



Cone Drive

DUODRIVE

POWER TRANSMISSION SOLUTIONS

PRODUCTS IN THE RANGE

Serving an entire spectrum of mechanical drive applications from food, energy, mining and metal; to automotive, aerospace and marine propulsion, we are here to make a positive difference to the supply of drive solutions.



Model HP

Worm gear units with double-enveloping worm gearing. Available in single, double and triple reductions



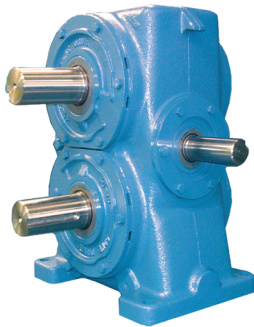
Model HP-A

Universal metric housing featuring double-enveloping gearing & drywell feature



Series B

Industrial duty worm gear unit featuring Conex gearing



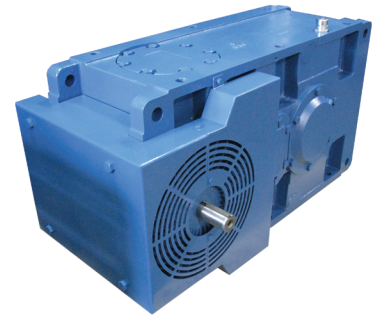
DuoDrive

Dual gears on parallel output shafts



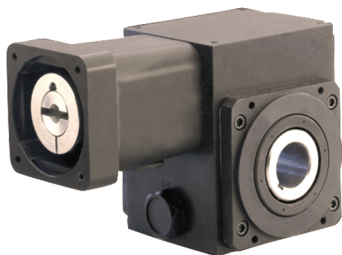
Extruder Drive

Rugged duty reducer takes high screw pressure



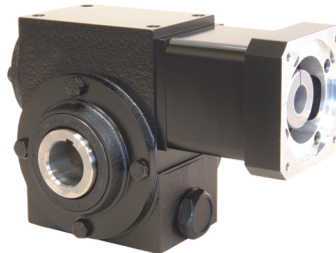
Series G

Helical parallel shaft & bevel helical right angle drive gear units



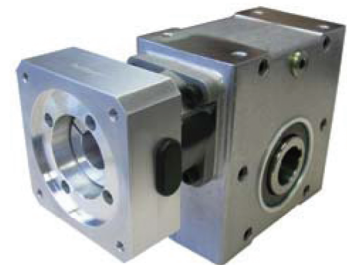
Series W

Precision right angle servo gearboxes



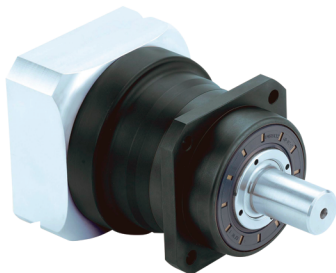
Model RG

Moderate precision right angle servo gearboxes



Series S

Value engineered right angle servo gearboxes



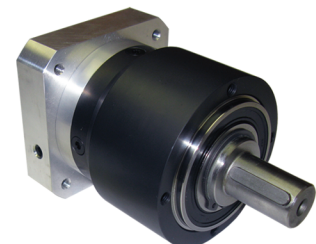
Series P

Precision planetary servo gearboxes



Series E

Economical planetary servo gearboxes



Series LE

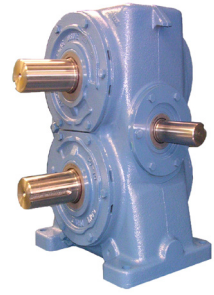
In-line helical geared motors & reducers

We can create custom engineered transmission solutions of any size and configuration.

Duodrive Options

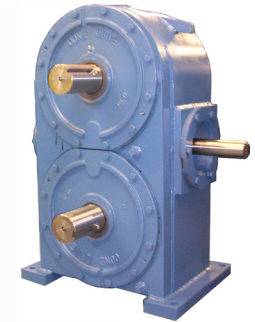
Standard Unit

- Standard sizes ranging from 2.00" up to 12.00"
- Standard ratios from 5:1 to 70:1
- Solid or hollow output shafts
- Fan or internal water cooling



Steel Weldment

- Steel fabricated housing
- Sizes ranging from 2.00" up to 28.00"
- Solid ratios from 5:1 up to 70:1
- Solid or hollow output shafts
- Fan or internal water cooling



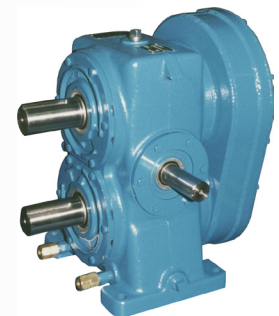
Double Reduction Assembly

- Single reduction worm mounted primary for higher ratio
- Sizes ranging from 2.00" up to 12.00"
- Solid ratios from 25:1 up to 4900:1
- Solid or hollow output shafts



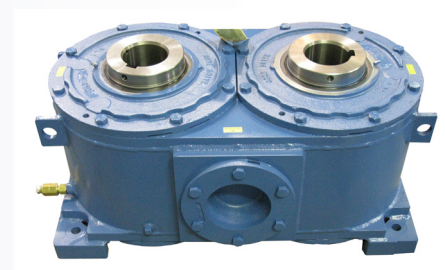
Unequal Ratio

- Unequal ratio configuration
- Sizes ranging from 2.00" up to 12.00"
- Solid ratios from 1:1 up to 4:1
- Solid or hollow output shafts
- Fan or internal water cooling

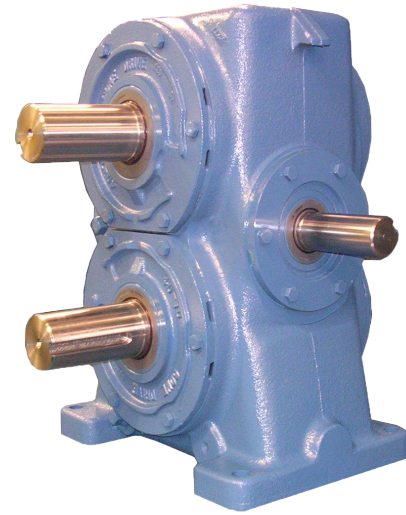


Vertical Output

- Vertical output shaft configuration
- Sizes ranging from 2.00" up to 12.00"
- Solid ratios from 5:1 up to 70:1
- Solid or hollow output shafts
- Fan or internal water cooling



- Solid or Hollow Output Shafts
- Double Extended Input or Output Shafts
- Ratios up to 4,900:1
- Water and Fan Cooling
- Motor Bell and Coupling NEMA 56 to 256



Worm gear units are comprised of one worm input shaft driving two gears on parallel output shafts, one shaft turns clockwise while the other turns counter clockwise providing synchronous drive operation.

Output Torque capacity up to 2,600,000 lb.in.

Base Mount with hollow or solid output shaft in single and double reduction type. Double reduction DuoDrive can be furnished by using the same worm gear primary.

Water cooling with finned O.D tubing is available for sizes D40 through D240. Fan cooling is available for limited sizes, please contact Cone Drive Operation. An oil circulation pump may mounted and driven directly from the blind end of a single extended input shaft for size D40 through D240.

Notes:
 Hollow shaft bore sizes, motorizing options, hand of assembly and mounting position numbers follow in this catalog. For ratings above size D-120, or the availability of vertical shaft units, or motorizing options, please contact Cone Drive Operation.

Table of Contents	Page
Ratings ----- Size 20 through 120 For size above 120, please contact Cone Drive Operation	3 - 13
Dimensions ----- Size 20 through 240 Motorizing For Motorizing options, please contact Cone Drive Operation	14 - 15
Water Cooling -----	16 - 17
Standard Hollow Gearshaft Bores ----- Size 20 through 120	18
Assembly and Mounting Positions -----	19

DuoDrive Size 20 (expanded rating table)

Reducer Size 20

4.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM							
		100	200	300	580	720	870	1150	1750
5	Me.HP	0.8	1.3	1.9	3.3	3.9	4.5	5.4	6.7
	Th.HP Std	0.4	0.7	1.0	1.7	2.0	2.4	2.8	3.2
	Efficiency	89	90	91	91	91	92	92	92
	O.T. / Shaft	1,100	950	900	850	800	800	700	600
10	Me.HP	0.5	0.9	1.2	2.1	2.5	2.9	3.5	4.5
	Th.HP Std	0.3	0.5	0.7	1.1	1.4	1.6	1.9	2.4
	Efficiency	83	85	86	87	87	89	90	90
	O.T. / Shaft	1,350	1,250	1,100	1,000	1,000	950	900	750
15	Me.HP	0.4	0.6	0.9	1.5	1.8	2.1	2.5	3.2
	Th.HP Std	0.2	0.4	0.5	0.8	1.0	1.1	1.3	1.7
	Efficiency	79	81	82	85	85	87	88	88
	O.T. / Shaft	1,500	1,150	1,200	1,050	1,050	1,000	950	800
20	Me.HP	0.3	0.5	0.7	1.2	1.4	1.6	1.9	2.5
	Th.HP Std	0.2	0.3	0.4	0.6	0.8	0.9	1.0	1.3
	Efficiency	75	77	78	83	83	83	84	85
	O.T. / Shaft	1,450	1,250	1,150	1,100	1,050	1,000	900	800
25	Me.HP	0.2	0.4	0.6	0.9	1.1	1.3	1.6	2.0
	Th.HP Std	0.2	0.2	0.3	0.5	0.6	0.7	0.9	1.1
	Efficiency	71	75	77	81	81	83	84	84
	O.T. / Shaft	1,150	1,200	1,250	1,000	1,000	1,000	950	800
30	Me.HP	0.2	0.3	0.5	0.8	0.9	1.1	1.3	1.7
	Th.HP Std	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9
	Efficiency	68	70	72	75	75	79	80	80
	O.T. / Shaft	1,300	1,000	1,150	1,000	900	950	900	750
40	Me.HP	0.2	0.3	0.4	0.6	0.7	0.8	1.0	1.3
	Th.HP Std	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7
	Efficiency	61	63	67	72	75	75	76	76
	O.T. / Shaft	1,550	1,200	1,150	950	950	900	850	750
50	Me.HP	0.1	0.2	0.3	0.5	0.6	0.7	0.8	1.0
	Th.HP Std	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6
	Efficiency	54	60	64	70	70	72	73	73
	O.T. / Shaft	900	950	1,050	1,000	950	950	800	700
60	Me.HP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9
	Th.HP Std	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.5
	Efficiency	53	59	61	66	66	69	70	70
	O.T. / Shaft	1,050	1,150	1,200	900	900	900	850	700

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft

DuoDrive Size 25 (expanded rating table)

Reducer Size 25

5.00 Inch (Center Distance at Output Shafts)

		Worm RPM							
Ratio to 1		100	200	300	580	720	870	1150	1750
5	Me.HP	0.8	1.4	2.0	3.5	4.1	4.7	5.5	6.9
	Th.HP Std	0.8	1.4	2.0	3.5	4.0	4.2	4.5	5.0
	Efficiency	89	90	91	91	91	92	92	92
	O.T. / Shaft	2,185	2,033	1,951	1,739	1,642	1,554	1,378	1,136
10	Me.HP	0.5	0.9	1.3	2.3	2.7	3.1	3.6	4.6
	Th.HP Std	0.5	0.9	1.3	2.3	2.7	3.1	3.6	4.0
	Efficiency	83	85	86	87	87	89	90	90
	O.T. / Shaft	2,595	2,444	2,346	2,143	2,042	1,969	1,791	1,478
15	Me.HP	0.3	0.6	0.9	1.6	1.9	2.2	2.6	3.2
	Th.HP Std	0.3	0.6	0.9	1.6	1.9	2.2	2.6	3.2
	Efficiency	79	81	82	85	85	87	88	88
	O.T. / Shaft	2,596	2,449	2,355	2,210	2,107	2,038	1,861	1,531
20	Me.HP	0.3	0.5	0.7	1.2	1.4	1.7	2.0	2.5
	Th.HP Std	0.3	0.5	0.7	1.2	1.4	1.7	2.0	2.5
	Efficiency	75	77	78	83	83	83	84	85
	O.T. / Shaft	2,512	2,380	2,288	2,204	2,101	1,990	1,819	1,512
25	Me.HP	0.2	0.4	0.6	1.0	1.2	1.3	1.6	2.0
	Th.HP Std	0.2	0.4	0.6	1.0	1.2	1.3	1.6	2.0
	Efficiency	71	75	77	81	81	83	84	84
	O.T. / Shaft	2,394	2,334	2,274	2,166	2,065	2,004	1,831	1,508
30	Me.HP	0.2	0.3	0.5	0.8	1.0	1.1	1.3	1.7
	Th.HP Std	0.2	0.3	0.5	0.8	1.0	1.1	1.3	1.7
	Efficiency	68	70	72	75	75	79	80	80
	O.T. / Shaft	2,305	2,190	2,138	2,016	1,922	1,917	1,757	1,452
40	Me.HP	0.1	0.2	0.4	0.6	0.7	0.8	1.0	1.3
	Th.HP Std	0.1	0.2	0.4	0.6	0.7	0.8	1.0	1.3
	Efficiency	61	63	67	72	75	75	76	76
	O.T. / Shaft	2,073	1,977	1,998	1,944	1,931	1,829	1,674	1,383
50	Me.HP	0.1	0.2	0.3	0.5	0.6	0.7	0.8	1.0
	Th.HP Std	0.1	0.2	0.3	0.5	0.6	0.7	0.8	1.0
	Efficiency	54	60	64	70	70	72	73	73
	O.T. / Shaft	1,840	1,888	1,913	1,895	1,807	1,761	1,612	1,332
60	Me.HP	0.1	0.2	0.2	0.4	0.5	0.6	0.7	0.8
	Th.HP Std	0.1	0.2	0.2	0.4	0.5	0.6	0.7	0.8
	Efficiency	53	59	61	66	66	69	70	70
	O.T. / Shaft	1,809	1,862	1,826	1,789	1,706	1,689	1,551	1,279

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft

DuoDrive Size 30 (expanded rating table)

Reducer Size 30

6.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM							
		100	200	300	580	720	870	1150	1750
5	Me.HP	1.4	2.5	3.6	6.1	7.0	7.8	9.0	11.3
	Th.HP Std	1.4	2.0	2.5	3.6	4.1	4.3	4.6	5.1
	Efficiency	89	90	91	91	91	92	92	92
	O.T. / Shaft	3,870	3,583	3,440	2,990	2,778	2,593	2,267	1,874
10	Me.HP	0.9	1.6	2.3	4.0	4.7	5.3	6.2	7.7
	Th.HP Std	0.9	1.6	2.3	3.2	3.4	3.6	3.8	4.1
	Efficiency	83	85	86	87	87	89	90	90
	O.T. / Shaft	4,618	4,344	4,172	3,761	3,543	3,393	3,047	2,504
15	Me.HP	0.6	1.1	1.6	2.8	3.3	3.7	4.4	5.5
	Th.HP Std	0.6	1.1	1.6	2.7	2.9	3.0	3.1	3.3
	Efficiency	79	81	82	85	85	87	88	88
	O.T. / Shaft	4,619	4,352	4,183	3,881	3,664	3,521	3,168	2,604
20	Me.HP	0.5	0.9	1.2	2.2	2.5	2.9	3.4	4.2
	Th.HP Std	0.5	0.9	1.2	2.2	2.5	2.7	2.8	2.9
	Efficiency	75	77	78	83	83	83	84	85
	O.T. / Shaft	4,484	4,231	4,070	3,878	3,670	3,447	3,112	2,586
25	Me.HP	0.4	0.7	1.0	1.7	2.0	2.3	2.7	3.4
	Th.HP Std	0.4	0.7	1.0	1.7	2.0	2.3	2.3	2.4
	Efficiency	71	75	77	81	81	83	84	84
	O.T. / Shaft	4,273	4,156	4,045	3,810	3,605	3,470	3,133	2,573
30	Me.HP	0.3	0.6	0.8	1.5	1.7	1.9	2.3	2.9
	Th.HP Std	0.3	0.6	0.8	1.5	1.7	1.9	2.1	2.2
	Efficiency	68	70	72	75	75	79	80	80
	O.T. / Shaft	4,115	3,900	3,803	3,553	3,356	3,328	3,008	2,471
40	Me.HP	0.2	0.4	0.6	1.1	1.3	1.5	1.7	2.2
	Th.HP Std	0.2	0.4	0.6	1.1	1.3	1.5	1.7	1.9
	Efficiency	61	63	67	72	75	75	76	76
	O.T. / Shaft	3,701	3,519	3,548	3,420	3,372	3,168	2,865	2,354
50	Me.HP	0.2	0.4	0.5	0.9	1.0	1.2	1.4	1.7
	Th.HP Std	0.2	0.4	0.5	0.9	1.0	1.2	1.4	1.7
	Efficiency	54	60	64	70	70	72	73	73
	O.T. / Shaft	3,285	3,361	3,398	3,341	3,162	3,056	2,759	2,274
60	Me.HP	0.2	0.3	0.4	0.7	0.9	1.0	1.2	1.4
	Th.HP Std	0.2	0.3	0.4	0.7	0.9	1.0	1.2	1.4
	Efficiency	53	59	61	66	66	69	70	70
	O.T. / Shaft	3,229	3,309	3,243	3,154	2,985	2,932	2,649	2,183

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft

DuoDrive Size 35 (expanded rating table)

Reducer Size 35

7.00 Inch (Center Distance at Output Shafts)

		Worm RPM							
Ratio to 1		100	200	300	580	720	870	1150	1750
5	Me.HP	4.5	8.3	11.6	18.9	21.7	24.0	27.9	34.4
	Th.HP Std	2.0	3.4	4.3	6.2	6.9	7.4	8.0	8.8
	Th.HP Fan	2.9	5.0	6.5	9.2	10.3	11.1	12.0	13.2
	Efficiency	89	90	91	91	91	92	92	92
	O.T. / Shaft	6,350	5,850	5,550	4,700	4,350	4,000	3,550	2,900
10	Me.HP	2.9	5.3	7.5	12.6	14.5	16.2	18.8	23.4
	Th.HP Std	1.3	2.3	3.3	5.0	5.5	5.9	6.3	6.7
	Th.HP Fan	2.0	3.5	5.0	7.5	8.3	8.9	9.5	10.1
	Efficiency	83	85	86	87	87	89	90	90
	O.T. / Shaft	7,600	7,100	6,800	6,000	5,550	5,250	4,650	3,800
15	Me.HP	2.1	3.7	5.3	8.9	10.3	11.5	13.3	16.7
	Th.HP Std	0.9	1.6	2.3	3.9	4.5	5.0	5.8	5.3
	Th.HP Fan	1.4	2.4	3.5	5.9	6.8	7.5	8.7	8.0
	Efficiency	79	81	82	85	85	87	88	88
	O.T. / Shaft	7,850	7,100	6,850	6,200	5,750	5,450	4,850	4,000
20	Me.HP	1.6	2.9	4.0	6.8	7.9	8.9	10.3	12.9
	Th.HP Std	0.7	1.3	1.8	3.0	3.5	3.9	4.3	4.5
	Th.HP Fan	1.1	2.0	2.7	4.5	5.3	5.9	6.5	6.8
	Efficiency	75	77	78	83	83	83	84	85
	O.T. / Shaft	7,600	7,050	6,600	6,150	5,750	5,350	4,750	3,950
25	Me.HP	1.3	2.3	3.3	5.5	6.4	7.2	8.3	10.4
	Th.HP Std	0.6	1.0	1.5	2.4	2.8	3.1	3.6	3.7
	Th.HP Fan	0.9	1.5	2.3	3.6	4.2	4.7	5.4	5.6
	Efficiency	71	75	77	81	81	83	84	84
	O.T. / Shaft	7,300	6,800	6,700	6,050	5,700	5,450	4,800	3,950
30	Me.HP	1.1	1.9	2.8	4.6	5.4	6.0	7.0	8.7
	Th.HP Std	0.5	0.9	1.2	2.0	2.4	2.6	3.1	3.2
	Th.HP Fan	0.8	1.4	1.8	3.0	3.6	3.9	4.7	4.8
	Efficiency	68	70	72	75	75	79	80	80
	O.T. / Shaft	7,100	6,300	6,400	5,650	5,350	5,150	4,650	3,800
40	Me.HP	0.8	1.5	2.1	3.5	4.0	4.5	5.3	6.6
	Th.HP Std	0.4	0.7	0.9	1.5	1.8	2.0	2.3	2.8
	Th.HP Fan	0.6	1.1	1.4	2.3	2.7	3.0	3.5	4.2
	Efficiency	61	63	67	72	75	75	76	76
	O.T. / Shaft	6,150	6,000	5,950	5,500	5,250	4,900	4,450	3,650
50	Me.HP	0.7	1.2	1.7	2.8	3.3	3.7	4.2	5.3
	Th.HP Std	0.3	0.5	0.8	1.3	1.4	1.6	1.9	2.3
	Th.HP Fan	0.5	0.8	1.2	2.0	2.1	2.4	2.9	3.5
	Efficiency	54	60	64	70	70	72	73	73
	O.T. / Shaft	6,000	5,700	5,750	5,350	5,100	4,850	4,200	3,500
60	Me.HP	0.6	1.0	1.4	2.4	2.7	3.1	3.5	4.4
	Th.HP Std	0.3	0.5	0.6	1.1	1.2	1.4	1.6	2.0
	Th.HP Fan	0.5	0.8	0.9	1.7	1.8	2.1	2.4	3.0
	Efficiency	53	59	61	66	66	69	70	70
	O.T. / Shaft	6,050	5,600	5,400	5,200	4,700	4,650	4,050	3,350

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 40 (expanded rating table)

Reducer Size 40

8.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM							
		100	200	300	580	720	870	1150	1750
5	Me.HP	6.5	11.8	16.5	26.3	29.7	32.8	38.0	46.5
	Th.HP Std	3.4	5.2	6.7	9.5	10.7	11.5	12.4	13.6
	Th.HP Fan	5.1	7.8	10.0	14.3	16.0	17.2	18.6	20.5
	Efficiency	92	93	94	94	94	95	95	95
	O.T. / Shaft	9,450	8,650	8,150	6,750	6,150	5,650	4,950	4,000
10	Me.HP	4.2	7.6	10.7	17.6	20.2	22.4	26.0	32.2
	Th.HP Std	2.3	4.2	5.7	7.8	8.5	9.1	9.7	10.4
	Th.HP Fan	3.5	6.3	8.6	11.7	12.8	13.7	14.6	15.6
	Efficiency	86	88	89	90	90	92	93	93
	O.T. / Shaft	11,400	10,550	10,000	8,650	8,000	7,500	6,650	5,400
15	Me.HP	2.9	5.3	7.5	12.5	14.3	15.9	18.4	22.9
	Th.HP Std	1.6	3.0	4.2	6.9	8.0	7.3	7.7	8.2
	Th.HP Fan	2.4	4.5	6.3	10.4	12.0	11.0	11.6	12.3
	Efficiency	82	84	85	88	89	90	91	91
	O.T. / Shaft	11,250	10,550	10,050	9,000	8,400	7,800	6,900	5,650
20	Me.HP	2.3	4.1	5.8	9.6	11.0	12.2	14.2	17.6
	Th.HP Std	1.3	2.3	3.2	5.3	6.1	6.4	6.6	6.9
	Th.HP Fan	2.0	3.5	4.8	8.0	9.2	9.6	9.9	10.4
	Efficiency	78	80	81	86	86	86	87	88
	O.T. / Shaft	11,350	10,350	9,900	9,000	8,300	7,600	6,800	5,600
25	Me.HP	1.8	3.3	4.7	7.7	8.9	9.9	11.5	14.2
	Th.HP Std	1.0	1.9	2.6	4.3	5.0	5.4	5.5	5.7
	Th.HP Fan	1.5	2.9	3.9	6.5	7.5	8.1	8.3	8.6
	Efficiency	74	78	80	84	84	86	87	87
	O.T. / Shaft	10,500	10,150	9,900	8,800	8,200	7,750	6,900	5,600
30	Me.HP	1.5	2.8	3.9	6.5	7.5	8.3	9.7	12.0
	Th.HP Std	0.9	1.6	2.2	3.6	4.2	4.6	4.8	5.0
	Th.HP Fan	1.4	2.4	3.3	5.4	6.3	6.9	7.2	7.5
	Efficiency	71	73	75	78	81	82	83	83
	O.T. / Shaft	10,100	9,700	9,250	8,300	8,000	7,400	6,650	5,400
40	Me.HP	1.2	2.1	3.0	4.9	5.6	6.3	7.3	9.0
	Th.HP Std	0.7	1.2	1.7	2.7	3.1	3.5	4.1	4.3
	Th.HP Fan	1.1	1.8	2.6	4.1	4.7	5.3	6.2	6.5
	Efficiency	64	66	70	75	76	78	79	79
	O.T. / Shaft	9,700	8,750	8,850	8,000	7,450	7,150	6,350	5,150
50	Me.HP	1.0	1.7	2.4	3.9	4.5	5.0	5.8	7.2
	Th.HP Std	0.5	1.0	1.3	2.2	2.5	2.8	3.3	3.8
	Th.HP Fan	0.8	1.5	2.0	3.3	3.8	4.2	5.0	5.7
	Efficiency	57	63	67	73	74	75	76	76
	O.T. / Shaft	9,000	8,450	8,450	7,750	7,300	6,800	6,050	4,950
60	Me.HP	0.8	1.4	2.0	3.3	3.8	4.2	4.9	6.0
	Th.HP Std	0.5	0.8	1.1	1.9	2.1	2.4	2.7	3.4
	Th.HP Fan	0.8	1.2	1.7	2.9	3.2	3.6	4.1	5.1
	Efficiency	56	62	64	69	71	72	73	73
	O.T. / Shaft	8,500	8,250	8,100	7,450	7,100	6,600	5,900	4,750

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 50 (expanded rating table)

Reducer Size 50

10.00 Inch (Center Distance at Output Shafts)

		Worm RPM							
Ratio to 1		100	200	300	580	720	870	1150	1750
5	Me.HP	12.8	23.2	32.2	49.6	55.4	61.6	70.4	85.8
	Th.HP Std	4.2	6.4	8.3	11.8	13.2	14.2	15.3	16.9
	Th.HP Fan	6.4	9.6	12.4	17.6	19.7	21.3	23.0	25.3
	Efficiency	92	93	94	94	94	95	95	95
	O.T. / Shaft	18,500	17,000	15,950	12,700	11,400	10,600	9,200	7,350
10	Me.HP	8.2	14.9	20.8	33.0	37.1	41.0	47.6	58.4
	Th.HP Std	3.8	5.5	7.0	9.6	10.5	11.2	12.0	12.8
	Th.HP Fan	5.7	8.3	10.5	14.4	15.8	16.8	18.0	19.2
	Efficiency	86	88	89	90	90	92	93	93
	O.T. / Shaft	22,250	20,700	19,450	16,150	14,650	13,700	12,150	9,800
15	Me.HP	5.7	10.5	14.6	23.4	26.3	29.1	33.7	41.3
	Th.HP Std	3.2	5.8	5.9	7.9	8.5	9.0	9.5	10.1
	Th.HP Fan	4.8	8.7	8.9	11.9	12.8	13.5	14.3	15.2
	Efficiency	82	84	85	88	89	90	91	91
	O.T. / Shaft	22,100	20,850	19,550	16,800	15,400	14,250	12,650	10,150
20	Me.HP	4.4	8.0	11.2	18.0	20.2	22.3	25.9	31.9
	Th.HP Std	2.4	4.2	5.2	7.1	7.5	7.8	8.1	8.5
	Th.HP Fan	3.6	6.3	7.8	10.7	11.3	11.7	12.2	12.8
	Efficiency	78	80	81	86	86	86	87	88
	O.T. / Shaft	21,650	20,200	19,100	16,850	15,250	13,900	12,350	10,150
25	Me.HP	3.6	6.5	9.1	14.5	16.4	18.1	21.0	25.8
	Th.HP Std	2.0	3.6	4.5	6.1	6.4	6.6	6.8	7.1
	Th.HP Fan	3.0	5.4	6.8	9.2	9.6	9.9	10.2	10.7
	Efficiency	74	78	80	84	84	86	87	87
	O.T. / Shaft	21,000	20,000	19,150	16,550	15,100	14,100	12,550	10,150
30	Me.HP	3.0	5.4	7.6	12.2	13.7	15.2	17.6	21.6
	Th.HP Std	1.7	3.0	3.9	5.3	5.6	5.8	5.9	6.1
	Th.HP Fan	2.6	4.5	5.9	8.0	8.4	8.7	8.9	9.2
	Efficiency	71	73	75	78	81	82	83	83
	O.T. / Shaft	20,150	18,650	18,000	15,550	14,600	13,550	12,050	9,700
40	Me.HP	2.3	4.1	5.7	9.2	10.4	11.4	13.3	16.3
	Th.HP Std	1.3	2.3	3.2	5.1	4.8	5.0	5.2	5.3
	Th.HP Fan	2.0	3.5	4.8	7.7	7.2	7.5	7.8	8.0
	Efficiency	64	66	70	75	76	78	79	79
	O.T. / Shaft	18,550	17,050	16,800	15,000	13,850	12,900	11,550	9,300
50	Me.HP	1.8	3.3	4.6	7.4	8.3	9.2	10.7	13.1
	Th.HP Std	1.0	1.8	2.6	3.7	4.0	4.2	4.4	4.7
	Th.HP Fan	1.5	2.7	3.9	5.6	6.0	6.3	6.6	7.1
	Efficiency	57	63	67	73	74	75	76	76
	O.T. / Shaft	16,200	16,400	16,200	14,700	13,450	12,500	11,150	9,000
60	Me.HP	1.5	2.8	3.9	6.2	7.0	7.7	8.9	10.9
	Th.HP Std	0.9	1.5	2.1	3.3	3.5	3.7	4.0	4.3
	Th.HP Fan	1.4	2.3	3.2	5.0	5.3	5.6	6.0	6.5
	Efficiency	56	62	64	69	71	72	73	73
	O.T. / Shaft	15,900	16,450	15,750	13,950	13,050	12,050	10,700	8,600
70	Me.HP	1.3	2.4	3.3	5.3	6.0	6.6	7.7	9.4
	Th.HP Std	0.7	1.3	1.8	2.9	3.3	3.4	3.7	3.8
	Th.HP Fan	1.1	2.0	2.7	4.4	5.0	5.1	5.6	5.7
	Efficiency	55	61	63	68	70	71	72	72
	O.T. / Shaft	15,800	16,150	15,300	13,750	12,900	11,900	10,650	8,550

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 60 (expanded rating table)

Reducer Size 60

12.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM							
		100	200	300	580	720	870	1150	1750
5	Me.HP	19.5	35.1	47.9	70.5	79.3	87.3	99.8	116.5
	Th.HP Std	6.2	9.3	12.0	17.1	19.1	20.6	22.3	24.5
	Th.HP Fan	9.2	14.0	18.0	25.6	28.7	30.9	33.4	36.8
	Efficiency	92	93	94	94	94	95	95	95
	O.T. / Shaft	28,250	25,700	23,650	18,000	16,350	15,050	13,000	10,000
10	Me.HP	12.5	22.7	31.3	47.5	53.3	59.0	68.2	81.7
	Th.HP Std	5.5	7.9	10.2	13.9	15.2	16.3	17.5	18.6
	Th.HP Fan	8.3	11.9	15.3	20.9	22.8	24.5	26.3	27.9
	Efficiency	86	88	89	90	90	92	93	93
	O.T. / Shaft	33,900	31,500	29,250	23,250	21,000	19,700	17,400	13,700
15	Me.HP	8.8	16.0	22.1	33.7	37.7	41.8	48.1	58.0
	Th.HP Std	4.9	6.9	8.5	11.5	12.3	13.1	13.8	14.7
	Th.HP Fan	7.4	10.4	12.8	17.3	18.5	19.7	20.7	22.1
	Efficiency	82	84	85	88	89	90	91	91
	O.T. / Shaft	34,100	31,800	29,600	24,200	22,050	20,450	18,000	14,300
20	Me.HP	6.7	12.2	16.9	25.9	28.9	32.2	36.9	45.0
	Th.HP Std	3.8	6.1	7.5	10.2	10.8	11.4	11.8	12.3
	Th.HP Fan	5.7	9.2	11.3	15.3	16.2	17.1	17.7	18.5
	Efficiency	78	80	81	86	86	86	87	88
	O.T. / Shaft	32,950	30,750	28,750	24,200	21,750	20,100	17,600	14,300
25	Me.HP	5.4	9.9	13.7	21.0	23.4	26.0	29.9	36.2
	Th.HP Std	3.1	5.2	6.5	8.9	9.3	9.6	9.9	10.2
	Th.HP Fan	4.7	7.8	9.8	13.4	14.0	14.4	14.9	15.3
	Efficiency	74	78	80	84	84	86	87	87
	O.T. / Shaft	31,500	30,450	28,800	24,000	21,500	20,250	17,850	14,200
30	Me.HP	4.6	8.3	11.5	17.6	19.7	21.8	25.0	30.5
	Th.HP Std	2.6	4.4	5.7	7.7	8.1	8.4	8.6	8.9
	Th.HP Fan	3.9	6.6	8.6	11.6	12.2	12.6	12.9	13.4
	Efficiency	71	73	75	78	81	82	83	83
	O.T. / Shaft	30,900	28,650	27,200	22,400	20,950	19,450	17,100	13,700
40	Me.HP	3.4	6.2	8.6	13.3	14.8	16.5	18.8	22.9
	Th.HP Std	1.9	3.5	4.7	7.5	6.9	7.2	7.5	7.7
	Th.HP Fan	2.9	5.3	7.1	11.3	10.4	10.8	11.3	11.6
	Efficiency	64	66	70	75	76	78	79	79
	O.T. / Shaft	27,450	25,800	25,300	21,700	19,700	18,650	16,300	13,050
50	Me.HP	2.8	5.0	6.9	10.7	11.9	13.2	15.1	18.4
	Th.HP Std	1.6	2.8	3.9	5.4	5.7	6.0	6.4	6.9
	Th.HP Fan	2.4	4.2	5.9	8.1	8.6	9.0	9.6	10.4
	Efficiency	57	63	67	73	74	75	76	76
	O.T. / Shaft	25,150	24,850	24,300	21,250	19,300	17,950	15,750	12,600
60	Me.HP	2.3	4.2	5.8	8.9	9.9	11.0	12.6	15.4
	Th.HP Std	1.3	2.4	3.3	4.8	5.0	5.3	5.8	6.2
	Th.HP Fan	2.0	3.6	5.0	7.2	7.5	8.0	8.7	9.3
	Efficiency	56	62	64	69	71	72	73	73
	O.T. / Shaft	24,350	24,650	23,400	20,050	18,500	17,250	15,150	12,150
70	Me.HP	2.0	3.6	5.0	7.6	8.5	9.5	10.8	13.2
	Th.HP Std	1.1	2.0	2.8	4.3	4.7	5.0	5.4	5.5
	Th.HP Fan	1.7	3.0	4.2	6.5	7.1	7.5	8.1	8.3
	Efficiency	55	61	63	68	70	71	72	72
	O.T. / Shaft	24,300	24,250	23,200	19,650	18,250	17,100	14,950	12,000

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 70 (expanded rating table)

Reducer Size 70

14.00 Inch (Center Distance at Output Shafts)

		Worm RPM							
Ratio to 1		100	200	300	580	720	870	1150	1750
5	Me.HP	30.6	54.5	72.6	105.2	117.5	128.8	146.2	168.7
	Th.HP Std	8.6	13.0	16.7	23.8	26.6	28.7	31.0	34.1
	Th.HP Fan	12.9	19.5	25.1	35.7	39.9	43.1	46.5	51.2
	Efficiency	92	93	94	94	94	95	95	95
	O.T. / Shaft	44,350	39,900	35,850	26,850	24,200	22,200	19,050	14,450
10	Me.HP	19.7	35.6	48.7	72.1	81.2	89.6	102.6	119.6
	Th.HP Std	7.7	11.0	14.1	19.4	21.2	22.6	24.3	25.9
	Th.HP Fan	11.6	16.5	21.2	29.1	31.8	33.9	36.5	38.9
	Efficiency	86	88	89	90	90	92	93	93
	O.T. / Shaft	53,400	49,350	45,550	35,250	32,000	29,850	26,150	20,050
15	Me.HP	13.8	25.1	34.4	51.3	57.7	63.8	73.0	86.3
	Th.HP Std	8.0	9.6	11.9	16.0	17.2	18.2	19.2	20.5
	Th.HP Fan	12.0	14.4	17.9	24.0	25.8	27.3	28.8	30.8
	Efficiency	82	84	85	88	89	90	91	91
	O.T. / Shaft	53,500	49,850	46,100	36,800	33,750	31,200	27,300	21,250
20	Me.HP	10.6	19.2	26.4	39.4	44.4	48.8	56.0	66.3
	Th.HP Std	5.3	8.5	10.5	14.2	15.1	15.8	16.4	17.2
	Th.HP Fan	8.0	12.8	15.8	21.3	22.7	23.7	24.6	25.8
	Efficiency	78	80	81	86	86	86	87	88
	O.T. / Shaft	52,100	48,400	44,950	36,850	33,450	30,400	26,700	21,050
25	Me.HP	8.5	15.5	21.3	31.9	35.9	39.5	45.5	53.7
	Th.HP Std	4.3	7.3	9.1	12.4	12.9	13.3	13.7	14.2
	Th.HP Fan	6.5	11.0	13.7	18.6	19.4	20.0	20.6	21.3
	Efficiency	74	78	80	84	84	86	87	87
	O.T. / Shaft	49,550	47,650	44,750	36,400	33,000	30,750	27,150	21,050
30	Me.HP	7.2	13.0	17.9	26.8	30.1	33.1	38.1	45.2
	Th.HP Std	4.2	6.1	7.8	10.7	11.2	11.7	12.0	12.3
	Th.HP Fan	6.3	9.2	11.7	16.1	16.8	17.6	18.0	18.5
	Efficiency	71	73	75	78	81	82	83	83
	O.T. / Shaft	48,350	44,850	42,300	34,100	32,050	29,500	26,000	20,300
40	Me.HP	5.4	9.8	13.4	20.1	22.6	24.9	28.8	34.0
	Th.HP Std	2.7	4.9	6.5	11.5	9.6	10.0	10.4	10.7
	Th.HP Fan	4.1	7.4	9.8	17.3	14.4	15.0	15.6	16.1
	Efficiency	64	66	70	75	76	78	79	79
	O.T. / Shaft	43,550	40,750	39,400	32,750	30,100	28,150	24,950	19,350
50	Me.HP	4.3	7.9	10.8	16.2	18.2	20.0	23.1	27.3
	Th.HP Std	2.2	3.9	5.4	7.5	8.0	8.4	8.9	9.6
	Th.HP Fan	3.3	5.9	8.1	11.3	12.0	12.6	13.4	14.4
	Efficiency	57	63	67	73	74	75	76	76
	O.T. / Shaft	38,650	39,200	38,000	32,150	29,500	27,200	24,050	18,700
60	Me.HP	3.6	6.6	9.0	13.5	15.2	16.7	19.3	22.9
	Th.HP Std	1.8	3.3	4.5	6.6	7.0	7.4	8.1	8.6
	Th.HP Fan	2.7	5.0	6.8	9.9	10.5	11.1	12.2	12.9
	Efficiency	56	62	64	69	71	72	73	73
	O.T. / Shaft	38,150	38,700	36,300	30,400	28,350	26,150	23,200	18,100
70	Me.HP	3.1	5.7	7.7	11.6	13.0	14.3	16.5	19.6
	Th.HP Std	1.6	2.8	3.9	5.9	6.6	6.9	7.5	7.6
	Th.HP Fan	2.4	4.2	5.9	8.9	9.9	10.4	11.3	11.4
	Efficiency	55	61	63	68	70	71	72	72
	O.T. / Shaft	37,600	38,350	35,700	30,000	27,900	25,750	22,800	17,800

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 80 (expanded rating table)

Reducer Size 80

16.00 Inch (Center Distance at Output Shafts)

		Worm RPM							
Ratio to 1		100	200	300	580	720	870	1150	1750
5	Me.HP	45.3	79.8	104.5	149.3	166.7	182.2	203.8	236.1
	Th.HP Std	9.4	14.3	18.4	26.1	29.3	31.5	34.1	37.5
	Th.HP Fan	14.1	21.4	27.5	39.2	43.9	47.3	51.1	56.2
	Efficiency	92	93	94	94	94	95	95	95
	O.T. / Shaft	65,700	58,450	51,600	38,150	34,300	31,350	26,550	20,200
10	Me.HP	29.3	52.9	71.6	104.8	118.0	129.3	148.8	173.1
	Th.HP Std	8.4	12.1	15.5	21.3	23.3	24.8	26.7	28.5
	Th.HP Fan	12.6	18.2	23.3	32.0	35.0	37.2	40.1	42.8
	Efficiency	86	88	89	90	90	92	93	93
	O.T. / Shaft	79,400	73,350	66,950	51,250	46,500	43,100	37,950	29,000
15	Me.HP	20.6	37.3	50.8	74.8	84.2	93.0	106.3	123.3
	Th.HP Std	8.6	10.5	13.0	17.6	18.8	19.9	21.1	22.5
	Th.HP Fan	12.9	15.8	19.5	26.4	28.2	29.9	31.7	33.8
	Efficiency	82	84	85	88	89	90	91	91
	O.T. / Shaft	79,850	74,050	68,050	53,650	49,200	45,500	39,750	30,300
20	Me.HP	15.8	28.6	39.0	57.6	64.7	71.6	81.6	95.2
	Th.HP Std	5.8	9.4	11.5	15.6	16.5	17.4	18.1	18.8
	Th.HP Fan	8.7	14.1	17.3	23.4	24.8	26.1	27.2	28.2
	Efficiency	78	80	81	86	86	86	87	88
	O.T. / Shaft	77,650	72,100	66,350	53,850	48,700	44,600	38,900	30,200
25	Me.HP	12.7	23.0	31.5	46.7	52.5	57.7	66.2	77.1
	Th.HP Std	4.7	8.0	9.9	13.6	14.1	14.6	15.0	15.6
	Th.HP Fan	7.1	12.0	14.9	20.4	21.2	21.9	22.5	23.4
	Efficiency	74	78	80	84	84	86	87	87
	O.T. / Shaft	74,050	70,650	66,150	53,300	48,250	44,950	39,450	30,200
30	Me.HP	10.7	19.3	26.4	39.1	44.1	48.6	55.7	64.9
	Th.HP Std	4.5	6.6	8.6	11.7	12.3	12.8	13.1	13.5
	Th.HP Fan	6.8	9.9	12.9	17.6	18.5	19.2	19.7	20.3
	Efficiency	71	73	75	78	81	82	83	83
	O.T. / Shaft	71,800	66,600	62,400	49,700	46,900	43,300	38,000	29,100
40	Me.HP	8.0	14.6	19.9	29.5	33.2	36.6	41.9	49.0
	Th.HP Std	2.9	5.4	7.2	12.3	10.5	11.0	11.4	11.8
	Th.HP Fan	4.4	8.1	10.8	18.5	15.8	16.5	17.1	17.7
	Efficiency	64	66	70	75	76	78	79	79
	O.T. / Shaft	64,550	60,750	58,550	48,100	44,200	41,350	36,300	27,900
50	Me.HP	6.5	11.7	16.0	23.7	26.6	29.4	33.6	39.3
	Th.HP Std	2.4	4.3	5.9	8.3	8.7	9.2	9.8	10.5
	Th.HP Fan	3.6	6.5	8.9	12.5	13.1	13.8	14.7	15.8
	Efficiency	57	63	67	73	74	75	76	76
	O.T. / Shaft	58,400	58,050	56,300	47,000	43,100	39,950	35,000	26,900
60	Me.HP	5.4	9.8	13.3	19.8	22.2	24.5	28.1	32.8
	Th.HP Std	2.0	3.6	5.0	7.3	7.7	8.1	8.9	9.4
	Th.HP Fan	3.0	5.4	7.5	11.0	11.6	12.2	13.4	14.1
	Efficiency	56	62	64	69	71	72	73	73
	O.T. / Shaft	57,200	57,450	53,650	44,550	41,400	38,350	33,750	25,900
70	Me.HP	4.6	8.4	11.4	17.0	19.1	21.0	24.1	28.2
	Th.HP Std	1.7	3.1	4.3	6.5	7.2	7.5	8.2	8.4
	Th.HP Fan	2.6	4.7	6.5	9.8	10.8	11.3	12.3	12.6
	Efficiency	55	61	63	68	70	71	72	72
	O.T. / Shaft	55,800	56,500	52,800	43,950	40,950	37,800	33,300	25,600

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
 O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 100 (expanded rating table)

Reducer Size 100

20.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM							
		100	200	300	580	720	870	1150	1750
5	Me.HP	84.7	143.9	183.2	258.3	286.8	311.0	337.9	397.5
	Th.HP Std	14.4	22.3	29.5	42.0	47.0	52.6	56.8	62.5
	Th.HP Fan	21.6	33.4	44.2	63.0	70.5	78.9	85.2	93.7
	Efficiency	94	95	96	96	97	97	97	97
	O.T. / Shaft	125,400	107,650	92,350	67,350	60,850	54,650	44,900	34,750
10	Me.HP	55.1	97.3	128.6	184.1	205.2	224.8	253.5	291.0
	Th.HP Std	11.9	17.4	22.6	31.4	35.5	37.9	41.7	44.5
	Th.HP Fan	17.9	26.1	33.9	47.1	53.3	56.9	62.6	66.8
	Efficiency	88	90	91	92	94	94	95	95
	O.T. / Shaft	152,750	137,950	122,900	92,000	84,400	76,550	66,000	49,800
15	Me.HP	38.7	68.7	91.0	130.9	146.7	160.5	181.7	209.1
	Th.HP Std	9.9	14.7	18.3	25.4	27.5	29.4	31.6	33.7
	Th.HP Fan	14.9	22.1	27.5	38.1	41.3	44.1	47.4	50.6
	Efficiency	84	86	87	90	92	92	93	93
	O.T. / Shaft	153,650	139,600	124,700	96,000	88,600	80,200	69,450	52,550
20	Me.HP	29.6	52.7	70.1	100.7	112.9	124.1	139.5	161.6
	Th.HP Std	7.8	12.8	15.8	22.1	23.4	24.6	25.8	27.2
	Th.HP Fan	11.7	19.2	23.7	33.2	35.1	36.9	38.7	40.8
	Efficiency	80	82	83	88	88	88	89	90
	O.T. / Shaft	149,200	136,150	122,200	96,300	86,950	79,100	68,050	52,400
25	Me.HP	23.9	42.5	56.6	81.6	91.0	99.9	113.3	130.2
	Th.HP Std	6.3	10.8	13.6	18.9	19.8	20.7	21.5	22.3
	Th.HP Fan	9.5	16.2	20.4	28.4	29.7	31.1	32.3	33.5
	Efficiency	76	80	82	86	88	88	89	89
	O.T. / Shaft	143,050	133,900	121,850	95,300	87,600	79,600	69,100	52,150
30	Me.HP	20.0	35.7	47.4	68.4	76.2	83.7	94.9	109.1
	Th.HP Std	6.8	8.9	11.6	15.9	16.9	17.7	18.2	18.8
	Th.HP Fan	10.2	13.4	17.4	23.9	25.4	26.6	27.3	28.2
	Efficiency	73	75	77	80	84	84	85	85
	O.T. / Shaft	138,000	126,550	115,000	89,200	84,050	76,400	66,300	50,100
40	Me.HP	15.1	26.8	35.7	51.4	57.3	63.0	71.4	82.0
	Th.HP Std	3.9	7.1	9.5	17.7	14.3	15.0	15.5	16.1
	Th.HP Fan	5.9	10.7	14.3	26.6	21.5	22.5	23.3	24.2
	Efficiency	66	68	72	77	80	80	81	81
	O.T. / Shaft	125,600	114,850	108,000	86,000	80,250	73,000	63,400	47,850
50	Me.HP	12.1	21.6	28.7	41.5	46.3	50.7	57.8	66.2
	Th.HP Std	3.1	5.6	7.8	11.0	11.7	12.3	13.2	14.1
	Th.HP Fan	4.7	8.4	11.7	16.5	17.6	18.5	19.8	21.2
	Efficiency	59	65	69	75	77	77	78	78
	O.T. / Shaft	112,450	110,600	104,000	84,550	78,000	70,700	61,750	46,500
60	Me.HP	10.1	18.0	24.0	34.6	38.6	42.3	48.2	55.2
	Th.HP Std	2.6	4.7	6.5	9.7	10.2	10.9	11.9	12.6
	Th.HP Fan	3.9	7.1	9.8	14.6	15.3	16.4	17.9	18.9
	Efficiency	58	64	66	71	74	74	75	75
	O.T. / Shaft	110,750	108,900	99,800	80,100	75,000	68,050	59,450	44,750
70	Me.HP	8.7	15.5	20.6	29.7	33.2	36.3	41.4	47.4
	Th.HP Std	2.2	4.0	5.6	8.6	9.6	10.0	10.9	11.2
	Th.HP Fan	3.3	6.0	8.4	12.9	14.4	15.0	16.4	16.8
	Efficiency	57	63	65	70	73	73	74	74
	O.T. / Shaft	109,350	107,700	98,450	79,050	74,250	67,200	58,750	44,200

Key: Me.HP = Mech. Input Power (HP)
 O.T. / Shaft = Output Torque (Lb.-in) per shaft

Th.HP Std = Ther. Input Power - No Fan
 Th.HP Fan = Ther. Input Power - Fan

DuoDrive Size 120 (expanded rating table)

Reducer Size 120

24.00 Inch (Center Distance at Output Shafts)

Ratio to 1		Worm RPM						
		100	200	300	580	720	870	1150
5	Me.HP	142.5	233.9	291.0	407.0	448.5	471.0	525.8
	Th.HP Std	19.8	30.6	40.6	57.8	64.7	72.3	78.1
	Th.HP Fan	29.7	45.9	60.8	86.7	97.0	108.5	117.2
	Efficiency	94	95	96	96	97	97	97
	O.T. / Shaft	210,900	175,000	146,650	106,150	95,200	82,750	69,900
10	Me.HP	93.5	160.9	206.2	293.5	324.0	354.2	386.7
	Th.HP Std	16.4	23.9	31.1	43.1	48.8	52.1	57.3
	Th.HP Fan	24.6	35.9	46.7	64.7	73.2	78.2	86.0
	Efficiency	88	90	91	92	94	94	95
	O.T. / Shaft	259,200	228,100	197,050	146,650	133,250	120,600	100,650
15	Me.HP	65.6	113.6	146.9	209.1	231.3	253.5	276.8
	Th.HP Std	13.6	20.2	25.2	34.9	37.8	40.5	43.4
	Th.HP Fan	20.4	30.3	37.8	52.4	56.7	60.8	65.1
	Efficiency	84	86	87	90	92	92	93
	O.T. / Shaft	260,400	230,850	201,300	153,350	139,650	126,700	105,800
20	Me.HP	50.3	87.4	112.8	160.9	178.1	195.3	214.7
	Th.HP Std	10.8	17.6	21.7	30.4	32.2	33.8	35.4
	Th.HP Fan	16.2	26.4	32.6	45.6	48.3	50.7	53.1
	Efficiency	80	82	83	88	88	88	89
	O.T. / Shaft	253,550	225,800	196,650	153,800	137,150	124,500	104,700
25	Me.HP	40.5	70.5	91.3	129.6	144.0	158.0	173.7
	Th.HP Std	8.6	14.8	18.7	26.0	27.1	28.4	29.5
	Th.HP Fan	12.9	22.2	28.1	39.0	40.7	42.6	44.3
	Efficiency	76	80	82	86	88	88	89
	O.T. / Shaft	242,400	222,100	196,550	151,350	138,600	125,900	105,900
30	Me.HP	34.0	59.1	76.7	108.6	120.7	132.3	146.2
	Th.HP Std	9.4	12.2	15.9	21.8	23.3	24.3	25.0
	Th.HP Fan	14.1	18.3	23.9	32.7	35.0	36.5	37.5
	Efficiency	73	75	77	80	84	84	85
	O.T. / Shaft	234,550	209,450	186,050	141,600	133,100	120,750	102,150
40	Me.HP	25.6	44.5	57.7	82.2	91.4	99.9	110.0
	Th.HP Std	5.3	9.7	13.1	24.4	19.6	20.5	21.3
	Th.HP Fan	8.0	14.6	19.7	36.6	29.4	30.8	32.0
	Efficiency	66	68	72	77	80	80	81
	O.T. / Shaft	212,900	190,650	174,500	137,550	128,000	115,750	97,650
50	Me.HP	20.5	35.7	46.4	65.9	73.3	80.2	88.2
	Th.HP Std	4.2	7.7	10.7	15.2	16.1	16.9	18.2
	Th.HP Fan	6.3	11.6	16.1	22.8	24.2	25.4	27.3
	Efficiency	59	65	69	75	77	77	78
	O.T. / Shaft	190,500	182,750	168,100	134,250	123,500	111,800	94,250
60	Me.HP	17.2	29.8	38.7	55.0	61.2	66.9	73.6
	Th.HP Std	3.5	6.4	9.0	13.3	14.1	14.9	16.3
	Th.HP Fan	5.3	9.6	13.5	20.0	21.2	22.4	24.5
	Efficiency	58	64	66	71	74	74	75
	O.T. / Shaft	188,550	180,250	160,950	127,250	118,900	107,550	90,750
70	Me.HP	14.7	25.6	33.2	47.2	52.5	57.4	63.2
	Th.HP Std	3.0	5.5	7.7	11.8	13.2	13.8	15.0
	Th.HP Fan	4.5	8.3	11.6	17.7	19.8	20.7	22.5
	Efficiency	57	63	65	70	73	73	74
	O.T. / Shaft	184,800	177,850	158,650	125,650	117,400	106,200	89,700

Contact Cone Drive Operation for ratings above Size D120.

For Motorizing options, please contact Cone Drive Operation.

Key: Me.HP = Mech. Input Power (HP) Th.HP Std = Ther. Input Power - No Fan
O.T. / Shaft = Output Torque (Lb.-in) per shaft Th.HP Fan = Ther. Input Power - Fan

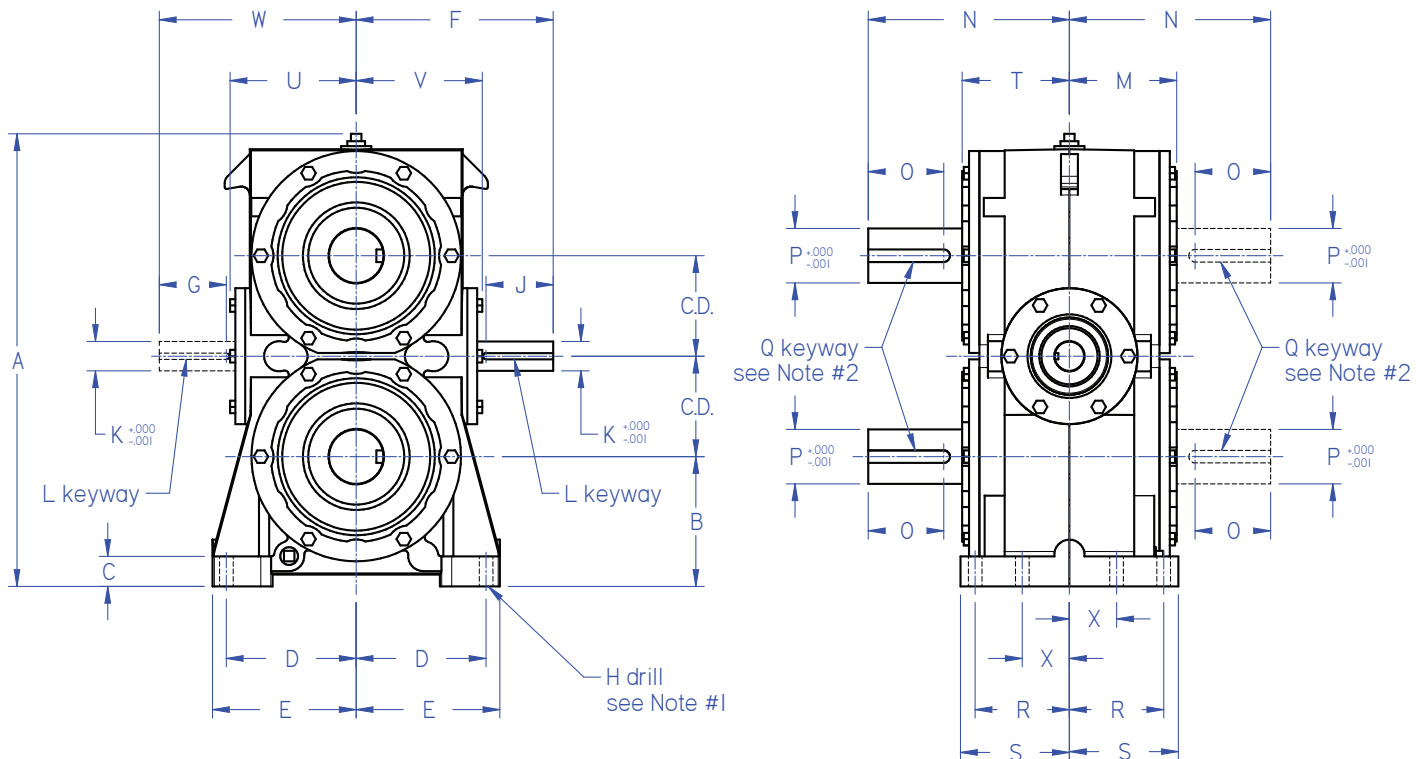
Dimensions

DuoDrive Size 20 to 240

#1 Assembly Shown

Dimensions shown are for cast iron housing sizes D20 through D80. Welded steel housing sizes D100 through D240.

Input and output shaft may extend on either side or may be double extended.



Notes:

1. Sizes D20 through D100, 4 mounting holes. Sizes D120, 6 mounting holes. Sizes D150 through D240, 8 mounting holes.
2. Sizes D150 through D240 have 2 keyways 180° apart, on each output shaft extension.
3. Unless otherwise specified housing will be furnished in cast iron or welded steel at our option.
4. Sizes D180 through D240 all dimensions subject to change at final design.
5. Dimension "X" applies only to sizes D150 to D240.

DuoDrive Motorizing Options

For motorizing options, please contact *Cone Drive Operation*.

Dimensions - DuoDrive Size 20 to 240

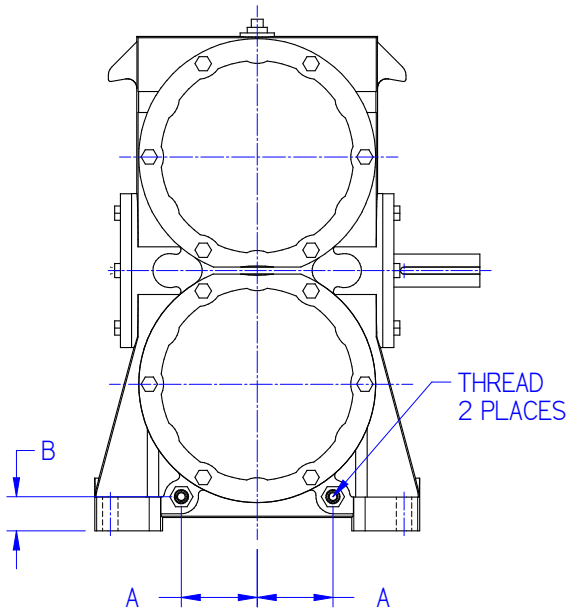
Size	C.D	A	B	C	D	E	F	G
D20	2.000	10.5	3.625	0.75	2.75	3.2	4.59	1.06
D25	2.500	12.8	4.250	0.88	3.25	3.9	5.25	1.00
D30	3.000	16.0	4.750	1.12	4.19	4.8	6.69	1.75
D35	3.500	17.5	5.375	1.25	4.88	5.7	7.75	2.62
D40	4.000	20.0	6.000	1.25	6.00	6.8	9.31	3.00
D50	5.000	23.7	6.875	1.25	7.50	8.4	10.50	3.25
D60	6.000	27.5	7.750	1.75	7.75	8.6	11.75	4.00
D70	7.000	31.3	9.000	2.12	8.50	9.5	14.50	4.50
D80	8.000	36.3	10.00	2.25	9.88	10.9	15.50	4.75
D100	10.000	44.7	12.00	1.75	12.63	13.7	19.25	4.25
D120	12.000	53.3	14.50	1.75	16.00	17.4	22.50	4.50
D150	Duodrive sizes D150 through D240 dimensions are based on customer requirements							
D180								
D220								
D240								

Size	H	J	K	L	M	N	O	P
D20	13/32	1.06	0.6875	3/16 x 3/32	2.2	4.06	1.19	1.125
D25	15/32	1.00	0.750	3/16 x 3/32	2.6	4.50	1.38	1.250
D30	9/16	1.75	1.000	1/4 x 1/8	3.4	5.94	2.00	1.500
D35	9/16	2.62	1.1875	1/4 x 1/8	4.2	7.88	2.68	1.875
D40	11/16	3.00	1.500	3/8 x 3/16	4.9	9.25	3.31	2.250
D50	13/16	3.25	1.500	3/8 x 3/16	5.7	10.31	3.62	2.750
D60	13/16	4.00	1.750	3/8 x 3/16	6.4	12.00	4.50	3.250
D70	15/16	4.50	1.875	1/2 x 1/4	7.4	13.00	4.87	3.375
D80	15/16	4.75	2.000	1/2 x 1/4	7.8	14.00	4.87	3.500
D100	1 1/16	5.00	2.375	5/8 x 5/16	9.4	15.72	5.12	4.000
D120	1 5/16	5.87	3.000	3/4 x 3/8	12.6	24.00	7.62	5.497
D150	Duodrive sizes D150 through D240 dimensions are based on customer requirements							
D180								
D220								
D240								

Size	Q	R	S	T	U	V	W	X
D20	1/4 x 1/8	2.19	2.7	2.4	3.0	3.0	4.59	N/A
D25	1/4 x 1/8	2.56	3.1	2.6	3.8	3.8	5.25	N/A
D30	3/8 x 3/16	2.81	3.5	3.4	4.7	4.7	6.69	N/A
D35	1/2 x 1/4	3.75	4.4	4.2	5.2	5.2	7.75	N/A
D40	1/2 x 1/4	4.25	5.0	4.9	6.0	6.0	9.31	N/A
D50	5/8 x 5/16	4.75	5.6	5.7	7.0	7.0	10.50	N/A
D60	3/4 x 3/8	5.63	6.5	6.4	7.7	7.7	11.75	N/A
D70	7/8 x 7/16	6.63	7.6	7.4	9.4	9.4	14.50	N/A
D80	7/8 x 7/16	7.38	8.4	7.8	10.8	10.8	15.50	N/A
D100	1 x 1/2	8.38	9.5	9.4	14.5	13.4	19.25	N/A
D120	1 1/4 x 5/8	10.88	12.3	12.6	17.2	15.7	23.25	N/A
D150	Duodrive sizes D150 through D240 dimensions are based on customer requirements							
D180								
D220								
D240								

Water Cooling

DuoDrive Water Cooling Connection Location



Reducer Size	A (inch)	B (inch)	Thread
D40	3.0	1.44	3/8 -NPT
D50	3.8	1.49	3/8 -NPT
D60	4.0	1.82	3/8 -NPT
D70	4.7	1.95	3/8 -NPT
D80	5.6	2.10	3/8 -NPT
D100	7.5	2.50	3/8 -NPT
D120	6.5	3.50	1.00-NPT
D150	12.5	4.25	1.00 - NPT

Note: Connections for water cooling are located at the opposite side of the output shafts for single extended output reducers.

DuoDrive Water Cooling Ratings (Values shown are in horsepower)

D 40 Ratio to 1	Worm RPM							
	100	200	300	580	720	870	1150	1750
5	6.5	11.8	16.5	23.6	24.8	28.4	29.4	30.6
10	4.2	7.6	10.7	16.3	17.0	19.7	21.8	22.5
15	2.9	5.3	7.5	12.5	14.3	15.8	17.1	17.6
20	2.3	4.1	5.8	9.6	11.0	12.2	13.1	14.0
25	1.8	3.3	4.7	7.7	8.9	9.9	11.5	12.2
30	1.5	2.8	3.9	6.5	7.5	8.3	9.7	10.0
40	1.2	2.1	3.0	4.9	5.6	6.3	7.3	8.3
50	1.0	1.7	2.4	3.9	4.5	5.0	5.8	7.2
60	0.8	1.4	2.3	3.3	3.8	4.2	4.9	6.0
70	0.7	1.2	1.7	2.8	3.3	3.6	4.2	5.2

Water Cooling

DuoDrive Water Cooling Ratings (cont.) (Values shown are in horsepower)

D 50	Worm RPM							
	Ratio to 1	100	200	300	580	720	870	1150
5	12.8	23.2	32.2	37.7	39.1	45.3	46.4	47.9
10	8.2	14.9	20.8	25.1	26.0	30.6	34.2	35.0
15	5.7	10.5	14.6	20.9	22.6	24.5	26.8	27.4
20	4.4	8.0	11.2	18.0	18.6	18.9	20.1	21.5
25	3.6	6.5	9.1	14.5	16.1	17.7	18.8	19.1
30	3.0	5.4	7.6	12.2	13.7	14.4	15.0	15.2
40	2.3	4.1	5.7	9.2	10.4	11.4	12.6	12.7
50	1.8	3.3	4.6	7.4	8.3	9.2	10.7	11.2
60	1.5	2.8	3.9	6.2	7.0	7.7	8.9	10.1
70	1.3	2.4	3.3	5.3	6.0	6.6	7.7	9.4

D 80	Worm RPM							
	Ratio to 1	100	200	300	580	720	870	1150
5	45.3	79.8	104.5	149.3	156.5	182.2	186.2	190.1
10	29.3	52.9	71.6	97.6	99.6	120.2	135.7	137.5
15	20.6	37.3	50.8	74.8	84.2	93.0	105.9	107.3
20	15.8	28.6	39.0	57.6	64.7	71.6	76.8	82.4
25	12.7	23.0	31.5	46.7	52.5	57.7	66.2	74.3
30	10.7	19.3	26.4	39.1	44.1	48.6	55.7	58.4
40	8.0	14.6	19.9	29.5	33.2	36.6	41.9	48.1
50	6.5	11.7	16.0	23.7	26.6	29.4	33.6	39.3
60	5.4	9.8	13.3	19.8	22.2	24.5	28.1	32.8
70	4.6	8.4	11.4	17.0	19.1	21.0	24.1	28.2

D 60	Worm RPM							
	Ratio to 1	100	200	300	580	720	870	1150
5	19.5	35.1	47.9	54.8	56.8	65.9	67.5	69.7
10	12.5	22.7	30.8	36.5	37.8	44.6	49.8	50.9
15	8.8	16.0	22.1	30.3	32.9	35.7	38.9	39.8
20	6.7	12.2	16.9	25.9	27.0	27.6	29.2	31.1
25	5.4	9.9	13.7	21.0	23.4	25.8	27.3	27.6
30	4.6	8.3	11.5	17.6	19.7	21.0	21.9	22.2
40	3.4	6.2	8.6	13.3	14.8	16.5	18.3	18.5
50	2.8	5.0	6.9	10.7	11.9	13.2	15.1	16.3
60	2.3	4.2	5.8	8.9	9.9	11.0	12.6	14.6
70	2.0	3.6	5.0	7.6	8.5	9.5	10.8	13.2

D 100	Worm RPM							
	Ratio to 1	100	200	300	580	720	870	1150
5	84.7	143.9	183.2	254.0	286.8	311.0	337.9	345.2
10	55.1	97.3	116.8	137.4	176.9	179.3	211.3	214.1
15	38.7	68.7	83.5	110.2	133.5	135.4	152.8	154.9
20	29.6	52.7	65.7	92.8	94.1	95.3	102.9	112.0
25	23.9	42.5	56.6	79.5	90.5	91.4	98.6	99.4
30	20.0	35.7	47.4	58.3	69.9	70.7	74.7	75.3
40	15.1	26.8	35.7	51.4	56.7	57.4	60.1	60.7
50	12.1	21.6	28.7	41.5	46.3	49.2	51.8	52.7
60	10.1	18.0	24.0	34.6	38.6	42.3	45.8	46.5
70	8.7	15.5	20.6	29.7	33.2	36.3	41.4	43.8

D 70	Worm RPM							
	Ratio to 1	100	200	300	580	720	870	1150
5	30.6	54.5	72.6	105.2	109.7	128.4	130.7	133.8
10	19.7	35.6	48.7	69.2	71.0	84.9	95.5	97.1
15	13.8	25.1	34.4	51.3	57.7	63.8	73.0	75.9
20	10.6	19.2	26.4	39.4	44.4	48.8	54.7	58.7
25	8.5	15.5	21.3	31.9	35.9	39.5	45.5	52.5
30	7.2	13.0	17.9	26.8	30.1	33.1	38.1	41.6
40	5.4	9.8	13.4	20.1	22.6	24.9	28.8	34.0
50	4.3	7.9	10.8	16.2	18.2	20.0	23.1	27.3
60	3.6	6.6	9.0	13.5	15.2	16.7	19.3	22.9
70	3.1	5.7	7.7	11.6	13.0	14.3	16.5	19.6

D 120	Worm RPM						
	Ratio to 1	100	200	300	580	720	870
5	132.9	166.3	210.2	227.4	290.8	298.5	304.3
10	72.9	91.7	106.5	127.9	161.9	165.2	193.0
15	56.0	68.7	77.4	102.7	122.6	125.3	140.3
20	44.7	55.3	61.6	86.9	88.7	90.3	97.1
25	36.9	48.7	56.4	74.5	83.6	84.9	91.2
30	34.0	39.3	45.4	55.7	65.7	66.7	70.2
40	25.3	30.9	37.3	53.9	53.5	54.4	57.0
50	20.5	27.1	32.6	42.3	45.6	46.4	49.0
60	17.5	25.2	29.0	36.7	40.2	41.0	43.4
70	14.7	23.8	27.1	34.4	38.3	38.9	41.1

Contact Cone Drive Operations for ratings above Size D120

Standard Hollow Gearshaft Bores

DuoDrive Standard Hollow Gearshaft Bores, Sizes D20 through D120

Size	Bore Inches	Gearshaft Numbers	Keyway Size	Bore Tolerance
20	1.375*	20-S60-106	1/4 x 1/8	+0.002, -.000
	1.250*	20-S60-104	1/4 x 1/8	+0.002, -.000
	1.1875*	20-S60-103	1/4 x 1/8	+0.002, -.000
	1.125*	20-S60-102	1/4 x 1/8	+0.002, -.000
	1.000*	20-S60-100	1/4 x 1/8	+0.002, -.000
25	2.000*	25-S60-200	1/4 x 1/8	+0.002, -.000
	1.9375*	25-S60-115	1/4 x 1/8	+0.002, -.000
	1.6875*	25-S60-111	3/8 x 3/16	+0.002, -.000
	1.4375*	25-S60-107	3/8 x 3/16	+0.002, -.000
	1.250*	25-S60-104	1/4 x 1/8	+0.002, -.000
	1.1875*	25-S60-103	1/4 x 1/8	+0.002, -.000
30	2.500	30-S60-208	3/8 x 3/16	+0.002, -.000
	2.4375*	30-S60-207	3/8 x 3/16	+0.002, -.000
	2.1875*	30-S60-203	1/2 x 1/4	+0.002, -.000
	1.9375*	30-S60-115	1/2 x 1/4	+0.002, -.000
	1.6875*	30-S60-111	3/8 x 3/16	+0.002, -.000
	1.500*	30-S60-108	3/8 x 3/16	+0.002, -.000
35	2.750	35-S60-212	3/8 x 3/16	+0.002, -.000
	2.6875*	35-S60-211	3/8 x 3/16	+0.002, -.000
	2.500	35-S60-208	3/8 x 3/16	+0.002, -.000
	2.4375*	35-S60-207	5/8 x 3/16	+0.002, -.000
	2.1875*	35-S60-203	1/2 x 1/4	+0.002, -.000
	1.9375*	35-S60-115	1/2 x 1/4	+0.002, -.000
	1.6875*	35-S60-111	3/8 x 3/16	+0.002, -.000
40	2.9375*	40-S60-215	5/8 x 3/16	+0.003, -.000
	2.6875*	40-S60-211	5/8 x 3/16	+0.003, -.000
	2.4375*	40-S60-207	5/8 x 3/16	+0.003, -.000
	2.1875*	40-S60-203	5/8 x 3/16	+0.003, -.000
50	3.4375*	50-S60-307	5/8 x 3/16	+0.003, -.000
	3.1875*	50-S60-303	5/8 x 3/16	+0.003, -.000
	2.750	50-S60-212	5/8 x 3/16	+0.003, -.000
60	3.9375*	60-S60-315	3/4 x 3/8	+0.003, -.000
	3.4375*	60-S60-307	3/4 x 3/8	+0.003, -.000
	2.9375*	60-S60-215	3/4 x 3/8	+0.003, -.000
70	4.4375*	80-S60-407	1 x 1/2	+0.003, -.000
	3.9375*	80-S60-315	1 x 1/2	+0.003, -.000
80	4.4375*	80-S60-407	1 x 1/2	+0.003, -.000
	3.9375*	80-S60-315	1 x 1/2	+0.003, -.000
100	5.9375	100-S61-515	1 1/4 x 7/16	+0.004, -.000
120	7.9375	120-S61-715	1 1/2 x 1/2	+0.004, -.000

Notes:

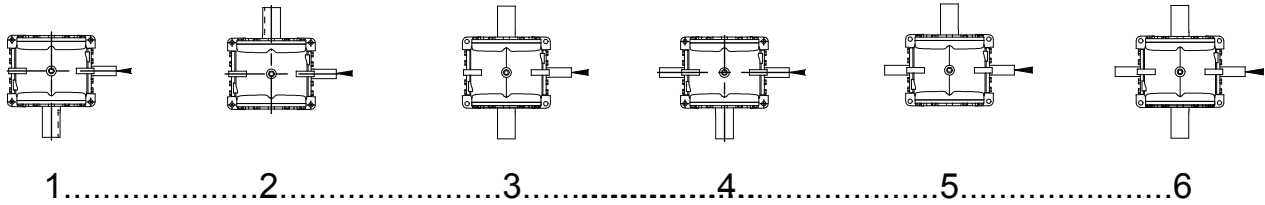
Special hollow gearshaft bore sizes are available at additional cost.

All sizes have 2 set screws at long end of shaft.

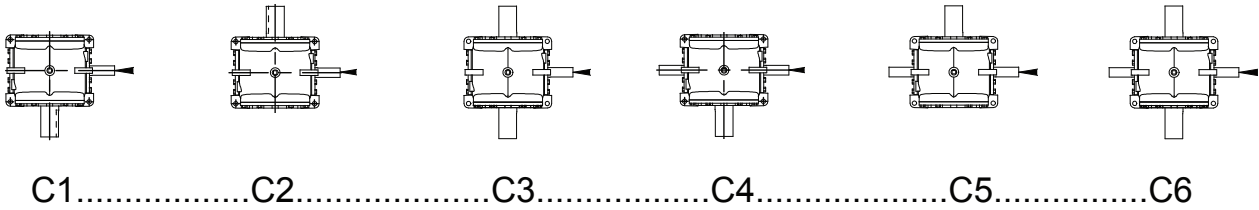
* Bore inches AGMA Standard

Assembly and Mounting Positions

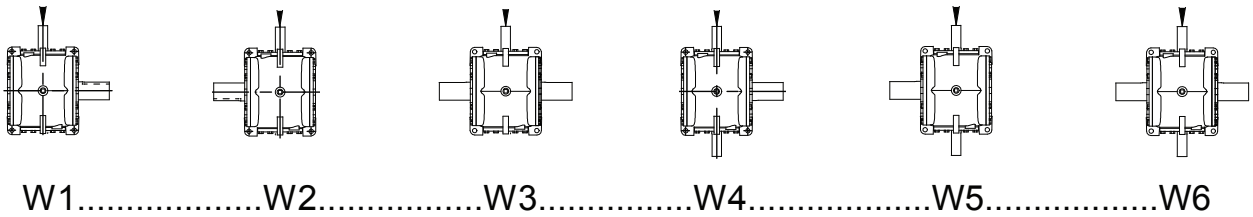
Top View, Floor Mounted



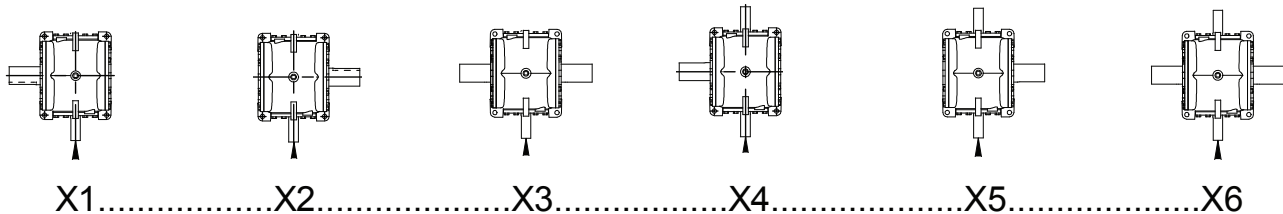
Ceiling Mounted



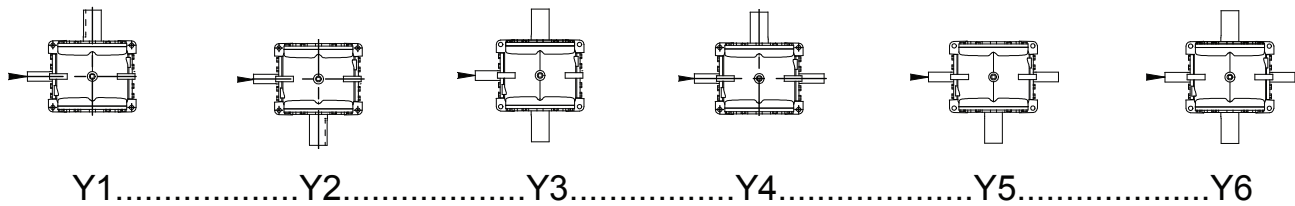
Wall Mounted, Worm Vertical Up



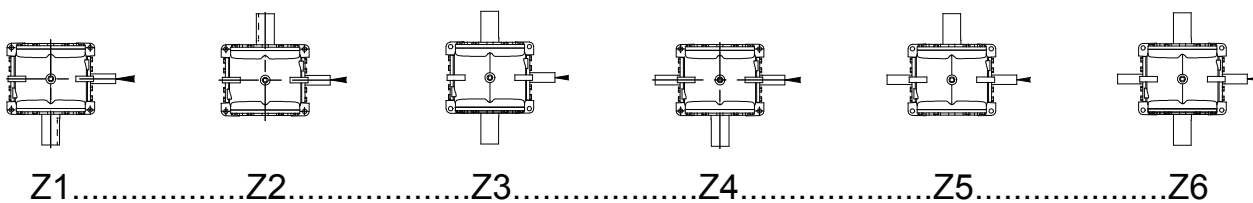
Wall Mounted, Worm Vertical Down



Wall Mounted, Worm Horizontal to the Left



Wall Mounted, Worm Horizontal to the Right



IMPORTANT

General - The following information is important in ensuring safety. It must be brought to the attention of personnel involved in the selection of Cone Drive Operation, those responsible for the design of the machinery in which it is to be incorporated and those involved in its installation, use and maintenance.

Cone Drive Operation equipment will operate safely provided it is selected, installed, used and maintained properly. As with any power transmission equipment **proper precautions must** be taken as indicated in the following paragraphs, to ensure safety.

Potential Hazards - There are not necessarily listed in any order of severity as the degree of danger varies in individual circumstances. It is important therefore that the list is studied in its entirety:

1) Fire / Explosion

- (a) Oil mists and vapor are generated within gear units. It is therefore dangerous to use naked lights in the proximity of gearbox openings, due to the risk of fire or explosion.
- (b) In the event of fire or serious overheating (over 570 °F (300°C)) certain materials (rubber, plastics, etc.) may decompose and produce fumes. Care should be taken to avoid exposure to the fumes, and remains of burned or overheated plastic / rubber materials should be handled with rubber gloves.

2) Guards - Rotating shafts and couplings must be guarded to eliminate the possibility of physical contact or entanglement of clothing. It should be of rigid construction and firmly secured.

3) Noise - High speed gearboxes and gearbox driven machinery may produce noise levels which are damaging to the hearing with prolonged exposure. Ear plugs should be provided for personnel in these circumstances. reference should be made to state and federal regulations for reducing exposure of employed persons to noise.

4) Lifting - Where provided (on larger units) only the lifting points or eyebolts must be used for lifting operations (see maintenance manual or general arrangement drawing for lifting point positions). Failure to use the lifting points provided may result in personal injury and/or damage to the product or surrounding equipment. Keep clear of raised equipment.

5) Lubricants and Lubrication

- (a) Prolonged contact with lubricants can be detrimental to the skin. the manufacturer's instruction must be followed when handling lubricants.
- (b) The lubrication status of the equipment must be checked before commissioning. Read and carry out all instructions on the lubricant plate and in the installation and maintenance literature. Heed all warning tags. Failure to do so could result in mechanical damage and in extreme cases risk of injury to personnel.

6) Electrical Equipment - Observe hazard warnings on electrical equipment and isolate power before working on the gearbox or associated equipment, in order to prevent the machinery being started.

7) Installation, Maintenance and Storage

- (a) In the event that equipment is to be held in storage, for a period exceeding 6 months, prior to installation or commissioning. Cone Drive must be consulted regarding special preservation requirements. Unless otherwise agreed,

equipment must be stored in a building protected from extremes of temperature and humidity to prevent deterioration.

The rotating components (gears and shafts) must be turned a few revolutions once a month (to prevent bearings bristling).

- (b) External gearbox components may be supplied with preservative materials applied, in the form of a "waxed" tape over wrap or wax film preservative. Gloves should be worn when removing these materials. The former can be removed manually, the latter using white spirit as a solvent.

Preservatives applied to the internal parts of the gear units do not require removal prior to operation.

- (c) Installation must be performed in accordance with the manufacturer's instructions and be undertaken by suitably qualified personnel.

- (d) Before working on a gearbox or associated equipment, ensure that the load has been removed from the system to eliminate the possibility of any movement of the machinery and isolate power supply. Where necessary, provide mechanical means to ensure the machinery cannot move or rotate. Ensure removal of such devices after work is complete.

- (e) Ensure the proper maintenance of gearboxes in operation. Use only the correct tools and Cone Drive approved spare parts for repair and maintenance. Consult the maintenance Manual before dismantling or performing maintenance work.

(8) Hot Surfaces and Lubricants

- (a) During operation, gear units may become sufficiently hot to cause skin burns. Care must be taken to avoid accidental contact.
- (b) After extended running the lubricant in gear units and lubrication systems may reach temperatures sufficient to cause burns. Allow equipment to cool before servicing or performing adjustments.

(9) Selection and Design

- (a) Where gear units provide a backstop facility, ensure that back-up systems are provided if failure of the backstop device would endanger personnel or result in damage.
- (b) The driving and driven equipment must be correctly selected to ensure that the complete machinery installation will perform satisfactorily, avoiding system critical speeds, system torsional vibration etc.
- (c) The equipment must not be operated in an environment or at speeds, powers, torques or with external loads beyond those for which it was designed.
- (d) As improvements in design are being made continually the contents of this catalog are not to be regarded as binding in detail, and drawings and capacities are subject to alterations without notice.

The above guidance is based on the current state of knowledge and our best assessment of the potential hazards in the operation of the gear units.

Notes

NORTH AMERICA | CHINA | EUROPE



GLOBAL LOCATIONS



Cone Drive Operations, Inc.
240 East 12th Street
Traverse City, Michigan 49684
USA

Cone Drive Europe
1 Redwood Crescent, Peel Park
East Kilbride G74 5PA
UK

H-Fang
A Cone Drive Brand
No. 20 Yungu Road
Changshou
Zhouzhuang Town, Jiangyin
Jiangsu PR China 214424

T +1 888 994 2663
E orders@conedrive.com
W www.conedrive.com