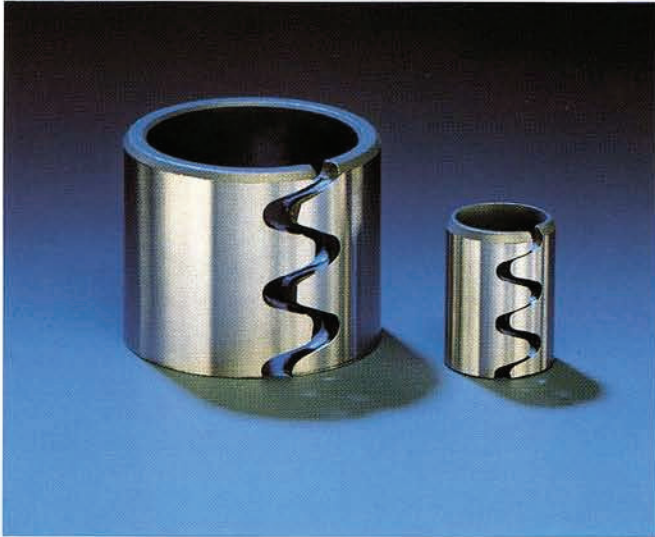


*THYSSING
HARDENED STEEL
JAW BUSHING*

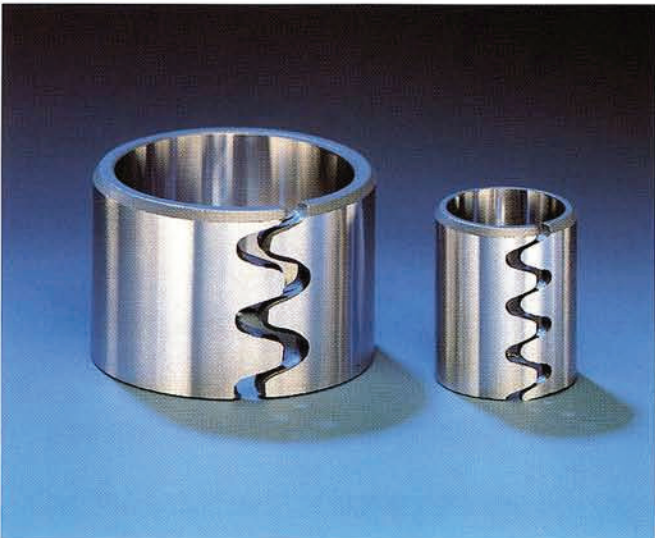




Precision Jaw Bush, Type E, Form 2.



Precision Flanged Jaw Bush, Type E, Form 3.



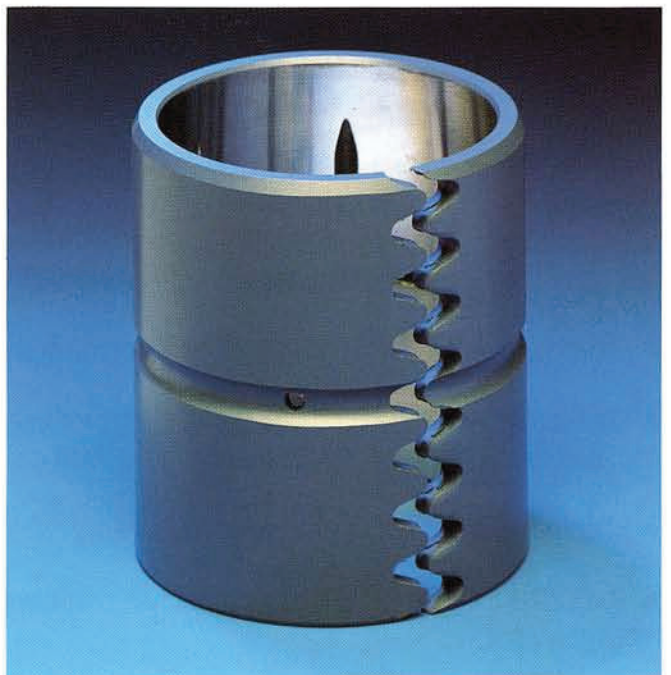
Precision Jaw Bush, Type E, Form 4.



Precision Jaw Bush, Type E, Form 4, with Grease Groove.



Precision Jaw Bush, Type E, Form 3.



Precision Jaw Bush, Type E, Form 3, with Grease Groove and Channel.

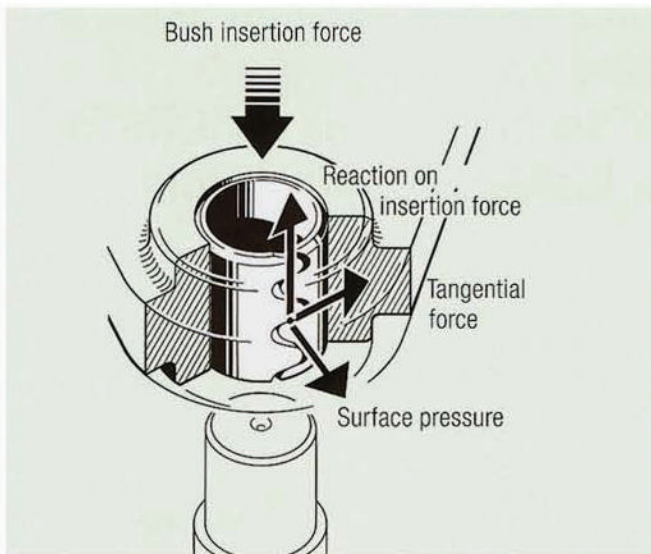


Principle

Our Hardened Steel Jaw Bushes fulfill the manufacturing precision and high quality material requirements of modern engineering. The nearly closed bearing surface and high seating capacity of the assembled bush in its housing is of additional advantage.

In the Jaw Bush principle, tooth and space width are staggered by a certain measure. In the relaxed state, the bush is oversized to its housing bore. However, upon insertion into the housing bore, the compression of the bush within the elastic limit of the hardened material allows the teeth to touch on one side. The perspective view shows that the tooth flank pressure results in a tangential force. In combination with the radial acting spring force, a higher contact pressure results between bush and casing. The higher the ratio between bush wall thickness and diameter, the more active is the surface pressure.

The Jaw Bushes are, by their principle, the options available, and the materials used, products of higher quality and precision. To the design engineer, new and more economical solutions are offered.

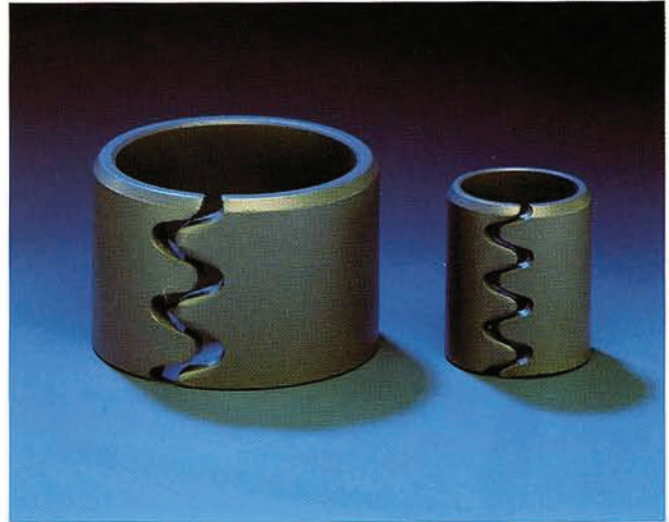


Isometric representation

Application

Jaw Bushes of hardened spring steel have been used in engineering, handling equipment, and vehicles, etc. for decades. Combined with hardened shafts or pivots, Jaw Bushes are suitable for slowing rotating or oscillating action under extreme conditions and high specific bearing pressure. As a rule, Jaw Bushes are used without lubrication. Being the wearing part, the ease of replacement is of advantage.

Often Jaw Bushes replace hardened solid bushes, for economical reasons on the one hand, but also because they are easy to fit and harmful tensions in the components are avoided.



Increasingly, Jaw Bushes with grease grooves are requested, where noise reduction is an important consideration. Lubrication and higher precision considerably improve bearing life.

The Jaw Bush is manufactured oversized, so that the resultant bore is correct when inserted into the component bore on assembly.

The tolerance of the insertion bore is also a deciding factor for the precision of the assembled bush.

Seating capacity Insertion force

Determination of insertion force of the Jaw Bush

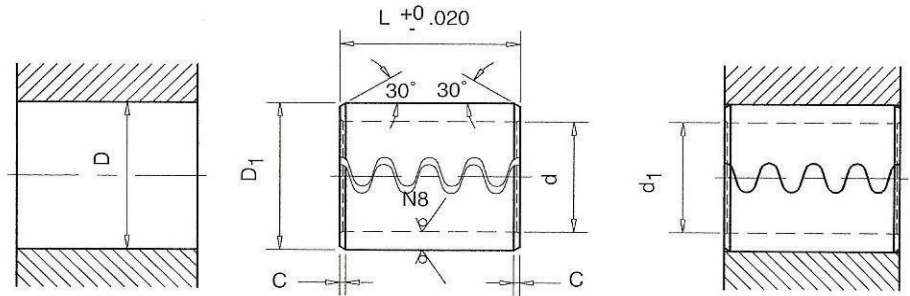
Definition:

The insertion force of the maximum force required to press the Jaw Bush into its housing depends on the oversize, the tolerance of the housing bore, the chamfer, the tooth staggering and lubrication used on assembly, etc.

Precision Jaw Bush, Form 3, Imperial Sizes

Cold rolled, with finished ends
with fine turned ID

Material: AISI 6150



Housing

Bushing Before Insertion

Bushing Installed

Nominal Diameter		Recommended Hole Size		d ₁ After Insertion		L*		C	Min OD Before Insertion
D	d	Max D	Min D	Max d ₁	Min d ₁	Min	Max	Min	D ₁
1	3/4	1.0012	1.000	.7535	.750	1/2	- 3	.080	1.020
1 1/8	7/8	1.1262	1.125	.8785	.875	1/2	- 3	.080	1.145
1 1/8	3/4	1.1262	1.125	.7535	.750	1/2	- 3	.100	1.150
1 1/4	1	1.2516	1.250	1.0035	1.000	1/2	- 3	.080	1.270
1 1/4	7/8	1.2516	1.250	.8785	.875	1/2	- 3	.100	1.275
1 3/8	1 1/8	1.3766	1.375	1.1285	1.125	1/2	- 3	.080	1.395
1 3/8	1	1.3766	1.375	1.0035	1.000	1/2	- 3	.100	1.400
1 1/2	1 1/4	1.5016	1.500	1.2540	1.250	1/2	- 3	.080	1.520
1 1/2	1 1/8	1.5016	1.500	1.1285	1.125	1/2	- 3	.100	1.525
1 1/2	1	1.5016	1.500	1.0035	1.000	1/2	- 3	.100	1.525
1 5/8	1 3/8	1.6266	1.625	1.3790	1.375	1/2	- 3	.080	1.645
1 5/8	1 1/4	1.6266	1.625	1.2540	1.250	1/2	- 3	.100	1.650
1 5/8	1 1/8	1.6266	1.625	1.1285	1.125	1/2	- 3	.100	1.650
1 3/4	1 1/2	1.7516	1.750	1.5040	1.500	1/2	- 3	.080	1.770
1 3/4	1 3/8	1.7516	1.750	1.3790	1.375	1/2	- 3	.100	1.775
1 3/4	1 1/4	1.7516	1.750	1.2540	1.250	1/2	- 3	.100	1.775
1 7/8	1 5/8	1.8766	1.875	1.6290	1.625	1/2	- 3	.080	1.895
1 7/8	1 1/2	1.8766	1.875	1.5040	1.500	3/4	- 3	.100	1.900
1 7/8	1 3/8	1.8766	1.875	1.3790	1.375	3/4	- 3	.100	1.900
2	1 3/4	2.0018	2.000	1.7540	1.750	3/4	- 3	.080	2.020
2	1 5/8	2.0018	2.000	1.6290	1.625	3/4	- 3	.100	2.030
2	1 1/2	2.0018	2.000	1.5040	1.500	3/4	- 3	.100	2.030
2 1/4	2	2.2518	2.250	2.0045	2.000	3/4	- 3	.080	2.270
2 1/4	1 3/4	2.2518	2.250	1.7540	1.750	3/4	- 3	.100	2.280
2 3/8	2	2.3768	2.375	2.0045	2.000	3/4	- 3	.100	2.405
2 3/8	1 7/8	2.3768	2.375	1.8790	1.875	3/4	- 3	.100	2.405
2 1/2	2 1/4	2.5018	2.500	2.2545	2.250	1	- 3	.080	2.520
2 1/2	2	2.5018	2.500	2.0045	2.000	1	- 3	.100	2.530
2 5/8	2 1/4	2.6268	2.625	2.2545	2.250	1	- 3	.100	2.655
2 3/4	2 1/2	2.7518	2.750	2.5045	2.500	1	- 3	.080	2.770
2 3/4	2 1/4	2.7518	2.750	2.2545	2.250	1	- 3	.100	2.790
2 7/8	2 3/8	2.8768	2.875	2.3795	2.375	1	- 3	.100	2.915
3	2 3/4	3.0018	3.000	2.7545	2.750	1	- 3	.080	3.040
3	2 1/2	3.0018	3.000	2.5045	2.500	1	- 3	.100	3.020
3 1/4	3	3.2522	3.250	3.0045	3.000	1	- 5	.080	3.270
3 1/2	3	3.5022	3.500	3.0045	3.000	1	- 5	.100	3.540
4	3 1/2	4.0022	4.000	3.5050	3.500	2	- 5	.100	4.040
4 1/2	4	4.5022	4.500	4.0050	4.000	2	- 5	.100	4.540
5	4 1/2	5.0025	5.000	4.5050	4.500	2	- 5	.100	5.040
5 1/2	5	5.5022	5.500	5.0050	5.000	2	- 5	.100	5.540

* Consult factory for special length requests.



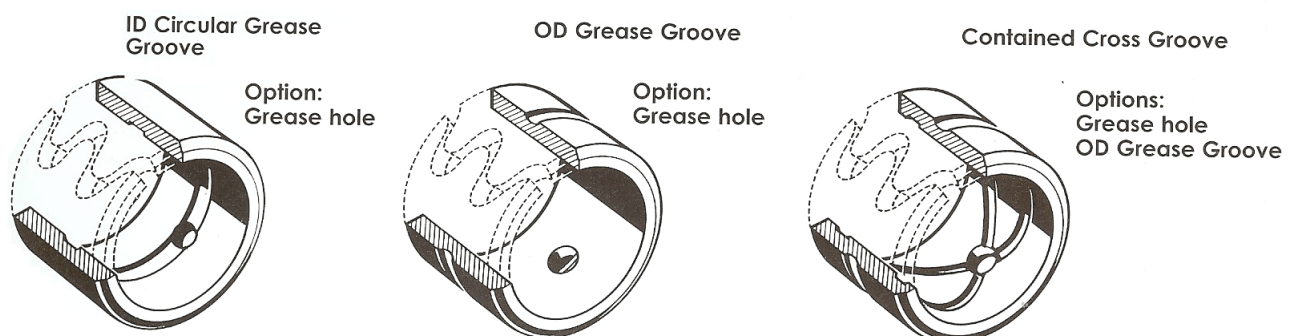
Why Hardened Steel Jaw Bushes?

Jaw Bushes are mostly heavily loaded bearing parts, which uses high quality spring steels, gives increased wear resistance and meets this requirement.

Properties of the Jaw Bushes:

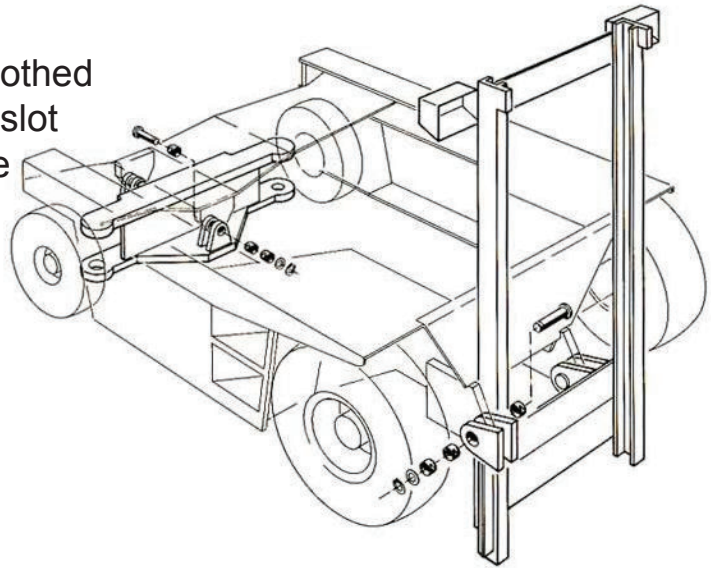
- The toothed slot allowing for a nearly closed surface in the slot region, gives a good all round bearing. Slot position is as a rule important.
- This principle results in an increased seating capacity of the Jaw Bush in the component bore.
- Insertion and pressing out are easy. Harmful tensions, seating and assembly problems, associated with plain bushes, can be avoided.
- Higher wear resistance chrome-vanadium spring steel is used for the standard Jaw Bushes.
- For special applications in corrosive medium, hardened INOX steels are used.
- For increased quality and precision, Precision Jaw Bushes with ground and fine turned surfaces will meet the requirements. They all correspond with the works standards.
- Grease grooves and channels can be incorporated on both Bore and OD.
- We recommend case hardened steel shafts for use with Jaw Bushes, as it is the wearing part and easily replaced, thus preserving the load carrying component.
- Shoulder Bushes are offered as a special.
- The Jaw Bush is generally a cost saving machine element, judged on its purchase price and assembly cost.
- We offer full technical support and drawing information to the design engineer.

Jaw Bushing Grease Options:



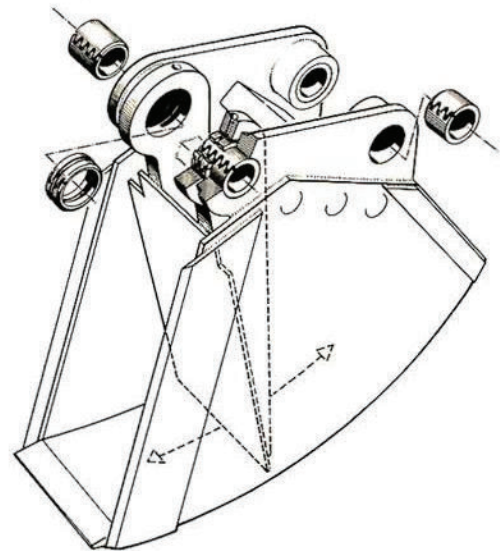


High specific and additional shock load are the characteristic factors required for the bearings shown operating without lubrication. With the larger line of the toothed slot, an additional advantage is the the slot is not cutting into the housing bore. Due to the precision of the Jaw Bush, this application offers lasting precision and a low noise factor.



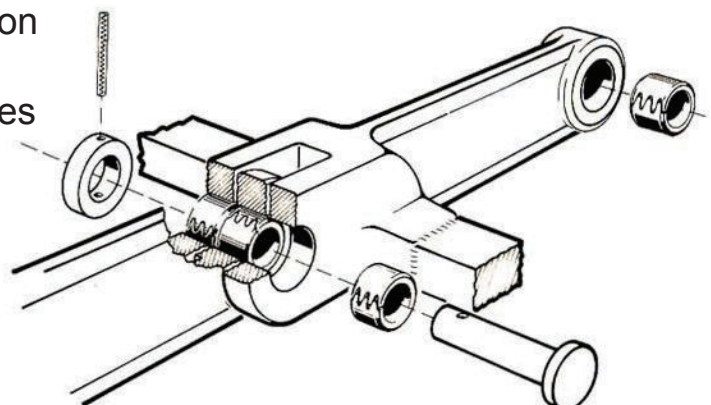
*Application:
Forklift*

Articulations in earthmoving equipment must be easily and quickly replaced. Jaw Bushes using chrome vanadium steel are highly resistant to wear and fulfill the demands, allowing special solutions as illustrated opposite.



*Application:
Excavator shovel with discharge plate*

Jaw Bushes being the wearing part are used in this conveyor chain. Dry running requires wear resistant material. Bushes are made of chrome vanadium spring steel. In applications where wet or corrosive materials are being moved, Jaw Bushes manufactured from corrosion resistant and hardened spring steel are used. The easily replaceable Jaw Bushes extend the life of the conveyor chain.



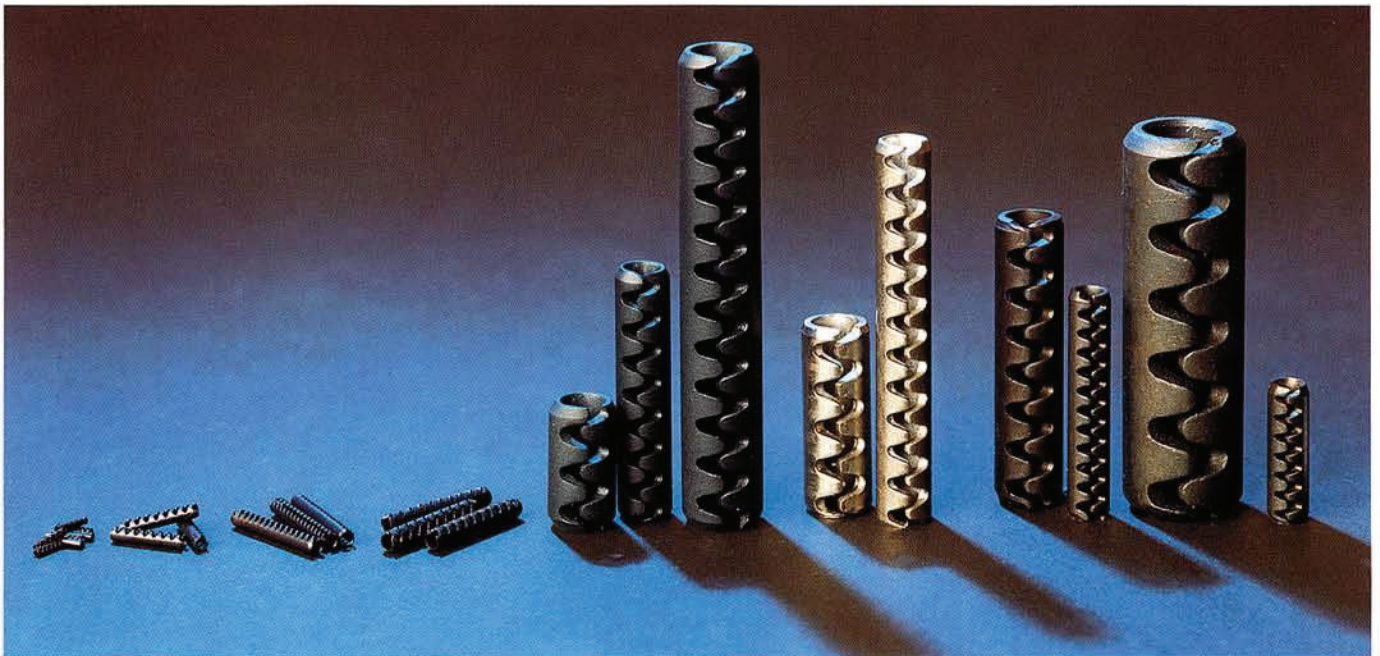
*Application:
Chain trough conveyor*



Spring Pins

We also specialise in Spring Pins and Precision Spring Pins. The user will appreciate the Jaw Bush principle, which offers special problem solutions. Some interesting features are:

- Nearly closed shape offers use as an axle
- Automatic feed possible
- Ground option for highest precision
- Increased roundness and tighter manufacturing tolerances
- Higher seating capacity



Assortment of Spring Pins, Light Spring Pins.

For more information, please contact:



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