Rolled Threads

Automotion Miniature Ballscrews with rolled-screw-shaft are supplied as a standard to German DIN 69 051/part I—VI, and the European ISO/DIS 3408 accuracy grade 10..

As an option all precision miniature ballscrews are also available in accuracy grade 7 or 5 (DIN 69 051 or ISO/DIS 3408)

Rolled Types Available

Nom-Dia.	3	5	8	12	16	Lead
						0.5
			X	X		1
						1.5
			X	X	X	2
			X			2.5
				X		3
			X	X	X	4
				X	X	5
				X	X	10

Lead Deviation

Standard Accuracy Class

T7	52 micron/300 mm
T10	210 micron/300 mm

Ground Threads

Automotion Miniature Ballscrews with ground screw-shaft are supplied as a standard to German DIN 69 051/part I—VI, and the European ISO/DIS 3408 accuracy grade 5.

As an option all precision miniature ballscrews are also available in accuracy classes 0,1,2 and 3. Please enquire.

Upon request Miniature Ballscrews will be supplied with the test records regarding lead accuracy

Ground Types Available*

Nom-Dia.	3	5	8	12	16	Lead
	X	X	X			0.5
	X	X	X	X		1
		X				1.5
			X	X	X	2
			X			2.5
				X		3
			X	X	X	4
				X	X	5
				X	X	10

Lead Deviation

Standard Accuracy Class

T1	6 micron/300 mm
T3	12 micron/300 mm
T5	23 micron/300 mm

1) Ground & Rolled Threads

2) Left hand thread and non standard leads on request

3) Additional ball circuits for extended load capacities are also available

4) Dynamic load capacity C: permissable dynamic axial load resulting in 1.10^6 revolution service life.

5) Please inform Automotion about different preload.

6) Wipers fitted upon request

Material Specification

Screw Spindle— DIN 1.1213 (CF53)
Nut & Ball — DIN 1.3505 (100Cr6)
Deflectors — DIN 2.0402 (CUZN40 PG2)

Certificates of Conformity— Available upon request

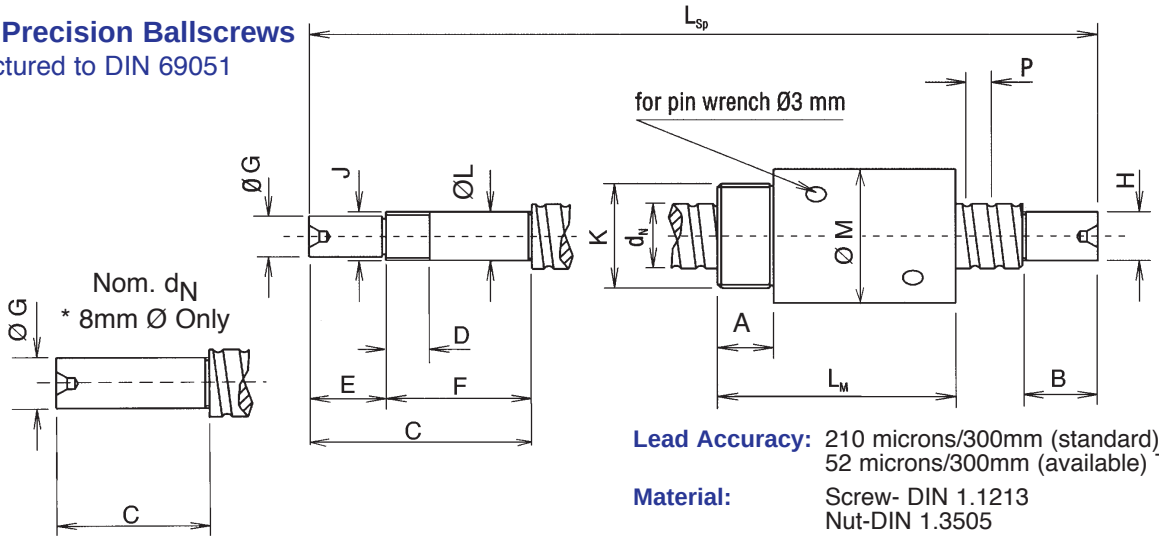
*** Please note:**

Ground threads are available on short delivery.

Sizes Ø8—16 Available *ex-stock*
Contact Automotion for details

Rolled Precision Ballscrews

Manufactured to DIN 69051



Lead Accuracy: 210 microns/300mm (standard) T10
52 microns/300mm (available) T7

Material: Screw- DIN 1.1213
Nut-DIN 1.3505

Part Number	Lead (2) P	Nom. Dia. d_N	No. of Circuits (3) I	Travel L_v	Load Capacity Dynamic (4) C_a (N)	Load Capacity Static C_{0a} (N)	Nut with Axial Backlash Max. Axial Backlash	Nut with Axial Backlash Max. Idling Torque T_0 (Ncm)	Screw Length L_{sp}	Nut Length L_m	Nut Dia M
1132-1-8-145-170	1	8*	3	100	1210	1500	0.02	0.5	170	22	16.5
1132-2-8-145-170	2	8*	3	100	2000	2100	0.03	0.5	170	27	16.5
1132-2.5-8-145-170	2.5	8*	3	100	2000	2100	0.03	0.5	170	29	16.5
1132-4-8-145-170	4	8*	3	100	2000	2100	0.03	0.5	170	30	16.5
1132-1-8-245-270	1	8*	3	200	1210	1500	0.02	0.5	270	22	16.5
1132-2-8-245-270	2	8*	3	200	2000	2100	0.03	0.5	270	27	16.5
1132-2.5-8-245-270	2.5	8*	3	200	2000	2100	0.03	0.5	270	29	16.5
1132-4-8-245-270	4	8*	3	200	2000	2100	0.03	0.5	270	30	16.5
1132-1-12-355-397	1	12	3	300	1490	2420	0.02	1	397	24	20.5
1132-2-12-355-397	2	12	3	300	2500	3400	0.03	1	397	29	20.5
1132-3-12-355-397	3	12	3	300	3600	4300	0.03	1	397	36	20.5
1132-4-12-355-397	4	12	3	300	3600	4300	0.03	1	397	33	22.5
1132-5-12-355-397	5	12	3	300	3600	4300	0.03	1	397	36	22.5
1132-10-12--355-397	10	12	3	300	2800	3100	0.04	1	397	47	22.5
1132-2-16-470-527	2	16	3	400	2900	4800	0.03	1.4	527	29	25.5
1132-4--16-470-527	4	16	3	400	9400	12000	0.04	1.4	527	38	28.5
1132-5-16-470-527	5	16	3	400	11400	12600	0.05	1.4	527	43	28.5
1132-10-16-470-527	10	16	3	400	7400	8200	0.05	1.4	527	53	28.5

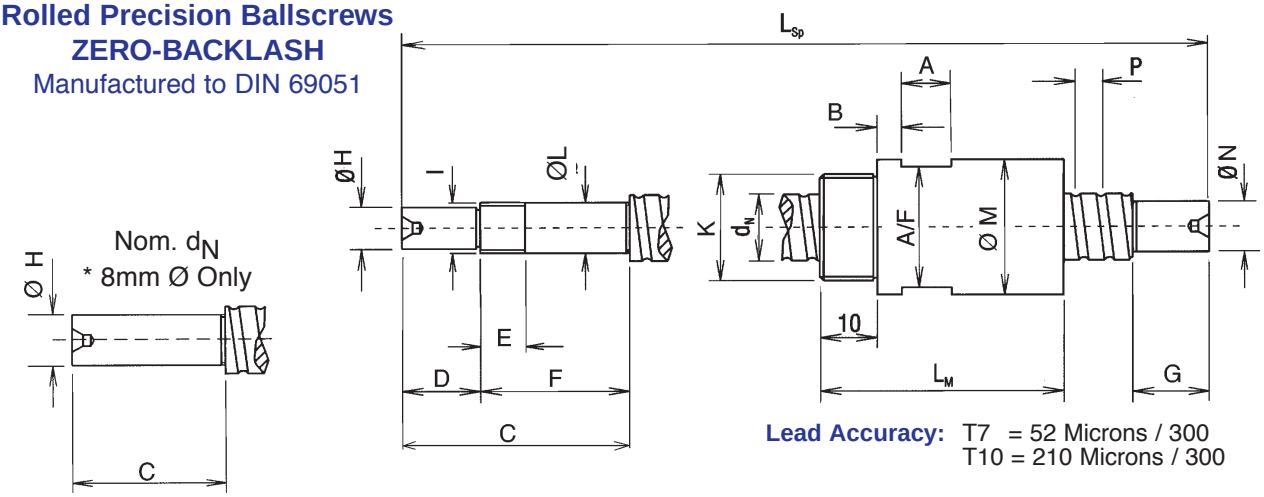
Series Ødn	A	B	C	D	E	F	ØG	ØH	ØL	J	K
Ø 8	8	7	18	—	—	—	6h6	6h6	—	—	M 14x1
Ø 12	10	10	32	6	10	22	6h6	8h6	8h6	M8 x 0.5	M18 x 1
Ø 16	10	13	44	6	12	32	10h6	12h6	12h6	M12 x 1	M22 x 1

1) Rolled Threads
2) Left hand thread and non standard leads on request
3) Additional ball circuits for extended load capacities are also available
4) Dynamic load capacity C: permissable dynamic axial load resulting in 1.10^6 revolution service life.
5) Please inform about different preload.

Backlash free option available
Ordering example
1132—1.8—145—170—T7 — P
(Sufffix P for Backlash Free Option)

*** Ground Threads Available**
Overall dimensions apply- except load capactiy

Rolled Precision Ballscrews
ZERO-BACKLASH
Manufactured to DIN 69051



Lead Accuracy: T7 = 52 Microns / 300
T10 = 210 Microns / 300

Material: Screw- DIN 1-1213
Nut- DIN 1-3505

Part Number	Lead (2) P	Nom. Dia. d_N	No. of Circuits (3) I	Travel L_v	Load Capacity Dynamic (4) C_a (N)	Load Capacity Static C_{0a} (N)	Max. pre-Load $F_{pr\ max}$ (N)	Max. Axial Load F_{max} (N-cm)	Idling Torque T_{pr0} (N-cm)	Screw Length L_{sp}	Nut Length L_m	Nut Dia M
1530-1-8-145-170	1	8*	2	100	850	1000	30	20	0.7-1.5	170	40	20
1530-2-8-145-170	2	8*	2	100	1400	1400	50	40	0.7-1.5	170	40	20
1530-2.5-8-145-170	2.5	8*	2	100	1400	1400	50	40	0.7-1.5	170	40	20
1530-1-8-245-270	1	8*	2	200	850	1000	30	20	0.7-1.5	270	40	20
1530-2-8-245-270	2	8*	2	200	1400	1400	50	40	0.7-1.5	270	40	20
1530-2.5-8-245-270	2.5	8*	2	200	1400	1400	50	40	0.7-1.5	270	40	20
1530-1-12-355-397	1	12	2	300	1050	1610	50	40	1-2	397	49	24
1530-2-12-355-397	2	12	2	300	1800	2200	80	70	1-2	397	49	24
1530-3-12-355-397	3	12	2	300	2500	2800	80	70	1-2	397	49	24
1530-4-12-355-397	4	12	2	300	2500	2800	80	70	1-2	397	49	24
1530-5-12-355-397	5	12	2	300	2500	2800	80	70	1-2	397	49	24
1530-2-16-470-527	2	16	2	400	2100	3200	120	100	1.5-3	527	57	33
1530-4-16-470-527	4	16	2	400	3000	4000	120	100	1.5-3	527	57	33
1530-5-16-470-527	5	16	2	400	3900	4700	150	130	1.5-3	527	57	33

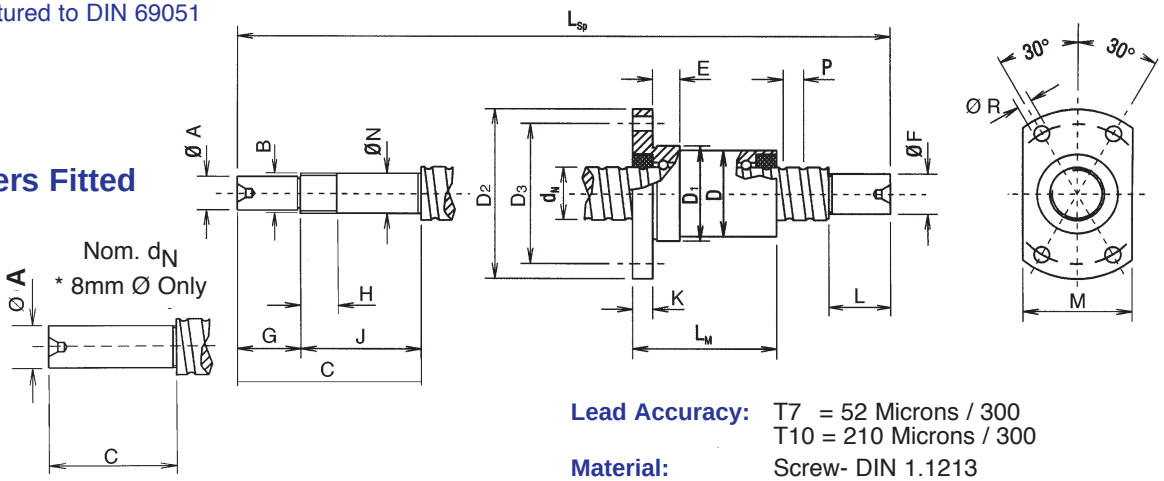
Ødn	A	B	C	D	E	F	G	A/F	ØH	ØL	ØJ	K	ØN	Pre-load F
Ø 8	8	4.5	18	—	—	—	7	17	6h6	—	—	M14x1	6h6	Pre-load is set to $F_{pr\ max}$ & can be reduced to min. 20 N. Max. permissable axial load F_{max} is approx 65-80% of preload
Ø 12	10	6.5	32	10	6	22	10	22	6h6	M8 x 0.5	8h6	M18 x 1	8h6	Pre-load is set to $F_{pr\ max}$ & can be reduced to min. 30 N. Max. permissable axial load F_{max} is approx 70-85% of preload
Ø 16	10	8.5	42	12	6	32	13	30	10h6	M12 x 1	12h6	M22 x 1	12h6	Pre-load is set to $F_{pr\ max}$ & can be reduced to min. 40 N. Max. permissable axial load F_{max} is approx 70-85% of preload

1) Rolled Threads
2) Left hand thread and non standard leads on request
3) Additional ball circuits for extended load capacities are also available
4) Dynamic load capacity C: permissable dynamic axial load resulting in 1.10^6 revolution service life.
5) Please inform about different preload.

*** Ground Threads Available**
Overall dimensions apply-
except load capactiy
Contact Automotion Technical department
for details

Rolled Precision Ballscrews

Manufactured to DIN 69051



Wipers Fitted

Lead Accuracy: T7 = 52 Microns / 300
T10 = 210 Microns / 300

Material: Screw- DIN 1.1213
Nut- DIN 1.3505

Part Number	Lead (2) P	Nom. Dia. d_N	No. of Circuits (3) I	Travel L_v	Load Capacity Dynamic (4) C_a (N)	Load Capacity Static C_{0a} (N)	Nut with Axial Backlash Max. Axial Backlash	Nut with Axial Backlash Max. Idling Torque T_0 (Ncm)	Screw Length L_{sp}	Nut Length L_m	Nut Dia D	Nut Dia. D_{1g6}	Nut Flange Dia. D_2	Nut Hole PCD D_3	Nut Flange Width M
1432-1-8-145-170	1	8*	3	100	1210	1500	0.02	0.5	170	23	16	—	28	22	19
1432-2-8-145-170	2	8*	3	100	2000	2100	0.03	0.5	170	28	16				19
1432-2.5-8-145-170	2.5	8*	3	100	2000	2100	0.03	0.5	170	30	16				19
1432-4-8-145-170	4	8*	3	100	2000	2100	0.03	0.5	170	31	16				19
1432-1-8-245-270	1	8*	3	200	1210	1500	0.02	0.5	270	23	16	—	28	22	19
1432-2-8-245-270	2	8*	3	200	2000	2100	0.03	0.5	270	28	16				19
1432-2.5-8-245-270	2.5	8*	3	200	2000	2100	0.03	0.5	270	30	16				19
1432-4-8-245-270	4	8*	3	200	2000	2100	0.03	0.5	270	31	16				19
1432-1-12-355-397	1	12	3	300	1490	2420	0.02	1	397	25	—	20	37	29	24
1432-2-12-355-397	2	12	3	300	2500	3400	0.03	1	397	30	19.4	20			24
1432-3-12-355-397	3	12	3	300	3600	4300	0.03	1	397	37	21.4	22			24
1432-4-12-355-397	4	12	3	300	3600	4300	0.03	1	397	36	21.4	22			24
1432-5-12-355-397	5	12	3	300	3600	4300	0.03	1	397	39	21.4	22			24
1442-10-12--355-397	10	12	3	300	2800	3100	0.04	1	397	51	21.4	22			24
1432-2-16-470-527	2	16	3	400	2900	4800	0.03	1.4	527	32	—	25	44	35	29
1432-4--16-470-527	4	16	3	400	9400	12000	0.04	1.4	527	38	27.4	28	48	38	31
1432-5-16-470-527	5	16	3	400	11400	12600	0.05	1.4	527	44	27.4	28	48	38	31
1442-10-16-470-527	10	16	3	400	7400	8200	0.05	1.4	527	54	27.4	28	48	38	31

Ødn	AØ	B	C	E	ØF	G	H	J	K	L	NØ	ØR
Ø 8	6h6	—	18	—	6h6	—	—	—	6	7	—	3.4
Ø 12	6h6	M8 x 0.5	32	10	8h6	10	6	22	8	10	8h6	4.5
Ø 16	10h6	M12 x I	44	13	12h6	12	6	32	10	13	12h6	5.5

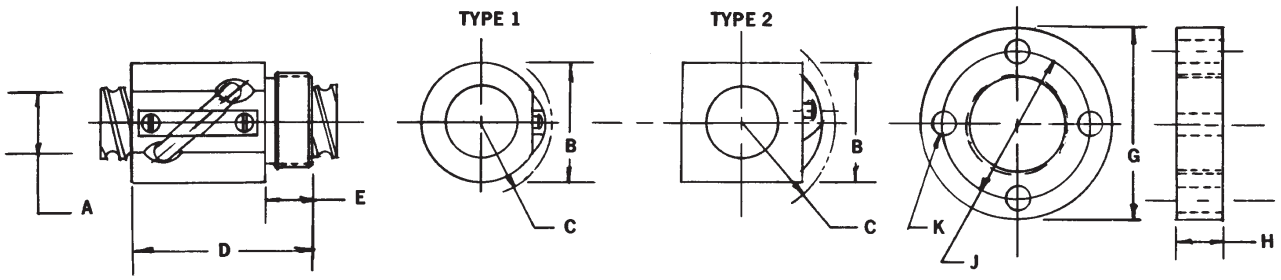
1) Rolled Threads
2) Left hand thread and non standard leads on request
3) Additional ball circuits for extended load capacities are also available
4) Dynamic load capacity C: permissable dynamic axial load resulting in 1.10^6 revolution service life.
5) Please inform about different preload.

Backlash free option available
Ordering example
1432—1.8—145—170—T7 — P
(Sufffix P for Backlash Free Option)

*** Ground Threads Available**
Overall dimensions apply- except load capactiy
Contact Automotion Technical department for details

Commercial Ballscrews

• Imperial Dimensions •



Lead Accuracy: Standard = 0.0015”/inch cummulative
Premium = 0.00025”/inch (upon request)

Backlash: 0.010” std.(0.002” upon request)

Wipers: wipers can be fitted at the factory if required

				Screw							Nut						Flange			
Part No.	Pitch Dia.	Load* Oprt. lbs.	Load max.lbs Static	Lead	A Root Dia.	Length ft. Max.	LH RH	Type	No. of Circ.	Type Thread	B O.D.	C Radius over Tube	D Length Overall	Thread size	E T.P.I	Thread Length	G Dia.	H Thick	J PCD	K No/Size
R-10	.375	130	1,300	.125	.300	4	R.H.	1	1	S	.750	.250	1.000	.664	32	.250	1.600	.270	1.240	4/.177
R-11	.375	260	2,600	.125	.300	4	R.H.	1	2	S	.750	.250	1.875	.664	32	.250	1.600	.270	1.240	4/.177
R-15•	.375	25	230	.125	.300	4	R.H.	1	1	S	.750	.250	1.000	.664	32	.250	1.600	.270	1.240	4/.177
R-16•	.375	50	460	.125	.300	4	R.H.	1	2	S	.750	.250	1.875	.664	32	.250	1.600	.270	1.240	4/.177
R-20	†.500	700	3,900	.500	.390	4	R.H.	1	2	M	1.062	.840	1.750	.937	16	.375	2.600	.530	2.090	4/.266
R-21•	†.500	135	725	.500	.390	4	R.H.	1	2	M	1.062	.840	1.750	.937	16	.375	2.600	.530	2.090	4/.266
R-22•	†.500	135	725	.500	.390	4	R.H.	1	2	M	1.320	.660	1.500	—	—	—	—	—	—	
R-23	†.500	700	3,900	.500	.390	4	R.H.	1	2	M	1.320	.660	1.500	—	—	—	—	—	—	
R-30	.631	725	5,600	.200	.480	6	R.H.	2	1	S	1.000	.797	1.710	.937	16	.500	2.600	.530	2.090	4/.266
R-31	.631	725	5,600	.200	.480	6	L.H.	2	1	S	1.000	.797	1.710	.937	16	.500	2.600	.530	2.090	4/.266
R-35	†.750	870	8,800	.200	.640	6	R.H.	1	1	S	1.250	.860	1.875	1.125	18	.500	2.600	.530	2.090	4/.266
R-36•	†.750	160	1,350	.200	.640	6	R.H.	1	1	S	1.250	.860	1.875	1.125	18	.500	2.600	.530	2.090	4/.266
R-37	†.750	3,150	18,500	.500	.620	6	R.H.	1	2	M	1.312	1.000	2.937	1.250	16	.500	2.600	.530	2.090	4/.266
R-38•	†.750	570	3,950	.500	.620	6	R.H.	1	2	M	1.312	1.000	2.937	1.250	16	.500	2.600	.530	2.090	4/.266
R-40	1.000	1500	13,000	.250	.820	12	R.H.	2	1	S	1.500	1.150	2.347	1.563	18	.600	3.250	.630	2.750	4/.266
R-40A	1.000	3,000	26,000	.250	.820	12	R.H.	2	2	S	1.500	1.150	3.000	1.563	18	.600	3.250	.630	2.750	4/.266
R-41	1.000	1,500	13,000	.250	.820	12	L.H.	2	1	S	1.500	1.150	2.347	1.563	18	.600	3.250	.630	2.750	4/.266
R-42	†1.000	3,450	30,000	.250	.870	12	R.H.	1	2	S	1.687	1.150	3.100	1.563	18	.600	3.250	.630	2.750	4/.266
R-43	†1.000	4,300	30,000	.500	.870	12	R.H.	1	2	M	1.687	1.150	3.100	1.563	18	.600	3.250	.630	2.750	4/.266
R-44	1.000	2,050	11,150	1.000	.820	12	R.H.	2	2	M	1.500	1.195	3.000	1.563	18	.600	3.250	.630	2.750	4/.266
R-45	1.150	2,450	24,500	.200	1.005	12	R.H.	1	2	S	1.687	1.100	2.500	1.625	20	.485	3.200	.490	2.702	4/.266
R-50	†1.500	9,050	54,100	.500	1.240	12	R.H.	1	2	S	2.625	1.812	4.687	2.548	18	.750	4.937	.780	4.062	4/.531
R-54	†1.500	4,525	44,800	.250	1.370	12	R.H.	1	2	S	2.093	1.340	3.000	1.967	18	.500	4.375	.810	3.440	4/.397
R-55	1.500	6,900	32,400	1.000	1.140	12	R.H.	2	2	M	2.250	1.718	3.625	2.250	20	1.000	4.937	1.020	4.125	4/.531
R-60	2.250	19,800	132,000	.500	1.850	12	R.H.	1	2	S	3.375	2.275	6.720	3.137	12	1.562	5.375	1.582	4.375	6/.656
R-61	†2.000	23,000	130,000	1.000	2.040	12	R.H.	1	2	M	3.250	2.280	6.375	3.000	12	1.500	5.375	1.531	4.250	8/.656
R-62	†2.000	18,000	130,000	.500	2.040	12	R.H.	1	2	S	3.250	2.280	6.375	3.000	12	1.500	5.375	1.531	4.250	8/.656
R-70	†2.500	22,500	138,500	.500	2.190	12	R.H.	1	2	S	4.000	2.750	6.750	3.625	12	1.750	6.000	1.780	5.000	8/.656
R-71	†2.500	26,500	138,500	1.000	2.190	12	R.H.	1	2	M	4.000	2.750	6.750	3.625	12	1.750	6.000	1.780	5.000	8/.656
R-80	3.000	42,400	254,000	.660	2.480	12	R.H.	1	3	S	4.750	3.060	9.312	4.325	12	2.000	7.375	2.020	6.250	8/.781
R-1	.652	300	—	.333	.560	6	R.H.	1	—	M	1.000	—	1.625	.937	16	.3750	2.000	.400	1.625	4/.177
R-2	561	150	—	.143	.470	4	R.H.	1	_	S	1.000	—	1.625	.937	16	.3750	2.000	.400	1.625	4/.177

• Stainless steel units, † Major diameter (O.D.)
M = Multiple start thread tubes opposite @ 180°, S = Single start thread
* Operating Load is for heat treated units where life is 1,000,000 inches of travel,