



# WORM & HELICAL GEAR SPEED REDUCERS



# Index

## I-Line Worm Gear Speed Reducers

Page

Ordering Information – Single Reduction . . . . .	.2
Service Factors . . . . .	.3
Recommended Lubricants . . . . .	.3
Single Reduction Ratings . . . . .	.4-7
Single Reduction Dimensions . . . . .	.8-33
Accessories . . . . .	.34
Single Reduction – Weights and Oil Capacities . . . . .	.35
Single Reduction – Shaft Rotation . . . . .	.36
Service Factors for Worm Gear Applications . . . . .	.37
Ordering Information – Double Reduction . . . . .	.38
Double Reduction – Weights . . . . .	.38
Double Reduction Ratings . . . . .	.39-43
Double Reduction Dimensions . . . . .	.44-61
Double Reduction Assembly Positions . . . . .	.62-65

## Blue Line Worm Gear Speed Reducers

Single Reduction Ratings . . . . .	.67-69
Single Reduction Dimensions . . . . .	.70-73
NEMA C Flange Adapters . . . . .	.74

## Helical Gear Speed Reducers

Size AA with Quill Input – Ratings & Dimensions . . . . .	.76
Size A-D with Quill Input – Features . . . . .	.77
Size A-D – Service Factors . . . . .	.78
Size A-D – Weights and Oil Capacities . . . . .	.79
Size A-D Ratings . . . . .	.79-82
Size A-D Dimensions – Foot Mounted . . . . .	.83
Size A-D Dimensions – Flange Mounted . . . . .	.84
Ratio-Pak Features . . . . .	.85
Ratio-Pak – Weights and Oil Capacities . . . . .	.85
Ordering Information – Ratio-Pak . . . . .	.86
Ratio-Pak Ratings . . . . .	.86
Ratio-Pak Dimensions . . . . .	.87
Engineering . . . . .	.88
Notes . . . . .	.89
Terms and Conditions . . . . .	.90

# The I Line

Increased Quality! Industrial Rated! Inexpensive!



- One-piece gearcase, without external ribs, is made of close-grained cast iron and provides for rigid gear and bearing support. It also offers excellent heat dissipation.
- Double lip, spring-loaded seals guard against oil leakage and prevent dirt from entering.
- Stepped shafts with oversized ball and tapered roller bearings.
- Carbon steel shafts for greater strength.
- High tensile strength cast bronze worm wheel and hardened and ground alloy steel worm made integral with the shaft for long and trouble-free life.
- Oil sight gauge for ease of maintenance (not available on sizes 25 and 34).
- Factory oil filled.
- Every unit test run prior to shipment.
- Universal mounting with bolt-on feet.
- Highly modifiable design.
- All this at substantially lower prices than you have been accustomed to paying for reducers of lesser quality.



IC40-R-56C-JB



IS 34

## How To Order Single Reduction Reducers

When ordering, specify:

- |                             |                               |
|-----------------------------|-------------------------------|
| 1) Model (I, IC, IMS, etc.) | 5) C-Face Size, if required   |
| 2) Size (25 - 350)          | 6) Mounting base, if required |
| 3) Ratio                    | B = Horizontal Base           |
| 4) Assembly position        | VB = Vertical Base            |
|                             | JB = J Mount Base             |
|                             | RB = Riser Block              |



IC45-R-56C-RB-B

**IPTS— Keeping an “I” on Quality and Price!**



ICSF60-R-140TC



IC100-1R-140TC-VB



IO45-R



IM70-R-180TC

**IPTS, INC.**

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The ratings shown on pages 4-7 and 39-43 are based on 10 hours per day operation with uniform load. For other duties it is necessary to multiply the motor horsepower by the appropriate service factor in the table below, then check the ratings on pages 4-7 or 39-43 to ensure the reducer is capable of transmitting this resulting horsepower at the required ratio.

### Service Factor for Electric and Hydraulic Motors

Duration of service (Hours per day)	Uniform load	Moderate shock	Heavy shock	Extreme shock
Occasional 1/2 hour	0.80	0.90	1.00	1.25
Less than 3 hours	1.00	1.00	1.25	1.50
3 – 10 hours	1.00	1.25	1.50	1.75
Over 10 hours	1.25	1.50	1.75	2.00

### Conversion Table to Find Equivalent Single or Multi-Cylinder Engine Service Factor

Electric or Hydraulic Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

### Recommended Lubricants

Ambient Temperature	Recommended Oil (or equal)	Lubricant AGMA No.	ISO Viscosity Grade
15° F to 50° F (-10° C to + 10° C)	Mobil 600W Cylinder Oil	7C	460
50° F to 125° F (10° C to 52° C)	Mobil Extra Hecla Super Cylinder Oil	8C	680

### Other Approved Lubricants

Manufacturer	Lubricant Name	AGMA No.
Shell Oil Co.	OMALA 460	7C
Shell Oil Co.	OMALA 680	8C
Texaco, Inc.	MEROPA 460	7C
Texaco, Inc.	MEROPA 680	8C

# Single Reduction Ratings

1.0 Service Factor

		1750 RPM Input Speed				1450 RPM Input Speed				1150 RPM Input Speed				870 RPM Input Speed				300 RPM Input Speed			
		Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
Size	Ratio	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL		
25	5:1	0.49	0.44	79	150	0.42	0.39	84	150	0.38	0.33	90	150	0.31	0.27	97	150	0.13	0.10	111	150
	7.5:1	0.38	0.32	86	150	0.33	0.28	90	150	0.29	0.24	99	150	0.24	0.19	104	150	0.10	0.08	120	150
	10:1	0.30	0.25	89	150	0.28	0.22	95	150	0.24	0.19	102	150	0.20	0.15	110	150	0.09	0.06	126	150
	15:1	0.23	0.17	92	150	0.21	0.15	99	150	0.18	0.13	106	150	0.15	0.10	113	150	0.07	0.04	130	150
	20:1	0.19	0.13	95	150	0.18	0.12	102	150	0.16	0.10	109	150	0.13	0.08	117	150	0.06	0.03	135	150
	25:1	0.18	0.11	100	150	0.16	0.10	106	150	0.14	0.08	114	150	0.12	0.07	121	150	0.06	0.03	139	150
	30:1	0.15	0.09	96	150	0.14	0.08	103	150	0.13	0.07	111	150	0.11	0.06	119	150	0.05	0.02	137	150
	40:1	0.13	0.07	100	150	0.12	0.06	107	150	0.11	0.05	114	150	0.09	0.04	121	150	0.04	0.02	138	150
	50:1	0.11	0.05	98	150	0.10	0.05	105	150	0.09	0.04	111	150	0.08	0.03	119	150	0.04	0.01	134	150
	60:1	0.10	0.04	94	150	0.09	0.04	100	150	0.08	0.03	106	150	0.07	0.03	113	150	0.03	0.01	128	150
34	5:1	0.93	0.85	153	160	0.84	0.77	162	160	0.72	0.66	177	160	0.57	0.52	182	160	0.26	0.24	252	160
	7.5:1	0.79	0.70	190	160	0.70	0.62	201	160	0.62	0.54	220	160	0.50	0.43	233	160	0.21	0.17	271	160
	10:1	0.69	0.53	191	160	0.63	0.48	202	160	0.53	0.40	210	160	0.42	0.32	224	160	0.19	0.14	294	160
	15:1	0.56	0.43	232	160	0.50	0.38	239	160	0.40	0.30	247	160	0.30	0.23	250	160	0.11	0.08	262	160
	20:1	0.40	0.26	187	160	0.35	0.23	193	160	0.30	0.20	210	160	0.24	0.16	224	160	0.10	0.07	294	160
	25:1	0.34	0.24	217	160	0.31	0.21	231	160	0.28	0.19	253	160	0.23	0.15	269	160	0.10	0.06	313	160
	30:1	0.30	0.18	195	160	0.27	0.16	202	160	0.23	0.14	220	160	0.19	0.12	252	160	0.08	0.05	315	160
	40:1	0.24	0.15	216	160	0.22	0.14	235	160	0.19	0.12	252	160	0.15	0.09	252	160	0.08	0.04	336	160
	50:1	0.20	0.12	216	160	0.18	0.11	231	160	0.16	0.10	263	160	0.13	0.08	280	160	0.06	0.04	420	160
	60:1	0.17	0.09	194	160	0.15	0.08	202	160	0.13	0.07	176	160	0.10	0.05	210	160	0.04	0.02	252	160
	70:1	0.15	0.08	188	160	0.13	0.07	198	160	0.12	0.06	214	160	0.10	0.04	225	160	0.04	0.02	256	160
80:1	0.12	0.06	168	160	0.10	0.05	175	160	0.09	0.04	187	160	0.08	0.03	195	160	0.04	0.01	217	160	
90:1	0.08	0.03	110	160	0.07	0.03	116	160	0.06	0.03	125	160	0.05	0.02	131	160	0.03	0.01	149	160	
40	5:1	1.16	1.06	190	240	1.05	0.96	209	240	0.90	0.78	214	240	0.72	0.62	225	240	0.33	0.29	305	240
	7.5:1	0.99	0.89	241	240	0.88	0.79	258	240	0.78	0.69	284	240	0.64	0.56	304	240	0.27	0.23	357	240
	10:1	0.86	0.70	252	270	0.79	0.64	269	270	0.67	0.54	284	270	0.53	0.43	301	270	0.24	0.20	420	270
	15:1	0.70	0.54	292	270	0.62	0.48	303	270	0.49	0.37	304	270	0.37	0.28	304	270	0.13	0.10	315	270
	20:1	0.57	0.45	324	270	0.52	0.40	341	270	0.47	0.35	369	270	0.34	0.23	333	270	0.12	0.10	468	270
	25:1	0.49	0.36	324	270	0.44	0.32	347	270	0.39	0.28	380	270	0.30	0.20	362	270	0.12	0.09	472	270
	30:1	0.41	0.29	313	270	0.37	0.26	340	270	0.32	0.22	365	270	0.26	0.18	390	270	0.11	0.08	504	270
	40:1	0.28	0.18	259	270	0.23	0.15	252	270	0.20	0.13	273	270	0.16	0.10	280	270	0.09	0.06	504	270
	50:1	0.25	0.14	252	270	0.22	0.12	252	270	0.19	0.10	263	270	0.15	0.08	280	270	0.07	0.04	420	270
	60:1	0.20	0.10	216	270	0.18	0.09	227	270	0.16	0.08	202	270	0.13	0.07	304	270	0.06	0.03	378	270
	70:1	0.18	0.10	247	270	0.16	0.09	261	270	0.15	0.07	284	270	0.12	0.06	304	270	0.06	0.02	345	270
	80:1	0.16	0.08	230	270	0.14	0.07	244	270	0.13	0.06	264	270	0.11	0.05	279	270	0.05	0.02	320	270
	90:1	0.13	0.06	200	270	0.12	0.06	213	270	0.11	0.05	232	270	0.10	0.04	246	270	0.05	0.02	285	270
100:1	0.08	0.04	126	270	0.07	0.03	133	270	0.06	0.03	144	270	0.05	0.02	153	270	0.03	0.01	175	270	
45	5:1	1.69	1.55	272	280	1.58	1.45	304	280	1.43	1.29	340	280	1.21	1.08	380	280	0.53	0.45	475	280
	7.5:1	1.45	1.31	353	280	1.29	1.16	379	280	1.15	1.01	416	280	0.93	0.82	445	280	0.40	0.33	524	280
	10:1	1.20	0.98	353	320	1.09	0.89	374	320	0.97	0.79	415	320	0.74	0.60	420	320	0.26	0.21	441	320
	15:1	0.90	0.69	373	320	0.82	0.63	397	320	0.69	0.53	276	320	0.54	0.41	431	320	0.19	0.14	441	320
	20:1	0.67	0.47	337	320	0.60	0.42	363	320	0.52	0.36	391	320	0.44	0.30	430	320	0.18	0.12	504	320
	25:1	0.61	0.45	406	320	0.55	0.40	436	320	0.48	0.34	486	320	0.40	0.27	487	320	0.17	0.12	624	320
	30:1	0.57	0.40	432	320	0.50	0.35	441	320	0.43	0.30	473	320	0.31	0.22	462	320	0.16	0.10	630	320
	40:1	0.37	0.24	345	320	0.33	0.21	353	320	0.30	0.19	399	320	0.23	0.15	420	320	0.15	0.08	840	320
	50:1	0.33	0.20	360	320	0.30	0.18	378	320	0.27	0.16	420	320	0.21	0.12	420	320	0.09	0.06	504	320
	60:1	0.26	0.15	323	320	0.23	0.13	327	320	0.20	0.11	347	320	0.18	0.10	420	320	0.07	0.04	504	320
	70:1	0.22	0.12	303	320	0.20	0.11	318	320	0.19	0.09	353	320	0.14	0.07	359	320	0.06	0.03	471	320
	80:1	0.19	0.10	294	320	0.17	0.09	312	320	0.16	0.08	339	320	0.13	0.06	359	320	0.06	0.03	414	320
	90:1	0.14	0.08	243	320	0.12	0.07	254	320	0.11	0.06	273	320	0.09	0.04	286	320	0.04	0.02	320	320
100:1	0.10	0.05	177	320	0.09	0.04	187	320	0.08	0.04	201	320	0.07	0.03	213	320	0.03	0.01	242	320	

Output Torque in Inch-Pounds. Overhung Load in Pounds at one shaft diameter from housing.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

# Single Reduction Ratings

1.0 Service Factor

Size	Ratio	1750 RPM Input Speed				1450 RPM Input Speed				1150 RPM Input Speed				870 RPM Input Speed				300 RPM Input Speed			
		Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
		HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL		
50	5:1	2.60	2.37	427	300	2.36	2.15	452	300	2.12	1.93	507	300	1.84	1.68	588	300	0.77	0.69	725	300
	7.5:1	1.90	1.73	466	310	1.73	1.56	508	310	1.56	1.40	573	310	1.31	1.15	625	310	0.59	0.49	769	310
	10:1	1.52	1.35	486	320	1.43	1.27	534	320	1.24	1.07	569	320	1.03	0.89	623	320	0.43	0.35	741	320
	15:1	1.15	0.97	524	380	1.03	0.88	555	380	0.93	0.77	608	380	0.78	0.63	666	380	0.33	0.24	787	380
	20:1	0.76	0.59	425	430	0.67	0.52	437	430	0.64	0.48	511	430	0.55	0.40	570	430	0.25	0.16	697	430
	25:1	0.73	0.57	514	470	0.66	0.51	522	470	0.59	0.45	610	470	0.49	0.36	655	470	0.23	0.15	778	470
	30:1	0.67	0.50	540	510	0.59	0.44	555	510	0.55	0.39	626	510	0.47	0.32	684	510	0.20	0.12	807	510
	40:1	0.47	0.30	432	570	0.41	0.26	437	570	0.39	0.23	509	570	0.34	0.19	567	570	0.16	0.07	693	570
	50:1	0.44	0.28	504	570	0.42	0.26	546	570	0.37	0.22	596	570	0.32	0.18	652	570	0.14	0.06	768	570
	60:1	0.37	0.22	475	570	0.34	0.20	504	570	0.31	0.17	567	570	0.27	0.14	618	570	0.12	0.05	730	570
	70:1	0.32	0.20	503	570	0.29	0.17	531	570	0.26	0.15	573	570	0.21	0.12	605	570	0.10	0.05	639	570
	80:1	0.27	0.16	460	570	0.25	0.14	484	570	0.22	0.12	523	570	0.19	0.10	554	570	0.09	0.04	634	570
90:1	0.20	0.10	324	570	0.18	0.09	354	570	0.17	0.08	388	570	0.14	0.06	415	570	0.07	0.03	487	570	
100:1	0.13	0.07	245	570	0.12	0.06	261	570	0.11	0.05	283	570	0.09	0.04	299	570	0.04	0.02	342	570	
60	5:1	3.97	3.65	657	490	3.65	3.30	693	490	3.31	3.03	796	490	2.85	2.60	910	490	1.24	1.12	1176	490
	7.5:1	3.09	2.85	768	508	2.83	2.59	845	508	2.60	2.35	965	508	2.18	1.96	1062	508	1.00	0.85	1335	508
	10:1	2.72	2.43	875	525	2.36	2.10	882	525	2.27	1.99	1050	525	1.93	1.67	1173	525	0.84	0.69	1451	525
	15:1	2.03	1.74	940	630	1.85	1.58	996	630	1.71	1.42	1126	630	1.45	1.19	1253	630	0.64	0.48	1539	630
	20:1	1.63	1.34	965	710	1.49	1.22	1025	710	1.37	1.09	1149	710	1.17	0.91	1282	710	0.52	0.37	1571	710
	25:1	1.38	1.11	1001	770	1.27	1.00	1089	770	1.16	0.89	1224	770	0.98	0.74	1331	770	0.46	0.31	1627	770
	30:1	1.18	0.90	972	835	1.07	0.81	1021	835	1.00	0.73	1161	835	0.87	0.61	1290	835	0.40	0.24	1581	835
	40:1	0.95	0.67	965	940	0.86	0.60	1008	940	0.82	0.54	1147	940	0.71	0.45	1277	940	0.33	0.18	1561	940
	50:1	0.72	0.46	828	940	0.65	0.41	861	940	0.64	0.38	1011	940	0.56	0.32	1133	940	0.27	0.13	1408	940
	60:1	0.66	0.40	864	940	0.61	0.36	908	940	0.57	0.33	1048	940	0.50	0.27	1167	940	0.24	0.10	1428	940
	70:1	0.50	0.33	822	940	0.45	0.29	873	940	0.40	0.25	949	940	0.34	0.20	1007	940	0.16	0.08	1162	940
	80:1	0.40	0.26	735	940	0.36	0.22	778	940	0.33	0.19	842	940	0.27	0.15	892	940	0.13	0.06	1022	940
90:1	0.29	0.15	494	940	0.27	0.14	538	940	0.26	0.12	606	940	0.22	0.10	660	940	0.12	0.04	809	940	
100:1	0.18	0.10	371	940	0.16	0.09	392	940	0.14	0.08	424	940	0.12	0.06	449	940	0.06	0.02	514	940	
70	5:1	5.66	5.22	940	525	5.13	4.73	994	525	4.82	4.44	1166	525	4.17	3.84	1345	525	1.89	1.73	1817	525
	7.5:1	4.98	4.62	1248	560	4.62	4.26	1388	560	4.30	3.93	1612	560	3.65	3.30	1794	560	1.71	1.47	2318	560
	10:1	4.11	3.70	1333	600	3.78	3.40	1429	600	3.50	3.09	1629	600	3.03	2.64	1854	600	1.37	1.12	2379	600
	15:1	3.05	2.64	1426	720	2.78	2.40	1513	720	2.62	2.21	1746	720	2.27	1.89	1981	720	1.04	0.80	2528	720
	20:1	2.48	2.10	1513	800	2.25	1.90	1597	800	2.08	1.72	1809	800	1.78	1.44	2019	800	0.79	0.59	2479	800
	25:1	2.06	1.69	1518	860	1.91	1.54	1669	860	1.77	1.39	1907	860	1.31	1.16	2097	860	0.73	0.50	2636	860
	30:1	1.77	1.36	1470	900	1.60	1.22	1538	900	1.54	1.13	1799	900	1.35	0.97	2039	900	0.65	0.41	2596	900
	40:1	1.41	1.05	1513	970	1.28	0.95	1597	970	1.20	0.86	1811	970	1.04	0.72	2015	970	0.48	0.29	2464	970
	50:1	1.02	0.66	1189	1050	0.98	0.63	1324	1050	0.93	0.56	1475	1050	0.84	0.48	1688	1050	0.44	0.20	2228	1050
	60:1	0.98	0.61	1318	1050	0.92	0.57	1437	1050	0.87	0.51	1629	1050	0.78	0.43	1850	1050	0.40	0.18	2344	1050
	70:1	0.80	0.52	1303	1050	0.74	0.46	1413	1050	0.69	0.41	1584	1050	0.59	0.34	1719	1050	0.30	0.14	2090	1050
	80:1	0.60	0.38	1083	1050	0.55	0.34	1170	1050	0.52	0.30	1302	1050	0.43	0.25	1405	1050	0.22	0.10	1688	1050
90:1	0.40	0.24	778	1050	0.37	0.21	840	1050	0.35	0.19	937	1050	0.30	0.16	1013	1050	0.16	0.07	1220	1050	
100:1	0.23	0.14	496	1050	0.21	0.12	526	1050	0.19	0.11	579	1050	0.17	0.09	621	1050	0.08	0.04	733	1050	
80	5:1	9.34	8.66	1559	600	9.05	8.39	1763	600	7.99	7.41	1946	600	6.97	6.46	2262	600	3.30	3.06	3214	600
	7.5:1	6.83	6.38	1724	670	6.11	5.68	1851	670	5.73	5.28	2172	670	4.91	4.48	2435	670	2.33	2.03	3203	670
	10:1	5.57	5.03	1812	710	5.40	4.88	2050	710	4.77	4.24	2232	710	4.16	3.66	2562	710	1.97	1.63	3426	710
	15:1	4.10	3.58	1934	840	3.72	3.25	2048	840	3.56	3.02	2390	840	3.12	2.61	2746	840	1.49	1.15	3635	840
	20:1	3.28	2.75	1981	950	2.98	2.50	2101	950	2.86	2.32	2447	950	2.51	1.99	2804	950	1.22	0.88	3710	950
	25:1	2.63	2.21	1987	1000	2.43	2.02	2191	1000	2.26	1.83	2511	1000	1.93	1.53	2768	1000	0.93	0.67	3497	1000
	30:1	2.36	1.85	1999	1130	2.15	1.69	2130	1130	2.08	1.56	2469	1130	1.85	1.34	2833	1130	0.93	0.59	3739	1130
	40:1	1.89	1.37	1974	1275	1.74	1.26	2118	1275	1.67	1.16	2445	1275	1.49	0.99	2799	1275	0.77	0.43	3694	1275
	50:1	1.62	1.14	2053	1400	1.48	1.04	2185	1400	1.42	0.96	2523	1400	1.26	0.82	2865	1400	0.62	0.34	3631	1400
	60:1	1.29	0.84	1815	1400	1.19	0.77	1941	1400	1.16	0.71	2235	1400	1.05	0.61	2559	1400	0.56	0.26	3377	1400
	70:1	1.03	0.68	1714	1400	0.96	0.62	1881	1400	0.91	0.56	2143	1400	0.79	0.46	2353	1400	0.41	0.20	2941	1400
	80:1	0.80	0.52	1498	1400	0.77	0.47	1645	1400	0.74	0.43	1875	1400	0.64	0.36	2058	1400	0.34	0.15	2574	1400
90:1	0.54	0.33	1054	1400	0.51	0.30	1157	1400	0.49	0.27	1318	1400	0.42	0.22	1447	1400	0.23	0.10	1810	1400	
100:1	0.37	0.21	747	1400	0.35	0.19	824	1400	0.34	0.17	947	1400	0.30	0.14	1045	1400	0.17	0.06	1326	1400	

Output Torque in Inch-Pounds. Overhung Load in Pounds at one shaft diameter from housing.  
While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

IPTS, INC.

# Single Reduction Ratings

1.0 Service Factor

Size	Ratio	1750 RPM Input Speed				1450 RPM Input Speed				1150 RPM Input Speed				870 RPM Input Speed				300 RPM Input Speed			
		Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
			HP	Torque	OHL		HP	Torque	OHL		HP	Torque	OHL		HP	Torque	OHL		HP	Torque	OHL
100	5:1	14.80	13.70	2467	690	13.60	12.59	2645	690	12.40	11.48	3015	690	11.10	10.28	3599	690	5.65	5.23	5494	690
	7.5:1	11.14	10.40	2808	690	10.13	9.41	3067	690	9.45	8.69	3570	690	8.24	7.50	4072	690	4.51	3.89	6128	690
	10:1	9.70	8.86	3191	725	8.92	8.15	3424	725	8.12	7.30	3835	725	7.31	6.49	4545	725	3.71	3.10	6522	725
	15:1	7.17	6.32	3414	880	6.26	5.52	3479	880	6.08	5.24	4137	880	5.47	4.64	4877	880	2.81	2.19	6933	880
	20:1	5.48	4.78	3443	1000	4.95	4.32	3639	1000	4.75	4.04	4249	1000	4.17	3.48	4882	1000	1.99	1.53	6465	1000
	25:1	4.33	3.75	3372	1140	4.04	3.46	3756	1140	3.80	3.19	4370	1140	3.26	2.69	4867	1140	1.75	1.32	6938	1140
	30:1	4.10	3.27	3533	1200	3.70	2.95	3718	1200	3.53	2.71	4279	1200	3.21	2.39	5036	1200	1.73	1.12	7118	1200
	40:1	3.05	2.38	3429	1375	2.76	2.15	3613	1375	2.70	2.02	4257	1375	2.39	1.74	4886	1375	1.20	0.76	6447	1375
	50:1	2.49	1.88	3385	1510	2.24	1.69	3550	1510	2.18	1.57	4137	1510	1.94	1.34	4715	1510	0.76	0.57	6081	1510
	60:1	2.04	1.49	3219	1510	1.85	1.35	3403	1510	1.81	1.24	3946	1510	1.59	1.05	4463	1510	0.78	0.45	5681	1510
	70:1	1.63	1.11	2791	1510	1.48	0.98	2978	1510	1.45	0.92	3524	1510	1.30	0.79	3973	1510	0.72	0.36	5298	1510
	80:1	1.29	0.91	2613	1510	1.19	0.82	2848	1510	1.11	0.73	3212	1510	0.95	0.60	3501	1510	0.48	0.26	4302	1510
	90:1	0.90	0.58	1890	1510	0.85	0.54	2096	1510	0.82	0.49	2424	1510	0.72	0.41	2688	1510	0.39	0.18	3447	1510
100:1	0.63	0.38	1362	1510	0.57	0.34	1459	1510	0.57	0.31	1718	1510	0.51	0.27	1930	1510	0.29	0.12	2554	1510	
120	7.5:1	16.19	15.26	4006	1040	15.05	14.12	4445	1100	13.77	12.83	5049	1190	12.10	11.16	5855	1310	6.67	5.86	9222	1860
	10:1	13.58	12.62	4415	1140	12.64	11.67	4900	1210	11.59	10.60	5565	1310	10.26	9.27	6490	1440	5.56	4.74	9952	2000
	15:1	10.26	9.31	4884	1300	9.56	8.61	4520	1390	8.79	7.82	6156	1500	7.84	6.87	7207	1650	4.14	3.37	10610	2000
	19:1	8.28	7.46	4958	1410	7.73	6.90	5502	1500	7.04	6.21	6188	1620	6.30	5.46	7252	1780	3.10	2.50	9960	2000
	25:1	6.75	5.99	5238	1550	6.21	5.45	5723	1650	5.77	5.00	6554	1780	5.05	4.29	7505	1950	2.39	1.88	9842	2000
	30:1	6.39	5.39	5660	1640	6.00	4.99	6281	1750	5.43	4.43	6976	1890	5.00	3.98	8345	2000	2.68	1.90	11942	2000
	39:1	5.02	4.10	5588	1790	4.72	3.79	6201	1910	4.33	3.40	6956	2000	3.95	3.00	8198	2000	2.08	1.39	11383	2000
	50:1	3.88	3.09	5399	1930	3.59	2.81	5893	2000	3.38	2.58	6757	2000	3.00	2.21	7747	2000	1.50	0.97	10184	2000
	60:1	3.29	2.46	5173	2000	3.01	2.20	5547	2000	2.89	2.05	6468	2000	2.63	1.80	7540	2000	1.41	0.81	10249	2000
	70:1	2.73	1.95	4764	2000	2.59	1.80	5287	2000	2.41	1.62	5941	2000	2.23	1.42	6977	2000	1.24	0.66	9622	2000
90:1	1.65	1.15	3623	2000	1.61	1.09	4112	2000	1.51	0.99	4666	2000	1.35	0.84	5295	2000	0.70	0.36	6820	2000	
135	7.5:1	21.06	20.02	5254	1440	19.56	18.52	5831	1540	17.88	16.83	6623	1660	15.73	14.67	7701	1820	8.51	7.62	11990	2600
	10:1	18.64	17.54	6135	1590	17.33	16.22	6809	1690	15.86	14.74	7734	1830	14.06	12.92	9042	2010	7.40	6.48	13595	2600
	15:1	13.65	12.49	6543	1820	12.72	11.53	7261	1940	11.68	10.48	8248	2090	10.39	9.18	9634	2300	5.62	4.64	14599	2600
	19.5:1	10.91	9.87	6736	1990	10.18	9.13	7475	2110	9.19	8.14	8332	2280	8.34	7.27	9919	2510	4.24	3.43	14057	2600
	25:1	8.92	7.80	6821	2160	8.34	7.21	7569	2300	7.45	6.35	8330	2480	6.90	5.75	10066	2600	3.70	2.80	14700	2600
	30:1	8.07	6.84	7182	2290	7.56	6.33	7970	2440	7.00	5.75	9053	2600	6.30	5.04	10587	2600	3.53	2.52	15861	2600
	40:1	6.35	5.25	7351	2520	5.97	4.86	8157	2600	5.44	4.34	9114	2600	4.99	3.86	10814	2600	2.65	1.81	15227	2600
	50:1	5.13	3.99	6985	2600	4.84	3.69	7751	2600	4.38	3.26	8544	2600	4.12	2.95	10307	2600	2.34	1.43	15001	2600
	60:1	4.10	3.18	6678	2600	3.74	2.84	7161	2600	3.59	2.65	8350	2600	3.26	2.32	9736	2600	1.72	1.05	13237	2600
	70:1	3.40	2.52	6160	2600	3.22	2.33	6836	2600	2.98	2.09	7680	2600	2.74	1.84	9022	2600	1.50	0.85	12451	2600
90:1	2.24	1.57	4928	2600	2.06	1.40	5295	2600	1.99	1.31	6164	2600	1.83	1.14	7177	2600	1.00	0.52	9728	2600	
155	7.17:1	29.14	27.80	6975	3290	27.05	25.71	7740	3400	24.71	23.36	8792	3400	22.02	20.65	10361	3400	12.34	11.12	16741	3400
	10.25:1	23.42	22.03	7901	3400	21.77	20.37	8768	3400	19.92	18.51	9959	3400	17.37	15.98	11459	3400	9.86	8.63	18565	3400
	14.67:1	18.63	17.31	8882	3400	17.33	16.00	9857	3400	15.89	14.54	11196	3400	14.11	12.75	13091	3400	7.48	6.39	19666	3400
	19.5:1	14.63	13.34	9100	3400	13.63	12.33	10098	3400	12.52	11.21	11471	3400	11.17	9.84	13428	3400	5.87	4.83	19765	3400
	25:1	12.03	10.70	9355	3400	11.24	9.89	10381	3400	10.35	8.99	11792	3400	9.26	7.89	13795	3400	5.03	3.92	20592	3400
	30:1	10.73	9.18	9635	3400	10.04	8.49	10693	3400	9.28	7.71	12146	3400	8.27	6.70	14069	3400	4.89	3.54	22265	3400
	40:1	8.18	6.90	9662	3400	7.68	6.38	10722	3400	6.95	5.67	11907	3400	6.41	5.09	14244	3400	3.43	2.43	20385	3400
	50:1	6.80	5.45	9534	3400	6.40	5.04	10580	3400	5.96	4.58	12018	3400	5.41	4.02	14063	3400	3.10	1.99	20897	3400
	60:1	5.42	4.31	9054	3400	5.23	3.99	10047	3400	4.73	3.52	11074	3400	4.45	3.18	13360	3400	2.53	1.54	19444	3400
	68:1	4.72	3.58	8510	3400	4.46	3.31	9444	3400	4.06	2.92	10431	3400	3.82	2.64	12556	3400	2.18	1.28	18195	3400
86:1	3.23	2.33	6998	3400	3.06	2.15	7766	3400	2.82	1.92	8648	3400	2.64	1.71	10309	3400	1.51	0.81	14649	3400	
175	7.5:1	35.80	34.25	8988	4400	33.22	31.68	9974	4400	30.34	28.78	11330	4400	27.02	25.44	13353	4400	15.40	13.96	21984	4400
	10:1	31.20	29.47	10312	4400	28.98	27.27	11444	4400	26.50	24.77	12999	4400	23.65	21.89	15320	4400	13.58	11.99	25165	4400
	15:1	23.61	21.95	11521	4400	21.97	20.30	12785	4400	20.13	18.45	14522	4400	17.67	15.99	16788	4400	9.96	8.50	26772	4400
	20:1	20.12	18.32	12819	4400	18.75	16.94	14226	4400	17.22	15.40	16159	4400	15.12	13.31	18629	4400	8.74	7.14	29988	4400
	25:1	16.30	14.46	12650	4400	15.22	13.37	14038	4400	14.02	12.15	15945	4400	12.29	10.45	18287	4400	7.35	5.70	29919	4400
	30:1	14.30	12.33	12944	4400	13.38	11.40	14364	4400	12.35	10.36	16316	4400	11.18	9.16	19229	4400	6.72	4.93	31039	4400
	40:1	11.44	9.57	13399	4400	10.72	8.54	14869	4400	9.93	8.05	16890	4400	8.85	6.97	19515	4400	5.35	3.71	31175	4400
	50:1	9.21	7.35	12860	4400	8.67	6.80	14271	4400	8.06	6.18	16210	4400	7.19	5.32	18618	4400	4.55	2.89	30326	4400
	59:1	7.55	6.05	12486	4400	7.11	5.59	13856	4400	6.61	5.08	15739	4400	6.01	4.46	18418	4400	3.44	2.21	27368	4400
	69:1	6.04	4.68	11289	4400	5.69	4.32	12528	4400	5.32	3.93	14230	4400	4.85	3.45	16658	4400	2.80	1.70	24590	4400
90:1	3.94	2.86	9006	4400	3.74	2.65	9994	4400	3.51	2.40	11352	4400	3.22	2.11	13289	4400	1.92	1.04	19598	4400	

Output Torque in Inch-Pounds. Overhung Load in Pounds at one shaft diameter from housing.  
 While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

# Single Reduction Ratings

1.0 Service Factor

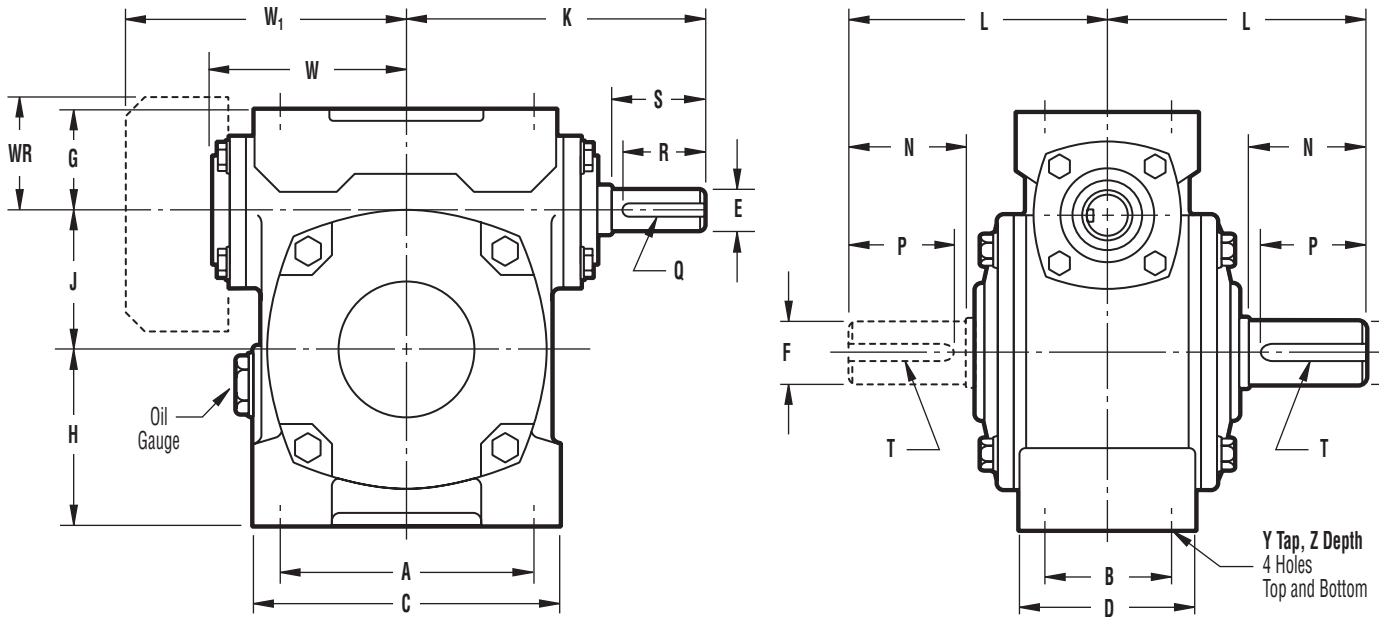
Size	Ratio	1750 RPM Input Speed				1450 RPM Input Speed				1150 RPM Input Speed				870 RPM Input Speed				300 RPM Input Speed			
		Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
		HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL	HP	Torque	OHL		
200	10.5:1	38.81	36.75	13500	5000	36.04	33.98	14981	5000	32.95	30.88	17017	5000	29.39	27.30	20055	5000	17.33	15.37	33872	5000
	15:1	30.33	28.43	14920	5000	28.19	26.29	16557	5000	25.81	23.89	18806	5000	22.44	20.55	21565	5000	12.91	11.21	35299	5000
	20:1	24.22	22.32	15617	5000	22.55	20.64	17330	5000	20.68	18.75	19685	5000	18.17	16.25	22739	5000	10.34	8.66	36359	5000
	25.5:1	20.59	18.57	16568	5000	19.20	17.17	18386	5000	17.65	15.61	20884	5000	15.51	13.48	24051	5000	9.05	7.26	38851	5000
	31:1	18.68	16.15	17513	5000	17.45	14.93	19435	5000	16.10	13.57	22076	5000	14.56	11.99	26017	5000	9.14	6.74	43861	5000
	41:1	14.13	12.09	17348	5000	13.23	11.18	19251	5000	12.23	10.16	21867	5000	10.89	8.83	25330	5000	6.44	4.66	40087	5000
	51:1	11.72	9.64	17198	5000	11.00	8.91	19085	5000	10.21	8.10	21679	5000	9.10	7.01	25013	5000	5.59	3.75	40157	5000
	60:1	10.14	8.15	17104	5000	9.54	7.54	18981	5000	8.87	6.85	21560	5000	7.97	5.95	24985	5000	4.87	3.13	39473	5000
	75:1	7.27	5.66	14847	5000	6.86	5.23	16476	5000	6.40	4.76	18715	5000	5.81	4.16	21848	5000	3.47	2.11	33255	5000
	90:1	5.40	4.02	12666	5000	5.11	3.72	14055	5000	4.78	3.38	15965	5000	4.37	2.96	18633	5000	2.67	1.50	28409	5000
225	10.5:1	47.72	45.80	16708	6250	44.30	42.06	18541	6600	40.46	38.21	21060	7000	36.05	33.78	24820	7000	21.21	19.07	42034	7000
	15:1	37.75	35.60	18684	7000	35.07	32.92	20735	7000	32.08	29.92	23552	7000	28.64	26.44	27757	7000	16.23	14.28	44955	7000
	20:1	30.15	27.89	19519	7000	28.05	25.80	21660	7000	25.71	23.44	24603	7000	23.02	20.72	28996	7000	13.29	11.23	47131	7000
	26:1	25.32	22.89	20819	7000	23.60	21.16	23103	7000	21.68	19.23	26243	7000	19.48	17.00	30928	7000	11.57	9.32	50857	7000
	29.5:1	22.82	20.58	21243	7000	21.28	19.03	23574	7000	19.56	17.30	26777	7000	17.19	14.94	30838	7000	10.03	8.04	49814	7000
	41:1	17.52	15.11	21677	7000	16.39	13.97	24055	7000	15.13	12.70	27324	7000	13.69	11.22	32202	7000	8.23	6.04	51980	7000
	48:1	15.39	13.18	22126	7000	14.41	12.18	24553	7000	13.32	11.07	27890	7000	11.86	9.62	32306	7000	7.01	5.07	51128	7000
	60:1	11.44	10.23	21476	7000	11.68	9.46	23832	7000	10.83	8.60	27071	7000	9.66	7.44	31234	7000	5.93	3.98	50145	7000
	70:1	9.78	7.90	19357	7000	9.20	7.31	21480	7000	8.55	6.64	24399	7000	7.72	5.80	28420	7000	4.59	2.99	43862	7000
	85:1	7.72	5.60	16667	7000	6.86	5.18	18495	7000	6.40	4.71	21009	7000	5.79	4.10	24365	7000	3.60	2.15	38374	7000
250	14.33:1	47.42	44.72	22421	9000	44.04	41.36	24881	9000	40.27	37.58	28263	9000	35.94	33.22	33308	9000	21.59	18.99	57114	9000
	20:1	38.66	35.82	25063	9000	35.95	33.12	27813	9000	32.94	30.10	31593	9000	29.48	26.60	37233	9000	17.74	15.03	63118	9000
	25.5:1	31.82	29.05	25921	9000	29.63	26.87	28765	9000	27.19	24.42	32674	9000	24.40	21.58	38508	9000	14.57	11.97	64081	9000
	30:1	28.87	26.10	27392	9000	26.91	24.13	30397	9000	24.72	21.93	34528	9000	22.21	19.38	40692	9000	13.20	10.63	66914	9000
	41:1	22.41	19.38	27793	9000	20.94	17.92	30843	9000	19.32	16.28	35034	9000	17.47	14.39	41288	9000	10.97	8.09	69607	9000
	52:1	17.93	15.09	27446	9000	16.80	13.95	30457	9000	15.54	12.68	34596	9000	14.11	11.21	40773	9000	8.85	6.19	67564	9000
	60:1	15.11	12.48	26199	9000	14.18	11.54	29073	9000	13.14	10.49	33024	9000	11.96	9.27	38920	9000	7.50	5.06	63770	9000
	70:1	12.25	9.84	24092	9000	11.51	9.10	26736	9000	10.70	8.27	30369	9000	9.78	7.31	35791	9000	6.22	3.99	58573	9000
	85:1	8.78	6.84	20343	9000	8.27	6.33	22575	9000	7.71	5.75	25643	9000	6.85	4.92	29280	9000	4.48	2.72	48502	9000
	300	16:1	59.88	56.71	31744	11000	55.59	52.44	35227	11000	50.80	47.65	40014	11000	45.30	42.12	47158	11000	27.44	24.36	81816
20:1		56.73	52.75	36912	11000	52.72	48.78	40962	11000	48.25	44.33	46528	11000	43.12	39.18	54834	11000	27.17	23.25	97626	11000
24.5:1		47.74	43.99	37711	11000	44.40	40.68	41849	11000	40.68	36.97	47535	11000	36.42	32.68	56022	11000	22.65	18.99	97686	11000
31:1		42.90	38.93	42221	11000	39.94	36.00	46853	11000	36.65	32.71	53220	11000	32.89	28.91	62721	11000	20.61	16.74	108948	11000
40:1		35.30	30.42	42580	11000	32.94	28.14	47252	11000	30.33	25.57	53673	11000	27.37	22.60	63255	11000	18.47	13.63	114414	11000
50:1		28.60	24.32	42537	11000	26.72	22.49	47204	11000	24.66	20.43	53618	11000	22.32	18.06	63191	11000	14.83	10.62	111468	11000
55:1		25.12	21.06	40530	11000	23.50	19.48	44977	11000	21.71	17.70	51089	11000	19.69	15.64	60210	11000	13.12	9.15	105641	11000
62:1		21.53	17.75	38507	11000	20.17	16.42	42732	11000	18.67	14.92	48539	11000	16.97	13.19	57205	11000	11.36	7.67	99797	11000
71:1		17.62	14.21	35304	11000	16.52	13.14	39178	11000	15.32	11.94	41502	11000	13.97	10.56	52446	11000	9.41	6.10	90942	11000
85:1		12.89	10.20	30331	11000	12.11	9.43	33658	11000	11.26	8.57	38232	11000	10.30	7.58	45058	11000	6.84	4.28	76301	11000
350	19:1	77.29	73.33	48746	13500	71.75	67.81	54094	13500	65.57	61.62	61445	13500	58.46	54.47	72414	13500	34.88	31.07	123923	13500
	24:1	72.09	66.96	56230	13500	66.98	61.93	62400	13500	61.30	56.27	70879	13500	54.79	49.74	83533	13500	34.69	29.62	149248	13500
	29.5:1	61.15	56.38	58191	13500	56.87	52.14	64576	13500	52.11	47.38	73351	13500	46.65	41.88	86446	13500	28.93	24.29	150413	13500
	33:1	57.71	52.82	60990	13500	53.71	48.85	67682	13500	49.25	44.39	76879	13500	44.15	39.24	90604	13500	27.37	22.63	156739	13500
	37.5:1	50.41	45.80	60087	13500	46.95	42.35	66680	13500	43.09	38.48	75741	13500	38.67	34.02	89263	13500	23.79	19.36	152390	13500
	48:1	42.67	36.77	61758	13500	39.81	34.01	68534	13500	36.65	30.92	77847	13500	33.08	27.31	91745	13500	22.32	16.47	165946	13500
	59:1	32.57	27.70	57172	13500	30.44	25.61	63444	13500	28.09	23.27	72066	13500	25.42	20.57	84931	13500	16.89	12.10	149819	13500
	66:1	28.02	23.49	54252	13500	26.21	21.73	60204	13500	24.22	19.74	68385	13500	21.96	17.45	80594	13500	14.63	10.21	141407	13500
	75:1	22.91	18.89	49557	13500	21.46	17.46	54994	13500	19.86	15.87	62468	13500	18.05	14.03	73620	13500	12.08	8.16	128434	13500
	86:1	18.10	14.60	43936	13500	16.98	13.50	48756	13500	15.74	12.27	55381	13500	14.35	10.85	65269	13500	9.67	6.27	113175	13500

Output Torque in Inch-Pounds. Overhung Load in Pounds at one shaft diameter from housing.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

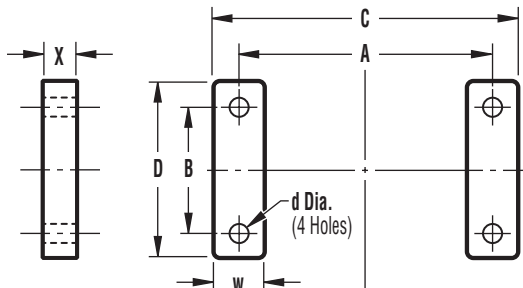


# Model IO



Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	2.88	2.88	1.81			1/4 - 20	7/16	.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	3.35	2.16			1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	3.35	2.36			5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	4.29	2.95			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	3.74	2.72			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	4.33	3.03			3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	5.12	3.70			3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	5.51	4.13			3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 3/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	6.69	5.28			1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	7.48		8.90	3.86	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	8.27		9.70	3.86	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	9.92		11.50	4.70	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	10.31		11.70	4.70	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	12.01		13.50	5.60	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	13.19		14.50	5.60	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	14.17		17.00	6.30	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

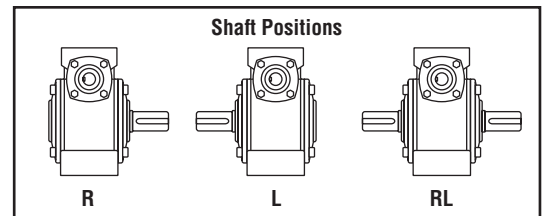
## Fan Clearance Spacers



Size	A	B	C	D	X	d	w
120	8.86	3.94	10.24	5.31	0.98	0.55	1.97
135	10.24	3.94	11.81	5.51	0.79	0.71	1.97
155	11.81	4.33	13.78	6.10	0.98	0.71	1.97
200	14.17	5.91	16.54	7.87	0.79	0.83	2.56
250	17.72	6.69	20.47	9.06	0.79	1.10	2.95

All dimensions in inches

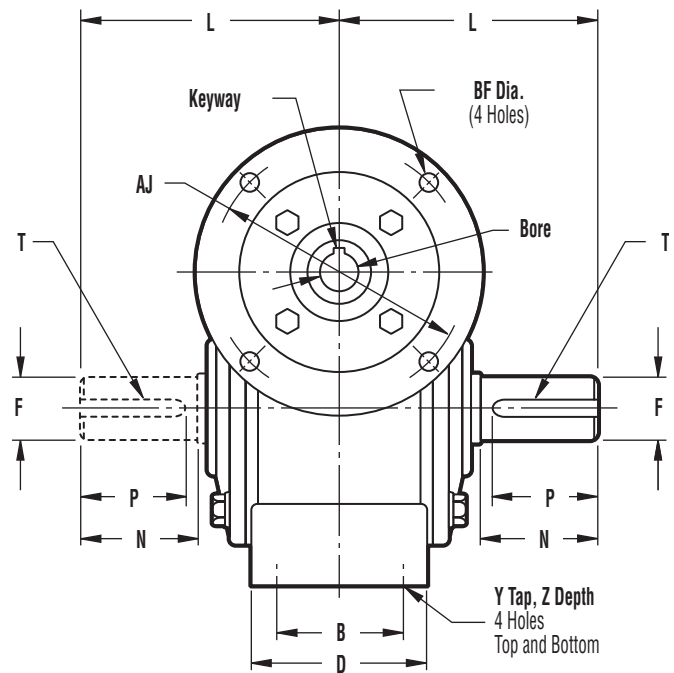
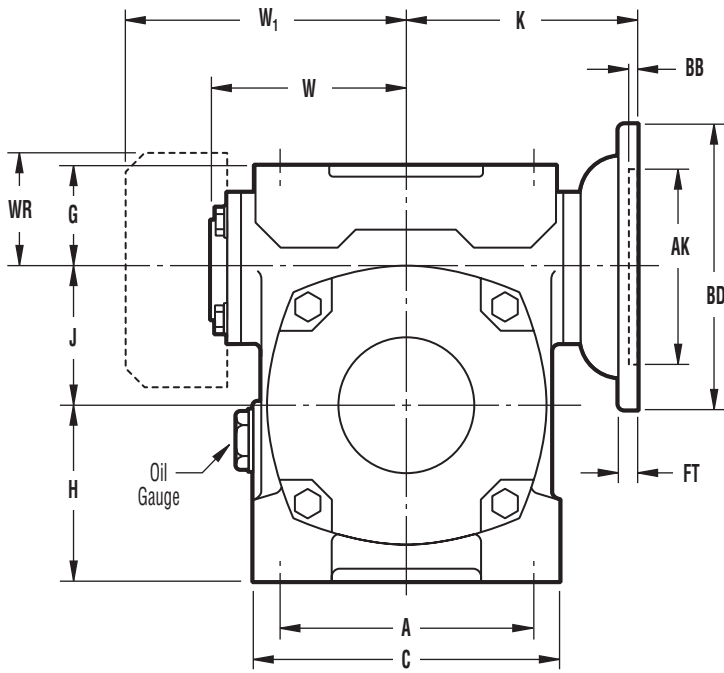
NOTE: When mounted with the input shaft lower than the output shaft (IU), spacers are required on sizes 120, 135, 155, 200, and 250 to ensure clearance between the fan and base of reducer. See below left for spacer dimensions.



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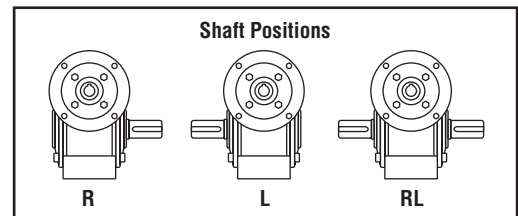
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# Model IC



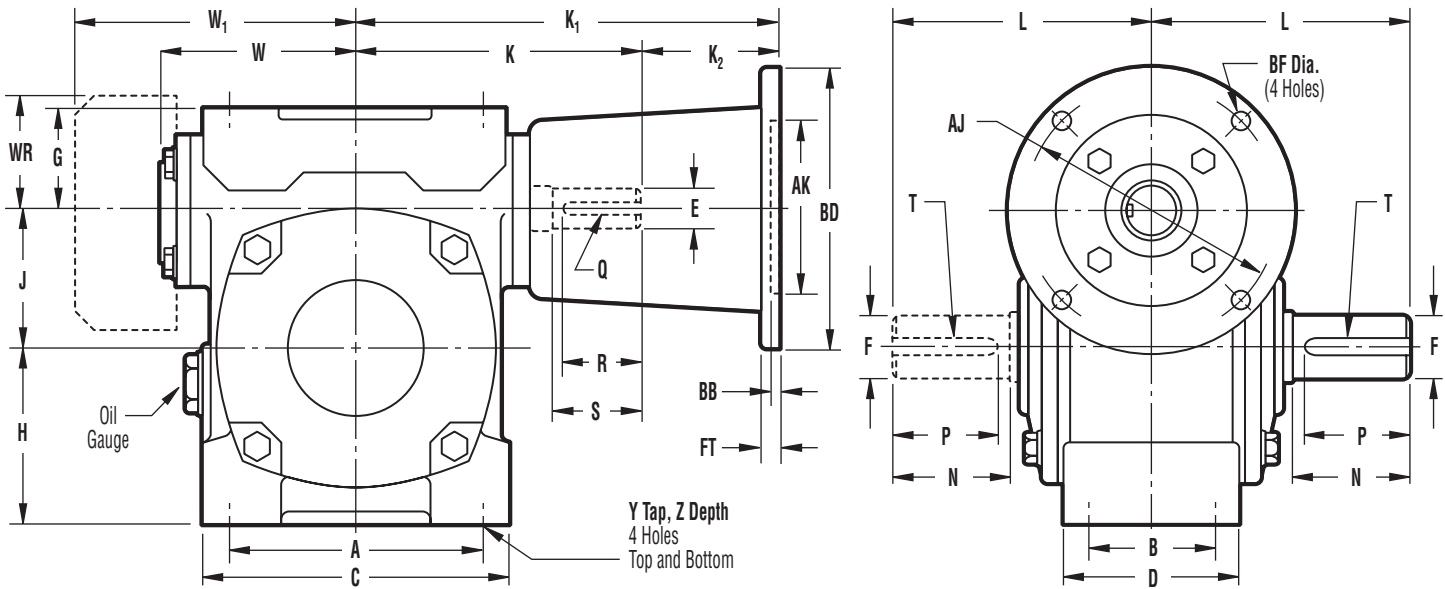
Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	Low Speed Shaft			
															F	N	P	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	3.16	2.88	1.81			1/4 - 20	7/16	.500	1.19	.98	1/8 X 1/16
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.23	3.35	2.44			1/4 - 20	7/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.41	3.35	2.64			5/16 - 18	5/8	.625	1.38	1.18	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	3.92	4.29	2.95			5/16 - 18	5/8	.750	1.94	1.77	3/16 X 3/32
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	3.33	3.74	2.97			5/16 - 18	5/8	.750	1.57	1.38	3/16 X 3/32
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.00	4.33	3.27			3/8 - 16	3/4	1.000	1.97	1.77	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	4.53	5.12	3.80			3/8 - 16	3/4	1.125	2.36	2.17	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	4.92	5.51	4.27			3/8 - 16	3/4	1.375	2.56	2.36	5/16 X 5/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	5.93	6.69	5.34			1/2 - 13	15/16	1.500	2.95	2.56	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	6.97	7.48		8.90	3.86	1/2 - 13	15/16	1.750	3.35	2.95	3/8 X 3/16
135	10.24	3.94	11.81	5.51	3.35	6.51	5.31	8.66	8.27		9.70	3.86	5/8 - 11	1 1/8	2.250	3.74	3.35	1/2 X 1/4
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	9.65	9.92		11.50	4.70	5/8 - 11	1 1/8	2.500	4.33	3.94	5/8 X 5/16
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.01	10.31		11.70	4.70	3/4 - 10	1 3/8	2.750	4.33	3.94	5/8 X 5/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	12.80	12.01		13.50	5.60	3/4 - 10	1 3/8	2.875	4.92	4.53	3/4 X 3/8
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	13.78	13.19		14.50	5.60	1 - 8	1 3/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	14.96	14.17		17.00	6.30	1 - 8	1 3/4	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16



Dimensions in inches

# Model IM

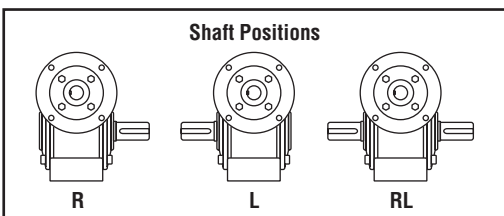


Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	2.88	2.88	1.81			1/4 - 20	7/16	.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	3.35	2.16			1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	3.35	2.36			5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	4.29	2.95			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	3.74	2.72			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	4.33	3.03			3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	5.12	3.70			3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	5.51	4.13			3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 5/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	6.69	5.28			1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	7.48		8.90	3.86	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	8.27		9.70	3.86	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	9.92		11.50	4.70	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	10.31		11.70	4.70	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	12.01		13.50	5.60	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	13.19		14.50	5.60	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	14.17		17.00	6.30	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>1</sub>				K <sub>2</sub>			
	42CZ	56C 140TC	180TC 210TC	250TC	42CZ	56C 140TC	180TC 210TC	250TC
25	4.76				1.88			
34		5.89				2.43		
40		6.09				2.31		
45		6.93				2.46		
50		6.42				2.29		
60		7.01				2.29		
70		7.80	9.14			2.29	3.63	
80		8.59	9.93			2.29	3.63	
100		9.77	11.61			2.29	4.13	
120			13.19	13.19			4.13	4.13
135			14.37	14.37			4.13	4.13
155			15.94	15.94			4.13	4.13
175			16.93	16.93			4.13	4.13
200			17.91	17.91			4.13	4.13
225			18.89	18.89			4.13	4.13
250			20.67	20.67			4.13	4.13

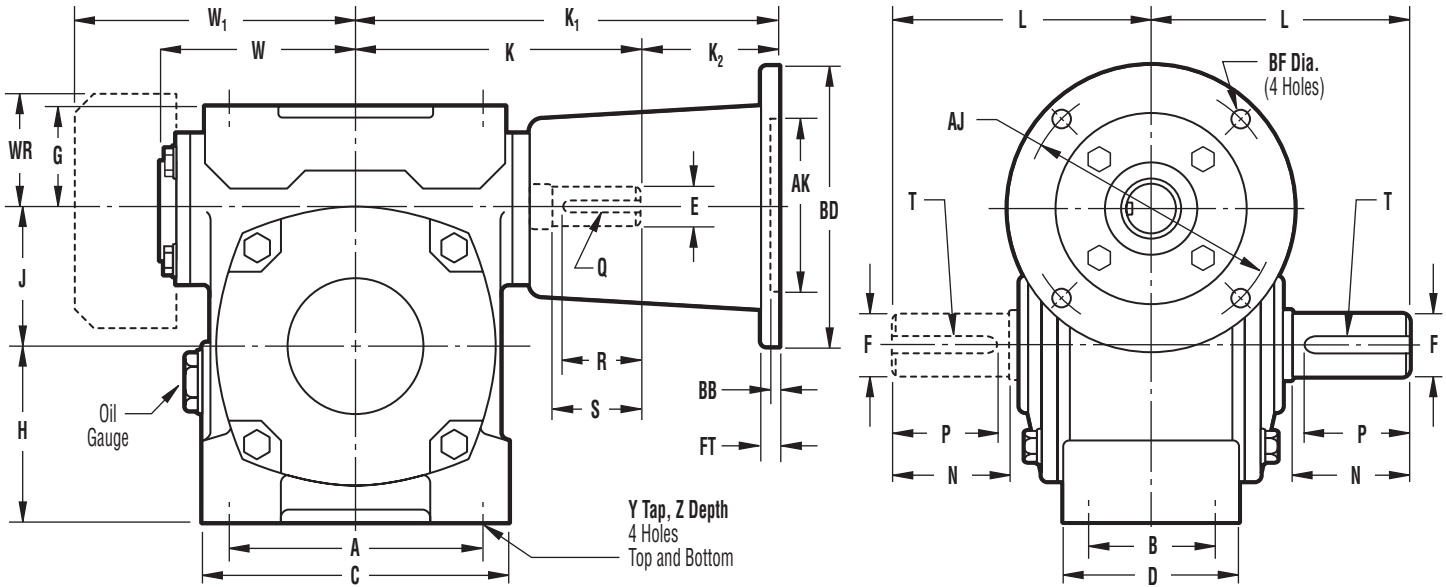
Dimensions in inches



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# Model IM with IEC Flange



Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	2.88	2.88	1.81			1/4 - 20	7/16	.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	3.35	2.16			1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	3.35	2.36			5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	4.29	2.95			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	3.74	2.72			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	4.33	3.03			3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	5.12	3.70			3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	5.51	4.13			3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 5/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	6.69	5.28			1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	7.48		8.90	3.86	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	8.27		9.70	3.86	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	9.92		11.50	4.70	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	10.31		11.70	4.70	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	12.01		13.50	5.60	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	13.19		14.50	5.60	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	14.17		17.00	6.30	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

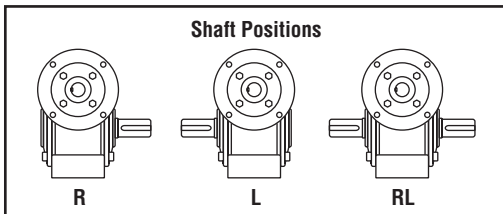
NOTE: Metric sized output shafts are available upon request.

IEC Flange	AJ	AK	BD	BF	BB	FT
63	115	95	140	M8	3.5	11
71	130	110	160	M8	3.5	11
80 / 90	165	130	200	M10	3.5	14
100 / 112	215	180	250	M12	4.0	17
132	265	230	300	M12	4.0	17
160	300	250	350	M16	5.0	22

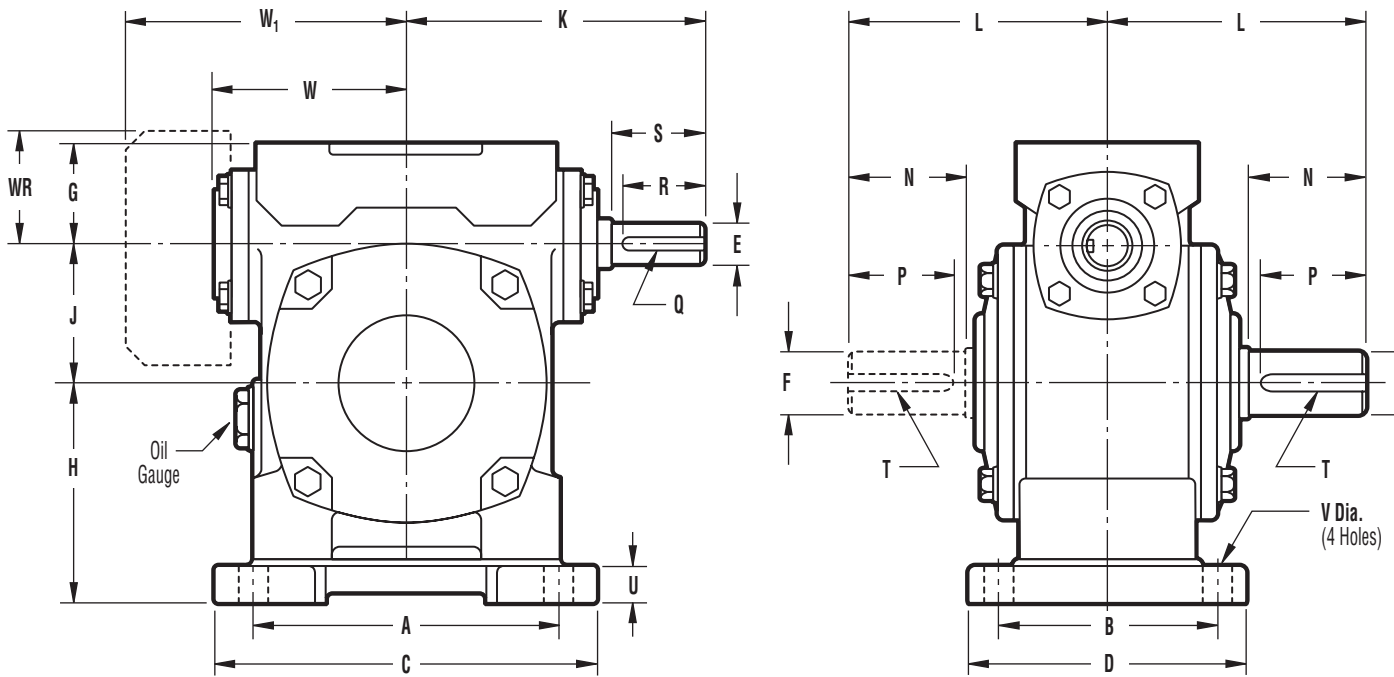
Dimensions in millimeters

Size	K <sub>1</sub>						K <sub>2</sub>							
	63	71	80	90	110 / 112	132	160	63	71	80	90	110 / 112	132	160
25	3.90							1.02						
34	4.48							1.02						
40		5.08							1.30					
45		5.77							1.30					
50		5.43							1.30					
60		6.02	6.45						1.30	1.73				
70		6.81	7.64	7.64					1.30	2.13	2.13			
80			8.43	8.43						2.13	2.13			
100				9.61	10.00						2.13	2.52		
120					11.58							2.52		
135					12.76	13.59						2.52	3.35	
155					14.33	15.16						25.2	3.35	
175						16.15	17.33						3.35	4.53
200						17.13	18.31						3.35	4.53
225						18.11	19.29						3.35	4.53
250							21.07							4.53

Dimensions in inches

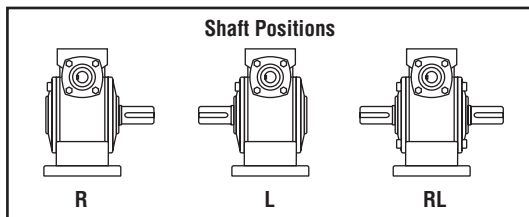


# Model IO with Horizontal Base

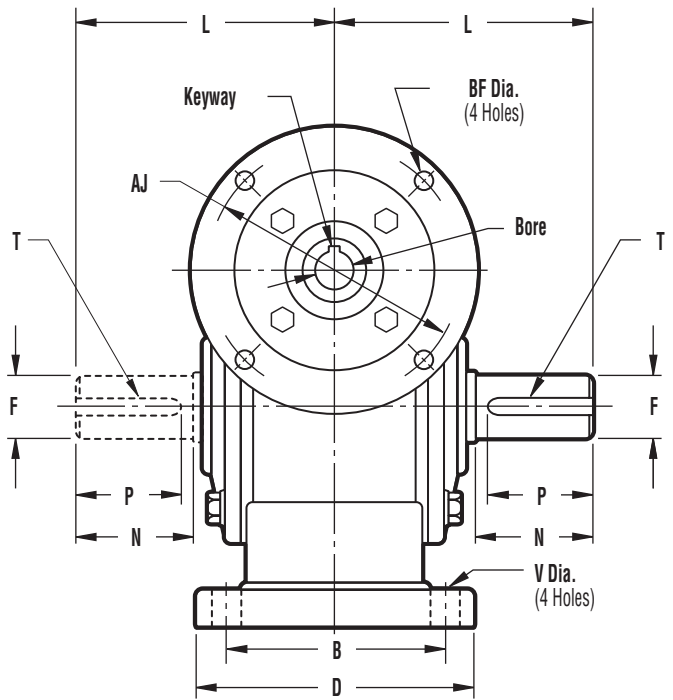
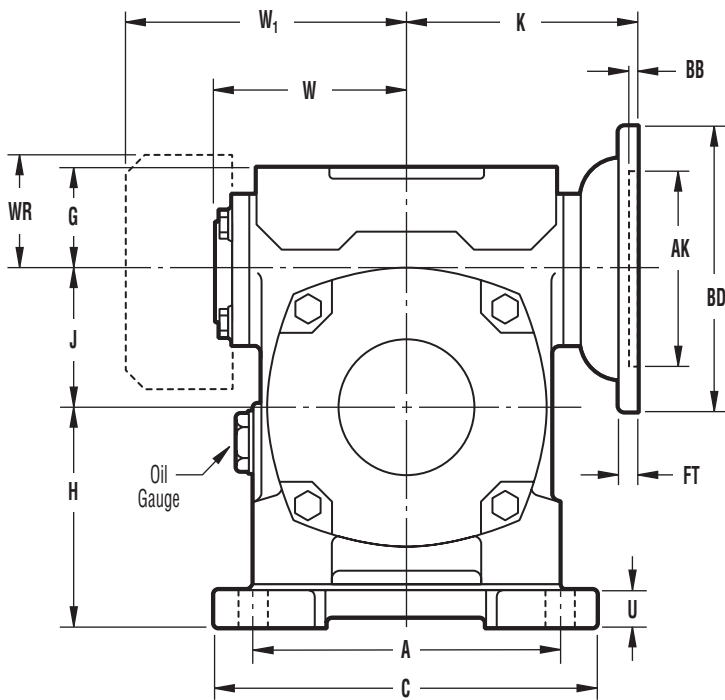


Size	A	B	C	D	G	H	J	K	L	U	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	3.75	2.88	4.63	3.69	1.31	1.75	1.00	2.88	2.88	.38	.34	1.81			.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	3.46	3.35	.39	.34	2.16			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	3.78	3.35	.43	.41	2.36			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	4.47	4.29	.50	.43	2.95			.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	4.13	3.74	.51	.43	2.72			.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	4.72	4.33	.59	.43	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	5.51	5.12	.69	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	6.30	5.51	.69	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 5/32
100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	7.48	6.69	.87	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	9.06	7.48	1.02	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	10.24	8.27	1.18	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	11.81	9.92	1.10	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	12.80	10.31	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	13.78	12.01	1.57	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	14.76	13.19	1.57	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	16.54	14.17	1.77	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches



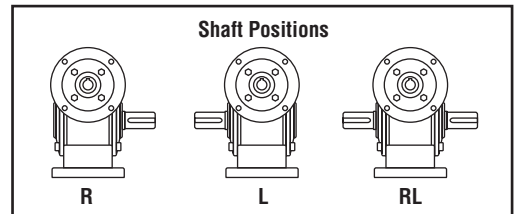
# Model IC with Horizontal Base



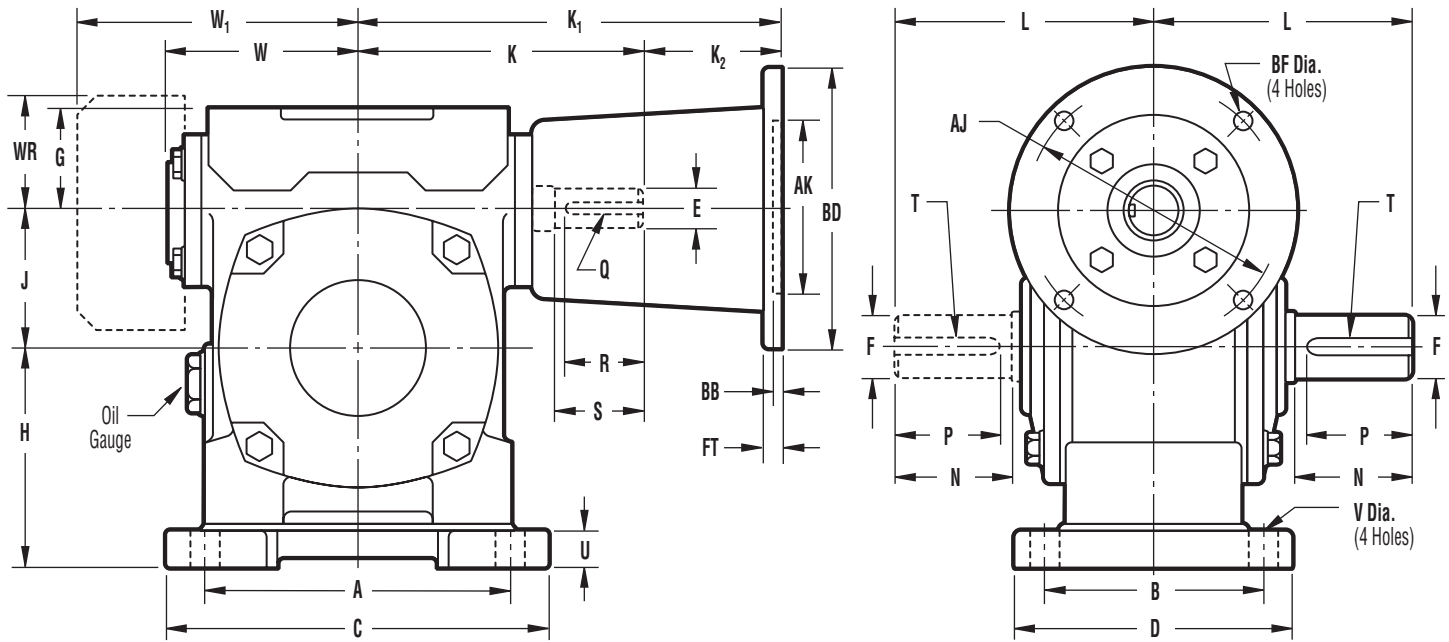
Size	A	B	C	D	G	H	J	K	L	U	V	W	W <sub>1</sub>	WR	Low Speed Shaft			
															F	N	P	T
25	3.75	2.88	4.63	3.69	1.31	1.75	1.00	3.16	2.88	.38	.34	1.81			.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	3.23	3.35	.39	.34	2.44			.625	1.38	1.18	3/16 X 3/32
40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	3.41	3.35	.43	.41	2.64			.625	1.38	1.18	3/16 X 3/32
45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	3.92	4.29	.50	.43	2.95			.750	1.94	1.77	3/16 X 3/32
50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	3.33	3.74	.51	.43	2.97			.750	1.57	1.38	3/16 X 3/32
60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	4.00	4.33	.59	.43	3.27			1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	4.53	5.12	.69	.59	3.80			1.125	2.36	2.17	1/4 X 1/8
80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	4.92	5.51	.69	.59	4.27			1.375	2.56	2.36	5/16 X 5/32
100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	5.93	6.69	.87	.59	5.34			1.500	2.95	2.56	3/8 X 3/16
120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	6.97	7.48	1.02	.71		8.90	3.86	1.750	3.35	2.95	3/8 X 3/16
135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	8.66	8.27	1.18	.71		9.70	3.86	2.250	3.74	3.35	1/2 X 1/4
155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	9.65	9.92	1.10	.79		11.50	4.70	2.500	4.33	3.94	5/8 X 5/16
175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	12.01	10.31	1.26	.79		11.70	4.70	2.750	4.33	3.94	5/8 X 5/16
200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	12.80	12.01	1.57	.87		13.50	5.60	2.875	4.92	4.53	3/4 X 3/8
225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	13.78	13.19	1.57	1.06		14.50	5.60	3.250	5.51	5.12	3/4 X 3/8
250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	14.96	14.17	1.77	1.06		17.00	6.30	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16



# Model IM with Horizontal Base

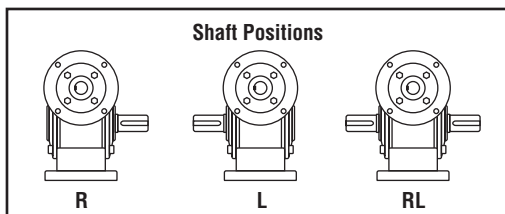


Size	A	B	C	D	G	H	J	K	L	U	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	3.75	2.88	4.63	3.69	1.31	1.75	1.00	2.88	2.88	.38	.34	1.81			.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	3.46	3.35	.39	.34	2.16			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	3.78	3.35	.43	.41	2.36			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	4.47	4.29	.50	.43	2.95			.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	4.13	3.74	.51	.43	2.72			.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	4.72	4.33	.59	.43	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	5.51	5.12	.69	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	6.30	5.51	.69	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/8 X 5/32
100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	7.48	6.69	.87	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	9.06	7.48	1.02	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	10.24	8.27	1.18	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	11.81	9.92	1.10	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	12.80	10.31	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	13.78	12.01	1.57	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	14.76	13.19	1.57	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	16.54	14.17	1.77	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>1</sub>				K <sub>2</sub>			
	42CZ	56C 140TC	180TC 210TC	250TC	42CZ	56C 140TC	180TC 210TC	250TC
25	4.76				1.88			
34		5.89				2.43		
40		6.09				2.31		
45		6.93				2.46		
50		6.42				2.29		
60		7.01				2.29		
70		7.80	9.14			2.29	3.63	
80		8.59	9.93			2.29	3.63	
100		9.77	11.61			2.29	4.13	
120			13.19	13.19			4.13	4.13
135			14.37	14.37			4.13	4.13
155			15.94	15.94			4.13	4.13
175			16.93	16.93			4.13	4.13
200			17.91	17.91			4.13	4.13
225			18.89	18.89			4.13	4.13
250			20.67	20.67			4.13	4.13

Dimensions in inches

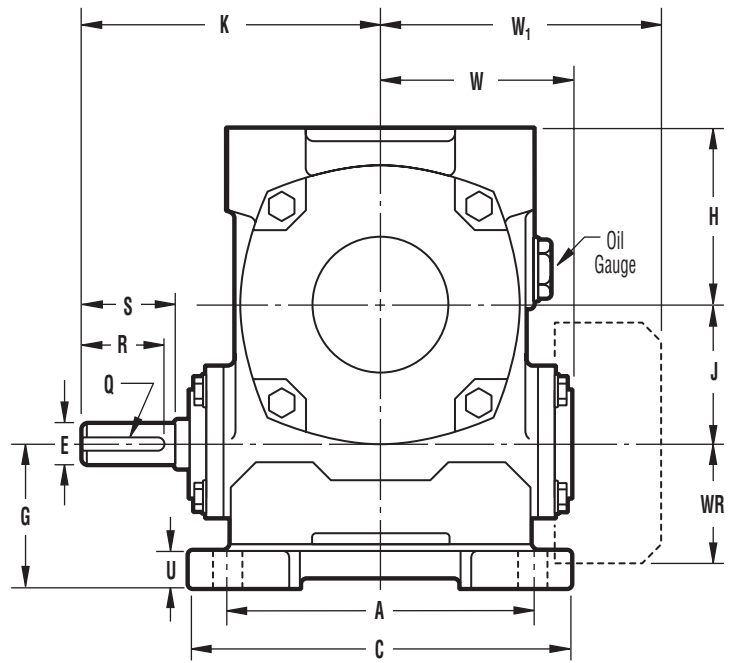
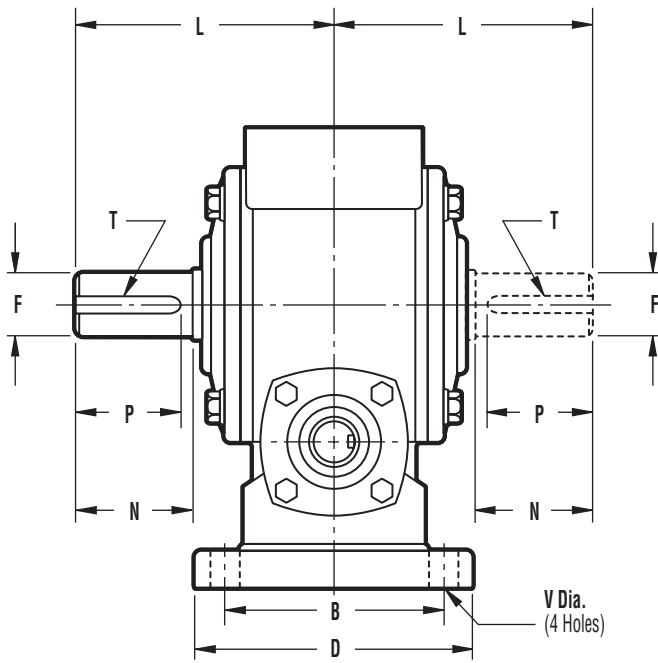


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# Model IU with Horizontal Base

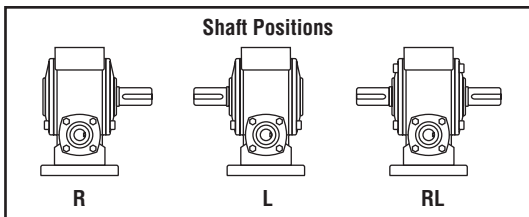
## Sizes 25-250



Size	A	B	C	D	G	H	J	K	L	U	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	3.75	2.88	4.63	3.69	1.75	1.31	1.00	2.88	2.88	.38	.34	1.81			.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	1.69	1.65	1.33	3.46	3.35	.39	.34	2.16			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.94	3.54	4.92	4.33	1.84	2.09	1.57	3.78	3.35	.43	.41	2.36			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	4.97	4.56	5.94	5.50	2.53	2.06	1.75	4.47	4.29	.50	.43	2.95			.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	4.33	3.74	5.51	4.72	1.97	2.56	1.97	4.13	3.74	.51	.43	2.72			.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	4.72	4.13	5.91	5.12	2.36	2.95	2.36	4.72	4.33	.59	.43	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	2.76	3.35	2.76	5.51	5.12	.69	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	7.09	5.31	8.66	6.69	3.15	3.62	3.15	6.30	5.51	.69	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 3/32
100	8.66	6.10	10.63	7.48	3.93	4.53	3.94	7.48	6.69	.87	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	10.24	7.09	12.60	9.06	5.31	5.51	4.72	9.06	7.48	1.02	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	11.42	7.87	13.78	9.84	5.52	6.50	5.31	10.24	8.27	1.18	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	13.39	8.66	15.75	11.02	6.30	7.99	6.10	11.81	9.92	1.10	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.78	9.84	16.14	12.20	6.30	8.78	6.89	12.80	10.31	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	13.78	11.42	17.13	14.17	7.68	9.65	7.87	13.78	12.01	1.57	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.35	12.99	19.29	16.14	7.48	10.83	8.86	14.76	13.19	1.57	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.32	14.96	21.46	18.11	8.67	11.81	9.84	16.54	14.17	1.77	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

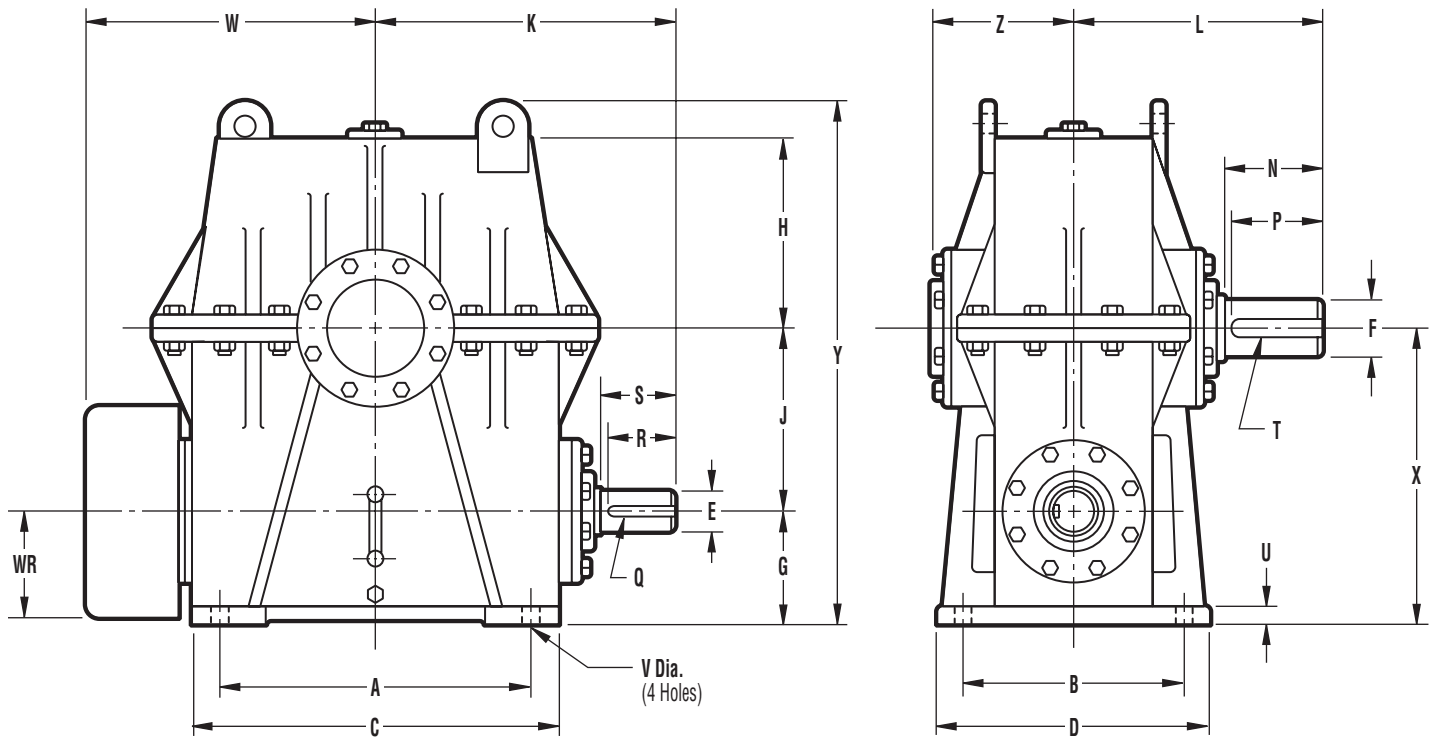
NOTE: Spacers are used on sizes 120, 135, 155, 200, and 250 to ensure clearance between the fan and base. Thickness of spacers is included in above dimensions.





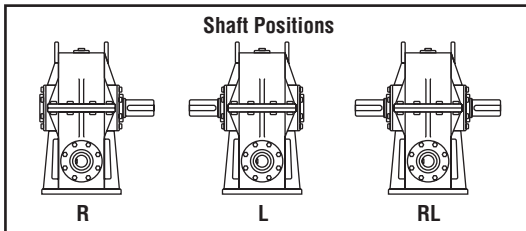
# Model IU with Integrally Cast Horizontal Base

Sizes 300 and 350

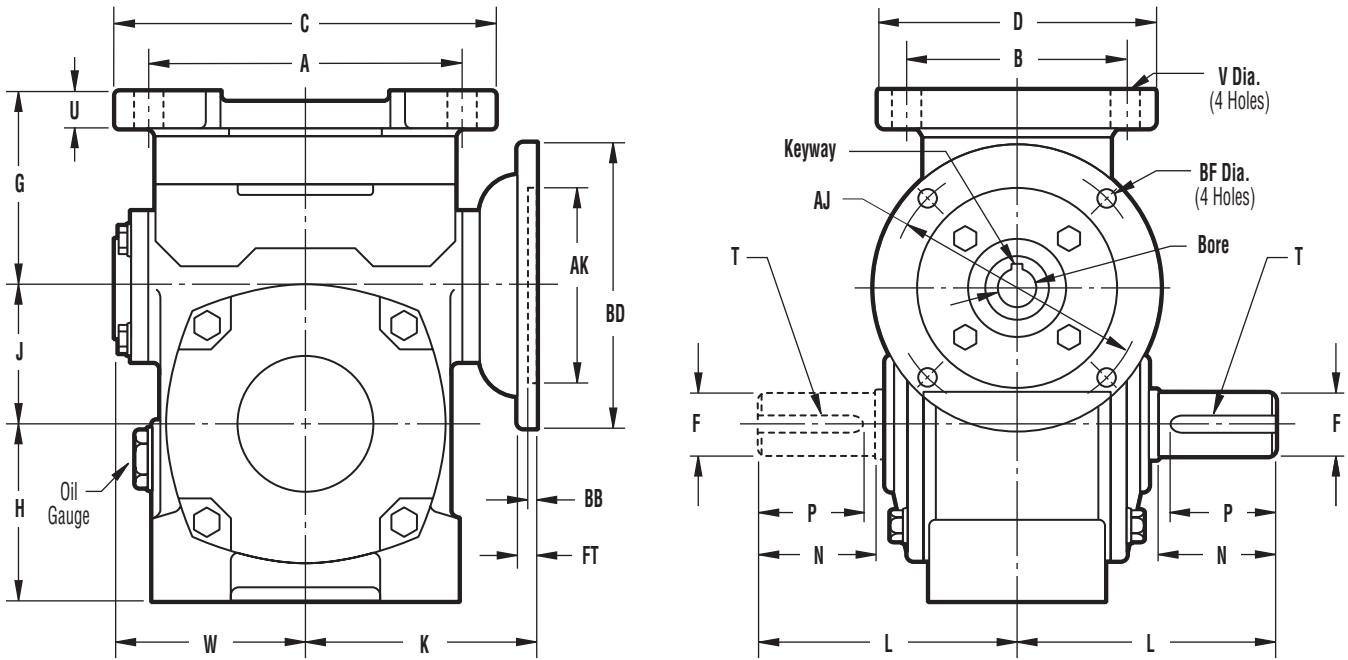


Size	A	B	C	D	G	H	J	K	L	U	V	W	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft			
																	E	S	R	Q	F	N	P	T
300	20.50	14.50	24.41	17.72	7.48	12.20	11.81	19.49	16.14	1.18	1.42	18.90	6.40	19.29	34.45	8.66	2.75	4.92	4.72	5/8 X 5/16	4.00	6.69	6.50	1 X 1/2
350	23.50	17.00	27.56	20.47	8.46	14.37	13.78	22.44	18.90	1.26	1.50	21.65	7.60	22.24	39.57	10.83	3.00	5.71	5.51	3/4 X 3/8	4.50	7.48	7.28	1 X 1/2

Dimensions in inches



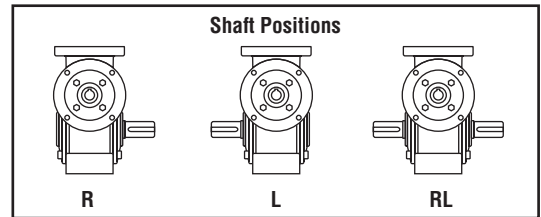
# Model IC with Riser Block and Horizontal Base



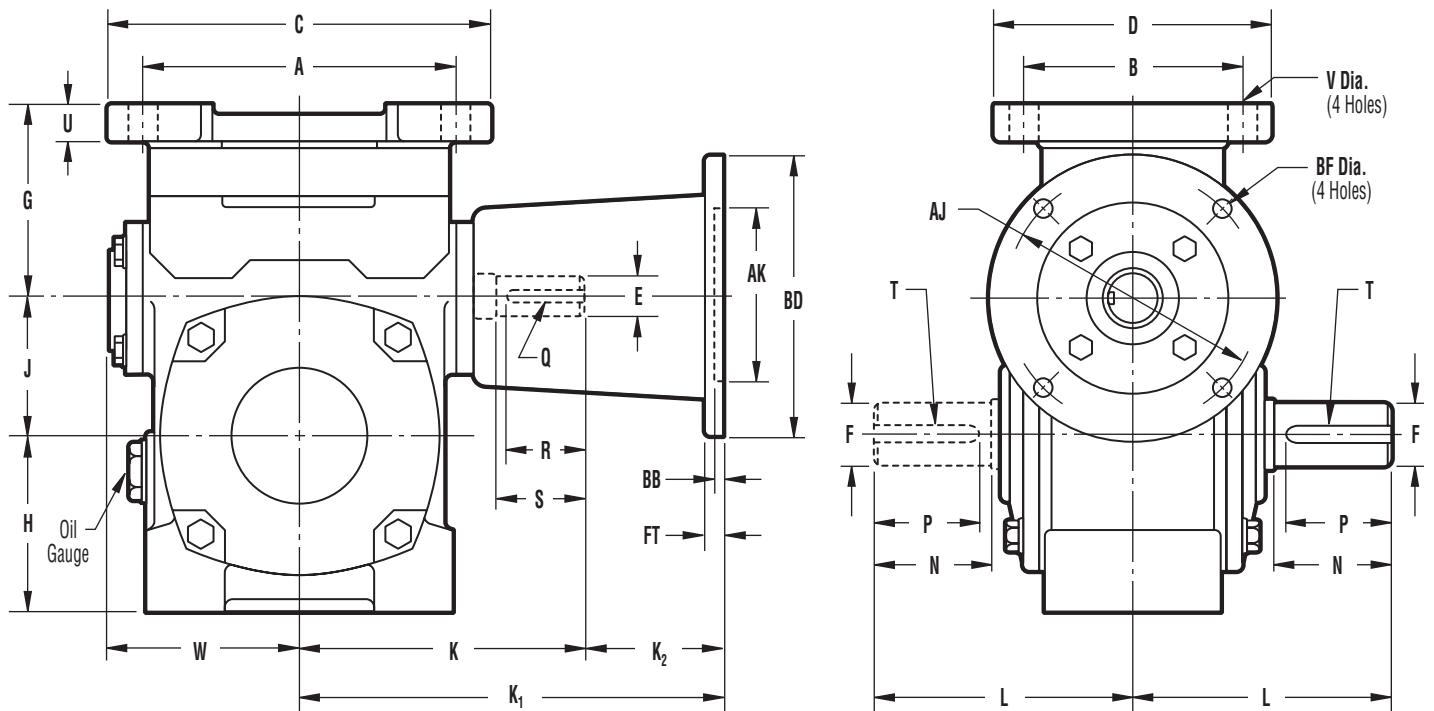
Size	A	B	C	D	G	H	J	K	L	U	V	W	Low Speed Shaft			
													F	N	P	T
25	3.75	2.88	4.63	3.69	2.94	1.31	1.00	3.16	2.88	.38	.34	1.81	.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	4.00	1.65	1.33	3.23	3.35	.39	.34	2.44	.625	1.38	1.18	3/16 X 3/32
40	3.94	3.54	4.92	4.33	4.00	2.09	1.57	3.41	3.35	.43	.41	2.64	.625	1.38	1.18	3/16 X 3/32
45	4.97	4.56	5.94	5.50	4.32	2.06	1.75	3.92	4.29	.50	.43	2.95	.750	1.94	1.77	3/16 X 3/32
50	4.33	3.74	5.51	4.72	4.00	2.56	1.97	3.33	3.74	.51	.43	2.97	.750	1.57	1.38	3/16 X 3/32
60	4.72	4.13	5.91	5.12	4.00	2.95	2.36	4.00	4.33	.59	.43	3.27	1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	5.50	3.35	2.76	4.53	5.12	.69	.59	3.80	1.125	2.36	2.17	1/4 X 1/8

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8

Dimensions in inches

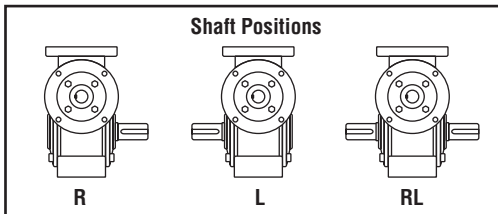


# Model IM with Riser Block and Horizontal Base



Size	A	B	C	D	G	H	J	K	L	U	V	W	High Speed Shaft				Low Speed Shaft			
													E	S	R	Q	F	N	P	T
25	3.75	2.88	4.63	3.69	2.94	1.31	1.00	2.88	2.88	.38	.34	1.81	.375	.81	.63	3/32 X 9/64	.500	1.19	.98	1/8 X 1/16
34	3.31	3.31	4.13	4.13	4.00	1.65	1.33	3.46	3.35	.39	.34	2.16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 9/32
40	3.94	3.54	4.92	4.33	4.00	2.09	1.57	3.78	3.35	.43	.41	2.36	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 9/32
45	4.97	4.56	5.94	5.50	4.32	2.06	1.75	4.47	4.29	.50	.43	2.95	.625	1.18	.98	3/16 X 9/32	.750	1.94	1.77	3/16 X 9/32
50	4.33	3.74	5.51	4.72	4.00	2.56	1.97	4.13	3.74	.51	.43	2.72	.625	1.18	.98	3/16 X 9/32	.750	1.57	1.38	3/16 X 9/32
60	4.72	4.13	5.91	5.12	4.00	2.95	2.36	4.72	4.33	.59	.43	3.03	.750	1.58	1.38	3/16 X 9/32	1.000	1.97	1.77	1/4 X 1/8
70	5.91	4.53	7.48	5.91	5.50	3.35	2.76	5.51	5.12	.69	.59	3.70	.875	1.58	1.38	3/16 X 9/32	1.125	2.36	2.17	1/4 X 1/8

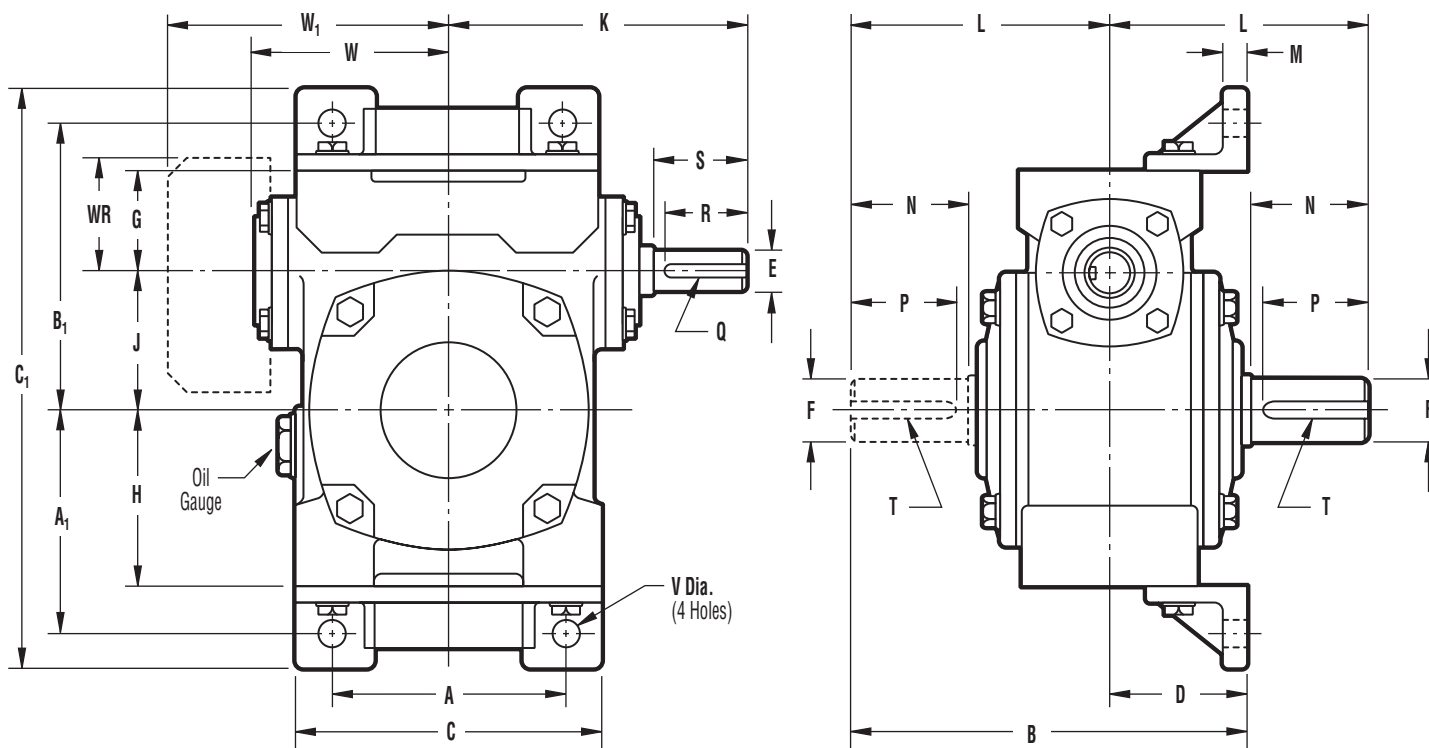
NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188



Size	K <sub>1</sub>			K <sub>2</sub>		
	42CZ	56C 140TC	180C 210TC	42CZ	56C 140TC	180C 210TC
25	4.76			1.88		
34		5.89			2.43	
40		6.09			2.31	
45		6.93			2.46	
50		6.42			2.29	
60		7.01			2.29	
70		7.80	9.14		2.29	3.63

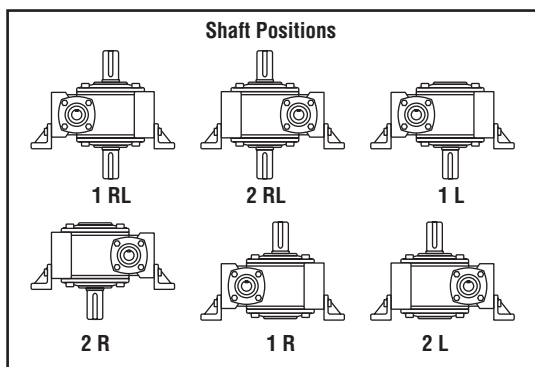
Dimensions in inches

# Model I with Vertical Base



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft			
																		E	S	R	Q	F	N	P	T
25	2.31	2.06	4.50	3.06	3.25	6.06	1.63	1.31	1.31	1.00	2.88	2.88	.31	.28	1.81			.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.46	3.35	.31	.28	2.16			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.78	3.35	.43	.35	2.36			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.94	2.06	1.75	4.47	4.29	.59	.44	2.95			.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.38	2.56	1.97	4.13	3.74	.55	.44	2.72			.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.72	4.33	.59	.44	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	1.97	3.35	2.76	5.51	5.12	.71	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	2.36	3.62	3.15	6.30	5.51	.71	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 5/32
100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	2.95	4.53	3.94	7.48	6.69	.79	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	3.15	5.51	4.72	9.06	7.48	.98	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	3.35	6.50	5.31	10.24	8.27	1.10	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	4.06	7.99	6.10	11.81	9.92	1.18	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.80	10.31	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	5.12	9.65	7.87	13.78	12.01	1.38	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	5.71	10.83	8.86	14.76	13.19	1.50	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	5.91	11.81	9.84	16.54	14.17	1.57	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

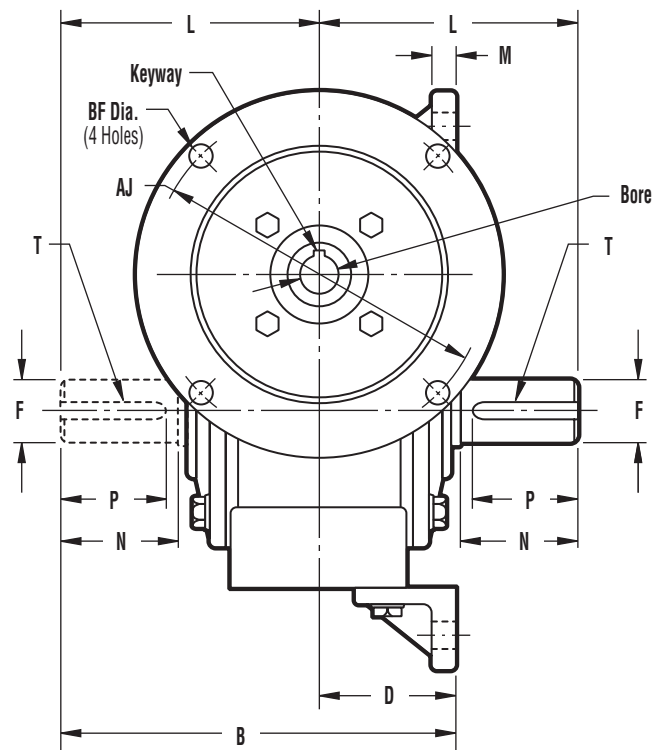
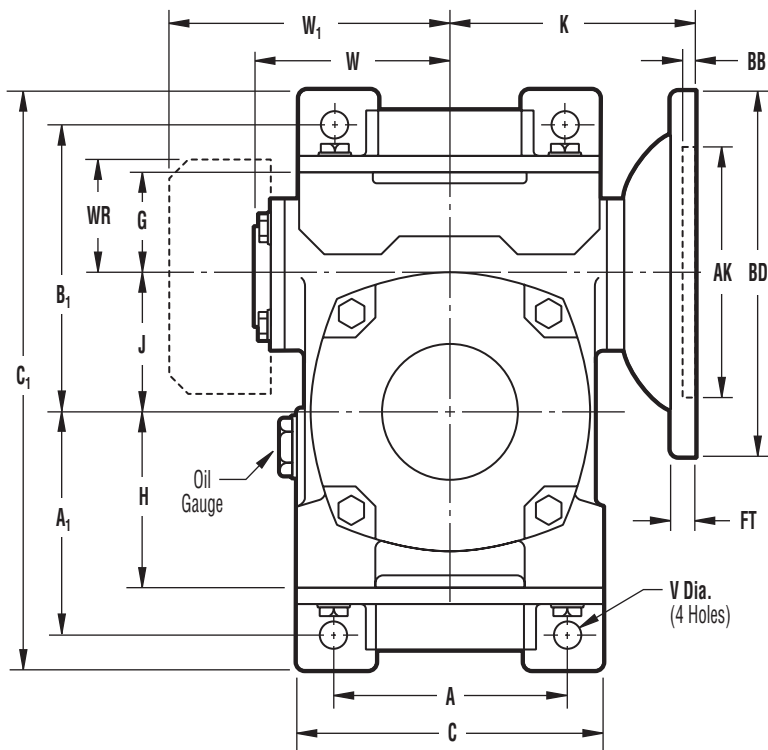
Dimensions in inches



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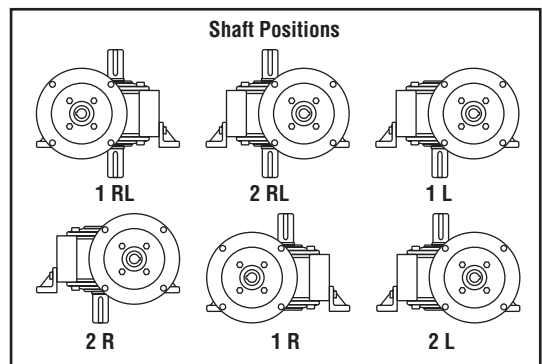
# Model IC with Vertical Base



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	Low Speed Shaft			
																		F	N	P	T
25	2.31	2.06	4.50	3.06	3.25	6.06	1.63	1.31	1.31	1.00	3.16	2.88	.31	.28	1.81			.500	1.19	.98	1/8 X 1/16
34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.23	3.35	.31	.28	2.44			.625	1.38	1.18	3/16 X 3/32
40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.41	3.35	.43	.35	2.64			.625	1.38	1.18	3/16 X 3/32
45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.94	2.06	1.75	3.92	4.29	.59	.44	2.95			.750	1.94	1.77	3/16 X 3/32
50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.38	2.56	1.97	3.33	3.74	.55	.44	2.97			.750	1.57	1.38	3/16 X 3/32
60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.00	4.33	.59	.44	3.27			1.000	1.97	1.77	1/4 X 1/8
70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	1.97	3.35	2.76	4.53	5.12	.71	.59	3.80			1.125	2.36	2.17	1/4 X 1/8
80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	2.36	3.62	3.15	4.92	5.51	.71	.59	4.27			1.375	2.56	2.36	5/16 X 5/32
100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	2.95	4.53	3.94	5.93	6.69	.79	.59	5.34			1.500	2.95	2.56	3/8 X 3/16
120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	3.15	5.51	4.72	6.97	7.48	.98	.71		8.90	3.86	1.750	3.35	2.95	3/8 X 3/16
135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	3.35	6.50	5.31	8.66	8.27	1.10	.71		9.70	3.86	2.250	3.74	3.35	1/2 X 1/4
155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	4.06	7.99	6.10	9.65	9.92	1.18	.79		11.50	4.70	2.500	4.33	3.94	5/8 X 5/16
175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.01	10.31	1.26	.79		11.70	4.70	2.750	4.33	3.94	5/8 X 5/16
200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	5.12	9.65	7.87	12.80	12.01	1.38	.87		13.50	5.60	2.875	4.92	4.53	3/4 X 3/8
225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	5.71	10.83	8.86	13.78	13.19	1.50	1.06		14.50	5.60	3.250	5.51	5.12	3/4 X 3/8
250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	5.91	11.81	9.84	14.96	14.17	1.57	1.06		17.00	6.30	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16

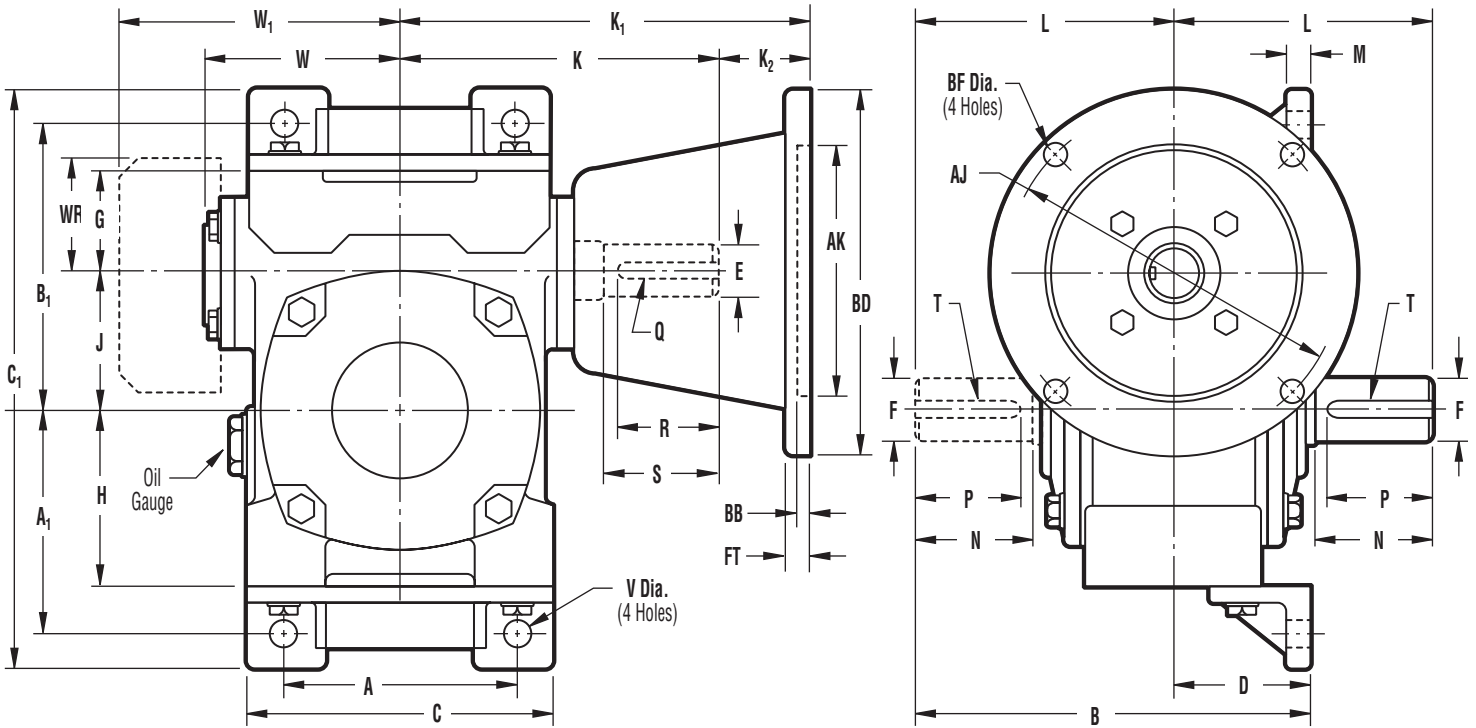
Dimensions in inches



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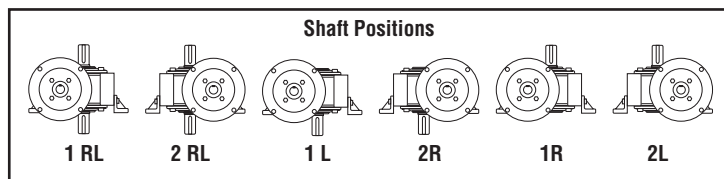
# Model IM with Vertical Base



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft			
																		E	S	R	Q	F	N	P	T
25	2.31	2.06	4.50	3.06	3.25	6.06	1.63	1.31	1.31	1.00	2.88	2.88	.31	.28	1.81			.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.46	3.35	.31	.28	2.16			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.78	3.35	.43	.35	2.36			.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.94	2.06	1.75	4.47	4.29	.59	.44	2.95			.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.38	2.56	1.97	4.13	3.74	.55	.44	2.72			.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.72	4.33	.59	.44	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	1.97	3.35	2.76	5.51	5.12	.71	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	2.36	3.62	3.15	6.30	5.51	.71	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.375	2.56	2.36	5/16 X 5/32
100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	2.95	4.53	3.94	7.48	6.69	.79	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	1.500	2.95	2.56	3/8 X 3/16
120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	3.15	5.51	4.72	9.06	7.48	.98	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	1.750	3.35	2.95	3/8 X 3/16
135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	3.35	6.50	5.31	10.24	8.27	1.10	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.250	3.74	3.35	1/2 X 1/4
155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	4.06	7.99	6.10	11.81	9.92	1.18	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	2.500	4.33	3.94	5/8 X 5/16
175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.80	10.31	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	2.750	4.33	3.94	5/8 X 5/16
200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	5.12	9.65	7.87	13.78	12.01	1.38	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	2.875	4.92	4.53	3/4 X 3/8
225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	5.71	10.83	8.86	14.76	13.19	1.50	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	3.250	5.51	5.12	3/4 X 3/8
250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	5.91	11.81	9.84	16.54	14.17	1.57	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Dimensions in inches

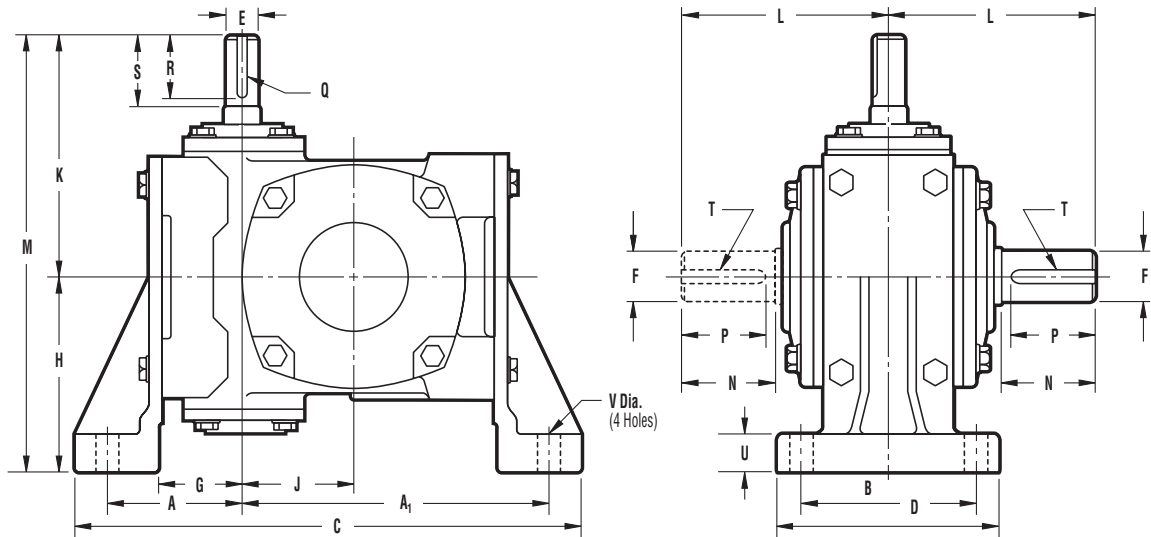


Size	K <sub>1</sub>				K <sub>2</sub>			
	42CZ	56C 140TC	180TC 210TC	250TC	42CZ	56C 140TC	180TC 210TC	250TC
25	4.76				1.88			
34		5.89				2.43		
40		6.09				2.31		
45		6.93				2.46		
50		6.42				2.29		
60		7.01				2.29		
70		7.80	9.14			2.29	3.63	
80		8.59	9.93			2.29	3.63	
100		9.77	11.61			2.29	4.13	
120			13.19	13.19			4.13	4.13
135			14.37	14.37			4.13	4.13
155			15.94	15.94			4.13	4.13
175			16.93	16.93			4.13	4.13
200			17.91	17.91			4.13	4.13
225			18.89	18.89			4.13	4.13
250			20.67	20.67			4.13	4.13

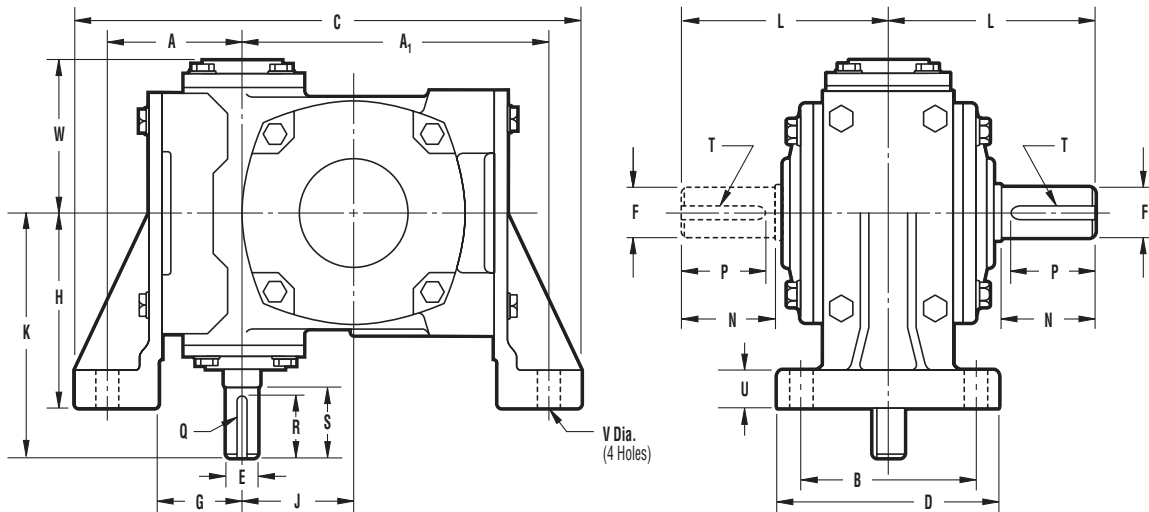
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# Model I with J Mount Base



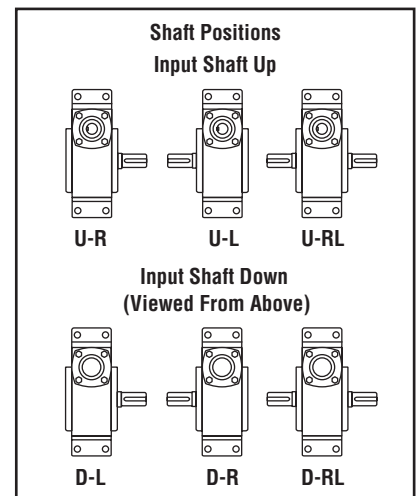
Input Shaft Vertical Up



Input Shaft Vertical Down

Size	A	A <sub>1</sub>	B	C	D	G	H	J	K	L	M	U	V	W	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F	N	P	T
25	2.06	3.06	1.75	6.06	2.66	1.40	2.25	1.00	2.88	2.88	4.88	.44	1 <sup>11</sup> / <sub>32</sub>	1.81	.375	.81	.63	3/32 X 9/64	.500	1.19	.98	1/8 X 1/16
34	2.32	4.09	2.00	7.28	2.91	1.50	2.94	1.33	3.46	3.35	6.40	.53	1 <sup>11</sup> / <sub>32</sub>	2.16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	2.46	4.79	2.50	8.25	3.72	1.56	3.50	1.57	3.78	3.35	7.28	.69	1 <sup>13</sup> / <sub>32</sub>	2.36	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	2.87	4.75	2.50	8.62	3.72	2.00	3.50	1.75	4.47	4.29	7.97	.69	1 <sup>13</sup> / <sub>32</sub>	2.95	.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	2.74	5.89	2.62	9.75	3.84	1.75	3.94	1.97	4.13	3.74	8.07	.72	1 <sup>15</sup> / <sub>32</sub>	2.72	.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	2.76	6.42	2.87	10.31	4.12	1.75	4.06	2.36	4.72	4.33	8.78	.75	1 <sup>15</sup> / <sub>32</sub>	3.03	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	3.12	7.25	3.12	11.88	4.53	2.00	4.75	2.76	5.51	5.12	10.26	.87	1 <sup>17</sup> / <sub>32</sub>	3.70	.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8

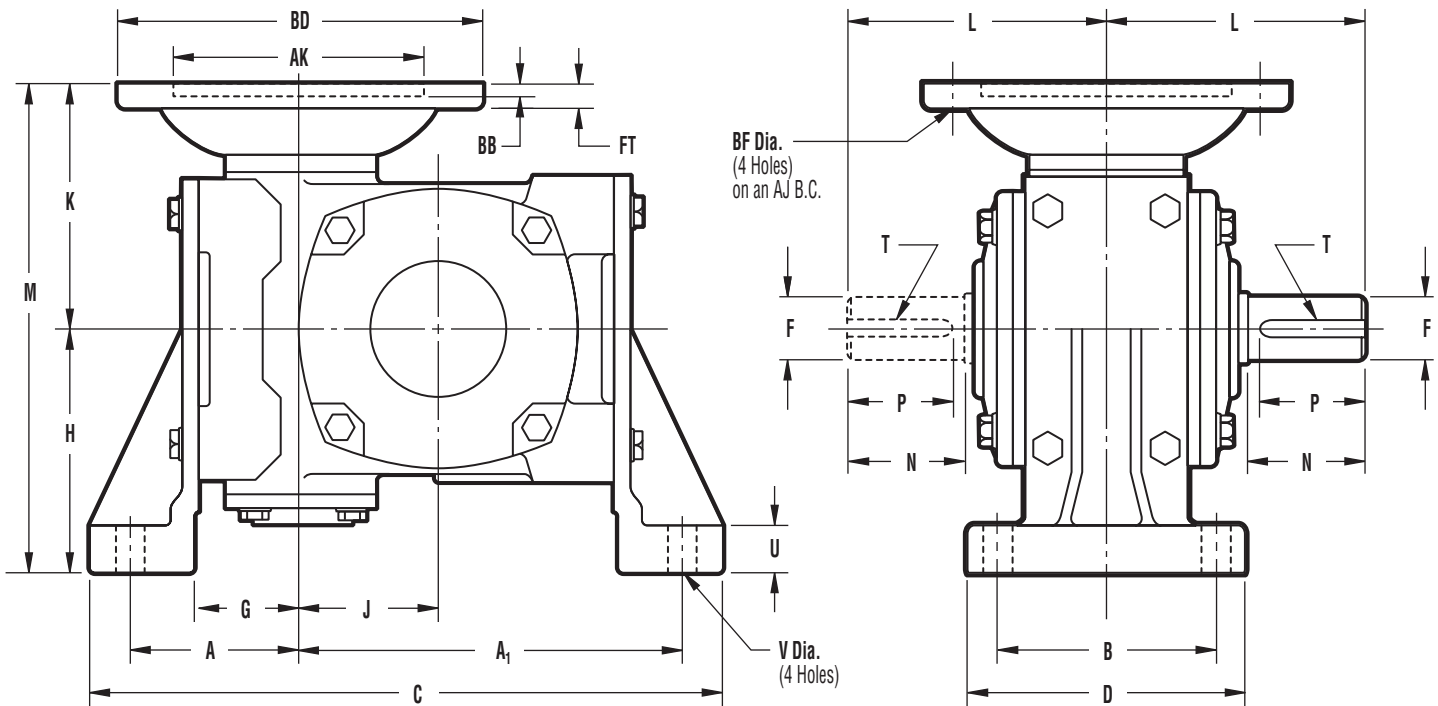
Dimensions in inches



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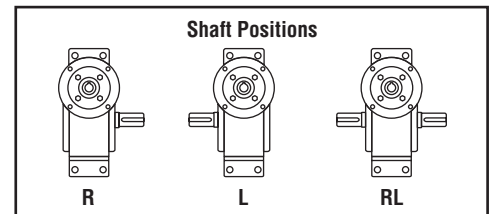
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# Model IC with J Mount Base



Size	A	A <sub>1</sub>	B	C	D	G	H	J	K	L	M	U	V	Low Speed Shaft			
														F	N	P	T
25	2.06	3.06	1.75	6.06	2.66	1.40	2.25	1.00	3.16	2.88	5.41	.44	11/32	.500	1.19	.98	1/8 X 1/16
34	2.32	4.09	2.00	7.28	2.91	1.50	2.94	1.33	3.23	3.35	6.17	.53	11/32	.625	1.38	1.18	3/16 X 3/32
40	2.46	4.79	2.50	8.25	3.72	1.56	3.50	1.57	3.41	3.35	6.91	.69	13/32	.625	1.38	1.18	3/16 X 3/32
45	2.87	4.75	2.50	8.62	3.72	2.00	3.50	1.75	3.92	4.29	7.42	.69	13/32	.750	1.94	1.77	3/16 X 3/32
50	2.74	5.89	2.62	9.75	3.84	1.75	3.94	1.97	3.33	3.74	7.27	.72	15/32	.750	1.57	1.38	3/16 X 3/32
60	2.76	6.42	2.87	10.31	4.12	1.75	4.06	2.36	4.00	4.33	8.06	.75	15/32	1.000	1.97	1.77	1/4 X 1/8
70	3.12	7.25	3.12	11.88	4.53	2.00	4.75	2.76	4.53	5.12	9.28	.87	17/32	1.125	2.36	2.17	1/4 X 1/8

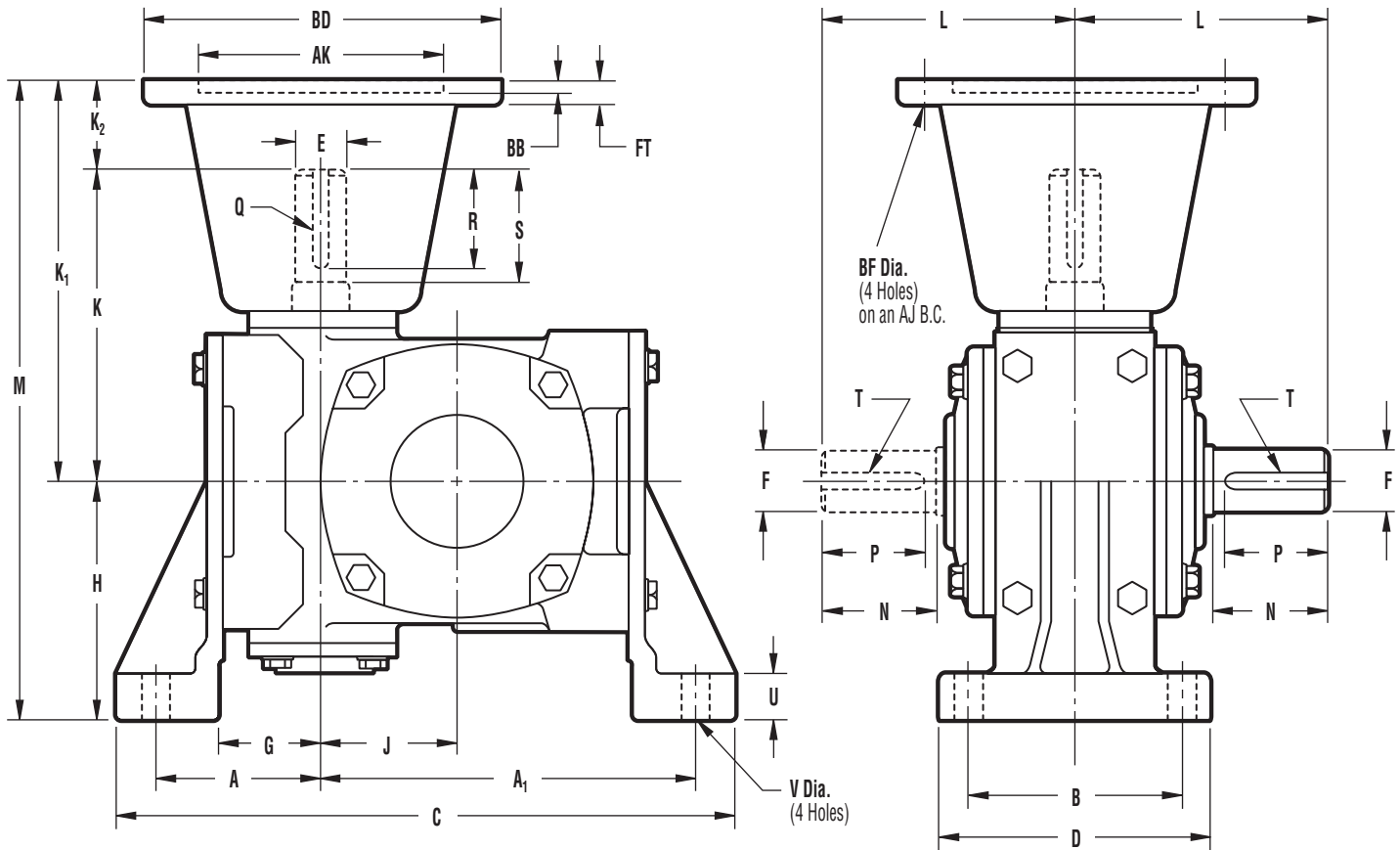
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8



Dimensions in inches



# Model IM with J Mount Base

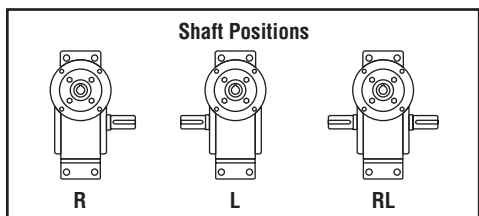


Size	A	A <sub>1</sub>	B	C	D	G	H	J	K	L	U	V	High Speed Shaft				Low Speed Shaft			
													E	S	R	Q	F	N	P	T
25	2.06	3.06	1.75	6.06	2.66	1.40	2.25	1.00	2.88	2.88	.44	11/32	.375	.81	.63	3/32 X 3/64	.500	1.19	.98	1/8 X 1/16
34	2.32	4.09	2.00	7.28	2.91	1.50	2.94	1.33	3.46	3.35	.53	11/32	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
40	2.46	4.79	2.50	8.25	3.72	1.56	3.50	1.57	3.78	3.35	.69	13/32	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
45	2.87	4.75	2.50	8.62	3.72	2.00	3.50	1.75	4.47	4.29	.69	13/32	.625	1.18	.98	3/16 X 3/32	.750	1.94	1.77	3/16 X 3/32
50	2.74	5.89	2.62	9.75	3.84	1.75	3.94	1.97	4.13	3.74	.72	15/32	.625	1.18	.98	3/16 X 3/32	.750	1.57	1.38	3/16 X 3/32
60	2.76	6.42	2.87	10.31	4.12	1.75	4.06	2.36	4.72	4.33	.75	15/32	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	3.12	7.25	3.12	11.88	4.53	2.00	4.75	2.76	5.51	5.12	.87	17/32	.875	1.58	1.38	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8

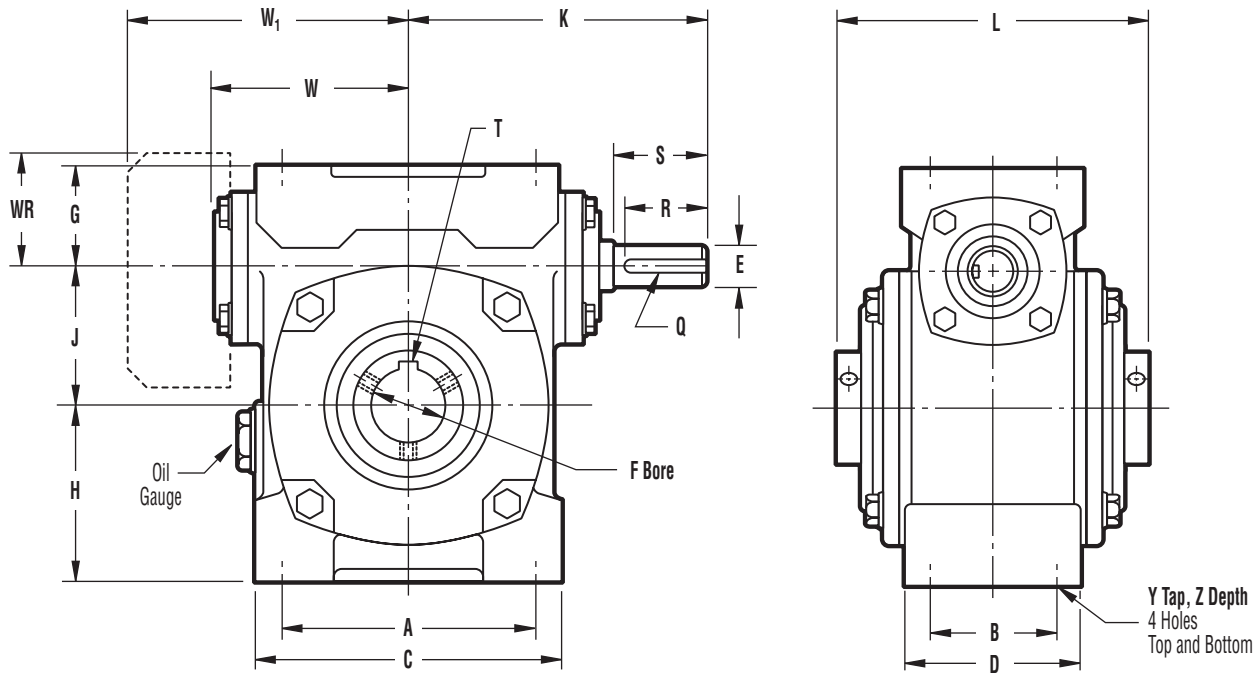
NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>1</sub>			K <sub>2</sub>			M		
	42CZ	56C 140TC	180TC 210TC	42CZ	56C 140TC	180TC 210TC	42CZ	56C 140TC	180TC 210TC
25	4.76			1.88			7.01		
34	5.02	5.89		1.56	2.43		7.96	8.83	
40		6.09			2.31			9.59	
45		6.93			2.46			10.43	
50		6.42			2.29			10.36	
60		7.01			2.29			11.07	
70		7.80	9.14		2.29	3.63		12.55	13.89

Dimensions in inches



# Model IS

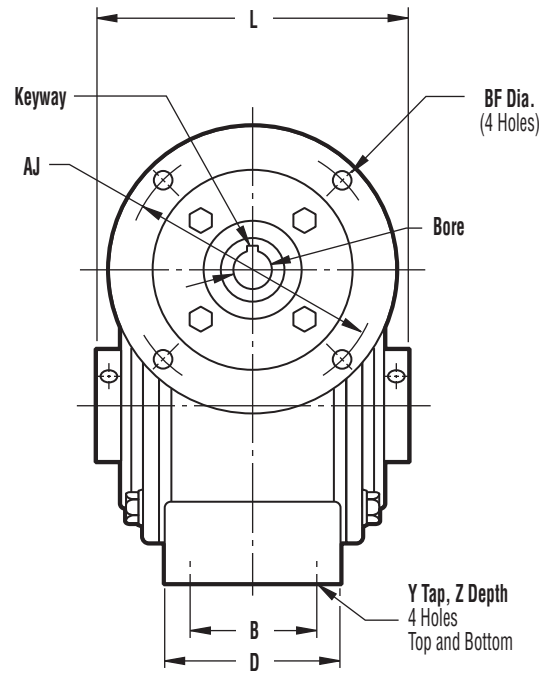
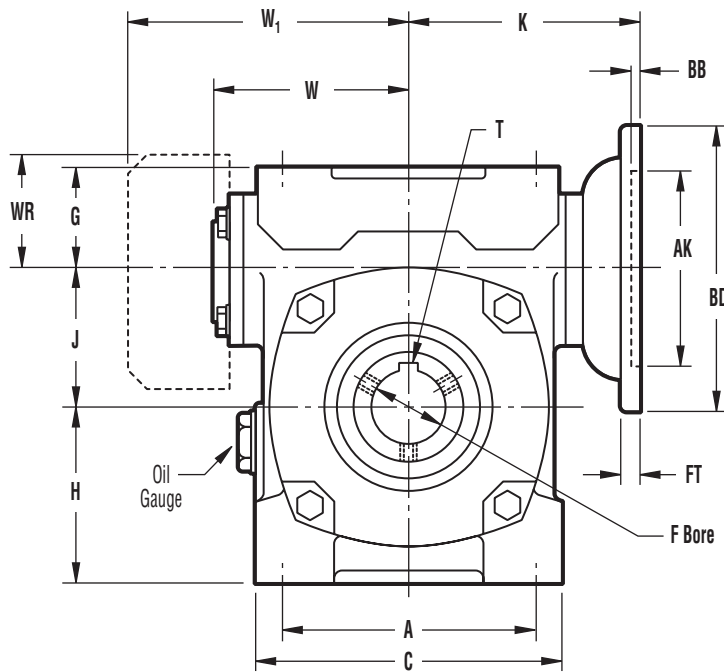


Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	High Speed Shaft				Low Speed Shaft	
															E	S	R	Q	F*	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	2.88	3.63	1.81			1/4 - 20	7/16	.375	.81	.63	3/32 X 3/64	.625	3/16 X 3/32
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	4.25	2.16			1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	4.50	2.36			5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	5.50	2.95			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	5.00	2.72			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	5.38	3.03			3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	5.88	3.70			3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.188	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	6.50	4.13			3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.500	5/16 X 5/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	7.25	5.28			1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 5/32	2.000	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	8.25		8.90	3.86	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	2.375	5/8 X 5/16
135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	9.25		9.70	3.86	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.750	5/8 X 5/16
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	11.75		11.50	4.70	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	3.250	3/4 X 3/8
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	12.00		11.70	4.70	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	3.500	7/8 X 7/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	14.50		13.50	5.60	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	4.125	1 X 1/2
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	15.25		14.50	5.60	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	4.500	1 X 1/2
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	16.25		17.00	6.30	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	5.000	1 1/4 X 5/8

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ICS



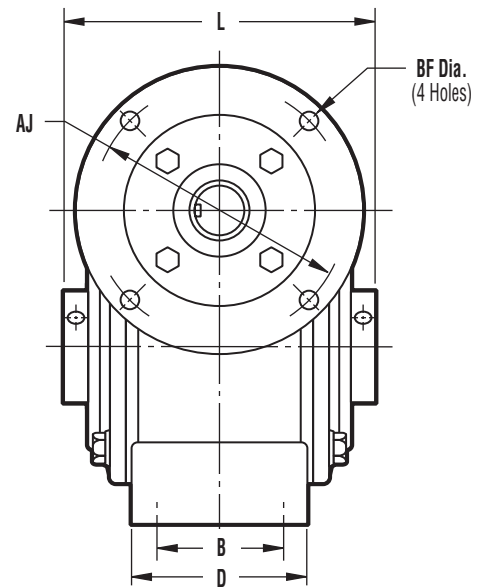
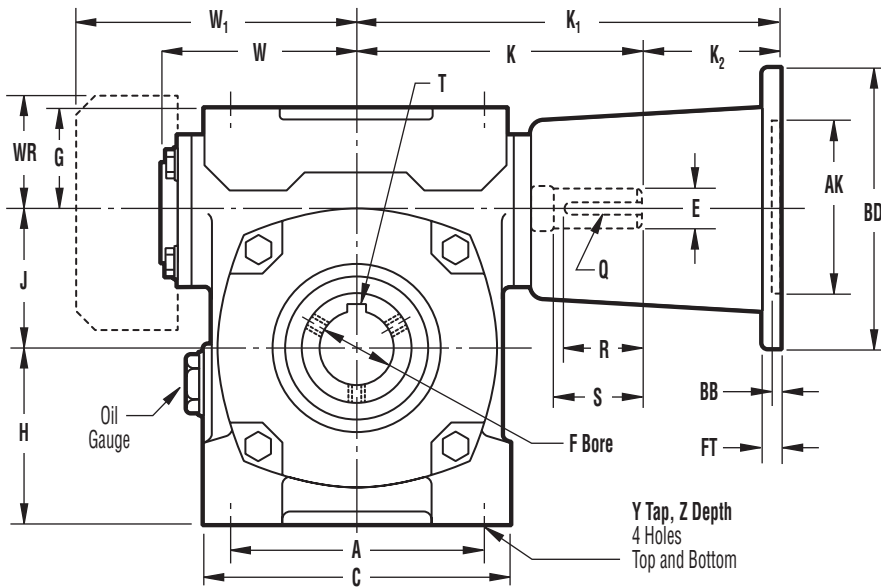
Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	Low Speed Shaft	
															F*	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	3.16	3.63	1.81			1/4 - 20	7/16	.625	3/16 X 3/32
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.23	4.25	2.44			1/4 - 20	7/16	.750	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.41	4.50	2.64			5/16 - 18	5/8	.750	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	3.92	5.50	2.95			5/16 - 18	5/8	1.000	1/4 X 1/8
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	3.33	5.00	2.97			5/16 - 18	5/8	1.000	1/4 X 1/8
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.00	5.38	3.27			3/8 - 16	3/4	1.000	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	4.53	5.88	3.80			3/8 - 16	3/4	1.188	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	4.92	6.50	4.27			3/8 - 16	3/4	1.500	5/16 X 5/32
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	5.93	7.25	5.34			1/2 - 13	15/16	2.000	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	6.97	8.25		8.90	3.86	1/2 - 13	15/16	2.375	5/8 X 5/16
135	10.24	3.94	11.81	5.51	3.35	6.51	5.31	8.66	9.25		9.70	3.86	5/8 - 11	1 1/8	2.750	5/8 X 5/16
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	9.65	11.75		11.50	4.70	5/8 - 11	1 1/8	3.250	3/4 X 3/8
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.01	12.00		11.70	4.70	3/4 - 10	1 3/8	3.500	7/8 X 7/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	12.80	14.50		13.50	5.60	3/4 - 10	1 3/8	4.125	1 X 1/2
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	13.78	15.25		14.50	5.60	1 - 8	1 3/4	4.500	1 X 1/2
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	14.96	16.25		17.00	6.30	1 - 8	1 3/4	5.000	1 1/4 X 5/8

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMS



Size	A	B	C	D	G	H	J	K	L	W	W <sub>1</sub>	WR	Y	Z	High Speed Shaft				Low Speed Shaft			
															E	S	R	Q	F*	N	P	T
25	2.63	1.69	3.25	2.50	1.31	1.31	1.00	2.88	3.63	1.81			1/4 - 20	7/16	.375	.81	.63	3/32 X 3/64	.625	1.19	.98	3/16 X 3/32
34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	4.25	2.16			1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.750	1.38	1.18	3/16 X 3/32
40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	4.50	2.36			5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	1.38	1.18	3/16 X 3/32
45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	5.50	2.95			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1.94	1.77	1/4 X 1/8
50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	5.00	2.72			5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1.57	1.38	1/4 X 1/8
60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	5.38	3.03			3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1.97	1.77	1/4 X 1/8
70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	5.88	3.70			3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.188	2.36	2.17	1/4 X 1/8
80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	6.50	4.13			3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.500	2.56	2.36	5/16 X 3/16
100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	7.25	5.28			1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 5/32	2.000	2.95	2.56	3/8 X 3/16
120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	8.25		8.90	3.86	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	2.375	3.35	2.95	5/8 X 5/16
135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	9.25		9.70	3.86	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.750	3.74	3.35	5/8 X 5/16
155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	11.75		11.50	4.70	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	3.250	4.33	3.94	3/4 X 3/8
175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	12.00		11.70	4.70	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	3.500	4.33	3.94	7/8 X 7/16
200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	14.50		13.50	5.60	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	4.125	4.92	4.53	1 X 1/2
225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	15.25		14.50	5.60	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	4.500	5.51	5.12	1 X 1/2
250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	16.25		17.00	6.30	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	5.000	6.10	5.71	1 1/4 X 5/8

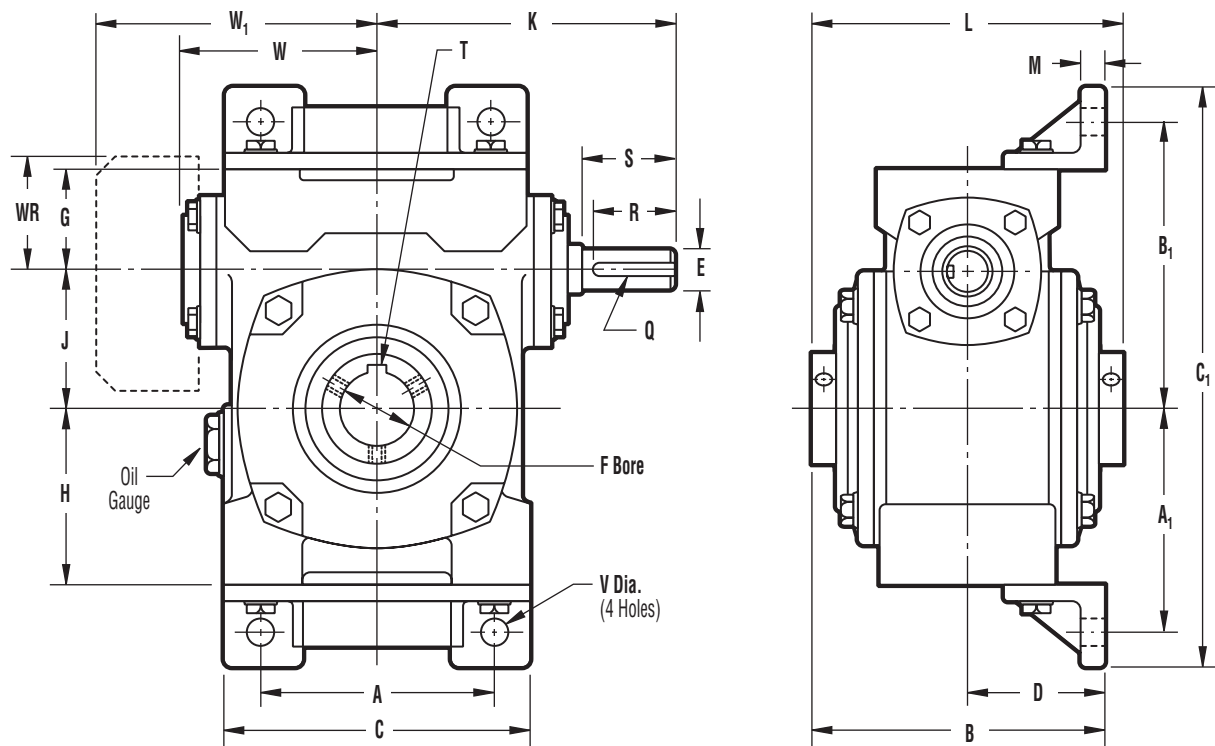
NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>1</sub>				K <sub>2</sub>			
	42CZ	56C 140TC	180TC 210TC	250TC	42CZ	56C 140TC	180TC 210TC	250TC
25	4.76				1.88			
34		5.89				2.43		
40		6.09				2.31		
45		6.93				2.46		
50		6.42				2.29		
60		7.01				2.29		
70		7.80	9.14			2.29	3.63	
80		8.59	9.93			2.29	3.63	
100		9.77	11.61			2.29	4.13	
120			13.19	13.19			4.13	4.13
135			14.37	14.37			4.13	4.13
155			15.94	15.94			4.13	4.13
175			16.93	16.93			4.13	4.13
200			17.91	17.91			4.13	4.13
225			18.89	18.89			4.13	4.13
250			20.67	20.67			4.13	4.13

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

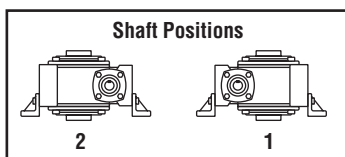
# Model IS with Vertical Base



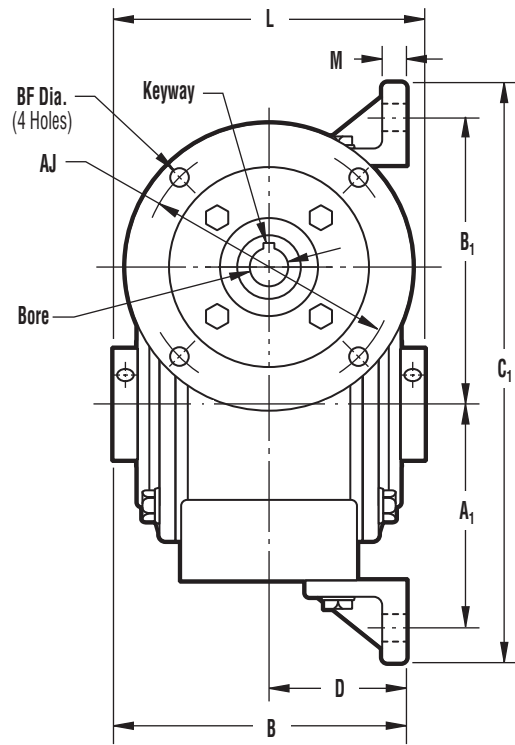
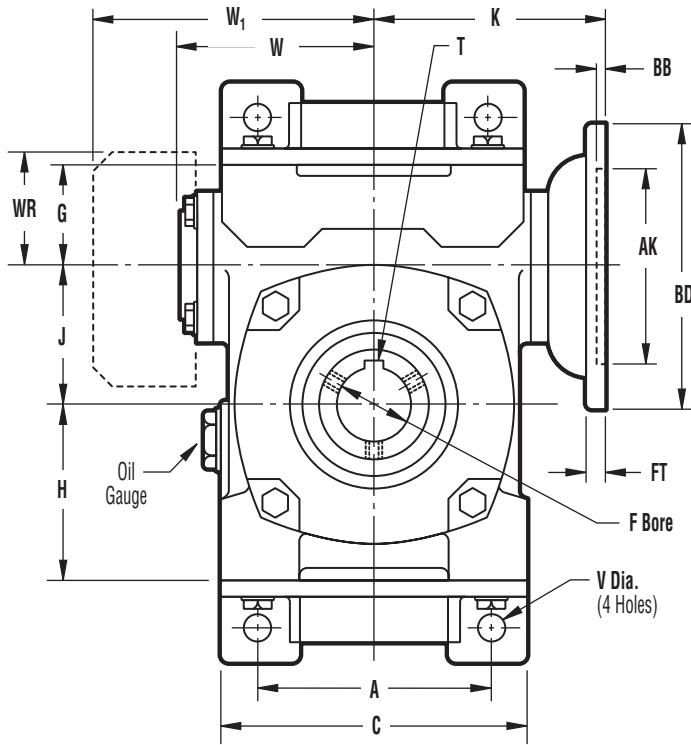
Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft	
																		E	S	R	Q	F*	T
25	2.31	2.06	3.44	3.06	3.25	6.06	1.63	1.31	1.31	1.00	2.88	3.63	.31	.28	1.81			.375	.81	.63	3/16 X 3/64	.625	3/16 X 3/32
34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.46	4.25	.31	.28	2.16			.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.78	4.50	.43	.35	2.36			.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.94	2.06	1.75	4.47	5.50	.59	.44	2.95			.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.38	2.56	1.97	4.13	5.00	.55	.44	2.72			.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.72	5.38	.59	.44	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1/4 X 1/8
70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	1.97	3.35	2.76	5.51	5.88	.71	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.188	1/4 X 1/8
80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	2.36	3.62	3.15	6.30	6.50	.71	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.500	5/16 X 5/32
100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	2.95	4.53	3.94	7.48	7.25	.79	.59	5.28			1.375	1.97	1.77	5/16 X 5/32	2.000	3/8 X 3/16
120	8.86	7.68	8.25	10.04	10.43	19.69	4.13	3.15	5.51	4.72	9.06	8.25	.98	.71		8.90	3.86	1.500	2.56	2.36	3/8 X 3/16	2.375	5/8 X 5/16
135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	3.35	6.50	5.31	10.24	9.25	1.10	.71		9.70	3.86	1.625	2.95	2.76	3/8 X 3/16	2.750	5/8 X 5/16
155	11.42	10.16	11.50	12.32	13.78	25.04	5.61	4.06	7.99	6.10	11.81	11.75	1.18	.79		11.50	4.70	1.625	3.35	3.15	3/8 X 3/16	3.250	3/4 X 3/8
175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.80	12.00	1.26	.79		11.70	4.70	1.875	3.35	3.15	1/2 X 1/4	3.500	7/8 X 7/16
200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	5.12	9.65	7.87	13.78	14.50	1.38	.87		13.50	5.60	2.000	3.74	3.54	1/2 X 1/4	4.125	1 X 1/2
225	15.75	13.58	15.11	17.32	18.50	34.06	7.48	5.71	10.83	8.86	14.76	15.25	1.50	1.06		14.50	5.60	2.250	3.74	3.54	1/2 X 1/4	4.500	1 X 1/2
250	17.72	14.76	16.00	18.70	20.47	36.61	7.87	5.91	11.81	9.84	16.54	16.25	1.57	1.06		17.00	6.30	2.250	4.33	4.13	1/2 X 1/4	5.000	1 1/4 X 5/8

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

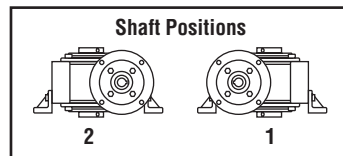


# Model ICS with Vertical Base



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	Low Speed Shaft	
																		F*	T
25	2.31	2.06	3.44	3.06	3.25	6.06	1.63	1.31	1.31	1.00	3.16	3.63	.31	.28	1.81			.625	3/16 X 3/32
34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.23	4.25	.31	.28	2.44			.750	3/16 X 3/32
40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.41	4.50	.43	.35	2.64			.750	3/16 X 3/32
45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.94	2.06	1.75	3.92	5.50	.59	.44	2.95			1.000	1/4 X 1/8
50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.38	2.56	1.97	3.33	5.00	.55	.44	2.97			1.000	1/4 X 1/8
60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.00	5.38	.59	.44	3.27			1.000	1/4 X 1/8
70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	1.97	3.35	2.76	4.53	5.88	.71	.59	3.80			1.188	1/4 X 1/8
80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	2.36	3.62	3.15	4.92	6.50	.71	.59	4.27			1.500	5/16 X 5/32
100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	2.95	4.53	3.94	5.93	7.25	.79	.59	5.34			2.000	3/8 X 3/16
120	8.86	7.68	8.25	10.04	10.43	19.69	4.13	3.15	5.51	4.72	6.97	8.25	.98	.71		8.90	3.86	2.375	5/8 X 5/16
135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	3.35	6.50	5.31	8.66	9.25	1.10	.71		9.70	3.86	2.750	5/8 X 5/16
155	11.42	10.16	11.50	12.32	13.78	25.04	5.61	4.06	7.99	6.10	9.65	11.75	1.18	.79		11.50	4.70	3.250	3/4 X 3/8
175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.01	12.00	1.26	.79		11.70	4.70	3.500	7/8 X 7/16
200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	5.12	9.65	7.87	12.80	14.50	1.38	.87		13.50	5.60	4.125	1 X 1/2
225	15.75	13.58	15.11	17.32	18.50	34.06	7.48	5.71	10.83	8.86	13.78	15.25	1.50	1.06		14.50	5.60	4.500	1 X 1/2
250	17.72	14.76	16.00	18.70	20.47	36.61	7.87	5.91	11.81	9.84	14.96	16.25	1.57	1.06		17.00	6.30	5.000	1 1/4 X 5/8

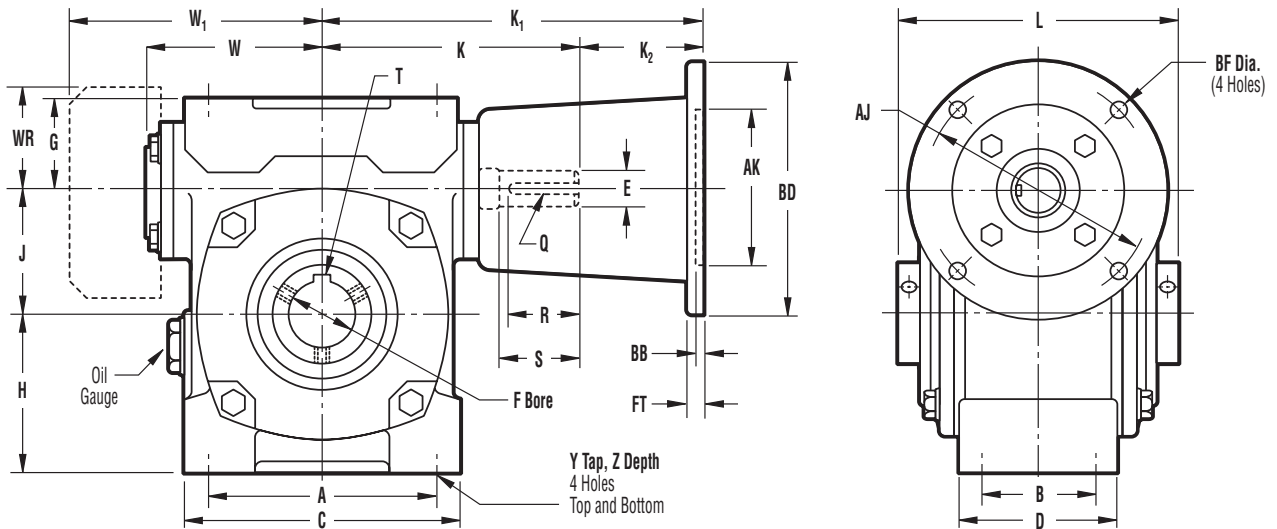
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16



Dimensions in inches

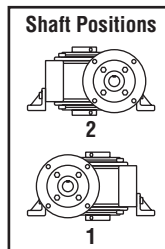
\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMS with Vertical Base



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	G	H	J	K	L	M	V	W	W <sub>1</sub>	WR	High Speed Shaft				Low Speed Shaft	
																		E	S	R	Q	F*	T
25	2.31	2.06	3.44	3.06	3.25	6.06	1.63	1.31	1.31	1.00	2.88	3.63	.31	.28	1.81			.375	.81	.63	3/32 X 3/64	.625	3/16 X 3/32
34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.22	1.65	1.33	3.46	4.25	.31	.28	2.16			.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.34	2.09	1.57	3.78	4.50	.43	.35	2.36			.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.94	2.06	1.75	4.47	5.50	.59	.44	2.95			.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.38	2.56	1.97	4.13	5.00	.55	.44	2.72			.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	1.65	2.95	2.36	4.72	5.38	.59	.44	3.03			.750	1.58	1.38	3/16 X 3/32	1.000	1/4 X 1/8
70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	1.97	3.35	2.76	5.51	5.88	.71	.59	3.70			.875	1.58	1.38	3/16 X 3/32	1.188	1/4 X 1/8
80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	2.36	3.62	3.15	6.30	6.50	.71	.59	4.13			1.125	1.97	1.77	1/4 X 1/8	1.500	5/16 X 5/32
100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	2.95	4.53	3.94	7.48	7.25	.79	.59	5.28	8.90	3.86	1.375	1.97	1.77	5/16 X 5/32	2.000	3/8 X 3/16
120	8.86	7.68	8.25	10.04	10.43	19.69	4.13	3.15	5.51	4.72	9.06	8.25	.98	.71		9.70	3.86	1.500	2.56	2.36	3/8 X 3/16	2.375	5/8 X 5/16
135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	3.35	6.50	5.31	10.24	9.25	1.10	.71		11.50	4.70	1.625	2.95	2.76	3/8 X 3/16	2.750	5/8 X 5/16
155	11.42	10.16	11.50	12.32	13.78	25.04	5.61	4.06	7.99	6.10	11.81	11.75	1.18	.79		11.70	4.70	1.625	3.35	3.15	3/8 X 3/16	3.250	3/4 X 3/8
175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	4.84	8.78	6.89	12.80	12.00	1.26	.79		13.50	5.60	1.875	3.35	3.15	1/2 X 1/4	3.500	7/8 X 7/16
200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	5.12	9.65	7.87	13.78	14.50	1.38	.87		14.50	5.60	2.000	3.74	3.54	1/2 X 1/4	4.125	1 X 1/2
225	15.75	13.58	15.11	17.32	18.50	34.06	7.48	5.71	10.83	8.86	14.76	15.25	1.50	1.06		17.00	6.30	2.250	3.74	3.54	1/2 X 1/4	4.500	1 X 1/2
250	17.72	14.76	16.00	18.70	20.47	36.61	7.87	5.91	11.81	9.84	16.54	16.25	1.57	1.06				2.250	4.33	4.13	1/2 X 1/4	5.000	1 1/4 X 5/8

NEMA Flange	AJ	AK	BD	BF	FT	BB
42CZ	3.750	3.00	4.63	.313	.281	.156
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188



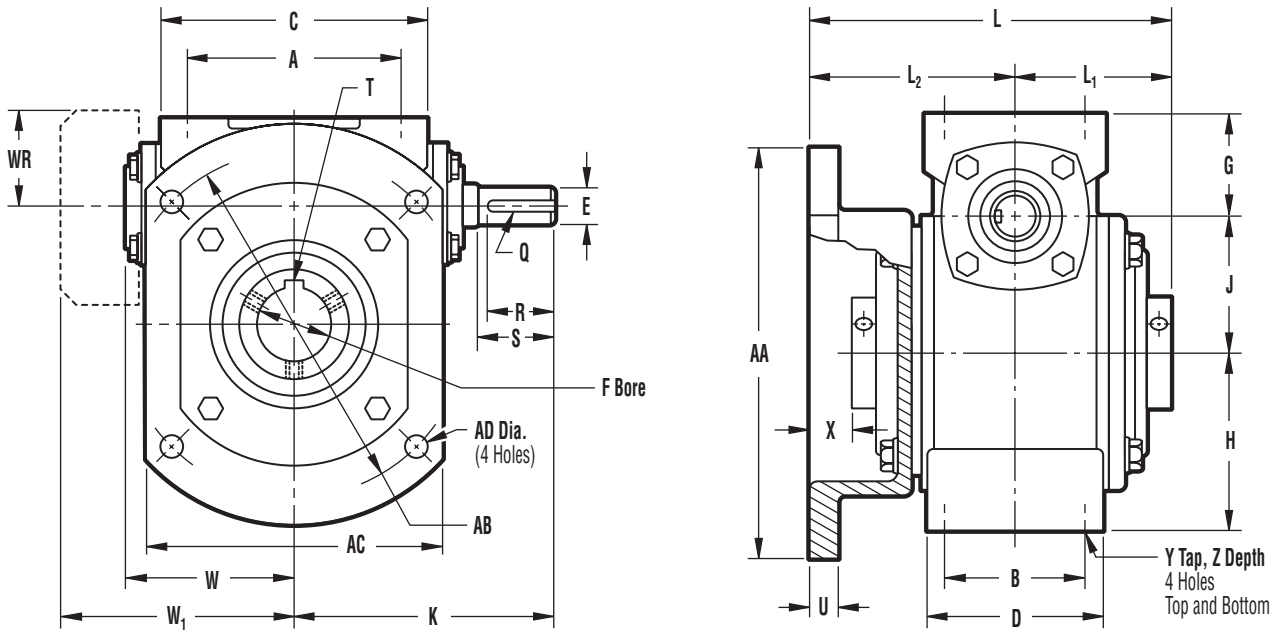
Size	K <sub>1</sub>				K <sub>2</sub>			
	42CZ	56C 140TC	180TC 210TC	250TC	42CZ	56C 140TC	180TC 210TC	250TC
25	4.76				1.88			
34		5.89				2.43		
40		6.09				2.31		
45		6.93				2.46		
50		6.42				2.29		
60		7.01				2.29		
70		7.80	9.14			2.29	3.63	
80		8.59	9.93			2.29	3.63	
100		9.77	11.61	11.61		2.29	4.13	4.13
120			13.19	13.19			4.13	4.13
135			14.37	14.37			4.13	4.13
155			15.94	15.94			4.13	4.13
175			16.93	16.93			4.13	4.13
200			17.91	17.91			4.13	4.13
225			18.89	18.89			4.13	4.13
250			20.67	20.67			4.13	4.13

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ISF

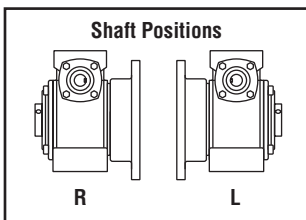
## Hollow Output Shaft with Output Flange



Size	AA	AB	AC	AD	A	B	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	U	W	W <sub>1</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft	
																							E	S	R	Q	F*	T
34	5.88	5.00	4.50	.34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	4.63	2.13	2.50	.38	2.16			.37	1/4-20	7/16	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
40	5.88	5.00	4.50	.34	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	4.87	2.25	2.62	.38	2.36			.37	5/16-18	5/8	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
45	6.75	5.88	4.88	.34	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	6.06	2.75	3.31	.55	2.95			.56	5/16-18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
50	7.88	7.00	6.12	.41	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	6.13	2.50	3.63	.44	2.72			1.13	5/16-18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
60	8.38	7.50	6.50	.41	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	6.22	2.69	3.53	.44	3.03			.84	3/8-16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1/4 X 1/8
70	8.88	8.00	7.12	.41	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	6.57	2.94	3.63	.44	3.70			.69	3/8-16	3/4	.875	1.58	1.38	3/16 X 3/32	1.188	1/4 X 1/8
80	10.00	9.00	7.38	.41	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	7.25	3.25	4.00	.50	4.13			.75	3/8-16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.500	5/16 X 5/32
100	10.00	9.00	7.38	.41	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	8.88	3.63	5.25	.56	5.28			1.62	1/2-13	15/16	1.375	1.97	1.77	5/16 X 5/32	2.000	3/8 X 3/16
120	13.00	11.50	10.50	.56	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	10.13	4.13	6.00	.62		8.90	3.86	1.87	1/2-13	15/16	1.500	2.56	2.36	3/8 X 3/16	2.375	5/8 X 5/16
135	16.00	14.00	12.87	.69	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	11.38	4.63	6.75	.75		9.70	3.86	2.12	5/8-11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.750	5/8 X 5/16
155	18.00	15.63	15.25	.69	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	12.26	5.88	6.38	.75		11.50	4.70	.50	5/8-11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	3.250	3/4 X 3/8
175	21.00	18.38	17.00	.78	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	12.50	6.00	6.50	.75		11.70	4.70	.50	3/4-10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	3.500	7/8 X 7/16
200	24.00	21.00	19.50	1.03	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	15.00	7.25	7.75	.75		13.50	5.60	.50	3/4-10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	4.125	1 X 1/2
225	26.50	23.00	21.00	1.03	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	15.76	7.63	8.13	.75		14.50	5.60	.50	1-8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	4.500	1 X 1/2
250	29.00	25.00	22.75	1.03	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	16.76	8.13	8.63	.75		17.00	6.30	.50	1-8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	5.000	1 1/4 X 5/8

Dimensions in inches

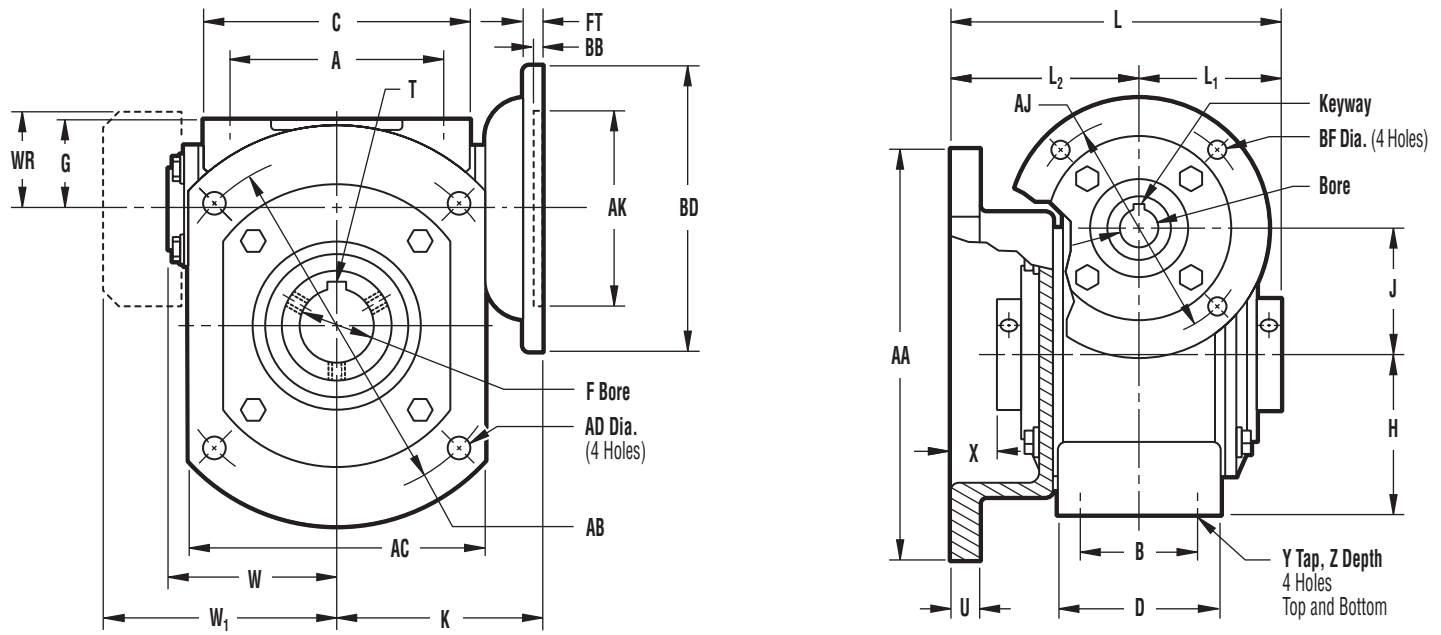
\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.





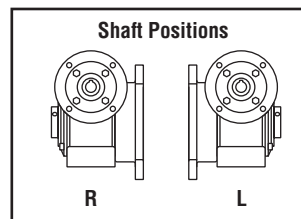
# Model ICSF

## Hollow Output Shaft with Output Flange



Size	AA	AB	AC	AD	A	B	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	U	W	W <sub>1</sub>	WR	X	Y	Z	Low Speed Shaft	
																							F*	T
34	5.88	5.00	4.50	.34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.23	4.63	2.13	2.50	.38	2.44			.37	1/4 - 20	7/16	.750	3/16 X 3/32
40	5.88	5.00	4.50	.34	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.41	4.87	2.25	2.62	.38	2.64			.37	5/16 - 18	5/8	.750	3/16 X 3/32
45	6.75	5.88	4.88	.34	4.19	2.75	4.82	3.35	1.94	2.06	1.75	3.92	6.06	2.75	3.31	.55	2.95			.56	5/16 - 18	5/8	1.000	1/4 X 1/8
50	7.88	7.00	6.12	.41	3.54	1.97	4.49	2.68	1.38	2.56	1.97	3.35	6.13	2.50	3.63	.44	2.97			1.13	5/16 - 18	5/8	1.000	1/4 X 1/8
60	8.38	7.50	6.50	.41	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.00	6.22	2.69	3.53	.44	3.27			.84	3/8 - 16	3/4	1.000	1/4 X 1/8
70	8.88	8.00	7.12	.41	4.92	2.60	5.98	3.46	1.97	3.35	2.76	4.53	6.57	2.94	3.63	.44	3.80			.69	3/8 - 16	3/4	1.188	1/4 X 1/8
80	10.00	9.00	7.38	.41	5.71	2.95	6.69	3.98	2.36	3.62	3.15	4.92	7.25	3.25	4.00	.50	4.27			.75	3/8 - 16	3/4	1.500	5/16 X 5/32
100	10.00	9.00	7.38	.41	7.28	3.35	8.82	4.49	2.95	4.53	3.94	5.93	8.88	3.63	5.25	.56	5.34			1.62	1/2 - 13	15/16	2.000	3/8 X 3/16
120	13.00	11.50	10.50	.56	8.86	3.94	10.24	5.31	3.15	5.51	4.72	6.97	10.13	4.13	6.00	.62		8.90	3.86	1.87	1/2 - 13	15/16	2.375	5/8 X 5/16
135	16.00	14.00	12.87	.69	10.24	3.94	11.81	5.51	3.35	6.50	5.31	8.66	11.38	4.63	6.75	.75		9.70	3.86	2.12	5/8 - 11	1 1/8	2.750	5/8 X 5/16
155	18.00	15.63	15.25	.69	11.81	4.33	13.78	6.10	4.06	7.99	6.10	9.65	12.26	5.88	6.38	.75		11.50	4.70	.50	5/8 - 11	1 1/8	3.250	3/4 X 3/8
175	21.00	18.38	17.00	.78	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.01	12.50	6.00	6.50	.75		11.70	4.70	.50	3/4 - 10	1 3/8	3.500	7/8 X 7/16
200	24.00	21.00	19.50	1.03	14.17	5.91	16.54	7.87	5.12	9.65	7.87	12.80	15.00	7.25	7.75	.75		13.50	5.60	.50	3/4 - 10	1 3/8	4.125	1 X 1/2
225	26.50	23.00	21.00	1.03	15.75	6.30	18.50	8.66	5.71	10.83	8.86	13.78	15.76	7.63	8.13	.75		14.50	5.60	.50	1 - 8	1 3/4	4.500	1 X 1/2
250	29.00	25.00	22.75	1.03	17.72	6.69	20.47	9.06	5.91	11.81	9.84	14.96	16.76	8.13	8.63	.75		17.00	6.30	.50	1 - 8	1 3/4	5.000	1 1/4 X 5/8

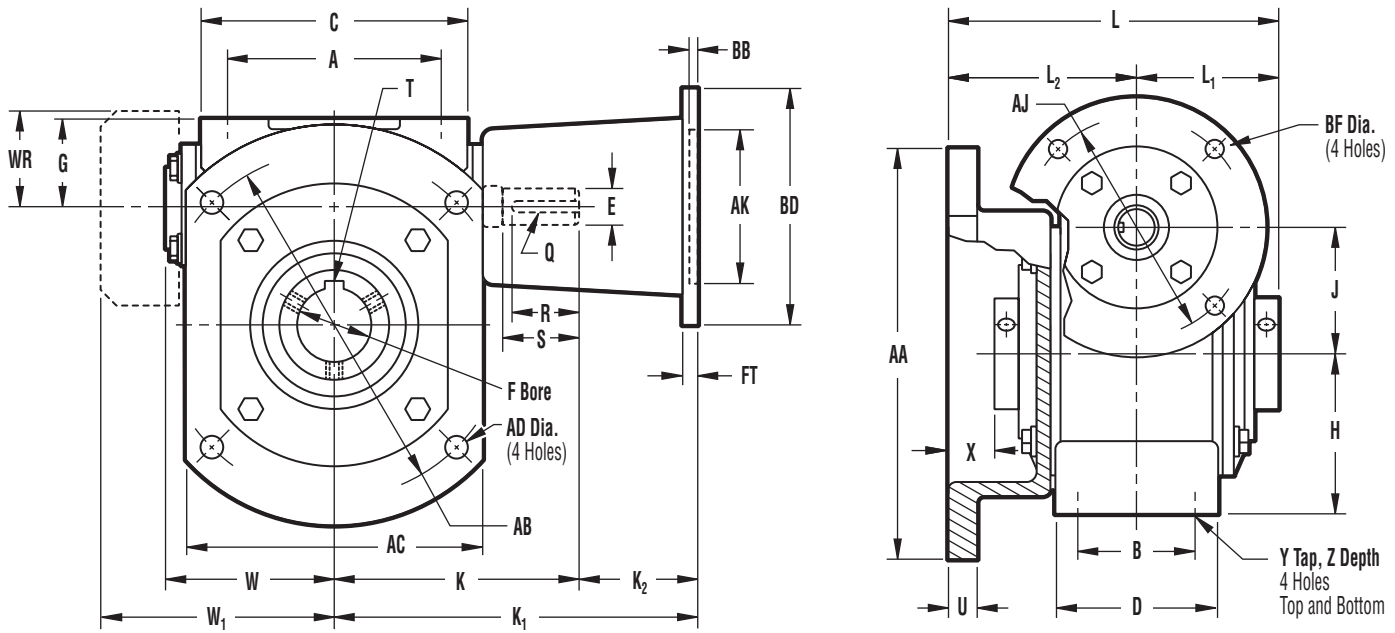
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32
250TC	7.250	8.50	9.00	.531	.375	.188	1.625	3/8 X 3/16



Dimensions in inches

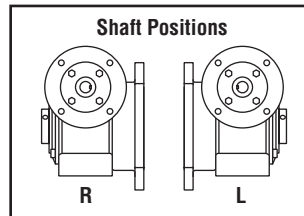
\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMSF



Size	AA	AB	AC	AD	A	B	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	U	W	W <sub>1</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft	
																							E	S	R	Q	F*	T
34	5.88	5.00	4.50	.34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	3.46	4.63	2.13	2.50	.38	2.16			.37	1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
40	5.88	5.00	4.50	.34	3.15	2.13	3.90	2.68	1.34	2.09	1.57	3.78	4.87	2.25	2.62	.38	2.36			.37	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
45	6.75	5.88	4.88	.34	4.19	2.75	4.82	3.35	1.94	2.06	1.75	4.47	6.06	2.75	3.31	.55	2.95			.56	5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
50	7.88	7.00	6.12	.41	3.54	1.97	4.49	2.68	1.38	2.56	1.97	4.13	6.13	2.50	3.63	.44	2.72			1.13	5/16 - 18	5/8	.625	1.18	.98	3/16 X 3/32	1.000	1/4 X 1/8
60	8.38	7.50	6.50	.41	3.94	2.13	4.96	3.11	1.65	2.95	2.36	4.72	6.22	2.69	3.53	.44	3.03			.84	3/8 - 16	3/4	.750	1.58	1.38	3/16 X 3/32	1.000	1/4 X 1/8
70	8.88	8.00	7.12	.41	4.92	2.60	5.98	3.46	1.97	3.35	2.76	5.51	6.57	2.94	3.63	.44	3.70			.69	3/8 - 16	3/4	.875	1.58	1.38	3/16 X 3/32	1.188	1/4 X 1/8
80	10.00	9.00	7.38	.41	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.30	7.25	3.25	4.00	.50	4.13			.75	3/8 - 16	3/4	1.125	1.97	1.77	1/4 X 1/8	1.500	5/16 X 5/32
100	10.00	9.00	7.38	.41	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.48	8.88	3.63	5.25	.56	5.28			1.62	1/2 - 13	15/16	1.375	1.97	1.77	5/16 X 5/32	2.000	3/8 X 3/16
120	13.00	11.50	10.50	.56	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.06	10.13	4.13	6.00	.62		8.90	3.86	1.87	1/2 - 13	15/16	1.500	2.56	2.36	3/8 X 3/16	2.375	5/8 X 5/16
135	16.00	14.00	12.87	.69	10.24	3.94	11.81	5.51	3.35	6.50	5.31	10.24	11.38	4.63	6.75	.75		9.70	3.86	2.12	5/8 - 11	1 1/8	1.625	2.95	2.76	3/8 X 3/16	2.750	5/8 X 5/16
155	18.00	15.63	15.25	.69	11.81	4.33	13.78	6.10	4.06	7.99	6.10	11.81	12.26	5.88	6.38	.75		11.50	4.70	.50	5/8 - 11	1 1/8	1.625	3.35	3.15	3/8 X 3/16	3.250	3/4 X 3/8
175	21.00	18.38	17.00	.78	13.00	4.33	15.35	6.46	4.84	8.78	6.89	12.80	12.50	6.00	6.50	.75		11.70	4.70	.50	3/4 - 10	1 3/8	1.875	3.35	3.15	1/2 X 1/4	3.500	7/8 X 7/16
200	24.00	21.00	19.50	1.03	14.17	5.91	16.54	7.87	5.12	9.65	7.87	13.78	15.00	7.25	7.75	.75		13.50	5.60	.50	3/4 - 10	1 3/8	2.000	3.74	3.54	1/2 X 1/4	4.125	1 X 1/2
225	26.50	23.00	21.00	1.03	15.75	6.30	18.50	8.66	5.71	10.83	8.86	14.76	15.76	7.63	8.13	.75		14.50	5.60	.50	1 - 8	1 3/4	2.250	3.74	3.54	1/2 X 1/4	4.500	1 X 1/2
250	29.00	25.00	22.75	1.03	17.72	6.69	20.47	9.06	5.91	11.81	9.84	16.54	16.76	8.13	8.63	.75		17.00	6.30	.50	1 - 8	1 3/4	2.250	4.33	4.13	1/2 X 1/4	5.000	1 1/4 X 5/8

NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188



Size	K <sub>1</sub>			K <sub>2</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
34	5.89			2.43		
40	6.09			2.31		
45	6.93			2.46		
50	6.42			2.29		
60	7.01			2.29		
70	7.80	9.14		2.29	3.63	
80	8.59	9.93		2.29	3.63	
100	9.77	11.61		2.29	4.13	
120		13.19	13.19		4.13	4.13
135		14.37	14.37		4.13	4.13
155		15.94	15.94		4.13	4.13
175		16.93	16.93		4.13	4.13
200		17.91	17.91		4.13	4.13
225		18.89	18.89		4.13	4.13
250		20.67	20.67		4.13	4.13

Dimensions in inches

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Accessories



## Hollow Output Shaft Bushing Kits

A range of bushing kits are available for mounting our hollow output shaft reducers to shafts smaller than the output bore of the reducer. The kit includes a bushing, key and set screws.

Reducer Size	Shaft Diameter	Shaft Keyway
34	.500	1/8 x 1/16
	.625	3/16 x 3/32
40	.500	1/8 x 1/16
	.625	3/16 x 3/32
45	.750	3/16 x 3/32
	.875	3/16 x 3/32
50	.750	3/16 x 3/32
	.875	3/16 x 3/32
60	.750	3/16 x 3/32
	.875	3/16 x 3/32
70	1.000	1/4 x 1/8
	1.125	1/4 x 1/8
80	1.000	1/4 x 1/8
	1.125	1/4 x 1/8
	1.250	1/4 x 1/8
100	1.438	3/8 x 3/16
	1.500	3/8 x 3/16
	1.688	3/8 x 3/16
	1.750	3/8 x 3/16
	1.875	1/2 x 1/4
120	1.688	3/8 x 3/16
	1.938	1/2 x 1/4
	2.188	1/2 x 1/4

Dimensions in inches

Reducer Size	Shaft Diameter	Shaft Keyway
135	2.000	1/2 x 1/4
	2.188	1/2 x 1/4
155	2.438	5/8 x 5/16
	2.188	1/2 x 1/4
	2.438	5/8 x 5/16
	2.688	5/8 x 5/16
175	2.938	3/4 x 3/8
	2.688	5/8 x 5/16
	2.938	3/4 x 3/8
	3.188	3/4 x 3/8
200	3.125	3/4 x 3/8
	3.625	7/8 x 7/16
	3.750	7/8 x 7/16
225	3.938	1 x 1/2
	3.750	7/8 x 7/16
250	4.250	1 x 1/2
	3.938	1 x 1/2
	4.250	1 x 1/2
	4.438	1 x 1/2
	4.750	1 1/4 x 5/8



## 7/8" to 5/8" Input Bushing Kit With Key

Ideal for reducing the quill input bore of a speed reducer from a 140TC to a 56C face.

## 1 3/8" to 1 1/8" Input Bushing Kit With Key

Ideal for reducing the quill input bore of a speed reducer from a 210TC to a 180TC face.

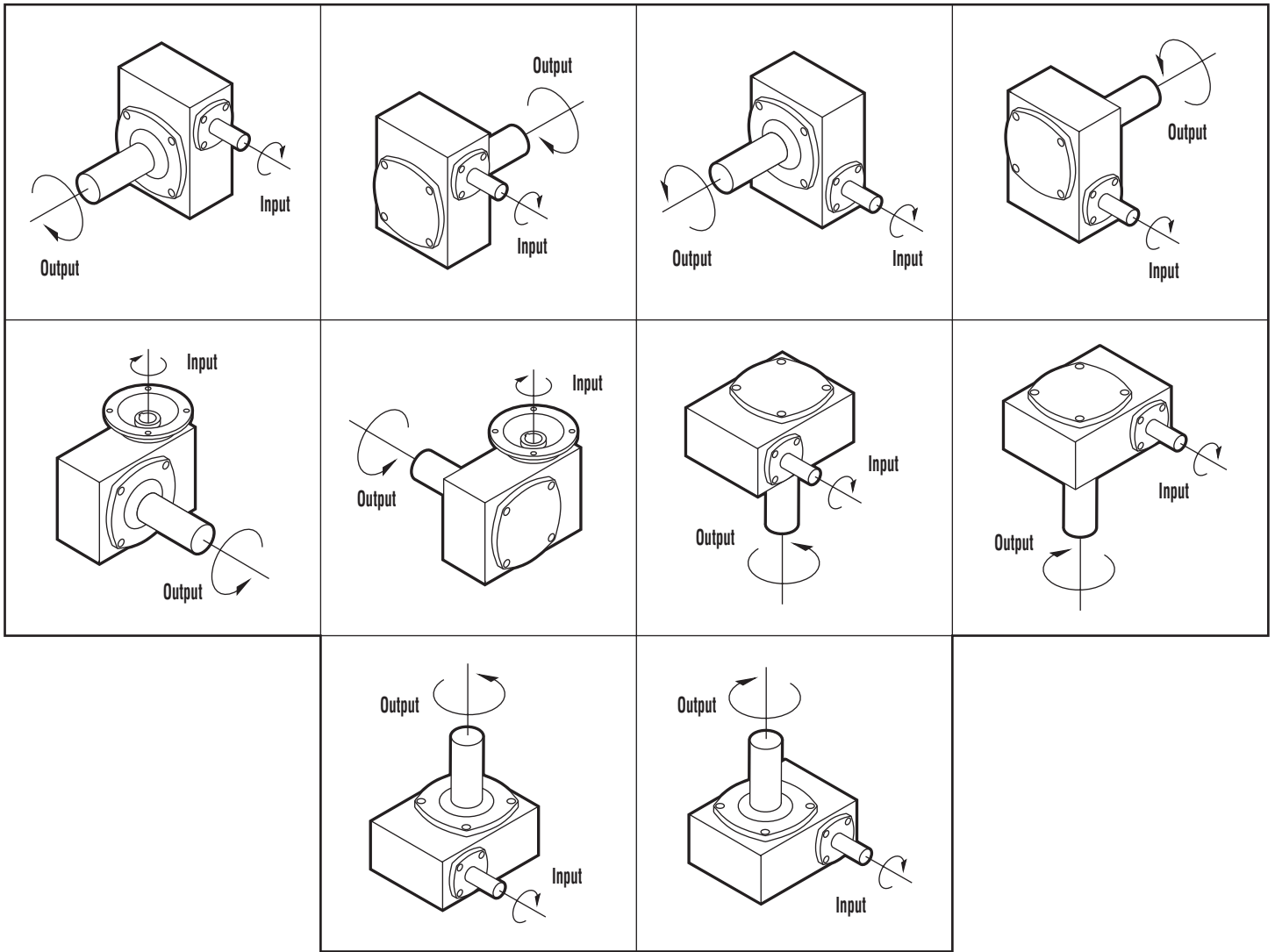
## Single Reduction Worm Gear Reducers Approximate Net Weight (Lbs.)

Model	SIZE																	
	25	34	40	45	50	60	70	80	100	120	135	155	175	200	225	250	300	350
I	7	8	9	16	14	21	31	43	82	120	190	240	360	470	680	800	1170	1760
IC	8	10	12	19	16	23	33	49	91	127	200	250	370	480	690	810		
IS	7	9	10	17	15	22	32	44	84	122	200	250	370	480	690	810		
ICS	8	11	13	20	17	24	34	50	93	129	210	260	380	490	700	820		
IM	11	15	17	24	21	28	38	54	98	134	220	270	390	500	710	830		
IMS	12	17	20	27	23	30	40	60	107	141	230	280	400	510	720	840		
ISF	-	11	12	21	21	28	39	53	92	142	230	290	420	550	800	930		
ICSF	-	13	15	24	23	30	41	59	101	149	240	300	430	560	810	940		
IMSF	-	19	22	31	29	36	47	69	115	161	260	320	450	580	830	960		
Horizontal Base	1	1	2	3	2	3	5	6	9	17	23	26	35	48	63	80		
Vertical Base	1	1	2	3	3	4	4	7	14	20	40	60	80	110	145	180		
J Mount Base	4	4	6	7	7	8	11	-	-	-	-	-	-	-	-	-		
Riser Block	1	2	2	2	2	3	4	-	-	-	-	-	-	-	-	-		

## Single Reduction Worm Gear Reducers Oil Capacity (ounces)

Unit Size	25	34	40	45	50	60	70	80	100	120	135	155	175	200	225	250	300	350
Worm Over	3	4	6	11	9	13	21	30	55	88	130	230	320	470	650	840	-	-
Worm Under	3	5	9	19	12	20	27	42	70	135	150	250	350	500	700	900	1100	1500
Vertical Output	3	5	7	14	10	16	23	34	60	110	160	260	370	550	760	980	-	-
J Mount	3	5	7	14	10	16	23	-	-	-	-	-	-	-	-	-	-	-

# Standard Shaft Rotation



All models are available with double output shafts.

# Service Factors For Worm Gear Applications

Type of Driven Machine	Service Factors	
	HRS. Per Day	
	3 - 10	OVER 10
<b>AGITATORS</b>		
Pure Liquid	1.00	1.25
Semi-Liquid, Variable Density	1.25	1.50
<b>BLOWERS</b>		
Centrifugal and Vane	1.00	1.25
Lobe	1.25	1.50
<b>BREWING AND DISTILLING</b>		
Bottling Machinery	1.00	1.25
Brew Kettles - Continuous Duty	1.00	1.25
Cookers - Continuous Duty	1.00	1.25
Mash Tubs - Continuous Duty	1.00	1.25
Scale Hopper - Frequent Starts	1.25	1.50
<b>CAN FILLING MACHINES</b>		
<b>CAR DUMPERS</b>		
<b>CAR PULLERS</b>		
<b>CLARIFIERS</b>		
<b>CLASSIFIERS</b>		
<b>CLAY WORKING MACHINERY</b>		
Brick Press & Briquette Machine	1.75	2.00
Extruders and Mixers	1.25	1.50
<b>COMPRESSORS</b>		
Centrifugal	1.00	1.25
Lobe, Reciprocating, Multi-Cycle	1.25	1.50
Reciprocating - Single Cycle	1.75	2.00
<b>CONVEYORS - UNIFORMLY LOADED &amp; FED</b>		
Apron	1.00	1.25
Assembly Belt, Bucket or Pan	1.00	1.25
Chain	1.00	1.25
Open, Live Roll, Screw	1.00	1.25
<b>CONVEYORS - HEAVY DUTY NOT UNIFORMLY FED</b>		
Apron	1.25	1.50
Assembly Belt, Bucket or Pan	1.25	1.50
Chain	1.25	1.50
Oven - Screw	1.25	1.50
Reciprocating - Shaker	1.75	2.00
<b>CRANES AND HOISTS</b>		
Main Hoists	1.00	1.25
<b>CRUSHER</b>		
Ore, Stone	1.75	2.00
Sugar	1.50	1.50
<b>ELEVATORS</b>		
Bucket - Uniform Load	1.00	1.25
Bucket - Heavy Load	1.25	1.50
Centrifugal Discharge	1.25	1.50
Freight	1.25	1.50
Gravity Discharge	1.00	1.25
<b>FANS</b>		
Centrifugal - Light (Small Dia.)	1.00	1.25
Large Industrial	1.25	1.50

Type of Driven Machine	Service Factors	
	HRS. Per Day	
	3 - 10	OVER 10
<b>FEEDERS</b>		
Apron - Belt - Screw	1.25	1.50
Disc 1.25	1.00	1.25
Reciprocating	1.75	2.00
<b>FOOD INDUSTRY</b>		
Beet Slicer	1.25	1.50
Cereal Cooker	1.00	1.25
Dough Mixer - Meat Grinder	1.25	1.50
Generators (Not Welding)	1.00	1.25
Hammer Mills	1.75	2.00
<b>HOISTS</b>		
Heavy Duty	1.75	2.00
Medium Duty and Skip Type	1.25	1.50
<b>LAUNDRY TUMBLERS</b>		
<b>LINE SHAFTS</b>		
Uniform Load	1.00	1.25
Heavy Load	1.25	1.50
<b>MACHINE TOOLS</b>		
Auxiliary Drive	1.00	1.25
Main Drive - Uniform Load	1.25	1.50
Main Drive - Heavy Duty	1.75	2.00
<b>METAL MILLS</b>		
Draw Bench Carriers & Main Drive	1.25	1.50
Slitters	1.25	1.50
<b>TABLE CONVEYORS - NON REVERSING</b>		
Group Drives	1.25	1.50
Individual Drives	1.75	2.00
Wire Drawing, Flattening or Winding	1.25	1.50
<b>MIXERS</b>		
Concrete - Continuous	1.25	1.50
Concrete - Intermittent	1.25	1.50
Constant Density	1.00	1.25
Semi-Liquid	1.25	1.50
<b>OIL INDUSTRY</b>		
Chillers, Paraffin Filter Press	1.25	1.50
Rotary Kilns	1.25	1.50
<b>PAPER MILLS</b>		
Agitator (Mixer)	1.25	1.50
Agitator - Pure liquids	1.00	1.25
Barking Drums - Mechanical Barkers	1.75	2.00
Bleacher	1.00	1.25
Calendar - Heavy Duty	2.00	2.00
Calendar - Anti-Friction Bearings	1.00	1.25
Cylinders	1.25	1.50
Chipper	2.00	2.00
Chip Feeder	1.25	1.50
Coating Rolls - Couch Rolls	1.00	1.25
Conveyors - Chips - Bark - Chemical	1.00	1.25
Conveyors - Log and Slab	2.00	2.00
Cutter	2.00	2.00
Cylinder Molds, Dryers - Anti-Friction	1.25	1.25

Type of Driven Machine	Service Factors	
	HRS. Per Day	
	3 - 10	OVER 10
<b>PAPER MILLS (Continued)</b>		
Felt Stretcher	1.25	1.50
Screens - Chip and Rotary	1.25	1.50
Thickener (AC)	1.25	1.50
Washer (AC)	1.25	1.50
Winder - Surface Type	1.25	1.25
<b>PLASTICS INDUSTRY</b>		
Intensive Internal Mixers		
Batch Type	1.75	1.75
Continuous Type	1.50	1.50
Batch Drop Mill - 2 Rolls	1.25	1.25
Compounding Mills	1.25	1.25
Calendars	1.50	1.50
Extruder - Variable Speed	1.50	1.50
Extruder - Fixed Speed	1.75	1.75
<b>PULLERS</b>		
Barge Haul	2.00	2.00
<b>PUMPS</b>		
Centrifugal	1.25	1.25
Proportioning	1.50	1.50
Reciprocating		
Single Acting, 3 or More Cycles	1.25	1.50
Double Acting, 2 or More Cycles	1.25	1.50
Rotary - Gear or Lube	1.00	1.25
<b>SEWAGE DISPOSAL EQUIPMENT</b>		
Bar Screens	1.00	1.25
Chemical Feeders	1.00	1.25
Collectors	1.00	1.25
Dewatering Screws	1.25	1.50
Scum Breakers	1.25	1.50
Slow or Rapid Mixers	1.25	1.50
Thickeners	1.25	1.50
Vacuum Filters	1.25	1.50
<b>SCREENS</b>		
Air Washing	1.00	1.25
Rotary - Stone or Gravel	1.25	1.50
Traveling Water Intake	1.00	1.25
Slab Pushers	1.25	1.50
Stokers	1.25	1.25
<b>TEXTILE INDUSTRY</b>		
Batchers or Calendars	1.25	1.50
Cards	1.25	1.50
Card Machines	1.75	2.00
Dry Cans and Dryers	1.25	1.50
Dyeing Machines	1.25	1.50
Looms	1.25	1.50
Mangles, Nappers and Pads	1.25	1.50
Soapers, Tenter Frames	1.25	1.50
Spinners, Washers, Winders	1.25	1.50
Tumbling Barrels	1.75	2.00
Windlass	1.25	1.50

This is not a complete list of machines. All applications should be checked for unusual operating conditions and the service factor adjusted accordingly.

Service factors shown apply only if electric or hydraulic motors are used. See conversion table if using a single or multi-cylinder engine.

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# Double Reduction Worm Gear Reducers

Approximate Net Weight (LBS.)

Model	Size														
	D34	D40	D45	D50	D60	D70	D80	D100	D120	D135	D155	D175	D200	D225	D250
I	18	20	27	24	31	49	63	104	158	240	290	410	570	810	930
IC	20	22	29	26	33	52	65	106	160	250	300	420	580	820	940
IS	19	21	28	25	32	50	64	106	160	250	300	420	580	820	940
ICS	21	23	30	27	34	53	66	108	162	260	310	430	590	830	950
IM	25	27	34	31	38	57	70	111	165	250	300	420	590	820	940
IMS	26	28	35	32	39	58	71	113	167	260	310	430	600	830	950
ISF	21	23	32	31	38	57	73	116	180	280	340	470	650	930	1060
ICSF	23	25	34	33	40	60	75	116	182	290	350	480	660	940	1070
IMSF	28	30	39	38	45	65	80	121	187	290	350	480	670	940	1070
Horizontal Base	1	2	3	2	3	5	6	9	17	23	26	35	48	63	80
Vertical Base	1	2	3	3	4	5	7	14	20	40	60	80	110	145	180

## How To Order Double Reduction Reducers

When ordering, specify:

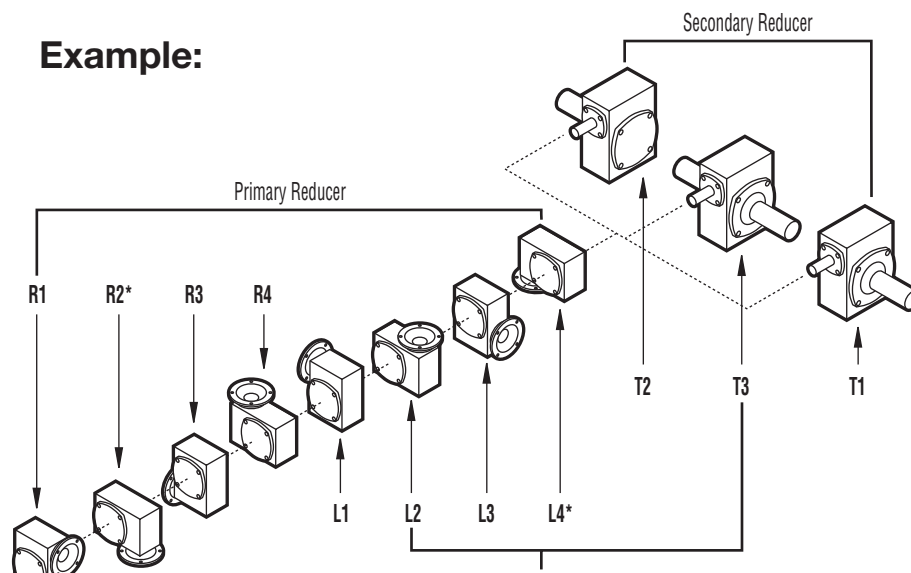
- 1) Model (I, IC, IMS, etc.)
- 2) Size (D34 - D250)
- 3) Ratio
- 4) Assembly position
- 5) C-Face Size, if required
- 6) Mounting base, if required

To determine assembly:

- 1) Select position of Primary (Input) Reducer
- 2) Select position of Secondary (Output) Reducer



### Example:



Full Model Number is:  
ICD45-150:1-L2T3-56C

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# Double Reduction Ratings

1.0 Service Factor

		Ratio Combination		1750 RPM Input Speed		1450 RPM Input Speed		1150 RPM Input Speed		870 RPM Input Speed	
Size	Ratio	PRI.	SEC.	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque
D34	75	5	15	.194	290	.167	298	.136	305	.107	313
	100	10	10	.153	289	.132	297	.107	303	.084	312
	150	10	15	.124	300	.107	308	.087	315	.068	324
	200	10	20	.109	307	.094	316	.076	322	.060	332
	250	10	25	.101	310	.087	319	.071	326	.056	335
	300	10	30	.093	302	.080	310	.065	317	.051	326
	400	20	20	.074	333	.064	342	.052	350	.041	360
	500	20	25	.069	335	.059	344	.048	352	.038	362
	600	20	30	.065	327	.056	336	.046	343	.036	353
	750	25	30	.060	335	.052	344	.042	352	.033	362
	1000	25	40	.053	335	.046	344	.037	352	.029	362
	1200	40	30	.049	337	.042	346	.034	354	.027	364
	1500	50	30	.047	346	.040	356	.033	363	.026	374
	1800	60	30	.043	359	.037	369	.030	377	.024	388
	2000	50	40	.043	347	.037	357	.030	364	.024	375
	2400	60	40	.040	360	.034	370	.028	378	.022	389
3000	60	50	.039	349	.034	359	.027	366	.021	377	
3600	60	60	.035	329	.030	338	.025	345	.019	355	
D40	75	5	15	.290	468	.250	481	.210	491	.161	505
	100	10	10	.230	470	.198	483	.161	494	.127	508
	150	10	15	.184	487	.158	501	.129	511	.101	526
	200	10	20	.153	490	.132	504	.107	515	.084	529
	250	10	25	.140	493	.120	507	.098	518	.077	532
	300	10	30	.132	490	.114	504	.092	515	.073	529
	400	20	20	.101	530	.087	545	.071	557	.056	572
	500	20	25	.093	534	.080	549	.065	561	.051	577
	600	20	30	.088	531	.076	546	.062	558	.048	573
	750	25	30	.080	543	.069	558	.056	570	.044	586
	1000	25	40	.070	533	.060	548	.049	560	.039	576
	1200	40	30	.064	547	.055	562	.045	574	.035	591
	1500	50	30	.061	562	.052	578	.043	590	.034	607
	1800	60	30	.056	583	.048	599	.039	612	.031	630
	2000	50	40	.054	551	.046	566	.038	579	.030	595
	2400	60	40	.050	572	.043	588	.035	601	.028	618
3000	60	50	.045	555	.039	571	.032	583	.025	599	
3600	60	60	.040	508	.034	522	.028	533	.022	549	
D45	75	5	15	.370	608	.320	625	.260	638	.200	657
	100	10	10	.300	614	.250	631	.210	645	.163	663
	150	10	15	.240	636	.200	654	.165	668	.130	687
	200	10	20	.200	640	.175	658	.142	672	.112	691
	250	10	25	.184	682	.158	701	.129	716	.101	737
	300	10	30	.167	640	.144	658	.117	672	.092	691
	400	20	20	.133	695	.114	714	.093	730	.073	751
	500	20	25	.120	738	.103	759	.084	775	.066	797
	600	20	30	.109	695	.094	714	.076	730	.060	751
	750	25	30	.098	710	.084	730	.069	746	.054	767
	1000	25	40	.089	700	.077	720	.062	735	.049	756
	1200	40	30	.077	715	.066	735	.054	751	.042	772
	1500	50	30	.074	735	.064	756	.052	772	.041	794
	1800	60	30	.067	762	.058	783	.047	800	.037	823
	2000	50	40	.067	724	.058	744	.047	760	.037	782
	2400	60	40	.061	752	.052	773	.043	790	.034	812
3000	60	50	.057	773	.049	795	.040	812	.031	835	
3600	60	60	.053	691	.046	710	.037	726	.029	746	

Output Torque in Inch-Pounds.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

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# Double Reduction Ratings

1.0 Service Factor

		Ratio Combination		1750 RPM Input Speed		1450 RPM Input Speed		1150 RPM Input Speed		870 RPM Input Speed	
Size	Ratio	PRI.	SEC.	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque
D50	75	5	15	.500	895	.430	920	.350	940	.270	967
	100	10	10	.370	786	.310	808	.260	825	.200	849
	150	10	15	.310	930	.260	956	.210	977	.168	1004
	200	10	20	.260	939	.230	965	.184	986	.145	1014
	250	10	25	.220	929	.192	955	.156	975	.123	1003
	300	10	30	.200	926	.173	952	.141	972	.111	1000
	400	20	20	.168	1010	.144	1038	.118	1061	.092	1091
	500	20	25	.144	1000	.124	1028	.101	1050	.079	1080
	600	20	30	.131	1000	.113	1028	.092	1050	.072	1080
	750	25	30	.118	1020	.101	1049	.083	1071	.065	1102
	1000	25	40	.108	1020	.093	1049	.076	1071	.059	1102
	1200	40	30	.091	1030	.078	1059	.064	1082	.050	1112
	1500	50	30	.086	1060	.074	1090	.060	1113	.047	1145
	1800	60	30	.078	1100	.067	1131	.055	1155	.043	1188
	2000	50	40	.080	1050	.069	1079	.056	1103	.044	1134
	2400	60	40	.073	1090	.063	1121	.051	1145	.040	1177
3000	60	50	.063	1050	.054	1079	.044	1103	.035	1134	
3600	60	60	.058	995	.050	1023	.041	1045	.032	1075	
D60	75	5	15	.820	1529	.710	1572	.580	1605	.450	1651
	100	10	10	.630	1500	.550	1542	.440	1575	.350	1620
	150	10	15	.500	1600	.430	1645	.350	1680	.280	1728
	200	10	20	.420	1600	.360	1645	.290	1680	.230	1728
	250	10	25	.370	1630	.320	1676	.260	1712	.200	1760
	300	10	30	.340	1630	.290	1676	.240	1712	.185	1760
	400	20	20	.260	1730	.220	1778	.183	1817	.144	1868
	500	20	25	.230	1770	.200	1820	.163	1859	.128	1912
	600	20	30	.210	1770	.183	1820	.149	1859	.117	1912
	750	25	30	.190	1810	.163	1861	.133	1901	.105	1955
	1000	25	40	.164	1780	.141	1830	.115	1869	.090	1922
	1200	40	30	.144	1820	.124	1871	.101	1911	.079	1966
	1500	50	30	.136	1870	.117	1922	.095	1964	.075	2020
	1800	60	30	.121	1940	.104	1994	.085	2037	.067	2095
	2000	50	40	.118	1840	.101	1892	.083	1932	.065	1987
	2400	60	40	.106	1910	.091	1963	.074	2006	.058	2063
3000	60	50	.094	1840	.081	1892	.066	1932	.052	1987	
3600	60	60	.074	1620	.064	1665	.052	1701	.041	1750	
D70	75	5	15	1.330	2540	1.140	2611	.930	2667	.730	2743
	100	10	10	1.020	2520	.880	2591	.710	2646	.560	2722
	150	10	15	.810	2700	.700	2776	.570	2835	.450	2916
	200	10	20	.620	2620	.530	2693	.430	2751	.340	2830
	250	10	25	.570	2670	.490	2745	.400	2804	.310	2884
	300	10	30	.540	2750	.460	2827	.380	2888	.300	2970
	400	20	20	.380	2840	.330	2920	.270	2982	.210	3067
	500	20	25	.350	2900	.300	2981	.250	3045	.193	3132
	600	20	30	.330	2980	.280	3063	.230	3129	.182	3218
	750	25	30	.290	3050	.250	3135	.200	3203	.160	3294
	1000	25	40	.210	2820	.181	2899	.147	2961	.116	3046
	1200	40	30	.220	3070	.189	3156	.154	3224	.121	3316
	1500	50	30	.190	3160	.163	3248	.133	3318	.105	3413
	1800	60	30	.190	3270	.163	3362	.133	3434	.105	3532
	2000	50	40	.146	2920	.126	3002	.102	3066	.080	3154
	2400	60	40	.142	3030	.122	3115	.099	3182	.078	3272
3000	60	50	.133	2970	.114	3053	.093	3119	.073	3208	
3600	60	60	.116	2820	.100	2899	.081	2961	.064	3046	

Output Torque in Inch-Pounds.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

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# Double Reduction Ratings

1.0 Service Factor

		Ratio Combination		1750 RPM Input Speed		1450 RPM Input Speed		1150 RPM Input Speed		870 RPM Input Speed	
Size	Ratio	PRI.	SEC.	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque
D80	75	5	15	1.73	3360	1.49	3454	1.21	3528	.95	3629
	100	10	10	1.33	3330	1.14	3426	.93	3497	.73	3596
	150	10	15	1.07	3610	.92	3711	.75	3791	.59	3899
	200	10	20	.76	3300	.65	3392	.53	3465	.42	3564
	250	10	25	.71	3560	.61	3660	.50	3738	.39	3845
	300	10	30	.74	3870	.64	3978	.52	4064	.41	4180
	400	20	20	.46	3580	.40	3680	.32	3759	.25	3866
	500	20	25	.43	3850	.37	3958	.30	4043	.24	4158
	600	20	30	.45	4190	.39	4307	.32	4400	.25	4525
	750	25	30	.39	4290	.34	4410	.27	4505	.21	4633
	1000	25	40	.29	4020	.25	4133	.20	4221	.16	4342
	1200	40	30	.29	4310	.25	4431	.20	4526	.16	4655
	1500	50	30	.25	4400	.22	4523	.18	4620	.14	4752
	1800	60	30	.23	4600	.20	4729	.16	4830	.13	4968
	2000	50	40	.19	4170	.16	4287	.13	4379	.11	4504
	2400	60	40	.18	4320	.15	4441	.13	4536	.10	4666
3000	60	50	.17	4510	.15	4636	.12	4736	.09	4871	
3600	60	60	.15	4290	.13	4410	.11	4505	.08	4633	
D100	75	5	15	2.45	4880	2.25	5319	2.06	6051	1.76	6783
	100	10	10	1.54	3890	1.42	4240	1.29	4824	1.11	5407
	150	10	15	1.54	5350	1.42	5832	1.29	6634	1.11	7437
	200	10	20	1.45	6600	1.25	6785	1.02	6930	.80	7128
	250	10	25	1.20	6470	1.03	6651	.84	6794	.66	6988
	300	10	30	1.34	7440	1.15	7648	.94	7812	.74	8035
	400	20	20	.87	7100	.75	7299	.61	7455	.48	7668
	500	20	25	.72	7010	.62	7206	.50	7361	.40	7571
	600	20	30	.80	8060	.69	8286	.56	8463	.44	8705
	750	25	30	.68	8250	.58	8481	.48	8663	.37	8910
	1000	25	40	.50	7560	.43	7772	.35	7938	.28	8165
	1200	40	30	.50	8300	.43	8532	.35	8715	.28	8964
	1500	50	30	.44	8500	.38	8738	.31	8925	.24	9180
	1800	60	30	.41	8800	.35	9046	.29	9240	.23	9504
	2000	50	40	.32	7800	.28	8018	.22	8190	.18	8424
	2400	60	40	.30	8120	.26	8347	.21	8526	.17	8770
3000	60	50	.25	7570	.22	7782	.18	7949	.14	8176	
3600	60	60	.20	6880	.17	7073	.14	7224	.11	7430	
D120	75	5	15	4.96	10100	4.27	10383	3.47	10605	2.73	10908
	100	10	10	4.00	10400	3.44	10691	2.80	10920	2.20	11232
	150	10	15	2.98	11000	2.56	11308	2.09	11550	1.64	11880
	190	10	19	2.19	10100	1.88	10383	1.53	10605	1.20	10908
	250	10	25	1.67	9830	1.44	10105	1.17	10322	.92	10616
	300	10	30	1.99	12200	1.71	12542	1.39	12810	1.09	13176
	380	20	19	1.32	11200	1.14	11514	.92	11760	.73	12096
	500	20	25	1.01	10900	.87	11205	.71	11445	.56	11772
	600	20	30	1.20	13700	1.03	14084	.84	14385	.66	14796
	750	25	30	1.04	14000	.89	14392	.73	14700	.57	15120
	975	25	39	.82	13200	.71	13570	.57	13860	.45	14256
	1200	40	30	.72	14100	.62	14495	.50	14805	.40	15228
	1500	50	30	.65	14500	.56	14906	.46	15225	.36	15660
	1800	60	30	.59	15000	.51	15420	.41	15750	.32	16200
	1950	50	39	.52	13700	.45	14084	.36	14385	.29	14796
	2340	60	39	.47	14200	.40	14598	.33	14910	.26	15336
3000	60	50	.34	12400	.29	12747	.24	13020	.19	13392	
3600	60	60	.34	12700	.29	13056	.23	13335	.18	13716	

Output Torque in Inch-Pounds.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

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# Double Reduction Ratings

1.0 Service Factor

Size	Ratio	Ratio Combination		1750 RPM Input Speed		1450 RPM Input Speed		1150 RPM Input Speed		870 RPM Input Speed	
		PRI.	SEC.	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque
D135	75	5	15	6.71	14000	5.77	14392	4.70	14700	3.69	15120
	100	10	10	5.19	14200	4.46	14598	3.63	14910	2.85	15336
	150	10	15	4.05	15300	3.48	15728	2.84	16065	2.23	16524
	195	10	19.5	2.99	14400	2.57	14803	2.09	15120	1.64	15552
	250	10	25	2.70	15200	2.32	15626	1.89	15960	1.49	16416
	300	10	30	2.66	16500	2.29	16962	1.86	17325	1.46	17820
	390	20	19.5	1.78	16100	1.53	16551	1.25	16905	.98	17388
	500	20	25	1.61	17000	1.38	17476	1.13	17850	.89	18360
	600	20	30	1.58	18500	1.36	19018	1.11	19425	.87	19980
	750	25	30	1.35	18900	1.16	19429	.95	19845	.74	20412
	1000	25	40	1.01	17800	.87	18298	.71	18690	.56	19224
	1200	40	30	.94	19000	.81	19532	.66	19950	.52	20520
	1500	50	30	.83	19600	.71	20149	.58	20580	.46	21168
	1800	60	30	.75	20300	.65	20868	.53	21315	.41	21924
	2000	50	40	.63	18400	.54	18915	.44	19320	.35	19872
	2400	60	40	.56	19100	.48	19635	.39	20055	.31	20628
3000	60	50	.52	19000	.45	19532	.36	19950	.29	20520	
3600	60	60	.38	16400	.33	16859	.27	17220	.21	17712	
D155	73.33	5	14.67	6.81	14300	6.27	15587	5.72	17732	4.90	19877
	102.5	10	10.25	5.26	14700	4.84	16023	4.42	18228	3.79	20433
	146.67	10	14.67	5.26	20400	4.52	20971	3.68	21420	2.89	22032
	195	10	19.5	4.18	20500	3.59	21074	2.93	21525	2.30	22140
	250	10	25	3.66	21400	3.15	21999	2.56	22470	2.01	23112
	300	10	30	3.72	23600	3.20	24261	2.60	24780	2.05	25488
	390	20	19.5	2.48	22900	2.13	23541	1.74	24045	1.36	24732
	500	20	25	2.17	24000	1.87	24672	1.52	25200	1.19	25920
	600	20	30	2.21	26400	1.90	27139	1.55	27720	1.22	28512
	750	25	30	1.89	27000	1.63	27756	1.32	28350	1.04	29160
	1000	25	40	1.29	23900	1.11	24569	.90	25095	.71	25812
	1200	40	30	1.31	27200	1.13	27962	.92	28560	.72	29376
	1500	50	30	1.16	28000	1.00	28784	.81	29400	.64	30240
	1800	60	30	1.04	29000	.89	29812	.73	30450	.57	31320
	2000	50	40	.80	24800	.69	25494	.56	26040	.44	26784
	2400	60	40	.72	25700	.62	26420	.50	26985	.40	27756
3000	60	50	.68	26700	.58	27448	.48	28035	.37	28836	
3600	60	60	.56	24600	.48	25289	.39	25830	.31	26568	
D175	75	5	15	6.81	14700	6.27	16023	5.72	18228	4.90	20433
	100	10	10	5.26	14700	4.84	16023	4.42	18228	3.79	20433
	150	10	15	5.26	20800	4.84	22672	4.42	25792	3.79	28912
	200	10	20	5.26	26200	4.84	28558	4.42	32488	3.79	36418
	250	10	25	5.26	30500	4.52	31354	3.68	32025	2.89	32940
	300	10	30	5.21	33600	4.48	34541	3.65	35280	2.87	36288
	400	20	20	3.08	28900	2.65	29709	2.16	30345	1.69	31212
	500	20	25	3.08	33600	2.65	34541	2.16	35280	1.69	36288
	600	20	30	3.08	37500	2.65	38550	2.16	39375	1.69	40500
	750	25	30	2.64	38400	2.27	39475	1.85	40320	1.45	41472
	1000	25	40	2.10	38000	1.81	39064	1.47	39900	1.16	41040
	1200	40	30	1.82	38600	1.57	39681	1.27	40530	1.00	41688
	1500	50	30	1.61	39700	1.38	40812	1.13	41685	.89	42876
	1800	60	30	1.43	40700	1.23	41840	1.00	42735	.79	43956
	2000	50	40	1.29	39300	1.11	40400	.90	41265	.71	42444
	2400	60	40	1.15	40800	.99	41942	.81	42840	.63	44064
3000	60	50	1.02	39900	.88	41017	.71	41895	.56	43092	
3540	60	59	.75	34900	.65	35877	.53	36645	.41	37692	

Output Torque in Inch-Pounds.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

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# Double Reduction Ratings

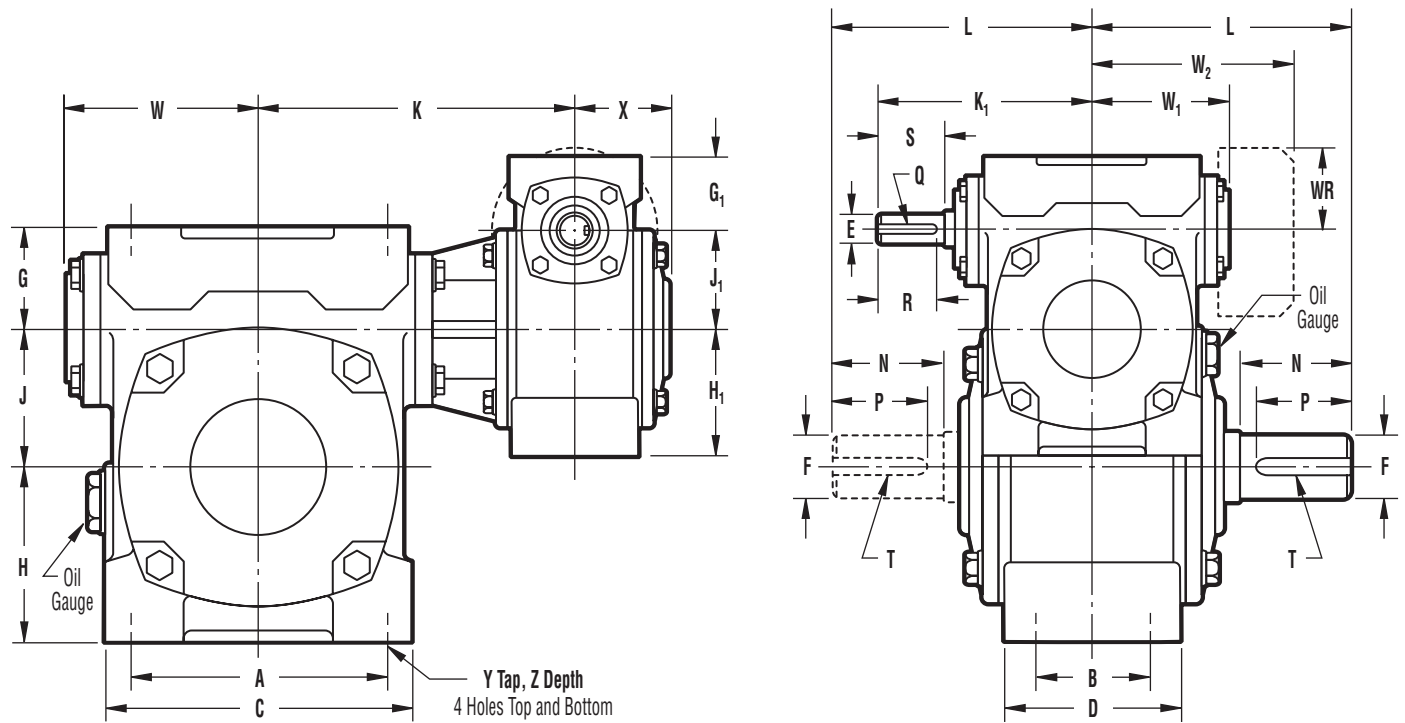
1.0 Service Factor

Size	Ratio	Ratio Combination		1750 RPM Input Speed		1450 RPM Input Speed		1150 RPM Input Speed		870 RPM Input Speed	
		PRI.	SEC.	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque
D200	75	5	15	11.75	26000	10.81	28340	9.87	32240	8.46	36140
	105	10	10.5	9.68	28400	8.91	30956	8.13	35216	6.97	39476
	150	10	15	9.29	37900	7.99	38961	6.50	39795	5.11	40932
	200	10	20	7.47	38800	6.42	39886	5.23	40740	4.11	41904
	255	10	25.5	6.67	41600	5.74	42765	4.67	43680	3.67	44928
	310	10	31	7.25	48800	6.24	50166	5.08	51240	3.99	52704
	400	20	20	4.38	43300	3.77	44512	3.07	45465	2.41	46764
	510	20	25.5	3.91	46400	3.36	47699	2.74	48720	2.15	50112
	620	20	31	4.25	54500	3.66	56026	2.98	57225	2.34	58860
	775	25	31	3.57	55800	3.07	57362	2.50	58590	1.96	60264
	1025	25	41	2.40	48700	2.06	50064	1.68	51135	1.32	52596
	1240	40	31	2.47	56100	2.12	57671	1.73	58905	1.36	60588
	1550	50	31	2.12	57700	1.82	59316	1.48	60585	1.17	62316
	1860	60	31	1.89	59900	1.63	61577	1.32	62895	1.04	64692
	2050	50	41	1.43	50400	1.23	51811	1.00	52920	.79	54432
	2460	60	41	1.28	52300	1.10	53764	.90	54915	.70	56484
3060	60	51	1.14	52600	.98	54073	.80	55230	.63	56808	
3600	60	60	1.01	51400	.87	52839	.71	53970	.56	55512	
D225	78.75	7.5	10.5	16.05	37000	14.77	40330	13.48	45880	11.56	51430
	105	10	10.5	13.47	40300	12.39	43927	11.31	49972	9.70	56017
	150	10	15	11.74	48800	10.10	50166	8.22	51240	6.46	52704
	200	10	20	9.78	51200	8.41	52634	6.85	53760	5.38	55296
	260	10	26	8.74	55700	7.52	57260	6.12	58485	4.81	60156
	295	10	29.5	7.40	53300	6.36	54792	5.18	55965	4.07	57564
	380	19	20	5.92	57200	5.09	58802	4.14	60060	3.26	61776
	494	19	26	5.29	62200	4.55	63942	3.70	65310	2.91	67176
	560.5	19	29.5	4.48	59600	3.85	61269	3.14	62580	2.46	64368
	737.5	25	29.5	3.55	60900	3.05	62605	2.49	63945	1.95	65772
	1025	25	41	3.05	64300	2.62	66100	2.14	67515	1.68	69444
	1150.5	39	29.5	2.50	61300	2.15	63016	1.75	64365	1.38	66204
	1475	50	29.5	2.08	63100	1.79	64867	1.46	66255	1.14	68148
	1770	60	29.5	1.91	65400	1.64	67231	1.34	68670	1.05	70632
	2050	50	41	1.79	66600	1.54	68465	1.25	69930	.98	71928
	2460	60	41	1.64	69000	1.41	70932	1.15	72450	.90	74520
2880	60	48	1.38	66700	1.19	68568	.97	70035	.76	72036	
3600	60	60	1.20	65700	1.03	67540	.84	68985	.66	70956	
D250	143.3	10	14.33	15.57	62300	13.39	64044	10.90	65415	8.56	67284
	200	10	20	12.88	68300	11.08	70212	9.02	71715	7.08	73764
	255	10	25.5	10.54	68400	9.06	70315	7.38	71820	5.80	73872
	300	10	30	9.53	70900	8.20	72885	6.67	74445	5.24	76572
	390	19.5	20	7.88	78800	6.78	81006	5.52	82740	4.33	85104
	497.25	19.5	25.5	6.45	79000	5.55	81212	4.52	82950	3.55	85320
	585	19.5	30	5.84	81800	5.02	84090	4.09	85890	3.21	88344
	750	25	30	4.85	83700	4.17	86044	3.40	87885	2.67	90396
	1025	25	41	4.24	88500	3.65	90978	2.97	92925	2.33	95580
	1200	40	30	3.25	84200	2.80	86558	2.28	88410	1.79	90936
	1500	50	30	2.86	86600	2.46	89025	2.00	90930	1.57	93528
	1800	60	30	2.48	89900	2.13	92417	1.74	94395	1.36	97092
	2050	50	41	2.50	91000	2.15	93548	1.75	95550	1.38	98280
	2460	60	41	2.17	95000	1.87	97660	1.52	99750	1.19	102600
	3120	60	52	1.76	91200	1.51	93754	1.23	95760	.97	98496
	3600	60	60	1.50	85400	1.29	87791	1.05	89670	.83	92232

Output Torque in Inch-Pounds.

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

# Model IO - Double Reduction

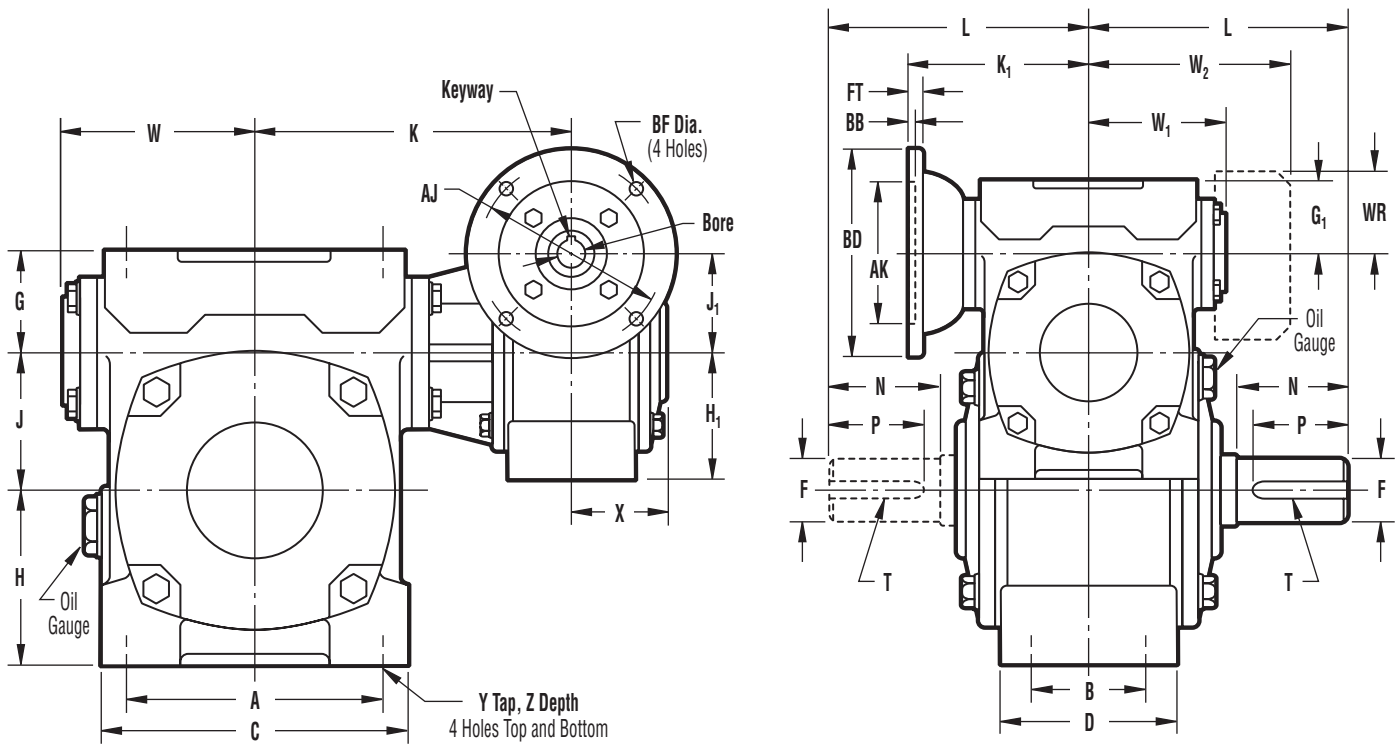


Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft			
																					E	S	R	Q	F	N	P	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	3.35	1.22	1.65	1.33	3.46	2.44	2.16			1.70	1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	3.35	1.22	1.65	1.33	3.46	2.64	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	4.29	1.22	1.65	1.33	3.46	2.95	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	3.74	1.22	1.65	1.33	3.46	2.97	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	4.33	1.22	1.65	1.33	3.46	3.27	2.16			1.70	3/8 - 16	3/4	.500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.12	1.94	2.06	1.75	4.47	3.80	2.95			2.20	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	5.51	1.38	2.56	1.97	4.13	4.27	2.72			1.90	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	6.69	1.38	2.56	1.97	4.13	5.34	2.72			1.90	1/2 - 13	15/16	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	7.48	1.97	3.35	2.76	5.51	7.30	3.70			2.40	1/2 - 13	15/16	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	8.27	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	9.92	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	10.31	2.36	3.62	3.15	6.30	9.10	4.13			2.70	3/4 - 10	1 3/8	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	12.01	2.95	4.53	3.94	7.48	9.90	5.28			3.20	3/4 - 10	1 3/8	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	13.19	3.15	5.51	4.72	9.06	10.80		8.90	3.86	3.80	1 - 8	1 3/4	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	14.17	3.35	6.50	5.31	10.24	11.80		9.70	3.86	4.20	1 - 8	1 3/4	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IC - Double Reduction



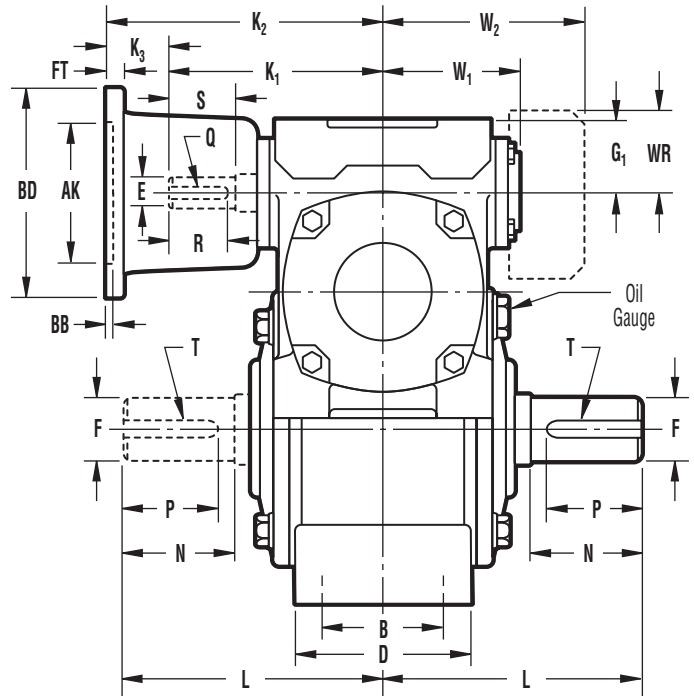
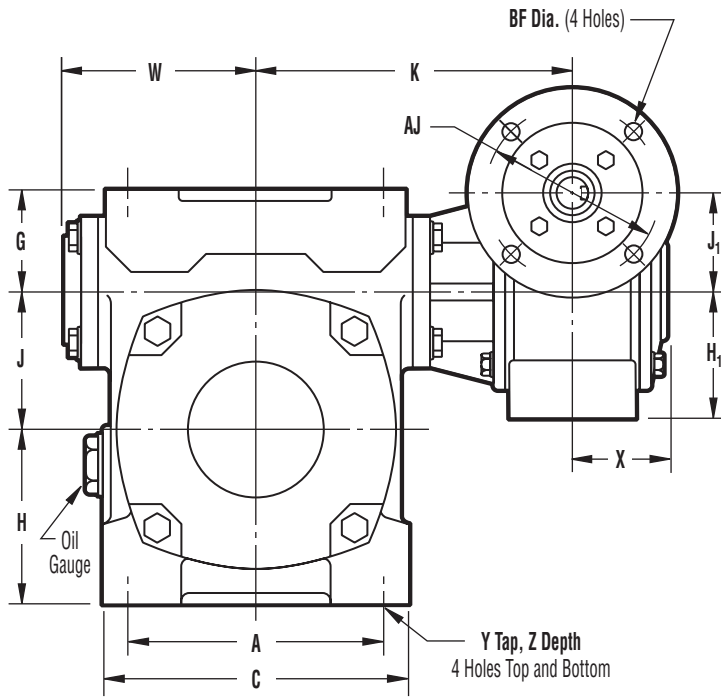
Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	Low Speed Shaft			
																					F	N	P	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	3.35	1.22	1.65	1.33	3.23	2.44	2.44			1.70	1/4 - 20	7/16	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	3.35	1.22	1.65	1.33	3.23	2.64	2.44			1.70	5/16 - 18	5/8	.625	1.38	1.18	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	4.29	1.22	1.65	1.33	3.23	2.95	2.44			1.70	5/16 - 18	5/8	.750	1.94	1.77	3/16 X 3/32
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	3.74	1.22	1.65	1.33	3.23	2.97	2.44			1.70	5/16 - 18	5/8	.750	1.57	1.38	3/16 X 3/32
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	4.33	1.22	1.65	1.33	3.23	3.27	2.44			1.70	3/8 - 16	3/4	1.000	1.97	1.77	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.12	1.94	2.06	1.75	3.92	3.80	2.95			2.20	3/8 - 16	3/4	1.125	2.36	2.17	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	5.51	1.38	2.56	1.97	3.33	4.27	2.97			1.90	3/8 - 16	3/4	1.375	2.56	2.36	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	6.69	1.38	2.56	1.97	3.33	5.34	2.97			1.90	1/2 - 13	15/16	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	7.48	1.97	3.35	2.76	4.53	7.30	3.80			2.40	1/2 - 13	15/16	1.750	3.35	2.95	3/8 X 3/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	8.27	2.36	3.62	3.15	4.92	8.10	4.27			2.70	5/8 - 11	1 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	9.92	2.36	3.62	3.15	4.92	8.10	4.27			2.70	5/8 - 11	1 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	10.31	2.36	3.62	3.15	4.92	9.10	4.27			2.70	3/4 - 10	1 3/8	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	12.01	2.95	4.53	3.94	5.93	9.90	5.34			3.20	3/4 - 10	1 3/8	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	13.19	3.15	5.51	4.72	6.97	10.80		8.90	3.86	3.80	1 - 8	1 3/4	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	14.17	3.35	6.50	5.31	8.66	11.80		9.70	3.86	4.20	1 - 8	1 3/4	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IM - Double Reduction



Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft			
																					E	S	R	Q	F	N	P	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	3.35	1.22	1.65	1.33	3.46	2.44	2.16			1.70	1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	3.35	1.22	1.65	1.33	3.46	2.64	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	4.29	1.22	1.65	1.33	3.46	2.95	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	3.74	1.22	1.65	1.33	3.46	2.97	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	4.33	1.22	1.65	1.33	3.46	3.27	2.16			1.70	3/8 - 16	3/4	.500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.12	1.94	2.06	1.75	4.47	3.80	2.95			2.20	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	5.51	1.38	2.56	1.97	4.13	4.27	2.72			1.90	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	6.69	1.38	2.56	1.97	4.13	5.34	2.72			1.90	1/2 - 13	15/16	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	7.48	1.97	3.35	2.76	5.51	7.30	3.70			2.40	1/2 - 13	15/16	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	8.27	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	9.92	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	10.31	2.36	3.62	3.15	6.30	9.10	4.13			2.70	3/4 - 10	1 3/8	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	12.01	2.95	4.53	3.94	7.48	9.90	5.28			3.20	3/4 - 10	1 3/8	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	13.19	3.15	5.51	4.72	9.06	10.80		8.90	3.86	3.80	1 - 8	1 3/4	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	14.17	3.35	6.50	5.31	10.24	11.80		9.70	3.86	4.20	1 - 8	1 3/4	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

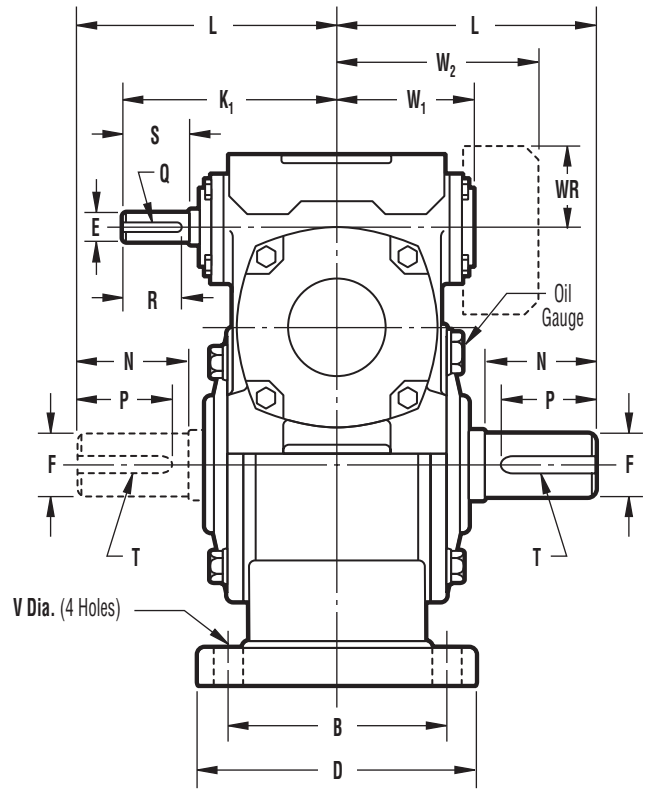
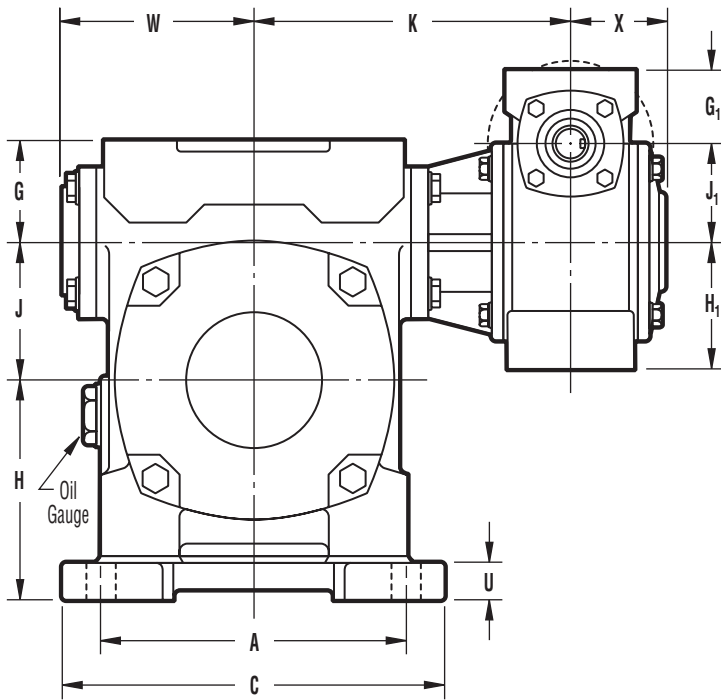
NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IO with Horizontal Base - Double Reduction



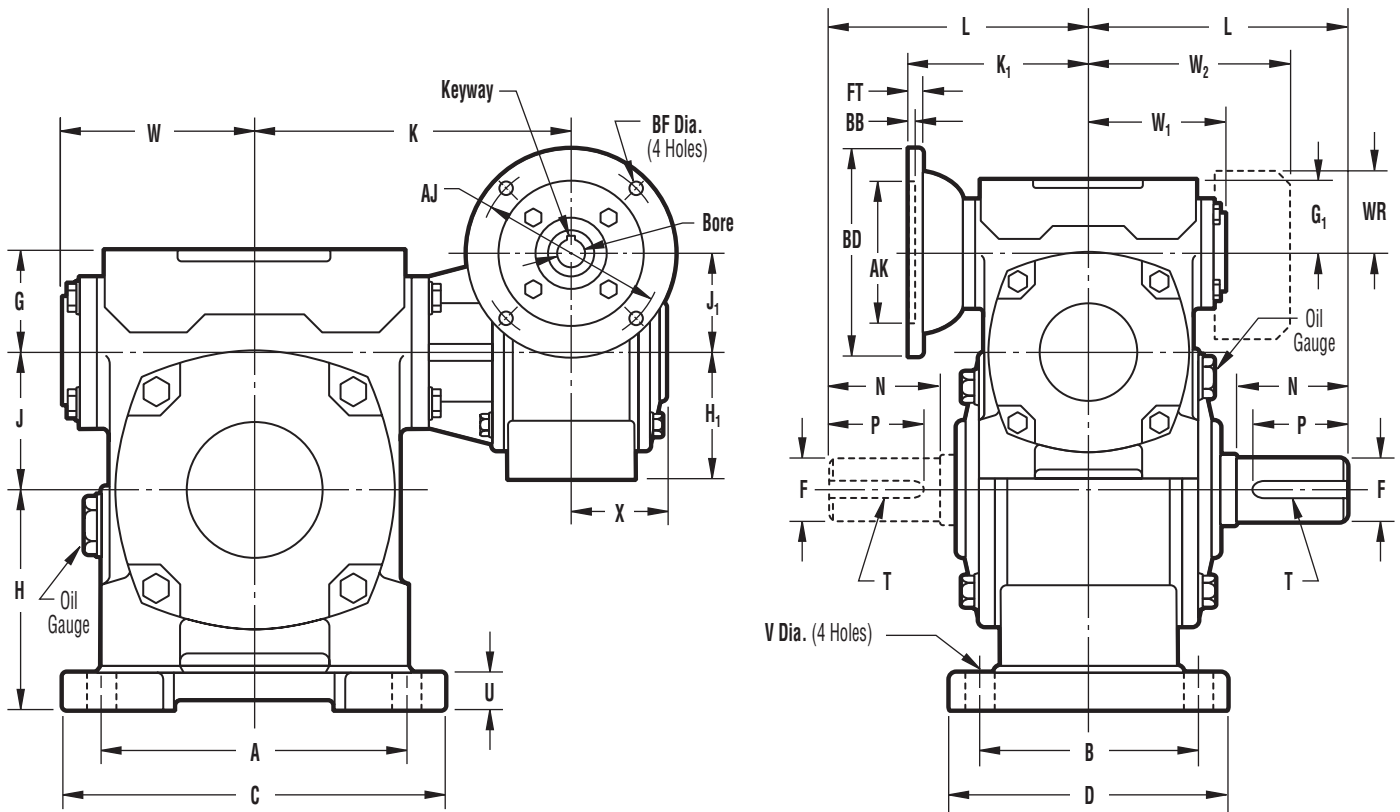
Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	V	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	High Speed Shaft				Low Speed Shaft			
																					E	S	R	Q	F	N	P	T
D34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	4.91	3.35	1.22	1.65	1.33	3.46	0.39	0.35	2.44	2.16			1.70	500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	4.96	3.35	1.22	1.65	1.33	3.46	0.43	0.39	2.64	2.16			1.70	500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	5.47	4.29	1.22	1.65	1.33	3.46	0.50	0.43	2.95	2.16			1.70	500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	5.29	3.74	1.22	1.65	1.33	3.46	0.51	0.43	2.97	2.16			1.70	500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	5.55	4.33	1.22	1.65	1.33	3.46	0.59	0.43	3.27	2.16			1.70	500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	6.62	5.12	1.94	2.06	1.75	4.47	0.69	0.59	3.80	2.95			2.20	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	6.69	5.51	1.38	2.56	1.97	4.13	0.69	0.59	4.27	2.72			1.90	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	7.70	6.69	1.38	2.56	1.97	4.13	0.87	0.59	5.34	2.72			1.90	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	9.33	7.48	1.97	3.35	2.76	5.51	1.02	0.71	7.30	3.70			2.40	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	11.22	8.27	2.36	3.62	3.15	6.30	1.18	0.71	8.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	12.20	9.92	2.36	3.62	3.15	6.30	1.10	0.79	8.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	14.57	10.31	2.36	3.62	3.15	6.30	1.26	0.79	9.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	16.14	12.01	2.95	4.53	3.94	7.48	1.57	0.87	9.90	5.28			3.20	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	17.52	13.19	3.15	5.51	4.72	9.06	1.57	1.06	10.80		8.90	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	19.09	14.17	3.35	6.50	5.31	10.24	1.77	1.06	11.80		9.70	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

Refer to pages 62-65 for Assembly Positions



# Model IC with Horizontal Base - Double Reduction



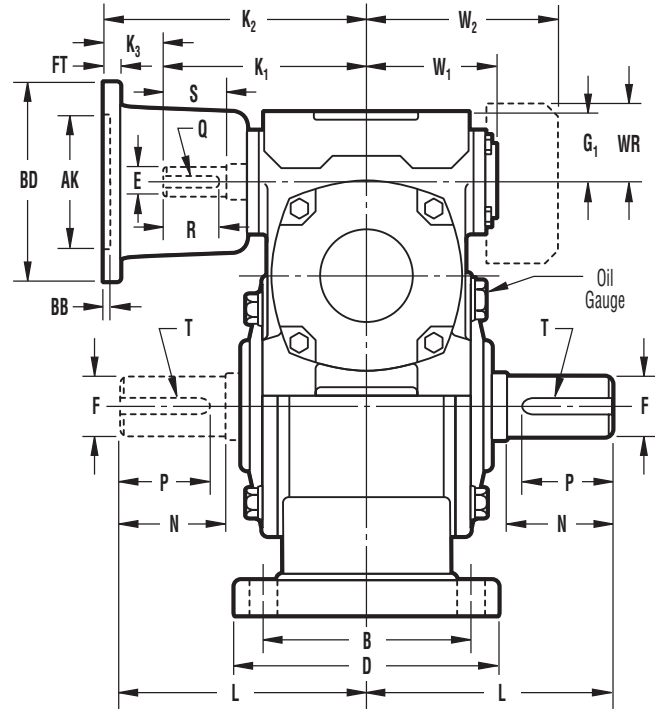
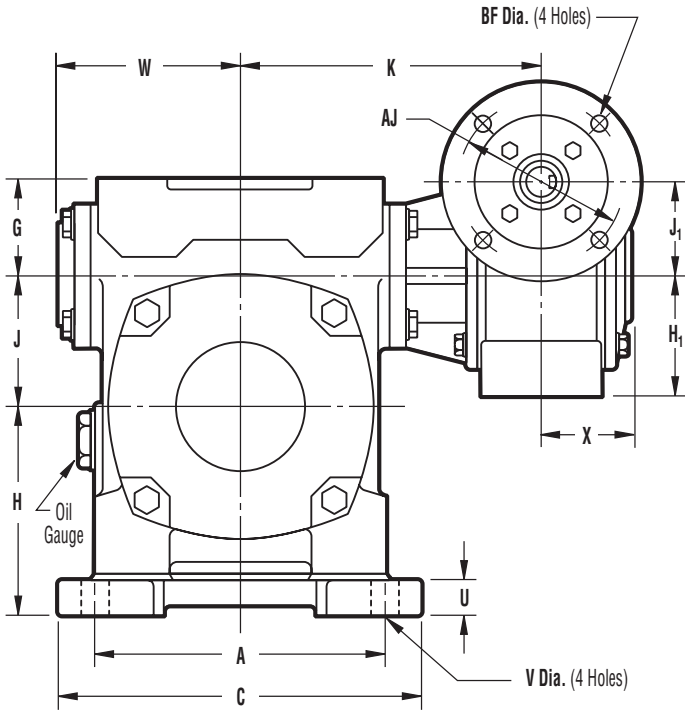
Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	V	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Low Speed Shaft			
																					F	N	P	T
D34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	4.91	3.35	1.22	1.65	1.33	3.23	0.39	0.35	2.44	2.44			1.70	.625	1.38	1.18	3/16 X 3/32
D40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	4.96	3.35	1.22	1.65	1.33	3.23	0.43	0.39	2.64	2.44			1.70	.625	1.38	1.18	3/16 X 3/32
D45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	5.47	4.29	1.22	1.65	1.33	3.23	0.50	0.43	2.95	2.44			1.70	.750	1.94	1.77	3/16 X 3/32
D50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	5.29	3.74	1.22	1.65	1.33	3.23	0.51	0.43	2.97	2.44			1.70	.750	1.57	1.38	3/16 X 3/32
D60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	5.55	4.33	1.22	1.65	1.33	3.23	0.59	0.43	3.27	2.44			1.70	1.000	1.97	1.77	1/4 X 1/8
D70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	6.62	5.12	1.94	2.06	1.75	3.92	0.69	0.59	3.80	2.95			2.20	1.125	2.36	2.17	1/4 X 1/8
D80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	6.69	5.51	1.38	2.56	1.97	3.33	0.69	0.59	4.27	2.97			1.90	1.375	2.56	2.36	5/16 X 5/32
D100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	7.70	6.69	1.38	2.56	1.97	3.33	0.87	0.59	5.34	2.97			1.90	1.500	2.95	2.56	3/8 X 3/16
D120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	9.33	7.48	1.97	3.35	2.76	4.53	1.02	0.71	7.30	3.80			2.40	1.750	3.35	2.95	3/8 X 3/16
D135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	11.22	8.27	2.36	3.62	3.15	4.92	1.18	0.71	8.10	4.27			2.70	2.250	3.74	3.35	1/2 X 1/4
D155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	12.20	9.92	2.36	3.62	3.15	4.92	1.10	0.79	8.10	4.27			2.70	2.500	4.33	3.94	5/8 X 5/16
D175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	14.57	10.31	2.36	3.62	3.15	4.92	1.26	0.79	9.10	4.27			2.70	2.750	4.33	3.94	5/8 X 5/16
D200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	16.14	12.01	2.95	4.53	3.94	5.93	1.57	0.87	9.90	5.34			3.20	2.875	4.92	4.53	3/4 X 3/8
D225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	17.52	13.19	3.15	5.51	4.72	6.97	1.57	1.06	10.80		8.90	3.86	3.80	3.250	5.51	5.12	3/4 X 3/8
D250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	19.09	14.17	3.35	6.50	5.31	8.66	1.77	1.06	11.80		9.70	3.86	4.20	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IM with Horizontal Base - Double Reduction



Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	V	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	High Speed Shaft				Low Speed Shaft			
																					E	S	R	Q	F	N	P	T
D34	3.31	3.31	4.13	4.13	1.22	2.12	1.33	4.91	3.35	1.22	1.65	1.33	3.46	0.39	0.35	2.44	2.16			1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.94	3.54	4.92	4.33	1.34	2.59	1.57	4.96	3.35	1.22	1.65	1.33	3.46	0.43	0.39	2.64	2.16			1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	4.97	4.56	5.94	5.50	1.94	2.65	1.75	5.47	4.29	1.22	1.65	1.33	3.46	0.50	0.43	2.95	2.16			1.70	.500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	4.33	3.74	5.51	4.72	1.38	3.15	1.97	5.29	3.74	1.22	1.65	1.33	3.46	0.51	0.43	2.97	2.16			1.70	.500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	4.72	4.13	5.91	5.12	1.65	3.66	2.36	5.55	4.33	1.22	1.65	1.33	3.46	0.59	0.43	3.27	2.16			1.70	.500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	5.91	4.53	7.48	5.91	1.97	4.14	2.76	6.62	5.12	1.94	2.06	1.75	4.47	0.69	0.59	3.80	2.95			2.20	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	7.09	5.31	8.66	6.69	2.36	4.41	3.15	6.69	5.51	1.38	2.56	1.97	4.13	0.69	0.59	4.27	2.72			1.90	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	8.66	6.10	10.63	7.48	2.95	5.51	3.94	7.70	6.69	1.38	2.56	1.97	4.13	0.87	0.59	5.34	2.72			1.90	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	10.24	7.09	12.60	9.06	3.15	6.69	4.72	9.33	7.48	1.97	3.35	2.76	5.51	1.02	0.71	7.30	3.70			2.40	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	11.42	7.87	13.78	9.84	3.35	7.88	5.31	11.22	8.27	2.36	3.62	3.15	6.30	1.18	0.71	8.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	13.39	8.66	15.75	11.02	4.06	9.25	6.10	12.20	9.92	2.36	3.62	3.15	6.30	1.10	0.79	8.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.78	9.84	16.14	12.20	4.84	10.24	6.89	14.57	10.31	2.36	3.62	3.15	6.30	1.26	0.79	9.10	4.13			2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	13.78	11.42	17.13	14.17	5.12	11.42	7.87	16.14	12.01	2.95	4.53	3.94	7.48	1.57	0.87	9.90	5.28			3.20	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.35	12.99	19.29	16.14	5.71	12.60	8.86	17.52	13.19	3.15	5.51	4.72	9.06	1.57	1.06	10.80		8.90	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.32	14.96	21.46	18.11	5.91	13.78	9.84	19.09	14.17	3.35	6.50	5.31	10.24	1.77	1.06	11.80		9.70	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

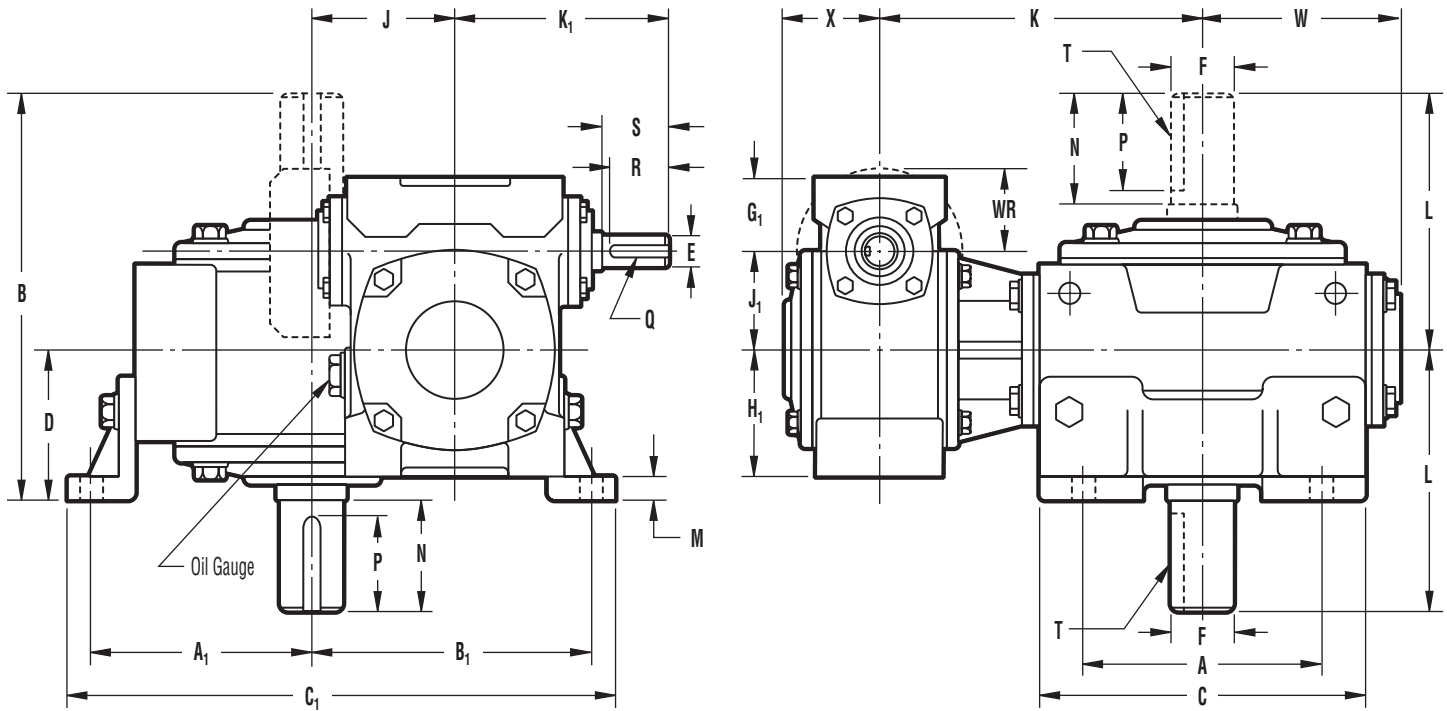
NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IO with Vertical Base - Double Reduction

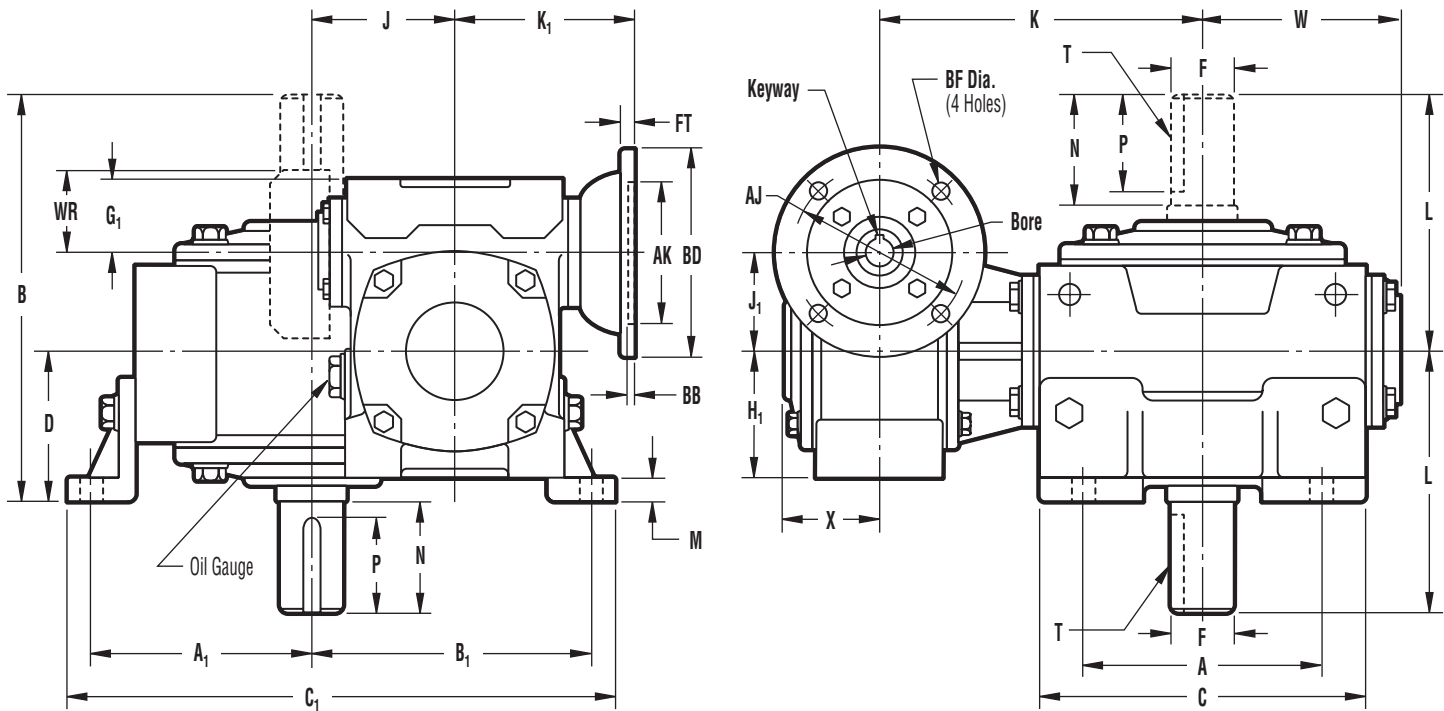


Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	High Speed Shaft				Low Speed Shaft			
																			E	S	R	Q	F	N	P	T
D34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.33	4.91	3.35	.31	1.22	1.65	1.33	3.46	2.44		1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.57	4.96	3.35	.43	1.22	1.65	1.33	3.46	2.64		1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.75	5.47	4.29	.59	1.22	1.65	1.33	3.46	2.95		1.70	.500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.97	5.29	3.74	.55	1.22	1.65	1.33	3.46	2.97		1.70	.500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	2.36	5.55	4.33	.59	1.22	1.65	1.33	3.46	3.27		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	2.76	6.62	5.12	.71	1.94	2.06	1.75	4.47	3.80		2.20	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	3.15	6.69	5.51	.71	1.38	2.56	1.97	4.13	4.27		1.90	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	3.94	7.70	6.69	.79	1.38	2.56	1.97	4.13	5.34		1.90	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	4.72	9.33	7.48	.98	1.97	3.35	2.76	5.51	7.30		2.40	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	5.31	11.22	8.27	1.10	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	6.10	12.20	9.92	1.18	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	6.89	14.57	10.31	1.26	2.36	3.62	3.15	6.30	9.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	7.87	16.14	12.01	1.38	2.95	4.53	3.94	7.48	9.90		3.20	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	8.86	17.52	13.19	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	9.84	19.09	14.17	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IC with Vertical Base - Double Reduction



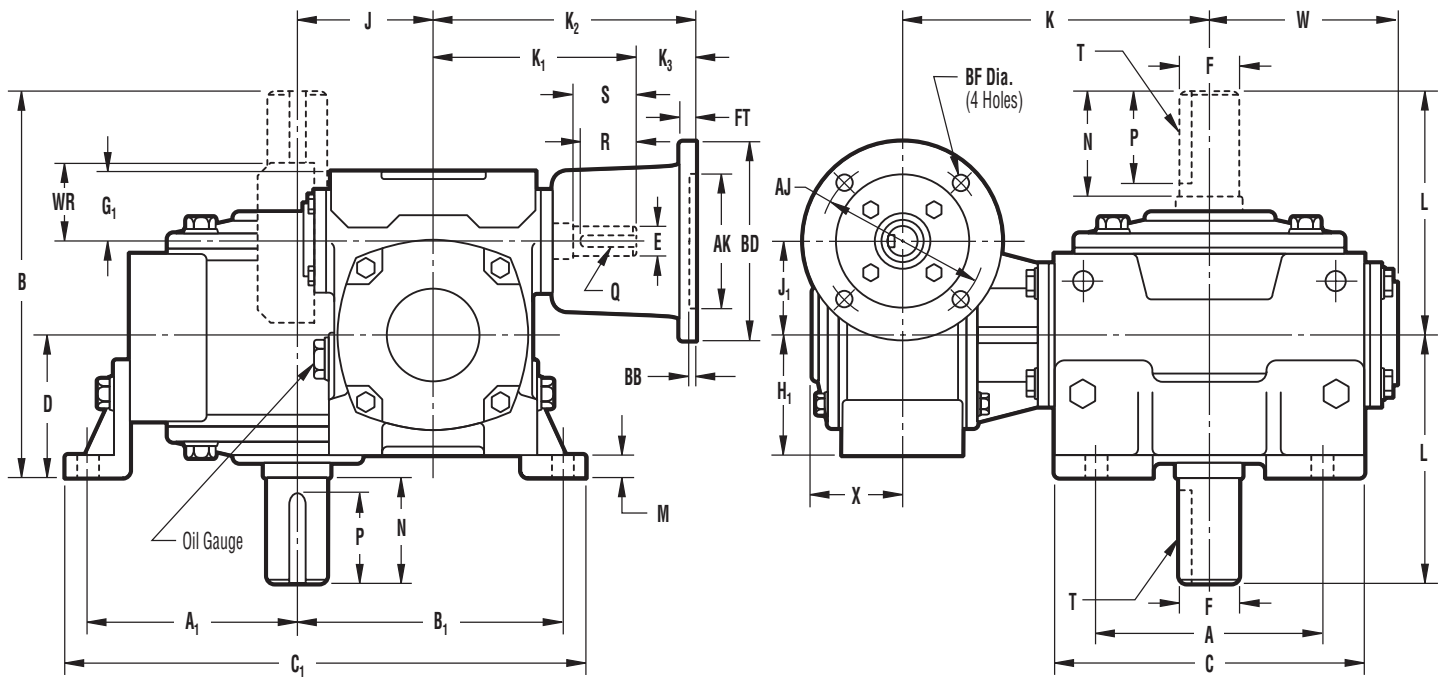
Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	Low Speed Shaft			
																			F	N	P	T
D34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.33	4.91	3.35	.31	1.22	1.65	1.33	3.46	2.44		1.70	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.57	4.96	3.35	.43	1.22	1.65	1.33	3.46	2.64		1.70	.625	1.38	1.18	3/16 X 3/32
D45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.75	5.47	4.29	.59	1.22	1.65	1.33	3.46	2.95		1.70	.750	1.94	1.77	3/16 X 3/32
D50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.97	5.29	3.74	.55	1.22	1.65	1.33	3.46	2.97		1.70	.750	1.57	1.38	3/16 X 3/32
D60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	2.36	5.55	4.33	.59	1.22	1.65	1.33	3.46	3.27		1.70	1.000	1.97	1.77	1/4 X 1/8
D70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	2.76	6.62	5.12	.71	1.94	2.06	1.75	4.47	3.80		2.20	1.125	2.36	2.17	1/4 X 1/8
D80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	3.15	6.69	5.51	.71	1.38	2.56	1.97	4.13	4.27		1.90	1.375	2.56	2.36	5/16 X 3/32
D100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	3.94	7.70	6.69	.79	1.38	2.56	1.97	4.13	5.34		1.90	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	4.72	9.33	7.48	.98	1.97	3.35	2.76	5.51	7.30		2.40	1.750	3.35	2.95	3/8 X 3/16
D135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	5.31	11.22	8.27	1.10	2.36	3.62	3.15	6.30	8.10		2.70	2.250	3.74	3.35	1/2 X 1/4
D155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	6.10	12.20	9.92	1.18	2.36	3.62	3.15	6.30	8.10		2.70	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	6.89	14.57	10.31	1.26	2.36	3.62	3.15	6.30	9.10		2.70	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	7.87	16.14	12.01	1.38	2.95	4.53	3.94	7.48	9.90		3.20	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	8.86	17.52	13.19	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	9.84	19.09	14.17	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

# Model IM with Vertical Base - Double Reduction



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	High Speed Shaft				Low Speed Shaft			
																			E	S	R	Q	F	N	P	T
D34	2.76	2.32	5.10	3.22	3.46	6.25	1.75	1.33	4.91	3.35	.31	1.22	1.65	1.33	3.46	2.44		1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D40	3.15	2.95	5.24	3.78	4.02	7.68	1.89	1.57	4.96	3.35	.43	1.22	1.65	1.33	3.46	2.64		1.70	.500	1.10	.98	1/8 X 1/16	.625	1.38	1.18	3/16 X 3/32
D45	3.94	3.13	6.79	4.75	4.88	8.98	2.50	1.75	5.47	4.29	.59	1.22	1.65	1.33	3.46	2.95		1.70	.500	1.10	.98	1/8 X 1/16	.750	1.94	1.77	3/16 X 3/32
D50	3.54	3.54	5.71	4.33	4.49	8.90	1.97	1.97	5.29	3.74	.55	1.22	1.65	1.33	3.46	2.97		1.70	.500	1.10	.98	1/8 X 1/16	.750	1.57	1.38	3/16 X 3/32
D60	3.94	4.02	6.50	5.08	4.92	10.28	2.17	2.36	5.55	4.33	.59	1.22	1.65	1.33	3.46	3.27		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1.97	1.77	1/4 X 1/8
D70	4.72	4.72	7.68	6.10	6.06	12.01	2.56	2.76	6.62	5.12	.71	1.94	2.06	1.75	4.47	3.80		2.20	.625	1.18	.98	3/16 X 3/32	1.125	2.36	2.17	1/4 X 1/8
D80	5.51	5.20	8.36	7.09	6.85	13.46	2.85	3.15	6.69	5.51	.71	1.38	2.56	1.97	4.13	4.27		1.90	.625	1.18	.98	3/16 X 3/32	1.375	2.56	2.36	5/16 X 5/32
D100	7.48	6.10	10.26	8.46	8.86	15.95	3.57	3.94	7.70	6.69	.79	1.38	2.56	1.97	4.13	5.34		1.90	.625	1.18	.98	3/16 X 3/32	1.500	2.95	2.56	3/8 X 3/16
D120	8.86	7.68	11.61	10.04	10.43	19.69	4.13	4.72	9.33	7.48	.98	1.97	3.35	2.76	5.51	7.30		2.40	.875	1.58	1.38	3/16 X 3/32	1.750	3.35	2.95	3/8 X 3/16
D135	9.84	8.66	12.60	10.83	11.81	21.46	4.33	5.31	11.22	8.27	1.10	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.250	3.74	3.35	1/2 X 1/4
D155	11.42	10.16	15.53	12.32	13.78	25.04	5.61	6.10	12.20	9.92	1.18	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.500	4.33	3.94	5/8 X 5/16
D175	13.00	11.22	16.22	14.17	15.35	27.76	5.91	6.89	14.57	10.31	1.26	2.36	3.62	3.15	6.30	9.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	4.33	3.94	5/8 X 5/16
D200	14.17	12.09	18.90	15.43	16.54	30.28	6.89	7.87	16.14	12.01	1.38	2.95	4.53	3.94	7.48	9.90		3.20	1.375	1.97	1.77	5/16 X 5/32	2.875	4.92	4.53	3/4 X 3/8
D225	15.75	13.58	20.67	17.32	18.50	34.06	7.48	8.86	17.52	13.19	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	3.250	5.51	5.12	3/4 X 3/8
D250	17.72	14.76	22.04	18.70	20.47	36.61	7.87	9.84	19.09	14.17	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	3.500	6.10	5.71	7/8 X 7/16

NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Dimensions in inches

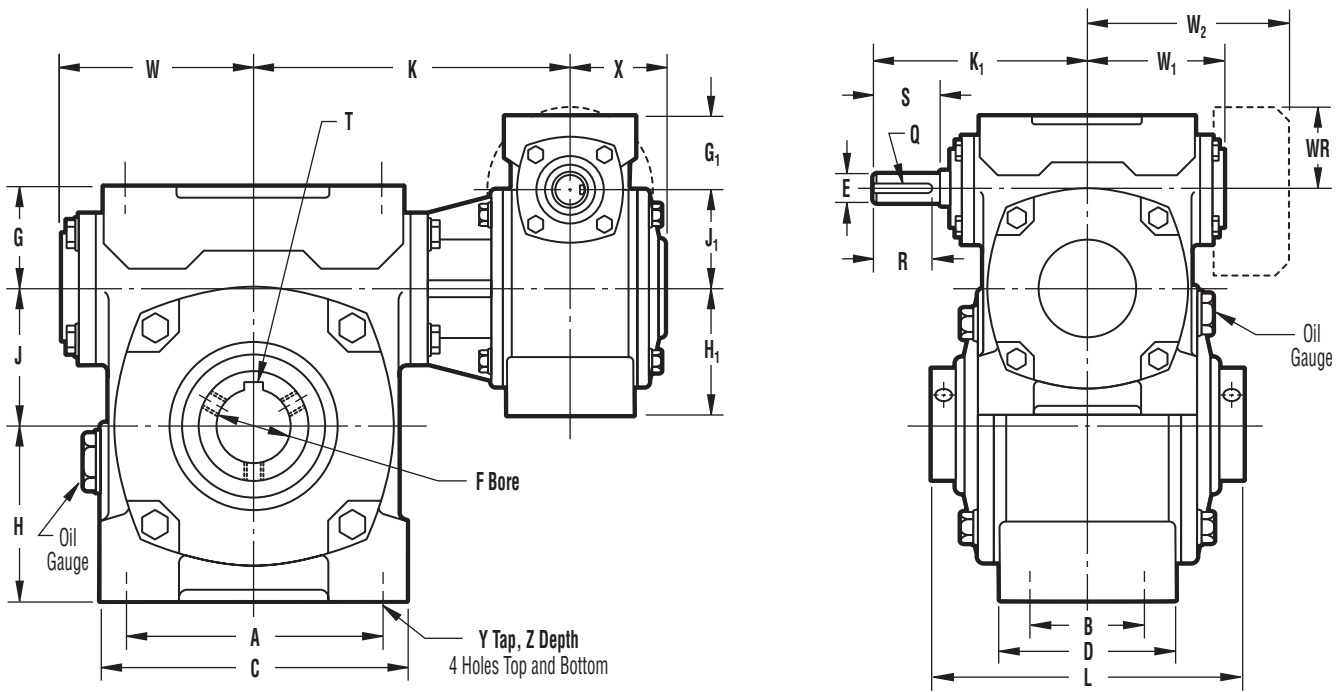
Refer to pages 62-65 for Assembly Positions

Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13

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# Model IS - Double Reduction



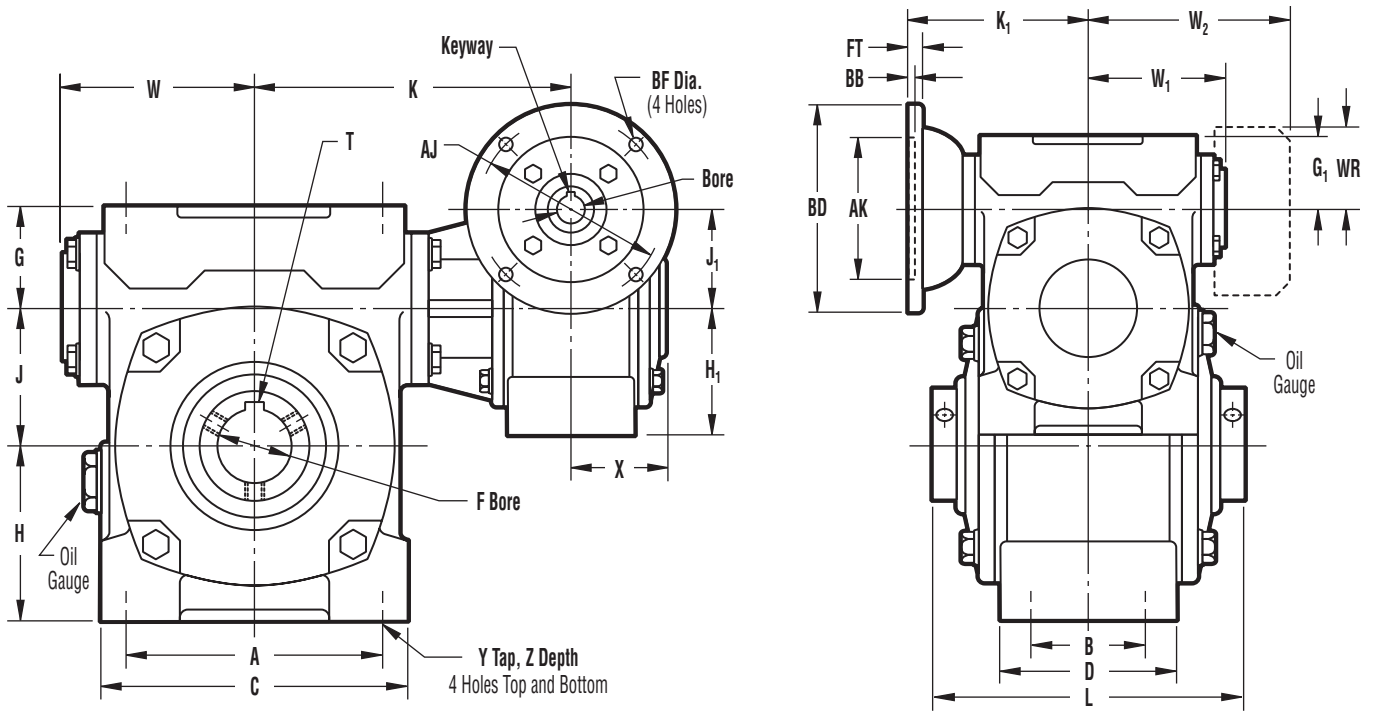
Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft	
																					E	S	R	Q	F*	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	4.25	1.22	1.65	1.33	3.46	2.44	2.16			1.70	1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	4.50	1.22	1.65	1.33	3.46	2.64	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	5.50	1.22	1.65	1.33	3.46	2.95	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	5.00	1.22	1.65	1.33	3.46	2.97	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	5.38	1.22	1.65	1.33	3.46	3.27	2.16			1.70	3/8 - 16	3/4	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.88	1.94	2.06	1.75	4.47	3.80	2.95			2.20	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	6.50	1.38	2.56	1.97	4.13	4.27	2.72			1.90	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	7.25	1.38	2.56	1.97	4.13	5.34	2.72			1.90	1/2 - 13	15/16	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	8.25	1.97	3.35	2.76	5.51	7.30	3.70			2.40	1/2 - 13	15/16	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	9.25	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	11.75	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	12.00	2.36	3.62	3.15	6.30	9.10	4.13			2.70	3/4 - 10	1 3/8	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	14.50	2.95	4.53	3.94	7.48	9.90	5.28			3.20	3/4 - 10	1 3/8	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	15.25	3.15	5.51	4.72	9.06	10.80		8.90	3.86	3.80	1 - 8	1 3/4	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	16.25	3.35	6.50	5.31	10.24	11.80		9.70	3.86	4.20	1 - 8	1 3/4	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ICS - Double Reduction



Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	Low Speed Shaft	
																					F*	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	4.25	1.22	1.65	1.33	3.23	2.44	2.44			1.70	1/4 - 20	7/16	.750	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	4.50	1.22	1.65	1.33	3.23	2.64	2.44			1.70	5/16 - 18	5/8	.750	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	5.50	1.22	1.65	1.33	3.23	2.95	2.44			1.70	5/16 - 18	5/8	1.000	1/4 X 1/8
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	5.00	1.22	1.65	1.33	3.23	2.97	2.44			1.70	5/16 - 18	5/8	1.000	1/4 X 1/8
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	5.38	1.22	1.65	1.33	3.23	3.27	2.44			1.70	3/8 - 16	3/4	1.000	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.88	1.94	2.06	1.75	3.92	3.80	2.95			2.20	3/8 - 16	3/4	1.188	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	6.50	1.38	2.56	1.97	3.33	4.27	2.97			1.90	3/8 - 16	3/4	1.500	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	7.25	1.38	2.56	1.97	3.33	5.34	2.97			1.90	1/2 - 13	15/16	2.000	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	8.25	1.97	3.35	2.76	4.53	7.30	3.80			2.40	1/2 - 13	15/16	2.375	5/8 X 5/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	9.25	2.36	3.62	3.15	4.92	8.10	4.27			2.70	5/8 - 11	1 1/8	2.750	5/8 X 5/16
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	11.75	2.36	3.62	3.15	4.92	8.10	4.27			2.70	5/8 - 11	1 1/8	3.250	3/4 X 3/8
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	12.00	2.36	3.62	3.15	4.92	9.10	4.27			2.70	3/4 - 10	1 3/8	3.500	7/8 X 7/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	14.50	2.95	4.53	3.94	5.93	9.90	5.34			3.20	3/4 - 10	1 3/8	4.125	1 X 1/2
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	15.25	3.15	5.51	4.72	6.97	10.80		8.90	3.86	3.80	1 - 8	1 3/4	4.500	1 X 1/2
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	16.25	3.35	6.50	5.31	8.66	11.80		9.70	3.86	4.20	1 - 8	1 3/4	5.000	1 1/4 X 5/8

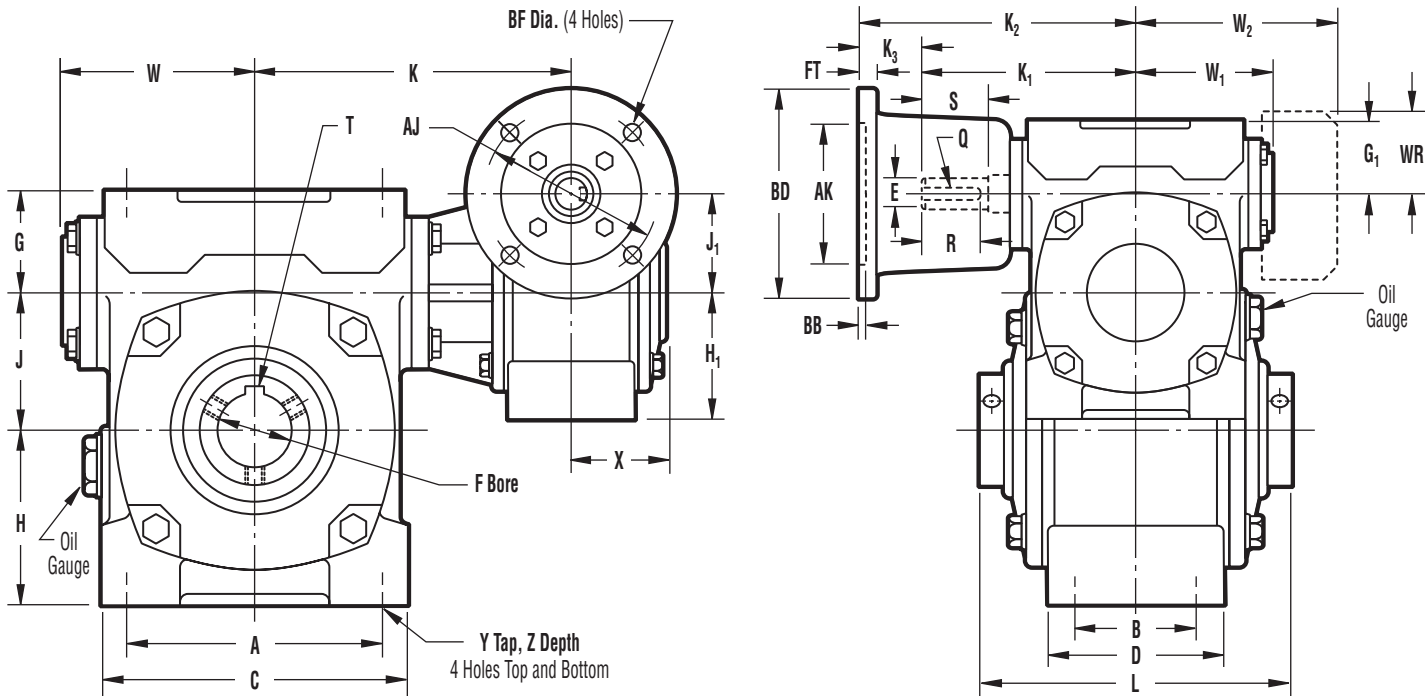
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMS - Double Reduction



Size	A	B	C	D	G	H	J	K	L	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	Y	Z	High Speed Shaft				Low Speed Shaft	
																					E	S	R	Q	F*	T
D34	2.76	1.93	3.43	2.44	1.22	1.65	1.33	4.91	4.25	1.22	1.65	1.33	3.46	2.44	2.16			1.70	1/4 - 20	7/16	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D40	3.15	2.13	3.90	2.68	1.34	2.09	1.57	4.96	4.50	1.22	1.65	1.33	3.46	2.64	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D45	4.19	2.75	4.82	3.35	1.94	2.06	1.75	5.47	5.50	1.22	1.65	1.33	3.46	2.95	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D50	3.54	1.97	4.49	2.68	1.38	2.56	1.97	5.29	5.00	1.22	1.65	1.33	3.46	2.97	2.16			1.70	5/16 - 18	5/8	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D60	3.94	2.13	4.96	3.11	1.65	2.95	2.36	5.55	5.38	1.22	1.65	1.33	3.46	3.27	2.16			1.70	3/8 - 16	3/4	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D70	4.92	2.60	5.98	3.46	1.97	3.35	2.76	6.62	5.88	1.94	2.06	1.75	4.47	3.80	2.95			2.20	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8
D80	5.71	2.95	6.69	3.98	2.36	3.62	3.15	6.69	6.50	1.38	2.56	1.97	4.13	4.27	2.72			1.90	3/8 - 16	3/4	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32
D100	7.28	3.35	8.82	4.49	2.95	4.53	3.94	7.70	7.25	1.38	2.56	1.97	4.13	5.34	2.72			1.90	1/2 - 13	15/16	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16
D120	8.86	3.94	10.24	5.31	3.15	5.51	4.72	9.33	8.25	1.97	3.35	2.76	5.51	7.30	3.70			2.40	1/2 - 13	15/16	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16
D135	10.24	3.94	11.81	5.51	3.35	6.50	5.31	11.22	9.25	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16
D155	11.81	4.33	13.78	6.10	4.06	7.99	6.10	12.20	11.75	2.36	3.62	3.15	6.30	8.10	4.13			2.70	5/8 - 11	1 1/8	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8
D175	13.00	4.33	15.35	6.46	4.84	8.78	6.89	14.57	12.00	2.36	3.62	3.15	6.30	9.10	4.13			2.70	3/4 - 10	1 3/8	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16
D200	14.17	5.91	16.54	7.87	5.12	9.65	7.87	16.14	14.50	2.95	4.53	3.94	7.48	9.90	5.28			3.20	3/4 - 10	1 3/8	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2
D225	15.75	6.30	18.50	8.66	5.71	10.83	8.86	17.52	15.25	3.15	5.51	4.72	9.06	10.80		8.90	3.86	3.80	1 - 8	1 3/4	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2
D250	17.72	6.69	20.47	9.06	5.91	11.81	9.84	19.09	16.25	3.35	6.50	5.31	10.24	11.80		9.70	3.86	4.20	1 - 8	1 3/4	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8

NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

Dimensions in inches

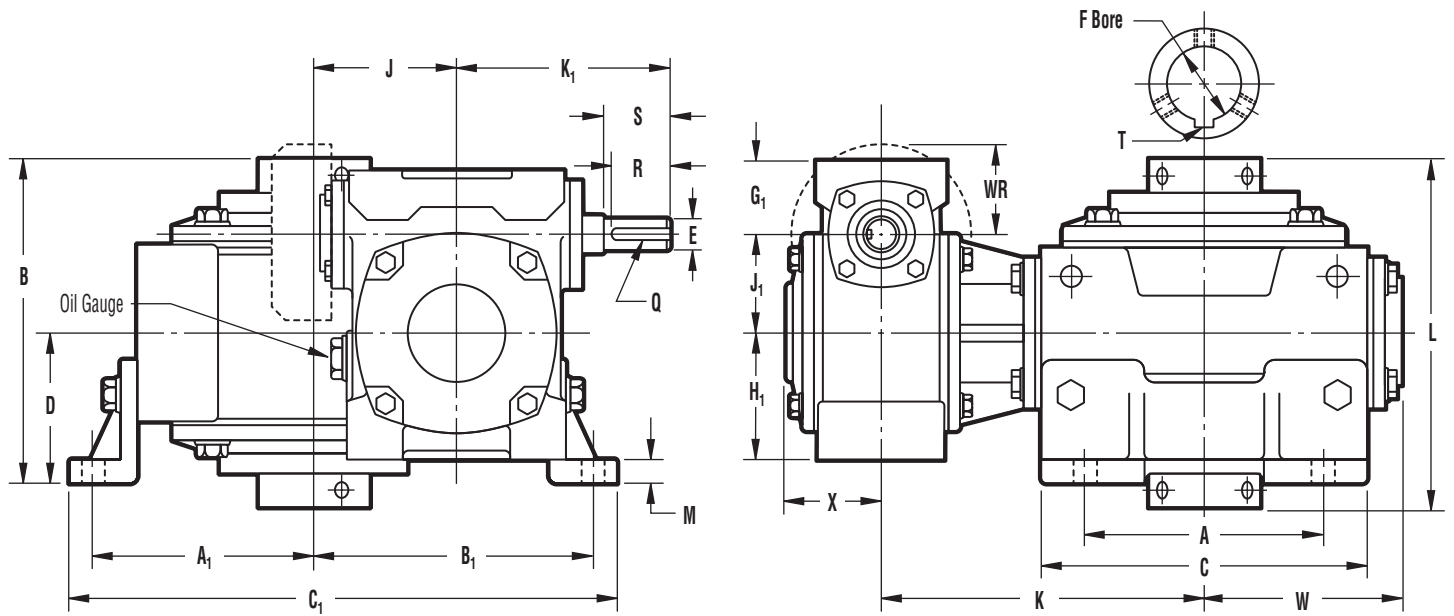
Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13



# Model IS with Vertical Base - Double Reduction



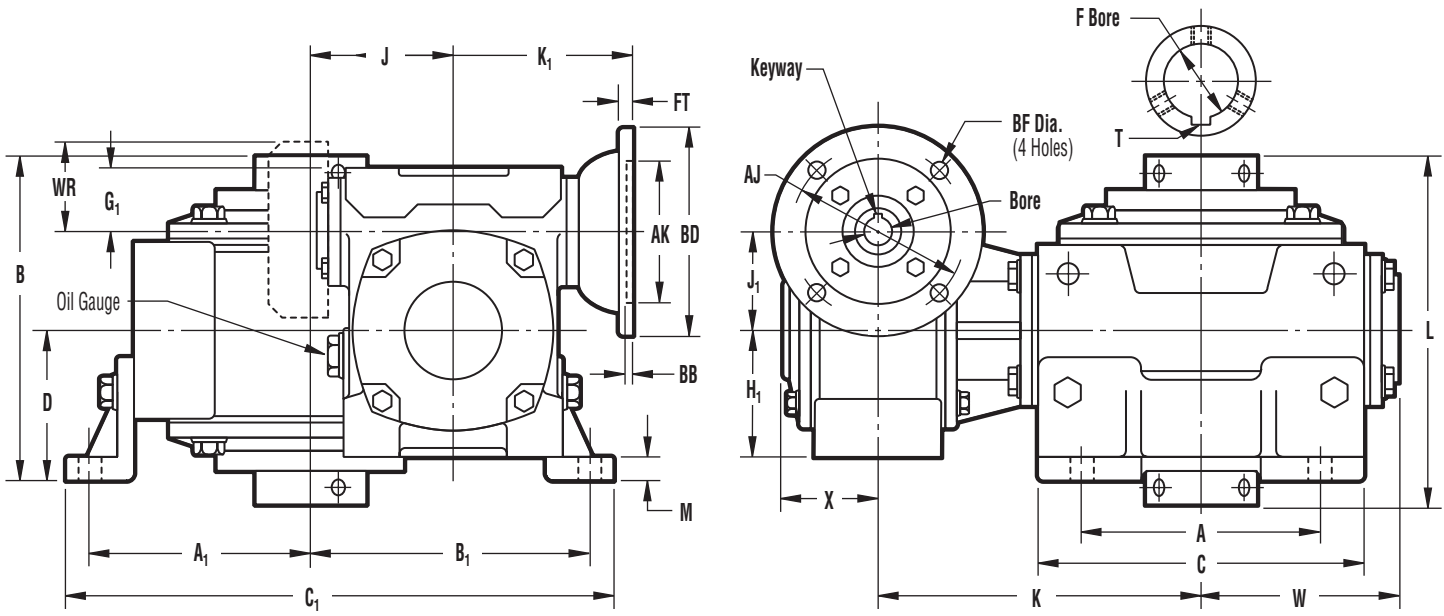
Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	High Speed Shaft				Low Speed Shaft	
																			E	S	R	Q	F*	T
D34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.33	4.91	4.25	.31	1.22	1.65	1.33	3.46	2.44		1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.57	4.96	4.50	.43	1.22	1.65	1.33	3.46	2.64		1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.75	5.47	5.50	.59	1.22	1.65	1.33	3.46	2.95		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.97	5.29	5.00	.55	1.22	1.65	1.33	3.46	2.97		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	2.36	5.55	5.38	.59	1.22	1.65	1.33	3.46	3.27		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	2.76	6.62	5.88	.71	1.94	2.06	1.75	4.47	3.80		2.20	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8
D80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	3.15	6.69	6.50	.71	1.38	2.56	1.97	4.13	4.27		1.90	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32
D100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	3.94	7.70	7.25	.79	1.38	2.56	1.97	4.13	5.34		1.90	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16
D120	8.86	7.68	8.26	10.04	10.43	19.69	4.13	4.72	9.33	8.25	.98	1.97	3.35	2.76	5.51	7.30		2.40	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16
D135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	5.31	11.22	9.25	1.10	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16
D155	11.42	10.16	11.49	12.32	13.78	25.04	5.61	6.10	12.20	11.75	1.18	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8
D175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	6.89	14.57	12.00	1.26	2.36	3.62	3.15	6.30	9.10		2.70	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16
D200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	7.87	16.14	14.50	1.38	2.95	4.53	3.94	7.48	9.90		3.20	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2
D225	15.75	13.58	18.50	17.32	18.50	34.06	7.48	8.86	17.52	15.25	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2
D250	17.72	14.76	20.47	18.70	20.47	36.61	7.87	9.84	19.09	16.25	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ICS with Vertical Base - Double Reduction



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	Low Speed Shaft	
																			F*	T
D34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.33	4.91	4.25	.31	1.22	1.65	1.33	3.46	2.44		1.70	.750	3/16 X 3/32
D40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.57	4.96	4.50	.43	1.22	1.65	1.33	3.46	2.64		1.70	.750	3/16 X 3/32
D45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.75	5.47	5.50	.59	1.22	1.65	1.33	3.46	2.95		1.70	1.000	1/4 X 1/8
D50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.97	5.29	5.00	.55	1.22	1.65	1.33	3.46	2.97		1.70	1.000	1/4 X 1/8
D60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	2.36	5.55	5.38	.59	1.22	1.65	1.33	3.46	3.27		1.70	1.000	1/4 X 1/8
D70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	2.76	6.62	5.88	.71	1.94	2.06	1.75	4.47	3.80		2.20	1.188	1/4 X 1/8
D80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	3.15	6.69	6.50	.71	1.38	2.56	1.97	4.13	4.27		1.90	1.500	5/16 X 3/32
D100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	3.94	7.70	7.25	.79	1.38	2.56	1.97	4.13	5.34		1.90	2.000	3/8 X 3/16
D120	8.86	7.68	8.26	10.04	10.43	19.69	4.13	4.72	9.33	8.25	.98	1.97	3.35	2.76	5.51	7.30		2.40	2.375	5/8 X 5/16
D135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	5.31	11.22	9.25	1.10	2.36	3.62	3.15	6.30	8.10		2.70	2.750	5/8 X 5/16
D155	11.42	10.16	11.49	12.32	13.78	25.04	5.61	6.10	12.20	11.75	1.18	2.36	3.62	3.15	6.30	8.10		2.70	3.250	3/4 X 3/8
D175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	6.89	14.57	12.00	1.26	2.36	3.62	3.15	6.30	9.10		2.70	3.500	7/8 X 7/16
D200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	7.87	16.14	14.50	1.38	2.95	4.53	3.94	7.48	9.90		3.20	4.125	1 X 1/2
D225	15.75	13.58	18.50	17.32	18.50	34.06	7.48	8.86	17.52	15.25	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	4.500	1 X 1/2
D250	17.72	14.76	20.47	18.70	20.47	36.61	7.87	9.84	19.09	16.25	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	5.000	1 1/4 X 5/8

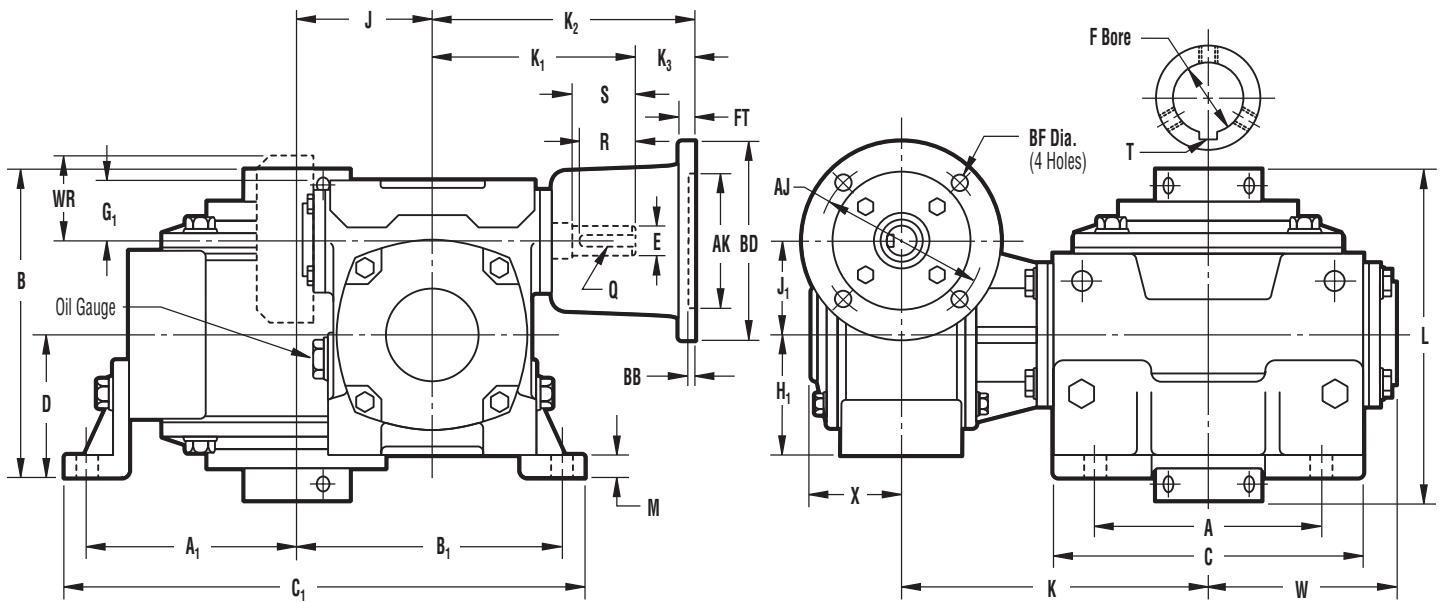
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMS with Vertical Base - Double Reduction



Size	A	A <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	D	J	K	L	M	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	W	WR	X	High Speed Shaft				Low Speed Shaft	
																			E	S	R	Q	F*	T
D34	2.76	2.32	3.88	3.22	3.46	6.25	1.75	1.33	4.91	4.25	.31	1.22	1.65	1.33	3.46	2.44		1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D40	3.15	2.95	4.14	3.78	4.02	7.68	1.89	1.57	4.96	4.50	.43	1.22	1.65	1.33	3.46	2.64		1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D45	3.94	3.13	5.25	4.75	4.88	8.98	2.50	1.75	5.47	5.50	.59	1.22	1.65	1.33	3.46	2.95		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D50	3.54	3.54	4.47	4.33	4.49	8.90	1.97	1.97	5.29	5.00	.55	1.22	1.65	1.33	3.46	2.97		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D60	3.94	4.02	4.86	5.08	4.92	10.28	2.17	2.36	5.55	5.38	.59	1.22	1.65	1.33	3.46	3.27		1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D70	4.72	4.72	5.50	6.10	6.06	12.01	2.56	2.76	6.62	5.88	.71	1.94	2.06	1.75	4.47	3.80		2.20	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8
D80	5.51	5.20	6.10	7.09	6.85	13.46	2.85	3.15	6.69	6.50	.71	1.38	2.56	1.97	4.13	4.27		1.90	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32
D100	7.48	6.10	7.20	8.46	8.86	15.95	3.57	3.94	7.70	7.25	.79	1.38	2.56	1.97	4.13	5.34		1.90	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16
D120	8.86	7.68	8.26	10.04	10.43	19.69	4.13	4.72	9.33	8.25	.98	1.97	3.35	2.76	5.51	7.30		2.40	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16
D135	9.84	8.66	8.96	10.83	11.81	21.46	4.33	5.31	11.22	9.25	1.10	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16
D155	11.42	10.16	11.49	12.32	13.78	25.04	5.61	6.10	12.20	11.75	1.18	2.36	3.62	3.15	6.30	8.10		2.70	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8
D175	13.00	11.22	11.91	14.17	15.35	27.76	5.91	6.89	14.57	12.00	1.26	2.36	3.62	3.15	6.30	9.10		2.70	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16
D200	14.17	12.09	14.14	15.43	16.54	30.28	6.89	7.87	16.14	14.50	1.38	2.95	4.53	3.94	7.48	9.90		3.20	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2
D225	15.75	13.58	18.50	17.32	18.50	34.06	7.48	8.86	17.52	15.25	1.50	3.15	5.51	4.72	9.06	10.80	3.86	3.80	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2
D250	17.72	14.76	20.47	18.70	20.47	36.61	7.87	9.84	19.09	16.25	1.57	3.35	6.50	5.31	10.24	11.80	3.86	4.20	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8

NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

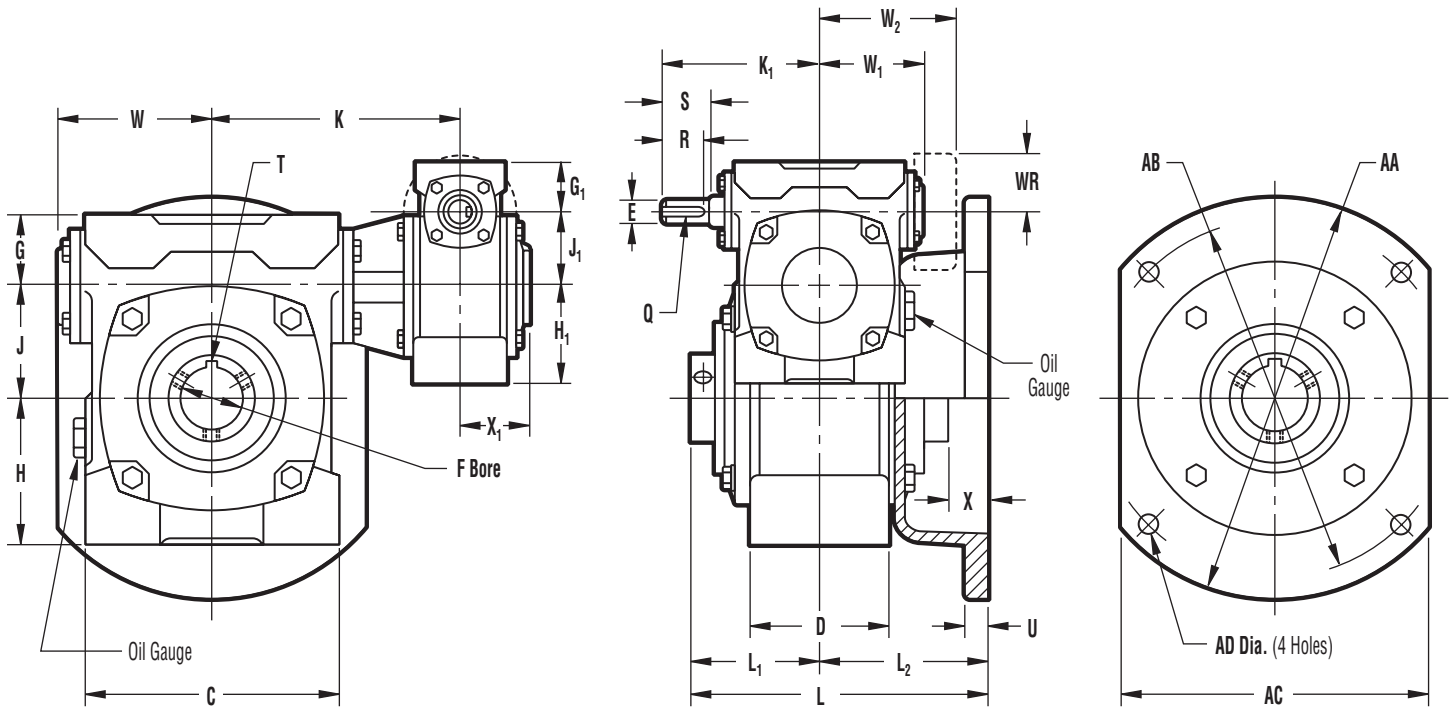
Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ISF - Double Reduction



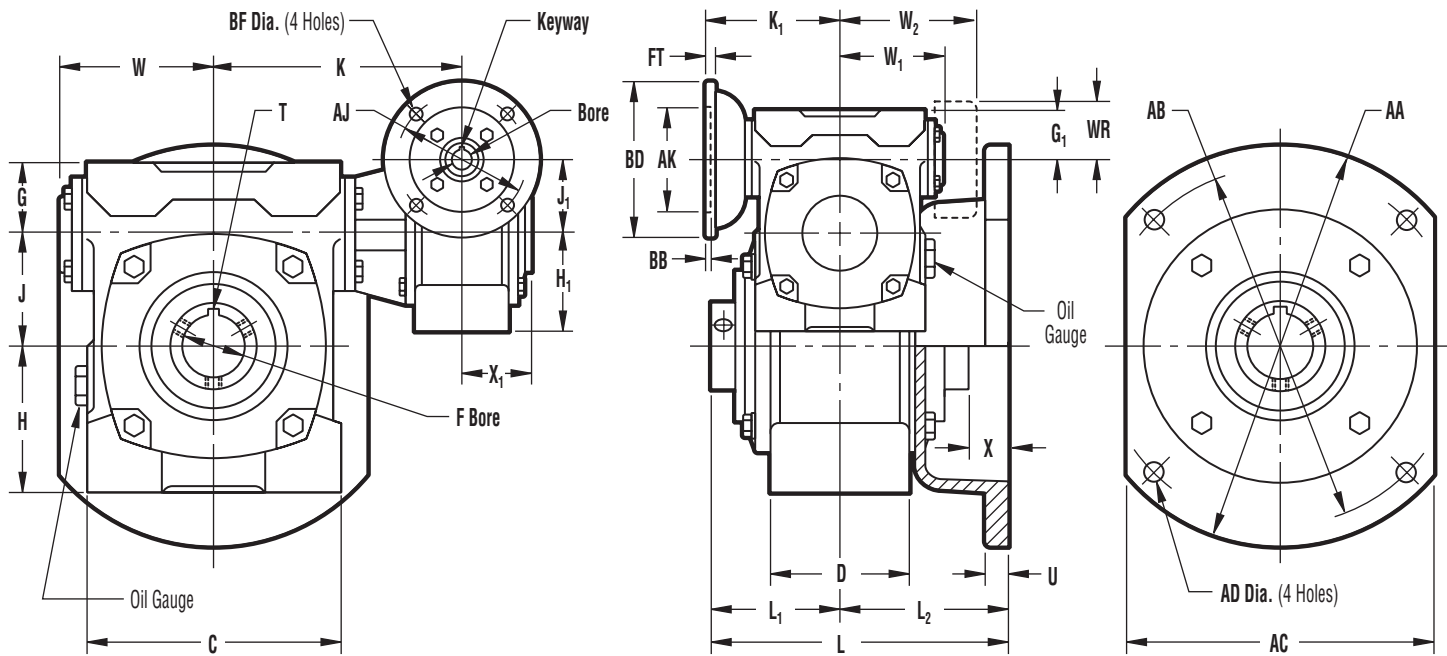
Size	AA	AB	AC	AD	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	X <sub>1</sub>	High Speed Shaft				Low Speed Shaft	
																									E	S	R	Q	F	T
D34	5.88	5.00	4.50	.34	3.43	2.44	1.22	1.65	1.33	4.91	4.63	2.13	2.50	1.22	1.65	1.33	3.46	.38	2.44	2.16			.37	1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D40	5.88	5.00	4.50	.34	3.90	2.68	1.34	2.09	1.57	4.96	4.87	2.25	2.62	1.22	1.65	1.33	3.46	.38	2.64	2.16			.37	1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32
D45	6.75	5.88	4.88	.34	4.82	3.35	1.94	2.06	1.75	5.47	6.06	2.75	3.31	1.22	1.65	1.33	3.46	.55	2.95	2.16			.56	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D50	7.88	7.00	6.12	.41	4.49	2.68	1.38	2.56	1.97	5.29	6.13	2.50	3.63	1.22	1.65	1.33	3.46	.44	2.97	2.16			1.13	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D60	8.38	7.50	6.50	.41	4.96	3.11	1.65	2.95	2.36	5.55	6.22	2.69	3.53	1.22	1.65	1.33	3.46	.44	3.27	2.16			.84	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8
D70	8.88	8.00	7.12	.41	5.98	3.46	1.97	3.35	2.76	6.62	6.57	2.94	3.63	1.94	2.06	1.75	4.47	.44	3.80	2.95			.69	2.20	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8
D80	10.00	9.00	7.38	.41	6.69	3.98	2.36	3.62	3.15	6.69	7.25	3.25	4.00	1.38	2.56	1.97	4.13	.50	4.27	2.72			.75	1.90	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32
D100	10.00	9.00	7.38	.41	8.82	4.49	2.95	4.53	3.94	7.70	8.88	3.63	5.25	1.38	2.56	1.97	4.13	.56	5.34	2.72			1.62	1.90	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16
D120	13.00	11.50	10.50	.56	10.24	5.31	3.15	5.51	4.72	9.33	10.13	4.13	6.00	1.97	3.35	2.76	5.51	.62	7.30	3.70			1.87	2.40	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16
D135	16.00	14.00	12.87	.69	11.81	5.51	3.35	6.50	5.31	11.22	11.38	4.63	6.75	2.36	3.62	3.15	6.30	.75	8.10	4.13			2.12	2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16
D155	18.00	15.63	15.25	.69	13.78	6.10	4.06	7.99	6.10	12.20	12.25	5.88	6.38	2.36	3.62	3.15	6.30	.75	8.10	4.13			.50	2.70	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8
D175	21.00	18.38	17.00	.78	15.35	6.46	4.84	8.78	6.89	14.57	12.50	6.00	6.50	2.36	3.62	3.15	6.30	.75	9.10	4.13			.50	2.70	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16
D200	24.00	21.00	19.50	1.03	16.54	7.87	5.12	9.65	7.87	16.14	15.00	7.25	7.75	2.95	4.53	3.94	7.48	.75	9.90	5.28			.50	3.20	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2
D225	26.50	23.00	21.00	1.03	18.50	8.66	5.71	10.83	8.86	17.52	15.75	7.63	8.13	3.15	5.51	4.72	9.06	.75	10.80				.50	3.80	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2
D250	29.00	25.00	22.75	1.03	20.47	9.06	5.91	11.81	9.84	19.09	16.75	8.13	8.63	3.35	6.50	5.31	10.24	.75	11.80				.50	4.20	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model ICSF - Double Reduction



Size	AA	AB	AC	AD	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	X <sub>1</sub>	Low Speed Shaft	
																									F*	T
D34	5.88	5.00	4.50	.34	3.43	2.44	1.22	1.65	1.33	4.91	4.63	2.13	2.50	1.22	1.65	1.33	3.23	.38	2.44	2.44			.37	1.70	.750	9/16 X 3/32
D40	5.88	5.00	4.50	.34	3.90	2.68	1.34	2.09	1.57	4.96	4.87	2.25	2.62	1.22	1.65	1.33	3.23	.38	2.64	2.44			.37	1.70	.750	9/16 X 3/32
D45	6.75	5.88	4.88	.34	4.82	3.35	1.94	2.06	1.75	5.47	6.06	2.75	3.31	1.22	1.65	1.33	3.23	.55	2.95	2.44			.56	1.70	1.000	1/4 X 1/8
D50	7.88	7.00	6.12	.41	4.49	2.68	1.38	2.56	1.97	5.29	6.13	2.50	3.63	1.22	1.65	1.33	3.23	.44	2.97	2.44			1.13	1.70	1.000	1/4 X 1/8
D60	8.38	7.50	6.50	.41	4.96	3.11	1.65	2.95	2.36	5.55	6.22	2.69	3.53	1.22	1.65	1.33	3.23	.44	3.27	2.44			.84	1.70	1.000	1/4 X 1/8
D70	8.88	8.00	7.12	.41	5.98	3.46	1.97	3.35	2.76	6.62	6.57	2.94	3.63	1.94	2.06	1.75	3.92	.44	3.80	2.95			.69	2.20	1.188	1/4 X 1/8
D80	10.00	9.00	7.38	.41	6.69	3.98	2.36	3.62	3.15	6.69	7.25	3.25	4.00	1.38	2.56	1.97	3.33	.50	4.27	2.97			.75	1.90	1.500	5/16 X 5/32
D100	10.00	9.00	7.38	.41	8.82	4.49	2.95	4.53	3.94	7.70	8.88	3.63	5.25	1.38	2.56	1.97	3.33	.56	5.34	2.97			1.62	1.90	2.000	3/8 X 3/16
D120	13.00	11.50	10.50	.56	10.24	5.31	3.15	5.51	4.72	9.33	10.13	4.13	6.00	1.97	3.35	2.76	4.53	.62	7.30	3.80			1.87	2.40	2.375	5/8 X 5/16
D135	16.00	14.00	12.87	.69	11.81	5.51	3.35	6.50	5.31	11.22	11.38	4.63	6.75	2.36	3.62	3.15	4.92	.75	8.10	4.27			2.12	2.70	2.750	5/8 X 5/16
D155	18.00	15.63	15.25	.69	13.78	6.10	4.06	7.99	6.10	12.20	12.25	5.88	6.38	2.36	3.62	3.15	4.92	.75	8.10	4.27			.50	2.70	3.250	3/4 X 3/8
D175	21.00	18.38	17.00	.78	15.35	6.46	4.84	8.78	6.89	14.57	12.50	6.00	6.50	2.36	3.62	3.15	4.92	.75	9.10	4.27			.50	2.70	3.500	7/8 X 7/16
D200	24.00	21.00	19.50	1.03	16.54	7.87	5.12	9.65	7.87	16.14	15.00	7.25	7.75	2.95	4.53	3.94	5.93	.75	9.90	5.34			.50	3.20	4.125	1 X 1/2
D225	26.50	23.00	21.00	1.03	18.50	8.66	5.71	10.83	8.86	17.52	15.75	7.63	8.13	3.15	5.51	4.72	6.97	.75	10.80		8.90	3.86	.50	3.80	4.500	1 X 1/2
D250	29.00	25.00	22.75	1.03	20.47	9.06	5.91	11.81	9.84	19.09	16.75	8.13	8.63	3.35	6.50	5.31	8.66	.75	11.80		9.70	3.86	.50	4.20	5.000	1 1/4 X 5/8

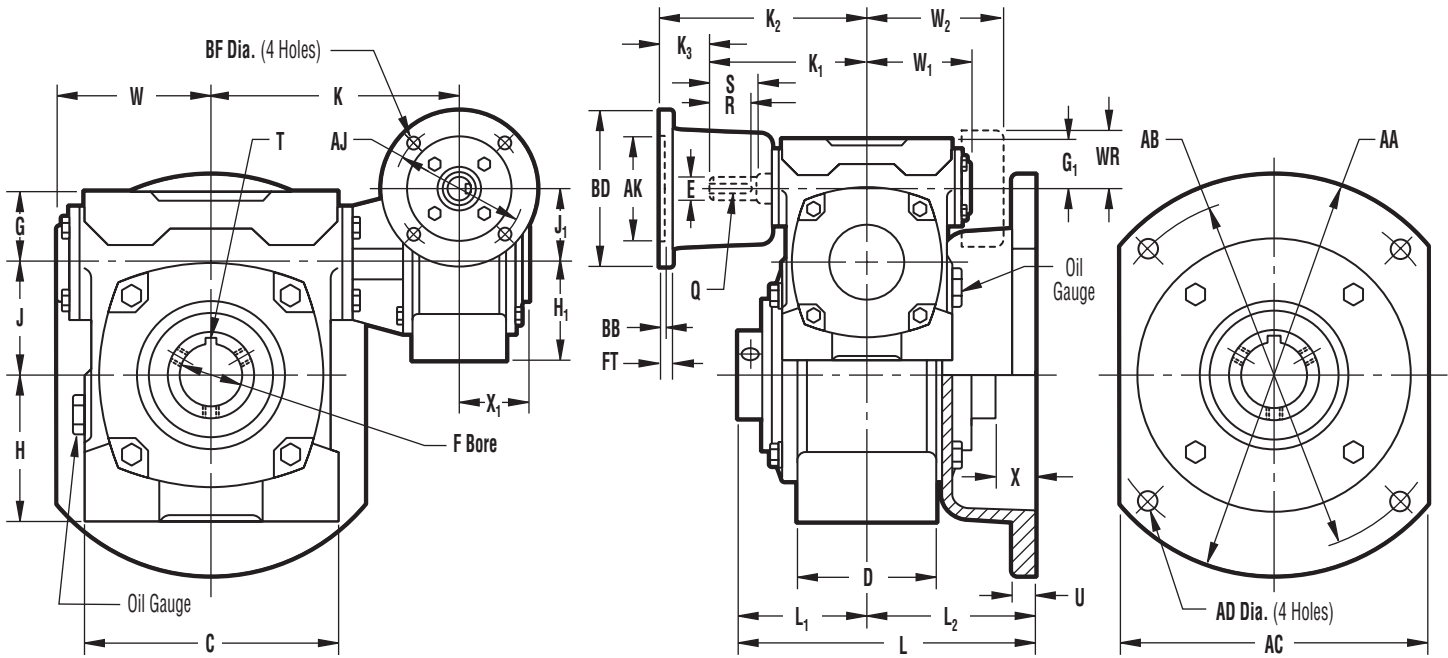
NEMA Flange	AJ	AK	BD	BF	FT	BB	Bore	Keyway
42CZ	3.750	3.00	4.63	.313	.281	.156	.500	1/8 X 1/16
56C	5.875	4.50	6.50	.438	.313	.156	.625	3/16 X 3/32
140TC	5.875	4.50	6.50	.438	.313	.156	.875	3/16 X 3/32
180TC	7.250	8.50	9.00	.531	.375	.188	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	.531	.375	.188	1.375	5/16 X 5/32

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

# Model IMSF - Double Reduction



Size	AA	AB	AC	AD	C	D	G	H	J	K	L	L <sub>1</sub>	L <sub>2</sub>	G <sub>1</sub>	H <sub>1</sub>	J <sub>1</sub>	K <sub>1</sub>	U	W	W <sub>1</sub>	W <sub>2</sub>	WR	X	X <sub>1</sub>	High Speed Shaft					Low Speed Shaft	
																									E	S	R	Q	F*	T	
D34	5.88	5.00	4.50	.34	3.43	2.44	1.22	1.65	1.33	4.91	4.63	2.13	2.50	1.22	1.65	1.33	3.46	.38	2.44	2.16			.37	1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32	
D40	5.88	5.00	4.50	.34	3.90	2.68	1.34	2.09	1.57	4.96	4.87	2.25	2.62	1.22	1.65	1.33	3.46	.38	2.64	2.16			.37	1.70	.500	1.10	.98	1/8 X 1/16	.750	3/16 X 3/32	
D45	6.75	5.88	4.88	.34	4.82	3.35	1.94	2.06	1.75	5.47	6.06	2.75	3.31	1.22	1.65	1.33	3.46	.55	2.95	2.16			.56	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8	
D50	7.88	7.00	6.12	.41	4.49	2.68	1.38	2.56	1.97	5.29	6.13	2.50	3.63	1.22	1.65	1.33	3.46	.44	2.97	2.16			1.13	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8	
D60	8.38	7.50	6.50	.41	4.96	3.11	1.65	2.95	2.36	5.55	6.22	2.69	3.53	1.22	1.65	1.33	3.46	.44	3.27	2.16			.84	1.70	.500	1.10	.98	1/8 X 1/16	1.000	1/4 X 1/8	
D70	8.88	8.00	7.12	.41	5.98	3.46	1.97	3.35	2.76	6.62	6.57	2.94	3.63	1.94	2.06	1.75	4.47	.44	3.80	2.95			.69	2.20	.625	1.18	.98	3/16 X 3/32	1.188	1/4 X 1/8	
D80	10.00	9.00	7.38	.41	6.69	3.98	2.36	3.62	3.15	6.69	7.25	3.25	4.00	1.38	2.56	1.97	4.13	.50	4.27	2.72			.75	1.90	.625	1.18	.98	3/16 X 3/32	1.500	5/16 X 5/32	
D100	10.00	9.00	7.38	.41	8.82	4.49	2.95	4.53	3.94	7.70	8.88	3.63	5.25	1.38	2.56	1.97	4.13	.56	5.34	2.72			1.62	1.90	.625	1.18	.98	3/16 X 3/32	2.000	3/8 X 3/16	
D120	13.00	11.50	10.50	.56	10.24	5.31	3.15	5.51	4.72	9.33	10.13	4.13	6.00	1.97	3.35	2.76	5.51	.62	7.30	3.70			1.87	2.40	.875	1.58	1.38	3/16 X 3/32	2.375	5/8 X 5/16	
D135	16.00	14.00	12.87	.69	11.81	5.51	3.35	6.50	5.31	11.22	11.38	4.63	6.75	2.36	3.62	3.15	6.30	.75	8.10	4.13			2.12	2.70	1.125	1.97	1.77	1/4 X 1/8	2.750	5/8 X 5/16	
D155	18.00	15.63	15.25	.69	13.78	6.10	4.06	7.99	6.10	12.20	12.25	5.88	6.38	2.36	3.62	3.15	6.30	.75	8.10	4.13			.50	2.70	1.125	1.97	1.77	1/4 X 1/8	3.250	3/4 X 3/8	
D175	21.00	18.38	17.00	.78	15.35	6.46	4.84	8.78	6.89	14.57	12.50	6.00	6.50	2.36	3.62	3.15	6.30	.75	9.10	4.13			.50	2.70	1.125	1.97	1.77	1/4 X 1/8	3.500	7/8 X 7/16	
D200	24.00	21.00	19.50	1.03	16.54	7.87	5.12	9.65	7.87	16.14	15.00	7.25	7.75	2.95	4.53	3.94	7.48	.75	9.90	5.28			.50	3.20	1.375	1.97	1.77	5/16 X 5/32	4.125	1 X 1/2	
D225	26.50	23.00	21.00	1.03	18.50	8.66	5.71	10.83	8.86	17.52	15.75	7.63	8.13	3.15	5.51	4.72	9.06	.75	10.80		8.90	3.86	.50	3.80	1.500	2.56	2.36	3/8 X 3/16	4.500	1 X 1/2	
D250	29.00	25.00	22.75	1.03	20.47	9.06	5.91	11.81	9.84	19.09	16.75	8.13	8.63	3.35	6.50	5.31	10.24	.75	11.80		9.70	3.86	.50	4.20	1.625	2.95	2.76	3/8 X 3/16	5.000	1 1/4 X 5/8	

NEMA Flange	AJ	AK	BD	BF	FT	BB
56C	5.875	4.50	6.50	.438	.313	.156
140TC	5.875	4.50	6.50	.438	.313	.156
180TC	7.250	8.50	9.00	.531	.375	.188
210TC	7.250	8.50	9.00	.531	.375	.188
250TC	7.250	8.50	9.00	.531	.375	.188

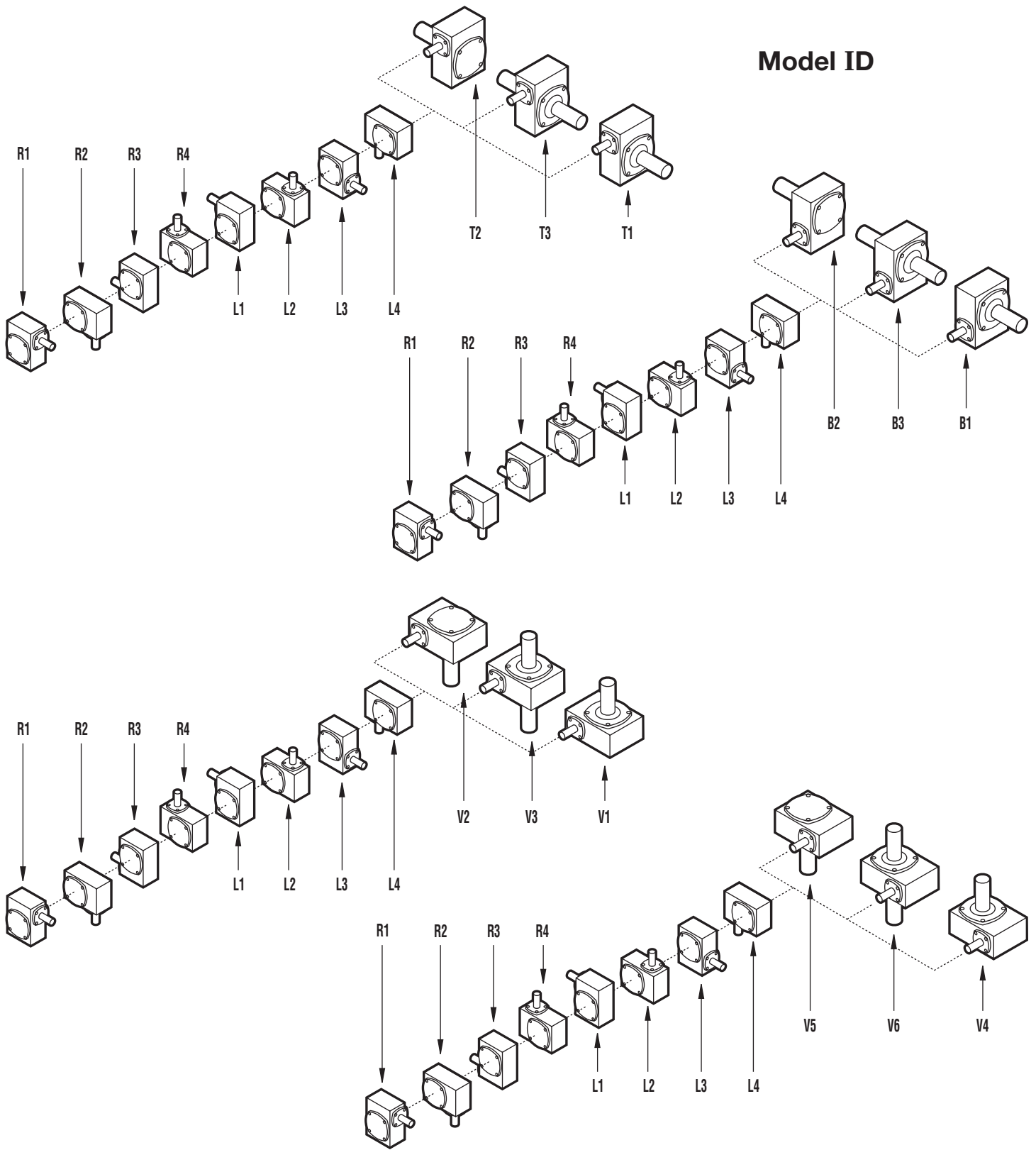
Size	K <sub>2</sub>			K <sub>3</sub>		
	56C 140TC	180TC 210TC	250TC	56C 140TC	180TC 210TC	250TC
D34	5.89			2.43		
D40	5.89			2.43		
D45	5.89			2.43		
D50	5.89			2.43		
D60	5.89			2.43		
D70	6.93			2.46		
D80	6.42			2.29		
D100	6.42			2.29		
D120	7.80	9.14		2.29	3.63	
D135	8.59	9.93		2.29	3.63	
D155	8.59	9.93		2.29	3.63	
D175	8.59	9.93		2.29	3.63	
D200	9.77	11.61	11.61	2.29	4.13	4.13
D225		13.19	13.19		4.13	4.13
D250		14.37	14.37		4.13	4.13

Dimensions in inches

Refer to pages 62-65 for Assembly Positions

\*For other bore sizes, see Output Shaft Bushing Kits available on page 34.

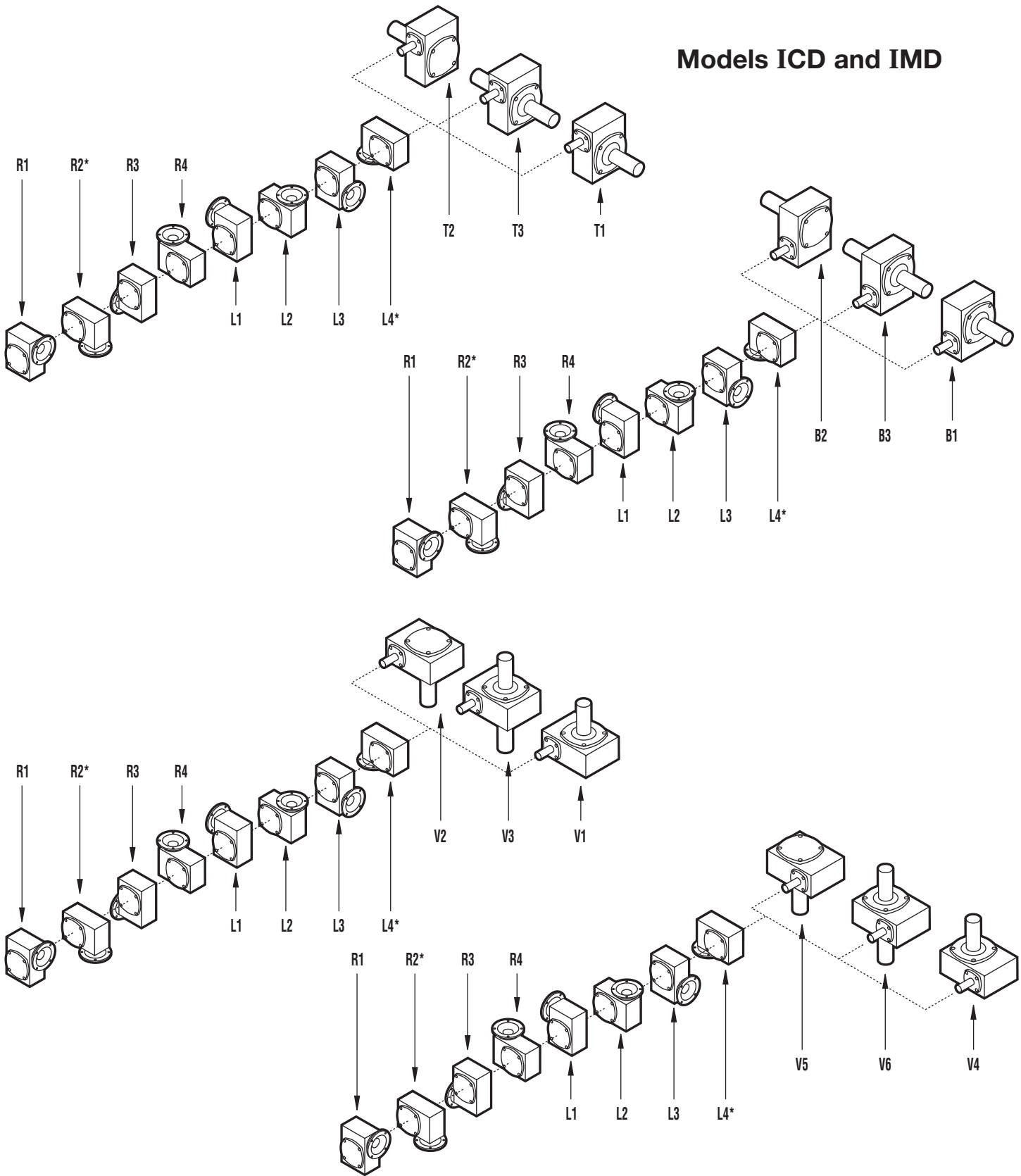
# Double Reduction Assembly Positions



Model ID

# Double Reduction Assembly Positions

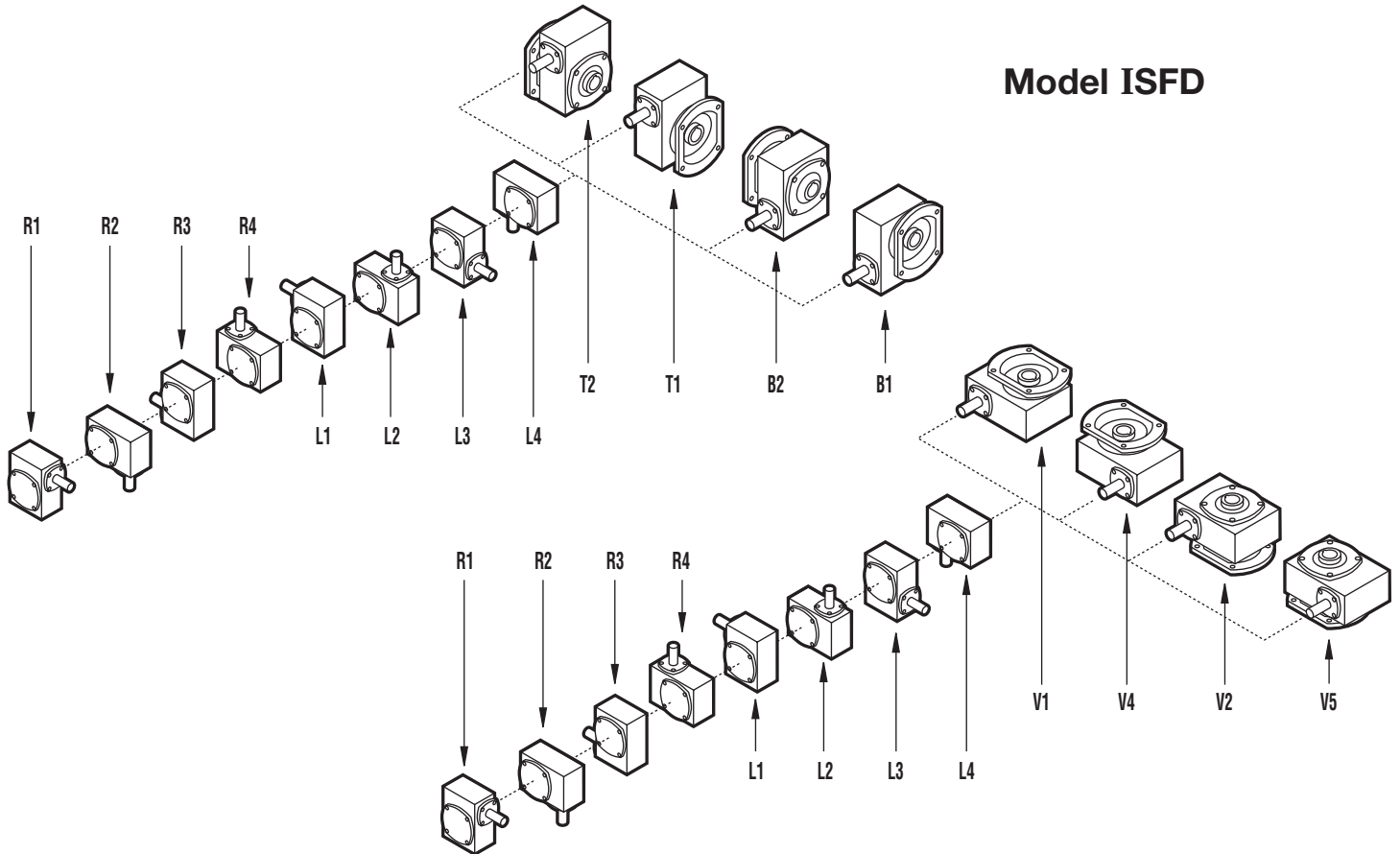
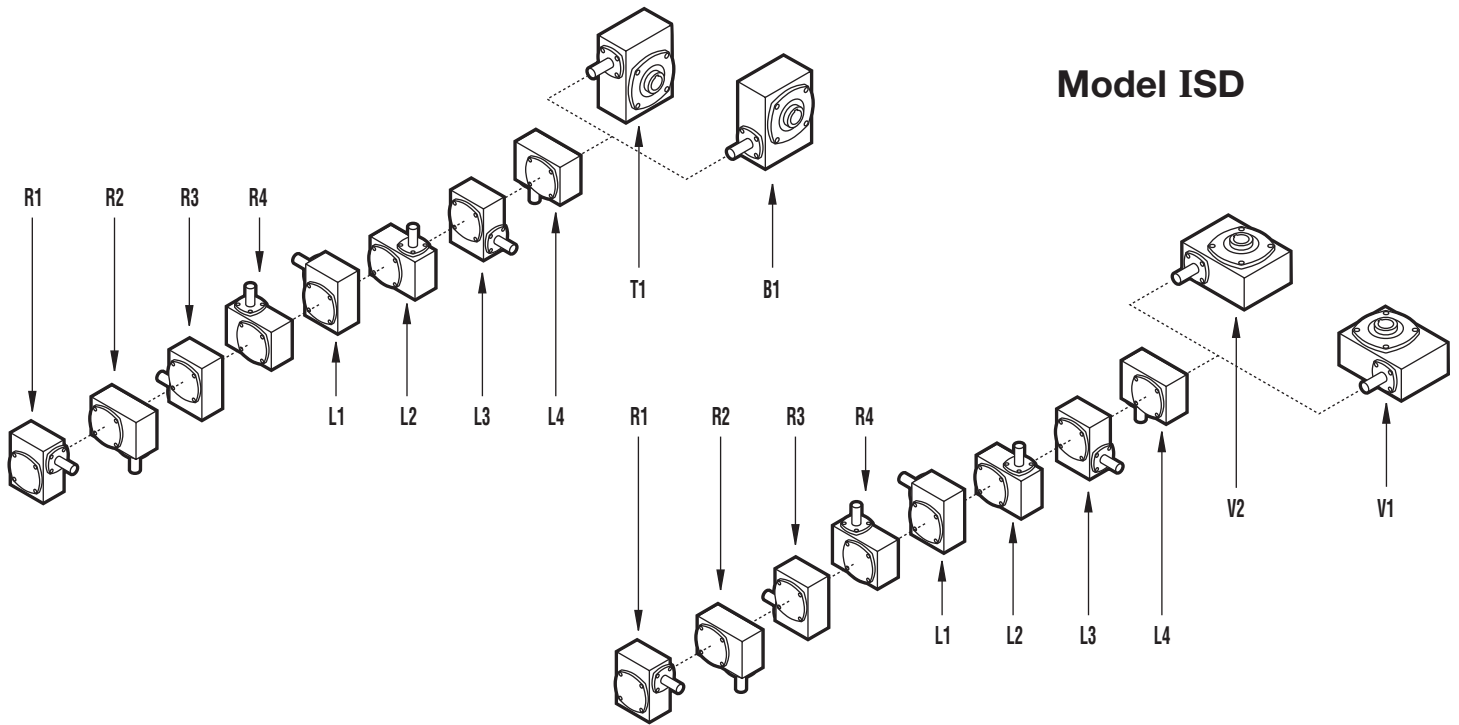
Models ICD and IMD



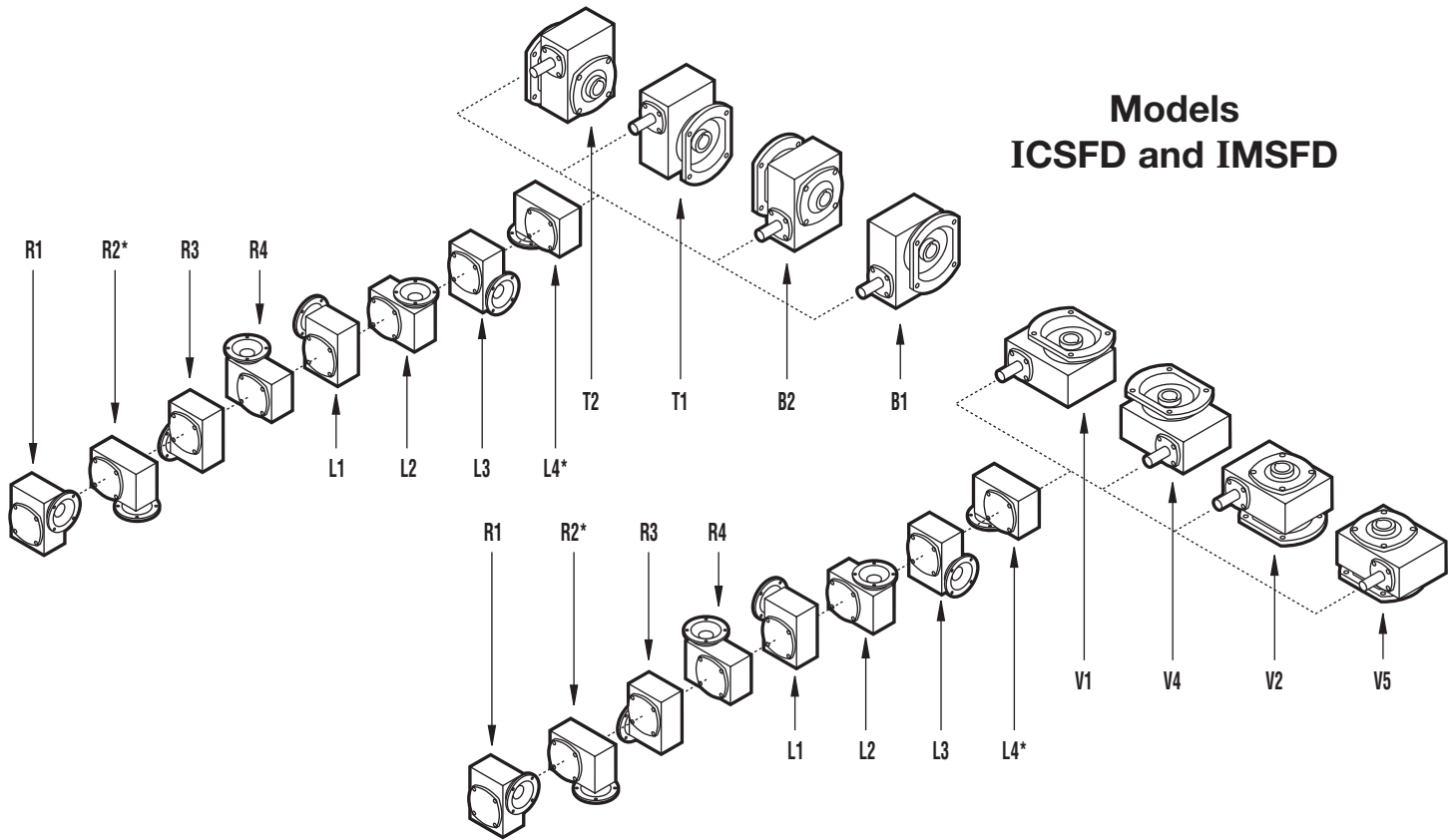
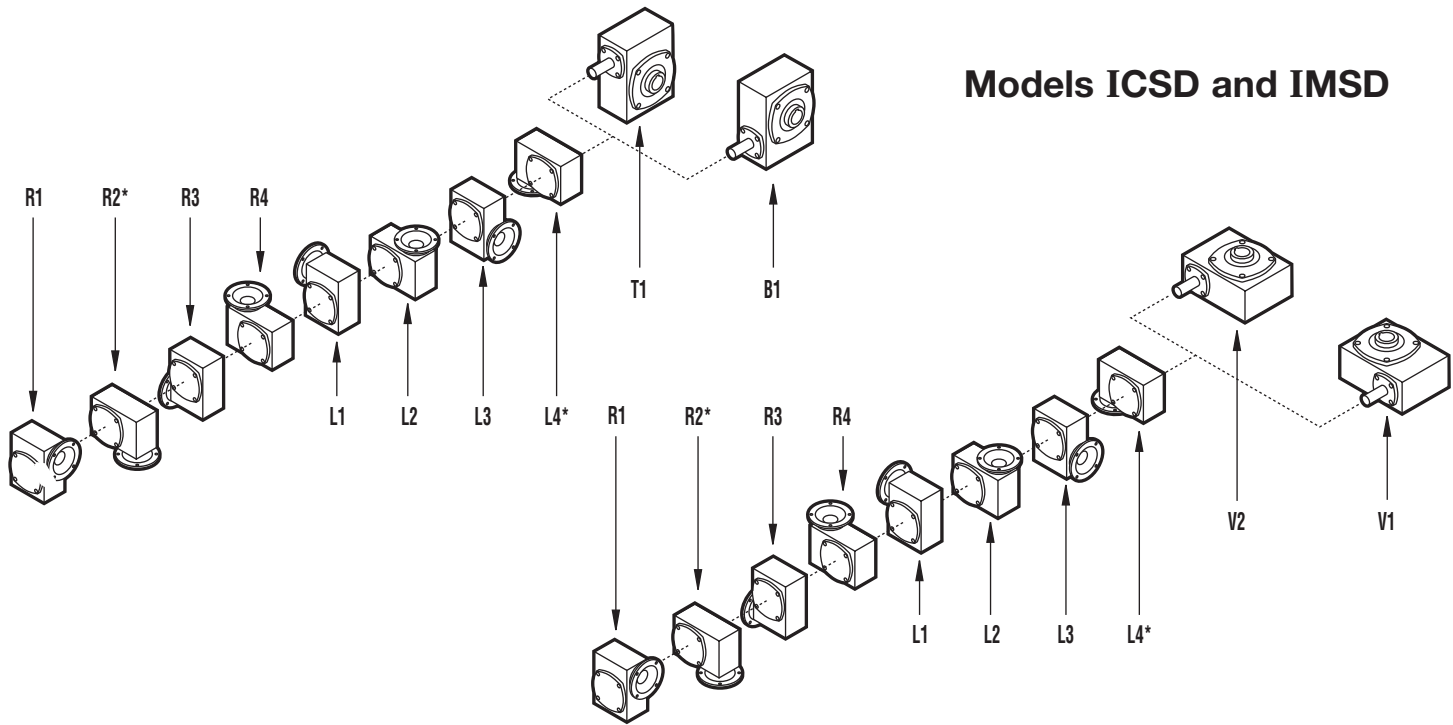
\* Not a recommended mounting position



# Double Reduction Assembly Positions

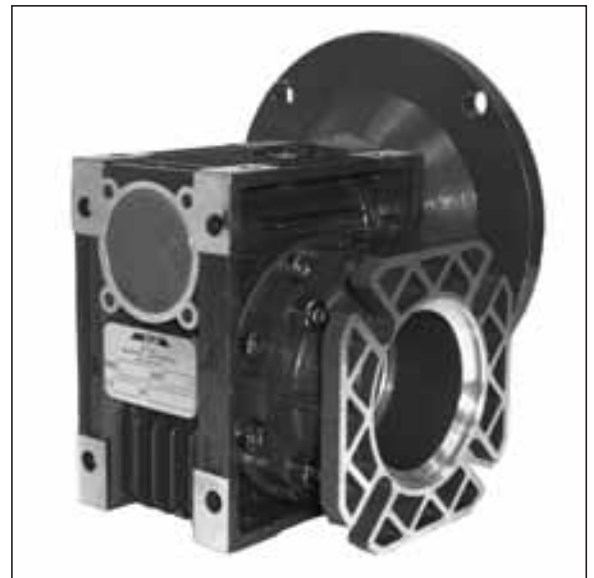


# Double Reduction Assembly Positions



\* Not a recommended mounting position

# IPTS Blue Line Worm Gear Speed Reducers



# Single Reduction Ratings

Max Output Torque (in-lbs)	Output Speed (RPM)	Exact Ratio	Max Input Power (HP)	Size	Overhung Load (OHL) lbs		
					Output (bearing type)		Input
					Ball	Tapered Roller	Solid Input Shaft
159	350	5	1.02	030	113	—	31
159	233	7.5	0.69	030	129	—	31
159	175	10	0.54	030	142	—	31
159	117	15	0.38	030	163	—	31
159	88	20	0.30	030	179	—	31
186	70	25	0.30	030	193	—	31
177	58	30	0.25	030	205	—	31
159	44	40	0.19	030	225	—	31
150	35	50	0.15	030	243	—	31
142	29	60	0.13	030	259	—	31
115	22	80	0.09	030	284	—	31
301	350	5	1.88	040	221	599	51
354	233	7.5	1.51	040	253	693	51
354	175	10	1.16	040	279	757	51
354	117	15	0.80	040	319	785	51
345	88	20	0.61	040	350	785	51
336	70	25	0.50	040	378	785	51
398	58	30	0.53	040	403	785	51
363	44	40	0.39	040	441	785	51
345	35	50	0.31	040	476	785	51
319	229	60	0.25	040	507	785	51
292	22	80	0.19	040	556	785	51
257	18	100	0.15	040	595	785	51
549	350	5	3.43	050	322	1007	71
628	233	7.5	2.64	050	269	1088	71
637	175	10	2.06	050	406	1088	71
655	117	15	1.48	050	464	1088	71
646	88	20	1.14	050	510	1088	71
619	70	25	0.90	050	551	1088	71
743	58	30	0.96	050	586	1088	71
672	44	40	0.70	050	643	1088	71
646	35	50	0.57	050	694	1088	71
602	29	60	0.47	050	739	1088	71
575	22	80	0.38	050	810	1088	71
487	18	100	0.28	050	866	1088	71

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

# Single Reduction Ratings

Max Output Torque (in-lbs)	Output Speed (RPM)	Exact Ratio	Max Input Power (HP)	Size	Overhung Load (OHL) lbs		
					Output (bearing type)		Input
					Ball	Tapered Roller	Solid Input Shaft
1133	233	7.5	4.77	063	463	1237	102
1150	175	10	3.67	063	510	1358	102
1239	117	15	2.76	063	583	1410	102
1194	88	20	2.05	063	641	1410	102
1150	70	25	1.64	063	692	1410	102
1416	58	30	1.77	063	736	1410	102
1283	44	40	1.27	063	807	1410	102
1194	35	50	1.01	063	871	1410	102
1150	29	60	.86	063	928	1410	102
1079	22	80	.66	063	1017	1410	102
1044	18	100	.57	063	1088	1410	102
1637	233	7.5	6.81	075	549	1457	143
1725	175	10	5.45	075	604	1598	143
1170	117	15	3.86	075	691	1659	143
1858	88	20	3.15	075	759	1659	143
1770	70	25	2.46	075	820	1659	143
2035	58	30	2.48	075	873	1659	143
1947	44	40	1.88	075	957	1659	143
1858	35	50	1.50	075	1033	1659	143
1770	229	60	1.26	075	1099	1659	143
1681	22	80	.97	075	1205	1659	143
1593	18	100	.80	075	1289	1659	143
2566	233	7.5	10.56	090	631	1618	184
2743	175	10	8.56	090	694	1773	184
3185	117	15	6.86	090	794	1839	184
3141	88	20	5.19	090	873	1839	184
3008	70	25	4.08	090	942	1839	184
3628	58	30	4.31	090	1003	1839	184
3185	44	40	2.95	090	1100	1839	184
3008	35	50	2.32	090	1187	1839	184
2831	29	60	1.90	090	1264	1839	184
2522	22	80	1.39	090	1386	1839	184
2389	18	100	1.12	090	1482	1839	184

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

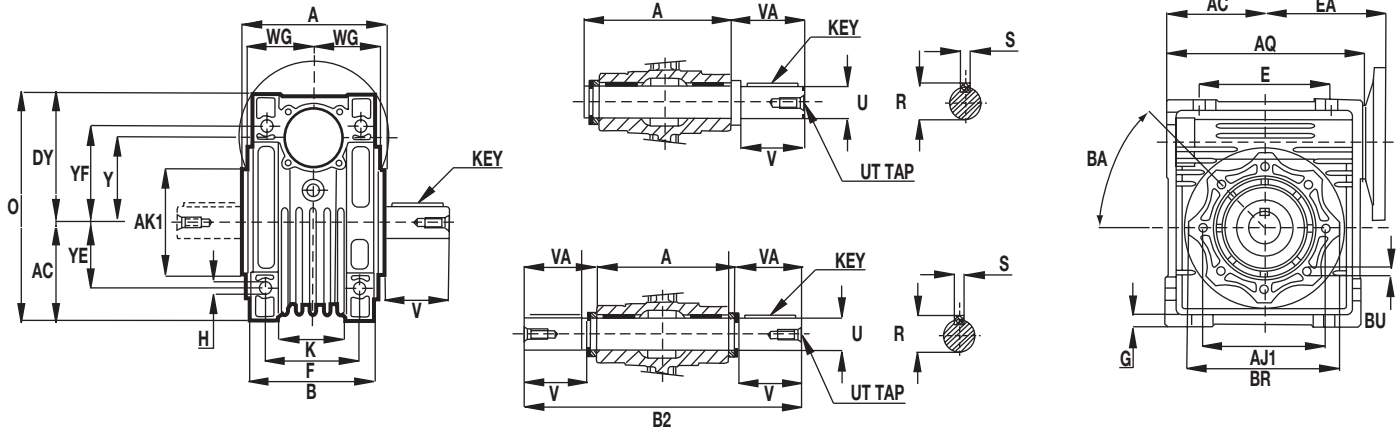
# Single Reduction Ratings

Max Output Torque (in-lbs)	Output Speed (RPM)	Exact Ratio	Max Input Power (HP)	Size	Overhung Load (OHL) lbs		
					Output (bearing type)		Input
					Ball	Tapered Roller	Solid Input Shaft
4247	233	7.5	17.48	110	776	2035	246
4601	175	10	14.36	110	853	2235	246
5043	117	15	10.86	110	976	2320	246
4955	88	20	8.10	110	1073	2320	246
5220	70	25	6.90	110	1158	2320	246
5574	58	30	6.53	110	1233	2320	246
5397	44	40	4.81	110	1352	2320	246
5309	35	50	3.93	110	1459	2320	246
4955	29	60	3.19	110	1553	2320	246
4336	22	80	2.25	110	1703	2320	246
4070	18	100	1.79	110	1821	2320	246
6636	233	7.5	27.01	130	1017	2660	306
7255	175	10	22.64	130	1119	2923	306
8140	117	15	17.33	130	1279	3035	306
8052	88	20	13.00	130	1407	3035	306
8229	70	25	10.88	130	1518	3035	306
9202	58	30	10.65	130	1616	3035	306
9290	44	40	8.27	130	1772	3035	306
8671	35	50	6.42	130	1913	3035	306
7963	229	60	5.12	130	2036	3035	306
7432	22	80	3.79	130	2233	3035	306
6548	18	100	2.84	130	2387	3035	306
10618	233	7.5	43.22	150	1425	3550	399
10972	175	10	33.86	150	1568	3900	399
11060	117	15	23.27	150	1793	4050	399
11502	88	20	18.58	150	1971	4050	399
10618	70	25	14.04	150	2127	4050	399
10618	58	30	11.85	150	2265	4050	399
13715	44	40	12.21	150	2484	4050	399
12387	35	50	9.05	150	2680	4050	399
11149	29	60	7.07	150	2854	4050	399
10175	22	80	5.20	150	3129	4050	399
8848	18	100	3.84	150	3346	4050	399

While ratios above 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.

# Model INMRW

## Single Output Shaft



## Double Output Shaft

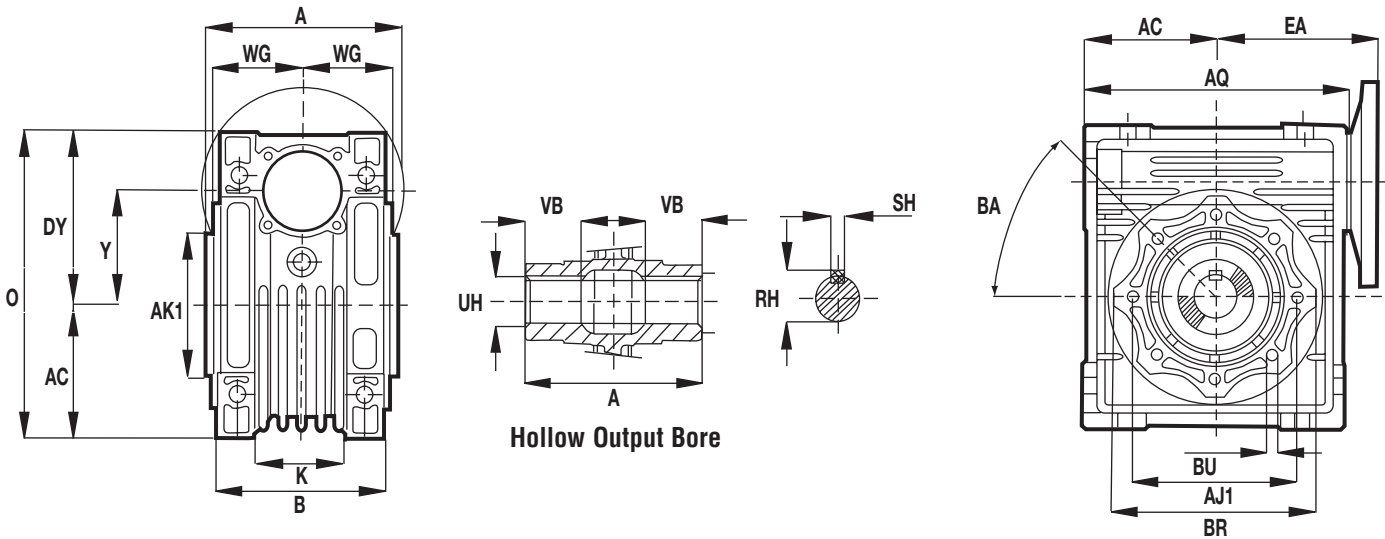
Size	A	AC	AJ1	AK1	AQ	B	BA	BR	BU	DY	E
030	2.48	1.57	2.56	2.17 <sup>-0.0018</sup>	3.15	2.20	0°	2.95	M 6 Tap, 0.43 deep, 4 pl.	2.24	2.13
040	3.07	1.97	2.95	2.36 <sup>-0.0018</sup>	3.94	2.80	45°	3.43	M 6 Tap, 0.32 deep, 4 pl.	2.81	2.76
050	3.62	2.36	3.35	2.76 <sup>-0.0018</sup>	4.72	3.35	45°	3.94	M 8 Tap, 0.39 deep, 4 pl.	3.31	3.15
063	4.41	2.83	3.74	3.15 <sup>-0.0021</sup>	5.67	4.06	45°	4.33	M 8 Tap, 0.55 deep, 8 pl.	4.02	3.94
075	4.72	3.39	4.53	3.74 <sup>-0.0021</sup>	6.77	4.41	45°	5.51	M 8 Tap, 0.55 deep, 8 pl.	4.69	4.72
090	5.51	4.06	5.12	4.33 <sup>-0.0021</sup>	8.11	5.12	45°	6.30	M 10 Tap, 0.71 deep, 8 pl.	5.32	5.51
110	6.10	5.02	6.50	5.12 <sup>-0.0025</sup>	9.94	5.67	45°	7.87	M 10 Tap, 0.71 deep, 8 pl.	6.59	6.69
130	6.69	5.81	8.46	7.09 <sup>-0.0025</sup>	11.52	6.10	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.	7.38	7.87
150	7.87	6.69	8.46	7.09 <sup>-0.0025</sup>	13.39	7.28	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.	9.06	9.45

Size	EA	F	G	H	K	O	WG	Y	YE	YF	Weight (lbs)
030	2.64	1.73	0.22	0.26	1.26	3.82	1.14	1.18	1.06	1.73	3
040	3.15	2.36	0.26	0.26	1.69	4.78	1.44	1.58	1.38	2.17	5
050	3.54	2.76	0.28	0.34	1.93	5.67	1.71	1.97	1.58	2.52	8
063	4.13	3.35	0.32	0.33	2.64	6.85	2.09	2.46	1.97	3.15	14
075	4.96	3.54	0.39	0.45	2.83	8.07	2.24	2.95	2.36	3.66	20
090	5.63	3.94	0.43	0.51	2.91	9.37	2.64	3.54	2.76	4.02	29
110	6.81	4.43	0.57	0.55	-	11.61	2.91	4.33	3.35	4.92	77
130	7.60	4.72	0.61	0.63	-	13.18	3.19	5.12	3.94	5.51	106
150	8.27	5.71	0.71	0.71	-	15.75	3.78	5.91	4.72	7.09	185

## Solid Output Shaft

Size	B2	R	S	U	UT	V	VA	Key Length	Key Square
030	5.83	0.70	0.188	0.625 <sup>+0.0005</sup>	1/4-20	1.58	1.67	1.125	0.188
040	7.24	0.83	0.188	0.750 <sup>+0.0005</sup>	1/4-20	1.97	2.09	1.500	0.188
050	7.83	1.11	0.250	1.000 <sup>+0.0005</sup>	3/8-16	1.97	2.11	1.500	0.250
063	9.41	1.23	0.250	1.125 <sup>+0.0005</sup>	3/8-16	2.36	2.50	1.875	0.250
075	10.51	1.36	0.250	1.250 <sup>+0.0005</sup>	1/2-13	2.76	2.89	2.250	0.250
090	12.13	1.51	0.313	1.375 <sup>+0.0005</sup>	1/2-13	3.15	3.33	2.500	0.313
110	16.14	1.79	0.375	1.625 <sup>+0.001</sup>	5/8-11	3.54	4.13	2.750	0.375
130	14.17	1.92	0.375	1.750 <sup>+0.001</sup>	5/8-11	3.64	3.74	2.750	0.375
150	16.14	2.22	0.500	2.000 <sup>+0.001</sup>	3/4-10	4.02	4.57	3.500	0.500

# Model INMRV



Size	A	AC	AJ1	AK1	AQ	B	BA	BR	BU
030	2.48	1.57	2.56	2.17 <sup>-0.0018</sup>	3.15	2.20	0°	2.95	M 6 Tap, 0.43 deep, 4 pl.
040	3.07	1.97	2.95	2.36 <sup>-0.0018</sup>	3.94	2.80	45°	3.43	M 6 Tap, 0.32 deep, 4 pl.
050	3.62	2.36	3.35	2.76 <sup>-0.0018</sup>	4.72	3.35	45°	3.94	M 8 Tap, 0.39 deep, 4 pl.
063	4.41	2.83	3.74	3.15 <sup>-0.0021</sup>	5.67	4.06	45°	4.33	M 8 Tap, 0.55 deep, 8 pl.
075	4.72	3.39	4.53	3.74 <sup>-0.0021</sup>	6.77	4.41	45°	5.51	M 8 Tap, 0.55 deep, 8 pl.
090	5.51	4.06	5.12	4.33 <sup>-0.0021</sup>	8.11	5.12	45°	6.30	M 10 Tap, 0.71 deep, 8 pl.
110	6.10	5.02	6.50	5.12 <sup>-0.0025</sup>	9.94	5.67	45°	7.87	M 10 Tap, 0.71 deep, 8 pl.
130	6.69	5.81	8.46	7.09 <sup>-0.0025</sup>	11.52	6.10	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.
150	7.87	6.69	8.46	7.09 <sup>-0.0025</sup>	13.39	7.28	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.

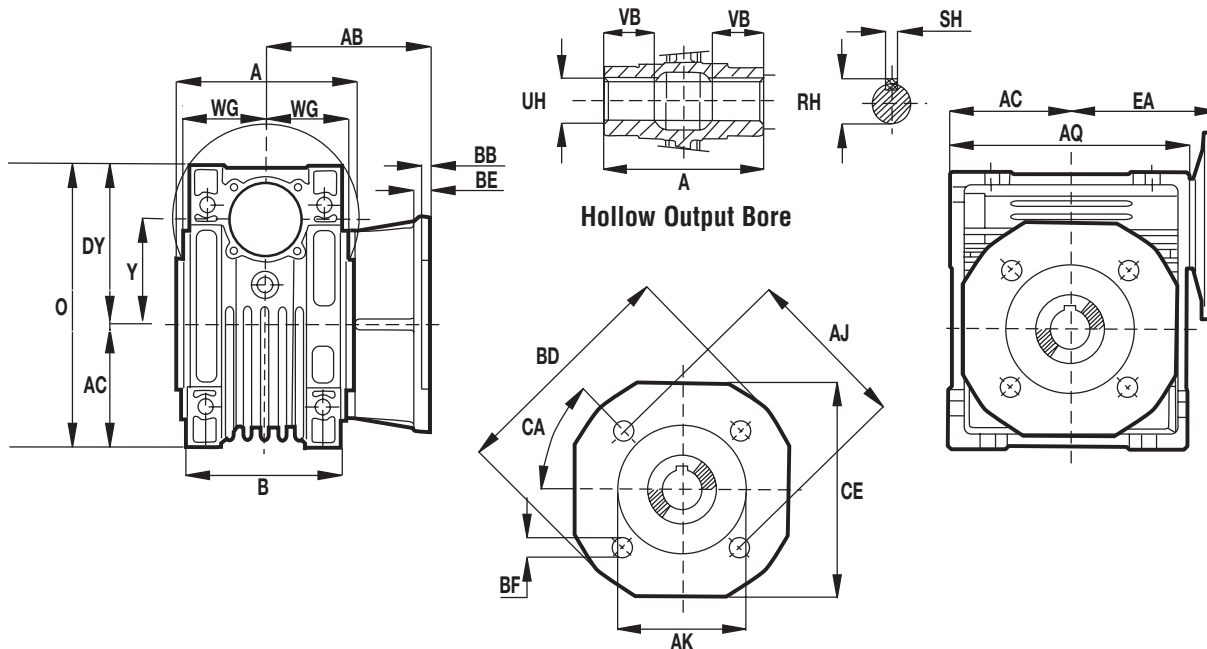
Size	DY	EA	K	O	WG	Y	Weight (lbs)
030	2.24	2.64	1.26	3.82	1.14	1.18	3
040	2.81	3.15	1.69	4.78	1.44	1.58	5
050	3.31	3.54	1.93	5.67	1.71	1.97	8
063	4.02	4.13	2.64	6.85	2.09	2.46	14
075	4.69	4.96	2.83	8.07	2.24	2.95	20
090	5.32	5.63	2.91	9.37	2.64	3.54	29
110	6.59	6.81	-	11.61	2.91	4.33	77
130	7.38	7.60	-	13.19	3.19	5.12	106
150	9.06	8.27	-	15.75	3.78	5.91	185

## Hollow Output Bore

Size	RH	SH	UH	VB
030	0.71	0.188	0.625 <sup>-0.001</sup> <sub>0</sub>	0.83
040	0.84	0.188	0.750 <sup>-0.001</sup> <sub>0</sub>	1.02
050	1.11	0.250	1.000 <sup>-0.001</sup> <sub>0</sub>	1.18
063	1.24	0.250	1.125 <sup>-0.001</sup> <sub>0</sub>	1.42
075	1.37	0.250	1.250 <sup>-0.001</sup> <sub>0</sub>	1.57
090	1.52	0.313	1.375 <sup>-0.001</sup> <sub>0</sub>	1.77
110	1.80	0.375	1.625 <sup>-0.001</sup> <sub>0</sub>	1.97
130	1.92	0.375	1.750 <sup>-0.001</sup> <sub>0</sub>	2.36
150	2.22	0.500	2.000 <sup>-0.001</sup> <sub>0</sub>	2.85



# Model INMRVF



Size	A	AC	AQ	B	DY	EA	O	WG	Y	Weight (lbs)
030	2.48	1.57	3.15	2.20	2.24	2.64	3.82	1.14	1.18	3
040	3.07	1.97	3.94	2.80	2.81	3.15	4.78	1.44	1.58	5
050	3.62	2.36	4.72	3.35	3.31	3.54	5.67	1.71	1.97	8
063	4.41	2.83	5.67	4.06	4.02	4.13	6.85	2.09	2.48	14
075	4.72	3.39	6.77	4.41	4.69	4.96	8.07	2.24	2.95	20
090	5.51	4.06	8.11	5.12	5.32	5.63	9.37	2.64	3.54	29
110	6.10	5.02	9.94	5.67	6.59	6.81	11.61	2.91	4.33	77
130	6.69	5.81	11.52	6.10	7.38	7.60	13.19	3.19	5.12	106
150	7.87	6.69	13.39	7.28	9.06	8.27	15.75	3.78	5.91	185

## Standard Flange

Size	AB	AJ	AK	BB	BD	BE	BF	CA	CE
030	2.15	2.68	1.97 <sup>-0.0007</sup>	.16	3.15	0.24	.26, 4 pl.	45°	2.76
040	2.64	2.95	2.36 <sup>-0.0007</sup>	.16	4.33	0.28	.35, 4 pl.	45°	3.74
050	3.54	3.35	2.76 <sup>-0.0007</sup>	.20	4.92	0.35	.43, 4 pl.	45°	4.33
063	3.23	5.91	4.53 <sup>-0.0009</sup>	.24	7.09	0.39	.43, 4 pl.	45°	5.60
075	4.37	6.49	5.12 <sup>-0.001</sup>	.24	7.87	0.51	.55, 4 pl.	45°	6.69
090	4.37	6.89	5.98 <sup>-0.001</sup>	.24	8.27	0.51	.55, 4 pl.	45°	7.87
110	5.16	9.06	6.69 <sup>-0.001</sup>	.24	11.02	0.59	.55, 8 pl.	45°	10.24
130	5.51	10.03	7.09 <sup>-0.001</sup>	.28	12.60	0.59	.63, 8 pl.	22.5°	11.42
150	6.10	10.03	7.09 <sup>-0.001</sup>	.28	12.60	0.59	.63, 8 pl.	22.5°	11.42

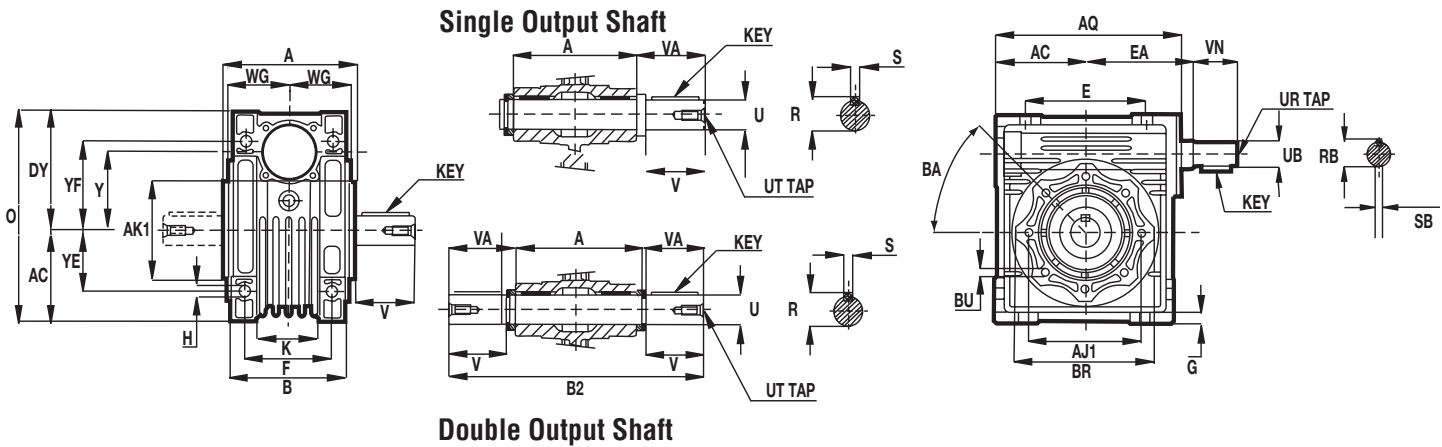
## Hollow Output Bore

Size	RH	SH	UH	VB
030	0.71	0.188	0.625 <sup>+0.001</sup> <sub>-0</sub>	0.83
040	0.84	0.188	0.750 <sup>+0.001</sup> <sub>-0</sub>	1.02
050	1.11	0.250	1.000 <sup>+0.001</sup> <sub>-0</sub>	1.18
063	1.24	0.250	1.125 <sup>+0.001</sup> <sub>-0</sub>	1.42
075	1.37	0.250	1.250 <sup>+0.001</sup> <sub>-0</sub>	1.57
090	1.52	0.313	1.375 <sup>+0.001</sup> <sub>-0</sub>	1.77
110	1.80	0.375	1.625 <sup>+0.001</sup> <sub>-0</sub>	1.97
130	1.92	0.375	1.750 <sup>+0.001</sup> <sub>-0</sub>	2.36
150	2.22	0.500	2.000 <sup>+0.001</sup> <sub>-0</sub>	2.85

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# Model INRW



Size	A	AC	AJ1	AK1	AQ	B	BA	BR	BU	DY	E
030	2.48	1.57	2.56	2.17 <sup>+0.002</sup>	3.15	2.20	0°	2.95	M 6 Tap, 0.43 deep, 4 pl.	2.24	2.13
040	3.07	1.97	2.95	2.36 <sup>+0.002</sup>	3.94	2.80	45°	3.43	M 6 Tap, 0.32 deep, 4 pl.	2.81	2.76
050	3.62	2.36	3.35	2.76 <sup>+0.002</sup>	4.72	3.35	45°	3.94	M 8 Tap, 0.39 deep, 4 pl.	3.31	3.15
063	4.41	2.83	3.74	3.15 <sup>+0.002</sup>	5.67	4.06	45°	4.33	M 8 Tap, 0.55 deep, 8 pl.	4.02	3.94
075	4.72	3.39	4.53	3.74 <sup>+0.002</sup>	6.77	4.41	45°	5.51	M 8 Tap, 0.55 deep, 8 pl.	4.69	4.72
090	5.51	4.06	5.12	4.33 <sup>+0.002</sup>	8.11	5.12	45°	6.30	M 10 Tap, 0.71 deep, 8 pl.	5.32	5.51
110	6.10	5.02	6.50	5.12 <sup>+0.003</sup>	9.94	5.67	45°	7.87	M 10 Tap, 0.71 deep, 8 pl.	6.59	6.69
130	6.69	5.81	8.46	7.09 <sup>+0.003</sup>	11.52	6.10	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.	7.38	7.87
150	7.87	6.69	8.46	7.09 <sup>+0.003</sup>	13.39	7.28	45°	9.84	M 12 Tap, 0.83 deep, 8 pl.	9.06	9.45

Size	EA	F	G	H	K	O	WG	Y	YE	YF	Weight (lbs)
030	2.64	1.73	0.22	0.26	1.26	3.82	1.14	1.18	1.06	1.73	3
040	3.15	2.36	0.26	0.26	1.69	4.78	1.44	1.58	1.38	2.17	5
050	3.54	2.76	0.28	0.34	1.93	5.67	1.71	1.97	1.58	2.52	8
063	4.13	3.35	0.32	0.33	2.64	6.85	2.09	2.46	1.97	3.15	14
075	4.96	3.54	0.39	0.45	2.83	8.07	2.24	2.95	2.36	3.66	20
090	5.63	3.94	0.43	0.51	2.91	9.37	2.64	3.54	2.76	4.02	29
110	6.81	4.43	0.57	0.55	-	11.61	2.91	4.33	3.35	4.92	77
130	7.60	4.72	0.61	0.63	-	13.18	3.19	5.12	3.94	5.51	106
150	8.27	5.71	0.71	0.71	-	15.75	3.78	5.91	4.72	7.09	185

## Solid Input Shaft

Size	RB	SB	UB	UR	VN	Key Length	Key Square
030	0.42	0.094	0.375 <sup>+0.0005</sup>	-	1.18	0.875	0.094
040	0.55	0.125	0.500 <sup>+0.0005</sup>	1/4-20	1.18	0.875	0.125
050	0.70	0.188	0.625 <sup>+0.0005</sup>	1/4-20	1.58	1.125	0.188
063	0.83	0.188	0.750 <sup>+0.0005</sup>	1/4-20	1.97	1.500	0.188
075	0.96	0.188	0.875 <sup>+0.0005</sup>	1/4-20	2.36	1.875	0.188
090	0.96	0.188	0.875 <sup>+0.0005</sup>	1/4-20	2.36	1.875	0.188
110	1.23	0.250	1.125 <sup>+0.0005</sup>	3/8-16	2.76	2.250	0.250
130	1.36	0.250	1.250 <sup>+0.0005</sup>	1/2-13	3.15	2.500	0.250
150	1.51	0.313	1.375 <sup>+0.0005</sup>	1/2-13	3.15	2.875	0.313

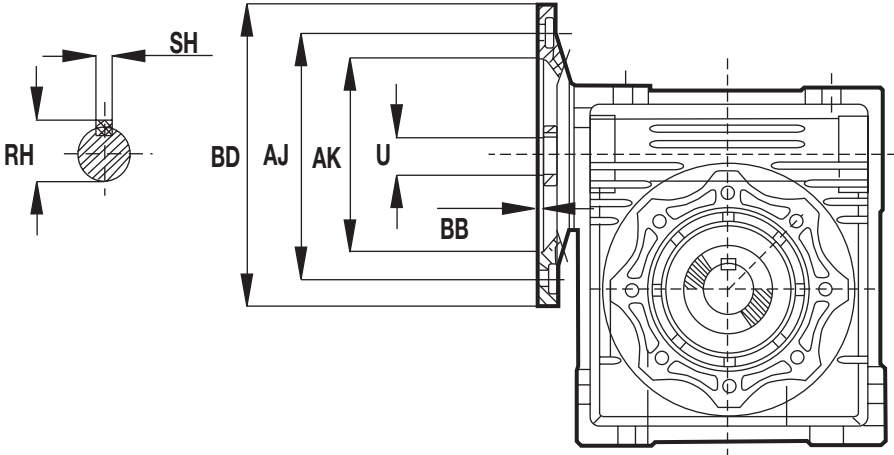
## Solid Output Shaft

Size	B2	R	S	U	UT	V	VA	Key Length	Key Square
030	5.83	0.70	0.188	0.625 <sup>+0.0005</sup>	1/4-20	1.58	1.67	1.125	0.188
040	7.24	0.83	0.188	0.750 <sup>+0.0005</sup>	1/4-20	1.97	2.09	1.500	0.188
050	7.83	1.11	0.250	1.000 <sup>+0.0005</sup>	3/8-16	1.97	2.11	1.500	0.250
063	9.41	1.23	0.250	1.125 <sup>+0.0005</sup>	3/8-16	2.36	2.50	1.875	0.250
075	10.51	1.36	0.250	1.250 <sup>+0.0005</sup>	1/2-13	2.76	2.89	2.250	0.250
090	12.13	1.51	0.313	1.375 <sup>+0.0005</sup>	1/2-13	3.15	3.33	2.500	0.313
110	16.14	1.79	0.375	1.625 <sup>+0.001</sup>	5/8-11	3.54	4.13	2.750	0.375
130	14.17	1.92	0.375	1.750 <sup>+0.001</sup>	5/8-11	3.64	3.74	2.750	0.375
150	16.14	2.22	0.500	2.000 <sup>+0.001</sup>	3/4-10	4.02	4.57	3.500	0.500

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# NEMA C Flange Adaptors



SIZE	NEMA FLANGE	DIMENSIONS						
		AK	AJ	BD	BB	RH	SH	U
030	48C	3.00	3.75	5.63	0.20	0.56	0.125	0.500
040	56C	4.50	5.88	6.50	0.20	0.71	0.188	0.625
050	56C	4.50	5.88	6.50	0.20	0.71	0.188	0.625
063	56C	4.50	5.88	6.50	0.20	0.71	0.188	0.625
	140TC	4.50	5.88	6.50	0.20	0.71	0.188	0.625
075	56C	4.50	5.88	6.50	0.20	0.71	0.188	0.625
	140TC	4.50	5.88	6.50	0.20	0.97	0.188	0.875
	180TC	8.50	7.25	9.00	0.22	1.24	0.250	1.125
090	56C	4.50	5.88	6.50	0.20	0.71	0.188	0.625
	140TC	4.50	5.88	6.50	0.20	0.97	0.188	0.875
	180TC	8.50	7.25	9.00	0.22	1.24	0.250	1.125
110	140TC	4.50	5.88	6.50	0.20	0.97	0.188	0.875
	180TC	8.50	7.25	9.00	0.22	1.24	0.250	1.125
	210TC	8.50	7.25	9.00	0.22	1.52	0.313	1.375
130	140TC	4.50	5.88	6.50	0.20	0.97	0.188	0.875
	180TC	8.50	7.25	9.00	0.22	1.24	0.250	1.125
	210TC	8.50	7.25	9.00	0.22	1.52	0.313	1.375
150	180TC	8.50	7.25	9.00	0.22	1.24	0.250	1.125
	210TC	8.50	7.25	9.00	0.22	1.52	0.313	1.375
	250TC	8.50	7.25	9.00	0.22	1.59	0.375	1.625

# IPTS Helical Gear Speed Reducers



# Size AA Helical Gear Speed Reducer With 56C Quill Input

THE IPTS SIZE AA HELICAL GEAR SPEED REDUCER WITH QUILL (PLUG IN) INPUT WILL ACCEPT ANY AC OR DC MOTOR IN A 56C FRAME WITHOUT THE USE OF A FLEXIBLE SHAFT COUPLING SAVING SPACE AS WELL AS INSTALLATION TIME.

THIS HIGHLY EFFICIENT (95%) REDUCER USES HARDENED STEEL GEARS SUPPORTED BY OVER-SIZED BALL BEARINGS IN A CLOSE GRAINED CAST IRON HOUSING AND IS AVAILABLE IN FOOT OR OUTPUT FLANGE MOUNTING VERSIONS. DOUBLE LIP, SPRING LOADED SEALS GUARD AGAINST OIL LEAKAGE WHILE PREVENTING DIRT FROM ENTERING THE REDUCER.

THE SIZE AA REDUCER USES A BRASS SPRING LOADED PRESSURE RELIEF BREATHER PLUG. ALL REDUCERS ARE SHIPPED WITH OIL AND TEST RUN IN BOTH DIRECTIONS PRIOR TO SHIPMENT.

IF YOU'RE LOOKING FOR A HIGH QUALITY, LOW COST HELICAL SPEED REDUCER TO OPERATE EFFICIENTLY IN A SMALL SPACE, THE IPTS SIZE AA REDUCER IS WHAT YOU'VE BEEN LOOKING FOR.

## RATINGS AT 1750 RPM INPUT SPEED

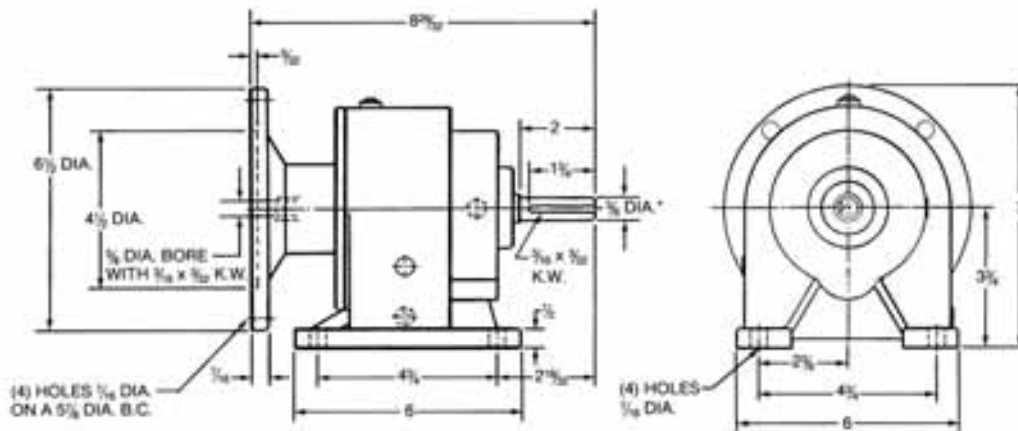
### 1.0 SERVICE FACTOR

Nominal Output Speed RPM	Actual Ratio: 1	Inout HP	Output Torque In.-Lbs.
1010	1.727	1.90	112
690	2.529	1.85	160
520	3.357	1.80	207
350	5.091	1.76	306
230	7.455	1.23	313
175	9.895	0.92	311
155	11.202	0.85	326
130	13.279	0.73	331
115	14.946	0.65	333
100	17.625	0.54	327
88	19.839	0.48	327
77	22.585	0.38	295
65	26.775	0.30	276
58	30.136	0.29	299

Overhung Load capacity is 200 pounds with a 3/8" diameter output shaft and 250 pounds with a 3/4" diameter output shaft, measured at one shaft diameter from the housing.

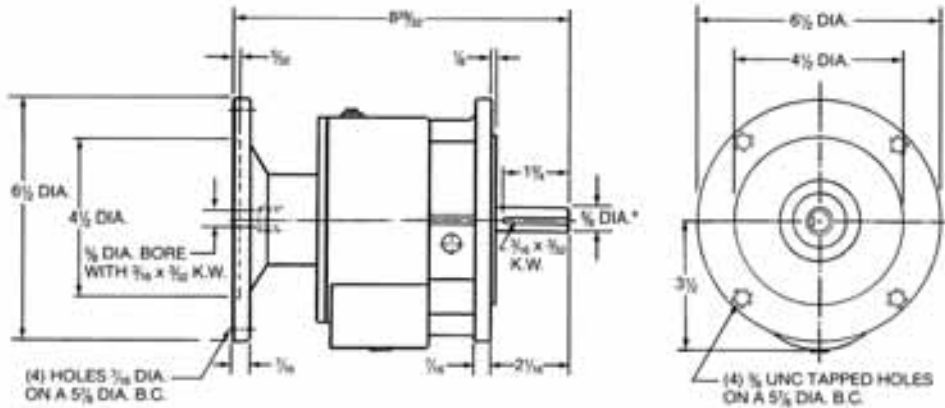
Thrust Load capacity is 250 pounds.

Weight is 22 pounds.



All dimensions in inches — \*Optional shaft diameter is 3/4"

## Foot Mounted HQD-AA-56C



All dimensions in inches — \*Optional shaft diameter is 3/4"

## Flange Mounted HQVD-AA-56C

NOTE: On both foot and flange mounted versions specify horizontal or vertical mounting when ordering.

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# Sizes A-D Helical Gear Speed Reducers With Quill Input

The IPTS helical gear speed reducers sizes A-D with quill (plug-in) input are available in double and triple reduction ratios for foot mounting or with flanged output. They accept standard, off-the-shelf, AC or DC motors in NEMA frames from 56C to 286TC. No input coupling is required saving installation time and space.



- Close grained cast iron construction.
- Stepped output shaft with oversized ball and tapered roller bearings with high overhung load capability.
- Double lip, spring loaded output seal guards against oil leakage while preventing dirt from entering the reducer.

- Hardened and shaved steel gears are used throughout for high efficiency and quiet operation.
- Brass, spring loaded pressure relief breather plug.



- Output shaft has a tapped hole in the end to facilitate mounting a sprocket or gear.
- Output cover is dowel pinned to gearcase before line boring to ensure perfect alignment of gears.



- Slots in C face to facilitate motor removal.
- Every unit test run prior to shipment.



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## Sizes A-D Helical Gear Speed Reducers with Quill Input

The ratings shown on pages 79-82 are based on 10 hours per day operation with uniform load. For other duties it is necessary to multiply the motor horsepower by the appropriate service factor in the table below, then check the ratings on pages 79-82 to ensure the reducer is capable of transmitting this resulting horsepower at the required ratio.

### Service Factor for Electric and Hydraulic Motors

Duration of Service (hours per day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 hour	0.80	0.90	1.00	1.25
Less than 3 hours	1.00	1.00	1.25	1.50
3 – 10 hours	1.00	1.25	1.50	1.75
Over 10 hours	1.25	1.50	1.75	2.00

### Conversion Table to Find Equivalent Single or Multi-Cylinder Engine Service Factor

Electric or Hydraulic Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

### Oil Capacity (pints)

Model	Floor Mounting	Ceiling Mounting*	Wall Mounting	Vertical Shaft Down*
HQD-A-56C/140TC	0.9	2.0	1.5	1.5
HQD-B-56C/140TC	1.5	2.6	2.1	2.4
HQD-B-180TC	1.6	3.2	2.6	2.4
HQD-C-56C/140/180/210/250TC	4.5	7.7	5.8	5.7
HQD-D-180/210/250/280TC	7.6	11.4	10.2	10.1
HQT-A-56C	2.0	2.2	1.8	2.9
HQT-B-56C	4.0	4.4	3.1	4.7
HQT-C-56C/140TC	7.6	7.1	5.3	9.7
HQT-D-56C/140/180TC	13.8	11.9	10.2	15.6

Oil capacity is identical for foot or flange mounted units.

\*Elbow is required for filling.

In all triple reduction units use the level plug in the triple reduction primary housing as the level plug for the entire reducer when the unit is floor mounted, wall mounted or in the vertical shaft down position. For ceiling mounted units use the oil level plug in the double reduction housing as the level plug for the entire reducer.

### Approximate Net Weight (lbs.)

	Size			
	A	B	C	D
<b>Foot Mounted</b>				
Double reduction 56C/140TC	29	42	79	—
Double reduction 180/210/250/280TC	—	51	93	185
Triple reduction 56C/140/180TC	34	48	85	162
<b>Flange Mounted</b>				
Double reduction 56C/140TC	31	45	93	—
Double reduction 180/210/250/280TC	—	54	107	202
Triple reduction 56C/140/180TC	36	51	99	179

# Double Reduction

## 1750 rpm HORSEPOWER AND TORQUE RATINGS

1.0 Service Factor

Nominal Output Speed RPM	HQDA					HQDB					HQDC					HQDD				
	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.
760	2.304	4.43	349	215	220	2.262	17.17	1329	265	270	2.230	28.5	2178	1275	475	2.230	59.3	4525	1505	575
703	—	—	—	—	—	—	—	—	—	—	2.489	28.5	2431	1300	480	2.489	56.0	4770	1515	585
640	2.773	4.22	401	220	230	2.711	17.17	1593	285	295	2.783	28.5	2719	1350	495	2.783	52.2	4974	1540	605
583	—	—	—	—	—	—	—	—	—	—	3.003	27.2	2798	1350	505	3.003	50.0	5140	1575	630
515	3.360	3.76	432	225	230	3.431	14.48	1701	300	305	3.374	24.6	2843	1350	520	3.374	46.3	5343	1620	650
490	—	—	—	—	—	—	—	—	—	—	3.655	23.0	2876	1440	530	3.511	45.2	5427	1640	650
430	4.114	3.35	472	230	235	3.982	12.40	1691	310	310	4.139	18.4	2600	1565	550	3.969	32.3	4391	1650	665
372	—	—	—	—	—	4.856	14.94	2483	335	315	4.716	16.6	2674	1630	595	4.716	32.2	5197	1720	695
350	5.057	4.43	766	240	250	—	—	—	—	—	5.033	23.7	4090	1575	565	5.033	48.9	8433	1750	710
336	5.120	2.88	505	240	250	5.205	8.18	1458	340	320	—	—	—	—	—	—	—	—	—	—
307	—	—	—	—	—	5.819	12.69	2527	355	325	5.617	22.3	4281	1640	595	5.617	45.3	8717	1800	740
295	6.087	4.22	880	250	260	—	—	—	—	—	6.281	20.8	4470	1685	620	6.281	41.3	8882	1890	770
270	6.528	2.41	540	260	265	6.625	6.84	1551	370	340	6.625	12.6	2859	1685	625	6.475	37.3	8265	1965	785
258	—	—	—	—	—	—	—	—	—	—	6.777	19.8	4589	1685	630	6.777	38.9	9023	1980	785
240	7.375	3.76	948	270	275	7.363	10.34	2606	380	350	7.117	18.3	4460	1685	635	7.228	34.1	8428	2025	800
230	7.560	3.62	937	275	280	7.605	8.68	2259	385	355	7.615	18.4	4807	1685	635	7.615	35.4	9230	2080	815
223	—	—	—	—	—	—	—	—	—	—	7.833	10.9	2913	1685	650	7.833	20.4	5466	2080	815
220	—	—	—	—	—	—	—	—	—	—	7.943	16.8	4577	1685	655	7.924	34.2	9277	2080	815
216	8.137	2.01	560	280	285	8.128	5.83	1623	370	360	8.250	17.4	4924	1685	660	8.082	31.1	8609	2100	825
200	9.031	3.35	1037	280	290	8.545	8.97	2625	395	365	8.883	15.4	4690	1685	670	8.720	29.4	8767	2135	835
190	9.100	3.22	1003	285	290	9.116	7.35	2293	400	370	9.342	16.1	5147	1685	685	8.957	31.1	9537	2135	835
180	9.813	1.74	586	290	295	—	—	—	—	—	9.583	14.6	4805	1685	690	9.800	26.8	8998	2160	875
172	—	—	—	—	—	10.276	4.80	1689	405	375	—	—	—	—	—	10.196	26.0	9082	2190	895
164	—	—	—	—	—	—	—	—	—	—	10.645	14.6	5327	1685	715	10.645	26.4	9604	2190	900
158	11.025	2.82	1063	295	300	11.172	6.92	2647	410	385	10.769	13.4	4944	1685	720	—	—	—	—	—
155	11.238	2.88	1109	295	300	11.534	6.20	2447	410	390	—	—	—	—	—	11.525	23.6	9313	2190	900
146	11.280	1.48	570	295	300	12.304	4.02	1695	415	390	11.667	12.7	5062	1685	740	11.697	13.7	5477	2190	960
132	—	—	—	—	—	13.386	5.36	2458	420	400	13.211	11.5	5198	1685	765	—	—	—	—	—
130	13.500	2.55	1178	305	305	13.594	3.47	1616	420	400	13.777	5.4	2562	1685	775	13.697	20.8	9747	2190	990
123	14.326	1.21	592	310	305	14.219	5.48	2670	425	405	—	—	—	—	—	—	—	—	—	—
122	14.329	2.41	1184	310	305	—	—	—	—	—	14.953	11.5	5870	1685	790	—	—	—	—	—
116	—	—	—	—	—	—	—	—	—	—	15.054	10.2	5239	1685	800	—	—	—	—	—
105	16.800	2.21	1273	325	310	17.036	2.28	1330	445	415	16.614	4.6	2593	1685	805	16.614	8.3	4729	2190	1010
101	17.280	0.99	587	325	310	17.445	4.49	2683	450	420	—	—	—	—	—	—	—	—	—	—
100	17.861	2.01	1230	330	315	17.500	4.20	2515	450	420	17.679	10.1	6128	1685	815	17.679	16.2	9788	2190	1010
88	19.776	0.87	590	350	325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
80	21.420	1.81	1328	360	330	—	—	—	—	—	21.146	7.4	5359	1685	845	—	—	—	—	—
79	21.540	1.74	1286	365	330	22.054	3.58	2703	470	440	—	—	—	—	—	—	—	—	—	—
78	—	—	—	—	—	22.273	3.34	2546	470	440	—	—	—	—	—	22.747	13.6	10621	2190	1060
68	24.759	1.48	1250	375	340	—	—	—	—	—	25.000	6.6	5659	1685	870	—	—	—	—	—
65	26.700	1.54	1410	385	340	26.406	3.00	2716	490	460	—	—	—	—	—	26.400	11.0	9903	2190	1100
64	—	—	—	—	—	27.326	2.88	2697	495	460	—	—	—	—	—	—	—	—	—	—
56	31.445	1.14	1227	395	345	29.176	2.03	2719	505	460	31.096	5.4	5711	1685	890	—	—	—	—	—
52	32.200	1.27	1404	395	345	34.546	2.31	2728	525	475	—	—	—	—	—	33.969	9.3	10855	2190	1125
47	37.013	1.13	1427	405	350	36.563	2.19	2736	530	490	37.500	4.5	5768	1685	905	37.500	7.8	10003	2190	1130
46	37.929	0.99	1289	405	350	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
42	—	—	—	—	—	41.364	1.93	2735	530	500	41.663	4.0	5738	1685	910	41.663	7.0	10023	2190	1140
40	43.407	0.86	1275	415	355	—	—	—	—	—	43.974	3.8	5653	1685	915	—	—	—	—	—
38	47.008	0.89	1424	425	360	45.703	1.76	2749	535	510	—	—	—	—	—	48.252	6.7	11032	2190	1150
33	—	—	—	—	—	—	—	—	—	—	53.030	3.1	5600	1685	935	53.608	6.0	11075	2190	1165
31	56.700	0.74	1432	450	365	57.273	1.41	2761	560	540	58.917	2.9	5816	1685	955	—	—	—	—	—
27	64.890	0.67	1490	475	370	65.227	1.29	2875	585	565	—	—	—	—	—	—	—	—	—	—

Overhung load is measured at one shaft diameter from housing.



# Triple Reduction

## 1750 rpm HORSEPOWER AND TORQUE RATINGS

1.0 Service Factor

Nominal Output Speed RPM	HQTA					HQTB					HQTC					HQTD				
	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.
32	—	—	—	—	—	56.585	1.10	2076	570	550	54.418	2.75	4980	1685	940	55.531	4.12	7644	2190	1140
29	62.471	0.57	1211	475	375	59.747	1.19	2376	575	555	63.519	2.48	5256	1685	950	61.569	4.26	8759	2190	1215
25	—	—	—	—	—	70.417	0.90	2088	590	565	66.635	2.43	5376	1685	975	71.453	3.67	8759	2190	1215
24	—	—	—	—	—	72.386	1.01	2412	595	565	—	—	—	—	—	72.600	2.32	5613	2190	1215
23	79.781	0.44	1174	500	380	—	—	—	—	—	76.955	2.05	5256	1685	1010	—	—	—	—	—
21	—	—	—	—	—	88.636	0.82	2412	595	565	82.923	2.01	5556	1685	1050	—	—	—	—	—
19.5	—	—	—	—	—	89.781	0.70	2076	595	565	—	—	—	—	—	92.400	2.32	7166	2190	1215
19	93.388	0.40	1249	500	380	—	—	—	—	—	94.231	1.68	5256	1685	1055	93.415	2.32	7219	2190	1215
16	104.304	0.35	1217	505	385	110.303	0.66	2412	595	565	105.727	1.61	5640	1685	1060	113.365	2.19	8281	2190	1215
15	119.266	0.33	1312	505	385	111.912	0.56	2088	595	565	117.265	1.34	5256	1685	1060	118.892	2.21	8759	2190	1215
13	132.750	0.27	1195	505	385	134.965	0.46	2064	595	565	131.788	1.29	5640	1685	1060	—	—	—	—	—
12.5	—	—	—	—	—	140.636	0.51	2412	595	565	—	—	—	—	—	143.314	1.73	8281	2190	1215
12	—	—	—	—	—	—	—	—	—	—	149.513	1.14	5640	1685	1060	145.868	1.80	8759	2190	1215
11	155.925	0.26	1356	505	385	155.137	0.40	2064	595	565	158.936	1.00	5256	1685	1060	—	—	—	—	—
10	—	—	—	—	—	175.303	0.42	2448	595	565	182.690	0.93	5640	1685	1060	171.600	1.45	8281	2190	1215
9.5	—	—	—	—	—	—	—	—	—	—	186.368	0.84	5256	1685	1060	184.404	1.42	8759	2190	1215
9	198.450	0.20	1328	505	385	197.031	0.31	2052	595	565	—	—	—	—	—	189.600	1.31	8281	2190	1215
8	—	—	—	—	—	211.414	0.35	2424	595	565	224.758	0.70	5256	1685	1060	220.800	1.19	8759	2190	1215
7.5	—	—	—	—	—	237.656	0.25	2052	595	565	232.025	0.72	5640	1685	1060	237.600	1.04	8281	2190	1215
7	—	—	—	—	—	243.011	0.31	2496	595	565	258.349	0.62	5256	1685	1060	243.961	1.08	8759	2190	1215
6.5	—	—	—	—	—	—	—	—	—	—	279.865	0.60	5640	1685	1060	—	—	—	—	—
5.5	—	—	—	—	—	308.636	0.24	2484	595	565	328.116	0.48	5256	1685	1060	305.723	0.86	8759	2190	1215
4.5	—	—	—	—	—	372.273	0.20	2460	595	565	395.769	0.40	5256	1685	1060	—	—	—	—	—

Overhung load is measured at one shaft diameter from housing.

# Double Reduction

## 1150 rpm HORSEPOWER AND TORQUE RATINGS

1.0 Service Factor

Nominal Output Speed RPM	HQDA					HQDB					HQDC					HQDD				
	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.
500	2.304	2.91	349	265	250	2.262	11.30	1332	315	305	2.230	18.8	2178	1530	530	2.230	40.0	4647	1810	630
462	—	—	—	—	—	—	—	—	—	—	2.489	18.8	2431	1575	530	2.489	38.0	4927	1820	640
420	2.773	2.90	419	265	250	2.711	11.30	1596	350	325	2.783	18.8	2719	1605	540	2.783	35.0	5074	1855	675
383	—	—	—	—	—	—	—	—	—	—	3.003	17.9	2800	1620	560	3.003	33.8	5287	1890	695
339	3.360	2.63	460	270	270	3.431	9.52	1701	360	340	3.374	16.2	2843	1620	575	3.374	30.5	5361	1945	720
319	—	—	—	—	—	—	—	—	—	—	3.655	15.1	2876	1685	585	3.511	29.7	5427	1965	720
282	4.114	2.40	514	270	270	3.982	8.15	1691	370	340	4.139	12.5	2695	1685	605	3.969	21.2	4391	1980	730
242	—	—	—	—	—	4.856	10.30	2605	395	350	4.716	11.9	2924	1685	660	4.716	21.2	5197	2070	765
230	5.057	2.91	766	290	270	—	—	—	—	—	5.033	17.5	4588	1685	660	5.033	36.0	9439	2100	785
223	5.120	2.10	560	290	270	5.205	5.75	1559	405	350	—	—	—	—	—	—	—	—	—	—
202	—	—	—	—	—	5.819	8.35	2532	425	360	5.617	16.0	4682	1685	660	5.617	33.0	9657	2135	810
194	6.087	2.90	920	290	280	—	—	—	—	—	6.281	15.0	4908	1685	685	6.281	30.0	9817	2250	855
177	6.528	1.70	578	305	290	6.625	4.90	1691	450	380	6.625	8.5	2917	1685	695	6.475	27.0	9109	2250	865
170	—	—	—	—	—	—	—	—	—	—	6.777	14.5	5119	1685	695	6.777	28.1	9921	2250	865
158	7.375	2.70	1037	315	305	7.363	6.90	2647	460	395	7.117	13.5	5005	1685	695	7.228	25.0	9414	2250	890
151	7.560	2.60	1024	325	305	7.605	6.18	2449	460	395	7.615	13.5	5356	1685	720	7.615	24.3	9641	2250	900
147	—	—	—	—	—	—	—	—	—	—	7.833	7.2	2918	1685	720	7.833	13.4	5466	2250	900
145	—	—	—	—	—	—	—	—	—	—	7.943	12.0	4966	1685	720	7.924	23.3	9619	2250	900
142	8.137	1.37	583	340	315	8.128	4.00	1694	460	395	8.250	12.5	5373	1685	730	8.082	23.0	9685	2250	910
131	9.031	2.40	1129	340	315	8.545	6.00	2671	470	405	8.883	11.3	5206	1685	740	8.720	21.5	9767	2250	920
125	9.100	2.40	1138	340	315	9.116	5.20	2470	470	405	9.342	11.5	5597	1685	750	8.957	20.8	9683	2250	920
117	9.813	1.15	588	340	325	—	—	—	—	—	9.583	10.5	5242	1685	765	9.800	19.3	9868	2250	965
113	—	—	—	—	—	10.276	3.16	1689	485	415	—	—	—	—	—	10.196	18.3	9897	2250	980
108	—	—	—	—	—	—	—	—	—	—	10.645	10.5	5823	1685	785	10.645	17.5	9705	2250	990
105	11.025	2.00	1149	350	325	11.172	4.60	2677	495	425	10.769	9.4	5274	1685	795	—	—	—	—	—
102	11.238	2.10	1230	350	325	11.534	4.18	2512	495	425	—	—	—	—	—	11.525	16.6	9982	2250	990
96	11.280	1.00	588	350	325	12.304	2.64	1695	495	425	11.667	9.0	5470	1685	820	11.697	9.0	5484	2250	1055
87	—	—	—	—	—	13.386	3.63	2531	505	440	13.211	7.8	5334	1685	840	—	—	—	—	—
85	13.500	1.88	1322	360	335	13.594	2.36	1671	505	440	13.777	4.0	2871	1685	855	13.697	14.1	10062	2250	1090
81	14.326	0.79	595	370	335	14.219	3.65	2704	505	450	—	—	—	—	—	—	—	—	—	—
80	14.329	1.73	1291	370	335	—	—	—	—	—	14.953	8.2	6349	1685	865	—	—	—	—	—
76	—	—	—	—	—	—	—	—	—	—	15.054	6.9	5380	1685	875	—	—	—	—	—
68	16.800	1.48	1295	380	335	17.036	1.54	1367	530	460	16.614	3.3	2813	1685	890	16.614	6.0	5194	2250	1110
67	17.280	0.65	587	395	350	17.445	2.98	2708	540	460	—	—	—	—	—	—	—	—	—	—
66	17.861	1.35	1256	395	350	17.500	2.95	2690	540	460	17.679	6.9	6355	1685	900	17.679	10.8	9901	2250	1110
58	19.776	0.57	590	405	360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
53	21.420	1.19	1328	425	370	—	—	—	—	—	21.146	5.1	5619	1685	930	—	—	—	—	—
52	21.540	1.15	1291	425	370	22.054	2.38	2729	560	485	—	—	—	—	—	—	—	—	—	—
51	—	—	—	—	—	22.273	2.34	2715	560	485	—	—	—	—	—	22.747	9.2	10844	2250	1170
46	24.759	1.00	1290	450	370	—	—	—	—	—	25.000	4.3	5659	1685	955	—	—	—	—	—
43	26.700	1.01	1410	450	370	26.406	2.00	2751	585	505	—	—	—	—	—	26.400	7.3	9972	2250	1215
42	—	—	—	—	—	27.326	1.93	2748	595	505	—	—	—	—	—	—	—	—	—	—
37	31.445	0.76	1245	450	380	29.176	1.80	2736	595	505	31.096	3.9	6237	1685	980	—	—	—	—	—
34	32.200	0.84	1404	450	380	34.546	1.54	2763	595	530	—	—	—	—	—	33.969	6.3	11061	2250	1235
31	37.013	0.74	1427	450	395	36.563	1.45	2762	595	540	37.500	3.3	6350	1685	1000	37.500	5.2	10062	2250	1235
30	37.929	0.65	1289	450	395	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	41.364	1.31	2823	595	550	41.663	2.7	5903	1685	1010	41.663	4.7	10093	2250	1235
26	43.407	0.57	1289	450	395	—	—	—	—	—	43.974	2.5	5681	1685	1010	—	—	—	—	—
25	47.008	0.58	1424	450	395	45.703	1.20	2857	595	560	—	—	—	—	—	48.252	4.4	11032	2250	1235
22	—	—	—	—	—	—	—	—	—	—	53.030	2.0	5600	1685	1010	53.608	4.0	11075	2250	1235
20	56.700	0.49	1432	450	395	57.273	0.95	2835	595	560	58.917	1.9	5816	1685	1010	—	—	—	—	—
18	64.890	0.44	1490	470	395	65.227	0.85	2875	595	565	—	—	—	—	—	—	—	—	—	—

Overhung load is measured at one shaft diameter from housing.

# Triple Reduction

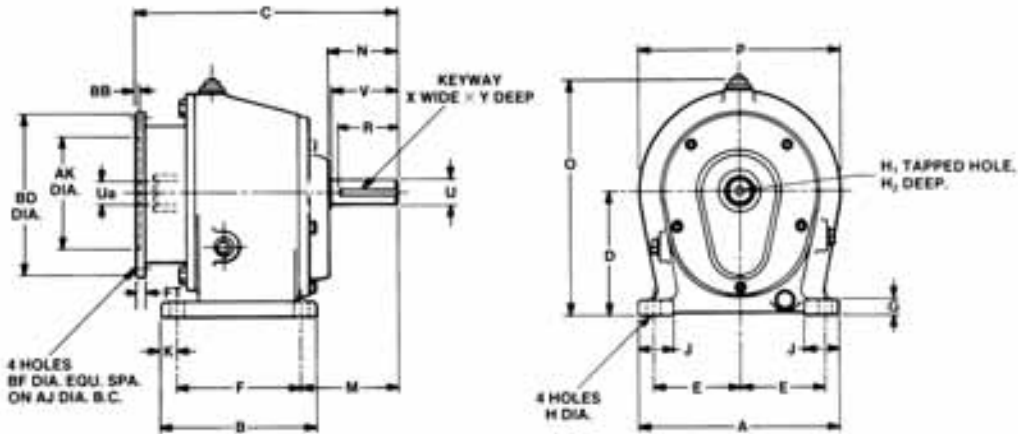
## 1150 rpm HORSEPOWER AND TORQUE RATINGS

1.0 Service Factor

Nominal Output Speed RPM	HQTA					HQTB					HQTC					HQTD				
	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.	Actual Ratio:1	Input HP	Output Torque Inch - Lbs.	Overhung Load Lbs.	Thrust Load Lbs.
21	—	—	—	—	—	56.585	0.72	2076	570	550	54.418	1.92	5292	1685	1010	55.531	2.82	7963	2250	1235
19	62.471	0.39	1188	475	375	59.747	0.79	2376	575	555	63.519	1.65	5292	1685	1010	61.569	2.91	9113	2250	1235
17	—	—	—	—	—	70.417	0.58	2076	590	565	66.635	1.66	5604	1685	1010	71.453	2.51	9113	2250	1235
16	—	—	—	—	—	72.386	0.66	2424	595	565	—	—	—	—	—	72.600	1.53	5839	2250	1235
15	79.781	0.28	1139	500	380	—	—	—	—	—	76.955	1.35	5292	1685	1010	—	—	—	—	—
14	—	—	—	—	—	88.636	0.54	2424	595	565	82.923	1.34	5652	1685	1050	—	—	—	—	—
13	—	—	—	—	—	89.781	0.46	2076	595	565	—	—	—	—	—	92.400	1.58	7432	2250	1235
12	93.388	0.27	1272	500	380	—	—	—	—	—	94.231	1.11	5292	1685	1055	93.415	1.59	7521	2250	1235
11	104.304	0.23	1200	505	385	110.303	0.43	2424	595	565	105.727	1.07	5736	1685	1060	113.365	1.50	8626	2250	1235
10	119.266	0.21	1296	505	385	111.912	0.36	2076	595	565	117.265	0.90	5292	1685	1060	118.892	1.51	9113	2250	1235
8.5	132.750	0.17	1172	505	385	134.965	0.31	2076	595	565	131.788	0.86	5736	1685	1060	—	—	—	—	—
8	—	—	—	—	—	140.636	0.34	2376	595	565	—	—	—	—	—	143.314	1.19	8626	2250	1235
7.5	—	—	—	—	—	—	—	—	—	—	149.513	0.70	5292	1685	1060	145.868	1.23	9113	2250	1235
7	155.925	0.16	1272	505	385	155.137	0.27	2076	595	565	158.936	0.71	5736	1685	1060	—	—	—	—	—
6.5	—	—	—	—	—	175.303	0.28	2472	595	565	182.690	0.62	5736	1685	1060	171.600	0.99	8626	2250	1235
6	—	—	—	—	—	—	—	—	—	—	186.368	0.56	5292	1685	1060	184.404	0.97	9113	2250	1235
5.5	198.450	0.13	1344	505	385	197.031	0.21	2076	595	565	—	—	—	—	—	189.600	0.90	8626	2250	1235
5	—	—	—	—	—	211.414	0.23	2472	595	565	224.758	0.47	5292	1685	1060	220.800	0.81	9113	2250	1235
4.8	—	—	—	—	—	237.656	0.17	2076	595	565	232.025	0.48	5736	1685	1060	237.600	0.71	8626	2250	1235
4.5	—	—	—	—	—	243.011	0.20	2472	595	565	258.349	0.40	5292	1685	1060	243.961	0.73	9113	2250	1235
4.1	—	—	—	—	—	—	—	—	—	—	279.865	0.40	5736	1685	1060	—	—	—	—	—
3.5	—	—	—	—	—	308.636	0.16	2472	595	565	328.116	0.32	5292	1685	1060	305.723	0.59	9113	2250	1235
3	—	—	—	—	—	372.273	0.13	2448	595	565	395.769	0.27	5292	1685	1060	—	—	—	—	—

Overhung load is measured at one shaft diameter from housing.

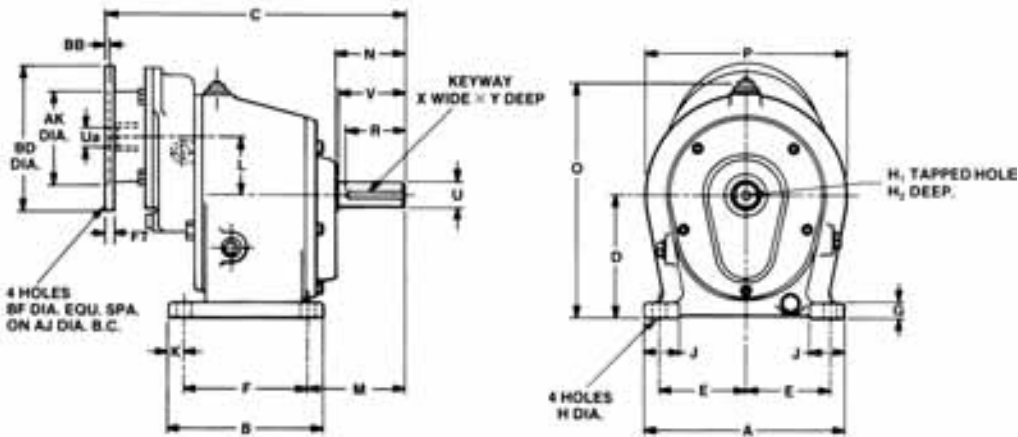
# Foot Mounted Dimensions



## Double Reduction

Model	A	B	C	D	E	F	G	H	H <sub>1</sub>	H <sub>2</sub>	J	K	M	N	O	P	R	U	V	X	Y	U <sub>a</sub>	AJ	AK	BD	BF	BB	FT	INPUT K.W.
HQD-A-56C	6 11/16	5 5/16	9 15/32	3 15/16	2 3/4	4 1/8	1/2	7/16	1/4 UNC	5/8	1 3/16	19/32	3 7/16	2 3/8	7 19/32	6 1/2	2 1/8	7/8	2 1/4	3/16	3/32	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQD-A-140TC	6 11/16	5 5/16	9 15/32	3 15/16	2 3/4	4 1/8	1/2	7/16	1/4 UNC	5/8	1 3/16	19/32	3 7/16	2 3/8	7 19/32	6 1/2	2 1/8	7/8	2 1/4	3/16	3/32	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQD-B-56C	7 7/8	6 1/8	10 3/8	4 29/32	3 11/32	4 15/16	19/32	17/32	3/8 UNF	3/4	1 3/8	19/32	3 27/32	2 3/4	9 11/32	7 7/8	2	1 1/8	2 5/8	1/4	1/8	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQD-B-140TC	7 7/8	6 1/8	10 3/8	4 29/32	3 11/32	4 15/16	19/32	17/32	3/8 UNF	3/4	1 3/8	19/32	3 27/32	2 3/4	9 11/32	7 7/8	2	1 1/8	2 5/8	1/4	1/8	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQD-B-180TC	7 7/8	6 1/8	11 1/8	4 29/32	3 11/32	4 15/16	19/32	17/32	3/8 UNF	3/4	1 3/8	19/32	3 27/32	2 3/4	9 11/32	9	2	1 1/8	2 5/8	1/4	1/8	1 1/8	7 1/4	8 1/2	9	9/16	3/16	9/16	1/4 X 1/8
HQD-C-56C	9 27/32	8 1/16	13 1/4	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQD-C-140TC	9 27/32	8 1/16	13 1/4	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQD-C-180TC	9 27/32	8 1/16	14 7/8	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	1 1/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	1/4 X 1/8
HQD-C-210TC	9 27/32	8 1/16	14 7/8	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	1 3/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	5/16 X 5/32
HQD-C-250TC	9 27/32	8 1/16	14 7/8	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	1 5/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	3/8 X 3/16
HQD-D-180TC	11 13/16	9 27/32	17 7/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	1 1/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	1/4 X 1/8
HQD-D-210TC	11 13/16	9 27/32	17 7/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	1 3/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	5/16 X 5/32
HQD-D-250TC	11 13/16	9 27/32	17 7/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	1 5/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	3/8 X 3/16
HQD-D-280TC	11 13/16	9 27/32	17 7/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	1 7/8	9	10 1/2	11 1/8	9/16	3/16	25/32	1/2 X 1/4

All dimensions are in inches and subject to confirmation.



## Triple Reduction

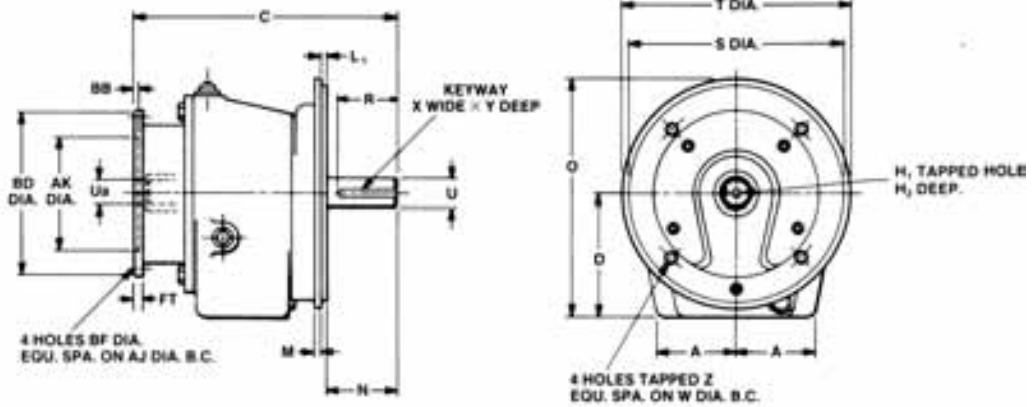
Model	A	B	C	D	E	F	G	H	H <sub>1</sub>	H <sub>2</sub>	J	K	L	M	N	O	P	R	U	V	X	Y	U <sub>a</sub>	AJ	AK	BD	BF	BB	FT	INPUT K.W.
HQT-A-56C	6 11/16	5 5/16	10 9/16	3 15/16	2 3/4	4 1/8	1/2	7/16	1/4 UNC	5/8	1 3/16	19/32	1 1/2	3 7/16	2 3/8	7 19/32	6 1/2	2 1/8	7/8	2 1/4	3/16	3/32	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQT-B-56C	7 7/8	6 1/8	12	4 29/32	3 11/32	4 15/16	19/32	17/32	3/8 UNF	3/4	1 3/8	19/32	1 29/32	3 27/32	2 3/4	9 11/32	7 7/8	2	1 1/8	2 5/8	1/4	1/8	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQT-B-140TC	7 7/8	6 1/8	12	4 29/32	3 11/32	4 15/16	19/32	17/32	3/8 UNF	3/4	1 3/8	19/32	1 29/32	3 27/32	2 3/4	9 11/32	7 7/8	2	1 1/8	2 5/8	1/4	1/8	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQT-C-56C	9 27/32	8 1/16	14 3/8	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	1 29/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQT-C-140TC	9 27/32	8 1/16	14 3/8	6 3/32	4 1/8	6 1/2	3 1/32	9/16	1/2 UNF	1	2 11/32	25/32	1 29/32	4 5/8	3 3/8	11 15/32	9 27/32	3	1 5/8	3 1/4	3/8	3/16	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQT-D-56C	11 13/16	9 27/32	16 3/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	2 3/8	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQT-D-140TC	11 13/16	9 27/32	16 3/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	2 3/8	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQT-D-180TC	11 13/16	9 27/32	17 3/8	7 3/32	4 23/32	7 7/8	1 3/32	3/4	5/8 UNF	1 3/8	2 3/4	1	2 3/8	4 15/16	3 7/8	15 11/32	11 13/16	3 1/2	1 7/8	3 3/4	1/2	1/4	1 1/8	7 1/4	8 1/2	9	9/16	3/16	9/16	1/4 X 1/8

All dimensions are in inches and subject to confirmation.

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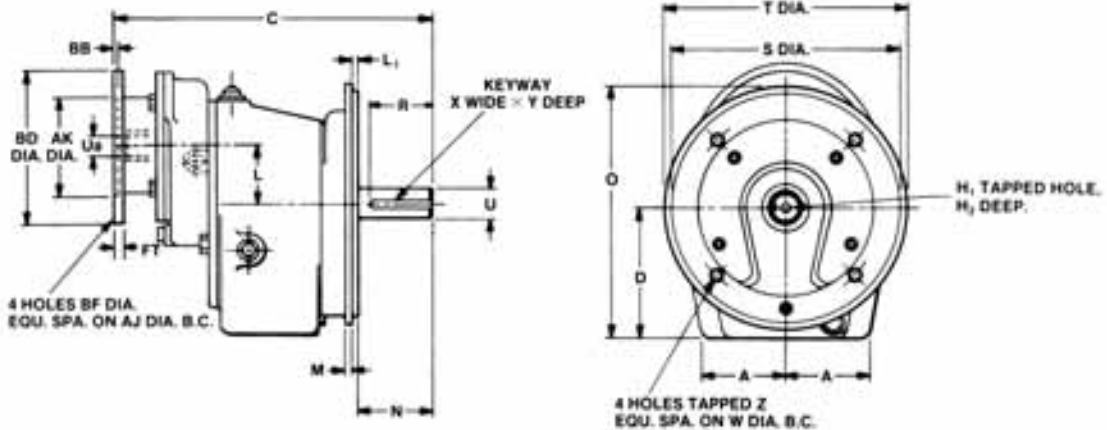
# Flange Mounted Dimensions



## Double Reduction

Model	A	C	D	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	M	N	O	R	S	T	U	W	X	Y	Z	U <sub>a</sub>	AJ	AK	BD	BF	BB	FT	INPUT K.W.
HQVD-A-56C	2 7/16	9 15/32	3 15/16	1/4 UNC	5/8	1/8	7/16	2 1/8	7 5/8	2 1/8	4 1/2	6 1/2	7/8	5 7/8	3/16	3/32	3/8 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVD-A-140TC	2 7/16	9 15/32	3 15/16	1/4 UNC	5/8	1/8	7/16	2 1/8	7 5/8	2 1/8	4 1/2	6 1/2	7/8	5 7/8	3/16	3/32	3/8 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVD-B-56C	3 1/8	10 3/8	4 13/16	3/8 UNF	3/4	1/4	7/32	2 5/8	9 11/32	2	8 1/2	9	1 1/8	7 1/4	1/4	1/8	1/2 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVD-B-140TC	3 1/8	10 3/8	4 13/16	3/8 UNF	3/4	1/4	7/32	2 5/8	9 11/32	2	8 1/2	9	1 1/8	7 1/4	1/4	1/8	1/2 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVD-B-180TC	3 1/8	11 1/8	4 13/16	3/8 UNF	3/4	1/4	7/32	2 5/8	9 11/32	2	8 1/2	9	1 1/8	7 1/4	1/4	1/8	1/2 UNC	1 1/8	7 1/4	8 1/2	9	9/16	3/16	9/16	1/4 X 1/8
HQVD-C-56C	3 7/8	13 1/4	5 29/32	1/2 UNF	1	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVD-C-140TC	3 7/8	13 1/4	5 29/32	1/2 UNF	1	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVD-C-180TC	3 7/8	14 7/8	5 29/32	1/2 UNF	1	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	1 1/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	1/4 X 1/8
HQVD-C-210TC	3 7/8	14 7/8	5 29/32	1/2 UNF	1	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	1 3/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	5/16 X 5/32
HQVD-C-250TC	3 7/8	14 7/8	5 29/32	1/2 UNF	1	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	1 5/8	7 1/4	8 1/2	9 1/8	9/16	3/16	5/8	3/8 X 3/16
HQVD-D-180TC	4 15/32	17 7/8	6 7/8	5/8 UNF	1 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	1 1/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	1/4 X 1/8
HQVD-D-210TC	4 15/32	17 7/8	6 7/8	5/8 UNF	1 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	1 3/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	5/16 X 5/32
HQVD-D-250TC	4 15/32	17 7/8	6 7/8	5/8 UNF	1 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	1 5/8	7 1/4	8 1/2	9 1/8	9/16	3/16	2 1/32	3/8 X 3/16
HQVD-D-280TC	4 15/32	18 7/16	6 7/8	5/8 UNF	1 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	1 7/8	9	10 1/2	11 1/8	9/16	3/16	25/32	1/2 X 1/4

All dimensions are in inches and subject to confirmation.



## Triple Reduction

Model	A	C	D	H <sub>1</sub>	H <sub>2</sub>	L	L <sub>1</sub>	M	N	O	R	S	T	U	W	X	Y	Z	U <sub>a</sub>	AJ	AK	BD	BF	BB	FT	INPUT K.W.
HQVT-A-56C	2 7/16	10 9/16	3 15/16	1/4 UNC	5/8	1 1/2	1/8	7/16	2 1/8	7 5/8	2 1/8	4 1/2	6 1/2	7/8	5 7/8	3/16	3/32	3/8 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVT-B-56C	3 1/8	12	4 13/16	3/8 UNF	3/4	1 29/32	1/4	7/32	2 5/8	9 11/32	2	8 1/2	9	1 1/8	7 1/4	1/4	1/8	1/2 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVT-B-140TC	3 1/8	12	4 13/16	3/8 UNF	3/4	1 29/32	1/4	7/32	2 5/8	9 11/32	2	8 1/2	9	1 1/8	7 1/4	1/4	1/8	1/2 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVT-C-56C	3 7/8	14 3/8	5 29/32	1/2 UNF	1	1 29/32	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVT-C-140TC	3 7/8	14 3/8	5 29/32	1/2 UNF	1	1 29/32	1/4	1/2	3	11 15/32	3	10 1/2	11 1/8	1 5/8	9	3/8	3/16	1/2 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	1 1/32	3/16 X 3/32
HQVT-D-56C	4 15/32	16 3/8	6 7/8	5/8 UNF	1 3/8	2 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	5/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVT-D-140TC	4 15/32	16 3/8	6 7/8	5/8 UNF	1 3/8	2 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	7/8	5 7/8	4 1/2	6 1/2	7/16	5/32	7/16	3/16 X 3/32
HQVT-D-180TC	4 15/32	17 3/32	6 7/8	5/8 UNF	1 3/8	2 3/8	1/4	1 1/16	3 1/2	15 5/32	3 1/2	12 1/2	13	1 7/8	11	1/2	1/4	5/8 UNC	1 1/8	7 1/4	8 1/2	9	9/16	3/16	7/16	1/4 X 1/8

All dimensions are in inches and subject to confirmation.

IPTS, INC.

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# Ratio-Pak

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



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

## Approximate Net Weight and Oil Capacity

Model	Weight (LBS.)	Oil Capacity (OUNCES)
RPQ1	18	11
RPQ2	25	14
RPQ3	50	28
Size 1 Base	1	—
Size 2 Base	1	—
Size 3 Base	2	—

# Ratio Pak - Single Reduction Ratings

1.0 Service Factor

SIZE 1 at 1750 RPM Input Speed					
Ratio	Input HP	Output			OHL
		HP	RPM	Torque	
1.5:1	3.29	3.19	1167	172	286
2:1	2.74	2.66	875	192	315
3:1	2.06	2.00	583	216	315
4:1	1.45	1.41	437	203	315
5:1	1.05	1.02	350	183	315

SIZE 2 at 1750 RPM Input Speed						
Ratio	Input HP	Output			OHL	OHL
		HP	RPM	Torque	56TC Output Flange	140TC Output Flange
1.5:1	13.60	13.19	1167	712	341	681
2:1	11.76	11.41	875	822	375	750
3:1	9.48	9.20	583	944	375	750
4:1	6.88	6.67	437	962	375	750
5:1	5.06	4.91	350	884	375	750

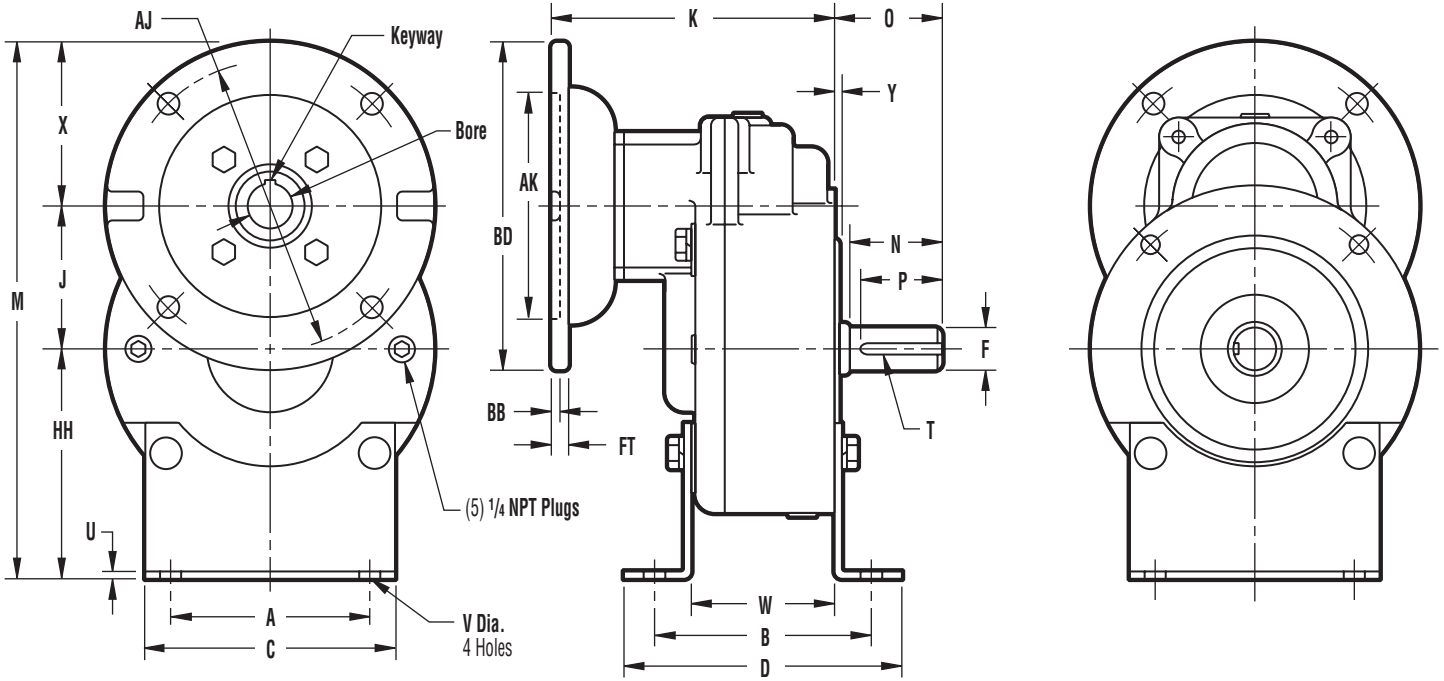
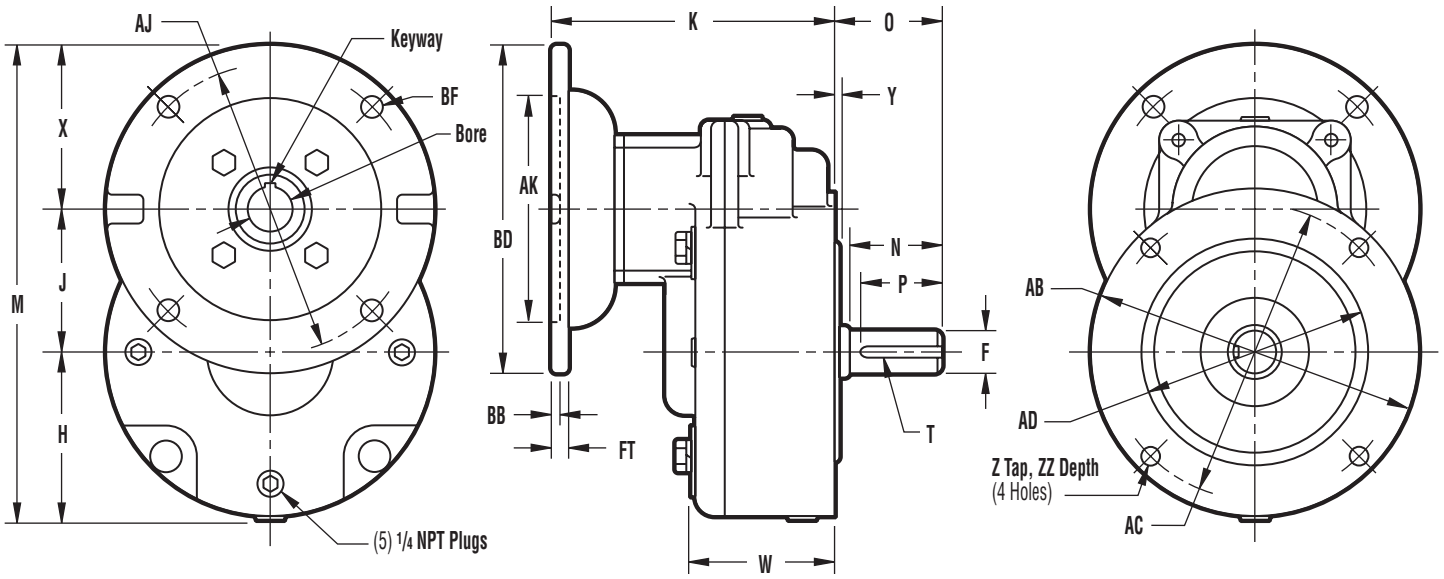
SIZE 3 at 1750 RPM Input Speed							
Ratio	Input HP	Output			OHL	OHL	
		HP	RPM	Torque	180TC Output Flange	210TC Output Flange	
1.5:1	17.79	17.26	1167	932	1030	1030	
2:1	15.38	14.92	875	1075	1100	1135	
3:1	12.39	12.02	583	1299	1100	1300	
4:1	8.99	8.72	437	1258	1100	1300	
5:1	6.61	6.41	350	1155	1100	1300	

Output Torque in Inch-Pounds. Overhung Load in Pounds at one shaft diameter from output flange.

Model	Available As
RPQ1	Quill 56C Flange Input and 56C Flange Output
RPQ2	Quill 56C Flange Input and 56C Flange Output Quill 56C Flange Input and 140TC Flange Output Quill 140TC Flange Input and 56C Flange Output Quill 140TC Flange Input and 140TC Flange Output
RPQ3	Quill 180TC Flange Input and 180TC Flange Output Quill 180TC Flange Input and 210TC Flange Output Quill 210TC Flange Input and 180TC Flange Output Quill 210TC Flange Input and 210TC Flange Output

When Ordering, Specify:		RPQ 2 -1.5 - 56C - 140TC - B					
Type	RPQ - Quill Flange Input	↑	↑	↑	↑	↑	↑
Size	1, 2, or 3	↑	↑	↑	↑	↑	↑
Ratio	1.5:1, 2:1, 3:1, 4:1, or 5:1	↑	↑	↑	↑	↑	↑
Input Flange Size	56C, 140TC, 180TC, or 210TC	↑	↑	↑	↑	↑	↑
Output Flange Size	56C, 140TC, 180TC, or 210TC	↑	↑	↑	↑	↑	↑
If Optional Base is required		↑	↑	↑	↑	↑	↑

# Model RPQ



with Optional Base

Size	Output Flange	A	B	C	D	F	G	H	HH	J	K	M	MM	N	O	P	T	U	V	W	X	Y	Z	ZZ	AB	AC	AD
1	56C	4.00	3.875	5.00	5.187	0.625	1.805	3.45	4.62	1.675	5.177	6.875	8.100	1.875	2.06	1.625	3/16 X 3/32	0.12	0.406	2.59	3.25	0.13	3/8-16	0.75	6.50	5.875	4.50
2	56C					0.625											3/16 X 3/32										
	140TC	4.00	4.120	5.00	5.430	0.875	1.850	3.40	4.62	2.875	5.625	8.125	9.350	1.875	2.125	1.625	3/16 X 3/32	0.12	0.406	2.83	3.25	0.13	3/8-16	0.75	6.50	5.875	4.50
3	180TC					1.125											1/4 X 1/8										
	210TC	5.13	4.750	6.37	6.150	1.375	1.825	4.81	4.95	2.875	7.43	9.40	12.19	2.875	3.00	2.563	5/16 X 5/32	0.16	0.500	3.24	4.50	0.25	1/2-13	0.94	9.13	7.250	8.50

Input Flange	AJ	AK	BD	BF	BB	FT	Bore	Keyway
56C	5.875	4.50	6.50	0.44	0.16	0.31	0.625	3/16 X 3/32
140TC	5.875	4.50	6.50	0.44	0.16	0.31	0.875	3/16 X 3/32
180TC	7.250	8.50	9.00	0.53	0.19	0.38	1.125	1/4 X 1/8
210TC	7.250	8.50	9.00	0.53	0.19	0.38	1.375	5/16 X 5/32

Dimensions in inches



# Engineering

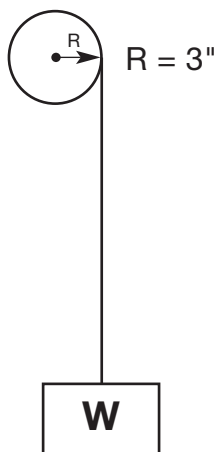
## Horsepower and Torque

One horsepower is the amount of power required to raise 33,000 pounds a distance of one foot in one minute's time.

$$\text{HP} = \frac{\text{LOAD IN POUNDS X FEET PER MINUTE}}{33,000}$$

Torque is the product of a force expressed in pounds multiplied by a radius measured in inches from the center of a shaft. This product is expressed in inch pounds.

$$\text{Torque} = \text{Force (LBS.) X Radius (inches)}$$



$$W = 100 \text{ LBS.}$$

$$T = 100 \times 3 = 300 \text{ In. LBS.}$$

The relationship between horsepower and torque is expressed as follows:

$$\text{HP} = \frac{\text{Torque X RPM}}{63,025}$$

$$\text{Torque} = \frac{63,025 \times \text{HP}}{\text{RPM}}$$

## Overhung Load

Overhung load is the radial force imposed on a shaft by a mounted pinion, pulley, sheave or sprocket. The overhung load ratings expressed in this catalog are the allowable load measured at a distance of one shaft diameter from the housing. When one of the above items is mounted on the output shaft of a reducer a calculation should be made to determine whether the resulting overhung load exceeds the overhung load rating of the reducer.

$$\text{OHL} = \frac{\text{Output Torque}}{\text{Factor}} \times \text{Overhung Load Radius of Mounted Member}$$

Mounted Member	Factor
Sprocket	1.00
Timing belt pulley	1.00
Pinion	1.25
V Belt sheave	1.50
Flat belt pulley	2.50
Variable pitch pulley	3.50

## Efficiency

To calculate the efficiency of a speed reducer divide the output horsepower by the input horsepower.

$$\text{EFFICIENCY} = \frac{\text{Output Horsepower}}{\text{Input Horsepower}}$$

When only the input horsepower and output torque are known the output torque can be converted to output horsepower by the following formula:

$$\text{OUTPUT HORSEPOWER} = \frac{\text{Output Torque X Output RPM}}{63,025}$$

Then take the output horsepower and divide by the input horsepower to obtain efficiency.

# Notes

# TERMS AND CONDITIONS

All sales and quotations by IPTS, Inc., hereafter referred to as the "Company", shall be made under the following terms and conditions.

## 1. QUOTATIONS AND CONDITIONS OF ACCEPTANCE

Unless otherwise agreed to, quotations on all stock items are for immediate shipment, subject to prior sale. Quotations made on special items are subject to acceptance within thirty (30) days thereof. The Company reserves the right to alter or cancel a quotation any time prior to receiving a written acceptance order from the customer.

## 2. PRICES

Prices are in accordance with current Company price sheets, are based on quantity specified and are subject to minimum order requirement of the Company. In the event the Company consents to the cancellation or suspension of orders, it shall be entitled to charge for work done and material ordered or used up to the time of giving its written consent to such cancellation or suspension. Prices, specifications, and terms and conditions, as well as all statements appearing in the Company's catalogs and advertisements, and made elsewhere by the Company are subject to change without notice. Changes by the customer in specification or delivery requirements will be subject to change in price. Whenever the net price of an order amounts to less than \$30.00 a minimum charge of \$30.00 will be made.

## 3. SHIPMENTS

All shipments are made F.O.B. IPTS. When ordering, the customer's desired method of shipment must be clearly stated. Where instructions for shipping do not appear on the order, shipment will be made according to the Company's best judgment. Full risk of loss (including transportation delays and losses) shall pass to the customer upon delivery to a common carrier at the stated F.O.B. point. Partial shipments shall be permitted and the Company may invoice each shipment separately.

## 4. REFUSAL OF SHIPMENT

In case of the refusal or inability of the customer to accept any shipment in accordance with the terms of the order, the customer shall be liable for freight, express, storage, extra cost of handling and all other expenses incurred by the Company as a result of such refusal or inability.

## 5. DELAYS OR NONPERFORMANCE

The Company shall not be liable for delay in delivery or failure in performance caused by material shortage, acts of God, strikes, or any other causes beyond the Company's reasonable control. Failure to make deliveries in accordance with the customer's requirements shall not constitute cause for cancellation.

## 6. CREDIT TERMS

All customer orders shall be subject to the approval of the Company's Credit Department. Those whose credit is satisfactory, will be extended terms of thirty (30) days net. Payment of all invoices shall be made in U.S. funds. In the event satisfactory credit cannot be established or an account becomes delinquent, the Company reserves the right to demand cash in advance or ship C.O.D.

## 7. SALES AND USE TAX

The Company shall not be liable for sales, use, or similar taxes arising out of the sales, use or delivery of any of the Company's products.

## 8. ERRORS

The Company shall not be held responsible for printers', stenographic or clerical errors made in catalogs, brochures, or other forms of printed matter. All such errors are subject to correction.

## 9. LIMITED WARRANTY

The Company warrants its gear reducers to be free from defects in material and workmanship. Any IPTS gear reducer which shall within 2 years from date of shipment, be proved to the Company's satisfaction to have been defective at the time of delivery in these respects will be replaced or repaired by the Company at its option. The Company's liability under this limited warranty is limited to such replacement or repair of the gear reducer and the Company shall not be held liable in any form of action for direct or consequential damages to property or person. Freight is the responsibility of the customer.

This warranty shall not apply where there is evidence of abuse, misapplication, improper or lack of maintenance, accident, alteration or to normal wearable terms.

The foregoing limited warranty is expressly made in lieu of all other warranties whatsoever, expressed, implied and statutory and including without limitation the implied warranties of merchantability and fitness.

No employee, agent, distributor or other person is authorized to give additional warranties on behalf of the Company, nor to assume for the Company any other liability in connection with any of its products, except by an officer of the Company in writing.

## 10. DEFERRED DELIVERIES

Deferred deliveries are subject to Company approval.

## 11. RETURNED GOODS

No goods will be accepted for return unless authorized by the Company in writing. In all cases, the transportation charges must be prepaid.

## 12. CANCELLATION

Cancellation of orders may be made only upon our written approval, and are subject to cancellation and/or re-stocking charges.

## 13. PATTERN AND TOOLING CHARGES

Pattern and/or tooling charges represent the customer's proportionate cost and it is expressly understood that such patterns and/or tooling remain the property of the Company, unless otherwise agreed in writing.

## 14. GENERAL

Any terms and conditions of a customer's order which are inconsistent with or additional to the terms and conditions hereof shall not be binding on the Company and shall not be considered applicable to any sale or shipment of the Company's products. All such terms and conditions are hereby expressly rejected. No waiver, alteration or modification of any of the Company's terms and conditions shall be binding on the Company unless made in writing and agreed to by a duly authorized official of the Company.

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## CUSTOM GEAR REDUCERS



Whether you require a gearbox made to your specifications or one of our standard models with a special ratio, shaft length or accessory, IPTS can meet your custom reducer needs.

- Worm, helical, spur, bevel or planetary gearing.
- Nema, I.E.C. or SAE flanges.
- Shafts available in stainless steel. Nickel or chrome plating also available.
- Special keyways, internal or external splines for input/output shafts.

From low volume to thousands, IPTS has the capability and experience to manufacture your custom reducer requirement quickly and at a competitive price.

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# FAX 866-702-0286