

SPIROL®

COMPRESSION LIMITERS

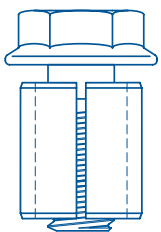
SPIROL® CL220 Split Seam Compression Limiters

The Series CL220 Split Seam Compression Limiter is installed into a hole after the molding process. The spring force generated during installation provides self-retention in the assembly. The flexible diameter accommodates wide hole tolerances, and the gap is designed such that the parts will not interlock in the free state. Once installed, the CL220 provides a minimum clearance of 1mm over the bolt diameter to compensate for misalignment. The CL220 is the only standard Compression Limiter finished with a protective coating of **ArmorGalv®**. Rated for use up to ISO Class 8.8 bolts, the CL220 Compression Limiter offers the widest range of standard diameter and length combinations to accommodate a variety of application requirements.

What is ArmorGalv®?

ArmorGalv® is a zinc alloy thermal diffusion coating covered by ASTM A1059M-08(2013) that provides uniform deposition of coating on all surfaces of the part. There are no insignificant surfaces and the entire inner diameter receives full coating and protection. ArmorGalv® offers a minimum of **1,000+ hours corrosion resistance** to red rust, and is an ideal coating for some of the most aggressive environments such as marine, automotive, agricultural, mining and industrial manufacturing. Additional benefits include:

- ZERO risk of hydrogen embrittlement
- Will not reduce fatigue strength of material
- Uniform deposition of coating on all surfaces
- Anti-galling characteristics similar to cadmium
- No flaking, peeling, or blistering
- Hard and highly abrasion resistant @ 37-42 HRC
- Slightly porous surface will retain paint and other coatings



Application Engineering Support

Partner with SPIROL's Application Engineers early in the design stage to help you select the most appropriate Compression Limiter to ensure bolted joint integrity throughout the life of the assembly.



ArmorGalv® Coated

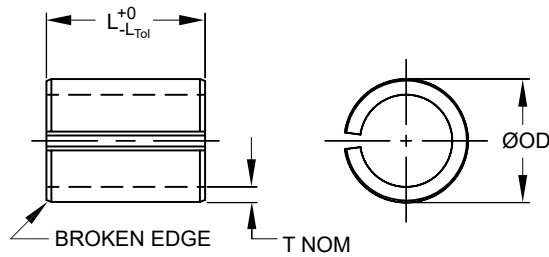


Electroplated Zinc

SPIROL is a licensee of ArmorGalv®, a registered trademark of Distek N.A LLC

Contact SPIROL for design assistance:
www.SPIROL.com/technical-support

CL220 Split Seam Compression Limiter Specifications



MATERIAL

B High Carbon Steel

FINISH

H ArmorGalv®

DIMENSIONAL DATA

NOMINAL BOLT SIZE ▶	M4	M5	M6	M8	M10	M12
Min. ØID Installed	5.0	6.0	7.0	9.0	11.0	13.0
Wall Thickness "T"	0.85	1.00	1.10	1.50	1.85	2.25
Length Tolerance "L _{Tol} "	0.15	0.15	0.15	0.20	0.25	0.25
Outer Diameter ØOD	7.17/7.34	8.47/8.64	9.67/9.89	12.52/12.79	15.27/15.59	18.07/18.44
Recommended Ø Hole Size	7.00/7.10	8.30/8.40	9.50/9.60	12.35/12.45	15.10/15.20	17.90/18.00
LENGTH	6					
	8					
	10					
	12					
	15					
	20					
	25					
30						

- CL220 rated for use up to ISO Class 8.8.
- Special lengths and sizes available upon request.

To Order: CMPL, Nominal Bolt Size, Length, Material, Finish, Series

Example: CMPL 6 X 8 BH CL220

Installation Technology for Compression Limiters

SPIROL offers robust, vertical installation machines specifically designed to post-mold install Compression Limiters into a variety of plastic assemblies. The machines can install a single Compression Limiter or multiple Compression Limiters simultaneously into various polymers, thermoplastics and thermosets.

Standard Models include:

- **Model CM** Manual Compression Limiter Installation Machine
- **Model CL** Semi-Automatic Compression Limiter Installation Machine
- **Model CLX** Extra-Large Semi-Automatic Compression Limiter Installation Machine

Each one of SPIROL's standard Compression Limiter Installation Machines can be customized to meet your specific application and assembly requirements.



Model CM

Model CL

Check out SPIROL's entire Installation Technology offering on SPIROL.com!





**Innovative fastening solutions.
Lower assembly costs.**

Technical Centers

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SPIROL.com



Coiled Spring Pins



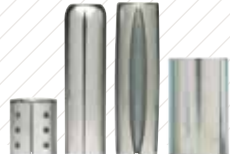
Slotted Spring Pins



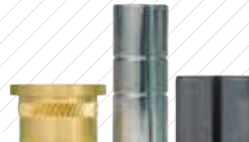
Solid Pins



**Alignment Dowels /
Bushings**



**Spacers & Rolled
Tubular Components**



**Compression
Limiters**



**Threaded Inserts
for Plastics**



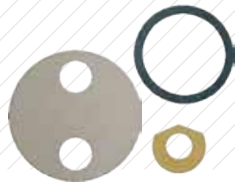
Railroad Nuts



Disc Springs



**Precision Shims &
Thin Metal Stampings**



Precision Washers



**Parts Feeding
Technology**



**Pin Installation
Technology**



**Insert Installation
Technology**



**Compression Limiter
Installation Technology**

Please refer to www.SPIROL.com for current specifications and standard product offerings.

SPIROL offers complimentary Application Engineering support! We will assist on new designs as well as help resolve issues, and recommend cost savings on existing designs. Let us help by visiting **Application Engineering Services** on **SPIROL.com**.