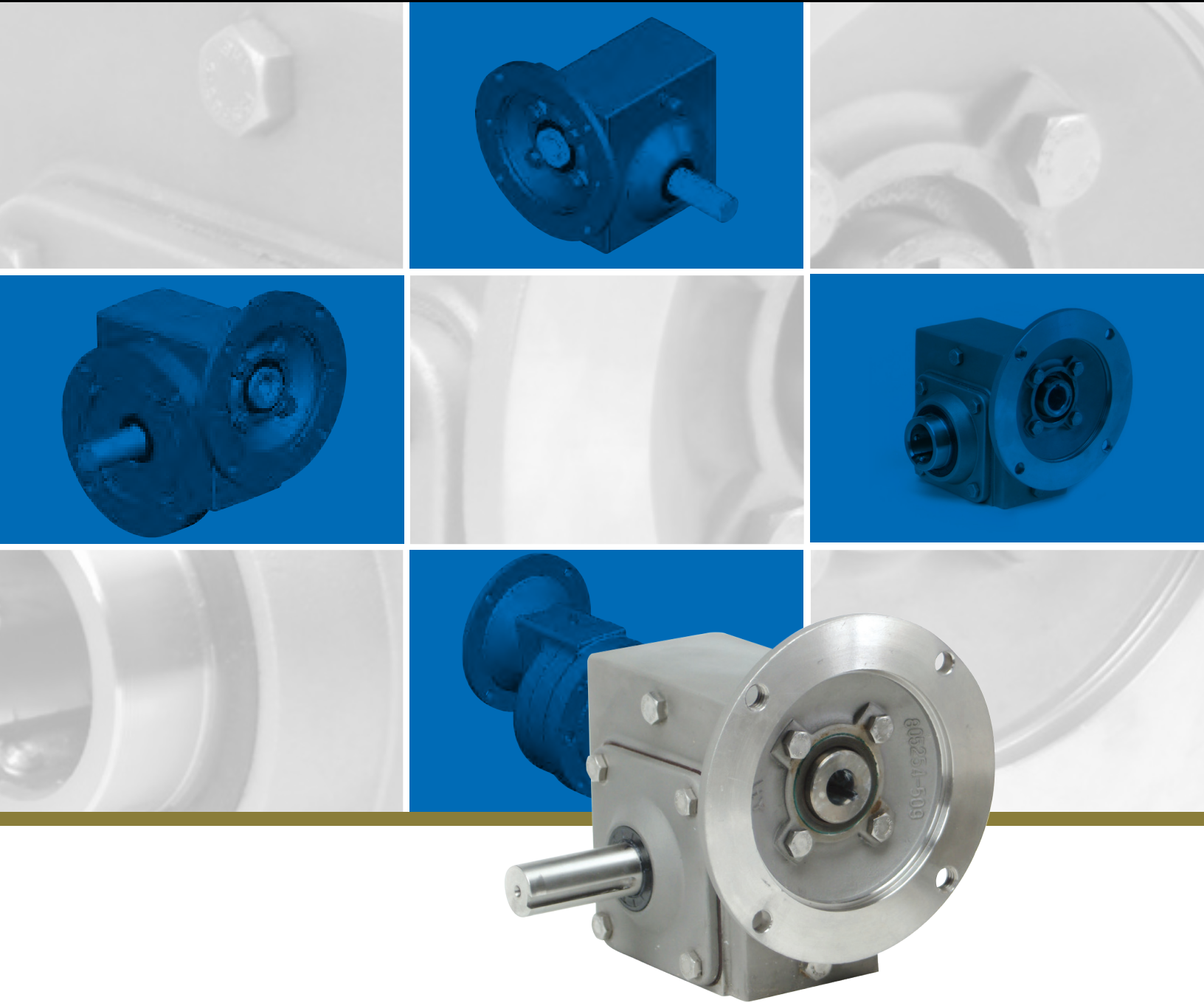




SE Stainless Steel Series

SE Stainless Reducers...the Solution for Severe Environmental Applications.

WINSMITH

SE Stainless Steel Worm Gear Speed Reducers

- Fights Contamination
- Constructed of Superior 316 Stainless Steel
- Engineered for Frequent and Harsh Wash Down Conditions
- Matte Finish Provides More Efficient Heat Dissipation
- Design Resists Rust, Contamination, and Retards the Growth of Bacteria
- Non-Wicking Gaskets on all Machined Surfaces Block Bacteria Ingress
- Internal O-Rings Used with the Non-Wicking Gaskets Provide Additional Contamination Barrier
- Optional Stainless Steel Vent Increases Seal Life and Lowers Operating Temperature
- Input and Output Bronze Bushing System Eases Motor and Shaft Disconnection
- Available in a Wide Variety of Product Configurations



SE Stainless Reducers...the Solution for Severe Environmental Applications.

WINSMITH

SE Stainless Steel Worm Gear Speed Reducers

Cast 316 stainless steel housings, covers, and input adaptors eliminate the possibility of corrosion

Supplied rubber gasket fits between motor flange and reducer adaptor (not shown)

Symmetric hollow shafts provide mounting flexibility

No. 4 polished pharmaceutical finish available

Nameplate etched into reducer housing

Optional top mounting holes available

Two tapped motor mounting holes for easy motor removal

Hollow output shaft puller slots ease reducer removal



Stainless Steel motor mounting bolts provided with each reducer

All worm-on-shaft bores are coated with NSF approved rust preventative

Filled with Mobil Glygoyle™ 460 NSF H1 food grade lubricant

2 Year Warranty



**WINSHIELD™
ADVANCED
SEALING
TECHNOLOGY
SYSTEM**

WINSHIELD incorporates an exclusive exclusionary barrier seal that works to exclude external contaminants like high-pressure wash down materials from entering our speed reducers. A precise network of barriers is used to keep contaminants out and lubrication in our speed reducers.

BARRIERS

- 1 Exterior dual lip seal provides a positive seal barrier between the outside atmosphere and the driven shaft
- 2 Seal cavity packed with food grade grease provides additional contamination barrier
- 3 Additional single lip seal rotating on a hardened surface inside the seal, provides a backup seal for the exterior and interior dual lip seals
- 4 Internal spring loaded dual lip seal is a barrier holding in the lubrication while providing a positive seal with the hardened surface of the rotating seal sleeve
- 5 Nitrile coated sleeve provides a static barrier between the hardened sealing surface and the driven shaft

SE Stainless Reducers...the Solution for Severe Environmental Applications.

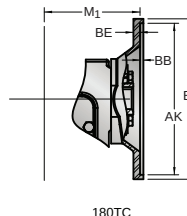
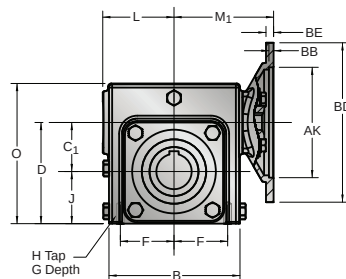
MDSA Model

Universal
Quill Input Adaptor
Hollow Output Shaft
Housing Mount

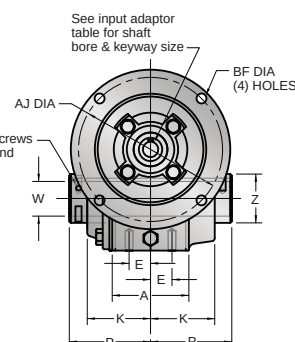


DLR Assembly

DIMENSIONS



180TC



MDSA Available in Double
Reduction Model:
MHDA MDSA



Input Adaptor Dimension Table

	56C	140TC	180TC
AJ	5.88	5.88	7.25
AK	4.50	4.50	8.50
BB	0.19	0.19	0.19
BD	6.50	6.50	9.00
BE	0.31	0.31	0.38
BF	0.406	0.406	0.531
KEYWAY	3/16 X 3/32		1/4 X 1/8
BORE**	0.6255	0.8755	1.1255

** Bore tolerance +.001 -.000

Speed Reducer Dimensions (in.)

Size	A	B	C ₁	D	E	F	G DEPTH	H TAP	J	K	L	M ₁ 56C 140TC	M ₁ 180TC	O	P	Z	OUTPUT SHAFT	
																	W*	KEYWAY
E20	3.13	5.38	2.000	4.13	0.88	2.18	0.63	3/8-16	2.13	2.63	3.40	4.06	NA	5.72	3.31	2.00	1.438	3/8 X 3/16
E26	3.63	7.23	2.625	5.75	1.13	2.44	0.69	1/2-13	3.13	2.76	4.39	5.38	5.38	7.96	3.50	2.50	1.688	3/8 X 3/16
E35	3.75	7.69	3.500	7.50	1.31	3.25	1.00	5/8-11	4.00	3.38	5.94	5.81	5.81	10.13	4.13	2.88	2.188	1/2 X 1/8

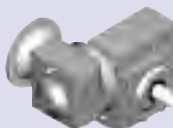
* Shaft diameter tolerances +.002 -.000

SE Stainless Steel Worm Gear Speed Reducer Horsepower and Torque Ratings

MECHANICAL HORSEPOWER AND TORQUE RATINGS⁽¹⁾

1750 Input RPM

1.0 Service Factor

			NOMINAL ⁽²⁾ RATIO	5:1	7.5:1	10:1	15:1	20:1	25:1	30:1	40:1
			NOMINAL ⁽²⁾ OUTPUT SPEED RPM	350	233	175	117	88	70	58	44
REDUCER											
	Single Worm	E20	HP	3.70	2.84	2.24	1.59	1.24	1.01	0.86	0.68
		SINGLE WORM	Torque	639	732	769	794	806	803	788	795
	Double Worm	E20	HP								
		DOUBLE WORM	Torque								
		E26	HP	7.70	5.93	4.82	3.42	2.64	2.17	1.80	1.42
		SINGLE WORM	Torque	1334	1533	1650	1724	1745	1758	1712	1737
	Helical Worm	E26	HP								
		DOUBLE WORM	Torque								
		E26	HP						2.61	2.26	2.00
		HELICAL WORM	Torque						2266	2343	2596
	Helical Worm	E35	HP	15.82	12.55	10.27	7.51	5.73	4.71	4.07	3.04
		SINGLE WORM	Torque	2738	3252	3515	3804	3821	3884	3943	3837
		E35	HP								
		DOUBLE WORM	Torque								
	Helical Worm	E35	HP						3.21	2.66	3.21
		HELICAL WORM	Torque						2728	2702	4100

⁽¹⁾ Continuous duty application may have a reduced thermal rating - Contact the factory for additional information concerning thermal limitations for your application.

⁽²⁾ For exact ratios and speeds refer to Winsmith SE Encore Catalog (PWS-19569).

Find the Solution to Your Application Problem with SE Stainless Steel Speed Reducers!

SE Stainless Steel Speed Reducers Quill Input Shaft Bushing Kits



1 Piece Bushing



2 Piece Bushing

MOTOR FLANGE (SHAFT DIAMETER)	REDUCER INPUT ADAPTOR (BORE SIZE)	BUSHING LENGTH	KEYWAY SIZE	TYPE	KIT #
56C (0.625)	140TC (0.875)	1.44	3/16 X 3/32	1 PIECE	WK9810170
140TC (0.875)	180TC (1.125)	2.00	3/16 X 3/32	2 PIECE	WK9810174

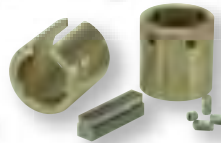
Hollow Output Shaft Bushing Kits



**Cast Bore Bushing Kit
TYPE (C)**
(2) Cast Bore Bushings



**Keyed Bushing Kit
TYPE (K)**
(1) Keyed Bushing
(1) Plain Bushing
(2) Drive Keys



**Slotted Bushing Kit
TYPE (S)**
(1) Slotted Bushing
(1) Plain Bushing
(1) Drive Key

HOLLOW SHAFT BUSHING CHART

SIZE	BUSHING I.D.	DRIVEN SHAFT O.D.	BUSHING LENGTH	DRIVEN SHAFT KEYWAY	KIT TYPE	KIT#
E20	0.630*		1.75	*	C	WK9850483
	0.750	3/4		3/16 X 3/32	K	WK9850638
	0.875	7/8		3/16 X 3/32	K	WK9850659
	1.000	1		1/4 X 1/8	K	WK9850468
	1.125	1-1/8		1/4 X 1/8	S*	WK9850660
	1.188	1-3/16		1/4 X 1/8	S*	WK9850625
	1.250	1-1/4		1/4 X 1/8	S*	WK9850469
1.438 STANDARD BORE - NO BUSHING REQUIRED**						
E26	0.880*		1.75	*	C	WK9850485
	1.000	1		1/4 X 1/8	K	WK9850627
	1.125	1-1/8		1/4 X 1/8	K	WK9877792
	1.188	1-3/16		1/4 X 1/8	S*	WK9850634
	1.438	1-7/16		3/8 X 3/16	S	WK9850472
	1.250	1-1/4		1/4 X 1/8	S*	WK9850479
	1.375	1-3/8		5/16 X 5/32	S*	WK9850664
	1.500	1-1/2	3/8 X 3/16		WK9850473	
1.688 STANDARD BORE - NO BUSHING REQUIRED**						
E35	1.000*		2.19	*	C	WK9850487
	1.250	1-1/4		1/4 X 1/8	K	WK9850582
	1.438	1-7/16		3/8 X 3/16	S*	WK9850482
	1.500	1-1/2		3/8 X 3/16	S*	WK9850639
	1.750	1-3/4		3/8 X 3/16	S*	WK9850656
	1.938	1-15/16		1/2 X 1/4	S	WK9850476
	2.000	2		1/2 X 1/4	S	WK9850477
2.188 STANDARD BORE - NO BUSHING REQUIRED**						

S* = Bushing uses a step key

* Rough bore size, bushing to be customer bored and keyed ** Bore tolerances +.000 +.002

* All keys are stainless steel

50:1	60:1	75:1	80:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	360:1
35	29	23	21	19	18	14	12	10	9	7	6	5
0.56 791	0.41 656		0.22 437		0.16 355							
0.73 1166		0.36 845			0.30 930		0.20 881		0.15 900		0.12 899	
1.18 1748	0.92 1556		0.49 979		0.34 767							
1.49 2391		0.83 1985			0.62 1941		0.46 2076		0.35 2038		0.27 2132	
1.15 1954	0.92 1860	0.79 1988		0.67 2006	0.59 1944	0.50 1975	0.42 2028	0.36 2063	0.34 2142	0.26 2035	0.20 1853	0.16 1715
2.44 3753	2.00 3573		1.12 2403		0.67 1666							
3.11 4992		2.88 6891			2.12 6708		1.65 7461		1.10 6558		0.95 7763	
3.22 5419	2.24 4494	2.76 6906		2.37 7088	2.03 6728	1.51 5952	1.46 7092	1.18 6787	1.06 6770	0.67 5196	0.56 5181	0.40 4339

Find the Solution to Your Application Problem with SE Stainless Steel Speed Reducers!

MDDA Model Worm Gear Ratio Multiplier

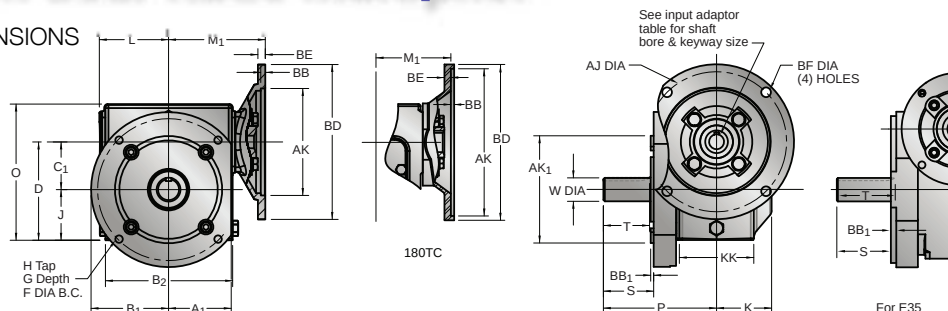
Quill Input Adaptor
Solid Output Shaft
Flange Mount – NEMA

R and L Assemblies Available
4.50 inch diameter register *



MDDA Available in
Double Reduction
Model: MDDA MDNA

DIMENSIONS



Input Adaptor Dimension Table

	56C	140TC	180TC
AJ	5.88	5.88	7.25
AK	4.50	4.50	8.50
BB	0.19	0.19	0.19
BD	6.50	6.50	9.00
BE	0.31	0.31	0.38
BF	0.406	0.406	0.531
KEYWAY	3/16 X 3/32		1/4 X 1/8
BORE**	0.6255	0.8755	1.1255

** Bore tolerance +.001 -.000

Optional Output Shaft

Size	P	OPTIONAL OUTPUT SHAFT			
		W*	S	T	KEYWAY
E20	4.75	1.000	2.13	2.31	1/4 X 1/8
E20	4.44	0.625	1.81	1.81	3/16 X 3/32
E26	5.50	1.000	2.13	2.63	1/4 X 1/8
E35	7.00	1.375	3.13	3.38	5/16 X 5/32

Speed Reducer Dimensions (in.)

Size	A ₁	AK ₁ *	B ₁	B ₂	BB ₁	C ₁	D	F DIA	G DEPTH	H TAP	J	K	L	M ₁ 56C 140TC	M ₁ 180TC	O	P	OUTPUT SHAFT			
																		W*	S	T	KEYWAY
E20	2.63	4.500	3.25	5.38	0.13	2.000	4.13	5.88	0.56	3/8-16	2.13	2.33	3.40	4.06	NA	5.72	4.50	0.875	1.88	2.00	3/16 X 3/32
E26	3.25	4.500	3.25	7.25	0.13	2.625	5.75	5.88	0.56	3/8-16	3.13	2.76	4.39	5.38	5.38	7.96	5.50	0.875	2.13	2.25	3/16 X 3/32
E35	4.13	8.500	4.50	7.69	0.31	3.500	7.50	7.25	0.75	1/2-13	4.00	3.25	5.94	5.81	5.81	10.13	7.00	1.750	3.13	3.63	3/8 X 3/16

* Shaft diameter tolerances +.000 -.001

■ Register diameter tolerance +.000 -.003

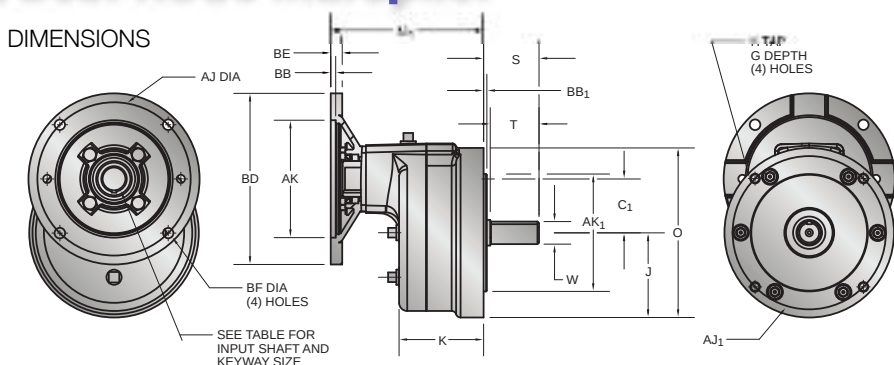
MHDA Model Helical Gear Ratio Multiplier

Quill Input Flange
Solid Output Shaft
Flange Mount – NEMA

4.50 inch diameter register *



DIMENSIONS



MHDA Available in Double
Reduction Model:
MHDA MDSA



Ratio Multiplier Ratings

RATIO (NOMINAL)	INPUT RPM	CENTER DISTANCE	
		2.06	
		INPUT HP	OUTPUT TORQUE
5	1750	3.22	579
	1160	2.21	601
6	1750	2.67	575
	1160	1.83	597

Ratio Multiplier Dimensions (in.)

Size	C ₁	H	G DEPTH	J	K	M ₁ 56C 140TC	O	OUTPUT ADAPTOR							
								W*	S	T	KEYWAY	AJ ₁	AK ₁	B ₁	lb.*
206	2.062	3/8-16	0.75	3.25	3.25	5.75	6.50	0.875	2.13	1.88	3/16 X 3/32	5.875	4.50	0.125	25

* Shaft diameter tolerances +.000 -.001

■ Approximate shipping weights

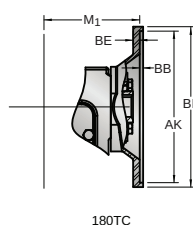
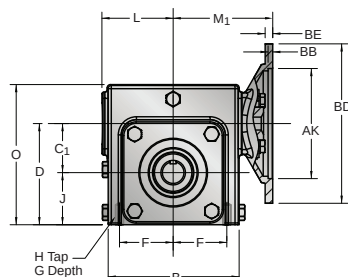
Peerless Winsmith... Producing Superior Gearing Products for Over 100 Years.

MDNA Model

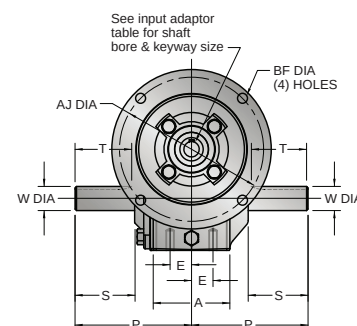
Universal
Quill Input Adaptor
Solid Output Shaft
Housing Mount
L, LR, and R Assemblies Available



DIMENSIONS



MDNA Available in Double
Reduction Model:
MDDA MDNA



Input Adaptor Dimension Table

	56C	140TC	180TC
AJ	5.88	5.88	7.25
AK	4.50	4.50	8.50
BB	0.19	0.19	0.19
BD	6.50	6.50	9.00
BE	0.31	0.31	0.38
BF	0.406	0.406	0.531
KEYWAY	3/16 X 3/32		1/4 X 1/8
BORE**	0.6255	0.8755	1.1255

** Bore tolerance +.001 -.000

Speed Reducer Dimensions (in.)

Size	A	B	C ₁	D	E	F	G DEPTH	H TAP	J	L	M ₁ 56C 140TC	M ₁ 180TC	O	P	OUTPUT SHAFT			
															W*	S	T	KEYWAY
E20	3.13	5.38	2.000	4.13	0.88	2.18	0.63	3/8-16	2.13	3.40	4.06	NA	5.72	4.75	1.000	2.44	2.31	1/4 X 1/8
E26	3.63	7.23	2.625	5.75	1.13	2.44	0.69	1/2-13	3.13	4.39	5.38	5.38	7.96	5.50	1.250	2.74	2.63	1/4 X 1/8
E35	3.75	7.69	3.500	7.50	1.31	3.25	1.00	5/8-11	4.00	5.94	5.81	5.81	10.13	7.00	1.750	3.75	3.63	3/8 X 3/16

* Shaft diameter tolerances +.000 -.001

SE SPEED REDUCERS

SE Encore



The new SE Encore™ series of worm gear speed reducers provides a wide variety of industrial applications with incomparable gearing performance. Developed with more performance features and up to 40% higher output torque ratings, the SE Encore series affords design engineers unbounded shafting and mounting options, motor connection options, and gear configurations.

Unlike other speed reducers, it operates sealed or with an optional on/off vent and is backed by Winsmith's two year warranty. The SE Encore series features the WinGuard™ epoxy coating system that withstands everyday abuse and harsh duty conditions such as outdoor service or wash downs. Additionally, SE Encore reducers utilize premium, H1 food-grade Mobil Glygoyle™ 460 synthetic lubricant that eliminates the need for oil changes during normal operation.

Winsmith's SE Encore Series sets the benchmark for unique, powerful performance!

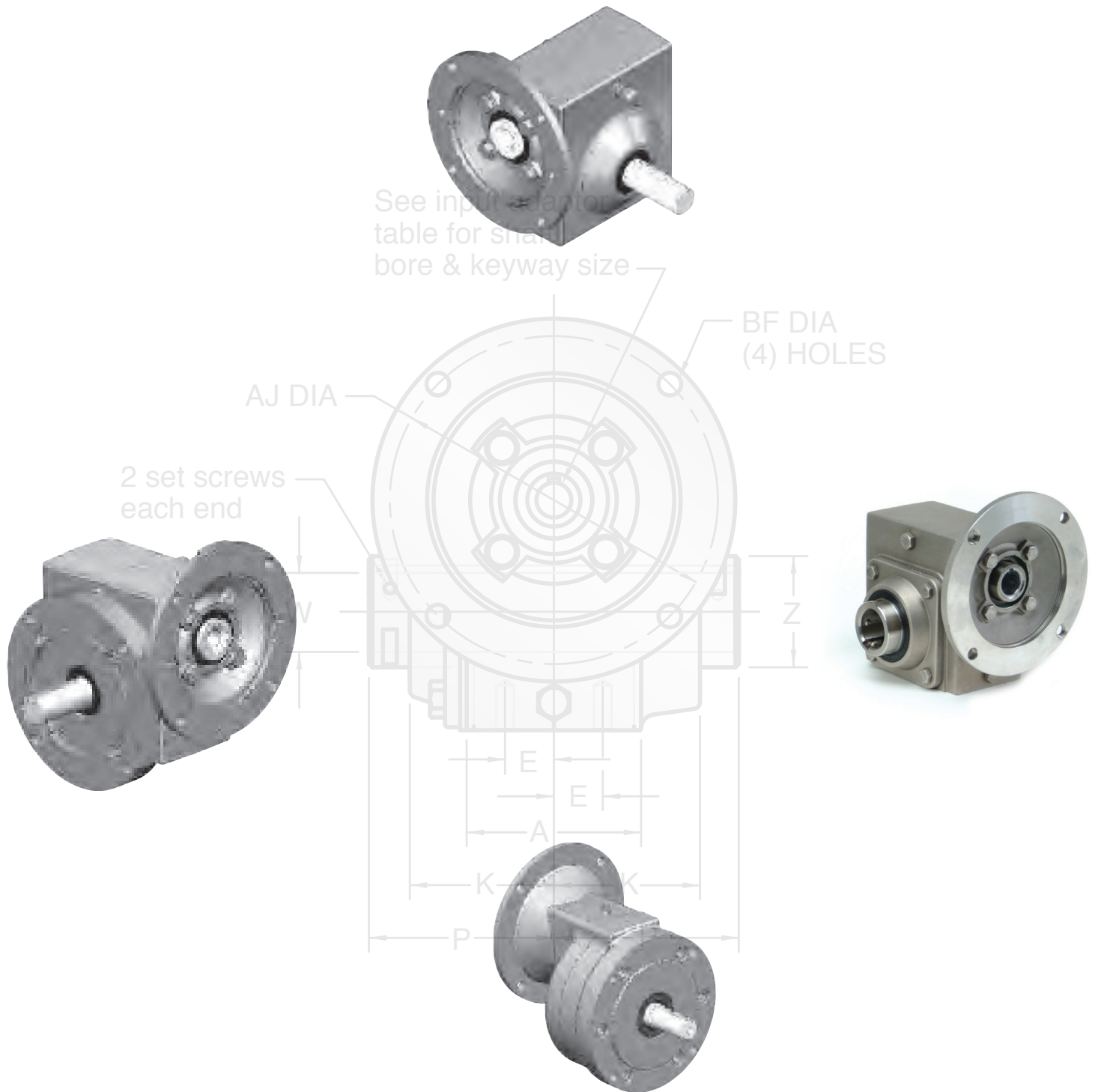
SE Maximizer Plus SE Stainless Steel

SE Speed Reducers deliver two advanced levels of protection over and above the standard SE Encore. The SE Maximizer Plus is designed for wash down environments featuring our white Winguard Epoxy Coating System and stainless output shaft. The premium level SE Stainless Steel reducer is designed for severe environments where no rust is tolerated. Both SE designs ensure long, contaminate free performance with minimal maintenance. All are factory filled with Mobil Glygoyle™ 460 food grade synthetic (PAG) lubricant.

INDUSTRIES SERVED

- Food Processing and Handling
- Beef
- Poultry Meat and Eggs
- Pork
- Seafood
- Produce and Vegetables
- Baking
- Cereal and Grains
- Snack Food
- Beverage
- Pharmaceutical
- Chemical/Petroleum Processing
- Carwash
- Mixer/Pump Drives

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