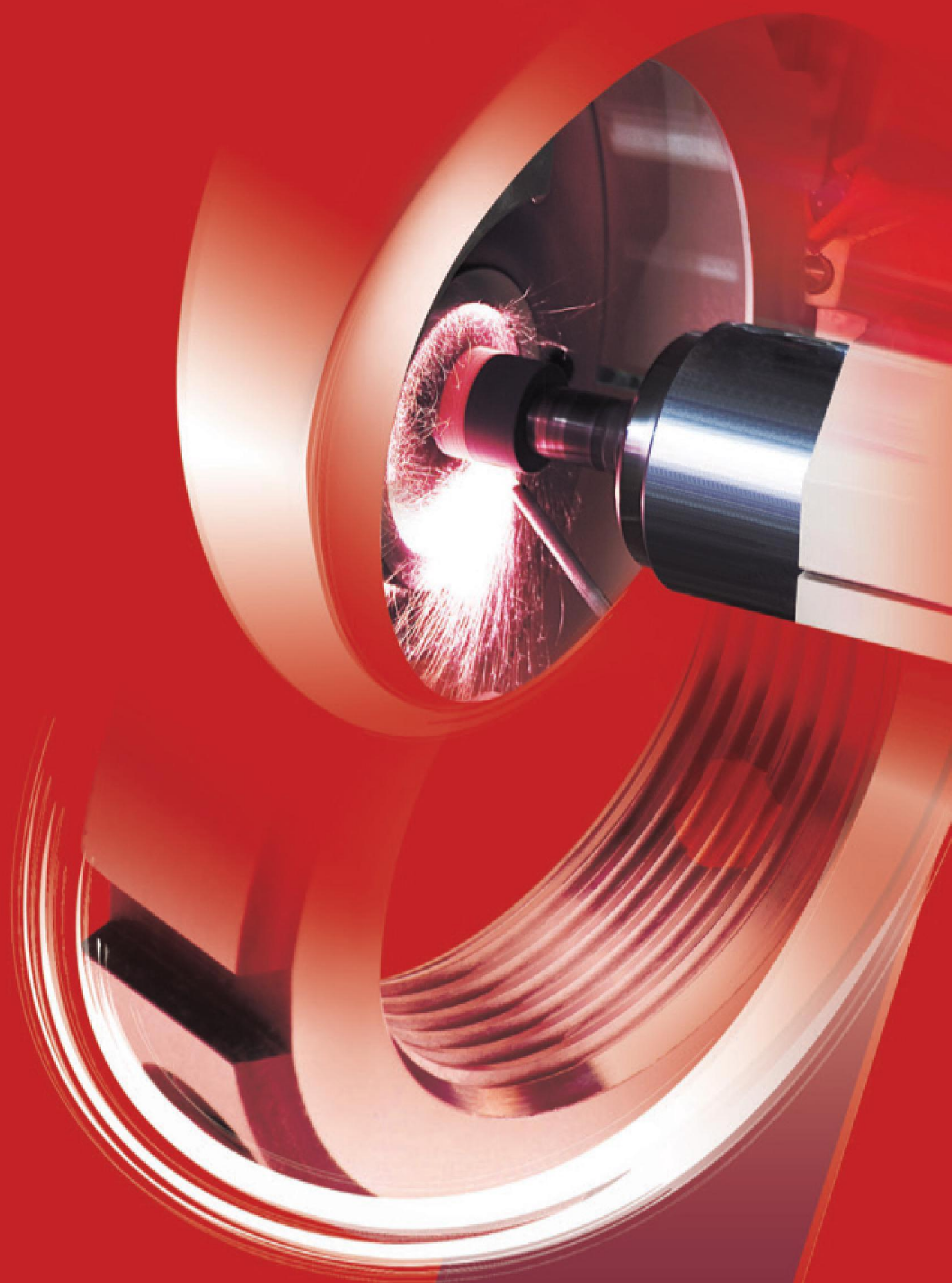




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The **SGL Series** was developed to practically and economically address the needs of high speed high precision machine tool spindles and ball screws. All threads, clamping rims, trailing rims, and outer skirts are precision ground and satisfy precision assembly requirements. The precision grinding of the SGL Series locknuts are the perfect match for your company's machine designs.



Precision Locknut Applications

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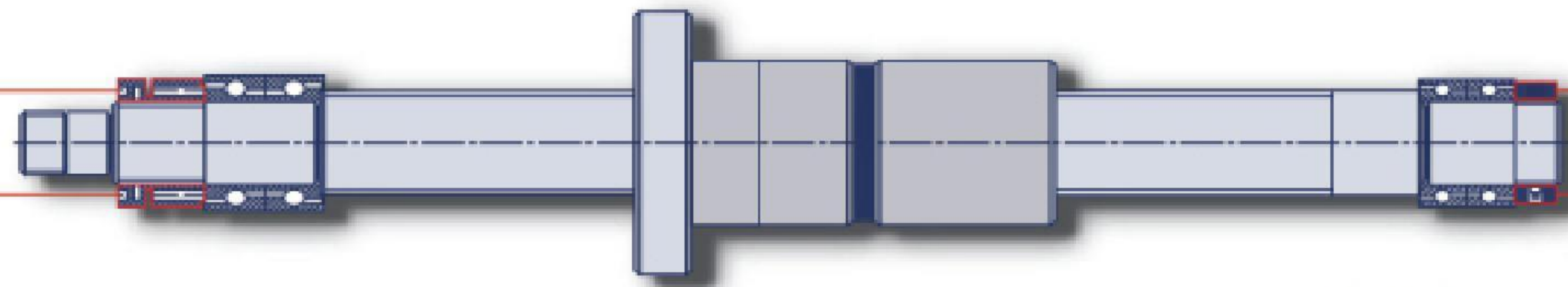
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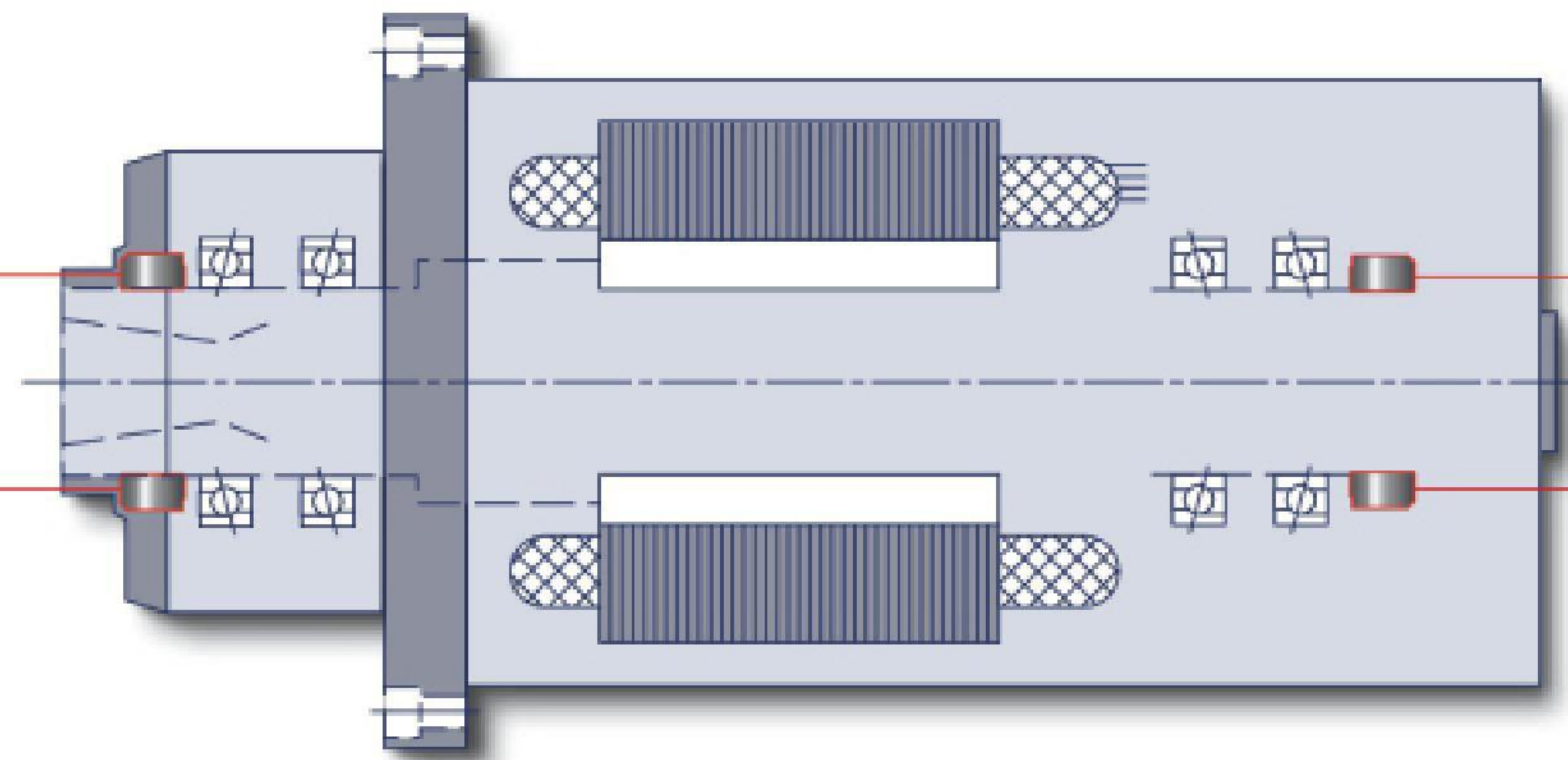
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SGL Series

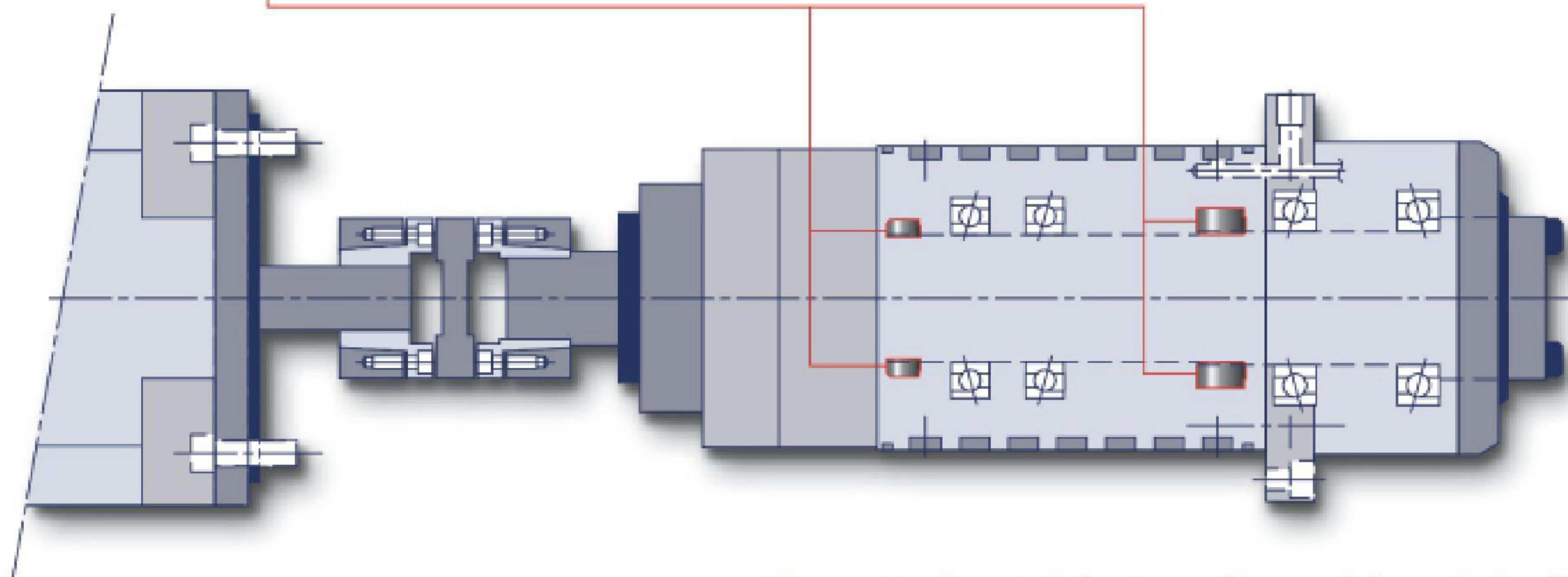
Precision Locknuts



Ball Screw



Built-in High Speed Precision Spindle



Direct Drive High Speed Precision Spindle



Video



← SGL

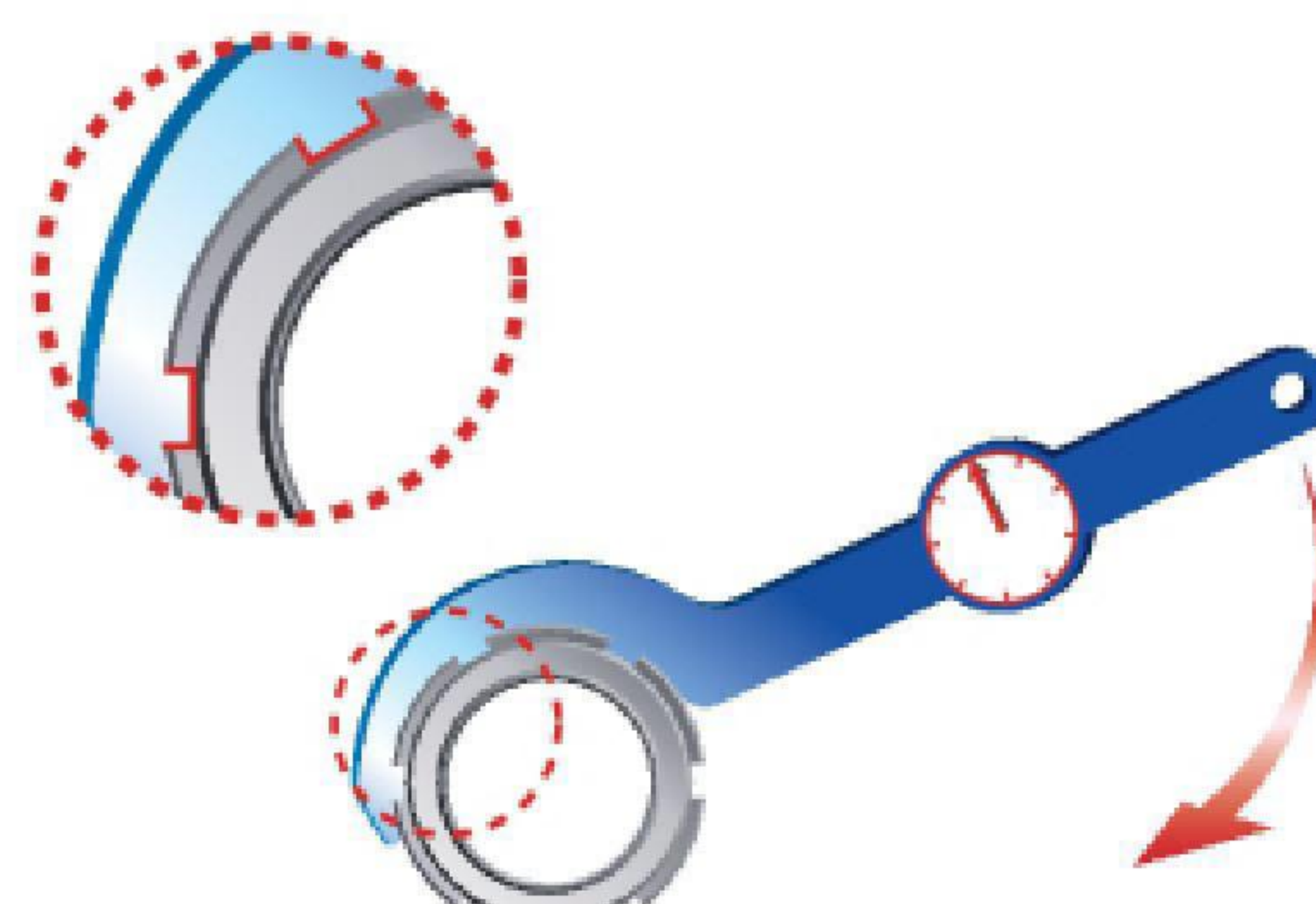
Notes on Installation



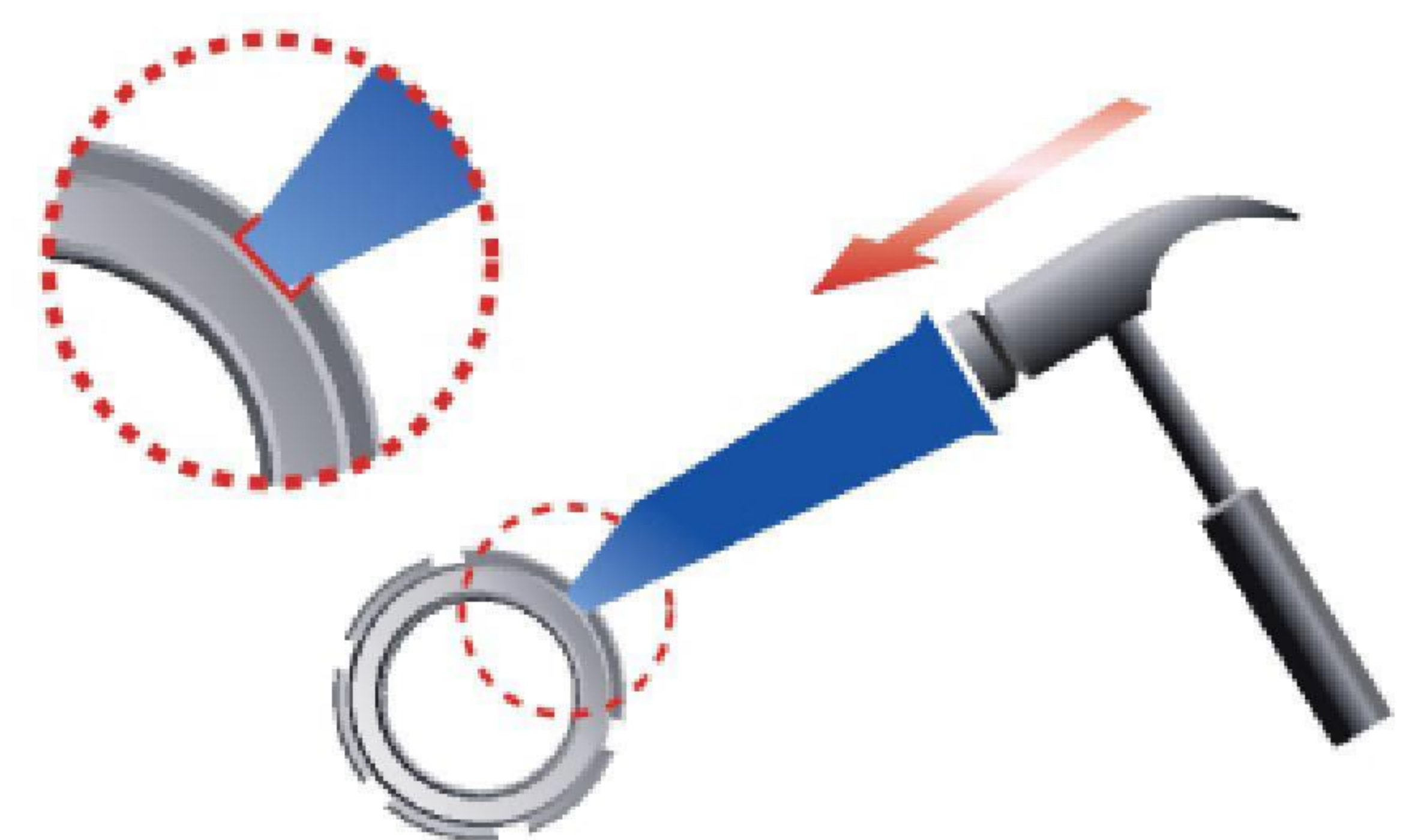
✓ Clean the locknut with naphtha or appropriate industrial degreaser before installation.



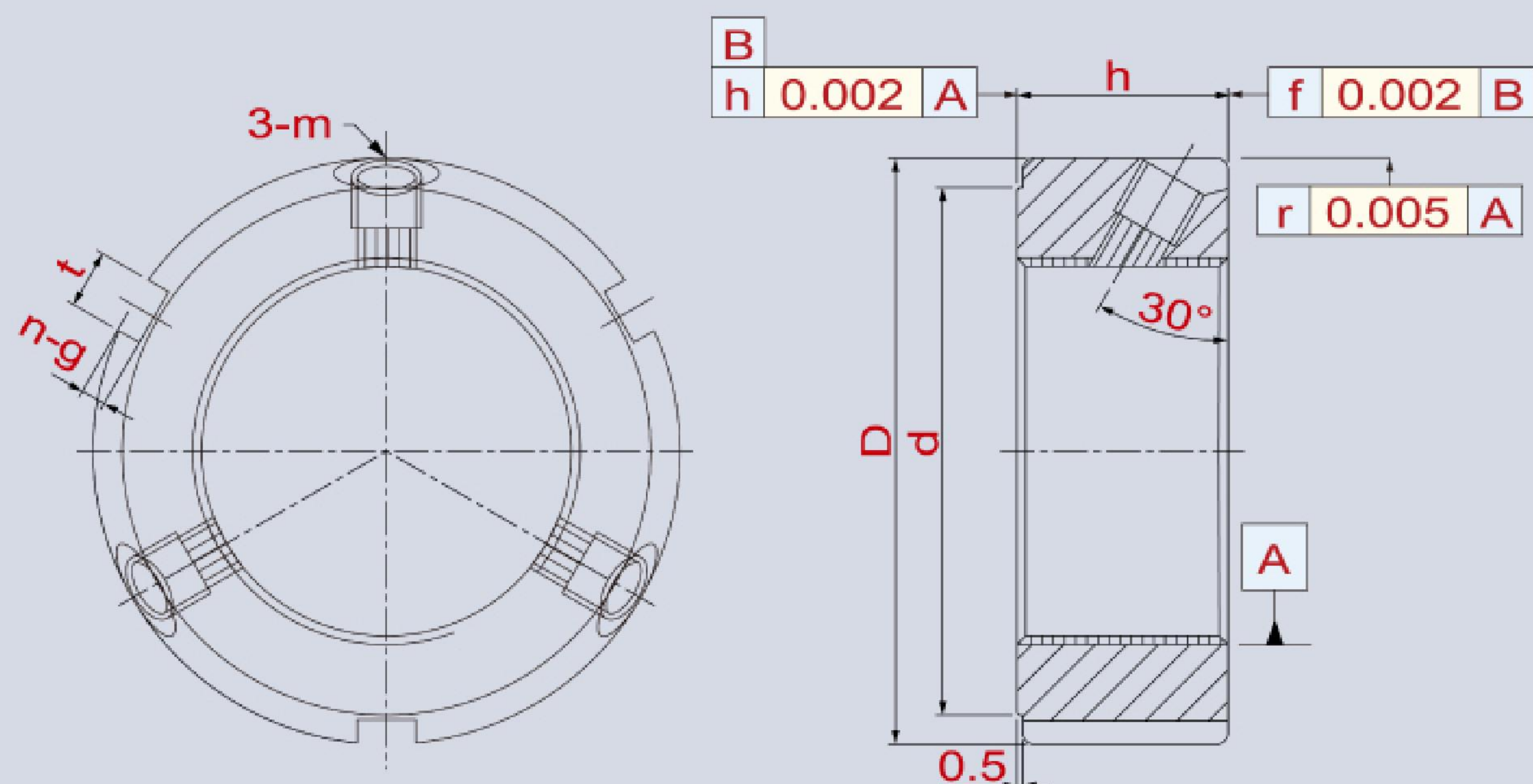
✓ Apply a small drop of lubricant to inner threads.



✓ Use appropriate tools or spanner to set the correct preload.



✗ Avoid applying direct pressure to any single point.



SGL-F

Thread	D	h	d	n - t x g	m	MAX. Nm
SGL-F M14 x 1.5	30	14	25	3-4 x 2	M5	4.5
SGL-F M15 x 1	30	14	25	3-4 x 2	M5	4.5
SGL-F M16 x 1.5	30	14	25	3-4 x 2	M5	4.5
SGL-F M17 x 1	32	16	27	3-4 x 2	M5	4.5
SGL-F M18 x 1.5	32	16	27	3-4 x 2	M5	4.5
SGL-F M20 x 1	38	16	33	3-4 x 2	M6	4.5
SGL-F M20 x 1.5	38	16	33	3-4 x 2	M6	8.0
SGL-F M22 x 1.5	38	16	33	3-4 x 2	M6	8.0
SGL-F M24 x 1.5	38	18	33	3-5 x 2	M6	8.0
SGL-F M25 x 1.5	38	18	33	3-5 x 2	M6	8.0
SGL-F M27 x 1.5	40	18	35	3-5 x 2	M6	8.0
SGL-F M30 x 1.5	45	18	40	3-5 x 2	M6	8.0
SGL-F M33 x 1.5	50	18	45	3-5 x 2	M6	8.0
SGL-F M35 x 1.5	52	18	47	3-5 x 2	M8	18.0
SGL-F M36 x 1.5	52	18	47	3-5 x 2	M8	18.0
SGL-F M39 x 1.5	58	20	52	3-6 x 2.5	M8	18.0
SGL-F M40 x 1.5	58	20	52	3-6 x 2.5	M8	18.0
SGL-F M42 x 1.5	62	20	56	3-6 x 2.5	M8	18.0
SGL-F M45 x 1.5	65	20	59	3-6 x 2.5	M8	18.0
SGL-F M48 x 1.5	70	20	64	3-6 x 2.5	M8	18.0
SGL-F M50 x 1.5	70	20	64	3-6 x 2.5	M8	18.0
SGL-F M52 x 1.5	73	22	66	3-7 x 3	M8	18.0
SGL-F M55 x 2	75	22	68	3-7 x 3	M8	18.0
SGL-F M56 x 2	75	22	68	3-7 x 3	M8	18.0
SGL-F M60 x 2	80	22	73	3-7 x 3	M8	18.0
SGL-F M64 x 2	85	22	78	3-7 x 3	M8	18.0
SGL-F M65 x 2	85	22	78	3-7 x 3	M8	18.0

SGL-F Flank Locking

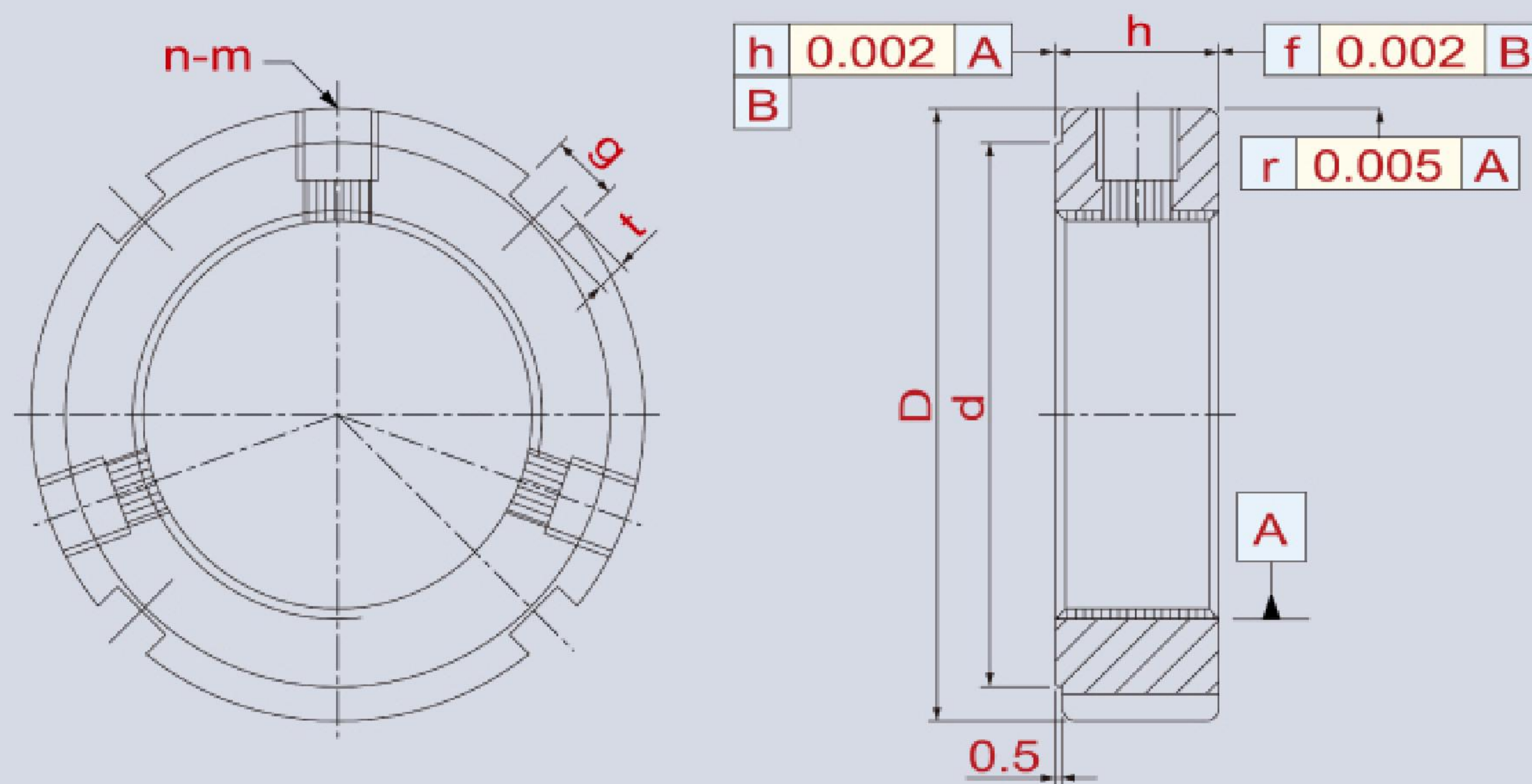
The SGL-F Series locknuts employ 30°, 3 point locking. The outstanding design of the brass threads are perfectly matched and prevent any loosening whatsoever. 30° design locking screws also reduce torque on this product.

Clamping rim, trailing rim, and outer skirt are precision ground to conform to high precision requirements during high rpms.

- Material Composition: SCM440(42CrMo4)
- Thread Precision: ISO 4H
- Run Out: 0.002mm
- Hardness: HRC 28° ~ 32°
- Parallelism: 0.002mm
- Concentricity: 0.005mm



Thread	D	h	d	n - t x g	m	MAX. Nm
SGL-F M68 x 2	92	24	84	3-8 x 3.5	M8	18.0
SGL-F M70 x 2	92	24	84	3-8 x 3.5	M8	18.0
SGL-F M72 x 2	94	24	86	3-8 x 3.5	M8	18.0
SGL-F M75 x 2	98	24	90	3-8 x 3.5	M8	18.0
SGL-F M76 x 2	98	24	90	3-8 x 3.5	M8	18.0
SGL-F M80 x 2	105	24	96	3-8 x 3.5	M8	18.0
SGL-F M85 x 2	110	24	102	6-8 x 3.5	M8	18.0
SGL-F M90 x 2	120	26	108	6-10 x 4	M8	18.0
SGL-F M95 x 2	125	26	113	6-10 x 4	M8	18.0
SGL-F M100 x 2	130	26	118	6-10 x 4	M8	18.0
SGL-F M105 x 2	140	28	125	6-10 x 4	M10	35.0
SGL-F M110 x 2	145	28	132	6-10 x 4	M10	35.0
SGL-F M115 x 2	150	28	137	6-10 x 4	M10	35.0
SGL-F M120 x 2	155	30	142	6-12 x 5	M10	35.0
SGL-F M125 x 2	160	30	147	6-12 x 5	M10	35.0
SGL-F M130 x 2	165	30	152	6-12 x 5	M10	35.0
SGL-F M135 x 2	175	32	160	6-12 x 5	M10	35.0
SGL-F M140 x 2	180	32	165	6-12 x 5	M10	35.0
SGL-F M145 x 2	190	32	175	6-12 x 5	M10	35.0
SGL-F M150 x 2	195	32	180	6-12 x 5	M10	35.0
SGL-F M155 x 3	200	34	180	6-14 x 6	M10	35.0
SGL-F M160 x 3	210	34	190	6-14 x 6	M10	35.0
SGL-F M165 x 3	210	34	190	6-14 x 6	M10	35.0
SGL-F M170 x 3	220	34	200	6-14 x 6	M10	35.0
SGL-F M180 x 3	230	36	205	6-16 x 7	M12	60.0
SGL-F M190 x 3	240	36	215	6-16 x 7	M12	60.0
SGL-F M200 x 3	250	38	225	6-16 x 7	M12	60.0



SGL-R

Thread	D	h	g	t	d	n - m	MAX. Nm
SGL-R M8 x 0.75	16	8	3	2	11	2 - M4	2.2
SGL-R M10 x 0.75	18	8	3	2	13	2 - M4	2.2
SGL-R M10 x 1	18	8	3	2	13	2 - M4	2.2
SGL-R M12 x 1	20	8	3	2	15	2 - M4	2.2
SGL-R M12 x 1.25	20	8	3	2	15	2 - M4	2.2
SGL-R M14 x 1.5	25	8	3	2	20	2 - M4	2.2
SGL-R M15 x 1	25	8	3	2	20	2 - M4	2.2
SGL-R M16 x 1.5	28	10	4	2	23	2 - M5	4.5
SGL-R M17 x 1	28	10	4	2	23	2 - M5	4.5
SGL-R M18 x 1.5	30	10	4	2	25	2 - M5	4.5
SGL-R M20 x 1	32	10	4	2	27	3 - M5	4.5
SGL-R M20 x 1.5	32	10	4	2	27	3 - M5	4.5
SGL-R M22 x 1.5	35	10	4	2	30	3 - M5	4.5
SGL-R M24 x 1.5	38	12	5	2	33	3 - M6	8.0
SGL-R M25 x 1.5	38	12	5	2	33	3 - M6	8.0
SGL-R M27 x 1.5	42	12	5	2	37	3 - M6	8.0
SGL-R M30 x 1.5	45	12	5	2	40	3 - M6	8.0
SGL-R M33 x 1.5	52	12	5	2	45	3 - M6	8.0
SGL-R M35 x 1.5	52	12	5	2	47	3 - M6	8.0
SGL-R M36 x 1.5	55	14	6	2.5	49	3 - M6	8.0
SGL-R M39 x 1.5	58	14	6	2.5	52	3 - M6	8.0
SGL-R M40 x 1.5	58	14	6	2.5	52	3 - M6	8.0
SGL-R M42 x 1.5	62	14	6	2.5	56	3 - M6	8.0
SGL-R M45 x 1.5	65	14	6	2.5	59	3 - M6	8.0
SGL-R M48 x 1.5	68	14	6	2.5	62	3 - M6	8.0
SGL-R M50 x 1.5	70	14	6	2.5	64	3 - M8	18.0
SGL-R M52 x 1.5	73	16	7	3	66	3 - M8	18.0
SGL-R M55 x 2	75	16	7	3	68	3 - M8	18.0
SGL-R M56 x 2	77	16	7	3	70	3 - M8	18.0
SGL-R M60 x 2	80	16	7	3	73	3 - M8	18.0

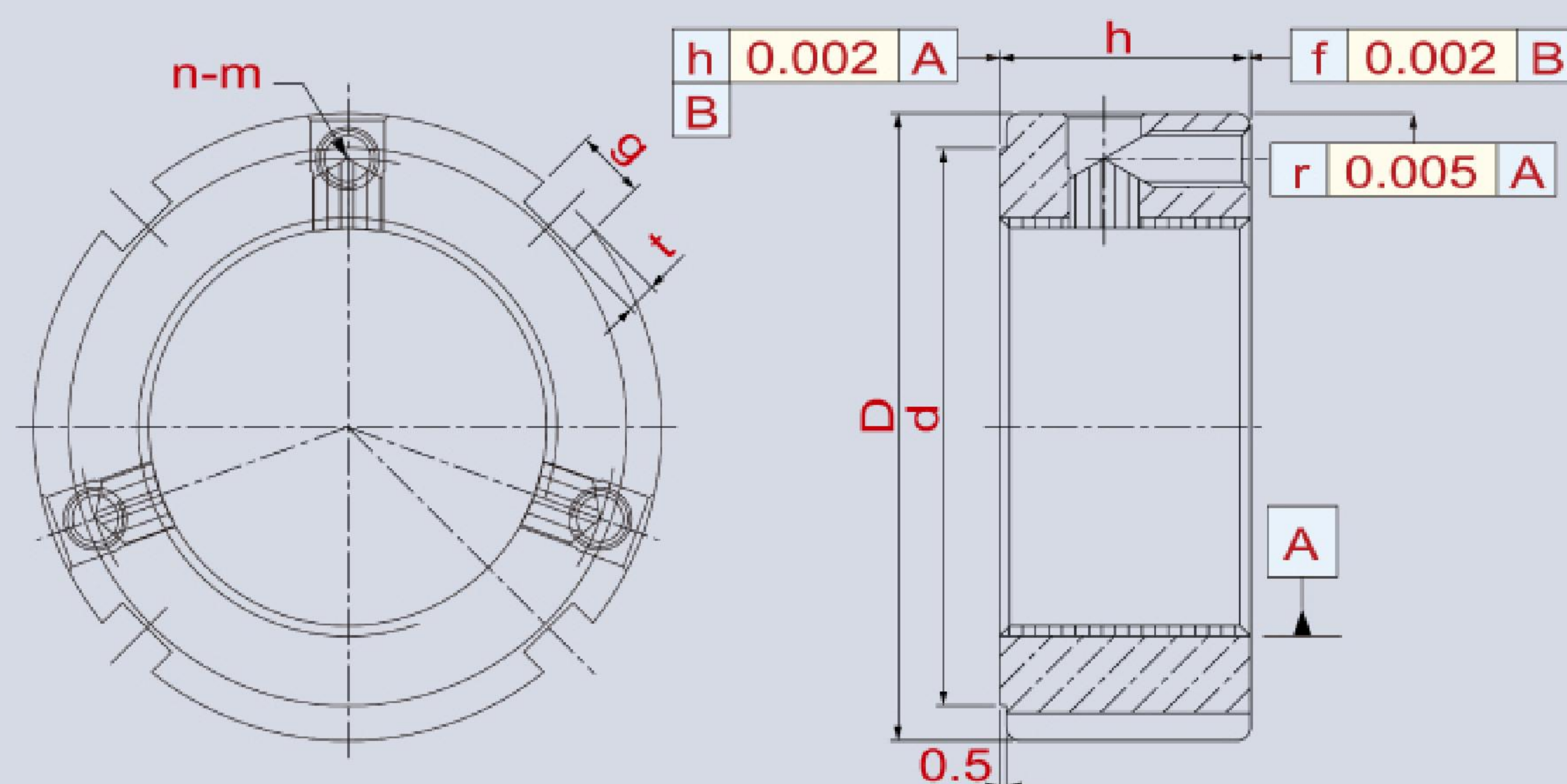
SGL-R Radial Locking

The SGL-R Series locknuts employ 3-way radial locking. Thickness is comparatively thinner than other products. This series is especially applicable for use when locknut space is limited. Aside from where other products are not usable due to space restrictions, locknut threads, clamping rim, trailing rim, and outer skirt are precision ground to conform to high precision requirements during high rpms.

- Material Composition: SCM440(42CrMo4)
- Thread Precision: ISO 4H
- Run Out: 0.002mm
- Hardness: HRC 28° ~ 32°
- Parallelism: 0.002mm
- Concentricity: 0.005mm



Thread	D	h	g	t	d	n - m	MAX. Nm
SGL-R M64 x 2	85	16	7	3	78	3 - M8	18.0
SGL-R M65 x 2	85	16	7	3	78	3 - M8	18.0
SGL-R M68 x 2	92	18	8	3.5	84	3 - M8	18.0
SGL-R M70 x 2	92	18	8	3.5	84	3 - M8	18.0
SGL-R M72 x 2	95	18	8	3.5	86	3 - M8	18.0
SGL-R M75 x 2	98	18	8	3.5	90	3 - M8	18.0
SGL-R M76 x 2	100	18	8	3.5	92	3 - M8	18.0
SGL-R M80 x 2	105	18	8	3.5	96	3 - M8	18.0
SGL-R M85 x 2	110	18	8	3.5	102	3 - M8	18.0
SGL-R M90 x 2	120	20	10	4	108	3 - M8	18.0
SGL-R M95 x 2	125	20	10	4	113	3 - M8	18.0
SGL-R M100 x 2	130	20	10	4	118	3 - M8	18.0
SGL-R M105 x 2	140	22	12	5	125	3 - M8	18.0
SGL-R M110 x 2	145	22	12	5	132	3 - M8	18.0
SGL-R M115 x 2	150	22	12	5	137	3 - M8	18.0
SGL-R M120 x 2	155	24	12	5	142	3 - M8	18.0
SGL-R M125 x 2	160	24	12	5	147	3 - M8	18.0
SGL-R M130 x 2	165	24	12	5	152	3 - M8	18.0
SGL-R M135 x 2	175	26	14	6	160	3 - M10	35.0
SGL-R M140 x 2	180	26	14	6	165	3 - M10	35.0
SGL-R M145 x 2	190	26	14	6	175	3 - M10	35.0
SGL-R M150 x 2	195	26	14	6	180	3 - M10	35.0
SGL-R M155 x 3	200	28	16	7	180	3 - M10	35.0
SGL-R M160 x 3	210	28	16	7	190	3 - M10	35.0
SGL-R M165 x 3	210	28	16	7	190	3 - M10	35.0
SGL-R M170 x 3	220	28	16	7	200	3 - M10	35.0
SGL-R M180 x 3	230	30	18	8	205	3 - M12	60.0
SGL-R M190 x 3	240	30	18	8	215	3 - M12	60.0
SGL-R M200 x 3	250	32	18	8	225	3 - M12	60.0



SGL-A

Thread	D	h	g	t	d	n - m	MAX. Nm
SGL-A M14 x 1.5	30	14	4	2	25	2 - M4	2.2
SGL-A M15 x 1	30	14	4	2	25	2 - M4	2.2
SGL-A M16 x 1.5	30	14	4	2	25	2 - M4	2.2
SGL-A M17 x 1	32	16	4	2	27	2 - M4	2.2
SGL-A M18 x 1.5	32	16	4	2	27	3 - M4	2.2
SGL-A M20 x 1	38	16	4	2	33	3 - M4	2.2
SGL-A M20 x 1.5	38	16	4	2	33	3 - M4	2.2
SGL-A M22 x 1.5	38	16	4	2	33	3 - M4	2.2
SGL-A M24 x 1.5	38	18	5	2	33	3 - M4	2.2
SGL-A M25 x 1.5	38	18	5	2	33	3 - M4	2.2
SGL-A M27 x 1.5	40	18	5	2	35	3 - M4	2.2
SGL-A M30 x 1.5	45	18	5	2	40	3 - M4	2.2
SGL-A M33 x 1.5	50	18	5	2	45	3 - M4	2.2
SGL-A M35 x 1.5	52	18	5	2	47	3 - M6	8.0
SGL-A M36 x 1.5	52	18	5	2	47	3 - M6	8.0
SGL-A M39 x 1.5	58	20	6	2.5	52	3 - M6	8.0
SGL-A M40 x 1.5	58	20	6	2.5	52	3 - M6	8.0
SGL-A M42 x 1.5	62	20	6	2.5	56	3 - M6	8.0
SGL-A M45 x 1.5	65	20	6	2.5	59	3 - M6	8.0
SGL-A M48 x 1.5	70	20	6	2.5	64	3 - M6	8.0
SGL-A M50 x 1.5	70	20	6	2.5	64	3 - M6	8.0
SGL-A M52 x 1.5	73	22	7	3	66	3 - M6	8.0
SGL-A M55 x 2	75	22	7	3	68	3 - M6	8.0
SGL-A M56 x 2	75	22	7	3	68	3 - M6	8.0
SGL-A M60 x 2	80	22	7	3	73	3 - M6	8.0
SGL-A M64 x 2	85	22	7	3	78	3 - M6	8.0
SGL-A M65 x 2	85	22	7	3	78	3 - M6	8.0

SGL-A Axial Locking

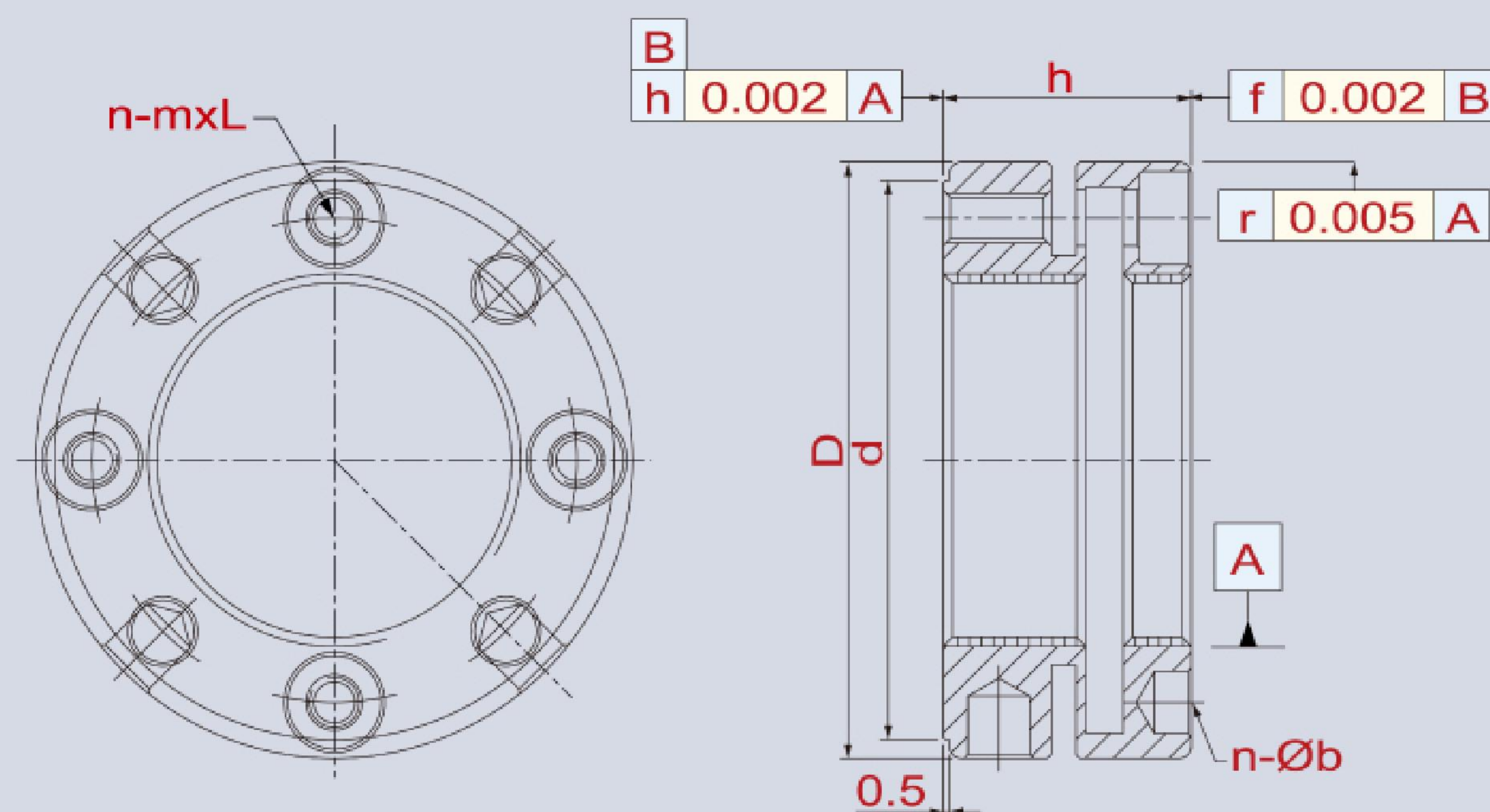
This locknut employs 3 way axial locking with the same thickness as the SGL-F series. 3 way axial locking is especially applicable to assembly work within special space constraints.

Locknut threads, clamping rim, trailing rim, and outer skirt are precision ground to conform to high precision requirements during high rpms.

- Material Composition: SCM440(42CrMo4)
- Thread Precision: ISO 4H
- Run Out: 0.002mm
- Hardness: HRC 28° ~ 32°
- Parallelism: 0.002mm
- Concentricity: 0.005mm



Thread	D	h	g	t	d	n - m	MAX. Nm
SGL-A M68 x 2	92	24	8	3.5	84	3 - M8	18.0
SGL-A M70 x 2	92	24	8	3.5	84	3 - M8	18.0
SGL-A M72 x 2	94	24	8	3.5	86	3 - M8	18.0
SGL-A M75 x 2	98	24	8	3.5	90	3 - M8	18.0
SGL-A M76 x 2	98	24	8	3.5	90	3 - M8	18.0
SGL-A M80 x 2	105	24	8	3.5	96	3 - M8	18.0
SGL-A M85 x 2	110	24	8	3.5	102	3 - M8	18.0
SGL-A M90 x 2	120	26	10	4	108	3 - M8	18.0
SGL-A M95 x 2	125	26	10	4	113	3 - M8	18.0
SGL-A M100 x 2	130	26	10	4	118	3 - M8	18.0
SGL-A M105 x 2	140	28	12	5	125	3 - M8	18.0
SGL-A M110 x 2	145	28	12	5	132	3 - M8	18.0
SGL-A M115 x 2	150	28	12	5	137	3 - M8	18.0
SGL-A M120 x 2	155	30	12	5	142	3 - M8	18.0
SGL-A M125 x 2	160	30	12	5	147	3 - M8	18.0
SGL-A M130 x 2	165	30	12	5	152	3 - M8	18.0
SGL-A M135 x 2	175	32	14	6	160	3 - M10	35.0
SGL-A M140 x 2	180	32	14	6	165	3 - M10	35.0
SGL-A M145 x 2	190	32	14	6	175	3 - M10	35.0
SGL-A M150 x 2	195	32	14	6	180	3 - M10	35.0
SGL-A M155 x 3	200	34	16	7	180	3 - M10	35.0
SGL-A M160 x 3	210	34	16	7	190	3 - M10	35.0
SGL-A M165 x 3	210	34	16	7	190	3 - M10	35.0
SGL-A M170 x 3	220	34	16	7	200	3 - M10	35.0
SGL-A M180 x 3	230	36	18	8	205	3 - M12	60.0
SGL-A M190 x 3	240	36	18	8	215	3 - M12	60.0
SGL-A M200 x 3	250	38	18	8	225	3 - M12	60.0



SGL-K

Thread	D	h	d	n - m x L	n	b	c	MAX. Nm
SGL-K M16 x 1.5	34	18	29	4 - M4 x 12	4	4	24	3.5
SGL-K M17 x 1	37	18	32	4 - M4 x 12	4	4	26	3.5
SGL-K M18 x 1.5	38	18	33	4 - M4 x 12	4	4	28	3.5
SGL-K M20 x 1	40	18	35	4 - M4 x 12	4	4	30	3.5
SGL-K M20 x 1.5	40	18	35	4 - M4 x 12	4	4	30	3.5
SGL-K M22 x 1.5	42	18	37	4 - M4 x 12	4	4	32	3.5
SGL-K M24 x 1.5	44	18	39	4 - M4 x 12	4	4	34	3.5
SGL-K M25 x 1.5	45	20	40	4 - M4 x 14	4	5	35	3.5
SGL-K M26 x 1.5	45	20	40	4 - M4 x 14	4	5	35	3.5
SGL-K M28 x 1.5	46	20	43	4 - M4 x 14	4	5	37	3.5
SGL-K M30 x 1.5	48	20	45	4 - M4 x 14	4	5	39	3.5
SGL-K M32 x 1.5	50	22	47	4 - M4 x 16	4	5	41	3.5
SGL-K M35 x 1.5	53	22	50	4 - M4 x 16	4	5	44	3.5
SGL-K M38 x 1.5	56	22	53	4 - M4 x 16	4	5	47	3.5
SGL-K M40 x 1.5	58	22	55	4 - M4 x 16	4	5	49	3.5
SGL-K M42 x 1.5	60	22	55	4 - M4 x 16	4	5	51	3.5
SGL-K M45 x 1.5	68	22	63	6 - M4 x 18	6	6	57	3.5
SGL-K M48 x 1.5	69	25	65	6 - M4 x 18	6	6	58	3.5
SGL-K M50 x 1.5	70	25	66	6 - M4 x 18	6	6	60	3.5
SGL-K M52 x 1.5	72	25	68	6 - M4 x 18	6	6	62	3.5
SGL-K M55 x 1.5	75	25	71	6 - M4 x 18	6	6	65	3.5
SGL-K M55 x 2	75	25	71	6 - M4 x 18	6	6	65	3.5
SGL-K M58 x 1.5	82	26	77	6 - M5 x 20	6	6	70	4.5
SGL-K M60 x 1.5	84	26	79	6 - M5 x 20	6	6	72	4.5
SGL-K M60 x 2	84	26	79	6 - M5 x 20	6	6	72	4.5
SGL-K M62 x 1.5	86	28	82	6 - M5 x 20	6	6	75	4.5

SGL-K Clasp Locking

The SGL-K Series locknuts utilize the elasticity of the steel body itself, axial locking, and forced locking. With locking capabilities more than three times higher compared to traditional locknuts, this series is aimed at harsh working conditions where locknuts are easily loosened.

Locknut threads, clamping rim, trailing rim, and outer skirt are precision ground to conform to high precision requirements during high rpms.

- Material Composition: SCM440(42CrMo4)
- Thread Precision: ISO 4H
- Run Out: 0.002mm
- Hardness: HRC 28° ~ 32°
- Parallelism: 0.002mm
- Concentricity: 0.005mm



Thread	D	h	d	n - m x L	n	b	c	MAX. Nm
SGL-K M65 x 1.5	88	28	84	6 - M5 x 20	6	6	77	4.5
SGL-K M65 x 2	88	28	84	6 - M5 x 20	6	6	77	4.5
SGL-K M68 x 1.5	93	28	87	6 - M5 x 20	6	7	80	4.5
SGL-K M70 x 1.5	95	28	89	6 - M5 x 20	6	7	82	4.5
SGL-K M70 x 2	95	28	89	6 - M5 x 20	6	7	82	4.5
SGL-K M72 x 1.5	97	28	91	6 - M5 x 20	6	7	84	4.5
SGL-K M75 x 1.5	100	28	94	6 - M5 x 20	6	7	87	4.5
SGL-K M75 x 2	100	28	94	6 - M5 x 20	6	7	87	4.5
SGL-K M80 x 2	110	32	103	6 - M6 x 22	6	8	95	8
SGL-K M85 x 2	115	32	108	6 - M6 x 22	6	8	100	8
SGL-K M90 x 2	120	32	113	6 - M6 x 22	6	8	105	8
SGL-K M95 x 2	125	32	118	6 - M6 x 22	6	8	110	8
SGL-K M100 x 2	130	32	123	6 - M6 x 22	6	8	115	8
SGL-K M105 x 2	135	32	128	6 - M6 x 22	6	8	120	8
SGL-K M110 x 2	140	32	133	6 - M6 x 22	6	8	125	8
SGL-K M115 x 2	145	34	137	6 - M6 x 22	6	8	130	8
SGL-K M120 x 2	155	36	146	6 - M6 x 25	6	8	136	8
SGL-K M125 x 2	160	36	150	6 - M6 x 25	6	8	140	8
SGL-K M130 x 2	165	36	155	6 - M6 x 25	6	8	148	8
SGL-K M140 x 2	180	38	168	8 - M6 x 25	8	10	160	8
SGL-K M150 x 2	190	38	178	8 - M6 x 25	8	10	170	8
SGL-K M160 x 3	205	40	190	8 - M8 x 30	8	10	178	18
SGL-K M170 x 3	215	40	200	8 - M8 x 30	8	10	193	18
SGL-K M180 x 3	230	40	213	8 - M8 x 30	8	10	205	18
SGL-K M190 x 3	240	40	223	8 - M8 x 30	8	10	215	18
SGL-K M200 x 3	245	40	230	8 - M8 x 30	8	10	223	18



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