

Worm Gear Ratio Multiplier

The Worm Gear Ratio Multiplier features a quill input adaptor along with a machined register output flange and shaft that duplicate NEMA C face flange/shaft dimensions. The following combinations are available:

- Sizes E13 and E17 are available with NEMA 56C output flange/shaft dimensions and NEMA 56C or 140TC input adaptor dimensions.*
- Sizes E17, E20, E24, and E26 are available with NEMA 140TC output flange/shaft dimensions and NEMA 56C, 140TC, or 180TC input adaptor dimensions.*
- Register diameter is machined to a NEMA tolerance of 0.003 inches, providing a precision interface with the driven equipment, which can be very useful especially in motion control applications.

- Available in 5, 10, 15, 20, 25, 30, 40, 50, and 60 ratios and configurable as either a left (L) or a right (R) assembly.
- Completely self-contained ratio multiplier and includes an open-close vent, Mobil Glygoyle 460 lubricant, and the WinGuard Epoxy Coating System.

Coupling the Worm Gear Ratio Multiplier to the input of another NEMA C face reducer provides additional reduction. It also offers an easy method of creating a double reduction reducer on location or when mounting to another piece of NEMA C face equipment such as a brake or a clutch. Various assemblies can be created by mounting it in any one of four positions.

MULTIMOUNT WORM GEAR RATIO MULTIPLIER NOMENCLATURE OVERVIEW

SIZE (Center Distance)	MODEL	RATIO	ASSEMBLY DESIGNATION	QUILL INPUT ADAPTOR	OUTPUT FLANGE
E13 – 1.333"	MDDS	5	Solid Output Shaft R - Right L - Left	56C	56C
E17 – 1.750"		10		140TC	140TC
E20 – 2.000"		15		180TC	180TC
E24 – 2.375"		20			
E26 – 2.625"		25			
		30			
		40			
		50			
		60			

* For 42C and 48C input adaptor, please contact Winsmith.



Selection By Input Horsepower



REDUCER SIZE AND TORQUE (lbf·in.) AT 1750 RPM INPUT ²

1.00 SERVICE FACTOR

OUTPUT RPM	RATIO ¹	HP	INPUT HORSEPOWER								
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00
350	5	SIZE			E13	E13	E13	E17	E17	E20	E24
		TORQUE			128	128	171	258	343	518	863
175	10	SIZE		E13	E13	E13	E17	E17	E20	E24	
		TORQUE		109	165	248	338	507	687	1021	
117	15	SIZE		E13	E13	E17	E17	E20	E24	E26	
		TORQUE		157	238	370	494	749	1003	1512	
88	20	SIZE	E13	E13	E17	E17	E20	E24	E24		
		TORQUE	153	202	321	483	650	983	1311		
70	25	SIZE	E13	E13	E17	E20	E20	E24	E26		
		TORQUE	185	245	391	596	795	1197	1620		
58	30	SIZE	E13	E13	E17	E20	E24	E26			
		TORQUE	209	276	452	687	938	1427			
44	40	SIZE	E13	E17	E17	E24	E24				
		TORQUE	256	383	580	902	1203				
35	50	SIZE	E17	E17	E20	E24	E26				
		TORQUE	340	449	706	1083	1481				
29	60	SIZE	E17	E20	E24	E26					
		TORQUE	386	525	810	1268					

REDUCER SIZE AND TORQUE (lbf·in.) AT 1750 RPM INPUT ²

1.25 SERVICE FACTOR

OUTPUT RPM	RATIO ¹	HP	INPUT HORSEPOWER								
			0.25	0.33	0.50	0.75	1.00	1.50	2.00	3.00	5.00
350	5	SIZE			E13	E13	E13	E17	E17	E20	E26
		TORQUE			128	128	171	258	343	518	866
175	10	SIZE		E13	E13	E17	E17	E20	E24	E26	
		TORQUE		109	165	253	338	515	680	1026	
117	15	SIZE		E13	E13	E17	E20	E24	E24		
		TORQUE		157	238	370	500	751	1003		
88	20	SIZE	E13	E13	E17	E17	E20	E24	E26		
		TORQUE	153	202	321	483	650	983	1322		
70	25	SIZE	E13	E13	E17	E20	E24	E26			
		TORQUE	185	243	391	596	798	1215			
58	30	SIZE	E13	E17	E17	E24	E24				
		TORQUE	209	298	452	703	938				
44	40	SIZE	E17	E17	E20	E24	E26				
		TORQUE	290	383	585	902	1223				
35	50	SIZE	E17	E17	E24	E24					
		TORQUE	340	449	722	1083					
29	60	SIZE	E20	E20	E24	E26					
		TORQUE	400	525	810	1268					

1. Exact ratio

2. If input speed is below 1160 RPM, please specify speed and mounting position to ensure proper lubrication.

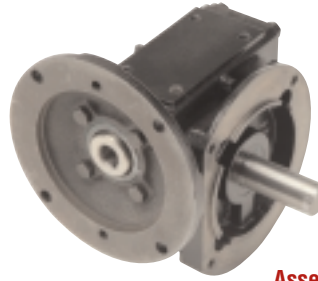
Multimount



MDDS Model Worm Gear Ratio Multiplier

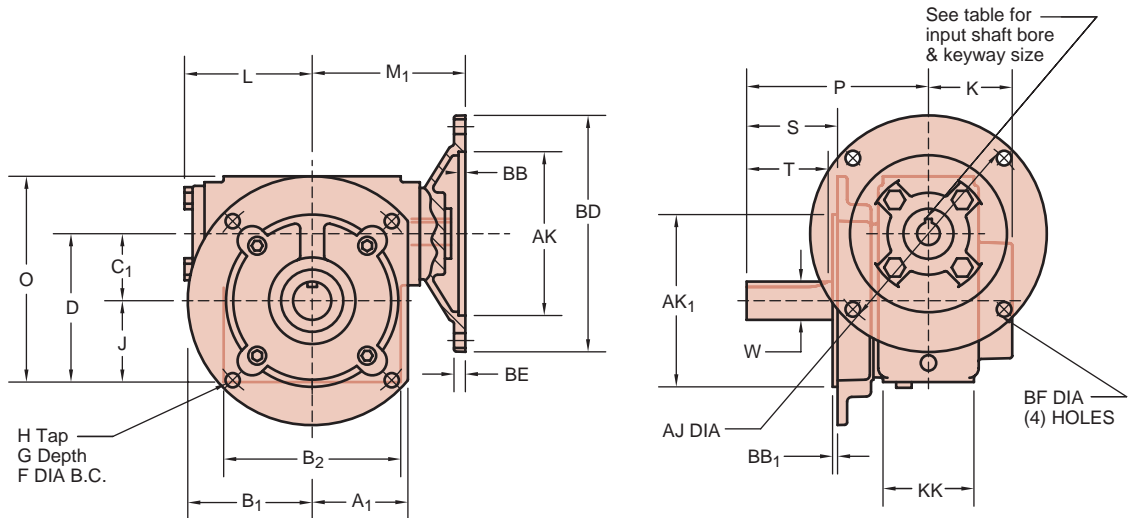
Quill Input Adaptor
Solid Output Shaft
Flange Mount – NEMA

4.50 inch diameter register *



Assembly R shown, Assembly L available

DIMENSIONS



RATIO MULTIPLIER DIMENSIONS (in.)

Size	Output Frame	A ₁	AK ₁ **	B ₁	B ₂	BB ₁	C ₁	D	F DIA.	G DEPTH	H TAP	J	K	KK	L	M ₁	O	P	W*	S	T	KEYWAY	lb.*
E13	56C	2.38	4.50	3.25	3.88	.13	1.333	3.08	5.88	.75	3/8-16	1.75	1.94	2.00	2.83	3.63	4.33	4.56	.625	2.06	1.81	3/16 X 3/32	21
E17	56C	2.50	4.50	3.25	4.63	.13	1.750	3.88	5.88	.88	3/8-16	2.13	2.19	2.38	3.44	4.06	5.38	4.44	.625*	2.06	1.81	3/16 X 3/32	23
E17	140TC	2.50	4.50	3.25	4.63	.13	1.750	3.88	5.88	.88	3/8-16	2.13	2.19	2.38	3.44	4.06	5.38	4.50	.875	2.13	2.00	3/16 X 3/32	23
E20	140TC	2.50	4.50	3.25	5.25	.13	2.000	4.13	5.88	.88	3/8-16	2.13	2.19	2.38	3.44	4.06	5.63	4.75	.875	2.13	2.00	3/16 X 3/32	29
E24	140TC	3.25	4.50	3.25	5.38	.13	2.375	5.25	5.88	.75	3/8-16	2.88	2.69	3.13	4.50	5.38	7.25	5.50	.875	2.13	2.25	3/16 X 3/32	48
E26	140TC	3.25	4.50	3.25	5.88	.13	2.625	5.75	5.88	.75	3/8-16	3.13	2.69	3.13	4.50	5.38	7.88	5.50	.875*	2.13	2.25	3/16 X 3/32	52

* Shaft diameter tolerances +.000-.001 Dimensions shown are for construction purposes only. Please contact Winsmith for certified dimension sheets.

† Approximate shipping weights ** Register diameter tolerances +.000-.003

‡ Catalog output torque limited to 575 lbf-in. § Catalog output torque limited to 1578 lbf-in.

INPUT ADAPTOR DIMENSIONS (in.)

INPUT ADAPT. DIM.	56C	140TC	180TC
AJ	5.88	5.88	7.25
AK	4.50	4.50	8.50
BB	.19	.19	.19
BD	6.50	6.50	9.00
BD ₁	6.63	6.63	9.00
BE	.31	.31	.38
BF	.406	.406	.531
KEYWAY	3/16 X 3/32		1/4 X 1/8
BORE ^{+0.001} / _{-.000}	.6255	.8755	1.1255

* See pages 140-141 for an 8.500 inch diameter register of the Worm Gear Ratio Multiplier.



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