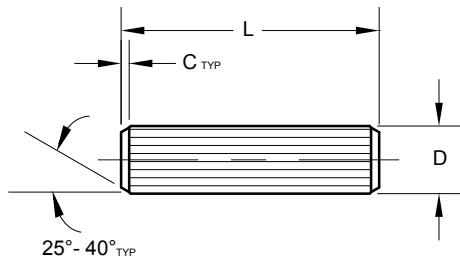
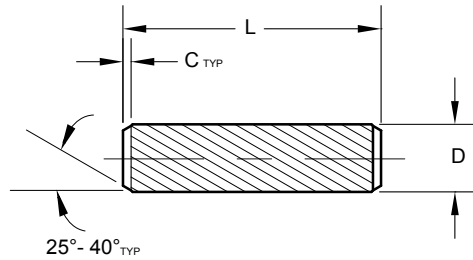


# SPIROL® KNURLED PINS

**Straight Knurl  
Series KP200**



**Helical Knurl  
Series KP300**



## DIMENSIONAL DATA

Nominal Diameter	INCH SPECIFICATIONS							METRIC SPECIFICATIONS						
		5/64 .078	3/32 .094	1/8 .125	5/32 .156	3/16 .187	1/4 .250		2	2.5	3	4	5	6
Diameter "D"	Min.	.084	.099	.131	.163	.195	.256	Min.	2.20	2.70	3.25	4.25	5.25	6.25
	Max.	.088	.103	.136	.168	.200	.262	Max.	2.30	2.80	3.35	4.35	5.35	6.35
Chamfer "C"	Ref.	.005	.008	.008	.010	.015	.015	Ref.	0.15	0.2	0.2	0.3	0.4	0.4
Recommended Hole	Min.	.078	.094	.125	.156	.188	.250	Min.	2.00	2.50	3.00	4.00	5.00	6.00
	Max.	.080	.096	.127	.159	.191	.253	Max.	2.06	2.56	3.06	4.08	5.08	6.08
Length "L"	.250	*						6	*					
	.312	*						8	*					
	.375	*						10	*					
	.437	*						12	*					
	.500	*						14	*					
	.562	*	Length Tolerance					16	*	Length Tolerance				
	.625	*	± .010					20		± 0.25				
	.750							24						
	.875							26						
	1.000							30						
	1.250							35						
	1.500							40						

\* Denotes sizes only available in KP300.

### Notes:

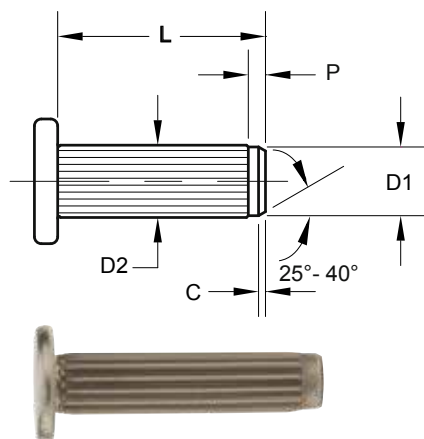
- Recommended hole sizes are given for average conditions. Actual required hole size is dependent on length of knurl engagement and hardness of host material.
- Other diameters, lengths and alternative knurl locations available on request.

### Part Number Code

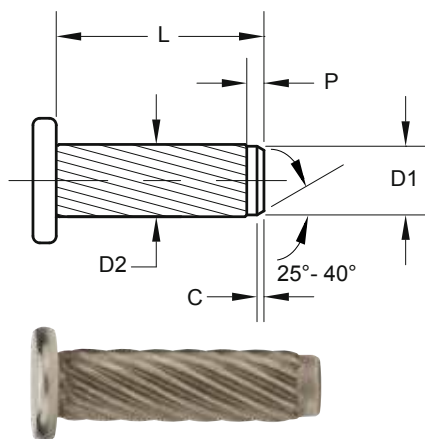
TO ORDER: SLDP (Nominal Diameter)x(Length)(Material)(Finish)(Pin Series Number)

EXAMPLE: SLDP 3 x 20 FK KP300

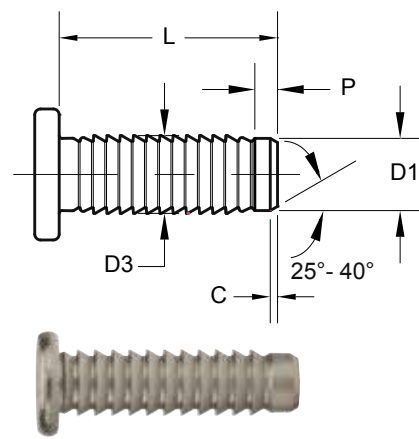
## Straight Knurl Series FH200



## Helical Knurl Series FH300



## Barbed Series FH400



## DIMENSIONAL DATA

Nominal Diameter	INCH SPECIFICATIONS							METRIC SPECIFICATIONS						
		5/64 .078	3/32 .094	1/8 .125	5/32 .156	3/16 .187	1/4 .250		2	2.5	3	4	5	6
Pilot Diameter "D1"	Min.	.0761	.0917	.1230	.1542	.1855	.2480	Min.	1.95	2.45	2.95	3.95	4.95	5.95
	Max.	.0781	.0937	.1250	.1562	.1875	.2500	Max.	2.00	2.50	3.00	4.00	5.00	6.00
Diameter "D2"	Min.	.084	.099	.131	.163	.195	.256	Min.	2.20	2.70	3.25	4.25	5.25	6.25
	Max.	.088	.103	.136	.168	.200	.262	Max.	2.30	2.80	3.35	4.35	5.35	6.35
Diameter "D3"	Min.	.092	.107	.139	.170	.201	.264	Min.	2.36	2.86	3.36	4.36	5.36	6.36
	Max.	.097	.112	.144	.175	.206	.269	Max.	2.46	2.96	3.46	4.46	5.46	6.46
Head Diameter	Min.	.132	.156	.209	.263	.312	.425	Min.	3.30	4.20	4.95	6.75	8.50	10.20
	Max.	.142	.172	.229	.283	.338	.451	Max.	3.70	4.60	5.45	7.25	9.10	10.80
Head Thickness	Min.	.022	.028	.036	.048	.060	.077	Min.	0.55	0.70	0.90	1.20	1.50	1.90
	Max.	.030	.036	.048	.060	.073	.090	Max.	0.75	0.90	1.20	1.50	1.80	2.20
Chamfer "C"	Ref.	.005	.008	.008	.010	.015	.015	Ref.	0.15	0.2	0.2	0.3	0.4	0.4
Pilot Length "P"	Ref.	.026	.031	.039	.046	.062	.078	Ref.	0.6	0.8	1	1.2	1.5	2
Recommended Hole	Min.	.078	.094	.125	.156	.188	.250	Min.	2.00	2.50	3.00	4.00	5.00	6.00
	Max.	.080	.096	.127	.159	.191	.253	Max.	2.06	2.56	3.06	4.08	5.08	6.08
Length "L"	.250	*						6	*					
	.312	*						8	*					
	.375	*		Length Tolerance				10	*		Length Tolerance			
	.500			± .010				12			± 0.25			
	.625							16						
	.750							20						
	1.000							24						

\* Denotes sizes only available in FH300 and FH400.

### Notes:

- Recommended hole sizes are given for average conditions. Actual required hole size is dependent on length engagement and hardness of host material.
- Other diameters, lengths and alternative knurl locations available on request.
- Series FH200, FH300 and FH400 are available to order with round heads.

### Part Number Code

TO ORDER: SLDP (Nominal Diameter)x(Length)(Material)(Finish)(Pin Series Number)

EXAMPLE: SLDP .250 x .625 FK FH300



# MATERIALS AND FINISHES

## STANDARD MATERIALS

### Low Carbon Steel (F)

Low carbon steel is one of the most versatile materials available. This material is readily available, and is the most economical of the standard Solid Pin materials in the absence of any plating or coating. Low carbon Solid Pins have a dry to the touch rust preventative. Additional coatings and finishes can be applied to carbon steel to improve corrosion resistance, however for some applications, it may be more appropriate and cost beneficial to specify stainless steel when a high level of corrosion resistance is required.

### Austenitic (Nickel) Stainless Steel (D)

Austenitic stainless steel provides excellent corrosion protection against normal environmental conditions. It withstands fresh water and atmospheric marine conditions very well, and is suitable for many other industrial conditions including acidic environments. All austenitic stainless Solid Pins are passivated.

## STANDARD FINISHES

### Plain/Oiled (K)

This finish is a thin coating of dry-to-the touch oil that provides corrosion resistance during storage and shipping. Since this lubricating oil is suspended in a carrier which evaporates over time, the pins are dry-to-the-touch and conducive for automatic feeding and assembly.

### Passivated (P)

Passivation of stainless steel Solid Pins is a process whereby surface contaminants such as embedded tool steel and other free iron particles are removed. The sole purpose of passivation is to remove embedded iron; not to clean the part. While all stainless steel Solid Pins are passivated as a standard, there are some critical applications that absolutely require passivation such as medical devices, components used in the food or drug industry, fuel system applications, and any application requiring a clean environment.

*Available only for stainless steel.*

MATERIALS		FINISHES
TYPE	GRADE	
<b>F</b> - Low Carbon Steel	UNS G10220 / C20C (1.0411)	<b>K</b> - Plain, oiled
<b>D</b> - Stainless Steel, Austenitic (Nickel)	UNS S30500 / X4CrNi18-12	<b>P</b> - Passivated

## SPECIAL MATERIALS

**SPIROL** has extensive experience with special materials required for unique circumstances such as:

### Alloy Steel (W)

Alloy steel is used for applications requiring higher shear strength than our standard materials provide, or when additional hardness is required to ensure that the pin is harder than the host material into which the pin is being installed.

### Aluminum (A)

Aluminum is lightweight, lead free, and has sufficient strength for most plastic applications. Aluminum is less than half the weight of steel, and does not require any supplemental coatings or platings to provide the necessary corrosion protection in most environments.

*Other materials and finishes are available to order depending on the application requirements.*



Please refer to [www.SPIROL.com](http://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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