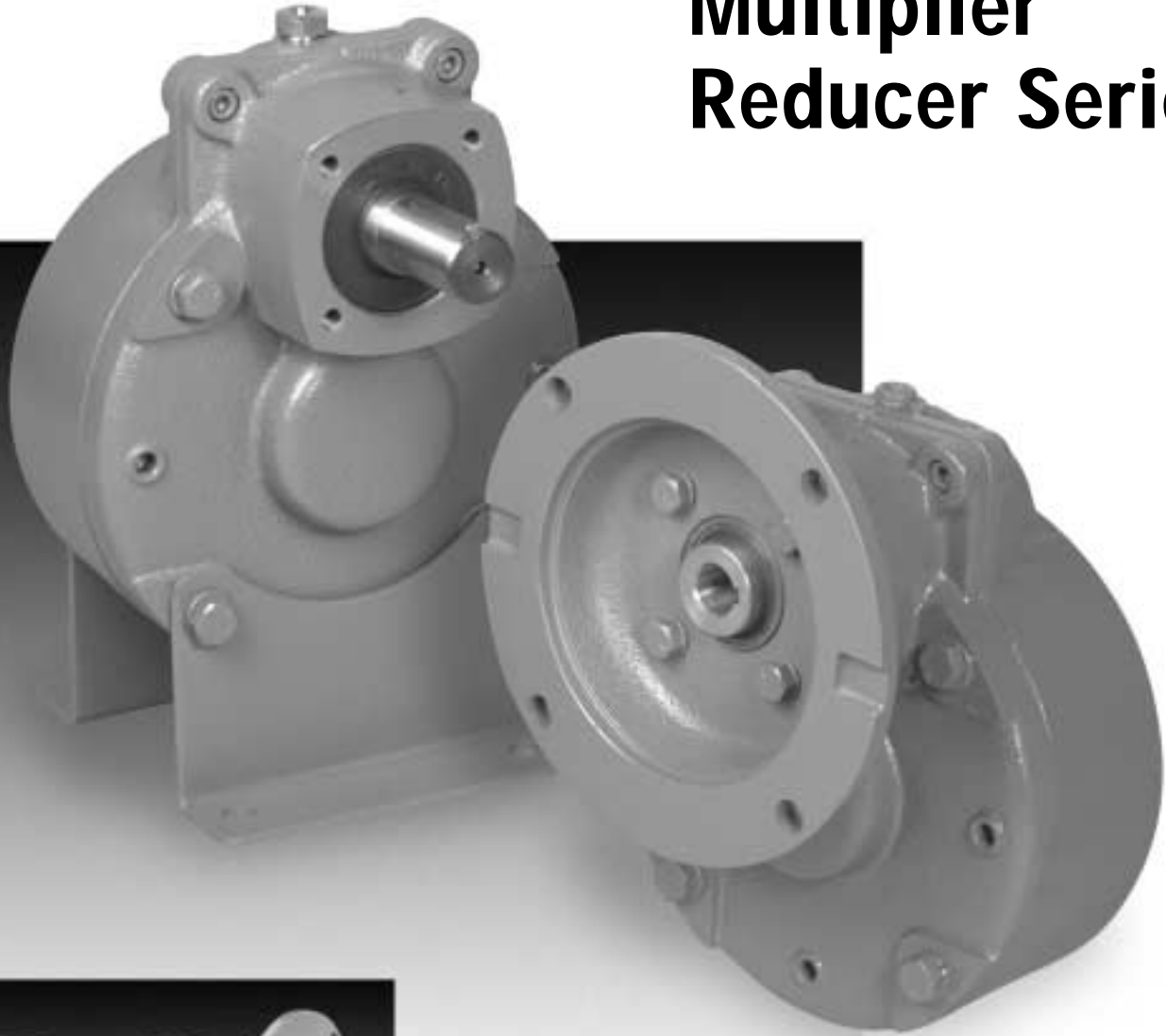
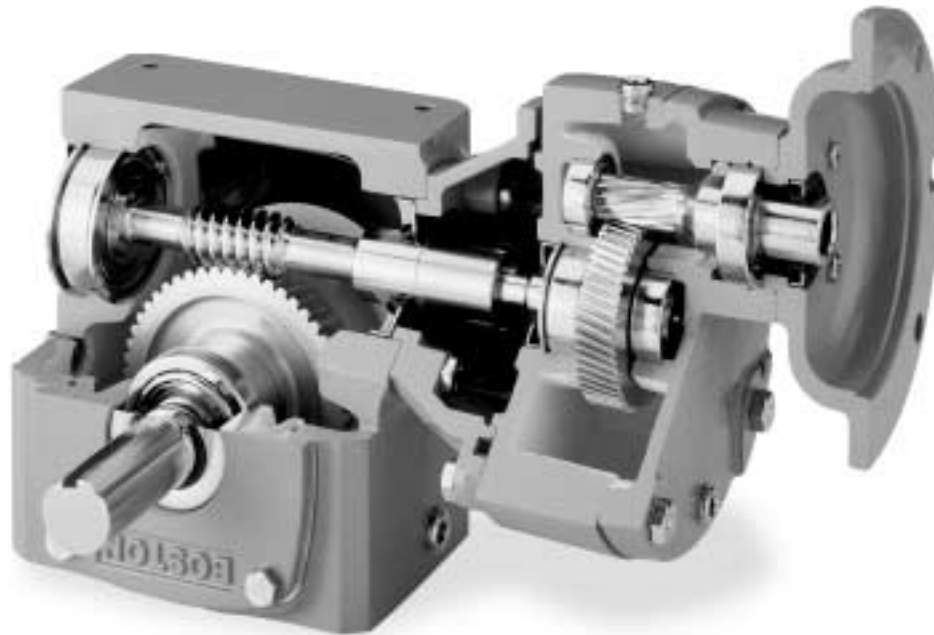


## Helical Multiplier Reducer Series



## Helical Multiplier Reducer Series

Use alone as either a speed reducer or increaser or in combination with a 700 Series worm gear reducer to create an efficient right angle double reduction speed reducer.



- Close grained cast iron housing and flanges
- Hardened steel helical gearing for long life
- Anti-friction bearings
- Double lip seals guard against oil leakage
- Brass spring loaded breather plug keeps out dirt and water
- Optional steel bolt on base
- Double bearing design on input and output shaft

Optional Base Kits		
Unit Size	Catalog Description	Item Code
1	HM1 Base Kit	83501
2	HM2 Base Kit	83502
3	HM3 Base Kit	83503

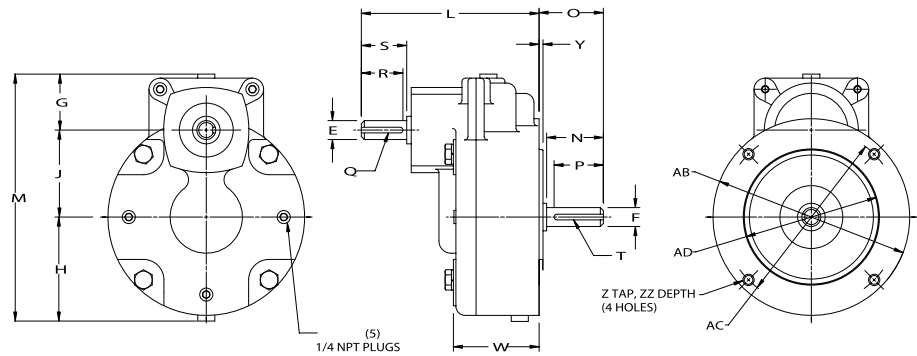
<b>HMF</b>	-	<b>2</b>	-	<b>1.5</b>	-	<b>S</b>	-	<b>B5</b>	-	<b>B7</b>	-	<b>B</b>
<b>Type</b>		<b>Size</b>		<b>Ratio</b>		<b>Lubrication</b>		<b>Input Flange Size</b>		<b>Output Flange Size</b>		<b>Mounting Position</b>
HM-Solid Input Shaft HMF-Quill Flange Input		1, 2, or 3		1.5:1 2:1 3:1 4:1 5:1		Blank- No Lub S- Mobil SHC634		B5-56C B7-140TC B9-180TC B11-210TC		B5-56C B7-140TC B9-180TC B11-210TC		A B C D

### Available Styles

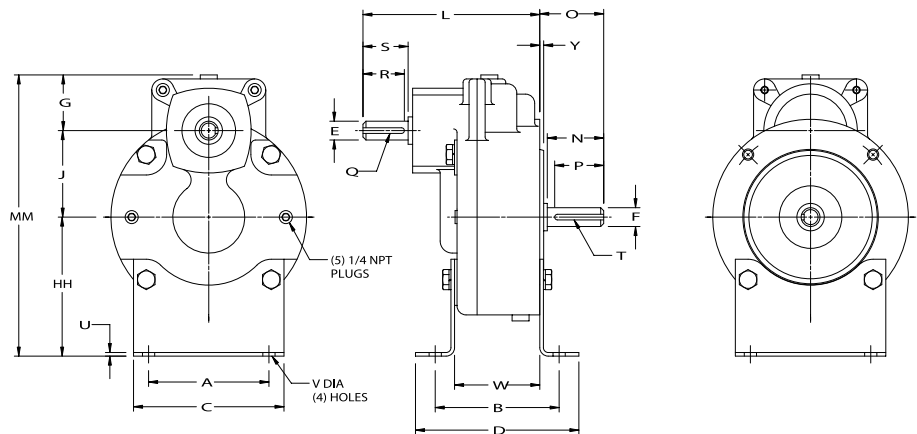
Model	Input	Output
HM1	Solid	B5
HMF1	B5	B5
HM2	Solid	B5 B7
HMF2	B5	B5
	B5	B7
	B7	B5
	B7	B7

Model	Input	Output
HM3	Solid	B9 B11
HMF3	B9	B9
	B9	B11
	B11	B9
	B11	B11

### HM Basic



### HM with Base

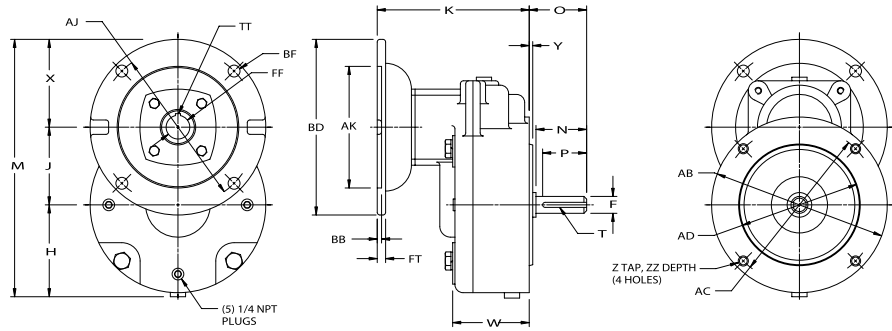


All dimensions in inches

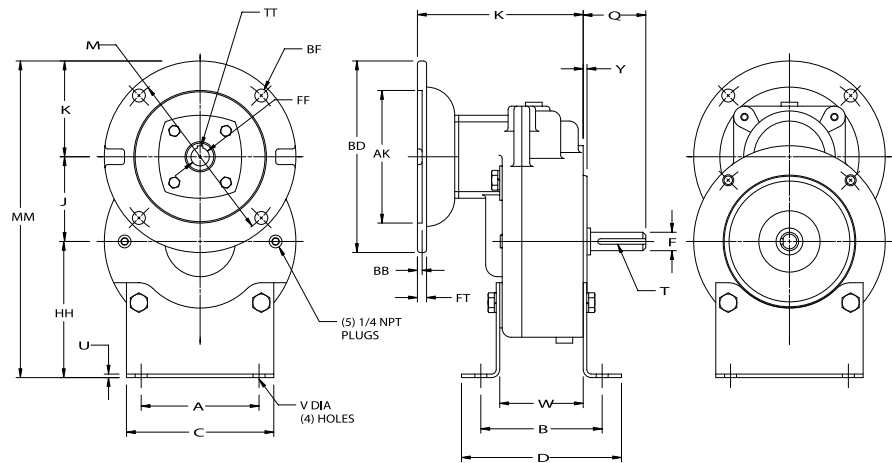
Output Size	Flange	A	B	C	D	E	F	G	H	HH	J	L	M	MM	N	O	P
1	56C	4.00	3.875	5.00	5.187	0.625	0.625	1.805	3.45	4.62	1.675	5.375	6.875	8.100	1.875	2.06	1.625
2	56C						0.625										
	140TC	4.00	4.120	5.00	5.430	0.625	0.875	1.850	3.40	4.62	2.875	5.875	8.15	9.350	1.875	2.125	1.625
3	180TC						1.125								2.375	2.50	2.063
	210TC	5.13	4.750	6.37	6.150	0.875	1.375	2.087	4.70	4.81	2.875	8.00	9.66	9.77	2.875	3.00	2.563

Output Size	Flange	Q	R	S	T	U	V	W	Y	Z	ZZ	AB	AC	AD
1	56C	3/16X3/32	1.375	1.50	3/16X3/32	0.12	0.406	2.59	0.13	3/8-16	0.75	6.50	5.875	4.50
2	56C				3/16X3/32									
	140TC	3/16X3/32	1.375	1.50	3/16X3/32	0.12	0.406	2.83	0.13	3/8-16	0.75	6.50	5.875	4.50
3	180TC				1/4X1/8									
	210TC	3/16X3/32	1.750	2.00	5/16X5/32	0.16	0.500	3.24	0.25	1/2-13	0.94	9.13	7.250	8.50

HMF Basic



HMF with Base



Short  
Flap  
Trim

All dimensions in inches

Output		A	B	C	D	F	H	HH	J	K	M	MM	N	O	P	T
1	B5	4.00	3.875	5.00	5.187	0.625	3.45	4.62	1.675	5.177	8.38	9.55	1.875	2.06	1.625	3/16X3/32
2	B5					0.625										3/16X3/32
	B7	4.00	4.120	5.00	5.430	0.875	3.40	4.62	2.875	5.625	9.53	10.75	1.875	2.125	1.625	3/16X3/32
3	B9					1.125							2.375	2.50	2.063	1/4X1/8
	B11	5.13	4.750	6.37	6.150	1.375	4.70	4.81	2.875	7.43	12.08	12.19	2.875	3.00	2.563	5/16X5/32

Size	U	V	W	X	Y	Z	ZZ	AB	AC	AD
1	0.12	0.406	2.59	3.25	0.13	3/8-16	0.75	6.50	5.875	4.50
2	0.12	0.406	2.83	3.25	0.13	3/8-16	0.75	6.50	5.875	4.50
3	0.16	0.500	3.24	4.50	0.25	1/2-13	0.94	9.13	7.250	8.50

Input		AJ	AK	BD	BF	BB	FF	FT	TT
1	B5	5.875	4.50	6.50	0.44	0.16	0.625	0.31	3/16x3/32
2	B5	5.875	4.50	6.50	0.44	0.16	0.625	0.31	3/16x3/32
	B7	5.875	4.50	6.50	0.44	0.16	0.875	0.31	3/16x3/32
3	B9	7.250	8.50	9.00	0.53	0.19	1.125	0.38	1/4x1/8
	B11	7.250	8.50	9.00	0.53	0.19	1.375	0.38	5/16x5/32

## Reducer Models

Catalog Number	Item Code	Catalog Number	Item Code
HM1-1.5-B5	83205	HM2-5-B7	83218
HM1-2-B5	83206	HM2-5-B5	83219
HM1-3-B5	83207	HM3-1.5-B9	83220
HM1-4-B5	83208	HM3-1.5-B11	83221
HM1-5-B5	83209	HM3-2-B9	83222
HM2-1.5-B7	83210	HM3-2-B11	83223
HM2-1.5-B5	83211	HM3-3-B9	83224
HM2-2-B7	83212	HM3-3-B11	83225
HM2-2-B5	83213	HM3-4-B9	83226
HM2-3-B7	83214	HM3-4-B11	83227
HM2-3-B5	83215	HM3-5-B9	83228
HM2-4-B7	83216	HM3-5-B11	83229
HM2-4-B5	83217		

## NEMA C-Face Models

Catalog Number	Item Code	Catalog Number	Item Code
HMF1-1.5-B5-B5	76600	HMF2-5-B7-B5	76619
HMF1-2-B5-B5	83230	HMF2-5-B5-B7	83240
HMF1-3-B5-B5	76602	HMF2-5-B5-B5	83241
HMF1-4-B5-B5	83231	HMF3-1.5-B9-B9	76625
HMF1-5-B5-B5	83232	HMF3-1.5-B9-B11	76630
HMF2-1.5-B7-B7	76620	HMF3-1.5-B11-B9	76635
HMF2-1.5-B7-B5	76615	HMF3-1.5-B11-B11	76640
HMF2-1.5-B5-B7	76610	HMF3-2-B9-B9	76626
HMF2-1.5-B5-B5	76605	HMF3-2-B9-B11	76631
HMF2-2-B7-B7	83233	HMF3-2-B11-B9	83242
HMF2-2-B7-B5	76616	HMF3-2-B11-B11	76641
HMF2-2-B5-B7	76611	HMF3-3-B9-B9	76627
HMF2-2-B5-B5	83234	HMF3-3-B9-B11	76632
HMF2-3-B7-B7	83235	HMF3-3-B11-B9	76637
HMF2-3-B7-B5	76617	HMF3-3-B11-B11	76642
HMF2-3-B5-B7	76612	HMF3-4-B9-B9	83243
HMF2-3-B5-B5	76607	HMF3-4-B9-B11	76633
HMF2-4-B7-B7	83236	HMF3-4-B11-B9	76638
HMF2-4-B7-B5	76618	HMF3-5-B9-B9	83244
HMF2-4-B5-B7	83237	HMF3-5-B9-B11	76634
HMF2-4-B5-B5	83238	HMF3-5-B11-B9	76639
HMF2-5-B7-B7	83239	HMF3-5-B11-B11	83245

## Horsepower and Torque Capacities at Listed RPM Inputs (Service Factor 1.0)

SERIES SIZE			HM SIZE 1			HM SIZE 2			HM SIZE 3		
Ratio	Input rpm	Output rpm	Input hp	Output		Input hp	Output		Input hp	Output	
				hp	Torque (lb. in.)		hp	Torque (lb. in.)		hp	Torque (lb. in.)
1.5	1750	1167	3.29	3.19	172	13.60	13.19	712	17.79	17.26	932
2	1750	875	2.74	2.66	192	11.76	11.41	822	15.38	14.92	1075
3	1750	583	2.06	2.00	216	9.48	9.20	944	12.39	12.02	1299
4	1750	437	1.45	1.41	203	6.88	6.67	962	8.99	8.72	1258
5	1750	350	1.05	1.02	183	5.06	4.91	884	6.61	6.41	1155

**Ratings Shown Reflect Maximum Gear Capacity With Mobil SHC 634 Lubricant.**

\*Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

Short Flap Trim



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