

HOLLOW OUTPUT SHAFT MOUNTED (See "How to Specify" on page 102.)

	HMQ		RHMQ		FHMQ
MOTORIZED QUILL INPUT		→			
	H		RH		FH
NON- MOTORIZED SOLID INPUT SHAFT		→			

SOLID OUTPUT SHAFT (See "How to Order" on page 102.)

	BMQ		RMQ		FMQ
MOTORIZED QUILL INPUT		→			
			(❖Non-Standard Option)		
	B		R		F
NON- MOTORIZED SOLID INPUT SHAFT		→			
			(❖Non-Standard Option)		

MOUNTING ACCESSORIES

Select the appropriate mounting accessories from this wide variety of options.

REACTION ARM R	F FLANGE (SHORT FLANGE)

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact LEESON with application details.

FLHMQ



THMQ



(❖Non-Standard Option)

UHMQ



(❖Non-Standard Option)

JHMQ



(❖Non-Standard Option)

FLH



TH



(❖Non-Standard Option)

UH



(❖Non-Standard Option)

JH



(❖Non-Standard Option)

FLMQ



TMQ



UMQ



JMQ



FL



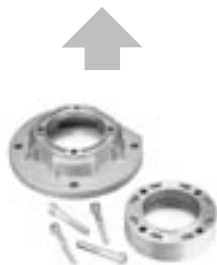
T



U



J



FL FLANGE
(LONG FLANGE)



HORIZONTAL T BASE
(WORM OVER ASSEMBLY)



HORIZONTAL T BASE
(WORM UNDER ASSEMBLY)



HORIZONTAL T BASE
(J ASSEMBLY
VERTICAL INPUT SHAFT)



ALUMINUM RIGHT ANGLE MODEL NUMBER SYSTEM

How To Specify A Bravo™ Gear Reducer

To specify a Bravo™ gear reducer, specify the Mounting Style, Unit Size/Series, Ratio, and Output Shaft Style, Hollow or Solid, Motor Input Flange, and Shaft Code. See page 103 for torque ratings.

HMQ 520 15 H 56 16

MOUNTING STYLE
See Pages 100 & 101
For Options

UNIT SIZE/SERIES

Size/ Series	Center Distances	
	Inch	MM
518	1.77	45
520	1.97	50
525	2.48	63
534	3.35	85

STANDARD RATIOS (Nominal)

Size/ Series	Center Distance	STANDARD RATIO : 1											
		7	10	15	20	25	30	40	45	50	60	70	
518	1.77	✓	✓	✓	✓		✓	✓	✓			✓	
520	1.97	✓	✓	✓	✓	✓	✓	✓	✓				✓
525	2.48	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
534	3.35	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓

See page 103 for exact ratios.

MOTOR INPUT FLANGES

Series	NEMA Frame	Input Shaft
518	56C	5/8"
520	56C	5/8"
525	56C*	5/8"
	143-5T	7/8"
534	56C*	5/8"
	143-5T*	7/8"
	182-4T	1 1/8"

*Input quill shaft bushing required.

SHAFT DIMENSION CODE

Size/ Series	Hollow Bore Dia.	Shaft Code*	Optional Solid Shaft Dia.**
518	3/4"	12	3/4"
520	1"	16	1"
525	1 1/8"	18	1 1/8"
534	1 1/2"	24	1 1/2"

* Hollow Bore or shaft diameter in 1/16th of an inch.

OUTPUT STYLE

** Specify "H" for Hollow Output Shaft or Extension From Below

- H = Hollow Shaft Output
- L = Left Hand Single Extension
Viewed from Drive End
- R = Right Hand Single Extension
Viewed from Drive End
- D = Double Shaft Extension
Viewed from Drive End

TYPICAL NAMEPLATE

LEESON HYDRO-MEC			
MAX INPUT HPD @ 1750 RPM	1.4	OUTPUT TORQUE ¹ (IN-LBS)	595
DESC.	HMQ 520 25 H 56 16	RATIO	15:1
CATALOG NO.	652025465616	DATE CODE	A03
LEESON ELECTRIC CORPORATION GRAFTON, WISCONSIN 53024 leeson.com			

SINGLE REDUCTION GEAR REDUCER RATINGS

1750 RPM INPUT

Output RPM	Ratio	Mechanical Rating			
		Series	Input HP	Output HP	Output TQ (lb.in.)
250	7:1	518	1.35	1.19	300
		520	2.32	2.04	514
		525	4.44	3.90	984
		534	7.58	6.90	1739
175	10:1	518	0.89	0.76	272
		520	1.68	1.43	514
		525	3.21	2.73	984
		534	5.83	5.31	1912
125	14:1	518	0.81	0.67	338
		520	1.12	0.95	480
		534	5.00	4.30	2323
117	15:1	525	2.44	2.08	1126
97	18:1	520	1.09	0.90	583
92	19:1	525	2.09	1.73	1181
88	20:1	534	3.32	2.75	1982
83	21:1	518	0.51	0.42	315
73	24:1	525	1.57	1.22	1053
67	26:1	520	0.76	0.62	580
63	28:1	518	0.54	0.40	400
		534	3.24	2.51	2528
58	30:1	525	1.55	1.12	1215
49	36:1	520	0.65	0.47	609
		525	1.09	0.79	1023
47	37:1	518	0.41	0.28	375
46	38:1	534	2.11	1.56	2132
41	43:1	520	0.50	0.36	557
39	45:1	525	1.01	0.69	1118
38	46:1	518	0.36	0.23	383
34	52:1	534	1.51	1.06	1984
		518	0.33	0.20	442
29	60:1	520	0.42	0.26	570
		525	0.55	0.35	835
26	67:1	534	1.57	1.02	2458

Note: All applications must be approved by LEESON's Engineering Group.

1150 RPM INPUT

Nominal Output RPM*	Series	Mechanical Rating		
		Input HP	Output HP	Output TQ (lb.in.)
164	518	0.75	0.68	259
	520	1.50	1.37	524
	525	3.00	2.73	1047
	534	5.00	4.60	1765
115	518	0.50	0.43	233
	520	1.00	0.87	477
	525	3.00	2.67	1463
	534	5.00	4.45	2439
77	518	0.50	0.41	333
	520	1.00	0.83	682
	525	2.00	1.72	1414
	534	3.00	2.52	2148
58	518	0.50	0.40	433
	520	0.75	0.61	666
	525	1.50	1.26	1381
	534	3.00	2.52	2762
46	520	0.75	0.38	514
	525	1.00	0.83	1137
38	518	0.33	0.24	391
	525	1.00	0.78	1282
	534	2.00	1.60	2631
29	518	0.25	0.17	373
	520	0.50	0.36	778
	525	1.00	0.75	1644
	534	1.50	1.13	2486
26	518	0.25	0.16	395
	520	0.33	0.22	545
	525	0.75	0.54	1332
23	534	1.00	0.70	1981
19	520	0.25	0.16	526
16	525	0.50	0.33	1247
	534	1.50	0.68	2609

Exact Ratios

Series	Center Distance	Nominal Ratio:1											
		7	10	15	20	25	30	40	45	50	60	70	
518	1.77	7	10	14	21	—	28	37	46	—	60	—	
520	1.97	7	10	14	18	26	—	36	43	—	60	—	
545	2.48	7	10	15	19	24	30	36	45	—	—	67	
534	3.35	7	10	14	20	—	28	38	—	52	—	67	

Overhung Load* and Thrust Load Ratings

Output RPM	Series / Size							
	518		520		525		534	
	OHL	TL	OHL	TL	OHL	TL	OHL	TL
200	200	40	270	54	400	80	562	112
100	248	50	338	68	518	104	675	135
50	315	58	428	86	675	135	900	180
25	405	68	562	108	855	158	1125	225

*At center line of output shaft for solid shaft style.

IN THIS CATALOGUE

RPM = Revolutions Per Minute

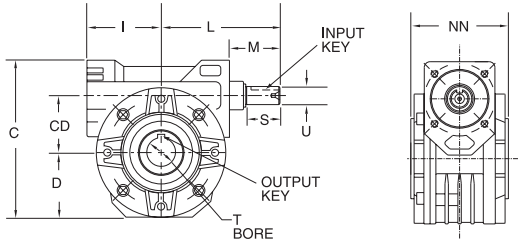
HP = Horsepower

TQ = Torque In Inch-Pounds

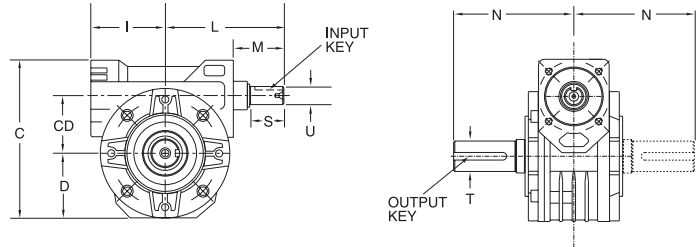
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.

TL = Thrust Load In Pounds

STYLE H



STYLE B

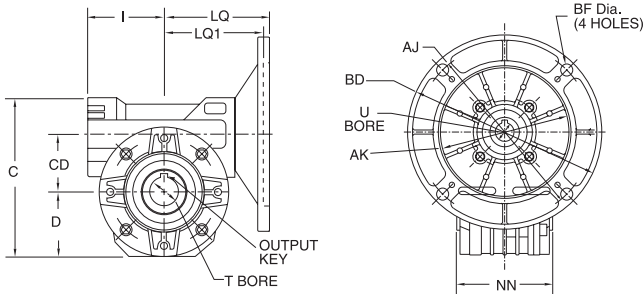


STYLE H and STYLE B DIMENSIONS (Inches)

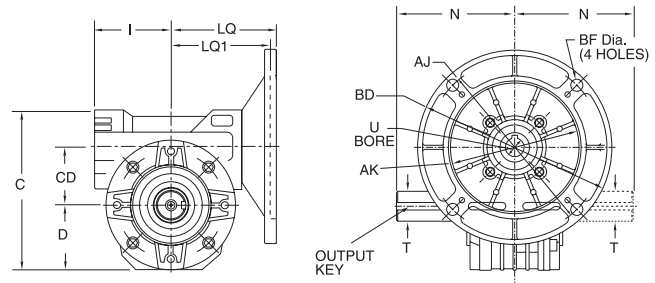
Series	C	CD	D	I	L	M	Style H NN	Style B N	S	T +0.0015 -0.0000	U +0.000 -0.001	Input Key	Output Keyway*
518	4.76	1.77	1.93	2.16	3.86	1.67	2.56	2.97	1.18	0.750	0.625	3/16 SQ. x 1.00	3/16 SQ. x 1.00
520	5.33	1.97	2.15	2.56	4.11	1.74	3.19	3.94	1.18	1.000	0.625	3/16 SQ. x 1.00	1/4 SQ. x 1.62
525	6.69	2.48	2.76	3.11	5.43	2.24	4.72	4.85	1.75	1.125	0.750	3/16 SQ. x 1.50	1/4 SQ. x 2.00
534	9.15	3.35	3.72	3.86	6.38	2.52	5.31	5.55	1.75	1.500	0.875	3/16 SQ. x 1.50	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE HMQ



STYLE BMQ



STYLE HMQ and STYLE BMQ DIMENSIONS (Inches)

Series	C	CD	D	I	LQ 56/140	LQ1 180	Style HMQ NN	Style BMQ N	T +0.0015 -0.0000	U +0.000 -0.001	Output Keyway*
518	4.76	1.77	1.93	2.16	3.33	—	2.56	2.97	0.750	0.625	3/16 SQ. x 1.00
520	5.33	1.97	2.15	2.56	3.51	—	3.19	3.94	1.000	0.625	1/4 SQ. x 1.62
525	6.69	2.48	2.76	3.11	4.08	—	4.72	4.85	1.125	0.750	1/4 SQ. x 2.00
534	9.15	3.35	3.72	3.86	4.83	5.35	5.31	5.55	1.500	0.875	3/8 SQ. x 2.00

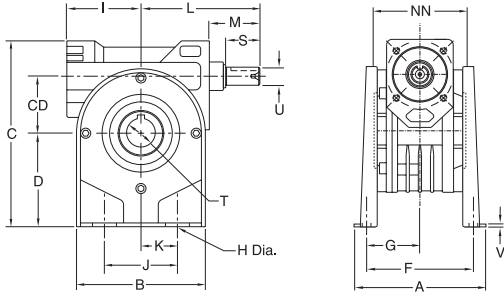
*Output keyway is through the bore on hollow shaft reducers.

MOTOR DATA (Inches)

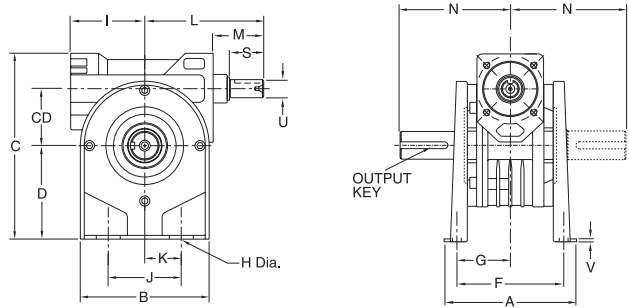
Motor Frame	AJ	AK	BD	BF	U BORE	Keyway
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32
180TC	7.250	8.500	9.00	0.531	1.125	1/4 x 1/8

In all charts, "T" dimension tolerance represents hollow output shaft. If solid shaft insert is used, tolerance is +0.000 and -0.001.

STYLE TH



STYLE T

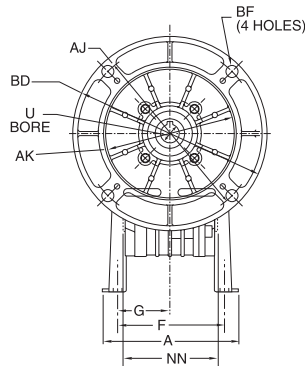
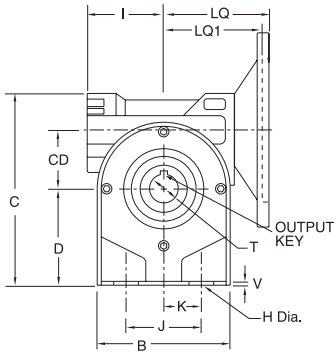


STYLE TH and STYLE T DIMENSIONS (Inches)

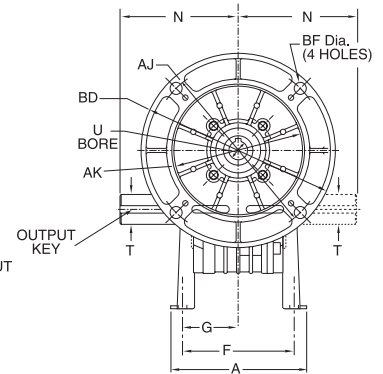
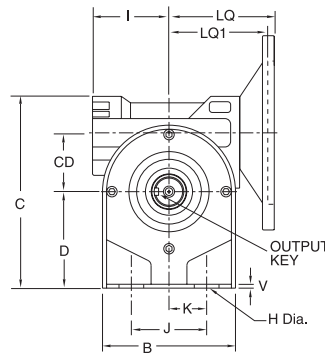
Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	Style TH NN	Style T N	S	T +0.0015 -0.0000	U +0.000 -0.001	V	Input Key	Output Keyway*
518	3.94	3.86	5.55	1.77	2.83	3.17	1.59	0.413	2.16	2.01	1.01	3.86	1.67	2.56	2.97	1.18	0.750	0.625	0.12	3/16 SQ. x 1.00	3/16 SQ. x 1.00
520	4.84	4.49	6.41	1.97	3.23	3.90	1.97	0.413	2.56	2.48	1.26	4.11	1.74	3.19	3.94	1.18	1.000	0.625	0.14	3/16 SQ. x 1.00	1/4 SQ. x 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.72	4.85	1.75	1.125	0.750	0.16	3/16 SQ. x 1.50	1/4 SQ. x 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	5.55	1.75	1.500	0.875	0.20	3/16 SQ. x 1.50	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE THMQ



STYLE TMQ

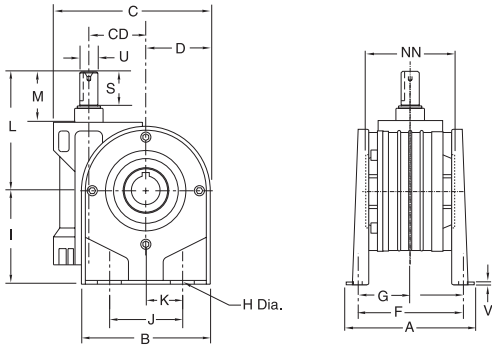


STYLE THMQ and STYLE TMQ DIMENSIONS (Inches)

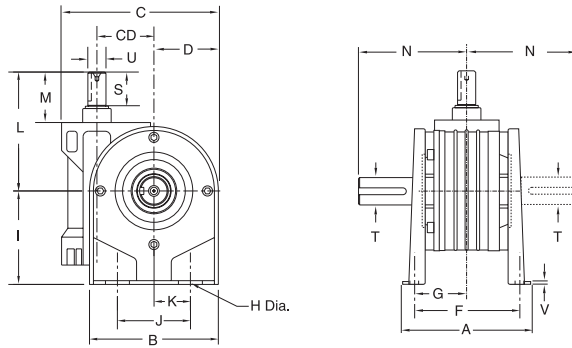
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ 56/140	LQ1 180	Style THMQ NN	Style TMQ N	T +0.0015 -0.0000	V	Output Keyway*
518	3.94	3.86	5.55	1.77	2.83	3.17	1.59	0.413	2.16	2.01	1.01	3.33	—	2.56	2.97	0.750	0.12	3/16 SQ. x 1.00
520	4.84	4.49	6.41	1.97	3.23	3.90	1.97	0.413	2.56	2.48	1.26	3.51	—	3.19	3.94	1.000	0.14	1/4 SQ. x 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	4.08	—	4.72	4.85	1.125	0.16	1/4 SQ. x 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.31	5.55	1.500	0.20	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE JH



STYLE J

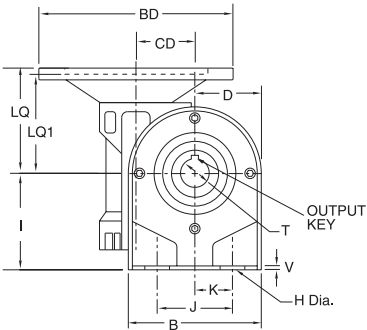


STYLE JH and STYLE J DIMENSIONS (Inches)

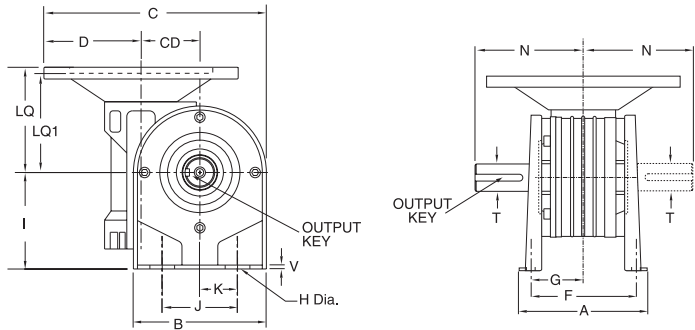
Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	Style JH NN	Style J N	S	T +0.0015 -0.0000	U +0.000 -0.001	V	Input Key	Output Keyway*
518	3.94	3.86	4.35	1.77	1.63	3.17	1.59	0.413	2.83	1.97	1.01	3.86	1.67	2.56	2.97	1.18	0.750	0.625	0.12	3/16 SQ. x 1.00	3/16 SQ. x 1.00
520	4.84	4.49	5.40	1.97	2.22	3.90	1.97	0.413	3.23	2.48	1.26	4.11	1.74	3.19	3.94	1.18	1.000	0.625	0.14	3/16 SQ. x 1.00	1/4 SQ. x 1.62
525	5.67	5.24	6.19	2.48	2.26	4.35	2.18	0.413	3.93	3.74	1.87	5.43	2.24	4.76	4.85	1.75	1.125	0.750	0.16	3/16 SQ. x 1.50	1/4 SQ. x 2.00
534	7.17	7.09	8.58	3.35	3.15	5.71	2.86	0.413	5.59	5.51	2.76	6.38	2.52	5.31	5.55	1.75	1.500	0.875	0.20	3/16 SQ. x 1.50	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE JHMQ



STYLE JMQ



STYLE JHMQ and STYLE JMQ DIMENSIONS (Inches)

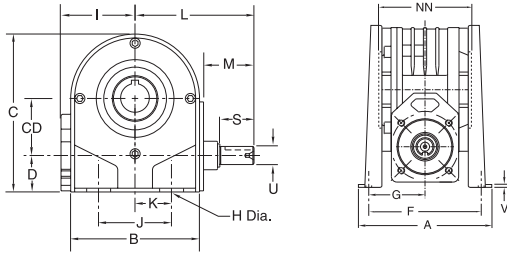
Series	A	B	CD	D	F	G	H	I	J	K	LQ 56/140	LQ1 180	Style JHMQ NN	Style JMQ N	T +0.0015 -0.0000	V	Output Keyway*
518	3.94	3.86	1.77	1.63	3.17	1.59	0.413	2.83	2.01	1.01	3.33	—	2.56	2.97	0.750	0.12	3/16 SQ. x 1.00
520	4.84	4.49	1.97	2.22	3.90	1.97	0.413	3.23	2.48	1.26	3.51	—	3.19	3.94	1.000	0.14	1/4 SQ. x 1.62
525	5.67	5.24	2.48	2.26	4.35	2.18	0.413	3.93	3.74	1.87	4.08	—	4.76	4.85	1.125	0.16	1/4 SQ. x 2.00
534	7.17	7.09	3.35	3.15	5.71	2.86	0.413	5.59	5.51	2.76	4.83	5.53	5.31	5.55	1.500	0.20	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

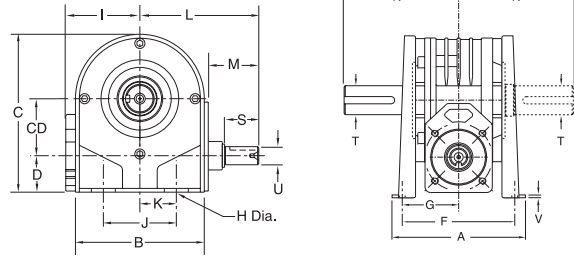
MOTOR DATA (Inches)

Motor Frame	AJ	AK	BD	BF	U BORE	Keyway
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32
180TC	7.250	8.500	9.00	0.531	1.125	1/4 x 1/8

STYLE UH



STYLE U

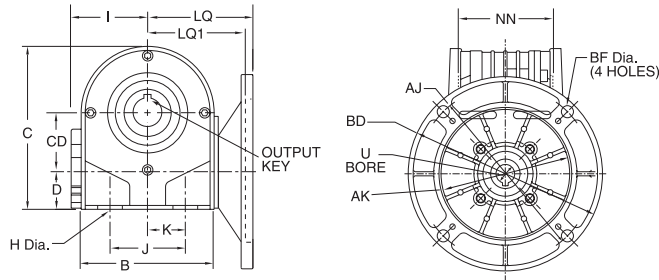


STYLE UH and STYLE U DIMENSIONS (Inches)

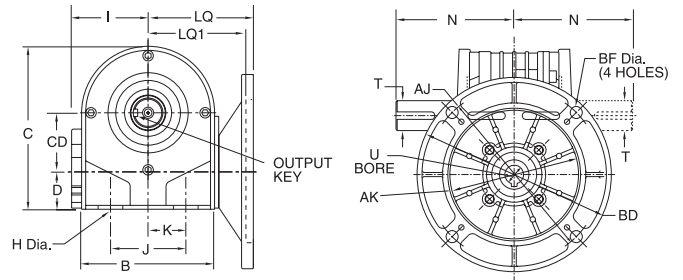
Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	Style UH NN	Style U N	S	T +0.0015 -0.0000	U +0.000 -0.001	V	Input Key	Output Keyway*
518	3.94	3.86	4.46	1.77	1.06	3.17	1.59	0.413	2.16	2.01	1.01	3.86	1.67	2.56	2.97	1.18	0.750	0.625	0.12	3/16 SQ. x 1.00	3/16 SQ. x 1.00
520	4.84	4.49	5.45	1.97	1.26	3.90	1.97	0.413	2.56	2.48	1.26	4.11	1.74	3.19	3.94	1.18	1.000	0.625	0.14	3/16 SQ. x 1.00	1/4 SQ. x 1.62
525	5.67	5.24	6.20	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.76	4.85	1.75	1.125	0.750	0.16	3/16 SQ. x 1.50	1/4 SQ. x 2.00
534	7.17	7.09	8.74	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	5.55	1.75	1.500	0.875	0.20	3/16 SQ. x 1.50	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE UHMQ



STYLE UMQ

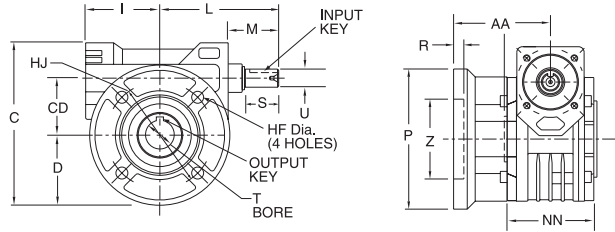


STYLE UHMQ and STYLE UMQ DIMENSIONS (Inches)

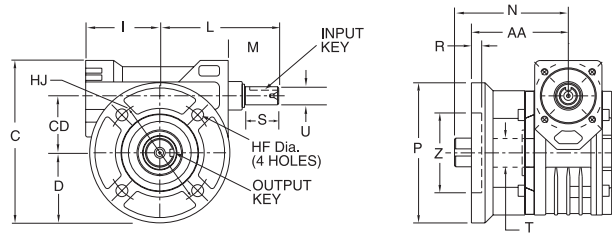
Series	A	B	C	CD	D	F	G	H	I	J	K	LQ 56/140	LQ1 180	Style UHMQ NN	Style UMQ N	T +0.0015 -0.0000	V	Output Keyway*
518	3.94	3.86	4.46	1.77	1.06	3.17	1.59	0.413	2.16	2.01	1.01	3.33	—	2.56	2.97	0.750	0.12	3/16 SQ. x 1.00
520	4.84	4.49	5.45	1.97	1.26	3.90	1.97	0.413	2.56	2.48	1.26	3.51	—	3.19	3.94	1.000	0.14	1/4 SQ. x 1.62
525	5.67	5.24	6.20	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	4.08	—	4.76	4.85	1.125	0.16	1/4 SQ. x 2.00
534	7.17	7.09	8.74	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.53	5.31	5.55	1.500	0.20	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE FH



STYLE F

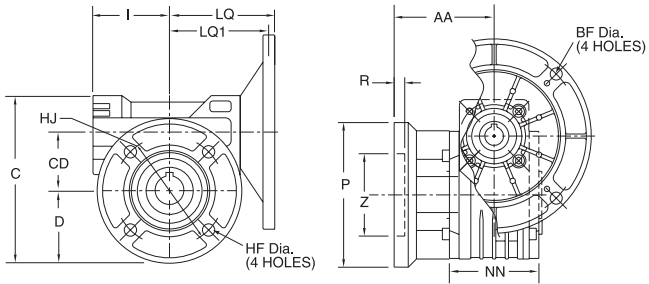


STYLE FH and STYLE F DIMENSIONS (Inches)

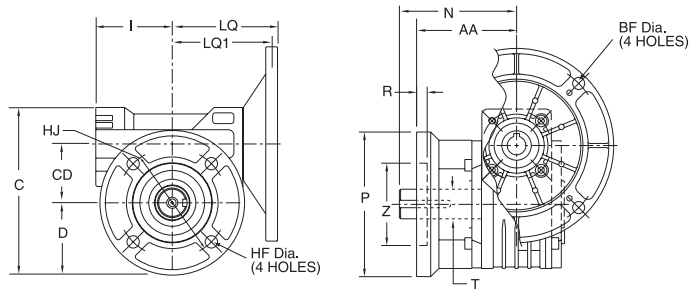
Series	AA	C	CD	D	HF	HJ	I	L	M	Style FH NN	Style F N	P	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	Input Key	Output Keyway*
518	2.38	4.88	1.77	2.16	0.335	3.43	2.16	3.86	1.67	2.56	2.97	4.33	0.354	1.18	0.750	0.625	2.362	3/16 SQ. x 1.00	3/16 SQ. x 1.00
520	3.35	5.60	1.97	2.42	0.413	3.54	2.56	4.11	1.74	3.19	3.94	4.84	0.472	1.18	1.000	0.625	2.756	3/16 SQ. x 1.00	1/4 SQ. x 1.62
525	3.39	7.37	2.48	3.44	0.413	5.91	3.11	5.43	2.24	4.76	4.85	6.89	0.512	1.75	1.125	0.750	4.528	3/16 SQ. x 1.50	1/4 SQ. x 2.00
534	4.25	8.96	3.35	4.04	0.512	6.93	3.86	6.38	2.52	5.31	5.55	8.07	0.630	1.75	1.500	0.875	5.984	3/16 SQ. x 1.50	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE FHMQ



STYLE FMQ



STYLE FHMQ and STYLE FMQ DIMENSIONS (Inches)

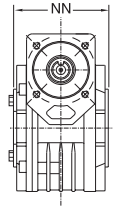
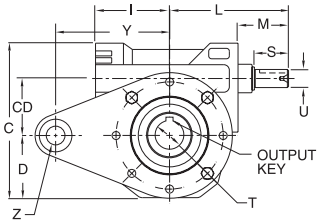
Series	AA	C	CD	D	HF	HJ	I	LQ 56/140	LQ1 180	Style FHMQ NN	Style FMQ N	P	R	T +0.0015 -0.0000	Z	Output Keyway*
518	2.38	4.88	1.77	2.16	0.335	3.43	2.16	3.33	—	2.56	2.97	4.33	0.354	0.750	2.362	3/16 SQ. x 1.00
520	3.35	5.60	1.97	2.42	0.413	3.54	2.56	3.51	—	3.19	3.94	4.84	0.472	1.000	2.756	1/4 SQ. x 1.62
525	3.39	7.37	2.48	3.44	0.413	5.91	3.11	4.08	—	4.76	4.85	6.89	0.512	1.125	4.528	1/4 SQ. x 2.00
534	4.25	8.96	3.35	4.04	0.512	6.93	3.86	4.83	5.53	5.31	5.55	8.07	0.630	1.500	5.984	3/8 SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

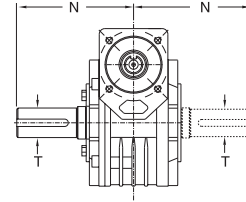
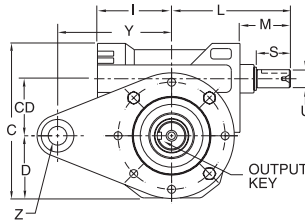
MOTOR DATA (Inches)

Motor Frame	AJ	AK	BD	BF	U BORE	Keyway
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32
180TC	7.250	8.500	9.00	0.531	1.125	1/4 x 1/8

STYLE RH



STYLE R

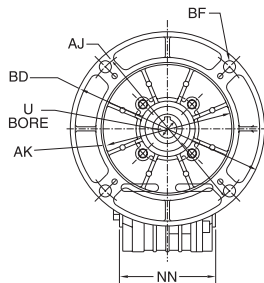
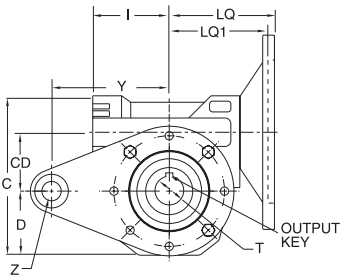


STYLE RH and STYLE R DIMENSIONS (Inches)

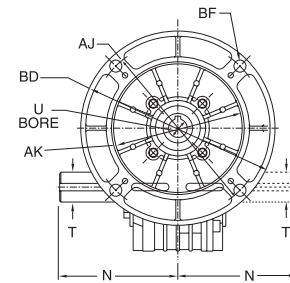
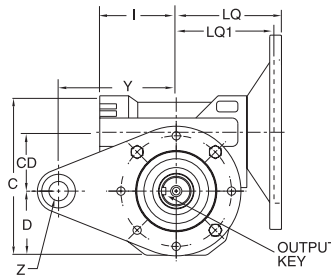
Series	C	CD	D	I	L	M	Style RH NN	Style R N	S	T +0.0015 -0.0000	U +0.000 -0.001	Y	Z	Input Key	Output Keyway*
518	4.65	1.77	1.93	2.16	3.86	1.67	2.56	2.97	1.18	0.750	0.625	3.94	0.315	³ / ₁₆ SQ. x 1.00	³ / ₁₆ SQ. x 1.00
520	5.33	1.97	2.15	2.56	4.11	1.74	3.19	3.94	1.18	1.000	0.625	3.94	0.315	³ / ₁₆ SQ. x 1.00	¹ / ₄ SQ. x 1.62
525	6.69	2.48	2.76	3.11	5.43	2.24	4.72	4.85	1.75	1.125	0.750	5.91	0.394	³ / ₁₆ SQ. x 1.50	¹ / ₄ SQ. x 2.00
534	8.64	3.35	3.72	3.86	6.38	2.52	5.31	5.55	1.75	1.500	0.875	7.87	0.787	³ / ₁₆ SQ. x 1.50	³ / ₈ SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

STYLE RHMQ



STYLE RMQ



STYLE RHMQ and STYLE RMQ DIMENSIONS (Inches)

Series	C	CD	D	I	LQ 56/140	LQ1 180	Style RHMQ NN	Style RMQ N	T +0.0015 -0.0000	Y	Z	Output Keyway*
518	4.65	1.77	1.93	2.16	3.33	—	2.56	2.97	0.750	3.94	0.315	³ / ₁₆ SQ. x 1.00
520	5.33	1.97	2.15	2.56	3.51	—	3.19	3.94	1.000	3.94	0.315	¹ / ₄ SQ. x 1.62
525	6.69	2.48	2.76	3.11	4.08	—	4.72	4.85	1.125	5.91	0.394	¹ / ₄ SQ. x 2.00
534	8.64	3.35	3.72	3.86	4.83	5.53	5.31	5.55	1.500	7.87	0.787	³ / ₈ SQ. x 2.00

*Output keyway is through the bore on hollow shaft reducers.

MOTOR DATA (Inches)

Motor Frame	AJ	AK	BD	BF	U BORE	Keyway
56C	5.875	4.500	6.50	0.405	0.625	³ / ₁₆ x ³ / ₃₂
140TC	5.875	4.500	6.50	0.405	0.875	³ / ₁₆ x ³ / ₃₂
180TC	7.250	8.500	9.00	0.531	1.125	¹ / ₄ x ¹ / ₈