



Special Spacers and Rolled Tubular Components

SPECIALS – CUSTOMIZED TO MEET YOUR SPECIFIC REQUIREMENTS

SPIROL specializes in replacing costly machined and cold-formed components with less expensive roll-formed product. SPIROL's proprietary manufacturing technology enables the cost-effective production of special tubular products that meet the performance requirements of the comparatively more expensive alternatives.

SPECIAL LENGTHS

Any length from 2.5mm to 150mm (.094" to 6") subject to some limitations relative to diameter and wall thickness.

SPECIAL INSIDE DIAMETERS

Any diameter between \varnothing 2mm to \varnothing 26mm (\varnothing .078" to \varnothing 1"). Reduced tolerances are also available.

SPECIFIED OUTSIDE DIAMETERS

The outside diameter can be specified with minimum and maximum tolerances, but it is then suggested to specify the inside diameter with only a reference dimension or only a minimum dimension rather than a minimum/maximum tolerance to reduce cost.

BOTH DIAMETERS SPECIFIED

In situations that require both the inside and outside diameters to be specified with toleranced dimensions, a decision needs to be made as to which dimension should have the tighter tolerance so that the raw material tolerance can be properly allocated.

GAP

Spacers are usually butted with minimal or no gap. The gap can be specified from "no gap" to a toleranced or maximum specified gap.

SPECIAL WALL THICKNESS

The ideal thickness is 15% of the mean inside diameter up to a maximum of 3.5mm (.140"). A range of 10% to 25% of the mean inside diameter is possible depending on material type and tolerance requirements.

SPECIAL LENGTH TOLERANCES

Standard Spacers have a generous length tolerance to keep the cost down. Reduced tolerances can be provided to 0.05mm (.004"), and in some instances even these tolerances can be further reduced. Since tight tolerances increase costs, tolerances should be tailored to the needs of the application to eliminate unnecessary expense.

INCREASED COLUMNAR STRENGTH

Can be achieved through increased wall thickness, higher strength material, or by using materials that can be heat treated. Given that columnar strength is application dependent, SPIROL's Applications Engineering team should be consulted whenever the Spacer will be used in a critical load bearing path.





SPECIAL MATERIALS

Virtually any material available in cold rolled strip form can be used. Some of the more frequently specified materials are aluminum, stainless steel, brass, galvanized steel and high carbon steel.

SPECIAL FINISHES

Finishes are only limited by market availability. Finishes are specified for corrosion protection, color coding, and appearance. Aluminum, stainless steel, galvanized steel, or brass should be considered in place of finishes, since these can result in a better product at a lower cost.



HEADED SPACERS/TUBULAR RIVETS

This economical method of manufacturing, combined with the Headed Spacer's/Tubular Rivet's hollow construction, reduces costs and permits lower prices. They have straighter shanks than conventional Rivets for faster, easier assembly. **SPIROL** Engineering can provide recommended heading tool dimensions for clinching the non-headed side of the part.

SHOULDER RIVETS

Shoulder Rivets are produced to meet specific customer requirements. The clinch allowance can be varied according to the thickness of the panel to which the Shoulder Rivet is to be attached. The inside diameter can be designed to allow for the passage of rivets, screws, or shafts. The wall thickness can be varied to achieve the desired inside/outside diameter relationship. These are often used to replace expensive long Semi-Tubular Rivets.



APPLICATION-SPECIFIC SPECIALS

Lightweight and durable **Conveyor Spacers** are used to separate the skate wheel rollers from each other and the conveyor walls. Corrosion-resistant **Garage Door Spacers** for hinges cost less than cut-off tubing and plated parts.

OTHER SPECIALS

- Stamped with identification numbers or letters, indentations and protrusions
- Holes and perforations
- Chevron or dovetail seams
- Outside diameter diamond knurls
- Serrated ends
- Inside diameter lead-ins or outside diameter chamfers
- Oval and C-shaped configurations





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

SPIROL Application Engineers will review your application needs and work with you to recommend the optimum solution. One way to start the process is to visit our **Optimal Application Engineering** portal at **SPIROL.com**.

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