

**MASKO TECH ENGINEERS**

**WORM GEAR SCREW JACK SERIES**



**MASKO TECH ENGINEERS**

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Type 1  
Screw Rod  
Traversing  
(Translating)



Design B Inverted



Design A Upright

Type 2  
Nut Traversing  
and Screw  
Rotating

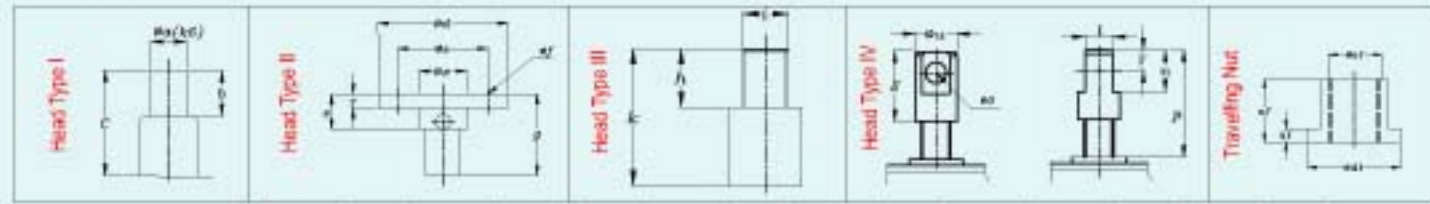


Design B Inverted

### Preliminary Selection Guide for MTE Series

Model No. & Capacity in Metric Tonnes	0.5	1	2	2.5	5	10	15	20	25	30	35	50	75	100	150	
Max. Lifting Force (kN)	5	90	20	25	50	100	150	200	250	300	350	500	750	1000	1500	
Lifting Screw Dia & Pitch mm	18 x 6	20 x 5	26 x 6.35	30 x 6	40 x 7	56 x 12	60 x 12	65 x 12	90 x 16	95 x 16	100 x 16	120 x 16	127 x 16	160 x 20	180 x 25	
Worm Gear Ratio	Normal	90 : 1	5 : 1	6 : 1	6 : 1	6 : 1	23 : 3	23 : 3	8 : 1	32 : 3	32 : 3	32 : 3	32 : 3	12 : 1	12 : 1	
	Slow	20 : 1	20 : 1	24 : 1	24 : 1	24 : 1	24 : 1	24 : 1	24 : 1	32 : 1	32 : 1	32 : 1	32 : 1	36 : 1	36 : 1	
Lift in mm per turn of input shaft	Normal	0.80	1	1.068	1.0	1.167	1.585	1.585	1.5	1.5	1.5	1.5	1.5	1.667	2.08	
	Slow	0.30	0.25	0.262	0.250	0.292	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.590	0.694	
Max. Power Input (KW) *	20% Duty	0.12	0.24	0.45	0.55	1.1	2.6	2.6	3.7	4.8	4.8	6.0	7.4	9	12.5	25
	10% Duty	0.17	0.32	0.63	0.75	1.5	3.7	3.7	5.2	6.7	6.7	8.4	10.4	13.6	17.5	17.5
Total Efficiency Rating %	Normal	27.2	27	26.4	23.2	21	23	22.5	21.5	20	19	18	15	15	15	
	Slow	20	16	16	13.6	16	16	16	15	12	12	11.0	10.0	10	9.0	9
Screw Torque (Nm) *	At Max. Lift	8.8	17.3	44.6	60	153	468	717	1009	1725	2148	2500	4236	6630	11116	19270
Max. Permissible Torque (Nm) At Driving Shaft		12	20.5	36	46.5	92	195	195	280	480	480	705	840	1200	2660	4220
Weight without Screw & Protection Tube (kg)		1.2	1.2	7.3	7.3	16.2	25	25	36	70.5	70.5	87	176	536	536	536
Weight per 100 mm Screw		0.14	0.17	0.32	0.45	0.62	1.67	1.8	2.15	4.15	4.62	5.20	7.70	8.62	13.62	16.6

### SCREW ROD - END VARIANTS



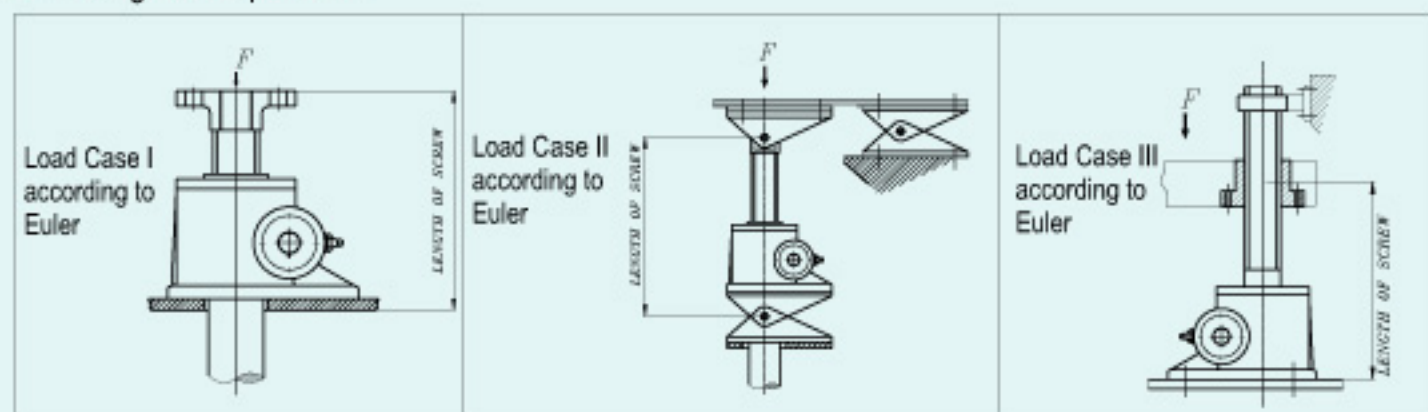
Model No./Capacity in Metric Tons	0.5	1	2	2.5	5	10	15	20	25	30	35	50	75	100	150	
HEAD I	a <sub>1</sub> <sup>mm</sup>	12	12	16	20	25	40	40	50	70	75	80	100	100	140	150
	b	20	20	30	30	40	50	50	60	63	75	80	125	125	175	175
	c	30	31.5	45	45	51	73.3	73.5	80	92	83	100	150	150	200	225
HEAD II	d <sub>1</sub>	65	90	96	96	122	150	150	165	205	240	260	300	350	355	370
	d <sub>2</sub>	45	65	75	75	85	105	105	140	155	175	200	225	260	260	260
	d <sub>3</sub>	4 x Ø27	4 x Ø11	4 x Ø11	4 x Ø14	4 x Ø17	4 x Ø21	4 x Ø21	4 x Ø26	4 x Ø27	4 x Ø30	4 x Ø33	4 x Ø35	4 x Ø38	6 x Ø48	6 x Ø52
	r	8	9.5	12	12	18	20	20	20	25	26	30	30	35	75	75
	s	20	25	30	30	40	50	50	60	63	75	80	70	70	125	125
	d <sub>4</sub>	16	35	40	40	50	65	65	90	90	100	130	140	155	200	200
	g	30	31.5	45	46	51	73.5	73.5	80	92	83	100	100	75	150	200
	h	20	20	30	30	39	50	50	60	63	75	80	125	125	175	175
HEAD III	i	M12 x 1.25	M12 x 1.5	M16 x 1.5	M22 x 1.5	M30 x 2	M40 x 3	M40 x 3	M50 x 3	M70 x 3	M75 x 3	M80 x 3	M100 x 5	M100 x 5	M140 x 8	M150 x 6p
	k	30	31.5	45	46	51	73.5	73.5	80	92	83	100	150	150	200	220
HEAD IV	j	20	20	30	30	42	60	60	75	90	90	105	120	120	160	160
	m	50	50	70	70	105	130	130	150	170	175	220	300	300	360	375
	n	30	30	50	50	75	100	100	120	140	140	160	200	200	260	300
	d <sub>5</sub> <sup>mm</sup>	15	15	20	25	35	50	50	60	70	70	80	100	100	145	160
	p	65	65	65	66	117	153.5	153.5	170	204	204	240	325	325	365	400
	d <sub>6</sub>	30	30	48	50	65	90	90	110	130	130	150	170	170	220	260
	v	15	15	25	25	37.5	50	50	60	70	70	80	100	100	140	150
TRAVEL NUT	af	32	36	40	45	60	75	75	100	120	140	145	155	190	200	225
	bf	10	12	15	15	18	25	25	35	35	40	35	50	50	65	80
	d <sub>7</sub> <sup>mm</sup>	40	38	50	50	70	90	90	90	130	133	150	160	180	200	230
	d <sub>8</sub>	50	62	76	80	87	110	110	120	155	230	190	225	316	260	365

## Dimension Table Type 1 & Type 2

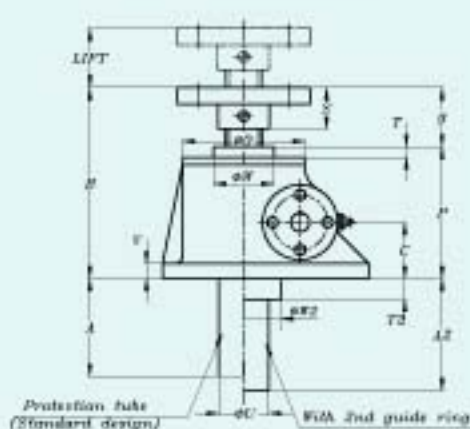
Frame Size	0.5	1	2	2.5	5	10	15	20	25	30	35	50	75	100	150
A	L+20	L+20	L+20	L+20	L+20	L+20	-	L+20	L+20	-	L+20	L+20	-	L+85	L+85
A2	L+32	-	L+44	L+40	L+43	L+42	L+55	L+55	L+60	L+60	L+60	L+65	L+70	L+65	L+65
A4	L+166	L+175.5	L+205	L+214	L+270	L+335	L+335	L+404	L+476	L+525	L+535	L+609	L+739	L+802	L+802
A5	L+168	L+195.5	L+227	L+238.5	L+300	L+359	L+359	L+430	L+513	L+577	L+560	L+698	L+789	L+812	L+812
B	105.5	114	147.5	150.5	193	230	230	262	317	338	350	375	419	520	520
C	32	36	44	45	61.5	70	70	87	102	105	115	130	140	170	170
D	81.5	92	94	165	212	235	235	295	350	365	430	260	584	540	540
E	-	-	57	135	166	190	190	240	260	295	360	150	482	440	440
F	115	127	162	120	155	200	200	215	260	260	280	500	356	620	620
G	90	102	152	90	114	155	155	160	190	190	210	400	254	520	520
GH	9	11	11	14	17	21	21	28	35	39	35	48	54	52	52
GH6	10	12	14	16	20	25	25	28	34	35	38	40	45	60m6	70m6
K1	27	32	45.2	45.2	56.2	66.8	66.8	72.5	97	97	120	137	137	196	196
K2	-	-	28.5	50	58	63.5	63.5	95	95	105	135	75	190.5	160	160
L	32.5	35	47	65	60	66	66	122.5	130	140	170	130	241	210	210
L1	22	36.5	34	34.25	46	52	52	52	60	61.5	60	100	105	110	110
M	73	80	100	110.5	132	172	172	213.5	221	251	265	324	380	420	420
N	120	153	160	190	228	260	260	322	355	380	430	560	610	670	670
NL	L+72	L+78	L+60	L+65	L+110	L+125	L+125	L+150	L+170	L+170	L+205	L+225	L+255	L+300	L+300
OO	65	70	96	96	122	150	150	165	205	230	260	300	350	440	440
P	75.5	82.5	101.5	105.5	142	166.5	166.5	162	225	255	250	275	344	370	370
Q	3x3x20	3x3x25	5x5x28	5x5x32	6x6x32	6x7x45	6x7x45	6x7x45	10x6x50	10x6x50	10x6x70	12x6x80	14x6x80	16x11x90	20x12x90
QR	-	-	41	38	55	55	55	72	80	90	100	-	140	147	147
S1	1.5	-	6	5.5	6	7	7	6	10	3	10	-	8	14	14
T	5.5	-	6.5	6.5	12	6.5	6.5	6	6	20	10	15	20	20	20
T1	18.5	20	24	26.5	30	34	34	39	52	52	45	29	50	43	43
T2	11.5	-	20	20	18	18	18	31	40	20	40	10	35	20	20
T4	0	-	0	0	0	0	0	0	0	0	15	32	0	0	0
OU	26	30	47	47	63	78	78	86	118	115	136	143	160	198	198
V	10	10	14	12	18	16	16	20	25	30	30	35	35	50	50
OW	36	36	46	46	65	60	60	100	130	140	150	170	160	240	240
OW1	45	36	60	66	63	110	110	140	160	140	160	210	200	280	280
OW2	45	-	60	60	75	95	95	100	130	140	150	169	200	220	220
X	20	20	20	20	20	25	25	25	25	25	30	50	50	50	50
Y	70	77.5	93	97	130	150	150	175	217	235	240	260	324	350	350
Y1	74	77.5	95	100	131	150	160	194	226	255	250	269	344	363	363
Y2	70	77.5	93	97	131	150	150	161	211	255	250	292	344	350	350

L = Lift

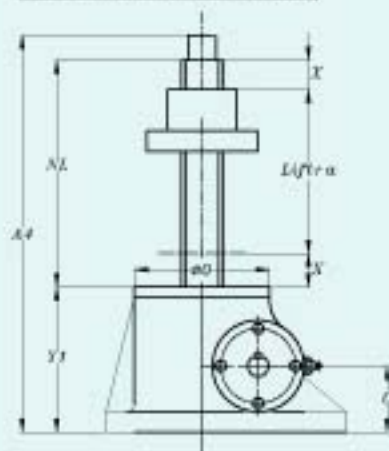
### Load Diagram as per Euler



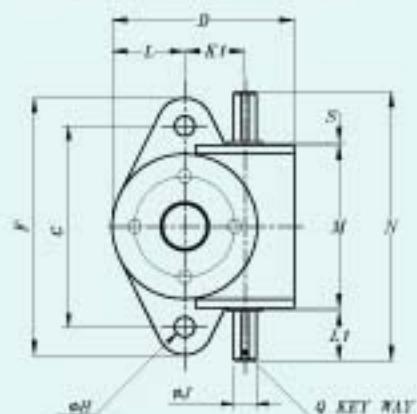
**TYPE 1 DESIGN A**



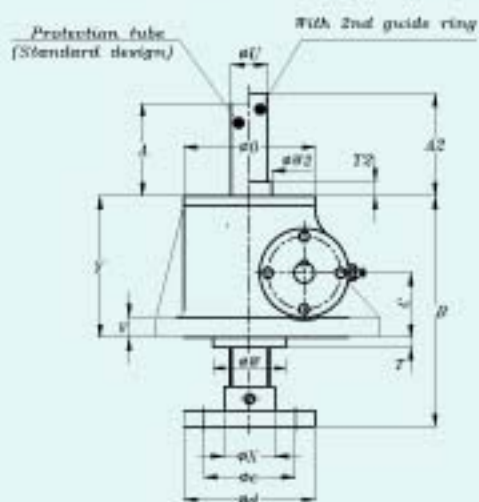
**TYPE 2 DESIGN A**



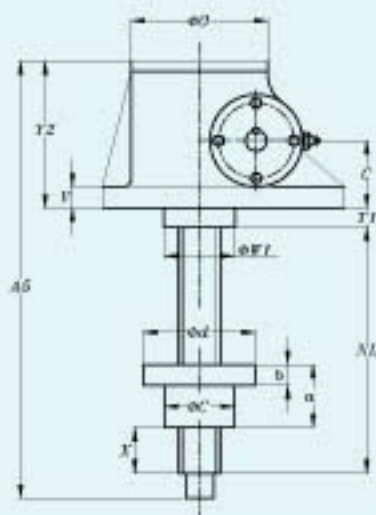
**Only for MTE - 0.5**



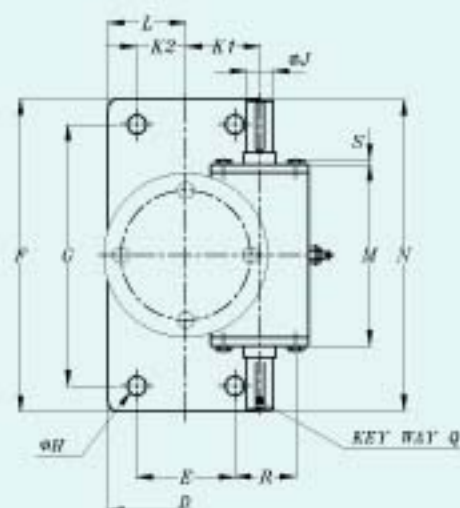
**TYPE 1 DESIGN B**



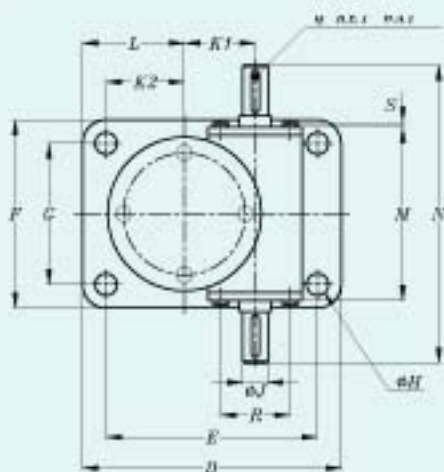
**TYPE 2 DESIGN B**



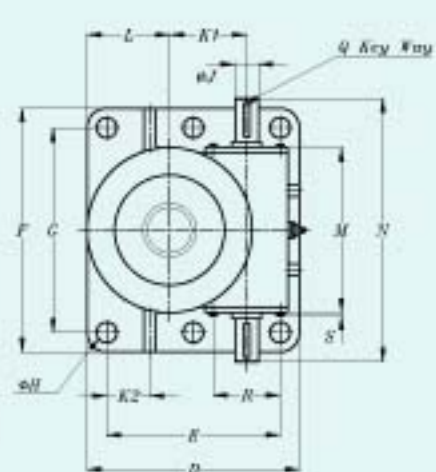
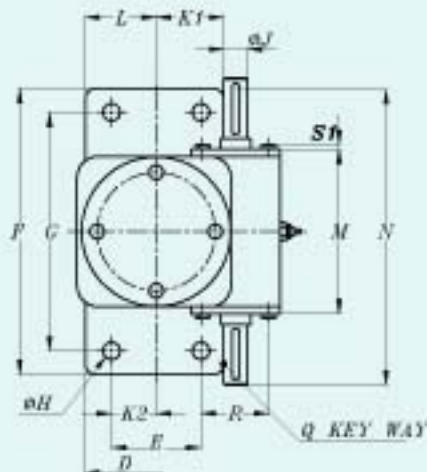
**Only for MTE - 2**



**Only For MTE - 2.5, 5, 10,15,20,25,30 35 & 75**

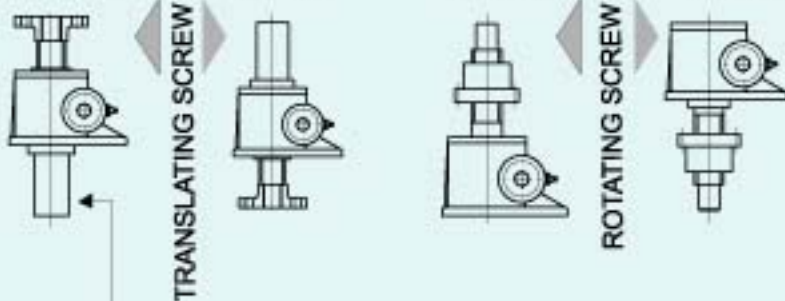


**Only For MTE - 100 & 150**

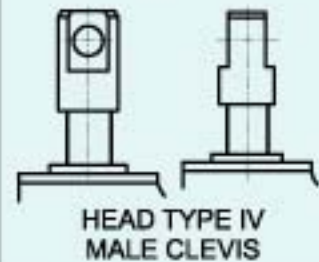


# Worm Gear Screw Jack

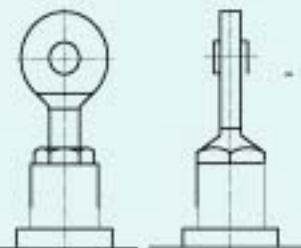
TYPE 1 DESIGN A UPRIGHT    TYPE 1 DESIGN B INVERTED    TYPE 2 DESIGN A UPRIGHT    TYPE 2 DESIGN B INVERTED



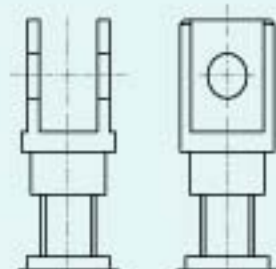
## SCREW ROD END VARIANTS CATALOGUED



## SCREW ROD END VARIANTS NON CATALOGUED



## FORK TYPE HEAD



MTE - 5    TYPE 1    DESIGN A    6:1    LIFT 450    CLOSED HEIGHT    HEAD TYPE II    BB    MRH

### Worm Gear SCREW Jack Model

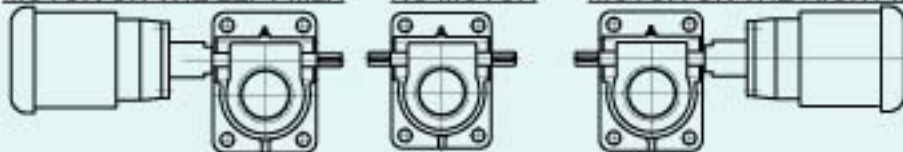
TON	KN	MODEL	TON	KN	MODEL
0.5	5	MTE - 0.5	20	200	MTE - 20
1	10	MTE - 1	25	250	MTE - 25
2	20	MTE - 2	30	300	MTE - 30
2.5	25	MTE - 2.5	35	350	MTE - 35
5	50	MTE - 5	50	500	MTE - 50
10	100	MTE 10	75	750	MTE - 75
15	150	MTE - 15	100	1000	MTE - 100
			150	1500	MTE - 150

### ADDITIONAL ACCESSORIES

- Hand Wheel    HW
- Hand Crank    HC
- Limit Switch    LS
- Bellow Boots    BB ←
- Swivel Base    SB
- Brake Motor    BM
- Reducers    Red
- Double Clevis    DC
- Anti Backlash    AB
- Anti Turn ( Keyed Version)    AT
- Anti Turn + Anti Backlash    AT+AB

Above Example:  
Size MTE 5 TON, Type 1 Design A, with Ratio 6:1, Lift 450 mm, Closed Height 450 + 193, Head Type II, Bellow Boots, Motor Mounted to right.  
\* Additional Closed height if any to be specified, refer catalogue, Dimension B,B1,NL

MOTOR ON THE LEFT MLH    NO MOTOR    MOTOR ON THE RIGHT MRH



# MASKO TECH ENGINEERS



Worm Gear Screw Jacks CLASSIC



Worm Gear Screw Jacks CUBICAL



Ball Screw Jack



Electric Cylinder



Bevel Gear Screw Jacks



UV Joints



Lifting Systems



WORM GEAR SCREW JACK & LINEAR ACTUATORS