

WINSMITH



WORM GEAR SPEED REDUCERS

SE Encore... Unique, Powerful Performance



UNIQUE OPEN-CLOSE VENT allows flexibility for the reducer to be properly applied indoors or out, in wet, dusty, or dirty environments.

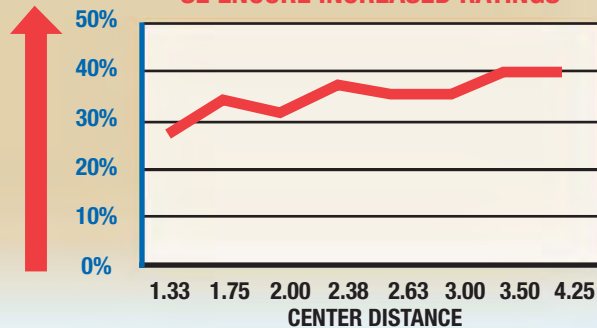


POWERFUL NEW RATINGS:

- SE Encore proprietary gear design
- Mobil Glygoyle 460 lubricant* filled to the proper level
- Recess action gearing for higher efficiency
- High pressure angle for higher efficiency

*Glygoyle is a registered trademark of Exxon Mobil Corporation or one of its subsidiaries.

SE ENCORE INCREASED RATINGS



NEW PERFORMANCE STANDARD with WinGuard™ Epoxy Coating System is tested and proven to be tough, durable, chip, nick, scratch resistant and suitable for high-pressure wash down and outdoor applications. The WinGuard Epoxy Coating System withstands over 1,000 hours of salt spray testing and resists severe duty environmental conditions.



RELIABLE LONG LIFE OPERATION

- All covers are sealed with O-rings
- All seal surfaces are plunge ground
- All input seals on quill input adaptors use higher temperature rated seals for longer life
- All reducers are 100% leak tested with a state of the art mass flow computerized system
- An internal vent shield is located above the worm and blocks oil from spraying directly toward the vent location
- Square male plugs for the vent, level, and drain locations allow easy removal
- Anti-seize compound installed in the worm bore to minimize fretting corrosion
- Push-off holes are threaded into a reinforced section of the motor flange for ease of removal
- Puller slots are located on both sides of all hollow output shafts for easy reducer removal



SE Encore... Worm Gear Speed Reducer Solutions



MULTIMOUNT

Immediate Availability Solutions

- WinGuard Black Epoxy Coating System
- Quill Input Adaptor
- Solid Output Shaft(s) (Standard Diameter)
- Hollow Output Shafts (Max Standard Bore)
- Bushing Kits
- Base Kits
- Bracket Kits
- Helical or Worm Gear Ratio Multiplier

INTEGRAL

Assembled And Ready To Use Solutions

- WinGuard Black or White Epoxy Coating System
- Quill or Coupling Input Adaptor or Solid Input Shaft
- Solid Output Shaft(s)
- Hollow Output Shafts (Bored to Size or with Bushing)
- Base Attached
- Double Reduction Worm or Helical Primary



MODIFIED

Engineered Special Solutions

- WinGuard Black or White Epoxy Coating System
- Special Input Shafts
- Special Input Quill and Coupling Adaptors
- Special Solid Output Shafts
- Special Hollow Output Shafts (Bored to Size or with Bushing)
- Special Ratios
- Special Bases and Brackets
- Special Output Flanges

SE ENCORE AVAILABILITY

MULTIMOUNT 24 hours!

INTEGRAL 1 Day to 4 Weeks

MODIFIED 1 to 8 Weeks

0 1 2 3 4 5 6 1 1 2 3 4 5 6 2 1 2 3 4 5 6 3 1 2 3 4 5 6 4 1 2 3 4 5 6 5 1 2 3 4 5 6 6 1 2 3 4 5 6 7 1 2 3 4 5 6 8



2D DRAWINGS & 3D MODELS
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SE Encore... Nomenclature

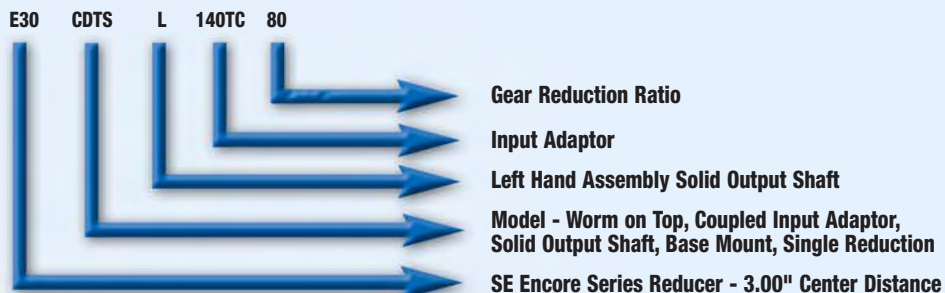
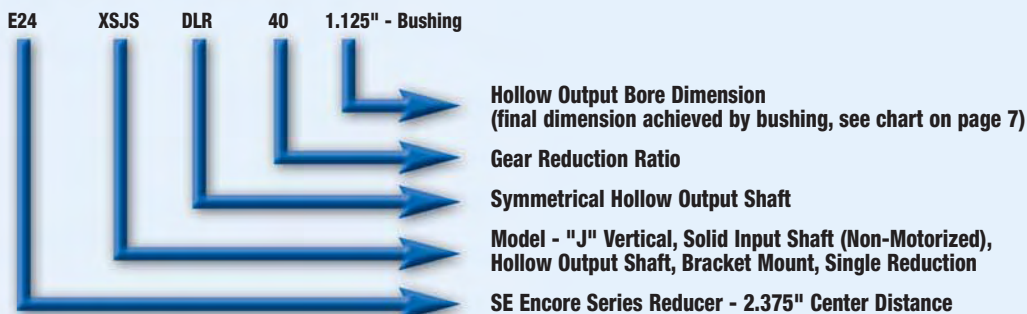


OVERVIEW

SIZE (Center Distance)	MODEL	ASSEMBLY DESIGNATION	INPUT ADAPTOR	STANDARD HOLLOW OUTPUT BORE	SINGLE REDUCTION RATIO*	DOUBLE REDUCTION RATIO*		
E13 - 1.330"	SOLID OUTPUT SHAFT MODEL EXAMPLES		Solid Output	42C	E17 - 1.000"	4	38	500
E17 - 1.750"	XDNS - Solid Input, Solid Output, Housing Mount, Single Reduction	L - Left	56C	E20 - 1.438"	5	50	750	
E20 - 2.000"	MDNS - Quill Input Adaptor, Solid Output, Housing Mount, Single Reduction	R - Right	140TC	E24 - 1.500"	7.5	60	1000	
E24 - 2.375"	CDNS - Coupled Input Adaptor, Solid Output, Housing Mount, Single Reduction	LR - Left & Right	180TC	E26 - 1.688"	10	75	1500	
E26 - 2.625"			210TC	E30 - 1.938"	15	90	2000	
E30 - 3.000"	XDTS - Solid Input, Solid Output, Base Mount, Single Reduction	Hollow Output		E35 - 2.188"	20	100	3000	
E35 - 3.500"	MDTS - Quill Input Adaptor, Solid Output, Base Mount, Single Reduction	DLR - Left & Right		E43 - 2.750"	25	120	3600	
E43 - 4.250"	CDTS - Coupled Input Adaptor, Solid Output, Base Mount, Single Reduction				30	150	4000	
	HOLLOW OUTPUT SHAFT MODEL EXAMPLES				40	180	5000	
	XDSS - Solid Input, Hollow Output, Housing Mount, Single Reduction				50	200	6000	
	MDSS - Quill Input Adaptor, Hollow Output, Housing Mount, Single Reduction				60	250	8000	
	CDSS - Coupled Input Adaptor, Hollow Output, Housing Mount, Single Reduction				80		10000	
	XSFS - Solid Input, Hollow Output, Flange Mount, Single Reduction				100			
	MSFS - Quill Input Adaptor, Hollow Output, Flange Mount, Single Reduction							
	CSFS - Coupled Input Adaptor, Hollow Output, Flange Mount, Single Reduction							

* Nominal ratio. For exact ratio see ratings tables.

EXAMPLES



SE Encore... Quick Select Tables



REDUCER SIZE AND TORQUE (lbf-in.) AT 1750 RPM INPUT

1.00 SERVICE FACTOR

OUTPUT RPM	RATIO		INPUT HORSEPOWER										
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00	7.50	10.00
438	4	SIZE			E13	E13	E13	E17	E17	E20	E26	E30	E35
		TORQUE			65	98	131	198	264	400	672	1017	1362
350	5	SIZE			E13	E13	E13	E17	E17	E20	E24	E26	E30
		TORQUE			86	128	171	258	343	518	863	1299	1735
233	7.5	SIZE		E13	E13	E13	E13	E17	E17	E24	E26	E30	E35
		TORQUE		84	127	190	253	382	510	772	1293	1949	2591
175	10	SIZE		E13	E13	E13	E17	E17	E20	E24	E30	E35	E35
		TORQUE		109	165	248	338	507	687	1021	1722	2567	3423
117	15	SIZE		E13	E13	E17	E17	E20	E24	E26	E30	E35	E43
		TORQUE		157	238	370	494	749	1003	1512	2542	3799	5003
88	20	SIZE	E13	E13	E17	E17	E20	E24	E24	E30	E35	E43	
		TORQUE	153	202	321	483	650	983	1311	2009	3334	4918	
70	25	SIZE	E13	E13	E17	E20	E20	E24	E26	E30	E43	E43	
		TORQUE	185	245	391	596	795	1197	1620	2478	3987	5981	
58	30	SIZE	E13	E13	E17	E20	E24	E26	E30	E35	E43		
		TORQUE	209	276	452	687	938	1427	1937	2906	4698		
44	40	SIZE	E13	E17	E17	E24	E24	E30	E30	E35			
		TORQUE	256	383	580	902	1203	1887	2516	3787			
35	50	SIZE	E17	E17	E20	E24	E26	E30	E35	E43			
		TORQUE	340	449	706	1083	1481	2305	3076	4433			
29	60	SIZE	E17	E20	E24	E26	E30	E35	E35	E43			
		TORQUE	386	525	810	1268	1766	2680	3573	5170			
22	80	SIZE	E24	E24	E26	E35	E35	E43					
		TORQUE	484	638	979	1609	2146	3255					
17.5	100	SIZE	E24	E26	E35	E43	E43						
		TORQUE	533	744	1243	1913	2551						

INPUT HORSEPOWER AND TORQUE RATINGS (lbf-in.)

1.00 SERVICE FACTOR

REDUCER SIZE	RATIO	4	5	7.5	10	15	20	25	30	40	50	60	80	100	
	OUTPUT RPM	438	350	233	175	117	88	70	58	44	35	29	21	18	
RATINGS AT 1750 RPM INPUT															
E13	HP	SEE THE SE ENCORE CATALOG	SEE THE SE ENCORE CATALOG	1.39	SEE THE SE ENCORE CATALOG	0.86	0.62	0.42	0.41	0.35	0.27	0.17	0.15	SEE THE SE ENCORE CATALOG	SEE THE SE ENCORE CATALOG
	Torque			238		284	295	257	304	293	276	213	202		
E17	HP			2.69		1.64	1.15	0.94	0.70	0.66	0.52	0.41	0.27		
	Torque			462		554	568	604	547	596	603	558	417		
E20	HP			3.70		2.24	1.59	1.24	1.01	0.86	0.68	0.56	0.41		
	Torque			639		769	794	806	803	788	795	791	656		
E24	HP			5.89		3.67	2.71	2.11	1.61	1.45	1.11	0.92	0.70		
	Torque			1017		1249	1359	1383	1285	1360	1335	1329	1134		
E26	HP			7.70		4.82	3.42	2.64	2.17	1.80	1.42	1.18	0.92		
	Torque			1334		1650	1724	1745	1758	1712	1737	1748	1556		
E30	HP			10.87		7.11	5.07	3.95	3.24	2.67	2.08	1.72	1.72		
	Torque			1886		2448	2578	2645	2676	2586	2617	2643	2033		
E35	HP			15.82		10.27	7.51	5.73	4.71	4.07	3.04	2.44	2.00		
	Torque			2738		3515	3804	3821	3884	3943	3837	3753	3573		
E43	HP	25.16	15.84	11.63	9.16	7.50	6.40	4.94	3.96	3.23					
	Torque	4382	5400	5819	6007	5981	6013	6005	5852	5566					

Mechanical ratings shaded above exceed speed reducer thermal limitations under continuous duty conditions. Contact Winsmith for full information on continuous duty thermal limit ratings.

All ratings are based on the use of Mobil Glygoyle 460 Lubricant.

For complete ratings and information regarding the following ratios 4:1, 7.5:1, 80:1 & 100:1; visit Winsmith's website.



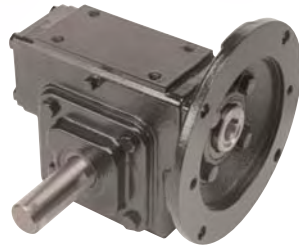
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MDNS Model Information



Universal Quill Input Adaptor Solid Output Shaft Housing Mount



L Assembly

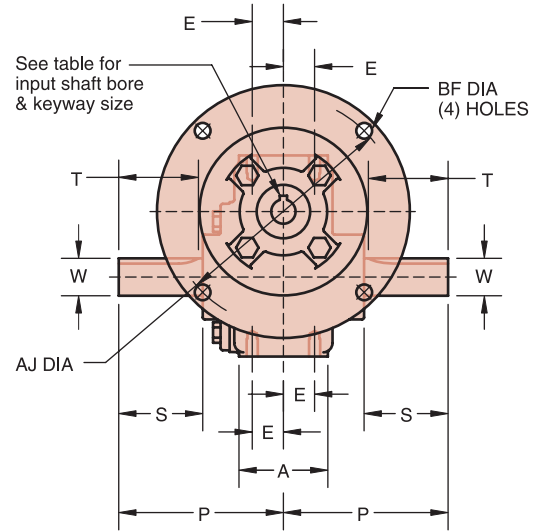
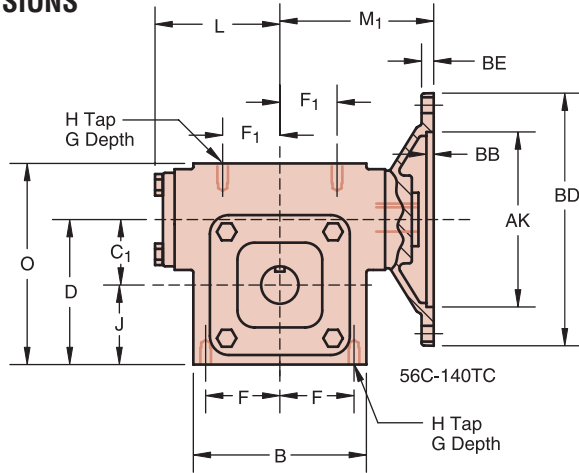


LR Assembly



R Assembly

DIMENSIONS



FRAME NO.	56C	140TC	180TC	210TC
AJ	5.88	5.88	7.25	7.25
AK	4.50	4.50	8.50	8.50
BB	.19	.19	.19	.19
BD	6.50	6.50	9.00	9.00
BE	.31	.31	.38	.38
BF	.406	.406	.531	.531
KEYWAY	3/16 X 3/32		1/4 X 1/8	5/16 X 5/32
BORE ^{+0.001} / _{-.000}	.6255	.8755	1.1255	1.3755

SPEED REDUCER DIMENSIONS (in.)

Size	A	B	C ₁	D	E	F	F ₁	G DEPTH	G ₁ DEPTH	H TAP	J	L	M ₁ 56C 140TC	M ₁ 180TC	M ₁ 210TC	O	P	OUTPUT SHAFT			lb.*	
																		W*	S	T		KEYWAY
E13	2.00	3.88	1.333	3.08	.69	1.56	1.19	.56	.56	5/16-18	1.75	2.83	3.63*	NA	NA	4.33	4.00	.750	2.06	1.88	3/16 X 3/32	18
E17	2.38	4.63	1.750	3.88	.88	1.94	1.69	.63	.56	3/8-16	2.13	3.44	4.06	NA	NA	5.38	4.75	1.000	2.56	2.31	1/4 X 1/8	23
E20	2.38	5.25	2.000	4.13	.88	2.19	1.69	.63	.56	3/8-16	2.13	3.44	4.06	NA	NA	5.63	4.75	1.000	2.56	2.31	1/4 X 1/8	26
E24	3.13	5.38	2.375	5.25	1.13	2.19	2.19	.63	.57	1/2-13	2.88	4.50	5.38	5.38	NA	7.25	5.50	1.250	2.81	2.63	1/4 X 1/8	44
E26	3.13	5.88	2.625	5.75	1.13	2.44	2.44	.69	.69	1/2-13	3.13	4.50	5.38	5.38	NA	7.88	5.50	1.250	2.81	2.63	1/4 X 1/8	46
E30	3.50	6.62	3.000	6.50	1.31	2.75	2.75	.75	.75	1/2-13	3.50	4.63	5.56	5.56	NA	9.00	5.88	1.375	2.88	2.75	5/16 X 5/32	60
E35	3.75	7.69	3.500	7.50	1.31	3.25	3.25	1.00	1.00	5/8-11	4.00	5.46	5.81	5.81	NA	10.13	7.00	1.750	3.75	3.63	3/8 X 3/16	84
E43	4.38	8.75	4.250	8.63	1.63	3.75	3.75	1.00	1.00	5/8-11	4.38	6.28	6.63	6.63	6.63	11.50	8.00	2.000	4.38	4.19	1/2 X 1/4	15

* Shaft diameter tolerances +.000 -.001

▲ 56C adaptor only

■ Approximate shipping weights



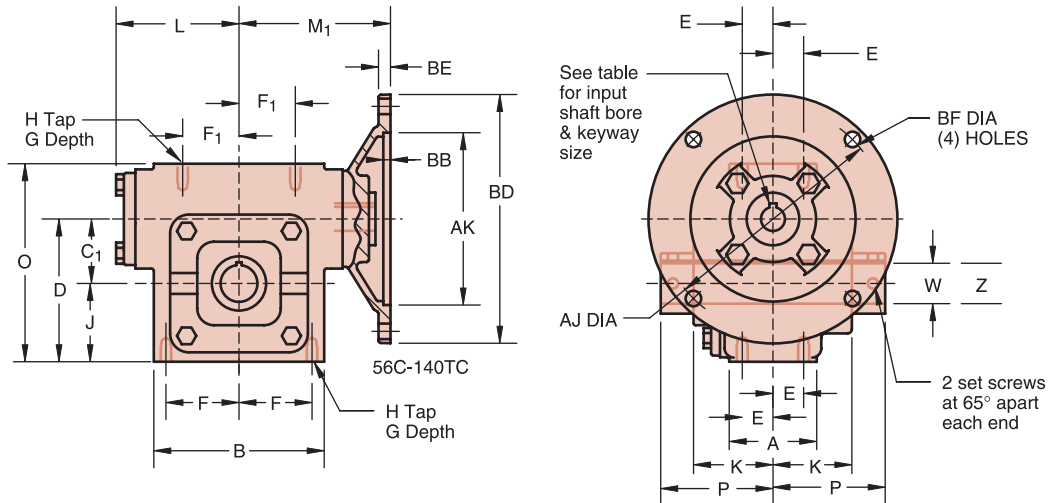
MDSS Model Information

**Universal
Quill Input Adaptor
Hollow Output Shaft
Housing Mount**

DLR Assembly



DIMENSIONS



FRAME NO.	56C	140TC	180TC	210TC
AJ	5.88	5.88	7.25	7.25
AK	4.50	4.50	8.50	8.50
BB	.19	.19	.19	.19
BD	6.50	6.50	9.00	9.00
BE	.31	.31	.38	.38
BF	.406	.406	.531	.531
KEYWAY	3/16 X 3/32		1/4 X 1/8	5/16 X 5/32
BORE ^{+0.001} / _{-.000}	.6255	.8755	1.1255	1.3755

HOLLOW OUTPUT SHAFT BORES (S) STANDARD BORE (B) BUSHING

W**	KEYWAY	E17	E20	E24	E26	E30	E35	E43
.625	5/8	3/16 X 3/32	B					
.750	3/4	3/16 X 3/32	B					
.875	7/8	3/16 X 3/32	B					
1.000	1	1/4 X 1/8	S	B	B	B		
1.125	1-1/8	1/4 X 1/8	B	B	B			
1.188	1-3/16	1/4 X 1/8	B	B	B			
1.250	1-1/4	1/4 X 1/8	B	B	B	B	B	
1.375	1-3/8	5/16 X 5/32		B	B	B		
*1.438	1-7/16	3/8 X 3/16	S	B	B	B	B	
1.500	1-1/2	3/8 X 3/16		S	B	B	B	B
1.625	1-5/8	3/8 X 3/16						
1.688	1-11/16	3/8 X 3/16			S	B		
1.750	1-3/4	3/8 X 3/16				B	B	B
1.875	1-7/8	1/2 X 1/4						B
*1.938	1-15/16	1/2 X 1/4				S	B	B
2.000	2	1/2 X 1/4					B	B
*2.188	2-3/16	1/2 X 1/4					S	B
2.250	2-1/4	1/2 X 1/4						B
2.438	2-7/16	5/8 X 5/16						B
2.750	2-3/4	5/8 X 5/16						S

**Bore tolerances +.000+.002
Two puller slots opposed on all hollow output shafts
• Bore size 1.438 on size E20: keyway is 3/8 x 1/8
• Bore size 1.938 on size E30: keyway is 1/2 x 3/16
• Bore size 2.188 on size E35: keyway is 1/2 x 1/8

SPEED REDUCER DIMENSIONS (in.)

Size	A	B	C ₁	D	E	F	F ₁	G DEPTH	G ₁ DEPTH	H TAP	J	K	L	M ₁ 56C 140TC	M ₁ 180TC	M ₁ 210TC	O	P	Z	lb.*
E17	2.38	4.63	1.750	3.88	.88	1.94	1.69	.63	.56	3/8-16	2.13	2.44	3.44	4.06	NA	NA	5.38	3.13	1.49	25
E20	2.38	5.25	2.000	4.13	.88	2.19	1.69	.63	.56	3/8-16	2.13	2.63	3.44	4.06	NA	NA	5.63	3.31	2.00	30
E24	3.13	5.38	2.375	5.25	1.13	2.19	2.19	.63	.57	1/2-13	2.88	2.75	4.50	5.38	5.38	NA	7.25	3.44	2.25	47
E26	3.13	5.88	2.625	5.75	1.13	2.44	2.44	.69	.69	1/2-13	3.13	2.81	4.50	5.38	5.38	NA	7.88	3.50	2.50	52
E30	3.50	6.62	3.000	6.50	1.31	2.75	2.75	.75	.75	1/2-13	3.50	3.00	4.63	5.56	5.56	NA	9.00	3.69	2.63	68
E35	3.75	7.69	3.500	7.50	1.31	3.25	3.25	1.00	1.00	5/8-11	4.00	3.38	5.46	5.81	5.81	NA	10.13	4.13	2.87	90
E43	4.38	8.75	4.250	8.63	1.63	3.75	3.75	1.00	1.00	5/8-11	4.38	3.63	6.28	6.63	6.63	6.63	11.50	4.38	3.88	183

* Approximate shipping weights



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