

# SPIROL®

## PRECISION ALUMINUM COMPRESSION LIMITERS

### **SPIROL® Series CL6000 and CL6100 Compression Limiters for bolted joint integrity.**

A Compression Limiter is used to preserve a threaded joint's integrity. As a bolt is tightened to achieve the required friction between threads, the plastic is compressed.

Without a Compression Limiter, plastic will either crack or creep, resulting in the loosening and eventual failure of the joint.

The Compression Limiter absorbs the load when the bolt is tightened to its recommended value. The plastic is isolated from excessive compressive loads and plastic integrity is maintained – ensuring that the joint remains intact throughout the life of the product.

**Series CL6000 Precision Machined - Aluminum:** The Series CL6000 is machined from 2024 aluminum as this grade provides the best combination of strength, corrosion resistance, machinability and cost. Additional advantages of aluminum are that it is lightweight (1/3 the weight of brass), it is 40% stronger than brass, and it is lead free. These Limiters can be molded in or pressed into the assembly. The precision machined ID tolerance allows proper seating on the core pin when molding into the assembly. When pressed into the assembly, they are designed with a pilot that allows the part to stand freely in the hole prior to completing the installation. Once installed, the knurl provides retention within the hole. The CL6000 is rated for use up to ISO Class 10.9/Grade 8 bolts.

**Series CL6100 Precision Machined - Headed Aluminum:** The CL6100 headed aluminum Compression Limiter is the same as the CL6000, with the addition of a head. The head provides extra bearing surface on the mating component when a flanged bolt or a washer is not used.

**SPIROL® Knurled CL6000 and CL6100 Compression Limiters** are perfect for press-in and molded-in applications - including highly automated assembly processes.

*The CL6000 supersedes the CL600 and the CL6100  
supersedes the CL601 Compression Limiters.*



**Knurled CL6000**



**Headed CL6100**

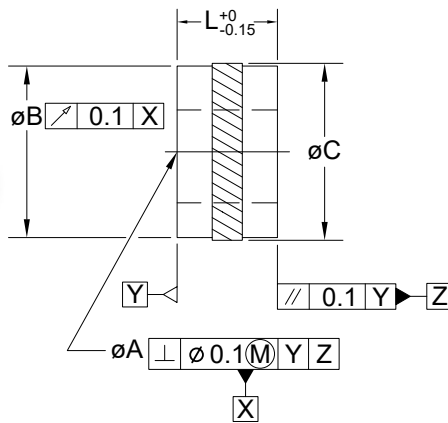


## SERIES CL6000 & CL6100 FEATURES & BENEFITS

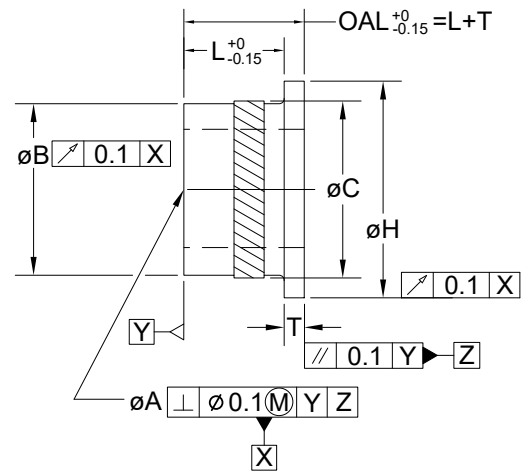
- Symmetrical CL6000 – no orientation required for installation.
- Headed CL6100 – provides extra bearing surface; eliminates washer.
- Square ends – to ensure 100% contact with mating surface.
- Knurl provides excellent retention.
- Pilot – stands freely in the hole prior to complete installation.
- Aluminum – strong, lightweight and **lead free.**



**Series CL6000**  
Knurled



**Series CL6100**  
Headed



**MATERIAL**      **FINISH**  
**A** Aluminum      **K** Plain

### DIMENSIONAL DATA

NOMINAL BOLT SIZE ▶	M3	M4	M5	M6	M8	M10
Inner Diameter ØA	4.05/4.15	5.05/5.15	6.05/6.15	7.05/7.15	9.05/9.15	11.05/11.15
Body Diameter ØB	5.42/5.58	6.95/7.11	8.47/8.63	10.00/10.16	13.36/13.52	16.72/16.88
Knurl Diameter ØC Nom.	5.83	7.38	8.88	10.43	13.78	17.13
Head Diameter ØH	7.35/7.60	8.95/9.20	10.55/10.80	12.15/12.40	15.35/15.60	18.95/19.20
Head Thickness "T" Ref.	1.00	1.00	1.00	1.25	1.25	1.25
Recommended Ø Hole Size	5.61/5.69	7.14/7.22	8.64/8.72	10.19/10.27	13.54/13.62	16.89/16.97
LENGTH	3					
	4					
	5					
	6					
	8					

- CL6000 / CL6100 rated for use up to ISO Class 10.9 bolts.
- The knurl will always be larger than the maximum hole.
- Additional diameters and special lengths available upon request.
- Available in inch sizes - made to order.

**To Order:** CMPL, Nominal Bolt Size x Length, Material, Finish, Series  
**Example:** CMPL 6 X 8 AK CL6100

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