

Screw Jacks

HR Line Rotating Nut



With a Rotating Nut Screw Jack (HR), the nut moves linearly along the screw.

They can be used as a single unit, or more Screw Jacks can be connected via transmission shafts and angular drives. Input rotational movement can come from manual winding or from an electrical motor, be that AC or DC. Screw Jacks are made up by a worm gear system (worm screw/worm wheel), a leadscrew and a nut.

- **ACME Lead Screw:** Carbon Steel – (Available in AISI304 on request)
- **Ball Screw:** Hardened Tempered Steel
- **Max Force:** 5 KN to 200 KN
- **Various Gear Ratios**
- **Gearbox Material:** Aluminum for sizes 05, 10, 25, Cast Iron for sizes 50, 100, 200
- **Options:** Bellows, Handwheel, Limit Switches, Position Feedback, Front ends, Mounting Feet and many more

Characteristics (ACME Screw):

TYPE:	05	10	25	50	100	200
LOAD - N:	5 000	10 000	25 000	50 000	100 000	200 000
ACME SCREW DIAMETER/PITCH:	18x4	20x4	30x6	40x7	55x9	70x10
GEARBOX REDUCTION RATIO:	1:4	1:4	1:5	1:5	1:5	1:5
	1:10	1:10	1:10	1:10	1:10	1:10
	1:16	1:16	1:10	1:10	1:10	1:10
	1:30	1:30	1:30	1:30	1:30	1:30
LEAD SCREW STROKE PER INPUT TURN (MM):	1	1	1.2	1.4	1.8	2
	0.4	0.4	0.6	0.7	0.9	1
	0.25	0.25	0.2	0.23	0.3	0.33
	0.13	0.13	0.2	0.23	0.3	0.33
JACK WEIGHT (GEARBOX ONLY) (KG):	2	3	6.5	24.5	36	80
WEIGHT FOR EACH 100 MM STROKE(KG):	0.16	0.2	0.45	0.81	1.56	2.6

Characteristics (Ball Screw / VRS):

TYPE:	05	10	25	50	100	200
LOAD - N:	5 000	10 000	25 000	50 000	100 000	200 000
ACME SCREW DIAMETER/PITCH:	16x5	20x5	32x10	40x10	50x10	63x10
GEARBOX REDUCTION RATIO:	1:4	1:4	1:5	1:5	1:5	1:5
	1:10	1:10	1:10	1:10	1:10	1:10
	1:16	1:16	1:10	1:10	1:10	1:10
	1:30	1:30	1:30	1:30	1:30	1:30
LEAD SCREW STROKE PER INPUT TURN (MM):	1.25	1.25	2	2	2	2
	0.5	0.5	1	1	1	1
	0.31	0.31	0.33	0.33	0.33	0.33
	0.16	0.16	0.33	0.33	0.33	0.33
JACK WEIGHT (GEARBOX ONLY) (KG):	2	3	6.5	24.5	36	80
WEIGHT FOR EACH 100 MM STROKE(KG):	0.12	0.24	0.53	0.85	1.3	2.2

Performance for HR05 (ACME Screw):

RATIO – 1:4											
LOAD - N:		5 000		4 000		3 000		2 000		1 000	
N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	0.47	3	0.36	2.3	0.25	1.6	0.19	1.2	0.09	0.6
1000	16.7	0.31	3	0.24	2.3	0.17	1.6	0.13	1.2	0.06	0.6
750	12.5	0.24	3	0.18	2.3	0.13	1.6	0.09	1.2	0.05	0.6
500	8.3	0.16	3	0.12	2.3	0.08	1.6	0.06	1.2	0.03	0.6
300	5.0	0.09	3	0.07	2.3	0.05	1.6	0.04	1.2	0.02	0.6
100	1.7	0.03	3	0.02	2.3	0.02	1.6	0.01	1.2	0.01	0.6
50	0.8	0.02	3	0.01	2.3	0.01	1.6	0.01	1.2	0.01	0.6

RATIO – 1:10											
LOAD - N:		5 000		4 000		3 000		2 000		1 000	
N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	10.0	0.24	1.5	0.19	1.2	0.14	0.9	0.09	0.6	0.05	0.3
1000	6.7	0.16	1.5	0.13	1.2	0.09	0.9	0.06	0.6	0.03	0.3
750	5.0	0.12	1.5	0.09	1.2	0.07	0.9	0.05	0.6	0.02	0.3
500	3.3	0.08	1.5	0.06	1.2	0.05	0.9	0.03	0.6	0.02	0.3
300	2.0	0.05	1.5	0.04	1.2	0.03	0.9	0.02	0.6	0.01	0.3
100	0.7	0.01	1.5	0.01	1.2	0.01	0.9	0.01	0.6	0.01	0.3
50	0.3	0.01	1.5	0.01	1.2	0.00	0.9	0.01	0.6	0.01	0.3

RATIO – 1:16											
LOAD - N:		5 000		4 000		3 000		2 000		1 000	
N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	6.3	0.16	1	0.13	0.8	0.09	0.6	0.06	0.4	0.03	0.2
1000	4.2	0.10	1	0.08	0.8	0.06	0.6	0.04	0.4	0.02	0.2
750	3.1	0.08	1	0.06	0.8	0.05	0.6	0.03	0.4	0.02	0.2
500	2.1	0.05	1	0.04	0.8	0.03	0.6	0.02	0.4	0.01	0.2
300	1.3	0.03	1	0.03	0.8	0.02	0.6	0.01	0.4	0.01	0.2
100	0.4	0.01	1	0.01	0.8	0.01	0.6	0.01	0.4	0.01	0.2
50	0.2	0.01	1	0.00	0.8	0.00	0.6	0.01	0.4	0.01	0.2

RATIO – 1:30											
LOAD - N:		5 000		4 000		3 000		2 000		1 000	
N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	3.3	0.08	0.5	0.06	0.4	0.05	0.3	0.03	0.2	0.02	0.1
1000	2.2	0.05	0.5	0.04	0.4	0.03	0.3	0.02	0.2	0.01	0.1
750	1.7	0.04	0.5	0.03	0.4	0.02	0.3	0.02	0.2	0.01	0.1
500	1.1	0.03	0.5	0.02	0.4	0.02	0.3	0.01	0.2	0.01	0.1
300	0.7	0.02	0.5	0.01	0.4	0.01	0.3	0.01	0.2	0.01	0.1
100	0.2	0.01	0.5	0.01	0.4	0.01	0.3	0.01	0.2	0.01	0.1
50	0.1	0.01	0.5	0.01	0.4	0.01	0.3	0.01	0.2	0.01	0.1

Performance for HR10 (ACME Screw):

RATIO – 1:4											
LOAD - N:		10 000		8 000		6 000		4 000		2 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	0.97	6.2	0.79	5	0.58	3.7	0.39	2.5	0.20	1.3
1000	16.7	0.65	6.2	0.52	5	0.39	3.7	0.26	2.5	0.14	1.3
750	12.5	0.49	6.2	0.39	5	0.29	3.7	0.20	2.5	0.10	1.3
500	8.3	0.32	6.2	0.26	5	0.19	3.7	0.13	2.5	0.07	1.3
300	5.0	0.19	6.2	0.16	5	0.12	3.7	0.08	2.5	0.04	1.3
100	1.7	0.06	6.2	0.05	5	0.04	3.7	0.03	2.5	0.01	1.3
50	0.8	0.03	6.2	0.03	5	0.02	3.7	0.01	2.5	0.01	1.3

RATIO – 1:10											
LOAD - N:		10 000		8 000		6 000		4 000		2 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	10.0	0.50	3.2	0.41	2.6	0.31	2	0.20	1.3	0.10	0.65
1000	6.7	0.34	3.2	0.27	2.6	0.21	2	0.14	1.3	0.07	0.65
750	5.0	0.25	3.2	0.20	2.6	0.16	2	0.10	1.3	0.05	0.65
500	3.3	0.17	3.2	0.14	2.6	0.10	2	0.07	1.3	0.03	0.65
300	2.0	0.10	3.2	0.08	2.6	0.06	2	0.04	1.3	0.02	0.65
100	0.7	0.03	3.2	0.03	2.6	0.02	2	0.01	1.3	0.01	0.65
50	0.3	0.02	3.2	0.01	2.6	0.01	2	0.01	1.3	0.01	0.65

RATIO – 1:16											
LOAD - N:		10 000		8 000		6 000		4 000		2 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	6.3	0.31	2	0.25	1.6	0.19	1.2	0.13	0.8	0.06	0.4
1000	4.2	0.21	2	0.17	1.6	0.13	1.2	0.08	0.8	0.04	0.4
750	3.1	0.16	2	0.13	1.6	0.09	1.2	0.06	0.8	0.03	0.4
500	2.1	0.10	2	0.08	1.6	0.06	1.2	0.04	0.8	0.02	0.4
300	1.3	0.06	2	0.05	1.6	0.04	1.2	0.03	0.8	0.01	0.4
100	0.4	0.02	2	0.02	1.6	0.01	1.2	0.01	0.8	0.01	0.4
50	0.2	0.01	2	0.01	1.6	0.01	1.2	0.01	0.8	0.01	0.4

RATIO – 1:30											
LOAD - N:		10 000		8 000		6 000		4 000		2 000	
N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt(Nm)	Pi(kW)	Mt(Nm)	N1 (RPM)	SPEED (MM/S)	Pi(kW)	Mt(Nm)	Pi(kW)	Mt(Nm)
1500	3.3	0.16	1	0.14	0.9	0.11	0.7	0.06	0.4	0.03	0.2
1000	2.2	0.10	1	0.09	0.9	0.07	0.7	0.04	0.4	0.02	0.2
750	1.7	0.08	1	0.07	0.9	0.05	0.7	0.03	0.4	0.02	0.2
500	1.1	0.05	1	0.05	0.9	0.04	0.7	0.02	0.4	0.01	0.2
300	0.7	0.03	1	0.03	0.9	0.02	0.7	0.01	0.4	0.01	0.2
100	0.2	0.01	1	0.01	0.9	0.01	0.7	0.01	0.4	0.01	0.2
50	0.1	0.01	1	0.01	0.9	0.01	0.7	0.01	0.4	0.01	0.2

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Your Screw Jack Supplier In South Africa

Performance for HR25 (ACME Screw):

RATIO – 1:5															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	30.0	3.69	23.5	2.91	18.5	2.20	14	1.46	9.3	1.10	7	0.71	4.5	0.36	2.3
1000	20.0	2.46	23.5	1.94	18.5	1.47	14	0.97	9.3	0.73	7	0.47	4.5	0.24	2.3
750	15.0	1.85	23.5	1.45	18.5	1.10	14	0.73	9.3	0.55	7	0.35	4.5	0.18	2.3
500	10.0	1.23	23.5	0.97	18.5	0.73	14	0.49	9.3	0.37	7	0.24	4.5	0.12	2.3
300	6.0	0.74	23.5	0.58	18.5	0.44	14	0.29	9.3	0.22	7	0.14	4.5	0.07	2.3
100	2.0	0.25	23.5	0.19	18.5	0.15	14	0.10	9.3	0.07	7	0.05	4.5	0.02	2.3
50	1.0	0.12	23.5	0.10	18.5	0.07	14	0.05	9.3	0.04	7	0.02	4.5	0.01	2.3

RATIO – 1:10															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	15.0	2.28	14.5	1.88	12	1.41	9	0.94	6	0.71	4.5	0.47	3	0.24	1.5
1000	10.0	1.52	14.5	1.26	12	0.94	9	0.63	6	0.47	4.5	0.31	3	0.16	1.5
750	7.5	1.14	14.5	0.94	12	0.71	9	0.47	6	0.35	4.5	0.24	3	0.12	1.5
500	5.0	0.76	14.5	0.63	12	0.47	9	0.31	6	0.24	4.5	0.16	3	0.08	1.5
300	3.0	0.46	14.5	0.38	12	0.28	9	0.19	6	0.14	4.5	0.09	3	0.05	1.5
100	1.0	0.15	14.5	0.13	12	0.09	9	0.06	6	0.05	4.5	0.03	3	0.02	1.5
50	0.5	0.08	14.5	0.06	12	0.05	9	0.03	6	0.02	4.5	0.02	3	0.01	1.5

RATIO – 1:30															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	5.0	0.79	5	0.63	4	0.47	3	0.31	2	0.25	1.6	0.16	1	0.08	0.5
1000	3.3	0.52	5	0.42	4	0.31	3	0.21	2	0.17	1.6	0.10	1	0.05	0.5
750	2.5	0.39	5	0.31	4	0.24	3	0.16	2	0.13	1.6	0.08	1	0.04	0.5
500	1.7	0.26	5	0.21	4	0.16	3	0.10	2	0.08	1.6	0.05	1	0.03	0.5
300	1.0	0.16	5	0.13	4	0.09	3	0.06	2	0.05	1.6	0.03	1	0.02	0.5
100	0.3	0.05	5	0.04	4	0.03	3	0.02	2	0.02	1.6	0.01	1	0.01	0.5
50	0.2	0.03	5	0.02	4	0.02	3	0.01	2	0.01	1.6	0.01	1	0.00	0.5



Data shown above refer to HR Screw Jacks featuring ACME leadscrew and grease-lubricated gearbox.

Highlighted values show restrictions due to thermal limits. In this case, it's necessary to reduce the duty factor or choose a bigger size, in order to grant an adequate heat dissipation.

Performance for HR50 (ACME Screw):

RATIO – 1:5															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	35.0	7.30	46.5	5.81	37	4.40	28	2.91	18.5	2.20	14	1.46	9.3	0.72	4.6
1000	23.3	4.87	46.5	3.87	37	2.93	28	1.94	18.5	1.47	14	0.97	9.3	0.48	4.6
750	17.5	3.65	46.5	2.91	37	2.20	28	1.45	18.5	1.10	14	0.73	9.3	0.36	4.6
500	11.7	2.43	46.5	1.94	37	1.47	28	0.97	18.5	0.73	14	0.49	9.3	0.24	4.6
300	7.0	1.46	46.5	1.16	37	0.88	28	0.58	18.5	0.44	14	0.29	9.3	0.14	4.6
100	2.3	0.49	46.5	0.39	37	0.29	28	0.19	18.5	0.15	14	0.10	9.3	0.05	4.6
50	1.2	0.24	46.5	0.19	37	0.15	28	0.10	18.5	0.07	14	0.05	9.3	0.02	4.6

RATIO – 1:10															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	17.5	4.63	29.5	3.69	23.5	2.75	17.5	1.81	11.5	1.41	9	0.93	5.9	0.47	3
1000	11.7	3.09	29.5	2.46	23.5	1.83	17.5	1.20	11.5	0.94	9	0.62	5.9	0.31	3
750	8.8	2.32	29.5	1.85	23.5	1.37	17.5	0.90	11.5	0.71	9	0.46	5.9	0.24	3
500	5.8	1.54	29.5	1.23	23.5	0.92	17.5	0.60	11.5	0.47	9	0.31	5.9	0.16	3
300	3.5	0.93	29.5	0.74	23.5	0.55	17.5	0.36	11.5	0.28	9	0.19	5.9	0.09	3
100	1.2	0.31	29.5	0.25	23.5	0.18	17.5	0.12	11.5	0.09	9	0.06	5.9	0.03	3
50	0.6	0.15	29.5	0.12	23.5	0.09	17.5	0.06	11.5	0.05	9	0.03	5.9	0.02	3

RATIO – 1:30															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	5.8	1.65	10.5	1.29	8.2	0.94	6	0.63	4	0.47	3	0.31	2	0.16	1
1000	3.9	1.10	10.5	0.86	8.2	0.63	6	0.42	4	0.31	3	0.21	2	0.10	1
750	2.9	0.82	10.5	0.64	8.2	0.47	6	0.31	4	0.24	3	0.16	2	0.08	1
500	1.9	0.55	10.5	0.43	8.2	0.31	6	0.21	4	0.16	3	0.10	2	0.05	1
300	1.2	0.33	10.5	0.26	8.2	0.19	6	0.13	4	0.09	3	0.06	2	0.03	1
100	0.4	0.11	10.5	0.09	8.2	0.06	6	0.04	4	0.03	3	0.02	2	0.01	1
50	0.2	0.05	10.5	0.04	8.2	0.03	6	0.02	4	0.02	3	0.01	2	0.01	1



Data shown above refer to HR Screw Jacks featuring ACME leadscrew and grease-lubricated gearbox.

Highlighted values show restrictions due to thermal limits. In this case, it's necessary to reduce the duty factor or choose a bigger size, in order to grant an adequate heat dissipation.

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Performance for HR100 (ACME Screw):

RATIO – 1:5															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	45.0	21.36	136	16.02	102	10.68	68	8.56	54.5	6.44	41	4.24	27	2.12	13.5
1000	30.0	14.24	136	10.68	102	7.12	68	5.71	54.5	4.29	41	2.83	27	1.41	13.5
750	22.5	10.68	136	8.01	102	5.34	68	4.28	54.5	3.22	41	2.12	27	1.06	13.5
500	15.0	7.12	136	5.34	102	3.56	68	2.85	54.5	2.15	41	1.41	27	0.71	13.5
300	9.0	4.27	136	3.20	102	2.14	68	1.71	54.5	1.29	41	0.85	27	0.42	13.5
100	3.0	1.42	136	1.07	102	0.71	68	0.57	54.5	0.43	41	0.28	27	0.14	13.5
50	1.5	0.71	136	0.53	102	0.36	68	0.29	54.5	0.21	41	0.14	27	0.10	13.5

RATIO – 1:10															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	22.5	11.78	75	8.80	56	5.97	38	4.71	30	3.46	22	2.36	15	1.18	7.5
1000	15.0	7.85	75	5.86	56	3.98	38	3.14	30	2.30	22	1.57	15	0.79	7.5
750	11.3	5.89	75	4.40	56	2.98	38	2.36	30	1.73	22	1.18	15	0.59	7.5
500	7.5	3.93	75	2.93	56	1.99	38	1.57	30	1.15	22	0.79	15	0.39	7.5
300	4.5	2.36	75	1.76	56	1.19	38	0.94	30	0.69	22	0.47	15	0.24	7.5
100	1.5	0.79	75	0.59	56	0.40	38	0.31	30	0.23	22	0.16	15	0.08	7.5
50	0.8	0.39	75	0.29	56	0.20	38	0.16	30	0.12	22	0.08	15	0.04	7.5

RATIO – 1:30															
LOAD - N:		500 00		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	7.5	4.71	30	3.30	21	2.36	15	1.88	12	1.41	9	0.94	6	0.47	3
1000	5.0	3.14	30	2.20	21	1.57	15	1.26	12	0.94	9	0.63	6	0.31	3
750	3.8	2.36	30	1.65	21	1.18	15	0.94	12	0.71	9	0.47	6	0.24	3
500	2.5	1.57	30	1.10	21	0.79	15	0.63	12	0.47	9	0.31	6	0.16	3
300	1.5	0.94	30	0.66	21	0.47	15	0.38	12	0.28	9	0.19	6	0.09	3
100	0.5	0.31	30	0.22	21	0.16	15	0.13	12	0.09	9	0.06	6	0.03	3
50	0.3	0.16	30	0.11	21	0.08	15	0.06	12	0.05	9	0.03	6	0.02	3



Data shown above refer to HR Screw Jacks featuring ACME leadscrew and grease-lubricated gearbox.

Highlighted values show restrictions due to thermal limits. In this case, it's necessary to reduce the duty factor or choose a bigger size, in order to grant an adequate heat dissipation.

Performance for HR200 (ACME Screw):

RATIO – 1:5															
LOAD - N:		200 000		175 000		150 000		100 000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	50.0	47.59	303	41.62	265	35.65	227	23.87	152	17.91	114	11.94	76	5.97	38
1000	33.3	31.73	303	27.75	265	23.77	227	15.92	152	11.94	114	7.96	76	3.98	38
750	25.0	23.80	303	20.81	265	17.83	227	11.94	152	8.95	114	5.97	76	2.98	38
500	16.7	15.86	303	13.87	265	11.88	227	7.96	152	5.97	114	3.98	76	1.99	38
300	10.0	9.52	303	8.32	265	7.13	227	4.77	152	3.58	114	2.39	76	1.19	38
100	3.3	3.17	303	2.77	265	2.38	227	1.59	152	1.19	114	0.80	76	0.40	38
50	1.7	1.59	303	1.39	265	1.19	227	0.80	152	0.60	114	0.40	76	0.20	38

RATIO – 1:10															
LOAD - N:		200 000		175 000		150 000		100 000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	26.23	167	22.93	146	19.63	125	13.19	84	9.90	63	6.60	42	3.30	21
1000	16.7	17.49	167	15.29	146	13.09	125	8.80	84	6.60	63	4.40	42	2.20	21
750	12.5	13.12	167	11.47	146	9.82	125	6.60	84	4.95	63	3.30	42	1.65	21
500	8.3	8.74	167	7.64	146	6.54	125	4.40	84	3.30	63	2.20	42	1.10	21
300	5.0	5.25	167	4.59	146	3.93	125	2.64	84	1.98	63	1.32	42	0.66	21
100	1.7	1.75	167	1.53	146	1.31	125	0.88	84	0.66	63	0.44	42	0.22	21
50	0.8	0.87	167	0.76	146	0.65	125	0.44	84	0.33	63	0.22	42	0.11	21

RATIO – 1:30															
LOAD - N:		200 000		175 000		150 000		100 000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	8.3	10.52	67	9.11	58	7.85	50	5.34	34	3.93	25	2.59	16.5	1.34	8.5
1000	5.6	7.02	67	6.07	58	5.24	50	3.56	34	2.62	25	1.73	16.5	0.89	8.5
750	4.2	5.26	67	4.55	58	3.93	50	2.67	34	1.96	25	1.30	16.5	0.67	8.5
500	2.8	3.51	67	3.04	58	2.62	50	1.78	34	1.31	25	0.86	16.5	0.45	8.5
300	1.7	2.10	67	1.82	58	1.57	50	1.07	34	0.79	25	0.52	16.5	0.27	8.5
100	0.6	0.70	67	0.61	58	0.52	50	0.36	34	0.26	25	0.17	16.5	0.09	8.5
50	0.3	0.35	67	0.30	58	0.26	50	0.18	34	0.13	25	0.09	16.5	0.04	8.5



Data shown above refer to HR Screw Jacks featuring ACME leadscrew and grease-lubricated gearbox.

Highlighted values show restrictions due to thermal limits. In this case, it's necessary to reduce the duty factor or choose a bigger size, in order to grant an adequate heat dissipation.

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BirCraft team for the most updated information. Please note that the Customer is responsible for determining that the product will perform suitably for their intended application.

Your Screw Jack Supplier In South Africa

Performance for HR-VRS 25 (Ball Screw):

RATIO - 1:5															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	50.0	1.57	10	1.26	8	0.94	6	0.63	4	0.47	3	0.31	2	0.16	1
1000	33.3	1.05	10	0.84	8	0.63	6	0.42	4	0.31	3	0.21	2	0.10	1
750	25.0	0.79	10	0.63	8	0.47	6	0.31	4	0.24	3	0.16	2	0.08	1
500	16.7	0.52	10	0.42	8	0.31	6	0.21	4	0.16	3	0.10	2	0.05	1
300	10.0	0.31	10	0.25	8	0.19	6	0.13	4	0.09	3	0.06	2	0.03	1
100	3.3	0.10	10	0.08	8	0.06	6	0.04	4	0.03	3	0.02	2	0.01	1
50	1.7	0.05	10	0.04	8	0.03	6	0.02	4	0.02	3	0.01	2	0.01	1

RATIO - 1:10															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	0.86	5.5	0.68	4.3	0.50	3.2	0.35	2.2	0.27	1.7	0.17	1.1	0.09	0.55
1000	16.7	0.58	5.5	0.45	4.3	0.34	3.2	0.23	2.2	0.18	1.7	0.12	1.1	0.06	0.55
750	12.5	0.43	5.5	0.34	4.3	0.25	3.2	0.17	2.2	0.13	1.7	0.09	1.1	0.04	0.55
500	8.3	0.29	5.5	0.23	4.3	0.17	3.2	0.12	2.2	0.09	1.7	0.06	1.1	0.03	0.55
300	5.0	0.17	5.5	0.14	4.3	0.10	3.2	0.07	2.2	0.05	1.7	0.03	1.1	0.02	0.55
100	1.7	0.06	5.5	0.05	4.3	0.03	3.2	0.02	2.2	0.02	1.7	0.01	1.1	0.01	0.55
50	0.8	0.03	5.5	0.02	4.3	0.02	3.2	0.01	2.2	0.01	1.7	0.01	1.1	0.00	0.55

RATIO - 1:30															
LOAD - N:		25 000		20 000		15 000		10 000		7 500		5 000		2 500	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	8.3	0.31	2	0.27	1.7	0.20	1.3	0.13	0.8	0.09	0.6	0.06	0.4	0.03	0.2
1000	5.6	0.21	2	0.18	1.7	0.14	1.3	0.08	0.8	0.06	0.6	0.04	0.4	0.02	0.2
750	4.2	0.16	2	0.13	1.7	0.10	1.3	0.06	0.8	0.05	0.6	0.03	0.4	0.02	0.2
500	2.8	0.10	2	0.09	1.7	0.07	1.3	0.04	0.8	0.03	0.6	0.02	0.4	0.01	0.2
300	1.7	0.06	2	0.05	1.7	0.04	1.3	0.03	0.8	0.02	0.6	0.01	0.4	0.01	0.2
100	0.6	0.02	2	0.02	1.7	0.01	1.3	0.01	0.8	0.01	0.6	0.01	0.4	0.00	0.2
50	0.3	0.01	2	0.01	1.7	0.01	1.3	0.01	0.8	0.01	0.6	0.01	0.4	0.00	0.2

Performance for HR-VRS 50 (Ball Screw):

RATIO - 1:5															
LOAD - N:		50 000		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	50.0	3.14	20	2.51	16	1.88	12	1.26	8	0.94	6	0.63	4	0.31	2
1000	33.3	2.09	20	1.68	16	1.26	12	0.84	8	0.63	6	0.42	4	0.21	2
750	25.0	1.57	20	1.26	16	0.94	12	0.63	8	0.47	6	0.31	4	0.16	2
500	16.7	1.05	20	0.84	16	0.63	12	0.42	8	0.31	6	0.21	4	0.10	2
300	10.0	0.63	20	0.50	16	0.38	12	0.25	8	0.19	6	0.13	4	0.06	2
100	3.3	0.21	20	0.17	16	0.13	12	0.08	8	0.06	6	0.04	4	0.02	2
50	1.7	0.10	20	0.08	16	0.06	12	0.04	8	0.03	6	0.02	4	0.01	2

RATIO - 1:10															
LOAD - N:		50 000		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	1.63	10.4	1.30	8.3	0.99	6.3	0.66	4.2	0.50	3.2	0.33	2.1	0.17	1.1
1000	16.7	1.09	10.4	0.87	8.3	0.66	6.3	0.44	4.2	0.34	3.2	0.22	2.1	0.12	1.1
750	12.5	0.82	10.4	0.65	8.3	0.49	6.3	0.33	4.2	0.25	3.2	0.16	2.1	0.09	1.1
500	8.3	0.54	10.4	0.43	8.3	0.33	6.3	0.22	4.2	0.17	3.2	0.11	2.1	0.06	1.1
300	5.0	0.33	10.4	0.26	8.3	0.20	6.3	0.13	4.2	0.10	3.2	0.07	2.1	0.03	1.1
100	1.7	0.11	10.4	0.09	8.3	0.07	6.3	0.04	4.2	0.03	3.2	0.02	2.1	0.01	1.1
50	0.8	0.05	10.4	0.04	8.3	0.03	6.3	0.02	4.2	0.02	3.2	0.01	2.1	0.01	1.1

RATIO - 1:30															
LOAD - N:		50 000		40 000		30 000		20 000		15 000		10 000		5 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	8.3	0.63	4	0.50	3.2	0.38	2.4	0.25	1.6	0.19	1.2	0.13	0.8	0.08	0.5
1000	5.6	0.42	4	0.34	3.2	0.25	2.4	0.17	1.6	0.13	1.2	0.08	0.8	0.05	0.5
750	4.2	0.31	4	0.25	3.2	0.19	2.4	0.13	1.6	0.09	1.2	0.06	0.8	0.04	0.5
500	2.8	0.21	4	0.17	3.2	0.13	2.4	0.08	1.6	0.06	1.2	0.04	0.8	0.03	0.5
300	1.7	0.13	4	0.10	3.2	0.08	2.4	0.05	1.6	0.04	1.2	0.03	0.8	0.02	0.5
100	0.6	0.04	4	0.03	3.2	0.03	2.4	0.02	1.6	0.01	1.2	0.01	0.8	0.01	0.5
50	0.3	0.02	4	0.02	3.2	0.01	2.4	0.01	1.6	0.01	1.2	0.01	0.8	0.01	0.5

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Performance for HR-VRS 100 (Ball Screw):

Data shown below refer to HR-VRS Screw Jacks featuring ball screw and oil-lubricated gearbox.

RATIO - 1:5															
LOAD - N:		100 000		75 000		50 000		40 000		30 000		20 000		10 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	50.0	6.20	39.5	4.65	29.6	3.14	20	2.51	16	1.88	12	1.26	8	0.63	4
1000	33.3	4.14	39.5	3.10	29.6	2.09	20	1.68	16	1.26	12	0.84	8	0.42	4
750	25.0	3.10	39.5	2.32	29.6	1.57	20	1.26	16	0.94	12	0.63	8	0.31	4
500	16.7	2.07	39.5	1.55	29.6	1.05	20	0.84	16	0.63	12	0.42	8	0.21	4
300	10.0	1.24	39.5	0.93	29.6	0.63	20	0.50	16	0.38	12	0.25	8	0.13	4
100	3.3	0.41	39.5	0.31	29.6	0.21	20	0.17	16	0.13	12	0.08	8	0.04	4
50	1.7	0.21	39.5	0.15	29.6	0.10	20	0.08	16	0.06	12	0.04	8	0.02	4

RATIO - 1:10															
LOAD - N:		100 000		75 000		50 000		40 000		30 000		20 000		10 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	3.25	20.7	2.45	15.6	1.63	10.4	1.30	8.3	0.99	6.3	0.66	4.2	0.33	2.1
1000	16.7	2.17	20.7	1.63	15.6	1.09	10.4	0.87	8.3	0.66	6.3	0.44	4.2	0.22	2.1
750	12.5	1.63	20.7	1.23	15.6	0.82	10.4	0.65	8.3	0.49	6.3	0.33	4.2	0.16	2.1
500	8.3	1.08	20.7	0.82	15.6	0.54	10.4	0.43	8.3	0.33	6.3	0.22	4.2	0.11	2.1
300	5.0	0.65	20.7	0.49	15.6	0.33	10.4	0.26	8.3	0.20	6.3	0.13	4.2	0.07	2.1
100	1.7	0.22	20.7	0.16	15.6	0.11	10.4	0.09	8.3	0.07	6.3	0.04	4.2	0.02	2.1
50	0.8	0.11	20.7	0.08	15.6	0.05	10.4	0.04	8.3	0.03	6.3	0.02	4.2	0.01	2.1

RATIO - 1:30															
LOAD - N:		100 000		75 000		50 000		40 000		30 000		20 000		10 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	8.3	1.26	8	0.94	6	0.63	4	0.50	3.2	0.38	2.4	0.25	1.6	0.13	0.8
1000	5.6	0.84	8	0.63	6	0.42	4	0.34	3.2	0.25	2.4	0.17	1.6	0.08	0.8
750	4.2	0.63	8	0.47	6	0.31	4	0.25	3.2	0.19	2.4	0.13	1.6	0.06	0.8
500	2.8	0.42	8	0.31	6	0.21	4	0.17	3.2	0.13	2.4	0.08	1.6	0.04	0.8
300	1.7	0.25	8	0.19	6	0.13	4	0.10	3.2	0.08	2.4	0.05	1.6	0.03	0.8
100	0.6	0.08	8	0.06	6	0.04	4	0.03	3.2	0.03	2.4	0.02	1.6	0.01	0.8
50	0.3	0.04	8	0.03	6	0.02	4	0.02	3.2	0.01	2.4	0.01	1.6	0.01	0.8

Performance for HR-VRS 200 (Ball Screw):

Data shown below refer to HR-VRS Screw Jacks featuring ballscrew and oil-lubricated gearbox.

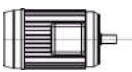
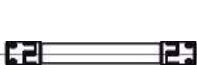
RATIO - 1:5															
LOAD:		200 000		175 000		15 0000		10 0000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	50.0	12.41	79	10.84	69	9.27	59	6.20	39.5	4.65	29.6	3.14	20	1.57	10
1000	33.3	8.27	79	7.23	69	6.18	59	4.14	39.5	3.10	29.6	2.09	20	1.05	10
750	25.0	6.20	79	5.42	69	4.63	59	3.10	39.5	2.32	29.6	1.57	20	0.79	10
500	16.7	4.14	79	3.61	69	3.09	59	2.07	39.5	1.55	29.6	1.05	20	0.52	10
300	10.0	2.48	79	2.17	69	1.85	59	1.24	39.5	0.93	29.6	0.63	20	0.31	10
100	3.3	0.83	79	0.72	69	0.62	59	0.41	39.5	0.31	29.6	0.21	20	0.10	10
50	1.7	0.41	79	0.36	69	0.31	59	0.21	39.5	0.15	29.6	0.10	20	0.05	10

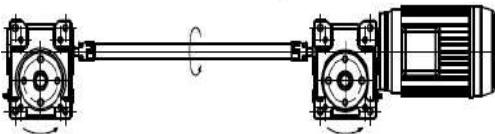
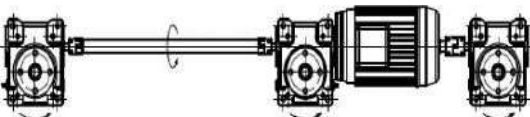
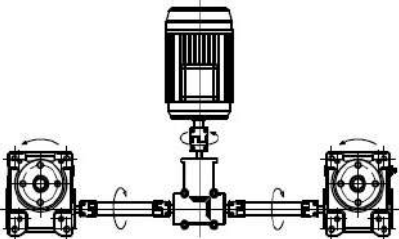
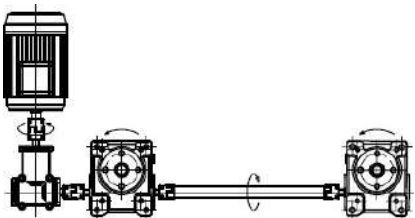
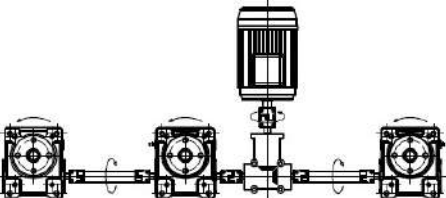
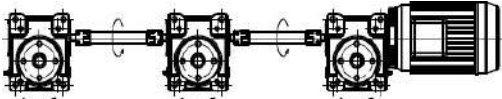
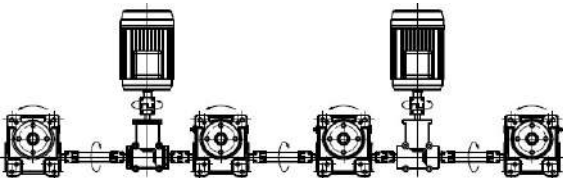
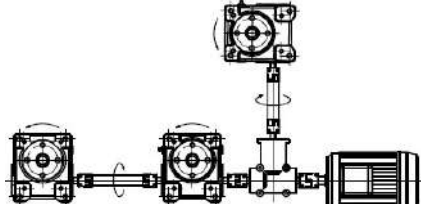
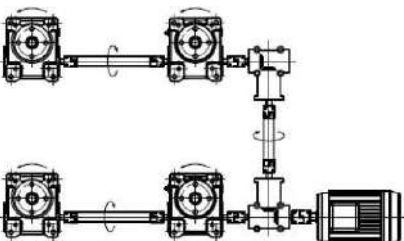
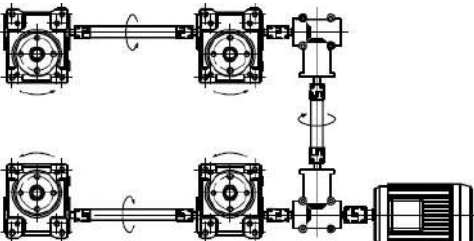
RATIO - 1:10															
LOAD - N:		200 000		175 000		15 0000		10 0000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	25.0	6.50	41.4	5.69	36.2	4.88	31.1	3.25	20.7	2.45	15.6	1.63	10.4	0.82	5.2
1000	16.7	4.34	41.4	3.79	36.2	3.26	31.1	2.17	20.7	1.63	15.6	1.09	10.4	0.54	5.2
750	12.5	3.25	41.4	2.84	36.2	2.44	31.1	1.63	20.7	1.23	15.6	0.82	10.4	0.41	5.2
500	8.3	2.17	41.4	1.90	36.2	1.63	31.1	1.08	20.7	0.82	15.6	0.54	10.4	0.27	5.2
300	5.0	1.30	41.4	1.14	36.2	0.98	31.1	0.65	20.7	0.49	15.6	0.33	10.4	0.16	5.2
100	1.7	0.43	41.4	0.38	36.2	0.33	31.1	0.22	20.7	0.16	15.6	0.11	10.4	0.05	5.2
50	0.8	0.22	41.4	0.19	36.2	0.16	31.1	0.11	20.7	0.08	15.6	0.05	10.4	0.03	5.2

RATIO - 1:30															
LOAD - N:		200 000		175 000		15 0000		10 0000		75 000		50 000		25 000	
N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	N1 (RPM)	SPEED (MM/S)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)	Pi (kW)	Mt (Nm)
1500	8.3	2.51	16	2.20	14	1.88	12	1.26	8	0.94	6	0.63	4	0.31	2
1000	5.6	1.68	16	1.47	14	1.26	12	0.84	8	0.63	6	0.42	4	0.21	2
750	4.2	1.26	16	1.10	14	0.94	12	0.63	8	0.47	6	0.31	4	0.16	2
500	2.8	0.84	16	0.73	14	0.63	12	0.42	8	0.31	6	0.21	4	0.10	2
300	1.7	0.50	16	0.44	14	0.38	12	0.25	8	0.19	6	0.13	4	0.06	2
100	0.6	0.17	16	0.15	14	0.13	12	0.08	8	0.06	6	0.04	4	0.02	2
50	0.3	0.08	16	0.07	14	0.06	12	0.04	8	0.03	6	0.02	4	0.01	2

GUIDELINE DIMENSIONS ONLY

System Mounting Options:

Screw Jack	Bevel Gear	Motor	Motor (double shaft)	Coupling	Transmission Shaft
					

Option A 	Option B 
Option C 	Option D 
Option E 	Option F 
Option G 	Option H 
Option I 	Option L 

Option M	Option N
Option O	Option P
Option Q	Option R
Option S	