

ELECON COOLING TOWER
WORM REDUCTION GEAR UNIT CTU TYPE



ELECON 

ALWAYS A STEP AHEAD IN TECHNOLOGY

Introduction

Elecon cooling tower worm reduction gear units incorporate extended top housing to accommodate the larger wheel shaft bearings maintaining compact drive. These gears are used for equipment like fan for cooling towers and similar other applications.

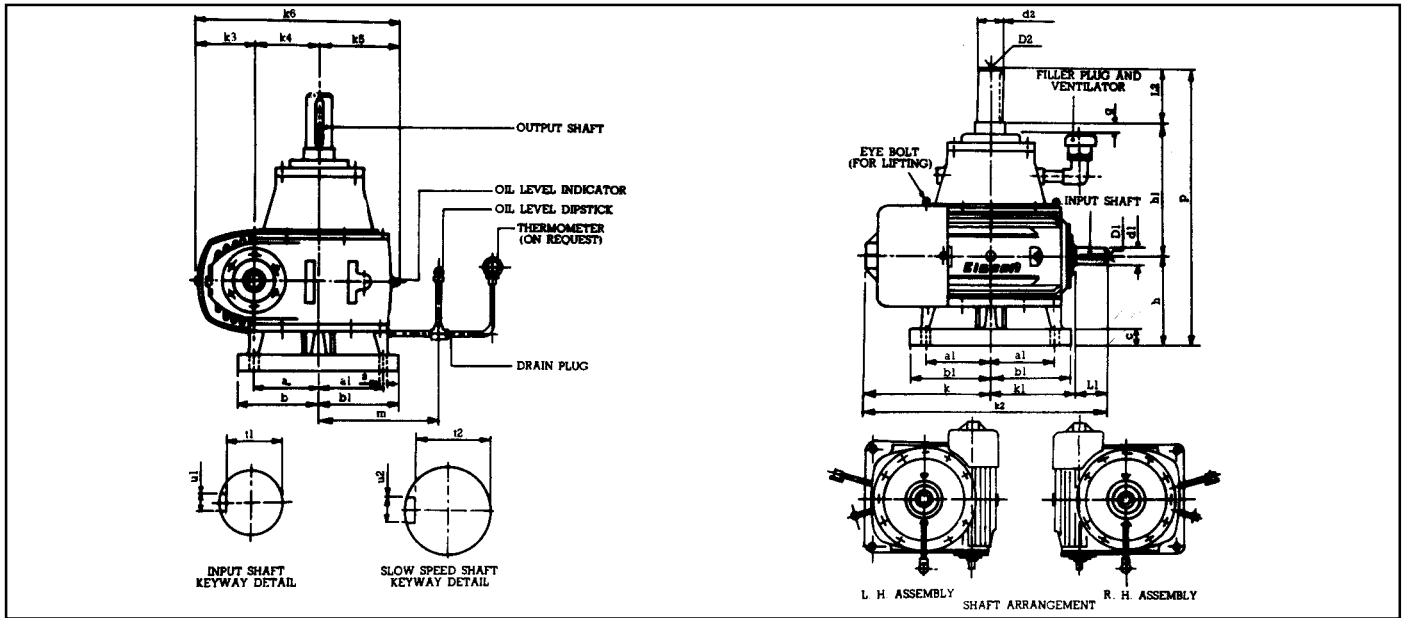
The unit consists of a typical extended top bearing housing which accommodates ample capacity bearings without sacrificing the compactness of the drive.

Lubrication system is entirely self contained. Gears and lower bearings dip in oil sump whilst oil is pumped to the top wheel shaft bearings by means of a built-in mechanism of plunger.

Gear boxes are supplied with usual accessories like filler plugs, ventilators, drain plugs, etc., suitable for connections in such a way that their maintenance is simplified and made more convenient.

For selection of the unit, consult Elecon giving full application details.

PRINCIPAL DIMENSIONS FOR COOLING TOWER GEAR UNIT.



GEAR BOX SIZE	MOUNTING DETAIL						CLEARANCE DIMENSIONS										SHAFT ENDS DETAILS											
	a	a1	b	b1	c	s	g	h	h1	k	k1	k2	k3	k4	k5	k6	m	p	d1	L1	t1	u1	D1	d2	L2*	t2	u2	D2
100 CTU	115	115	140	140	35	23	15	175	260	240	165	469	102	101.6	135	340	185	525	32	64	27	10	m12	45	90	39.5	14	m16
125 CTU	140	140	165	165	35	23	15	190	290	275	190	535	113	127	165	405	205	580	35	70	30	10	m12	50	100	44.5	14	m16
150 CTU	153	153	190	190	40	23	25	210	310	295	203	574	125	152.4	190	468	260	635	38	76	33	10	m12	60	115	53	18	m20
175 CTU	178	178	215	215	40	27	25	225	330	325	229	636	132	177.8	225	535	275	685	40	82	35	12	m16	65	130	58	18	m20
200 CTU	203	203	245	245	45	27	25	250	350	362	254	704	145	203.2	250	598	300	740	45	88	39.5	14	m16	70	140	62.5	20	m20
225 CTU	225	225	265	265	50	27	25	265	370	395	280	770	160	228.6	280	670	330	780	50	95	44.5	14	m16	75	145	67.5	20	m20
260 CTU	245	285	290	330	50	33	25	285	400	475	335	925	180	266.7	300	747	350	840	60	115	53	18	m20	80	155	71	22	m20
300 CTU	267	318	320	370	60	33	25	300	470	505	360	990	185	304.8	380	870	430	935	60	125	53	18	m20	85	165	76	22	m20
350 CTU	305	355	375	425	65	42	25	330	560	590	450	1180	210	355.6	450	1015	500	1090	80	140	71	22	m20	110	200	100	28	m24

* SPECIAL OUTPUT SHAFT EXTENSION CAN BE SUPPLIED ON REQUEST.

Notes :- Keyways as per IS 2048. Shaft limits up to 58 dia k6 and above 58 dia m6. These dimensions are for preliminary use only and are subject to our confirmation.

INFORMATION REQUIRED FOR SELECTION

In case where very special load conditions exist, or the requirement falls outside the range included in the present publication, the following information should be given along with the inquiry, to enable us to suggest the unit size to satisfy the requirement.

(1) Type of prime mover, H.P. rating, speed R.P.M. (2) Required reduction ratio. (3) Type of driven machine, actual power required, designed speed R.P.M., peak and shock (give magnitude and duration where possible). (4) Type of drive employed between. (i) Prime mover and reducer; (ii) Reducer and driven machine. (5) No. of hours/day the gear unit will be in operation. (6) Ambient conditions, i.e., temperature, humidity. (7) Handling arrangement of gear unit. (8) whether high speed/low speed coupling required. Give details of motor-driven machine shaft. (9) Whether base-plate required? If yes, give dimensions of the prime mover. (10) Details regarding weight & diameter of fan and axial thrust. Give sketch of available space.

HORSE POWER RATINGS AND TORQUE CAPACITIES

WORM SHAFT R.P.M.	GEAR RATIO	WORM WHEEL R.P.M.	CAPACITY	SIZE OF UNIT								
			INPUT H. P. OUTPUT TORQUE daNm	100	125	150	175	200	225	260	300	350
1500	5	300		18.5 42	31 71.5	49 115	67 153	90 209	96 224	126 291	144 338	182 430
	7.5	200	do	13 44	24 83.5	35 120	54 188	74 258	85 299	113 397	134 472	169 596
	10	150	do	11.1 50	21 95	31 142	44 199	61 286	74 348	106 484	127 590	161 755
	15	100	do	7.5 50	14.5 95	23 156	29 193	42 291	55 380	81 556	106 728	138 956
	20	75	do	6.8 59	12 105	19 166	25 222	33 292	43 384	59 530	80 697	113 1037
	25	60	do	5.3 56	9.9 106	16.2 174	23 245	30 338	39 430	55 596	70 783	96 1089
	30	50	do	4.7 59.5	8.4 106	13.7 173	19.9 251	27 357	32 417	43 595	64 841	82 1100
	40	37.5	do	3.9 63.5	6.7 107	11.1 178	16 258	20 345	27 464	36 610	50 848	64 1119
	50	30	do	3.3 65	5.7 110	8.9 173	14.5 279	18.1 371	22 443	28 583	42 861	53 1127
	60	25	do	3.0 66	5.1 114	8.3 183	12.3 272	16.3 357	19.3 435	25 610	35 835	45 1129
70	21.4	do	2.5 62	4.5 111	6.7 166	9.9 245	13.2 345	14.7 397	19.1 518	27 728	38 1085	
1000	5	200	do	14.6 50	25 87	36 124	50 171	66 231	69 242	87 304	110 384	132 463
	7.5	133	do	10.1 52	18.9 97	28 143	40 205	53 276	58 304	81 422	101 524	123 650
	10	100	do	8.7 59	163.3 110	25 169	34 227	43 299	52 363	73 503	93 643	120 835
	15	66.7	do	6 59	10.3 102	18 178	27 272	33 337	40 417	58 597	73 756	97 1008
	20	50	do	5.2 67	9.1 116	14.4 185	19.6 251	27 330	33 443	46 616	60 795	83 1187
	25	40	do	4.0 63	7.9 122	11.1 175	17.3 273	23 371	29 478	40 662	52 864	70 1176
	30	33.3	do	3.8 70	6.5 120	10 184	15.9 291	21 397	25 489	36 691	45 876	58 1164
	40	25	do	3.2 74	5.5 130	8.5 198	12.2 288	16.1 384	21 511	27 677	36 901	48 1245
	50	20	do	2.7 75	4.7 132	7.1 199	10.2 285	14.1 405	16.5 490	24 728	32 956	39 1210
	60	16.7	do	2.5 81	4.0 126	6.0 192	9.2 291	12.1 391	14.1 489	18.3 636	26 916	33 1199
70	14.3	do	1.9 66	3.5 124	5.2 182	7.7 272	9.9 358	10.8 424	15.2 595	19 768	29 1209	

The table shows the maximum uniform power and torque that may be transmitted continuously for 12 hours per day, with normal overloads of 100% momentary, 40% for 30 minutes and 25% for 2 hours. The ratings are based on a SERVICE FACTOR OF 1.0 Apply appropriate service factor considering type of loading.

1 daNm = 1.02kg.m.

SHIPPING SPECIFICATION AND OIL CAPACITIES

Size	100	125	150	175	200	225	260	300	350
Approx. weight(kg)	105	150	200	270	360	470	590	910	1470
Approx. oil capacities (Litres)	5.5	7.0	9.0	17	22	32	40	70	90

First filling of oil not supplied unless requested.



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