



IN/06/1046

An ISO 9001 - 2000 Certified Company



COVAAI GEARS



Gears | Gear Boxes | Geared Motors

Introduction

Covaai Gears established in 2000 with well qualified and well experienced engineers in gear technology and one of the leading manufacturers of Helical Geared Motors and Worm reductions gear boxes in Coimbatore. Covaai Geared motors and Worm Gear Boxes are designed and manufacture to meet increasing demand for slow speed applications. Our worm reduces for compact and efficient.

Infrastructure

We are equipped with

1. Imported gear hobbing machines
2. Imported gear profile grinding machines
3. Thread Milling and grinding
4. Boring and other conventional machines

Systems

We have been certified for International Quality Standard ISO 9001-2000 certified by GCAS

CGC Series worm gear boxes

Construction

Worm gear casings are manufactured with close grained cast iron with cooling fins for better heat dissipation. Casings are machined accurately in CNC machines for better performance

The worm shaft is made with case hardened alloy steel and ground for smooth running operation.

The worm wheel is centrifugally cast with phosphor bronze for better life

The worm shaft and worm wheel are mounted on taper roller bearings to take care of radial & thrust loads. All bearings are selected to give increased bearing life.

Covaai worm reducers can be supplied with double extended input, with hollow input etc.,

Range

1 5/8 CD to 5" CD centre distances

10 : 1 to 70 : 1 ratios

Under driven, overdriven, Vertical Input / Output shaft

Shaft mounted models

Lubrication

The lubrication of worm shaft, worm wheel & Bearings are achieved by splash of oil. Adaptable reducers are provided with breather, oil level and drain plugs and it must be ensured that these are positioned suitably before commissioning the unit. For CGCF models dipstick have provided to check the oil level.

Details required for Gear box selection

1. Type, HP and Speed of prime mover
2. Output torque and ratio
3. Application and type of load
4. Service factor

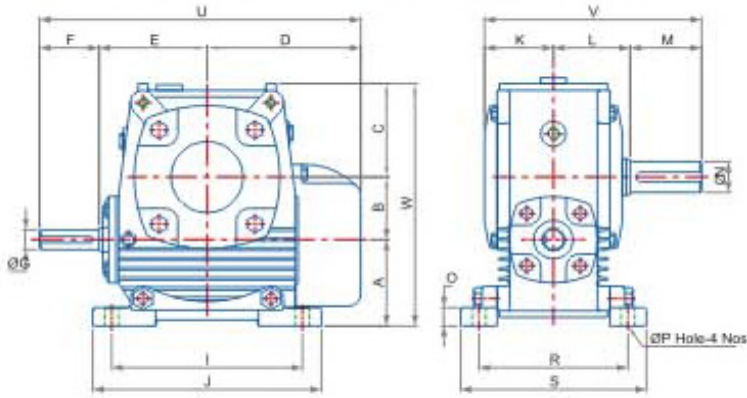
Selection Chart For HP & Torque (Input Speed - 1500 RPM)

Ratio	Output Speed (RPM)	Capacity	Gear Box Size							
			162	200	237	287	300	337	400	500
5:1	290	Input HP	1.50	3.00	3.50	7.00	8.00	10.00	17.00	25.00
		Output Torque (Kgf.m)	3.7	7.4	8.6	17.3	19.7	24.7	42.0	61.7
7.5:1	190	Input HP	1.20	2.00	3.00	5.50	7.00	8.50	11.50	22.00
		Output Torque (Kgf.m)	4.5	7.5	11.3	20.7	26.4	32.0	43.3	82.9
10:1	150	Input HP	1.00	2.00	2.50	4.50	6.00	7.00	10.00	20.00
		Output Torque (Kgf.m)	4.8	9.5	11.9	21.5	28.6	33.4	47.7	95.5
15:1	100	Input HP	1.00	1.50	2.20	4.00	4.50	5.50	8.00	13.00
		Output Torque (Kgf.m)	7.2	10.7	15.8	28.6	32.2	39.4	57.3	93.1
20:1	75	Input HP	0.80	1.10	2.00	3.00	3.70	4.50	6.50	11.00
		Output Torque (Kgf.m)	7.6	10.5	19.1	28.6	35.3	43.0	62.0	105.0
25:1	60	Input HP	0.60	1.00	1.50	2.50	3.20	4.00	5.00	8.00
		Output Torque (Kgf.m)	7.2	11.9	17.9	29.8	38.2	47.7	59.7	95.5
30:1	50	Input HP	0.50	1.00	1.30	2.50	3.00	3.50	5.00	8.00
		Output Torque (Kgf.m)	7.2	14.3	18.6	35.8	43.0	50.1	71.6	114.5
40:1	36	Input HP	0.40	0.70	1.00	1.80	2.20	3.00	4.00	6.50
		Output Torque (Kgf.m)	8.0	13.9	19.9	35.8	43.8	59.7	79.5	129.3
50:1	30	Input HP	0.30	0.60	1.00	1.50	1.90	2.20	3.00	5.00
		Output Torque (Kgf.m)	7.2	14.3	23.9	35.8	45.3	52.5	71.6	119.3
60:1	25	Input HP	0.20	0.50	0.80	1.10	1.70	1.90	2.60	4.50
		Output Torque (Kgf.m)	5.7	14.3	22.9	31.5	48.7	54.4	74.5	128.9
70:1	20	Input HP	0.20	0.40	0.70	1.00	1.40	1.50	2.30	4.00
		Output Torque (Kgf.m)	7.2	14.3	25.1	35.8	50.1	53.7	82.3	143.2

Selection Chart For HP & Torque (Input Speed - 1000 RPM)

Ratio	Output Speed (RPM)	Capacity	Gear Box Size							
			162	200	237	287	300	337	400	500
5:1	190	Input HP	1.20	2.40	3.60	5.50	6.50	8.00	13.00	22.00
		Output Torque (Kgf.m)	4.5	9.0	13.6	20.7	24.5	30.1	49.0	82.9
7.5:1	130	Input HP	1.00	1.90	2.50	4.50	5.50	6.50	9.50	18.00
		Output Torque (Kgf.m)	5.5	10.5	13.8	24.8	30.3	35.8	52.3	99.1
10:1	100	Input HP	0.90	1.70	2.00	3.50	4.50	5.50	8.00	15.00
		Output Torque (Kgf.m)	6.4	12.2	14.3	25.1	32.2	39.4	57.3	107.4
15:1	65	Input HP	0.70	1.30	1.60	3.00	3.50	4.50	6.00	10.00
		Output Torque (Kgf.m)	7.7	14.3	17.6	33.0	38.5	49.6	66.1	110.1
20:1	50	Input HP	0.50	1.00	1.50	2.30	3.00	3.50	5.00	9.00
		Output Torque (Kgf.m)	7.2	14.3	21.5	32.9	43.0	50.1	71.6	128.9
25:1	40	Input HP	0.50	0.80	1.10	2.00	2.70	3.00	4.00	7.00
		Output Torque (Kgf.m)	8.9	14.3	19.7	35.8	48.3	53.7	71.6	125.3
30:1	32	Input HP	0.40	0.70	1.00	1.80	2.30	3.00	3.50	6.50
		Output Torque (Kgf.m)	8.9	15.7	22.4	40.3	51.5	67.1	78.3	145.4
40:1	25	Input HP	0.30	0.50	1.00	1.50	2.00	2.00	3.00	5.00
		Output Torque (Kgf.m)	8.6	14.3	28.6	43.0	57.3	57.3	85.9	143.2
50:1	20	Input HP	0.20	0.50	0.70	1.20	1.60	1.70	2.50	4.30
		Output Torque (Kgf.m)	7.2	17.9	25.1	43.0	57.3	60.9	89.5	153.9
60:1	16	Input HP	0.20	0.40	0.50	0.90	1.50	1.50	2.00	4.00
		Output Torque (Kgf.m)	8.9	17.9	22.4	40.3	67.1	67.1	89.5	179.0
70:1	14	Input HP	0.20	0.30	0.50	0.80	1.10	1.30	2.00	3.00
		Output Torque (Kgf.m)	10.2	15.3	25.6	40.9	56.3	66.5	102.3	153.4

Dimension Sheet for Single Reduction Worm Gear Boxes (Adaptable - CGCA)

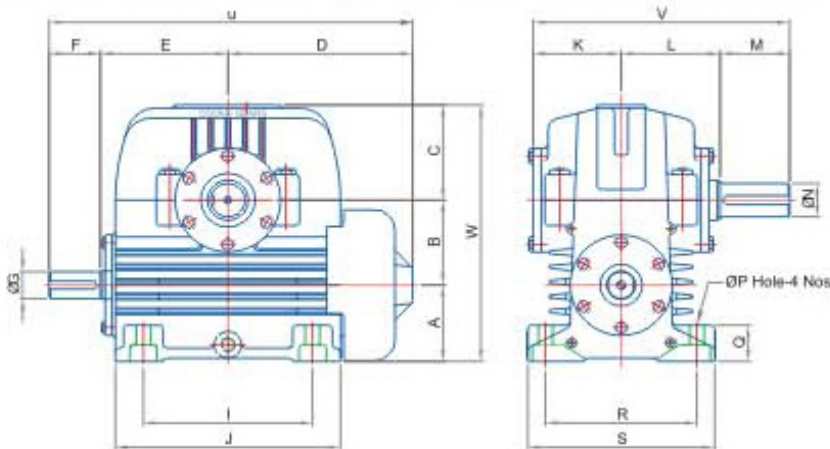


Weight and Oil Capacity

Size	162	200	237	287	337
Net Weight (Kg)	10.5	13.5	20.0	30.0	51.0
Oil Required (Lts)	0.2	0.3	0.5	1.0	2.0

Size	A	B	C	D	E	F	ØG	KW	I	J	K	L	M	ØN	KW	O	P	R	S	T	U	V	W
162	60.30	41.27	64	92.0	68	42.0	16	5	118	145	46.5	51	47.5	19	6	12	11	96.4	121	66.5	200	145	166
200	70.00	50.80	79	116.5	86	47.5	16	5	152	176	57.0	61	57.0	25	8	16	11	118.6	152	78.5	250	175	200
237	84.00	60.33	89	141.0	98	57.0	19	6	175	198	68.0	70	70.0	28	8	19	12	136.6	168	92.0	296	209	233
287	95.00	73.03	110	159.0	121	70.0	22	6	213	245	78.5	86	82.0	32	10	22	14	165.0	195	113.0	350	247	278
337	108.00	85.72	121	178.0	137	82.0	25	8	238	280	98.0	102	98.0	38	10	24	15	190.0	236	135.0	397	299	315

Dimension Sheet for Single Reduction Worm Gear Boxes (Foot Mounted - CGCF)



Weight and Oil Capacity

Size	300	400	500
Net Weight (Kg)	34.5	52.0	63.00
Oil Required (Lts)	1.5	2.0	3.0

Size	A	B	C	D	E	F	ØG	KW	I	J	K	L	M	ØN	KW	O	P	R	S	U	V	W
300	102.0	76.2	100	178	117.5	50	25	8	140	186	103.0	111	75	38	10	32	18	182	225	346	289	278
400	108.4	101.6	127	246	164.0	65	32	10	216	280	110.5	127	90	45	14	45	22	204	254	474	328	337
500	114.0	127.0	142	272	187.0	75	40	12	248	330	125.0	145	102	50	14	54	22	222	274	534	372	383

★In view of Continuous developments, we reserve the rights to change the design and dimensions without notice.



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