

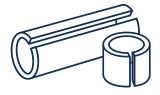






Vogelsang Fastener Solutions is a **world-wide leading manufacturer of formed metal parts** and one of the **world's largest producers of spring pins**, (Rollpins® both slotted and coiled), Tension Bushings and tubular spacers.

COMPRESSION LIMITERS (CL)



For any plastic component that requires bolting. Compression Limiters are used to ensure that the polymer will not crack from the bolt tension but will still retain the plastic part to its mate.

Typical Uses:

Airbag assembly boxes, Electric modules of all kinds, Front bumpers, Fuel pedal assembly, transmission pans, Oil pans, Manifolds, Valve covers, Water pumps, Motor inlet attachments. **Features:**

Knurling, Grooves, Dimples, Holes. Slot Types: Straight, Wavy, Special. Slot Opening: V open inside, V open outside, closed. Flanged/Headed. CL Shapes: Round, Square, Rectangular, Oval, Triangular. Length Tolerances: tightest to +/-0.05mm.

SPECIAL PINS & AUTOMOTIVE SPRING PINS (ASP)

We design a variety of products to solve for a variety of applications. ASP's are typically used in auto-feed mechanisms so the slot designs are engineered to prevent interlocking.

Advantages/Applications:

Flanged Pins for Hinge mechanisms

Displace more expensive Coil Pins where automatic insertion is involved that require plating. The plated Coil Pins offer inferior corrosion protection due to inner layers having no real plating. Unique "tooth" designs, various material thicknesses, chamfers, etc.



TENSION BUSHINGS

Vogelsang Tension Bushings are cost-effective bearings used as wear products to allow smooth pin/shaft rotation, and protect the surrounding structure of the rotating attachment such as a backhoe bucket.

Advantage/Application

Designed to replace solid steel (tubular) and case hardened parts, with ease of removal and replacement. Ideal for high-load/low- RPM operations, in harsh, non-lubricated environments Hydraulic cylinder rod/clevis ends, forklift forks, backhoe shovel, and skid steer attachments. Styles include "wavy", and "straight" slot configurations



974-446-5500











Vogelsang's product development and quality control meet the highest standards for precision, material properties and mechanical characteristics. Our worldwide reputation for quality is recognized by our certification to international standards.

GROUND SOLID PINS



Typical Uses: Powertrain areas with a dynamic load Advantage/Application For Motors & Transmissions

For Motors & Transmissions. High shear force without any movement off the located parts to each other.



HOLLOW GROUND SLEEVES

Typical Uses:

condition

load.

Advantage/Application

Motor, Transmission locators, Cylinder Head to Block Locators, Flywheel or Flex Plate to Block Locators, Multiple Transmission Mechanism Locators

Extremely tight diameter and length tolerances

(significant weight and cost reduction) whereas the solid pin is simply being used to locate parts

together, but do not need to support a dynamic

Displace solid locator pins in a static load

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YOUR TRUSTED PARTNER FOR ALL TUBULAR FASTENER NEEDS.

STANDARD COIL PINS

ASME/ISO standards Features: Fractional ASME B.18.8.2-2000 Carbon 302/304 (18-8) Stainless Steel 420 Stainless Steel Multiple coating options Metric ISO 8748 Stainless Medium and Heavy Duty ISO 8750 Carbon Medium and Heavy Duty Multiple coating options



STANDARD SLOTTED SPRING PINS

ASME/ISO standards Features: Fractional ASME B.18.8.2-2000 Carbon 302/304 (18-8) Stainless Steel 420 Stainless Steel Multiple coating options Metric ISO 8752-1998 Standard Duty Metric Carbon & Stainless (18-8) ISO 13337-1997 Light Duty Metric Carbon & Stainless (18-8) Multiple coating options





ISO 875 Media Multiple