

With so many types of industrial standard pins to choose from, the challenge for the designer is to select the most cost-effective pin that meets the specific application requirements. While more than one type of pin may meet certain requirements, here are some general guidelines when a Solid Pin may be most suitable:

- When a head is required for a positive stop or to retain a thin member to a thicker member of the assembly
- When a smooth, uninterrupted surface is required such as when used in conjunction with a pawl or other angular component
- When a hollow pin is not suitable such as when the designer is looking to plug a hole (i.e. Restrict passage of liquids)
- When there is a need to manually align several clearance holes
- When increased bending or shear strength is required
- When precise hole locations need to be maintained



SPIROL SOLID PINS

SPIROL has a standard offering of Straight Pins, Knurled Pins and Barbed Pins. The specifications for these pins can be found on pages 4-7.

Straight Pins – Offered with or without a head, Straight Pins are distinguished by their uniformity. The chamfered ends are more consistent than tumbled edges—making installation with automatic assembly equipment more reliable. Straight Pins are retained by compressing the host, not the pin. They are suitable for use in plastics for press-fit applications limited to those cases where the host material can withstand compression in the order of .002” – .003” (0.05mm – 0.08mm). These pins are often used to replace ground dowels in applications that do not require the tight tolerances of a ground dowel.

Knurled Pins – Offered with or without a head, Knurled Pins are available with either straight or helical knurls. Unlike a Straight Pin where retention is provided by the uniform interference between the pin and hole, knurled pins are designed to cut into the host. The displacement of the host material into the valleys of the knurls yields more frictional contact area between the pin and hole thus resulting in higher retention. With Helical Knurled Pins, a 30° knurl causes the pin to rotate as it enters the hole creating even more surface contact with the host. This results in higher frictional forces, greater engagement and improved resistance to back out.

Barbed Pins – Offered with a head, Barbed Pins were created specifically for use in plastic assemblies. The raised barbs are angled backwards, opposite the direction of insertion for maximum retention. All Barbed Pins are provided with a generous pilot to facilitate alignment with the hole and ease installation.



CUSTOMIZED PRODUCTS TO MEET YOUR APPLICATION REQUIREMENTS

One of the advantages of partnering with SPIROL early in the design stage is that if one of our 30,000 standard items doesn't meet your specific application requirements, the solution is often a simple derivation of our standard design. Regardless of the complexity, SPIROL's Engineers will work with you to develop a pin to meet the exact requirements of your application at the lowest total manufacturing cost.





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

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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**.