Data sheet
FlatLock® SFL 20x1

General

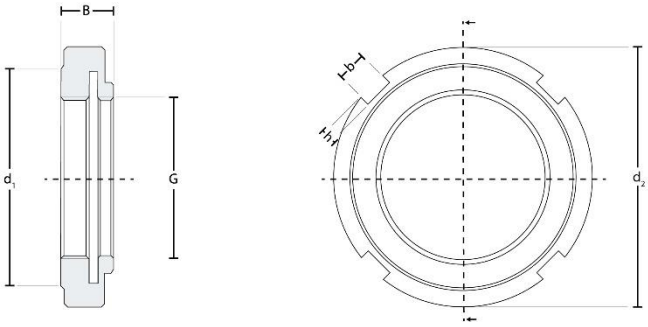
Order number: K-10702001

This data sheet summarizes the main data of your Spieth locknut SFL 20x1 of the FlatLock® series and provides valuable information on design parameters as well as assembly values and tools. Further information on Spieth locknuts can be found in the operating instructions, available at www.spieth-me.de.

Design data

FlatLock®

Thread ISO-5H	G	M20x1	[-] x [mm]
DIN981		KM4	
Height	B	7.00	[mm]
Outer-Ø	d_2	32	[mm]
Contact surface-Ø	d_1	26	[mm]
Groove width	b	4	[mm]
Groove height	h	2	[mm]
Breaking load	F_m	36	[kN]
Weight	m	0.020	[kg]
Moment of inertia	J	0.034	[kg · cm²]



FlatLock® are made of steel with high material strength (approx. 375 N/mm²). The surface is fine-turned and bare. The contact surface is produced together with the thread in one process to ensure maximum form and location quality.

Application

Required pretensioning force	F_V		[kN]
Constant	A	1.281	[-]
Friction coefficient	μ		[-]
Effective friction radius	r_A		[mm]
Pretensioning torque: $T_{pre} = \frac{F_V \cdot (A + \mu_A \cdot r_A)}{1000}$	T_{pre}		[Nm]

Connecting Parts

Thread	G	M20x1	[-] x [mm]
Tolerance		6g	

All data on pre-tensioning and locking processes were determined with a spindle made of solid material. When using a hollow spindle, the preload and locking forces achieved may differ.

Assembly instructions

Assembly

1. Clean the FlatLock® and connecting parts carefully and lightly lubricate with machine oil without friction-reducing additives. **Important:** Absolutely necessary to avoid damaging the spindle thread!
2. Screw the FlatLock® onto the spindle thread by hand until the locking part engages.
3. Apply the screw-on torque T_A using a tool. **Caution:** Due to the functional principle, an increased screw-on torque is generated.
4. In addition to the screw-on torque, tighten the FlatLock® with the desired preload torque T_{pre} against the flat surface:
   $T_p = T_{pre} + T_A =$ _____ Nm
5. Optional: To reduce settling effects, initially tighten FlatLock® with increased preload torque against the flat surface and then loosen again.
   $T_{p,e}$ = (1,2 to 1,5) x T_p = _____ Nm

Disassembly

Disassembly is carried out in reverse order to assembly.

Tools

- Wrench according to DIN 1810 – A30-32
- Slotted nut wrench (Pneumatic or electric torque wrenches can be used.)

Please note

Spieth locknuts from the FlatLock® series can only be reused to a limited extent.

Previous document: n.v.
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Data sheet
FlatLock® SFL 25x1.5

SPIETH
Aus Prinzip präziser

General

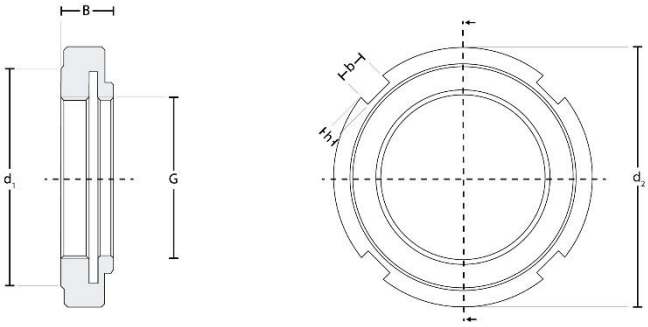
Order number: K-10702501

This data sheet summarizes the main data of your Spieth locknut SFL 25x1.5 of the FlatLock® series and provides valuable information on design parameters as well as assembly values and tools. Further information on Spieth locknuts can be found in the operating instructions, available at www.spieth-me.de.

Design data

FlatLock®

Thread ISO-5H	G	M25x1.5	[-] x [mm]
DIN981		KM5	
Height	B	8.25	[mm]
Outer-Ø	d_2	38	[mm]
Contact surface-Ø	d_1	32	[mm]
Groove width	b	5	[mm]
Groove height	h	2	[mm]
Breaking load	F_m	66	[kN]
Weight	m	0.032	[kg]
Moment of inertia	J	0.079	[kg · cm²]



FlatLock® are made of steel with high material strength (approx. 375 N/mm²). The surface is fine-turned and bare. The contact surface is produced together with the thread in one process to ensure maximum form and location quality.

Application

Required pretensioning force	F_V		[kN]
Constant	A	1.632	[-]
Friction coefficient	μ		[-]
Effective friction radius	r_A		[mm]
Pretensioning torque: $T_{pre} = \frac{F_V \cdot (A + \mu_A \cdot r_A)}{1000}$	T_{pre}		[Nm]

Connecting Parts

Thread	G	M25x1.5	[-] x [mm]
Tolerance		6g	

All data on pre-tensioning and locking processes were determined with a spindle made of solid material. When using a hollow spindle, the preload and locking forces achieved may differ.

Assembly instructions

Assembly

1. Clean the FlatLock® and connecting parts carefully and lightly lubricate with machine oil without friction-reducing additives. **Important:** Absolutely necessary to avoid damaging the spindle thread!
2. Screw the FlatLock® onto the spindle thread by hand until the locking part engages.
3. Apply the screw-on torque T_A using a tool. **Caution:** Due to the functional principle, an increased screw-on torque is generated.
4. In addition to the screw-on torque, tighten the FlatLock® with the desired preload torque T_{pre} against the flat surface:
   $T_p = T_{pre} + T_A =$ _____ Nm
5. Optional: To reduce settling effects, initially tighten FlatLock® with increased preload torque against the flat surface and then loosen again.
   $T_{p,e}$ = (1,2 to 1,5) x T_p = _____ Nm

Disassembly

Disassembly is carried out in reverse order to assembly.

Tools

- Wrench according to DIN 1810 – A38-45
- Slotted nut wrench (Pneumatic or electric torque wrenches can be used.)

Please note

Spieth locknuts from the FlatLock® series can only be reused to a limited extent.

Data sheet
FlatLock® SFL 30x1.5

SPIETH
Aus Prinzip präziser

General

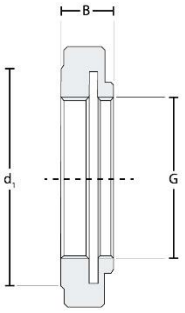
Order number: K-10703001

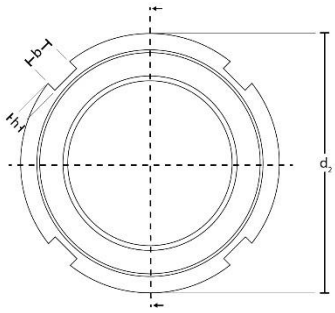
This data sheet summarizes the main data of your Spieth locknut SFL 30x1.5 of the FlatLock® series and provides valuable information on design parameters as well as assembly values and tools. Further information on Spieth locknuts can be found in the operating instructions, available at www.spieth-me.de.

Design data

FlatLock®

Thread ISO-5H	G	M30x1.5	[-] x [mm]
DIN981		KM6	
Height	B	8.25	[mm]
Outer-Ø	d_2	45	[mm]
Contact surface-Ø	d_1	38	[mm]
Groove width	b	5	[mm]
Groove height	h	2	[mm]
Breaking load	F_m	80	[kN]
Weight	m	0.044	[kg]
Moment of inertia	J	0.153	[kg · cm²]





FlatLock® are made of steel with high material strength (approx. 375 N/mm²). The surface is fine-turned and bare. The contact surface is produced together with the thread in one process to ensure maximum form and location quality.

Application

Required pretensioning force	F_V		[kN]
Constant	A	1.922	[-]
Friction coefficient	μ		[-]
Effective friction radius	r_A		[mm]
Pretensioning torque: $T_{pre} = \frac{F_V \cdot (A + \mu_A \cdot r_A)}{1000}$	T_{pre}		[Nm]

Connecting Parts

Thread	G	M30x1.5	[-] x [mm]
Tolerance		6g	

All data on pre-tensioning and locking processes were determined with a spindle made of solid material. When using a hollow spindle, the preload and locking forces achieved may differ.

Assembly instructions

Assembly

1. Clean the FlatLock® and connecting parts carefully and lightly lubricate with machine oil without friction-reducing additives. **Important:** Absolutely necessary to avoid damaging the spindle thread!
2. Screw the FlatLock® onto the spindle thread by hand until the locking part engages.
3. Apply the screw-on torque T_A using a tool. **Caution:** Due to the functional principle, an increased screw-on torque is generated.
4. In addition to the screw-on torque, tighten the FlatLock® with the desired preload torque T_{pre} against the flat surface:
   $T_p = T_{pre} + T_A =$ _____ Nm
5. Optional: To reduce settling effects, initially tighten FlatLock® with increased preload torque against the flat surface and then loosen again.
   $T_{p,e}$ = (1,2 to 1,5) x T_p = _____ Nm

Disassembly

Disassembly is carried out in reverse order to assembly.

Tools

- Wrench according to DIN 1810 – A45-50
- Slotted nut wrench (Pneumatic or electric torque wrenches can be used.)

Please note

Spieth locknuts from the FlatLock® series can only be reused to a limited extent.

Previous document: n.v.
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Data sheet
FlatLock® SFL 35x1.5

SPIETH
Aus Prinzip präziser

General

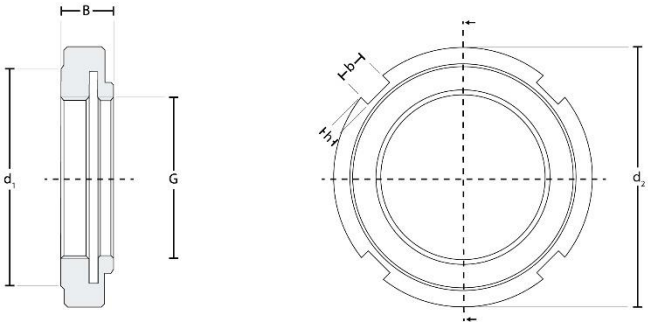
Order number: K-10703501

This data sheet summarizes the main data of your Spieth locknut SFL 35x1.5 of the FlatLock® series and provides valuable information on design parameters as well as assembly values and tools. Further information on Spieth locknuts can be found in the operating instructions, available at www.spieth-me.de.

Design data

FlatLock®

Thread ISO-5H	G	M35x1.5	[-] x [mm]
DIN981		KM7	
Height	B	9.25	[mm]
Outer-Ø	d_2	52	[mm]
Contact surface-Ø	d_1	44	[mm]
Groove width	b	5	[mm]
Groove height	h	2	[mm]
Breaking load	F_m	104	[kN]
Weight	m	0.066	[kg]
Moment of inertia	J	0.312	[kg · cm²]



FlatLock® are made of steel with high material strength (approx. 375 N/mm²). The surface is fine-turned and bare. The contact surface is produced together with the thread in one process to ensure maximum form and location quality.

Application

Required pretensioning force	F_V		[kN]
Constant	A	2.211	[-]
Friction coefficient	μ		[-]
Effective friction radius	r_A		[mm]
Pretensioning torque: $T_{pre} = \frac{F_V \cdot (A + \mu_A \cdot r_A)}{1000}$	T_{pre}		[Nm]

Connecting Parts

Thread	G	M35x1.5	[-] x [mm]
Tolerance		6g	

All data on pre-tensioning and locking processes were determined with a spindle made of solid material. When using a hollow spindle, the preload and locking forces achieved may differ.

Assembly instructions

Assembly

1. Clean the FlatLock® and connecting parts carefully and lightly lubricate with machine oil without friction-reducing additives. **Important:** Absolutely necessary to avoid damaging the spindle thread!
2. Screw the FlatLock® onto the spindle thread by hand until the locking part engages.
3. Apply the screw-on torque T_A using a tool. **Caution:** Due to the functional principle, an increased screw-on torque is generated.
4. In addition to the screw-on torque, tighten the FlatLock® with the desired preload torque T_{pre} against the flat surface:
   $T_p = T_{pre} + T_A =$ _____ Nm
5. Optional: To reduce settling effects, initially tighten FlatLock® with increased preload torque against the flat surface and then loosen again.
   $T_{p,e}$ = (1,2 to 1,5) x T_p = _____ Nm

Disassembly

Disassembly is carried out in reverse order to assembly.

Tools

- Wrench according to DIN 1810 – A52-55
- Slotted nut wrench (Pneumatic or electric torque wrenches can be used.)

Please note

Spieth locknuts from the FlatLock® series can only be reused to a limited extent.

Previous document: n.v.
Successive document: n.v.
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Data sheet
FlatLock® SFL 40x1.5

SPIETH
Aus Prinzip präziser

General

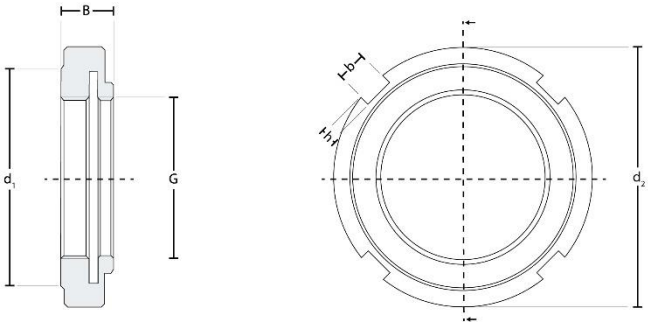
Order number: K-10704001

This data sheet summarizes the main data of your Spieth locknut SFL 40x1.5 of the FlatLock® series and provides valuable information on design parameters as well as assembly values and tools. Further information on Spieth locknuts can be found in the operating instructions, available at www.spieth-me.de.

Design data

FlatLock®

Thread ISO-5H	G	M40x1.5	[-] x [mm]
DIN981		KM8	
Height	B	10.25	[mm]
Outer-Ø	d_2	58	[mm]
Contact surface-Ø	d_1	50	[mm]
Groove width	b	6	[mm]
Groove height	h	2.5	[mm]
Breaking load	F_m	130	[kN]
Weight	m	0.088	[kg]
Moment of inertia	J	0.529	[kg · cm²]



FlatLock® are made of steel with high material strength (approx. 375 N/mm²). The surface is fine-turned and bare. The contact surface is produced together with the thread in one process to ensure maximum form and location quality.

Application

Required pretensioning force	F_V		[kN]
Constant	A	2.500	[-]
Friction coefficient	μ		[-]
Effective friction radius	r_A		[mm]
Pretensioning torque: $T_{pre} = \frac{F_V \cdot (A + \mu_A \cdot r_A)}{1000}$	T_{pre}		[Nm]

Connecting Parts

Thread	G	M40x1.5	[-] x [mm]
Tolerance		6g	

All data on pre-tensioning and locking processes were determined with a spindle made of solid material. When using a hollow spindle, the preload and locking forces achieved may differ.

Assembly instructions

Assembly

1. Clean the FlatLock® and connecting parts carefully and lightly lubricate with machine oil without friction-reducing additives. **Important:** Absolutely necessary to avoid damaging the spindle thread!
2. Screw the FlatLock® onto the spindle thread by hand until the locking part engages.
3. Apply the screw-on torque T_A using a tool. **Caution:** Due to the functional principle, an increased screw-on torque is generated.
4. In addition to the screw-on torque, tighten the FlatLock® with the desired preload torque T_{pre} against the flat surface:
   $T_p = T_{pre} + T_A =$ _____ Nm
5. Optional: To reduce settling effects, initially tighten FlatLock® with increased preload torque against the flat surface and then loosen again.
   $T_{p,e}$ = (1,2 to 1,5) x T_p = _____ Nm

Disassembly

Disassembly is carried out in reverse order to assembly.

Tools

- Wrench according to DIN 1810 – A58-62
- Slotted nut wrench (Pneumatic or electric torque wrenches can be used.)

Please note

Spieth locknuts from the FlatLock® series can only be reused to a limited extent.

Previous document: n.v.
Successive document: n.v.
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