

L&T JACK 29.03.12					TITLE		L&T SCREW JACK		
		WHEEL	WORM			31.03.12	PINION	GEAR	
1	Z		50	1	1	No. of Teeth	Z	28	28
2	Ratio		50		2	Ratio		1	1
3	m		2.75	2.75	3	Module	m	2.5	2.5
4	d		137.5	33	4	P.C.D.	d	70	70
5	Diameter Factor	q		12	5	Pitch Cone Angle	d	0.79	0.79
6	C.D.		85.25		6	Pitch Cone Angle	DEG	45	45
7	Lead			8.64	7	Cone Distance	R	49.50	49.50
8	Lead AngleRad	λ		0.08	8	Face Width	b	12.37	12.37
9	Lead Angle	Degree		4.76	9	Addendum	ha	2.5	2.5
10	THROAT DIA		143.00	-	10	Dedendum	hf	2.92	2.92
11	O.D.		145.75	38.50	11	AddendumAngle	f	0.05	0.05
12	ROOT DIA		130.63	26.13	12	DedendumAngle	f	0.06	0.06
13	THROAT RAD.		13.75	-	13	Tip Angle		0.84	0.84
14	FACE WIDTH		24.75	30.00	14	Tip Angle(Deg)		47.89	47.89
15	RPM		20.00	1000.00	15	Root Angle		0.73	0.73
16	V	Mtr/Min	0.14		16	Root Angle(Deg.)		41.63	41.63
17	Strength	So	125.00		17	Tip Dia.		73.54	73.54
18	FORM FACTOR	y	0.41		18	Virtual No. of Teeth		39.60	39.60
19	F.S.		3471.19		19	Lewis Factor		0.41	0.41
20	WEAR FACTOR	N/MM ²	0.88		20	RPM	N	1000.00	1000.00
21	F.W.		2994.75		21	Speed		3.67	3.67
22	Kt		1.02		22	Dynamic Constant	Kt	2.22	2.22
23	Mx. Power Output	WATTS	488.10		23	Material Strength		330.00	330.00
24	Power Input	WATTS	1075.18		24	Beam Strength	Fs.	3150.32	3150.32
25	Max. Torque	N-Mtr.	233.05	0.40	25	Power Output		5197.09	5197.09
26	Min. Sft.Dia.		28.74	3.43	26	Torque Output	N-Mtrs	49.63	49.63
27	Efficiency		0.45		27		Q	1	1
28	HEAT GENERATED	WATTS	587.08		28	Wear Strength	Fw	2382.07	2382.07
29	EFFECTIVE AREA	A	2185.63			Bearing Design			
30	TEMP RISE	$\Delta t - ^\circ C$	0.41		29		Pt.	1620.52	1620.52
	Bearing Design				30		Pr.	416.98	416.98
31		Pt.	3389.84	451.33	31		Pa.	416.98	416.98
32		Pr.	1233.93	1233.93	32		Fa	416.98	416.98
33		Pa.	451.33	3389.84	33		Fr	1673.31	1673.31
34		Fa	451.33	3389.84	34		Fresult	1724.48	1724.48
35		Fr	3607.43	1313.88	35		Fa/Fr	0.25	0.25
36		Fresult	3635.56	3635.56	36	Expected Life	L	720	720
37		Fa/Fr	0.13	2.58	37	Minimum Dia.		4.67	4.67