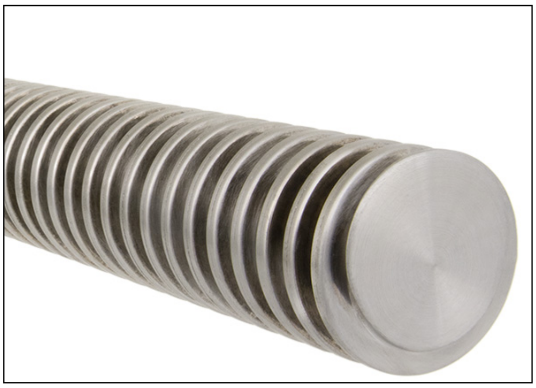
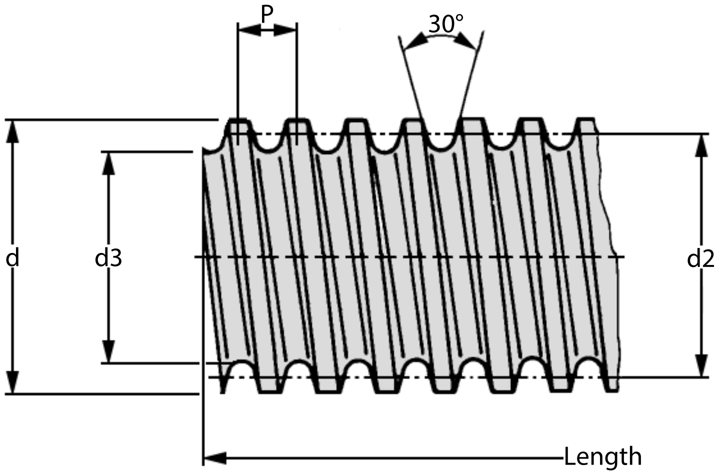
LFM

LINEAR MOTION

Trapezoidal Rolled Leadscrew

1 Start : Steel : ISO 2901/2903 DIN 103 : Tr10 x 2 - Tr80 x 10





Part Number RH	Part Number LH	Max. d	Min. d	Pitch/ Lead P	Max. d2	Min. d2	Max. d3	Min. d3	Pitch Accuracy µ/300mm	Straightness mm/300mm	Lead Angle	Mass Kg/m
LFM102	LFM102/LH	10	9.82	2	8.93	8.74	7.5	6.89	200	0.5	4°07'	0.48
LFM123	LFM123/LH	12	11.76	3	10.42	10.19	8.5	7.69	200	0.5	5°17'	0.65
LFM143	LFM143/LH	14	13.76	3	12.42	12.19	10.5	9.69	200	0.5	4°26'	0.93
LFM164	LFM164/LH	16	15.70	4	13.91	13.64	11.5	10.47	50	0.5	5°16'	1.17
LFM184	LFM184/LH	18	17.70	4	15.91	15.64	13.5	12.47	50	0.5	4°36'	1.53
LFM204	LFM204/LH	20	19.70	4	17.91	17.64	15.5	14.47	50	0.5	4°05'	1.94
LFM225	LFM225/LH	22	21.67	5	19.39	19.11	16.5	15.29	50	0.2	4°43'	2.29
LFM245	LFM245/LH	24	23.67	5	21.39	21.09	18.5	17.27	50	0.2	4°17'	2.78
LFM285	LFM285/LH	28	27.67	5	25.39	25.09	22.5	21.27	50	0.2	3°36'	3.91
LFM306	LFM306/LH	30	29.63	6	26.88	26.55	23.0	21.56	70	0.2	4°05'	4.36
LFM326	LFM326/LH	32	31.63	6	28.88	28.55	25.0	23.56	70	0.2	3°48'	5.04
LFM366	LFM366/LH	36	35.63	6	32.88	32.55	29.0	27.56	70	0.2	3°20'	6.55
LFM407	LFM407/LH	40	39.58	7	36.38	36.02	32.0	30.38	80	0.2	3°31'	7.98
LFM447	LFM447/LH	44	43.58	7	40.38	40.02	36.0	34.38	80	0.2	3°10'	9.86
LFM508	LFM508/LH	50	49.55	8	45.87	45.47	41.0	39.17	100	0.2	3°11'	12.70
LFM609	LFM609/LH	60	59.47	9	55.36	54.94	50.0	47.98	100	0.2	2°58'	18.50
LFM7010	LFM7010/LH	70	69.47	10	64.85	64.43	59.0	56.82	100	0.4	2°49'	25.63
LFM8010	LFM8010/LH	80	79.47	10	74.85	74.43	69.0	66.82	100	0.4	2°27'	34.19

Material

Medium Carbon Steel C35E / C45E (1.1181 / 1.1191).
ISO 2901/2903 and DIN 103 tolerance 7e.

Guide - Torque to move nut: $\text{Torque (Nm)} = \dfrac{\text{Load (N)} \times \text{Lead (mm)}}{2000\pi \times \text{efficiency}}$

(Frictional & acceleration torque as well as frictional resistance of bearings of sub assemblies need to be taken into account).

Efficiency Guide 20% with lubrication.

Features

Standard Lengths: (LFM102-LFM285): 1000mm and 3000mm.
(LFM306-LFM12016*): 1000mm, 3000mm and 6000mm.
Bars can be supplied to custom lengths and also machined according to your drawings. Quotations provided on request.

*Larger sizes of threaded bar (RH only) available P.O.A.:
LFM9012, LFM9516, LFM10016, LFM12016.

Precision threaded bar for mechanical applications for transmission.
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

To be used with our nuts: **BFM, LRM, KSM, SKM, VKM** and self-lubricating plastic **WSRM & WSLM**, **WFRM & WFLM, JSRM & JSLM** and **JFRM & JFLM.**

Special nuts can also be made - please fax a drawing for a quote.

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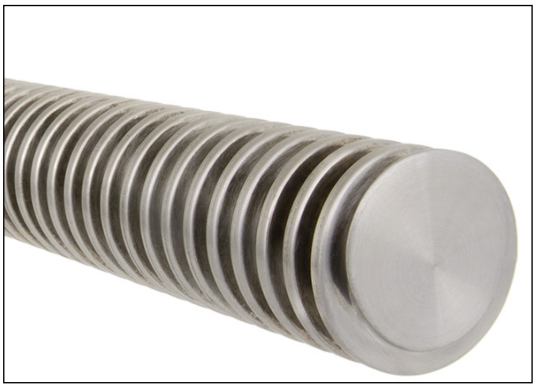
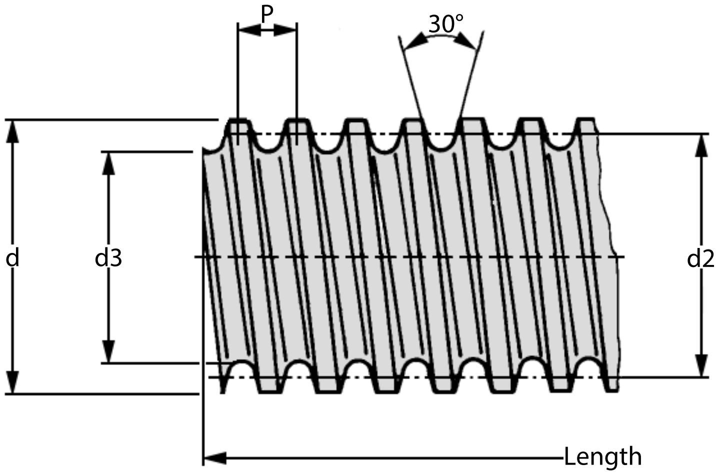
LSM

LINEAR MOTION

Trapezoidal Rolled Leadscrew

1 Start : Stainless Steel : ISO 2901/2903 DIN 103 : Tr10 x 2 - Tr70 x 10





Part Number RH	Part Number LH	Max. d	Min. d	Pitch/ Lead P	Max. d2	Min. d2	Max. d3	Min. d3	Pitch Accuracy µ/300mm	Straightness mm/300mm	Lead Angle	Mass Kg/m
LSM102	-	10	9.82	2	8.93	8.74	7.5	6.89	300	1.5	4°07'	0.48
LSM123	LSM123/LH	12	11.76	3	10.42	10.19	8.5	7.69	300	1.5	5°17'	0.65
LSM143	-	14	13.76	3	12.42	12.19	1.05	9.69	300	1.5	4°26'	0.93
LSM164	LSM164/LH	16	15.70	4	13.91	13.64	11.5	10.47	100	1.5	5°16'	1.17
LSM184	-	18	17.70	4	15.91	15.64	13.5	12.47	100	1.5	4°36'	1.53
LSM204	LSM204/LH	20	19.70	4	17.91	17.64	15.5	14.47	100	1.5	4°05'	1.94
LSM225	-	22	21.67	5	19.39	19.11	16.5	15.29	100	1.5	4°43'	2.29
LSM245	LSM245/LH	24	23.67	5	21.39	21.09	18.5	17.27	100	1.5	4°17'	2.78
LSM285	-	28	27.66	5	25.39	25.09	22.5	21.27	100	1.5	3°36'	3.91
LSM306	LSM306/LH	30	29.63	6	26.88	26.55	23.0	21.56	100	1.5	4°05'	4.36
LSM326	LSM326/LH	32	31.63	6	28.88	28.55	25.0	23.56	100	1.5	3°48'	5.04
LSM366	LSM366/LH	36	35.63	6	32.88	32.55	29.0	27.56	100	1.5	3°20'	6.55
LSM407	LSM407/LH	40	39.58	7	36.38	36.02	32.0	30.38	150	1.5	3°31'	7.98
LSM508	LSM508/LH	50	49.55	8	45.87	45.47	41.0	39.17	150	2.0	3°11'	12.70
LSM609	LSM609/LH	60	59.47	9	55.36	54.94	50.0	47.98	150	2.0	2°58'	18.50
LSM7010	LSM7010/LH	70	69.47	10	64.85	64.43	59.0	56.82	150	2.0	2°49'	25.63

Material

316L Stainless Steel (1.4404) (X2 CrNiMo17.12.2).
ISO 2901/2903 and DIN 103 tolerance 7e.

Guide - Torque to move nut: Torque (Nm) = $\frac{\text{Load (N) x Lead (mm)}}{2000\pi \text{ x efficiency}}$

(Frictional & acceleration torque as well as frictional resistance of bearings of sub assemblies need to be taken into account).

Efficiency Guide 20% with lubrication.

Features

Standard Lengths: (LSM102-LSM285): 1000mm and 3000mm.
(LSM306-LSM7010): 1000mm, 3000mm and 6000mm.
Bars can be supplied to custom lengths and also machined according to your drawings. Quotations provided on request.

Rolled threaded bar for use in wet or corrosive environments.
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

To be used with our nuts: **BFM, LRM, KSM, SKM, VKM** and self-lubricating plastic **WSRM & WSLM**, **WFRM & WFLM**, **JSRM & JSLM** and **JFRM & JFLM).**

Special nuts can also be made - please ask for a quote.

316L Stainless Steel ensures resilience to nearly all types of corrosion.

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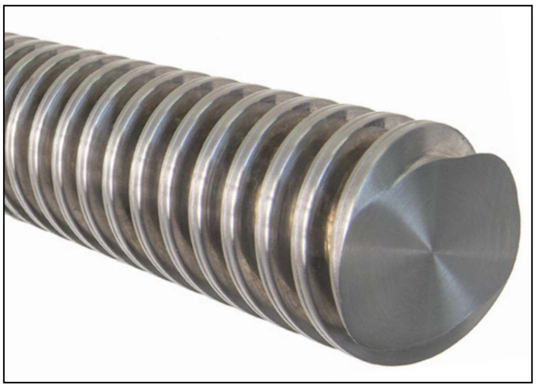
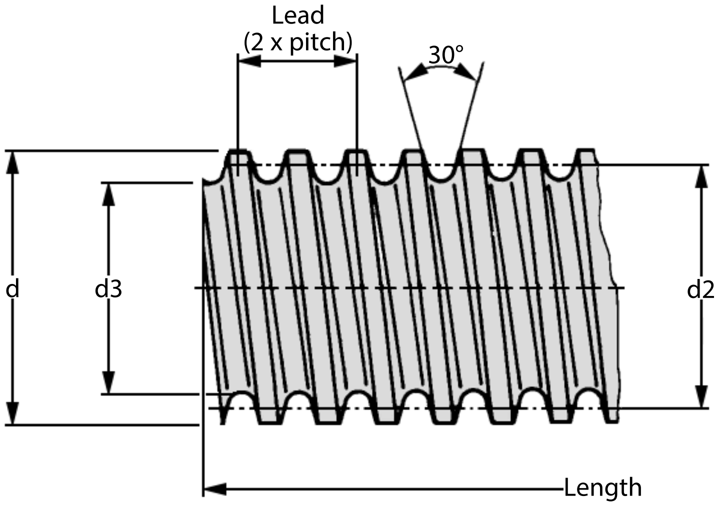
LFM

LINEAR MOTION

Trapezoidal Rolled Leadscrew

2 Start : Steel : ISO 2901/2903 DIN 103 : Tr10 x 4 - Tr40 x 14





Part Number RH	Max. d	Min. d	Pitch/ Lead P	Max. d2	Min. d2	Max. d3	Min. d3	Pitch Accuracy μ/300mm	Straightness mm/300mm	Lead Angle	Mass Kg/m
LFM104	10	9.82	4	8.93	8.72	7.50	6.89	300	0.5	8°12'	0.48
LFM126	12	11.76	6	10.42	10.16	8.50	7.69	300	0.5	10°30'	0.65
LFM146	14	13.76	6	12.42	12.16	10.50	9.69	300	0.5	8°49'	0.93
LFM168	16	15.70	8	13.91	13.61	11.50	10.47	100	0.5	10°29'	1.17
LFM188	18	17.70	8	15.91	15.61	13.50	12.47	100	0.5	9°20'	1.53
LFM208	20	19.70	8	17.91	17.61	15.50	14.47	100	0.5	8°09'	1.94
LFM2210	22	21.67	10	19.39	19.06	16.50	15.29	200	0.3	9°23'	2.29
LFM2410	24	23.67	10	21.39	21.06	18.50	17.27	200	0.3	8°31'	2.78
LFM2810	28	27.67	10	25.39	25.06	22.50	21.27	200	0.3	7°12'	3.91
LFM3012	30	29.63	12	26.88	26.51	23.00	21.56	200	0.3	8°08'	4.36
LFM3212	32	31.63	12	28.88	28.51	25.00	23.56	200	0.3	7°34'	5.04
LFM3612	36	35.63	12	32.88	32.51	29.00	27.56	200	0.3	6°39'	6.55
LFM4014	40	39.58	14	36.38	35.98	32.00	30.38	200	0.3	7°01'	7.98

Material

Medium Carbon Steel C35E / C45E (1.1181 / 1.1191).
ISO 2901/2903 and DIN 103 tolerance 7e.

Guide - Torque to move nut: $\text{Torque (Nm)} = \dfrac{\text{Load (N)} \times \text{Lead (mm)}}{2000\pi \times \text{efficiency}}$

(Frictional & acceleration torque as well as frictional resistance of bearings of sub assemblies need to be taken into account).

Features

Standard Lengths: (LFM104-LFM2810): 1000mm and 3000mm.
(LFM3012-LFM4014): 1000mm, 3000mm and 6000mm.
Bars can be supplied to custom lengths and also machined according to your drawings. Quotations provided on request.

Precision threaded bar for mechanical applications for transmission.
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

To be used with our 2 start nuts: **BFM, LRM, KSM, SKM & VKM**.

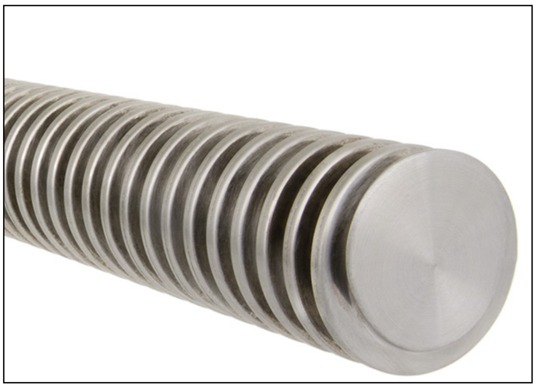
Special nuts can also be made - please fax a drawing for a quote.

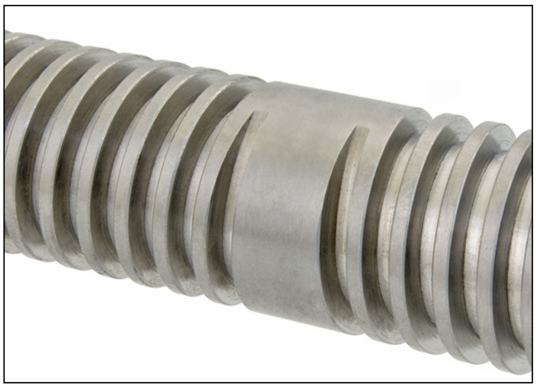
LRH
LSRH

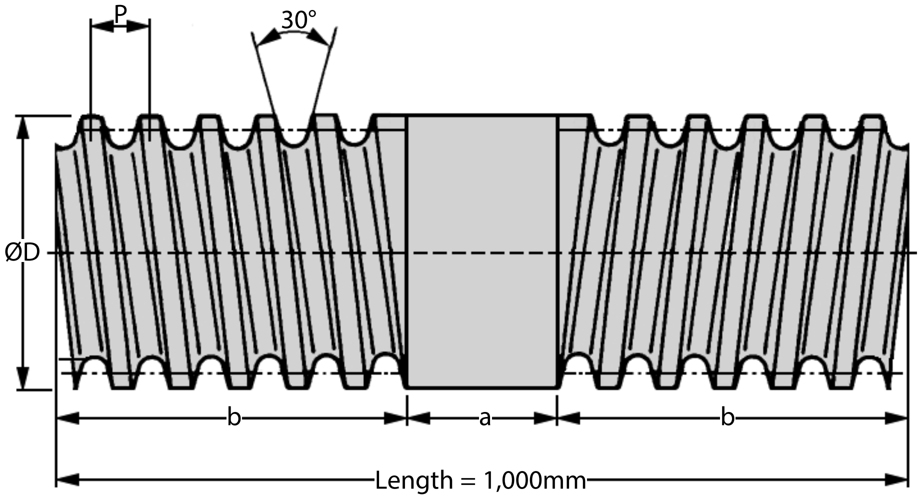
LINEAR MOTION

RH / LH Trapezoidal Whirled Leadscrew

1 Start : Steel & Stainless Steel : Tr16 x 4 - Tr36 x 6







Part Number					
Steel	Stainless	ØD	(Pitch/Lead) P	b	a
LRH164-1	LSRH164-1	16	4	496	8
LRH184-1	LSRH184-1	18	4	496	8
LRH204-1	LSRH204-1	20	4	496	8
LRH245-1	LSRH245-1	24	5	495	10
LRH285-1	-	28	5	495	10
LRH306-1	LSRH306-1	30	6	494	12
LRH326-1	LSRH326-1	32	6	494	12
LRH366-1	-	36	6	494	12

Material

LRH: Steel 080 M40 (ck40).
LSRH: 303 Stainless Steel.

Whirled screw left hand and right hand cut on same single piece of material to DIN 103 Grade 7e.

Features

To be used with our nuts: **BFM, LRM, KSM, SKM, VKM** and self-lubricating plastic **WSRM & WSLM**, **WFRM & WFLM**, **JSRM & JSLM** and **JFRM & JFLM.**

Other lengths available and different material.

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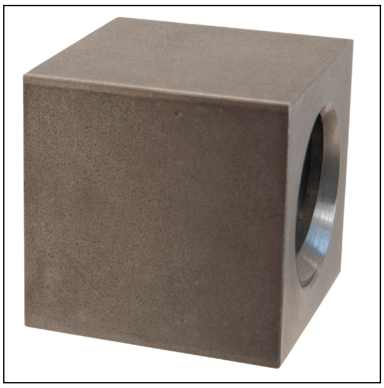
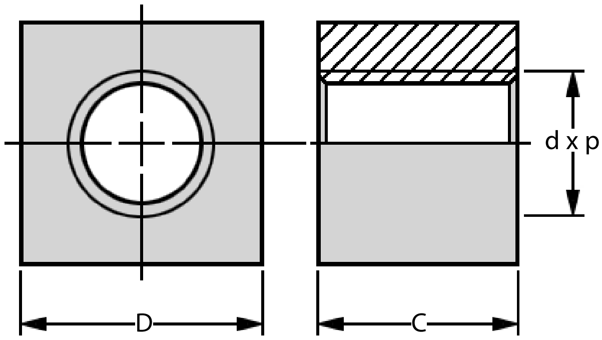
VKM

LINEAR MOTION

Square Trapezoidal Nut

1 Start : Steel : ISO 2901/2903 DIN 103





Part Number RH	Part Number LH	d	p	D	C	Contact Surface mm^2	Mass Kg
VKM102	VKM102/LH	10	2	17	15	150	0.027
VKM123	VKM123/LH	12	3	25	18	210	0.076
VKM143	VKM143/LH	14	3	25	20	285	0.079
VKM164	VKM164/LH	16	4	28	24	365	0.119
VKM184	VKM184/LH	18	4	30	28	470	0.154
VKM204	VKM204/LH	20	4	35	30	590	0.259
VKM225	VKM225/LH	22	5	35	33	700	0.240
VKM245	VKM245/LH	24	5	40	36	845	0.354
VKM285	VKM285/LH	28	5	45	42	1,175	0.506
VKM306	VKM306/LH	30	6	45	45	1,335	0.513
VKM326	VKM326/LH	32	6	55	48	1,430	0.891
VKM366	VKM366/LH	36	6	60	54	1,950	1.163
VKM407	VKM407/LH	40	7	60	60	2,400	1.216
VKM447	VKM447/LH	44	7	65	66	2,940	1.538

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.

- Manual control - Low rotation speeds.
- For Clamping or locking functions.
- For receiving dead weights.

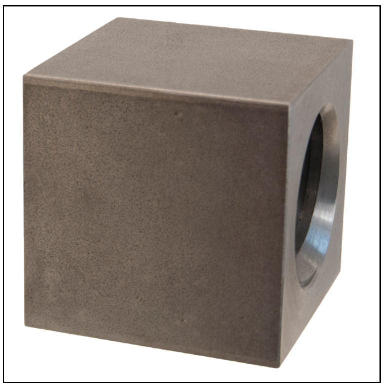
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

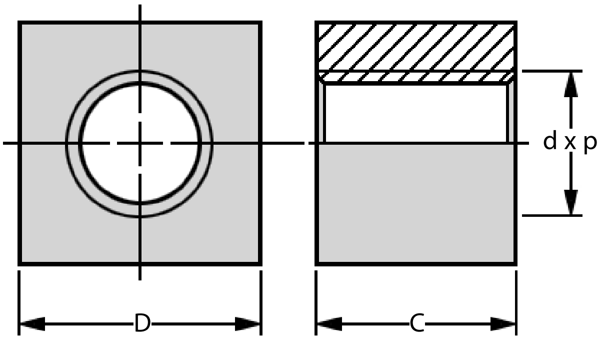
VKM

LINEAR MOTION

Square Trapezoidal Nut

2 Start : Steel : ISO 2901/2903 DIN 103





Part Number RH	d	p	D	C	Contact Surface mm^2	Mass Kg
VKM126	12	3	25	18	210	0.076
VKM146	14	3	25	20	285	0.079
VKM168	16	4	28	24	365	0.119
VKM188	18	4	30	28	470	0.154
VKM208	20	4	35	30	590	0.259
VKM2410	24	5	40	36	845	0.354
VKM3012	30	6	45	45	1,335	0.513
VKM3612	36	6	60	54	1,950	1.163
VKM4014	40	7	60	60	2,400	1.216

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.
- Manual control - Low rotation speeds.
- For Clamping or locking functions.
- For receiving dead weights.

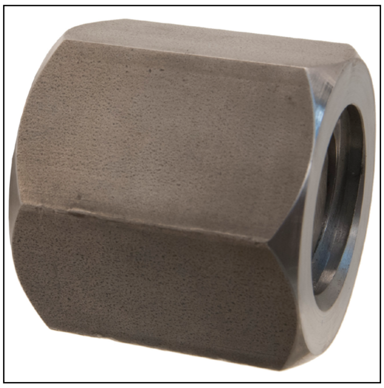
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

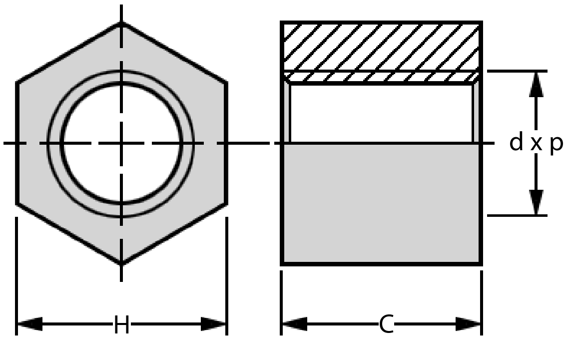
SKM

LINEAR MOTION

Hexagonal Trapezoidal Nut

1 Start : Steel : ISO 2901/2903 DIN 103





Part Number				A/F		Contact Surface	Mass
RH	LH	d	p	H	C	mm^2	Kg
SKM102	SKM102/LH	10	2	17	15	150	0.022
SKM123	SKM123/LH	12	3	19	18	210	0.032
SKM143	SKM143/LH	14	3	22	21	285	0.049
SKM164	SKM164/LH	16	4	24	24	365	0.065
SKM184	SKM184/LH	18	4	27	27	470	0.091
SKM204	SKM204/LH	20	4	30	30	590	0.124
SKM225	SKM225/LH	22	5	30	33	700	0.125
SKM245	SKM245/LH	24	5	36	36	845	0.219
SKM285	SKM285/LH	28	5	41	42	1,175	0.318
SKM306	SKM306/LH	30	6	46	45	1,335	0.445
SKM326	SKM326/LH	32	6	50	48	1,430	0.567
SKM366	SKM366/LH	36	6	55	54	1,950	0.708
SKM407	SKM407/LH	40	7	60	60	2,400	0.893
SKM447	SKM447/LH	44	7	65	66	2,940	1.538
SKM508	SKM508/LH	50	8	75	75	3,790	1.889
SKM609	SKM609/LH	60	9	90	90	5,490	3.277

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.
• Manual control - Low rotation speeds.
• For Clamping or locking functions.
• For receiving dead weights.

For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

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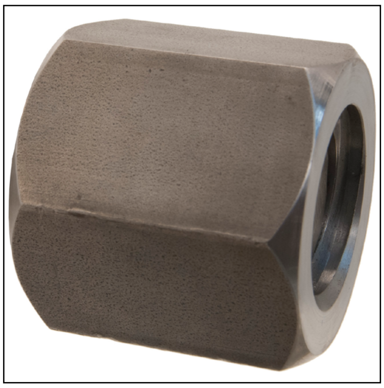
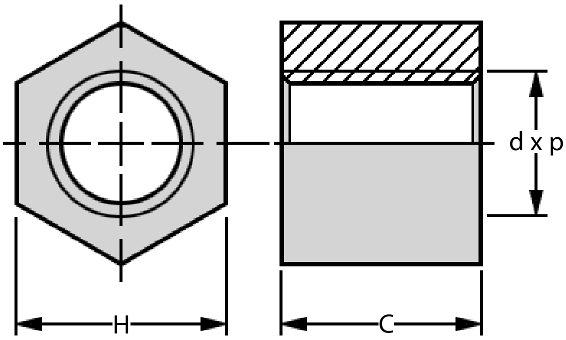
SKM

LINEAR MOTION

Hexagonal Trapezoidal Nut

2 Start : Steel : ISO 2901/2903 DIN 103





Part Number RH	d	p	D	C	Contact Surface mm^2	Mass Kg
SKM126	12	6	19	18	210	0.032
SKM146	14	6	22	21	285	0.049
SKM168	16	8	24	24	365	0.065
SKM188	18	8	27	27	470	0.091
SKM208	20	8	30	30	590	0.124
SKM2410	24	10	36	36	845	0.219
SKM3012	30	12	46	45	1,335	0.445
SKM3612	36	12	55	54	1,950	0.708
SKM4014	40	14	60	60	2,400	0.893

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.
- Manual control - Low rotation speeds.
- For Clamping or locking functions.
- For receiving dead weights.

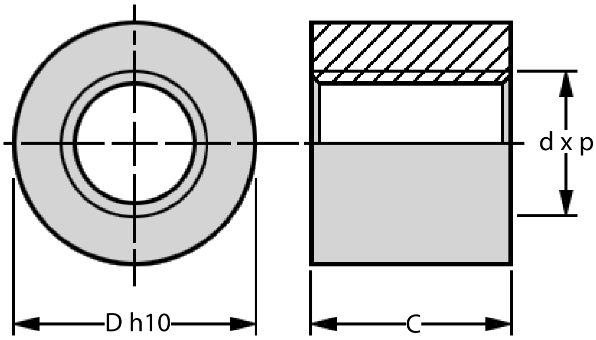
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

KSM

LINEAR MOTION

Round Trapezoidal Nut

1 Start : Steel : ISO 2901/2903 DIN 103



Part Number RH	Part Number LH	d	p	D h10	C	Contact Surface mm^2	Mass Kg
KSM102	KSM102/LH	10	2	22	15	150	0.035
KSM123	KSM123/LH	12	3	26	18	210	0.055
KSM143	KSM143/LH	14	3	30	21	285	0.090
KSM164	KSM164/LH	16	4	36	24	365	0.155
KSM184	KSM184/LH	18	4	40	27	470	0.215
KSM204	KSM204/LH	20	4	45	30	590	0.305
KSM225	KSM225/LH	22	5	45	33	700	0.322
KSM245	KSM245/LH	24	5	50	36	845	0.440
KSM285	KSM285/LH	28	5	60	42	1,175	0.740
KSM306	KSM306/LH	30	6	60	45	1,335	0.765
KSM326	KSM326/LH	32	6	60	48	1,430	0.790
KSM366	KSM366/LH	36	6	75	54	1,950	1.470
KSM407	KSM407/LH	40	7	80	60	2,400	1.830
KSM447	KSM447/LH	44	7	80	66	2,940	1.890
KSM508	KSM508/LH	50	8	90	75	3,790	2.695
KSM609	KSM609/LH	60	9	100	90	5,490	3.865
KSM7010	KSM7010/LH	70	10	110	100	7,140	5.115
KSM8010	KSM8010/LH	80	10	120	110	8,900	6.000

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.

- Manual control - Low rotation speeds.
- For Clamping or locking functions.
- For receiving dead weights.

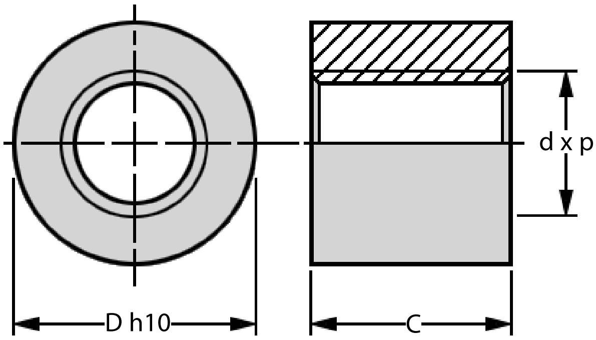
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

KSM

LINEAR MOTION

Round Trapezoidal Nut

2 Start : Steel : ISO 2901/2903 DIN 103



Part Number RH	d	p	D	C	Contact Surface mm^2	Mass Kg
KSM126	12	6	26	18	210	0.055
KSM146	14	6	30	21	285	0.090
KSM168	16	8	36	24	365	0.155
KSM188	18	8	40	27	470	0.215
KSM208	20	8	45	30	590	0.305
KSM2210	22	10	45	33	700	0.322
KSM2410	24	10	50	36	845	0.440
KSM2810	28	10	60	42	1,175	0.740
KSM3012	30	12	60	45	1,335	0.765
KSM3212	32	12	60	48	1,430	0.790
KSM3612	36	12	75	54	1,950	1.470
KSM4014	40	14	80	60	2,400	1.830

Material

Carbon Manganese Steel S300 Pb (11SMnPb37).
It is possible to weld this material but difficulties may arise with bubbling due to the sulphur content.

ISO 2901/2903 and DIN 103.

Features

To be used with our screws: **LFM, LSM**.

- Manual control - Low rotation speeds.
- For Clamping or locking functions.
- For receiving dead weights.

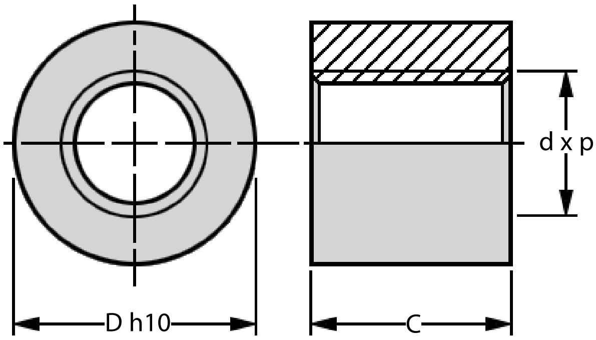
For power transmission and continuous use, always use bronze nuts, never steel.
Nuts and screws should always be lubricated with grease or oil.
Steel nuts should be used with steel screws for hand motion only.

LRM

LINEAR MOTION

Round Trapezoidal Nut

1 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	Part Number LH	d	p	D h10	C	Contact Surface mm^2	Mass Kg
LRM102	LRM102/LH	10	2	22	20	200	0.053
LRM123	LRM123/LH	12	3	26	24	280	0.083
LRM143	LRM143/LH	14	3	30	28	380	0.135
LRM164	LRM164/LH	16	4	36	32	490	0.232
LRM184	LRM184/LH	18	4	40	36	630	0.320
LRM204	LRM204/LH	20	4	45	40	790	0.455
LRM225	LRM225/LH	22	5	45	44	940	0.480
LRM245	LRM245/LH	24	5	50	48	1,130	0.656
LRM285	LRM285/LH	28	5	60	56	1,570	1.102
LRM306	LRM306/LH	30	6	60	60	1,780	1.140
LRM326	LRM326/LH	32	6	60	64	1,910	1.177
LRM366	LRM366/LH	36	6	75	72	2,610	2.189
LRM407	LRM407/LH	40	7	80	80	3,210	2.725
LRM447	LRM447/LH	44	7	80	88	3,920	2.815
LRM508	LRM508/LH	50	8	90	100	5,060	4.014
LRM609	LRM609/LH	60	9	100	120	7,320	5.150
LRM7010	-	70	10	110	140	10,000	7.805

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

• Manual or powered control - low and medium rotation speeds.
• For working under load.

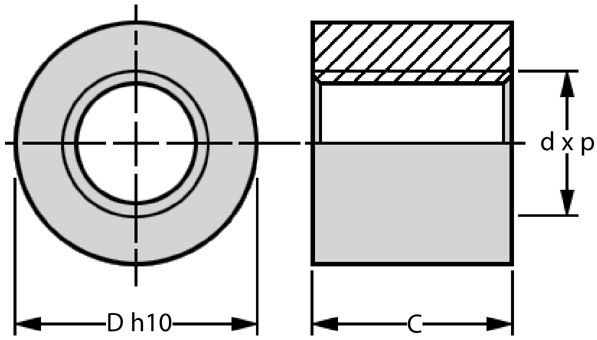
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

LRM

LINEAR MOTION

Round Trapezoidal Nut

2 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	d	p	D	C	Contact Surface mm^2	Mass Kg
LRM126	12	6	26	24	280	0.083
LRM146	14	6	30	28	380	0.135
LRM168	16	8	36	32	490	0.232
LRM188	18	8	40	36	630	0.320
LRM208	20	8	45	40	790	0.455
LRM2210	22	10	45	44	940	0.480
LRM2410	24	10	50	48	1,130	0.656
LRM2810	28	10	60	56	1,570	1.102
LRM3012	30	12	60	60	1,780	1.140
LRM3212	32	12	60	64	1,910	1.177
LRM3612	36	12	75	72	2,610	2.189
LRM4014	40	14	80	80	3,210	2.725

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.
- Manual or powered control - low and medium rotation speeds.
- For working under load.

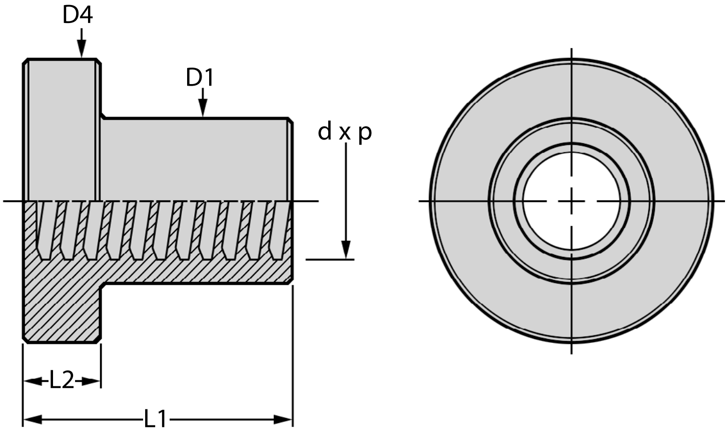
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

FMR

LINEAR MOTION

Flanged Trapezoidal Nut

1 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	Part Number LH	d	p	D1	D4	L1	L2	Contact Surface mm^2	Mass Kg
FMR102	FMR102/LH	10	2	20	35	15	6	150	0.068
FMR123	FMR123/LH	12	3	24	42	20	7	228	0.120
FMR143	FMR143/LH	14	3	30	52	24	10	315	0.260
FMR164	FMR164/LH	16	4	30	52	24	10	363	0.250
FMR204	FMR204/LH	20	4	38	62	26	11	514	0.400
FMR245	FMR245/LH	24	5	50	77	33	13	780	0.750
FMR306	FMR306/LH	30	6	58	90	48	15	1,430	1.400
FMR366	FMR366/LH	36	6	80	115	60	20	2,166	3.200
FMR407	FMR407/LH	40	7	80	140	65	20	2,610	4.100
FMR508	FMR508/LH	50	8	90	170	70	20	4,237	5.900

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

• Manual or powered control - low and medium rotation speeds.
• For working under load.

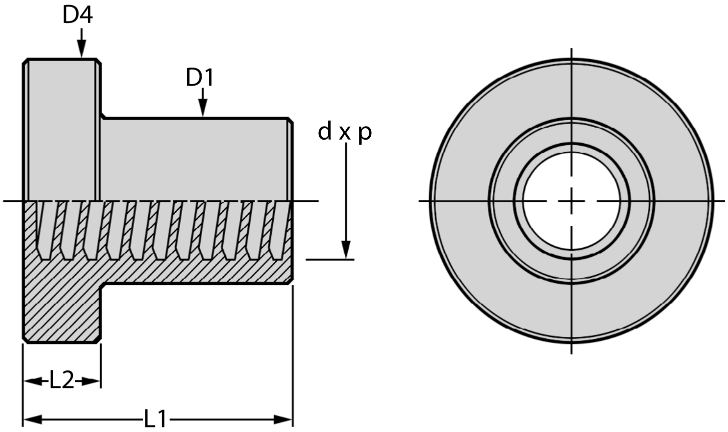
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

FMR

LINEAR MOTION

Flanged Trapezoidal Nut

2 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	d	p	D1	D4	L1	L2	Contact Surface mm^2	Mass Kg
FMR126	12	6	24	42	20	7	262	0.120
FMR168	16	8	30	52	24	12	363	0.250
FMR208	20	8	38	62	26	12	514	0.400
FMR2410	24	10	50	77	33	12	780	0.750
FMR3012	30	12	58	90	48	14	1,430	1.400
FMR3612	36	12	80	115	60	16	2,166	3.200
FMR4014	40	14	80	140	65	16	2,610	4.100

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

- Manual or powered control - low and medium rotation speeds.
- For working under load.

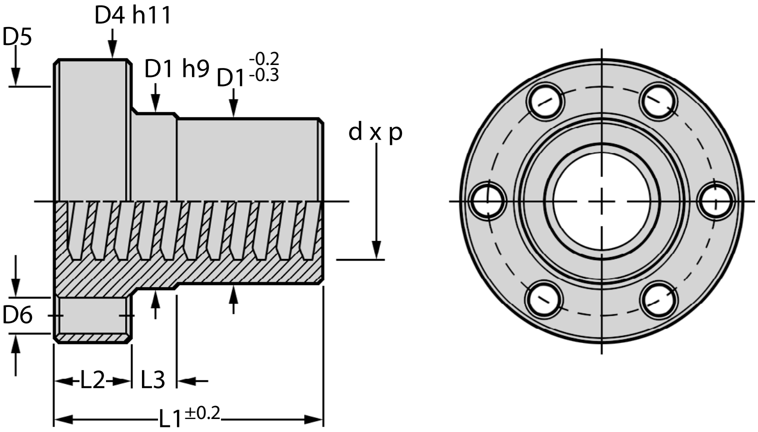
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

LINEAR MOTION

BFM

Flanged Trapezoidal Nut

1 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	Part Number LH	d	p	D1	D4 h11	D5	Holes D6	$L1^{\pm0.2}$	$L2^{+0.15}_{-0.00}$	$L3^{+0.00}_{-0.15}$	Contact Surface mm²	Mass Kg
BFM102	BFM102/LH	10	2	25	42	34	5	25	10	6	250	0.016
BFM123	BFM123/LH	12	3	28	48	38	6	35	12	8	400	0.266
BFM143	BFM143/LH	14	3	28	48	38	6	35	12	8	460	0.258
BFM164	BFM164/LH	16	4	28	48	38	6	35	12	8	530	0.244
BFM184	BFM184/LH	18	4	28	48	38	6	35	12	8	610	0.228
BFM204	BFM204/LH	20	4	32	55	45	7	44	12	8	870	0.346
BFM225	BFM225/LH	22	5	32	55	45	7	44	12	8	1,030	0.322
BFM245	BFM245/LH	24	5	32	55	45	7	44	12	8	1,040	0.304
BFM285	BFM285/LH	28	5	38	62	50	7	46	14	8	1,200	0.442
BFM306	BFM306/LH	30	6	38	62	50	7	46	14	8	1,370	0.408
BFM326	BFM326/LH	32	6	45	70	58	7	54	16	10	1,710	0.706
BFM366	BFM366/LH	36	6	45	70	58	7	54	16	10	1,950	0.606
BFM407	BFM407/LH	40	7	63	95	78	9	66	16	12	2,650	1.700
BFM447	BFM447/LH	44	7	63	95	78	9	66	16	12	2,940	1.524
BFM508	BFM508/LH	50	8	72	110	90	11	75	18	14	4,540	2.324
BFM609	BFM609/LH	60	9	88	130	110	13	90	20	16	5,490	3.942
BFM7010	BFM7010/LH	70	10	95	140	120	13	105	22	17	7,500	4.465

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

• Manual or powered control - low and medium rotation speeds.
• For working under load.

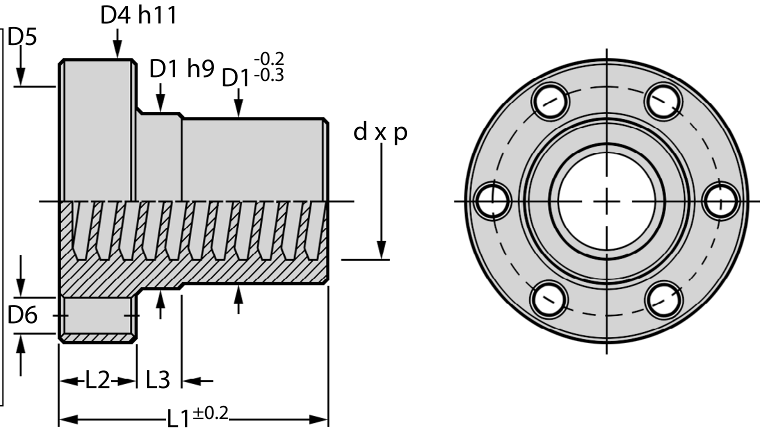
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

BFM

LINEAR MOTION

Flanged Trapezoidal Nut

2 Start : Bronze : ISO 2901/2903 DIN 103



Part Number RH	d	p	D1	D4 h11	D5	Holes D6	$L1^{\pm0.2}$	$L2^{+0.15}_{-0.00}$	$L3^{+0.00}_{-0.15}$	Contact Surface mm^2	Mass Kg
BFM126	12	6	28	48	38	6	35	12	8	400	0.266
BFM146	14	6	28	48	38	6	35	12	8	460	0.258
BFM168	16	8	28	48	38	6	35	12	8	530	0.244
BFM188	18	8	28	48	38	6	35	12	8	610	0.228
BFM208	20	8	32	55	45	7	44	12	8	870	0.346
BFM2210	22	10	32	55	45	7	44	12	8	1,030	0.322
BFM2410	24	10	32	55	45	7	44	12	8	1,040	0.304
BFM2810	28	10	38	62	50	7	46	14	8	1,200	0.442
BFM3012	30	12	38	62	50	7	46	14	8	1,370	0.408
BFM3212	32	12	45	70	58	7	54	16	10	1,710	0.706
BFM3612	36	12	45	70	58	7	54	16	10	1,950	0.606
BFM4014	40	14	63	95	78	9	66	16	12	2,650	1.700

Material

Bronze CC493K (CuSn7ZnPb).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

- Manual or powered control - low and medium rotation speeds.
- For working under load.

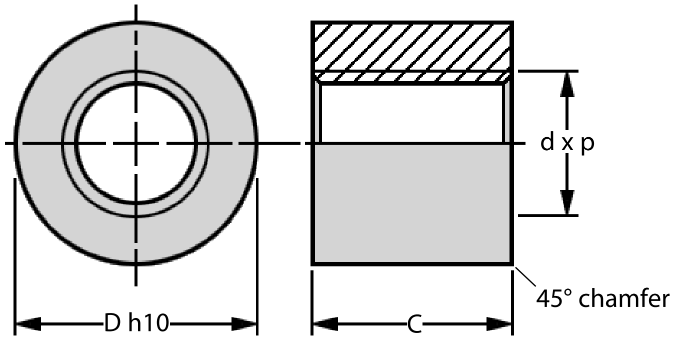
For power transmission and continuous use, always use bronze nuts, never steel. Nuts and screws should always be lubricated with grease or oil.

WSRM
WSLM

LINEAR MOTION

Round Trapezoidal Nut

1 Start : iglidur® W300 Self Lubricating : ISO 2901/2903 DIN 103



Part Number RH	LH	d	p	D h10	C	Contact Surface mm^2	Max. Static F Axial (N)
WSRM102	WSLM102	10	2	22	20	282	1,410
WSRM123	WSLM123	12	3	26	24	394	1,970
WSRM164	WSLM164	16	4	36	32	752	3,760
WSRM184	WSLM184	18	4	40	36	904	4,520
WSRM204	WSLM204	20	4	45	40	1,130	5,650
WSRM245	WSLM245	24	5	50	48	1,620	8,100
WSRM285	WSLM285	28	5	60	56	2,240	11,200
WSRM306	WSLM306	30	6	60	60	2,542	12,710

Material

Plastic iglidur® W300.
Density: 1.24g/cm^3.
Max. Moisture Absorption at 23°C/50% r.h.: 1.3% of mass.
Max. Moisture Absorption: 6.5% of mass.
Max. Dry PV Value: 0.23 MPa • m/s.
Modulus of Elasticity: 3,500 MPa.
Tensile Strength at +20°C: 125 MPa.
Compressive Strength: 61 MPa.
Shore D Hardness: 77.
Max. Long Term Application Temp.: +90°C.
Max. Short Term Application Temp.: +180°C.
Min. Application Temp.: -40°C.
Thermal Conductivity: 0.24 W/m•K.
Coefficient of Thermal Expansion at +23°C: 9 K^{-1} • 10^{-5}.
Specific Volume Resistance: >10^{13} Ωcm.
Surface Resistance: >10^{12} Ω.

Some sizes available in iglidur® A180 FDA approved material on request, P.O.A.
Shorter lengths and anti-Backlash nuts available, P.O.A.

Features

- Especially long service life.
- Low coefficient of friction.
- Extremely high wear resistance and good resistance to dirt.

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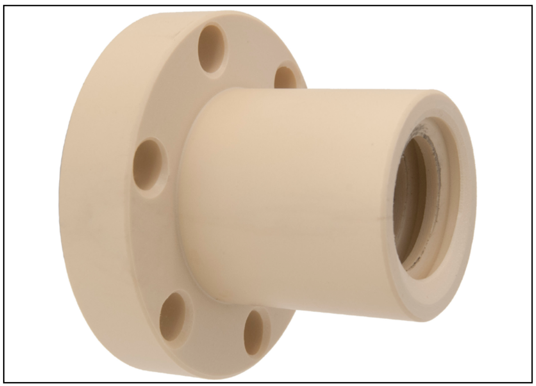
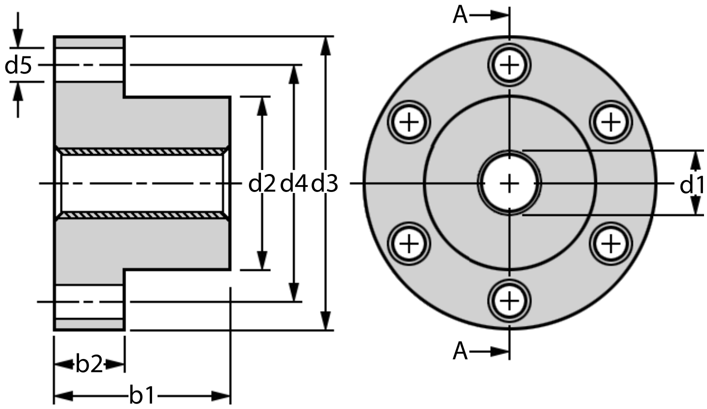
WFRM WFLM

LINEAR MOTION

Flanged Trapezoidal Nut

1 Start : iglidur® W300 Self Lubricating : ISO 2901/2903 DIN 103





Part Number RH	LH	d	p	d2	d3	d4	d5	b1	b2	Contact Surface mm²	Max. Static F Axial (N)
WFRM102	WFLM102	10	2	25	42	34	5	25	10	352	1,760
WFRM123	WFLM123	12	3	28	48	38	6	35	12	576	2,880
WFRM164	WFLM164	16	4	28	48	38	6	35	12	768	3,840
WFRM184	WFLM184	18	4	28	48	38	6	35	12	878	4,390
WFRM204	WFLM204	20	4	32	55	45	7	44	12	1,242	6,210
WFRM245	WFLM245	24	5	32	55	45	7	44	12	1,484	7,420
WFRM285	WFLM285	28	5	38	62	50	7	46	14	1,840	5,900
WFRM306	WFLM306	30	6	38	62	50	7	46	14	1,948	4,470

Material

Plastic iglidur® W300
Density: 1.24g/cm^3.
Max. Moisture Absorption at 23°C/50% r.h.: 1.3% of weight.
Max. Moisture Absorption: 6.5% of weight.
Max. Dry PV Value: 0.23 MPa • m/s.
Modulus of Elasticity: 3,500 MPa.
Tensile Strength at +20°C: 125 MPa.
Compressive Strength: 61 MPa.
Shore D Hardness: 77.
Max. Long Term Application Temp.: +90°C.
Max. Short Term Application Temp.: +180°C.
Min. Application Temp.: -40°C.
Thermal Conductivity: 0.24 W/m•K.
Coefficient of Thermal Expansion at +23°C: 9 K^{-1} • 10^{-5}.
Specific Volume Resistance: >10^{13} Ωcm.
Surface Resistance: >10^{12} Ω.

Some sizes available in iglidur® A180 FDA approved material on request, P.O.A.

Features

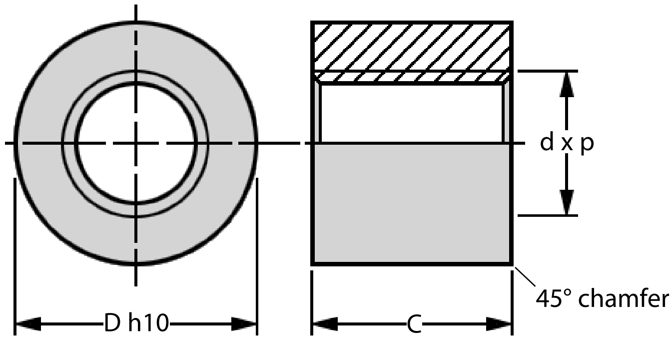
- Especially long service life.
- Low coefficient of friction.
- Extremely high wear resistance and good resistance to dirt.

JSRM JSLM

LINEAR MOTION

Round Trapezoidal Nut

1 Start : iglidur® J Self Lubricating : ISO 2901/2903 DIN 103



Part Number RH	LH	d	p	D h10	C	Contact Surface mm^2	Max. Static F Axial (N)
JSRM102	JSLM102	10	2	22	20	282	1,128
JSRM123	JSLM123	12	3	26	24	394	1,576
JSRM164	JSLM164	16	4	36	32	752	3,008
JSRM184	JSLM184	18	4	40	36	904	3,616
JSRM204	JSLM204	20	4	45	40	1,130	4,520
JSRM245	JSLM245	24	5	50	48	1,620	6,480
JSRM285	JSLM285	28	5	60	56	2,240	8,960
JSRM306	JSLM306	30	6	60	60	2,542	10,168
JSRM366	JSLM366	36	6	75	72	3,732	15,274
JSRM407	JSLM407	40	6	76	80	4,582	17,837
JSRM508	JSLM508	50	6	90	100	7,225	20,400

Material

Plastic iglidur® J.
Density: 1.49g/cm^3.
Max. Moisture Absorption at 23°C/50% r.h.: 0.3% of mass.
Max. Moisture Absorption: 1.3% of mass.
Max. Dry PV Value: 0.34 MPa • m/s.
Modulus of Elasticity: 2,400 MPa.
Tensile Strength at +20°C: 73 MPa.
Compressive Strength: 60 MPa.
Shore D Hardness: 74.
Max. Long Term Application Temp.: +90°C.
Max. Short Term Application Temp.: +120°C.
Min. Application Temp.: -50°C.
Thermal Conductivity: 0.25 W/m•K.
Coefficient of Thermal Expansion at +23°C: 10 K^{-1} • 10^{-5}.
Specific Volume Resistance: >10^{13} Ωcm.
Surface Resistance: >10^{12} Ω.

Some sizes available in iglidur® A180 FDA approved material on request, P.O.A.
Shorter lengths and anti-Backlash nuts available, P.O.A.

Features

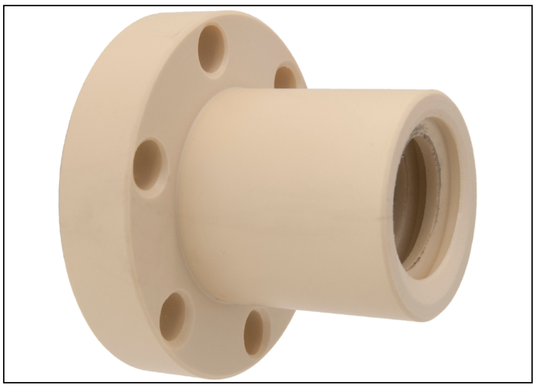
- Low wear and low coefficients of friction running dry.
- Vibration damping.
- Good chemical resistance
- Low moisture absorption.

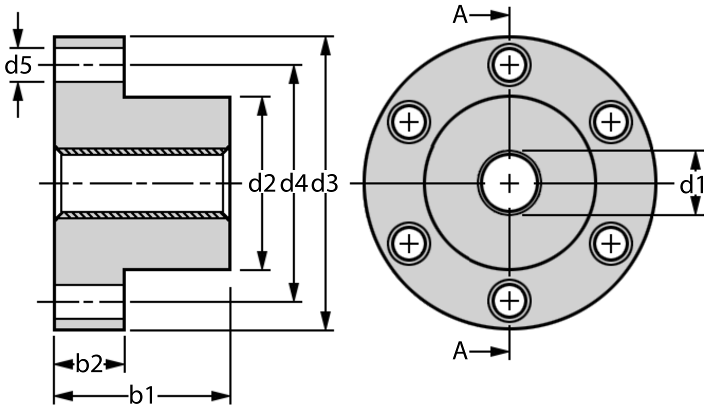
JFRM
JFLM

LINEAR MOTION

Flanged Trapezoidal Nut

1 Start : iglidur® J Self Lubricating : ISO 2901/2903 DIN 103





Part Number RH	LH	d	p	d2	d3	d4	d5	b1	b2	Contact Surface mm²	Max. Static F Axial (N)
JFRM102	JFLM102	10	2	25	42	34	5	25	10	352	1,760
JFRM123	JFLM123	12	3	28	48	38	6	35	12	576	2,880
JFRM164	JFLM164	16	4	28	48	38	6	35	12	768	3,840
JFRM184	JFLM184	18	4	28	48	38	6	35	12	878	4,390
JFRM204	JFLM204	20	4	32	55	45	7	44	12	1,242	6,210
JFRM245	JFLM245	24	5	32	55	45	7	44	12	1,484	7,420
JFRM285	JFLM285	28	5	38	62	50	7	46	14	1,840	5,900
JFRM306	JFLM306	30	6	38	62	50	7	46	14	1,948	4,470

Material

Plastic iglidur® J.
Density: 1.49g/cm³.
Max. Moisture Absorption at 23°C/50% r.h.: 0.3% of mass.
Max. Moisture Absorption: 1.3% of mass.
Max. Dry PV Value: 0.34 MPa • m/s.
Modulus of Elasticity: 2,400 MPa.
Tensile Strength at +20°C: 73 MPa.
Compressive Strength: 60 MPa.
Shore D Hardness: 74.
Max. Long Term Application Temp.: +90°C.
Max. Short Term Application Temp.: +120°C.
Min. Application Temp.: -50°C.
Thermal Conductivity: 0.25 W/m•K.
Coefficient of Thermal Expansion at +23°C: 10 K^{-1} • 10^{-5}.
Specific Volume Resistance: >10^{13} Ωcm.
Surface Resistance: >10^{12} Ω.

Some sizes available in iglidur® A180 FDA approved material on request, P.O.A..

Features

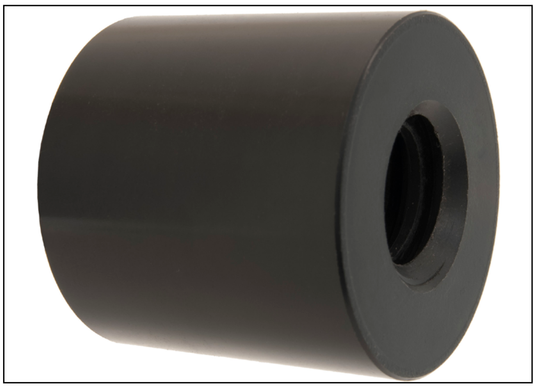
- Low wear and low coefficients of friction running dry.
- Vibration damping.
- Good chemical resistance
- Low moisture absorption.

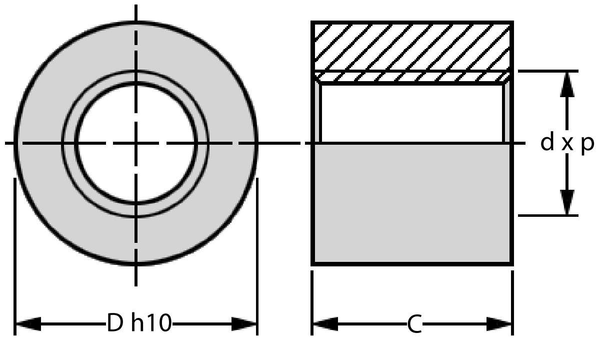
LKM

LINEAR MOTION

Round Trapezoidal Nut

1 Start : Nylon : ISO 2901/2903 DIN 103





Part Number RH	Part Number LH	d	p	D h10	C	Contact Surface mm^2	Mass Kg
LKM123	LKM123/LH	12	3	26	24	280	0.012
LKM164	LKM164/LH	16	4	36	32	490	0.032
LKM204	LKM204/LH	20	4	45	40	790	0.060
LKM245	LKM245/LH	24	5	50	48	1,130	0.088
LKM306	LKM306/LH	30	6	60	60	1,780	0.150
LKM366	LKM366/LH	36	6	75	72	2,610	0.300
LKM407	LKM407/LH	40	7	80	80	3,210	0.370

Material

Machined Nylon PA 6.6 (Black).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

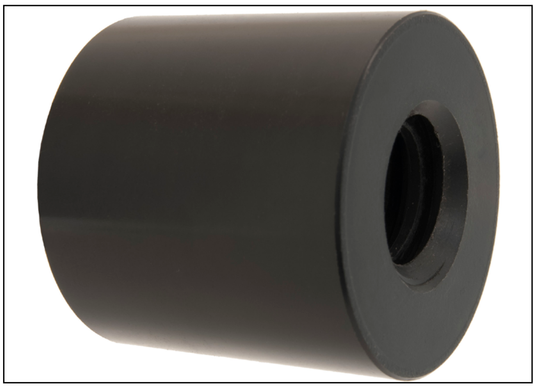
- Manual or powered control - Medium and high rotation speeds.
- For working under moderate loads.
- Very low sound level.
- Gives very good results with Steel or Stainless screws.
- Can be used without lubrication but at reduced service life.

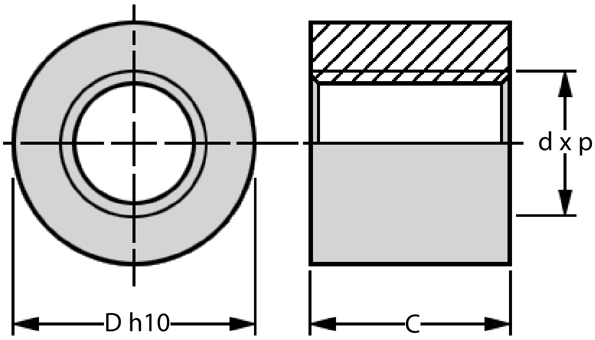
LRM

LINEAR MOTION

Round Trapezoidal Nut

2 Start : Nylon : ISO 2901/2903 DIN 103





Part Number RH	d	p	D	C	Contact Surface mm^2	Mass Kg
LKM126	12	6	26	24	280	0.012
LKM168	16	8	36	32	490	0.032
LKM208	20	8	45	40	790	0.060
LKM2410	24	10	50	48	1,130	0.088
LKM3012	30	12	60	60	1,780	0.150
LKM3612	36	12	75	72	2,610	0.300
LKM4014	40	14	80	80	3,210	0.370

Material

Machined Nylon PA 6.6 (Black).

ISO 2901/2903 and DIN 103 tolerance 7H.

Features

To be used with our screws: **LFM, LSM**.

- Manual or powered control - Medium and high rotation speeds.
- For working under moderate loads.
- Very low sound level.
- Gives very good results with Steel or Stainless screws.
- Can be used without lubrication but at reduced service life.

LINEAR MOTION

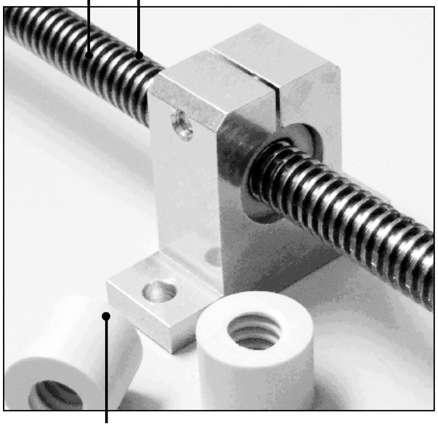
Trapezoidal Leadscrew Nuts

iglidur® Self Lubricating : DIN 103, ISO 2903

TECHNICAL

Advantages

- Self lubricating
- Resistant to dirt
- Maintenance free
- Best resistance to galling
- Corrosion free
- Quiet operation
- Temperature resistant up to +90°C
- Trapezoidal lead screws manufactured from Steel, Stainless and anodised Aluminium on request.
- Left-handed leadscrew nuts on request.



Until now, there have been two types of trapezoidal lead screw nuts on the market; lubricated metallic nuts (Steel, Bronze, Brass etc.) without emergency running properties, and maintenance free versions made of plastic such as PA 6.6 or POM with very restricted load capacity. iglidur® maintenance free trapezoidal lead screw nuts are now closing the gap - they are fully maintenance free and take high loads.

The new Trapezoidal lead screw nuts add to the range of the maintenance free and dry running products for linear technology.

The iglidur® lead screw nuts offer considerable advantages over nuts which require maintenance and lubrication especially in applications using detergents such as those of the packaging industry or in areas with high dust contamination (textile machines).

The iglidur® lead screw nuts are manufactured to DIN 103.

Calculations of the trapezoidal thread loads

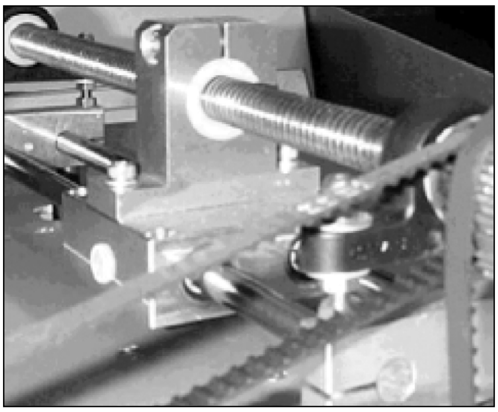
The load capacity of the trapezoidal lead screw nuts made of high performance polymers depends on the surface pressure, the speed and the resulting temperature.

The temperature ratio will be affected by the frequency as well as by the lead screw material and its thermal properties.

The surface pressure of the iglidur® trapezoidal lead screw nut should not permanently exceed 5 MPa.

p x v Value$_{max}$ 0.08 MPa x m/s

The permissible feeds and speeds can be determined for each thread size with the pxv value and the running surfaces given in the dimension table.



Required (running surface):

$A_e = F_{axial} / p_{permissible}$ (mm^2)

Selection of the thread size and determination of the effective surface pressure:

$p_{eff} = F_{axial} / A_{e\ eff}$ (MPa)

Permissible sliding speed:

$V_{slide} = p \times v_{max} / p_{eff}$ (m/s)

Maximum permissible RPM:

$N = V_{slide} \times 1.000 \times 60 / (\pi \times d1)$ (1/mm)

Feed Speed:

$V_{feed} = n \times P / 60.000$ (m/s)

F_{axial}	Axial force
$p_{permissible}$	Max. permissible surface pressure 5 MPa
p_{eff}	Effective surface pressure on a specific thread size
$A_{E\ eff}$	Effective supporting surface of the selected trapezoidal lead screw nut
P	Pitch
d1	Effective diameter

LINEAR MOTION

Trapezoidal Leadscrews

Dimensions of Screw and Nut

The screw has to withstand the applied torque and also carry the load. The length of engagement between the nut and screw must be sufficient to avoid shearing and too rapid wear. In practice, it is nearly always the latter which determines the length of nut. The screw, if in compression, will also have to be considered as a column, and the J B Johnson or Euler formula applied. Since the torque is a function of the pitch diameter, which itself cannot be calculated until the minor diameter is known, the screw diameter must be selected by a trial and error solution. Therefore a trial solution for the minor diameter area is made considering only the **normal** stress. Use the following equation;

$$Ai = \frac{W \times fs}{Sy}$$

Then a nominal thread is selected having a minor diameter equal to, or exceeding that calculated. It is now possible to ascertain the tangent of the helix angle;

$$\tan\lambda = \frac{P}{\pi d}$$

With this information the torque can be calculated;

$$T = \frac{Wd}{2}\left(\frac{\cos\alpha \tan\lambda + \mu}{\cos\alpha - \mu\tan\lambda}\right)$$

The next step is to find the torsional shear stress;

$$Ss = \frac{16T}{\pi di^3}$$

And the normal stress on the minor diameter section for screws in **tension**;

$$S = \frac{W}{Ai}$$

For screws in **compression**, we must take into account the bending stresses, since the screw is acting as a column, and J B Johnson or Euler formula will apply.

Use the following equation to determine which formula is applicable;

$$a)\ \frac{L}{K} < \sqrt{\frac{2C\pi^2 E}{Sy}} \qquad b)\ \frac{L}{K} > \sqrt{\frac{2C\pi^2 E}{Sy}}$$

If a) applies, then the screw conforms to the Johnson formula;

$$S = \frac{W}{Ai}\ \frac{1}{1 - \left[\frac{Sy\,(L/K)^2}{4C\pi^2 E}\right]}$$

If b) applies, then the screw conforms to the Euler formula;

$$S = \frac{W}{Ai}\ \frac{Sy\,(L/K)^2}{C\pi^2 E}$$

Having obtained a value for 'S' from one of the above equations a solution can be made for the factor of safety, taking into account all the stresses.

$$fs = \frac{Sy/2}{\sqrt{\left(\frac{S}{2}\right)^2 + \left(Ss\right)^2}}$$

This is then compared with the originally selected design value, and a decision can be made as to whether this is adequate, or whether another solution must be calculated.

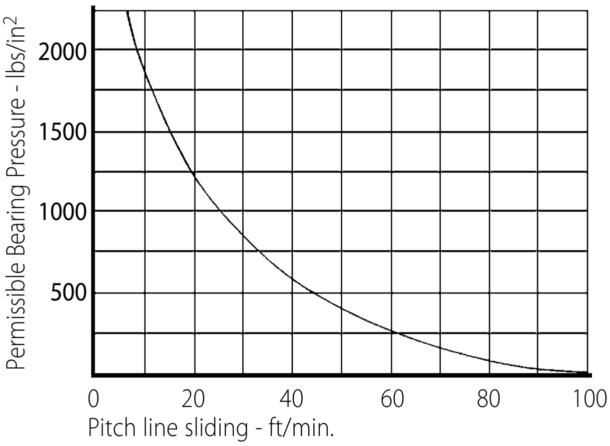
It is advisable to check at this stage the length of the nut necessary to give acceptable bearing pressure on the thread flanks to ensure a satisfactory service life;

$$Le = \frac{4Wp}{\pi B\,(do^2 - di^2)}$$

The length of the nut should not exceed 3d, or manufacturing difficulties will arise, and if the nut length is found to be excessive, then re-calculation will be necessary using a larger screw diameter and alternative pitch. A multiple start thread will reduce the pitch-line sliding speed, and this alone may solve the problem of excessive bearing pressure. Finally, a check should be made on the factor of safety provided by the screw threads in shear;

$$\text{Screw } fs = \frac{Le\,\pi\,di\,ti\,Ssy}{Wp} \qquad \text{Nut } fs = \frac{Le\,\pi\,do\,to\,Ssy}{Wp}$$

Graph of Speed/Allowable Pressure
Steel screws and bronze or cast iron nuts only



Efficiency of a Screw Thread

$$e = \tan\lambda\left(\frac{\cos\alpha - \mu\tan\lambda}{\cos\alpha\tan\lambda + \mu}\right)$$

Self Locking Threads

A screw will be self-sustaining if μ exceeds cos μ tan λ.

Symbols Used in Equations

- Ai = Area of screw minor diameter
- B = Allowable bearing pressure (see graph)
- C = End fixity coefficient (C = 2 for fixed ends)
- d = Effective diameter of thread
- di = Minor diameter of thread
- do = Major diameter of thread
- E = Modulus of elasticity of material
- fs = Factor of safety
- I = Second moment of inertia
- K = $\sqrt{\frac{I}{Ai}}$ = radius of gyration of cross-section
- L = Length of shaft, unsupported
- Le = Length of engagement = length of nut
- p = Pitch of thread
- P = Lead of thread (pitch x No. of starts)
- SS = Torsional shear stress
- SSy = Shear stress yield point of material
- T = Torque
- ti = Thread thickness, minor diameter
- to = Thread thickness, major diameter
- W = Axial load
- λ = Helix angle
- α = Flank angle (15° Trapezoidal)
- μ = Coefficient of friction (can be taken as 0.15)

LINEAR MOTION

Trapezoidal Leadscrews

TECHNICAL

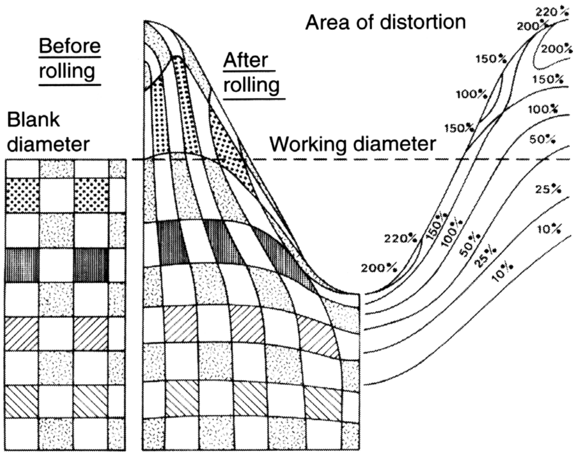
Load v Speed (Steel screws with Bronze nuts) (May need correction for nut length (lg)

Linear speed (mm/min):		125	250	375	500	625	750	875	1000	1250	1500	1750	2000
Tr 12 x 3	Rpm:	42	83	125	167	208	250	292	333	417	500	583	667
25lg	Load Kg:	700	560	475	400	330	280	240	200	150	100	60	60
Tr 16 x 4	Rpm:	30	70	100	125	150	200	250	300	350	400	450	500
29lg	Load Kg:	1,050	860	680	610	520	380	280	220	170	120	90	68
Tr 20 x 4	Rpm:	31	62	94	125	156	187	219	250	312	375	437	500
32lg	Load Kg:	1,330	1,080	875	700	580	470	380	300	170	100	60	60
Tr 24 x 5	Rpm:	25	50	75	100	125	150	175	200	250	300	350	400
45lg	Load Kg:	2,360	1,900	1,500	1,220	1,020	850	680	530	300	170	100	75
Tr 32 x 6	Rpm:	21	42	63	83	104	125	146	167	208	250	292	333
60lg	Load Kg:	4,100	3,230	2,530	2,050	1,670	1,600	1,020	770	420	230	150	115
Tr 40 x 6	Rpm:	21	42	63	83	104	125	146	167	208	250	292	333
60lg	Load Kg:	4,950	3,630	2,730	2,150	1,580	1,470	740	500	250	150	-	-
Tr 50 x 8	Rpm:	16	31	47	63	78	94	109	125	156	188	219	250
90lg	Load Kg:	9,300	6,950	5,300	4,100	3,200	2,380	1,700	1,150	550	380	-	-
Tr 60 x 9	Rpm:	13	25	38	50	63	75	88	100	125	150	175	200
115lg	Load Kg:	14,300	10,800	8,250	6,600	5,200	3,950	2,800	2,000	1,050	600	415	-

To select the correct screw for your application you will find it helpful to refer to the chart. This shows the screw required for various loads and linear speeds. It takes into account flank loads to give satisfactory life. If in compression consideration must also be given to the screw as a column. When used in tension the figures given will normally allow an adequate safety factor (steel screw with bronze nuts), use lowest figure from either table.

Bucking Load v Screw Length

Thread Dimensions	Perm-tensile Force (Kg)	Screw Length (m) 0.15	0.20	0.30	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	3.00	4.00	5.00
Tr 10 x 3	330	136	75	33	12	5	3	-	-	-	-	-	-	-	-	-
Tr 12 x 3	570	393	221	98	35	15	8	5	3	-	-	-	-	-	-	-
Tr 14 x 4	710	612	345	153	55	24	13	8	6	4	3	2	-	-	-	-
Tr 16 x 4	1,040	-	740	329	118	45	29	19	13	9	7	5	4	3	1	-
Tr 20 x 4	1,890	-	-	1,085	391	173	97	62	43	31	24	19	15	10	6	3
Tr 24 x 5	2,690	-	-	2,202	794	353	198	127	88	64	49	39	31	22	12	7
Tr 28 x 5	3,980	-	-	-	1,732	770	433	277	192	141	108	85	69	48	27	17
Tr 30 x 6	4,340	-	-	-	2,062	918	517	330	229	168	129	102	82	57	32	20
Tr 32 x 6	5,110	-	-	-	2,860	1,271	715	458	318	233	178	141	114	79	44	28
Tr 36 x 6	6,830	-	-	-	5,120	2,280	1,280	820	569	418	320	253	205	142	80	51
Tr 40 x 7	8,300				7,560	3,360	1,890	1,210	840	617	472	377	302	210	118	75
Tr 44 x 7	10,460		Bucking		-	5,330	3,000	1,920	1,332	980	750	593	480	333	187	120
Tr 48 x 8	12,510		Load		-	7,350	3,950	2,610	1,860	1,370	1,020	850	670	460	245	175
Tr 50 x 8	13,530		(kg)		-	8,940	5,020	3,218	2,230	1,640	1,255	993	804	558	314	201
Tr 52 x 8	14,550	-	-	-	-	10,530	6,045	3,815	2,610	1,925	1,485	1,150	940	660	375	230
Tr 60 x 9	20,030	-	-	-	-	19,570	11000	7,050	4,890	3,595	2,750	2,178	1,761	1,222	688	440
Tr 70 x 10	27,810	-	-	-	-	-	21,200	13,570	9,420	6,920	5,300	4,180	3,390	2,352	1,325	848



Improvement of the Mechanical Properties: Gain reaching 30% on hardness and 12% on breaking strength, in fact the fibres of the material are formed but not cut as in the case of cutting.

The Process

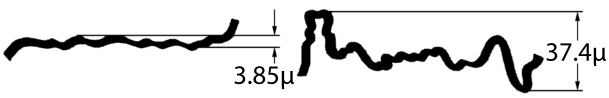
Cold-formed threading, more commonly called rolling, implies the cold forming of a metal bar by pressing during rotation with tools called dies, in order to obtain a thread or a knurling. Thanks to this performing process, we manufacture amongst others metric, trapezoidal threads and ball screws, using different materials such as current and special steels, stainless steel, brass and numerous alloys.

Economic Efficiency

The process of rolling allows a high production and an important saving in material as the diameter used is below nominal and unlike cutting it has no chips, thus no material loss.

Comparisons

The roller finishing on the surface considerably increases the life time of the screw or of the nut, improves fatigue strength and eliminates the starting points of the fracture.



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