

PRELIMINARY SELECTION GUIDE

High Efficiency Worm Gearbox WGJ 0.5/31 to WGJ 100/200

Gearbox Type	Standard High Efficiency Worm Gearbox WGJ									
	0.5/31		1/36		2.5/50		5/63		10/80	
Nominal size, WGJ	0.5/31		1/36		2.5/50		5/63		10/80	
Max lifting capacity, kN	5		10		25		50		100	
Lifting screw Tr	18x4		22x5		40x8		50x9		60x12	
Normal N, Slow L	N	L	N	L	N	L	N	L	N	L
Ratio	4:1	16:1	5:1	20:1	6:1	24:1	7:1	28:1	8:1	32:1
Lift per turn of worm, at ratio, mm	1	0.25	1	0.25	1.3	0.33	1.28	0.32	1.5	0.375
Total efficiency, at ratio	0.33	0.22	0.33	0.22	0.31	0.2	0.28	0.17	0.19	0.13
Screw efficiency	0.427		0.433		0.4		0.37		0.4	
Screw torque at max lifting capacity, Nm	7.5		18.4		79.7		192		478	
Worm torque at max lifting capacity, at ratio Nm	2.4	0.9	4.8	1.8	17.3	6.7	36.7	14.8	79.7	32
Max permissible torque at worm shaft, Nm	12.5		29.4		48.5		165		400	
Weight without lifting screw, and protection tube, kg	2		4		13		25		47	
Weight per 100 mm of screw and protection tube, kg	0.16		0.23		0.82		1.3		1.8	

Gearbox Type	Standard High Efficiency Worm Gearbox WGJ							
	20/200		35/125		50/140		100/200	
Nominal size, WGJ	20/200		35/125		50/140		100/200	
Max lifting capacity, kN	200		350		500		1000	
Lifting screw Tr	70x12		100x16		120x16		160x20	
Normal N, Slow L	N	L	N	L	N	L	N	L
Ratio	8:1	32:1	10.67:1	32:1	10.67:1	32:1	13.3:1	40:1
Lift per turn of worm, at ratio, mm	1.5	0.375	1.5	0.5	1.5	0.5	1.5	0.5
Total efficiency, at ratio	0.27	0.17	0.25	0.17	0.21	0.14	0.2	0.14
Screw efficiency	0.36		0.34		0.3		0.28	
Screw torque at max lifting capacity, Nm	1061		2598		4236		11115	
Worm torque at max lifting capacity, at ratio Nm	175	69	337	166	556	277	1163	576
Max permissible torque at worm shaft, Nm	705		975		1640		4260	
Weight without lifting screw and protection tube, kg	74		145		335		870	
Weight per 100 mm of screw and protection tube, kg	2.52		5.2		7.7		13.8	

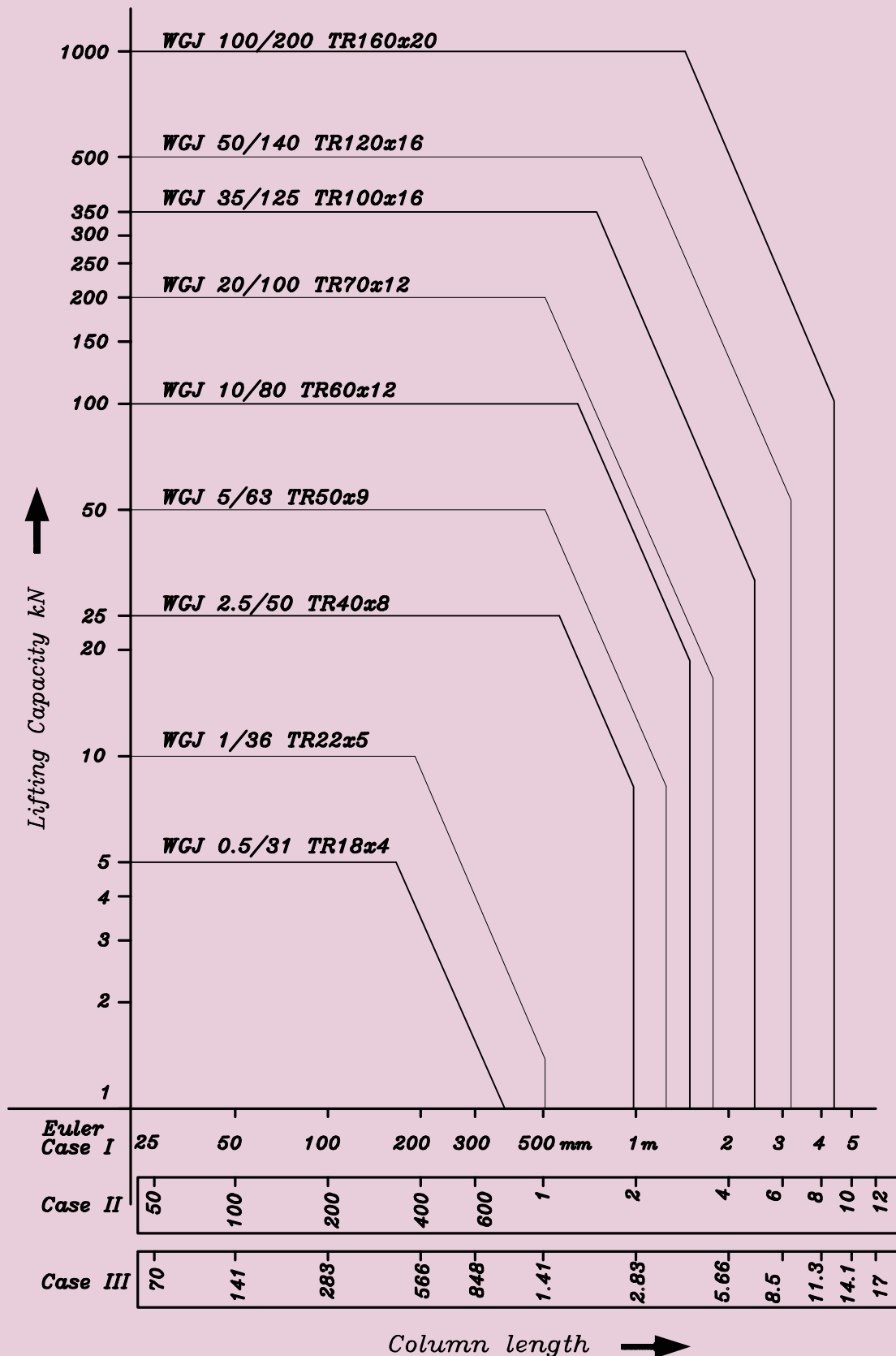
Note: Total efficiency is given for input rpm of 300. For other rpm multiply total efficiency by factor C1.

Input rpm	100	300	600	1000	1500	3000
Factor C1	0.96	1	1.05	1.06	1.08	1.12



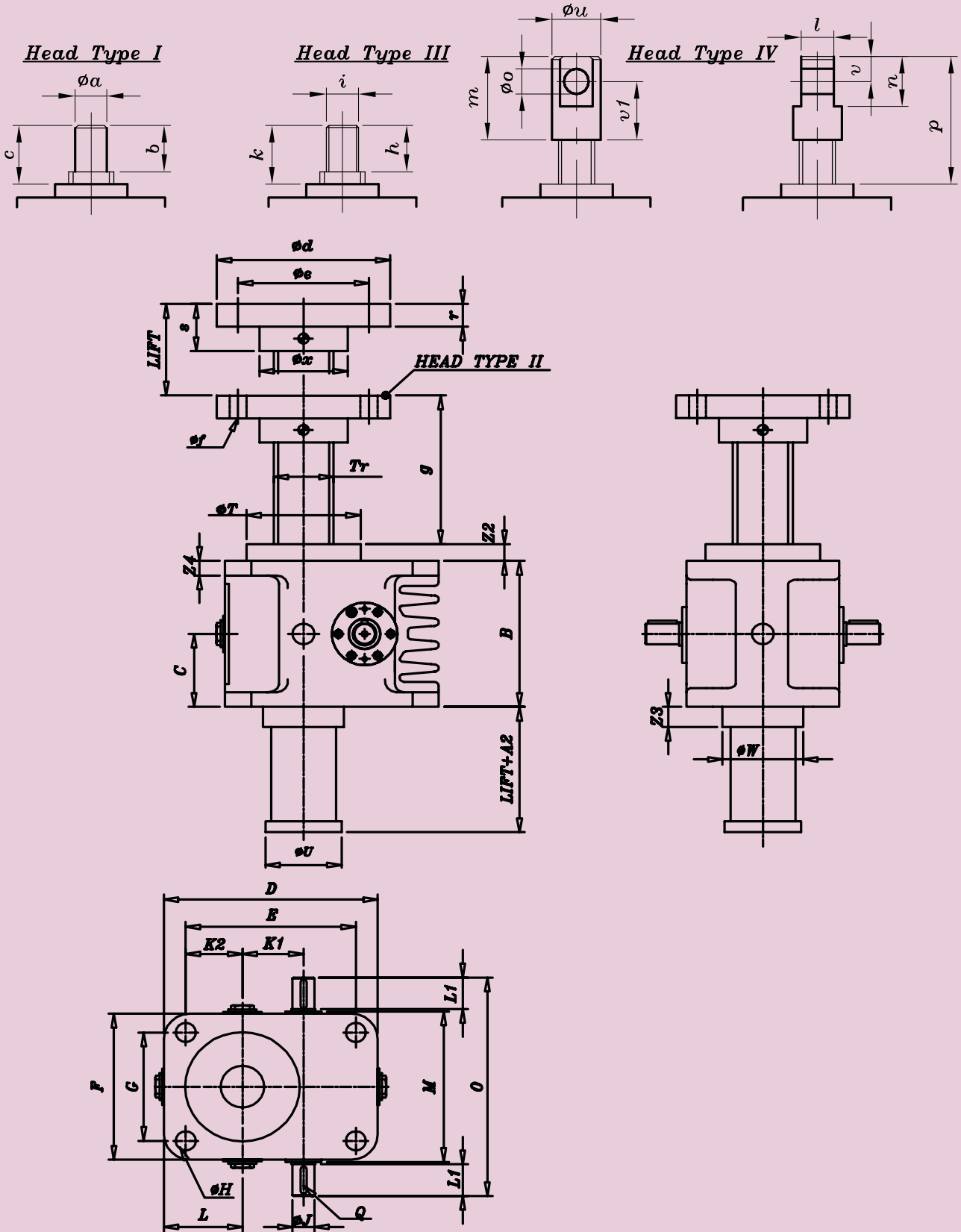
PRELIMINARY SELECTION CHART

Column Strength



DIMENSION SHEET

Nominal Size WGJ 0.5/31 to WGJ 100 /200 Type 1





DIMENSION SHEET

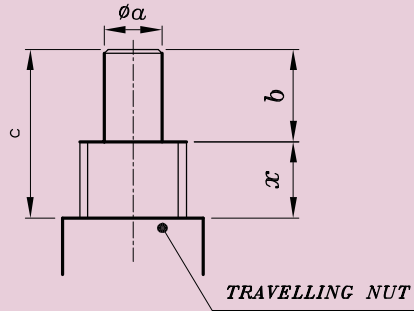
Nominal Size WGJ 0.5/31 to WGJ 100/200 Type 1

Size	0.5/31	1/36	2.5/50	5/63	10/80	20/100	35/125	50/140	100/200
Screw	Tr 18x4	Tr22x5	Tr40x8	Tr50x9	Tr60x12	Tr70x12	Tr100x16	Tr120x16	Tr160x20
A2	39	44	46	52	61	71	76	86	101
B	80	105	130	160	200	230	300	350	450
C	40	52.5	65	80	100	115	150	175	225
D	117	138	175	235	275	330	410	490	680
E	95	110	140	190	220	270	330	390	550
F	80	105	130	160	200	230	300	350	460
G	62	80	100	120	150	175	230	260	330
ØH	9	9	13	17	21	28	39	46	66
ØJ k6	10	14	16	24	32	38	42	50	70
K1	31	36	50	63	80	100	125	140	200
K2	31	40	50	70	75	87.5	110	130	185
L	42	54	67.5	92.5	102.5	117.5	150	180	250
L1	15	18	28	36	58	58	82	82	105
M	83	108	133	163	204	235	305	355	470
O	116	148	192	238	322	356	474	524	682
Q	3x3x12	5x5x16	5x5x25	8x7x32	10x8x50	10x8x50	12x8x70	14x9x70	20x12x100
Ø T f7	62	72	92	122	152	182	222	262	352
Ø U	28	37	66	82	78	92	136	143	198
ØW	45	50	80	100	120	150	180	220	290
Z2	23	24	26	29	39	49	54	64	79
Z3	29	34	39	44	54	64	74	84	109
Z4	10	12	15	20	25	28	35	45	60
Head I									
Øa k6	12	15	20	30	40	50	80	95	130
b	17	24	29	39	49	54	79	99	119
c	37	44	49	59	69	74	99	119	139
Head II									
Ø d	62	72	92	122	150	182	222	262	352
Ø e	45	50	65	85	105	135	170	205	270
Ø f	4xØ6.6	4xØ9	4xØ14	4xØ18	4xØ22	6xØ26	8xØ30	8xØ33	8xØ45
g	43	45	50	60	70	75	100	120	140
r	8	10	12	18	20	25	30	35	50
s	18	25	30	40	50	55	80	100	120
Ø X	20	30	35	50	65	85	115	140	185
Head III									
h	17	24	29	39	49	54	79	99	119
i	M 12x1.5	M 16x1.5	M 20x1.5	M 30x2	M 42x3	M 56x3	M 80x3	M 100x4	M 140x4
k	37	44	49	59	69	74	99	119	139
Head IV									
l _{0.2}	20	25	30	40	60	75	100	120	160
m	50	60	70	100	130	150	230	300	360
n	30	40	50	70	100	120	160	200	280
Ø o H8	15	20	25	35	50	60	80	100	140
p	55	60	65	85	100	110	170	220	240
Ø u	30	40	50	65	90	110	140	170	220
v	15	20	25	35	50	60	80	100	140
v1	35	40	45	65	80	90	150	200	220

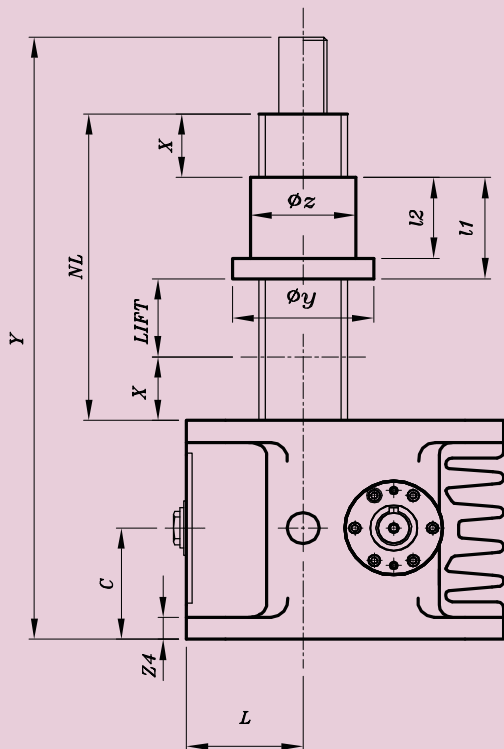
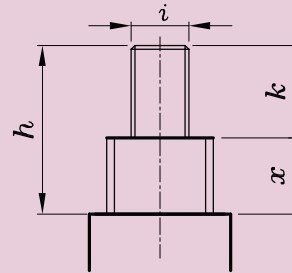
DIMENSION SHEET

Nominal Size WGJ 0.5/31 to WGJ 100 /200 Type 2

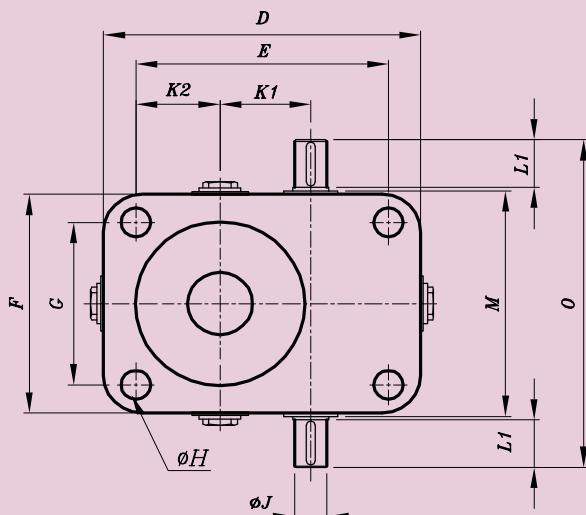
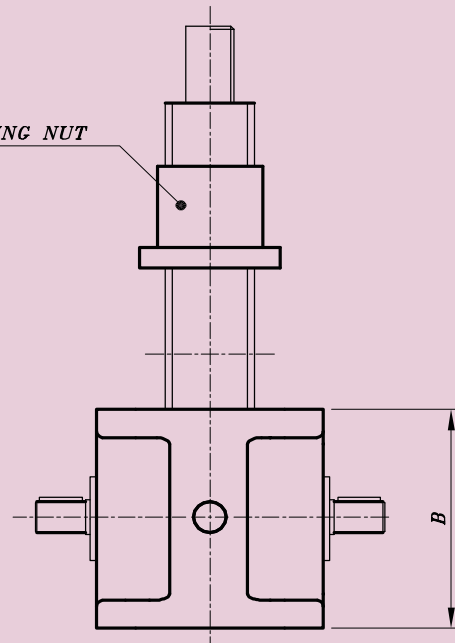
HEAD TYPE I



HEAD TYPE III



TRAVELLING NUT





DIMENSION SHEET

Nominal Size WGJ 0.5/31 to WGJ 100 /200 Type 2

Size	0.5/31	1/36	2.5/50	5/63	10/80	20/100	35/125	50/140	100/200
Screw	Tr 18x4	Tr 22x5	Tr 40x8	Tr 50x9	Tr 60x12	Tr 70x12	Tr 100x16	Tr 120x16	Tr 160x20
B	80	105	130	160	200	230	300	350	450
C	40	52.5	65	80	100	115	150	175	225
F	80	105	130	160	200	230	300	350	460
ØJ k6	10	14	16	24	32	38	42	50	70
L	42	54	67.5	92.5	102.5	117.5	150	180	250
L1	15	18	28	36	58	58	82	82	105
M	83	108	133	163	204	235	305	355	470
NL	lift+85	lift+95	lift+120	lift+140	lift+170	lift+170	lift+200	lift+220	lift+260
O	116	148	192	238	322	356	474	524	682
Q	3x3x12	5x5x16	5x5x25	8x7x32	10x8x50	10x8x50	12x8x70	14x9x70	20x12x100
Safety X	20	20	20	20	20	20	20	20	20
Y	NL+97	NL+129	NL+169	NL+199	NL+249	NL+284	NL+379	NL+449	NL+569
Z4	10	12	15	20	25	28	35	45	60
Travelling nut									
I1	45	55	80	100	130	130	160	180	220
I2	35	43	62	78	105	100	115	130	140
Øy	50	65	87	105	110	120	190	225	260
Øz h8	40	45	70	80	90	90	150	160	200
Head I									
Ø a k6	12	15	30	40	40	50	80	95	130
b	17	24	39	49	49	54	79	99	119
c	37	44	59	69	69	74	99	119	139
Head III									
h	17	24	39	49	49	54	79	99	119
i	M 12x1.5	M 16x1.5	M 30x2	M 42x3	M 42x3	M 56x3	M 80x3	M 100x4	M 140x4
k	37	44	59	69	69	74	99	119	139

Note: For dimension D, E, F, G, H, K1, K2 refer page 5.



HITORK[®]

Power Transmission Technology



Worm Gear Screw Jacks CLASSIC



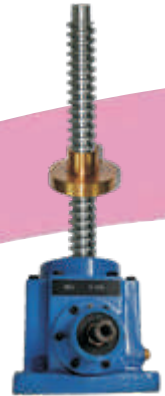
Worm Gear Screw Jacks CUBICAL



Ball Screw Jack



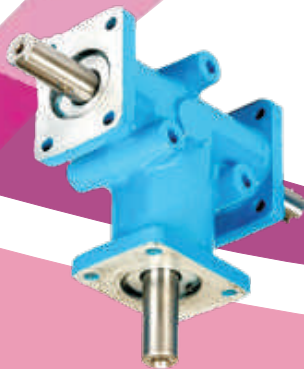
Electric Cylinder



Bevel Gear Screw Jacks



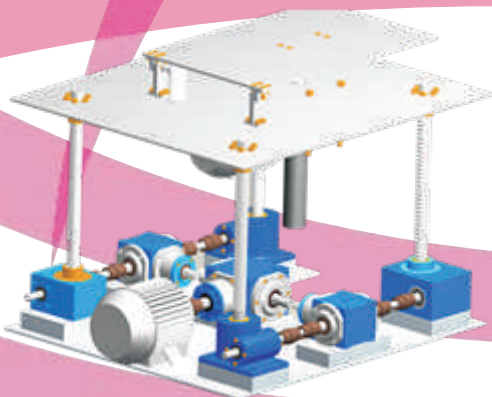
Bevel Gear Box, FG



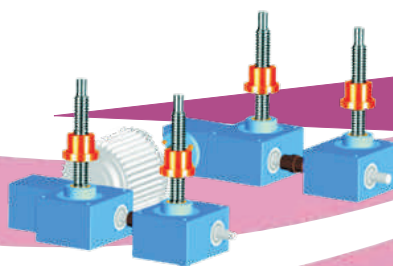
Bevel Gear Box, L Drive



UV Joints



Lifting Systems



Worm Reducer



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