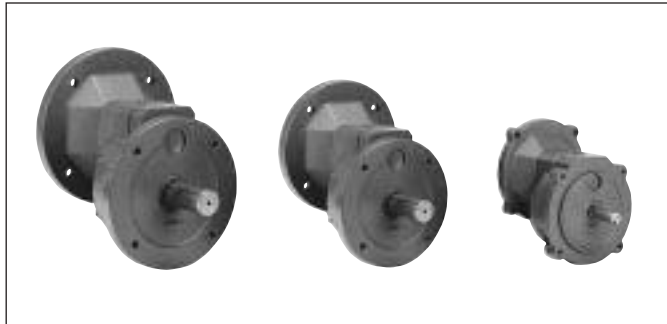


# Ratio Multiplier

## Helical Gear Reducers

### Ratio Multipliers Styles TX, TXQ, & TXM



- Increases Torque and Efficiency as a Primary Drive
- Ratings to 20 Horsepower
- Double Lip Seals
- Factory Filled with Lubricant – Ready to Use
- Easy to Install/Maintain – Mounts in Any Position
- Will Accept any C-Face Motor
- Will Bolt to any C-Face Reducer
- Increases inventory flexibility
- Increases profit power

#### ORDERING DATA

<p><b>Model Description</b>                  TX Solid I.P. Shaft                  TXQ Quill "C" Flange I.P.                  TXM Flexible,                  Coupled "C" Flange input</p> <p><b>Unit Size</b> _____                  1; 2; 3</p> <p><b>Ratio</b> _____                  2:1; 3:1; 4:1; 5:1, 7.5:1</p> <p><b>Motor Size</b> _____                  48CZ; 56C; 140TC; 180TC; 210TC, 250TC</p> <p><b>Output "C" Face Size</b> _____                  56C; 140TC; 180TC</p>	<p>TXQ</p> <p>2-3-56C-56C</p>
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#### Oil & Weight Specifications

Oil Type	AGMA #4	
Oil Capacity	Size 1	5/8 Pint
	Size 2	7/8 Pint
	Size 3	1 Pint
Weight	Size 1	19 Lbs.
	Size 2	22 Lbs.
	Size 3	45 Lbs.

### Footed Reducers Styles TBX, TBXQ, & TBXM

- Increases output torque
- Ratings up to 20 Horsepower
- 5 Ratios available
- Double Lip Seals
- Anti-Friction Bearings
- Factory Filled with Lubricant – Ready to Use
- Will Accept any C-Face Motor

#### ORDERING DATA

<p><b>Model Description</b>                  TBX Footed with Solid I.P. Shaft                  TBXQ Footed with                  Quill "C" Flange I. P.                  TBXM Footed with Flexible                  Coupled "C" Flange I.P.</p> <p><b>Unit Size</b> _____                  1; 2; 3</p> <p><b>Ratio</b> _____                  2:1; 3:1; 4:1; 5:1, 7.5:1</p> <p><b>Motor Size</b> _____                  48CZ; 56C; 140TC; 180TC; 210TC, 250TC</p>	<p>TBXQ</p> <p>2-5-56C</p>
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#### Oil & Weight Specifications

Oil Type	AGMA #4	
Oil Capacity	Size 1	5/8 Pint
	Size 2	7/8 Pint
	Size 3	1 Pint
Weight	Size 1	27 3/4 Lbs.
	Size 2	30 3/4 Lbs.
	Size 3	59 Lbs.

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# Ratio Multiplier

## Rating Table

### TX1 Ratings @ 1750 R.P.M. Input (48, 56)

Ratio	Qty. Teeth		Output R.P.M.	Input H.P.	Output H.P.	Output Torque	Max. LS OHL
7.462	97	13	235	0.75	0.73	196	300
5.111	92	18	342	1.03	1.01	186	300
4.000	88	22	438	1.20	1.18	170	300
2.929	82	28	598	1.43	1.41	148	265
2.056	74	36	851	2.01	1.97	146	222

### TX2 Ratings @ 1750 R.P.M. Input (56, 140)

Ratio	Qty. Teeth		Output R.P.M.	56C Output				140TC Output			
				Input H.P.	Output H.P.	Output Torque	Max. LS OHL	Input H.P.	Output H.P.	Output Torque	Max. LS OHL
7.182	79	11	244	2.62	2.57	664	375	2.62	2.57	664	455
5.000	75	15	350	3.00	2.94	529	375	3.00	2.94	529	455
4.000	72	18	438	3.63	3.55	511	375	3.63	3.55	511	455
2.913	67	23	601	4.21	4.13	433	375	4.21	4.13	433	434
2.000	60	30	875	6.00	5.88	424	358	6.00	5.88	424	358

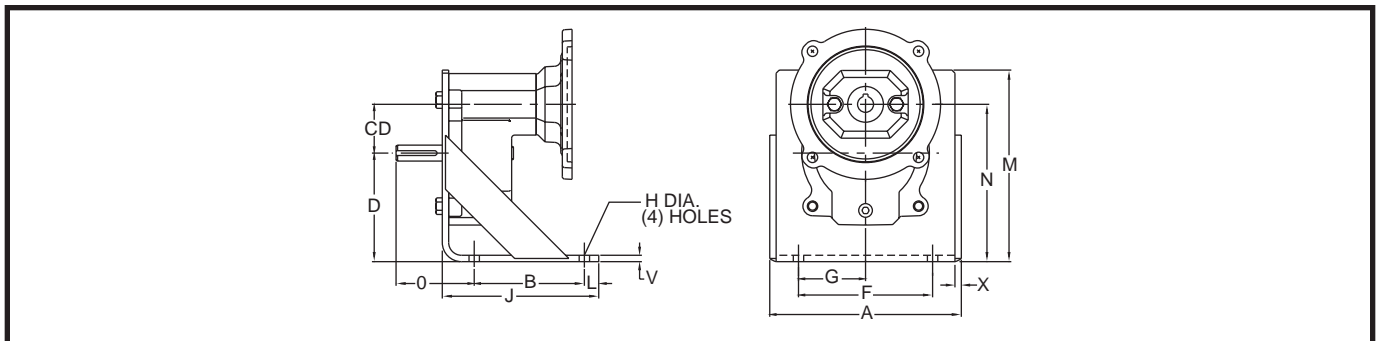
\*TX2 OHL rating may be increased 30% for 140TC using enhanced output bearings

### TX3 Ratings @ 1750 R.P.M. Input (180, 210, 250)

Ratio	Qty. Teeth		Output R.P.M.	Input H.P.	Output H.P.	Output Torque	Max. LS OHL
7.538	98	13	232	5.80	5.69	1544	900
5.167	93	18	339	10.07	9.87	1836	900
4.045	89	22	433	11.35	11.13	1621	900
2.964	83	28	590	12.98	12.72	1357	900
2.000	74	37	875	20.00	19.60	1412	900

## Mounting Base For Ratio Multipliers

### Styles TBX, TBXQ, TBXM

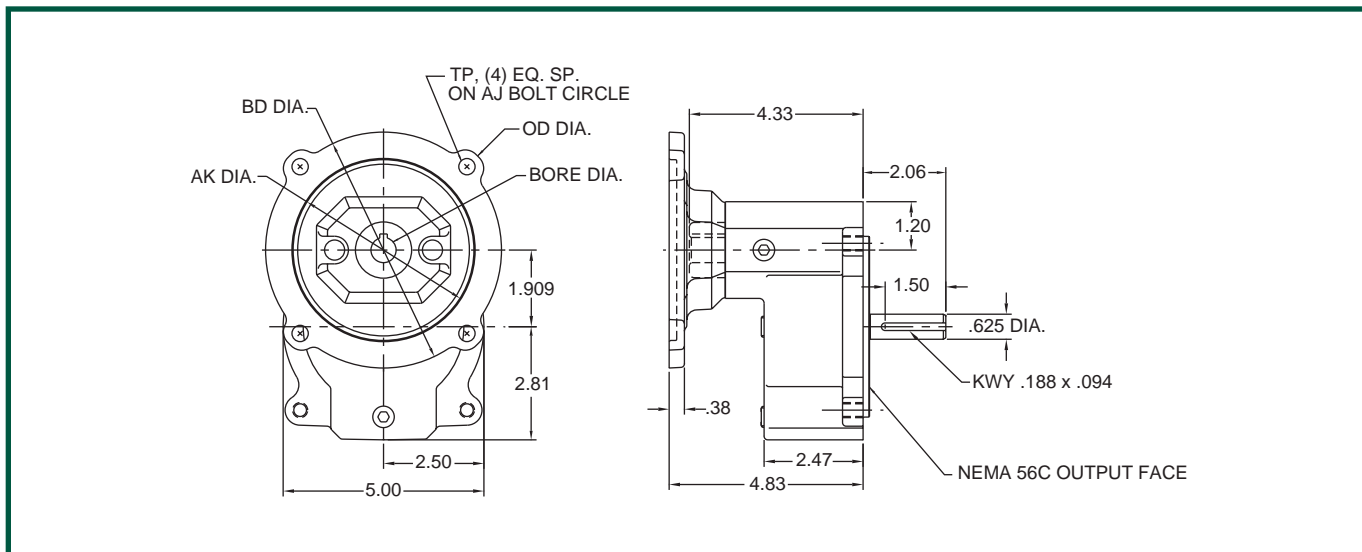


	Output	A	B	CD	D	F	G	H	J	X	L	M	N	O	V	X
Size 1	56C	7.50	6.13	1.909	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.06	.25	.25
Size 2	56C	7.50	6.13	2.362	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.06	.25	.25
	140TC	7.50	6.13	2.362	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.12	.25	.25
Size 3	180TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	3.88	.25	.25
	210TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	4.38	.25	.25
	250TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	5.00	.25	.25

# Ratio Multiplier

## Dimensions

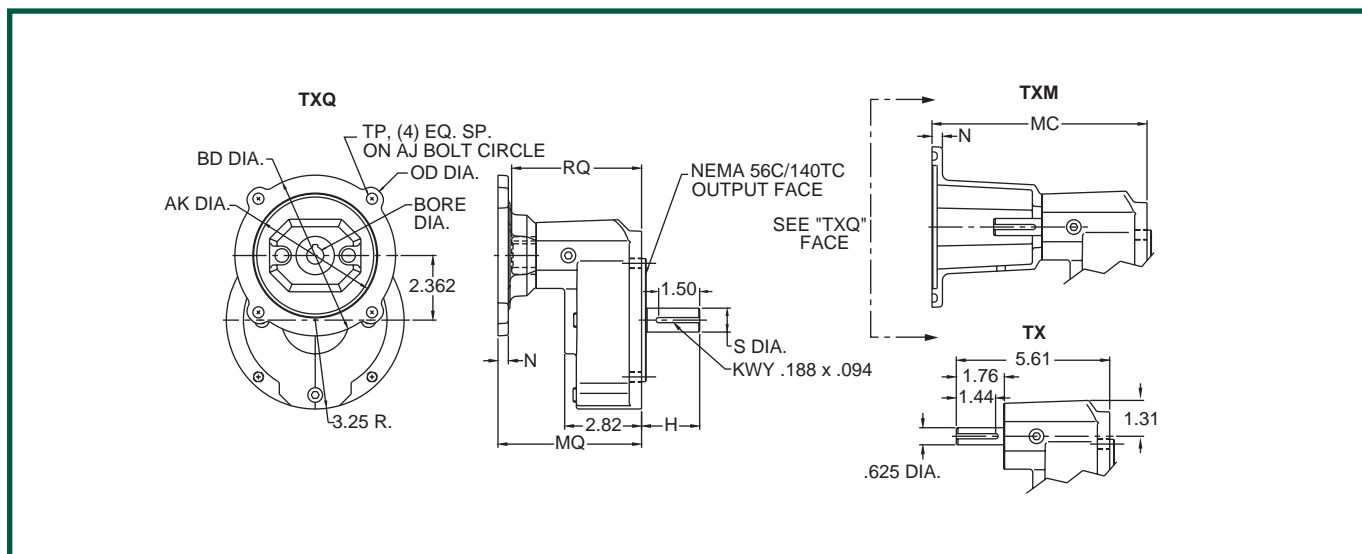
### SIZE 1



	Input Frame	AJ	AK	BD	OD	TP	Bore	Input KWKY.**
TXQ1	48C	3.75	3.00	3.88	4.36	.28	.500	1/8 x 1/16
	56C	5.88	4.50	5.88	6.64	.41	.625	3/16 x 3/32

\*\* keyway width by depth.

### SIZE 2



	Input-Output Frame	AJ	AK	BD	TP	Bore	OD	MQ	N	MC	RQ	IP KWKY.*	H	S Dia.	OP KWKY.*
TXQ2	56C-56C	5.88	4.50	5.88	.41	.625	6.64	5.25	.38	7.86	4.75	.188 x .094	2.06	.625	.188 x .094
TXM2	56C-140TC	5.88	4.50	5.88	.41	.625	6.64	5.25	.38	7.86	4.75	.188 x .094	2.13	.875	.188 x .094
TX2	140TC-56C	5.88	4.50	5.88	.41	.875	6.64	5.25	.38	7.86	4.75	.188 x .094	2.06	.625	.188 x .094
	140TC-140TC	5.88	4.50	5.88	.41	.875	6.64	5.25	.38	7.86	4.75	.188 x .094	2.13	.875	.188 x .094

\*keyway width by depth

Note: All dimensions are for reference only. Contact factory for certified dimensions.

**CAUTION** For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains etc., mounted thereon.

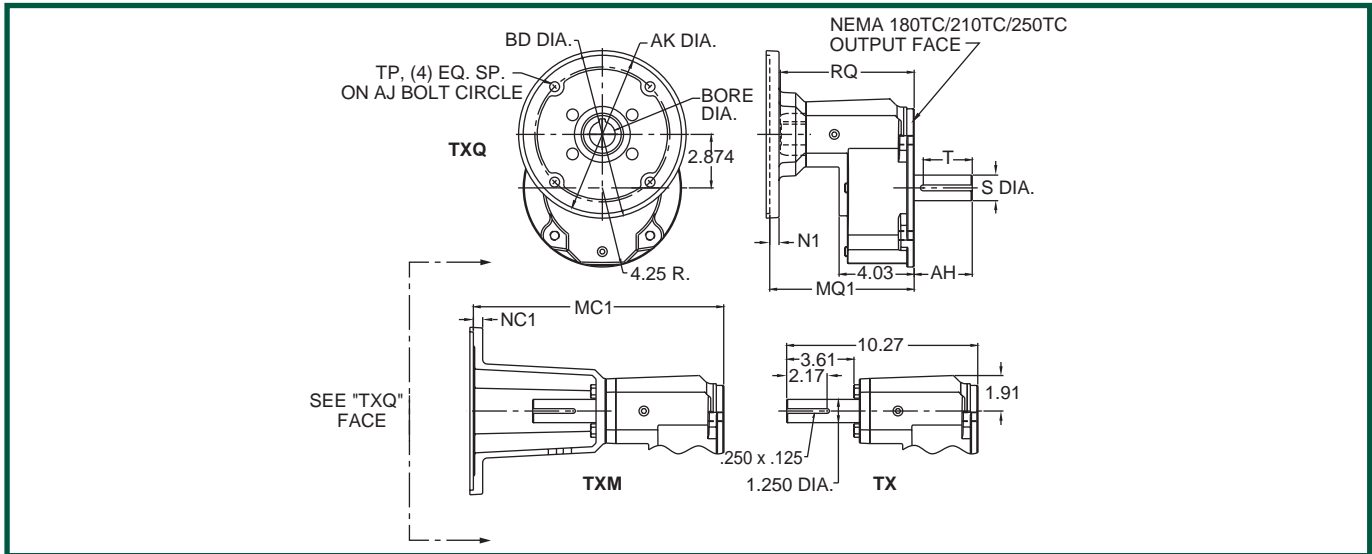
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# Ratio Multiplier

## Dimensions

### SIZE 3



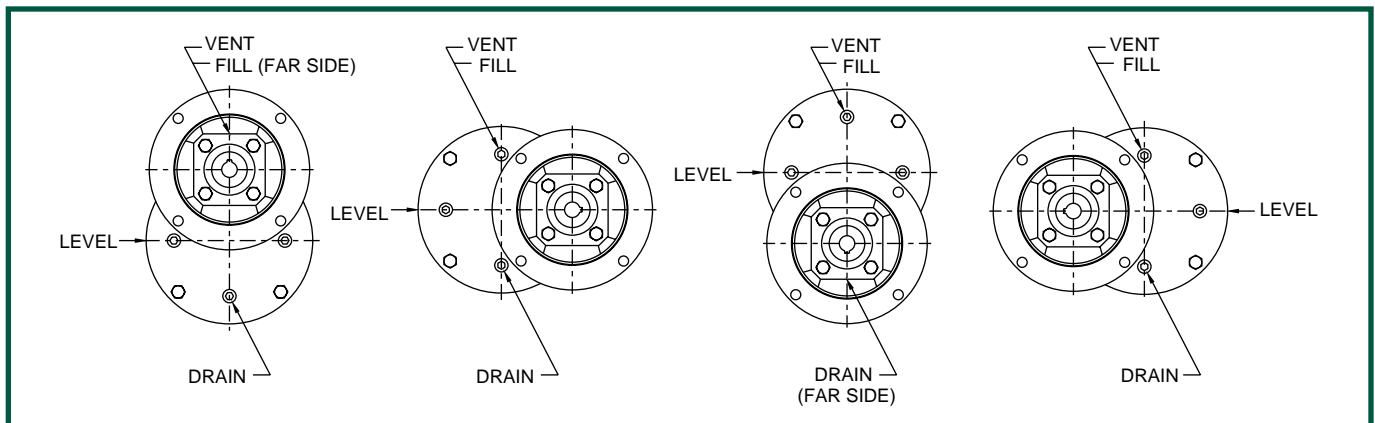
	Input-Output Frame**	AJ	AK	BD	TP	Bore	MQ1	N1	MC1	NC1	RQ	IP KWY.*	AH	S Dia.	OP KWY.*
TXQ3	180TC-180TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	2.62	1.125	.250 x .125 x 1.80
	210TC-180TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	.312 x .156	2.62	1.125	.250 x .125 x 1.80
	250TC-180TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	2.62	1.125	.250 x .125 x 1.80
TXM3	180TC-210TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	3.12	1.375	.312 x .156 x 2.63
	210TC-210TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	.312 x .156	3.12	1.375	.312 x .156 x 2.63
	250TC-210TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	3.12	1.375	.312 x .156 x 2.63
TX3	180TC-250TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	3.75	1.625	.375 x .188 x 3.00
	210TC-250TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	.312 x .156	3.75	1.625	.375 x .188 x 3.00
	250TC-250TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	3.75	1.625	.375 x .188 x 3.00

\* keyway width by depth

\*\*56C and 140TC available for input flange only. 180TC/210TC input flange shown.

Note: All dimensions are for reference only. Contact factory for certified dimensions.

### Vent Plug Location



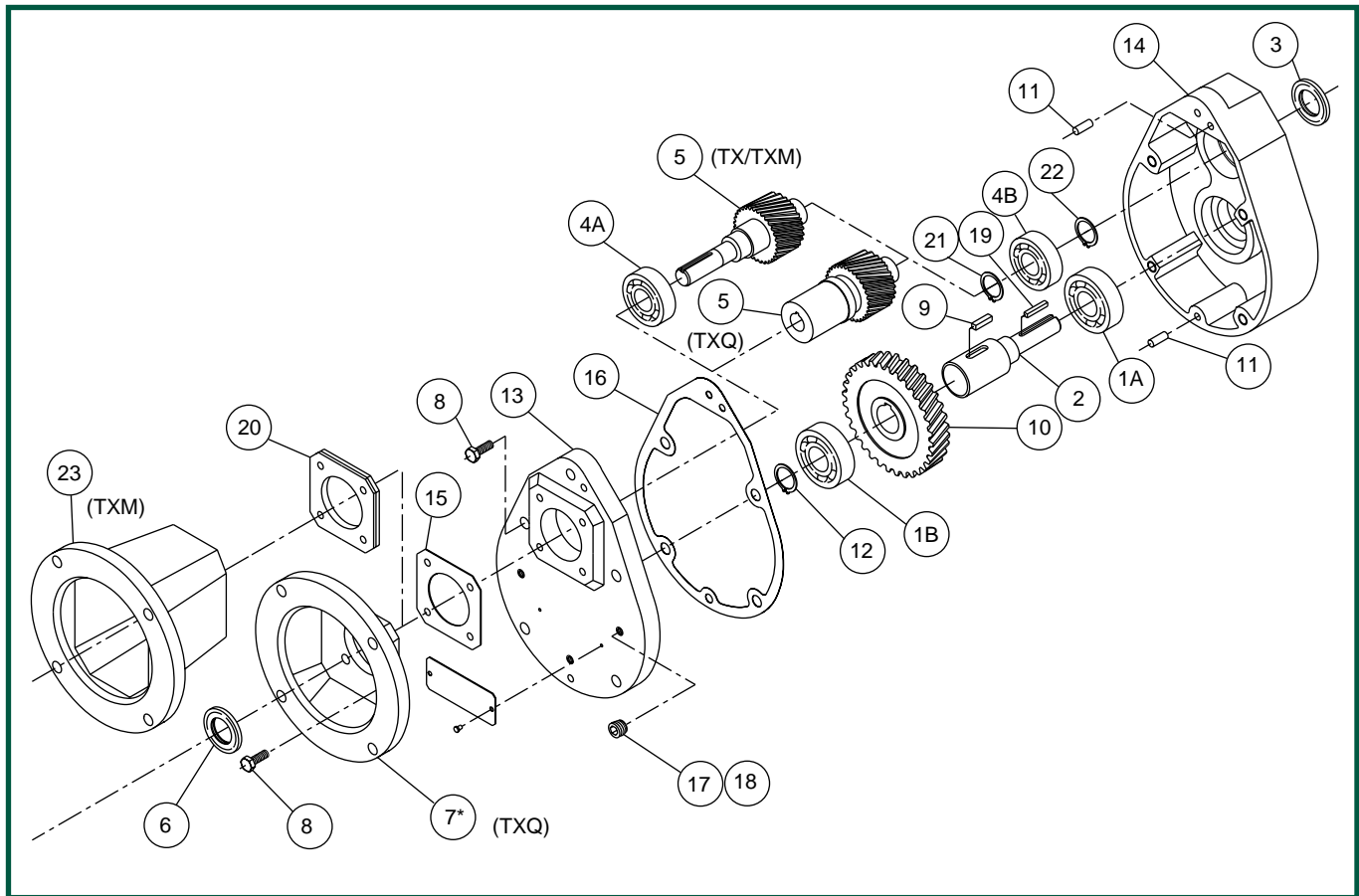
- Units are factory filled for input over mounting position. Verify proper oil level for other mountings.
- The "input under" mounting position is not recommended due to the increased probability of leakage from the high speed shaft seals.
- Special provisions are required for vertical shaft mountings. Consult factory for details.

**CAUTION** For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains etc., mounted thereon.

# Ratio Multiplier

## Dimensions

### Ratio Multiplier



#### Item # Description

- 1A. Bearing, Output (Ball) – Extension End
- 1B. Bearing, Output (Ball) – Inboard End
- 2. Shaft, Output (state output frame size)
- 3. Seal, Oil (Output)
- 4A. Bearing, Input (Ball) – Extension End (N/A for TXQ)
- 4B. Bearing, Input (Ball) – Inboard End
- 5. Shaft, Input (state ratio); on TXQ also state frame size.
- 6. Seal, Oil (Input)
- \*7. Flange, Motor (TXQ only)
- 8. Screw – 8 req. on Model I & II; 11 req. on Model III
- 9. Key, Gear
- 10. Gear, Output (state ratio)

#### Item # Description

- 11. Pin, Dowel – 2 req.
- 12. Spacer, Low Speed – 2 req.
- 13. Cover, Housing
- 14. Housing, Gear
- 15. Gasket, Input Cover
- 16. Gasket, Housing
- 17. Plug, Pipe – 2 req.
- 18. Plug, Vent
- 19. Key, Output Shaft
- 20. Cover, Input, Seal Retainer
- 21. Ring, Retaining, Internal, Input Shaft
- 22. Ring, Retaining, External, Input Shaft
- 23. Flange, Motor (TXM only)

\*Note: Motor Flange replaces input cover on 'TXQ' Model.

Include the complete model description and serial number of the reducer when ordering replacement parts.

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