

# Butler Fasteners

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## SLOTTED SPRING PINS (SPRING TENSION PINS)

Spring Tension Pins consist of a single coil of spring steel or stainless steel with chamfered ends and an open slot wide enough to enable the pin to reduce in diameter as it is driven into a hole. They are designed for plain drilled holes but a countersink makes assembly easier.



It is possible to increase the shear strength of slotted pins by inserting a smaller diameter tension pin into a larger one. The larger pin must be inserted first, then the smaller pin taking care that the slot is between 90° and 180° away from the slot in the larger pin.

Suitable combinations for pins to ISO 8752 are:-

Outer Pin	Inner Pin
2.5mm	1.5mm
3.5	2
5	3
6	3.5
8	5
10	6
12	7
14	8
16	10
20	12

## MATERIALS

SPRING STEEL CS70 / AISI 1070 / C67  
STAINLESS STEEL A2 AISI 304

## STANDARDS

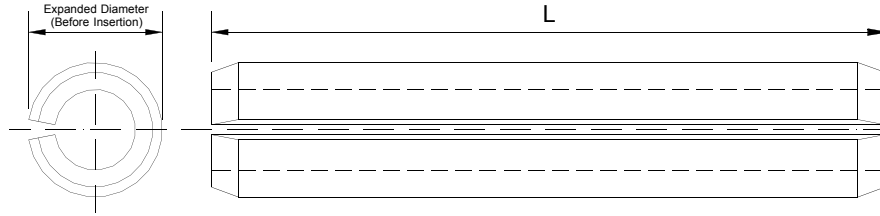
ISO 8752 Heavy Duty (stocked)  
BS 7060 Equivalent to ISO 8752  
DIN 1481 Equivalent to ISO 8752 but with plus only length tolerances  
DIN 7346 Light Duty Slotted Spring Pin  
ISO 13337 Light Duty Slotted Spring Pin  
JIS B 2808 Equivalent to ISO 8752 but with reduced expanded diameter for easier assembly

## FINISHES

- Self Colour
- Zinc Plated

Where electrolytically applied finishes are used it is essential to de-embrittle the pins immediately after plating. For safety-critical applications non-electrolytic finishes should be used as the de-embrittlement process is not 100% reliable.

# SIZE RANGE – SLOTTED PINS\*



Nominal Diameter, ISO 8752	1	1.5	2	2.5	3	3.5	4	5	6	7	8	10	12	14	16	20
Available Materials	Carbon Steel, Stainless Steel A2													Carbon Steel Only		
Expanded Diameter	Min 1.2 Max 1.3	Min 1.7 Max 1.8	Min 2.3 Max 2.4	Min 2.8 Max 2.9	Min 3.3 Max 3.5	Min 3.8 Max 4.0	Min 4.4 Max 4.6	Min 5.4 Max 5.6	Min 6.4 Max 6.7	Min 7.45 Max 7.75	Min 8.5 Max 8.8	Min 10.5 Max 10.8	Min 12.5 Max 12.8	Min 14.5 Max 14.8	Min 16.5 Max 16.8	Min 20.5 Max 20.9
Recommended Hole Size (H12)	Min 1.0 Max 1.1	Min 1.5 Max 1.6	Min 2.0 Max 2.1	Min 2.5 Max 2.6	Min 3.0 Max 3.1	Min 3.5 Max 3.62	Min 4.0 Max 4.12	Min 5.0 Max 5.12	Min 6.0 Max 6.12	Min 7.0 Max 7.15	Min 8.0 Max 8.15	Min 10.0 Max 10.15	Min 12.0 Max 12.18	Min 14.0 Max 14.18	Min 16.0 Max 16.18	Min 20.0 Max 20.21
Material Thickness	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.2	1.2	1.5	2	2.5	3	3	4
Minimum Double Shear Strengths – tested to ISO 8749, kN (see also Page 37)																
Carbon Steel	0.7	1.58	2.82	4.38	6.32	9.06	11.24	17.54	26.04	30.0	42.76	70.16	104.1	144.7	171	280
Stainless Steel	0.4	0.98	1.81	2.84	4.07	5.80	7.25	10.75	16.17		26.46	42.14				
Lengths																
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180																
200																
Length Tolerances	1 – 10 mm long ± 0.25					12 – 50 mm long ± 0.50					Over 50 mm long ± 0.75					

Selection Kits are Available in Carbon Steel and A2 Stainless Steel