



PRESTINCERT SELF-PIERCING

PRESTINCERT is a self-piercing fastening system whereby a bush is punched into sheet materials without the need to pre-drill or punch holes in the parent material.

This direct one shot application eliminates the need for welding and riveting.

The punch tooling needed to install Prestincerts is of a simple design and is easy to install in most hand or power operated presses.

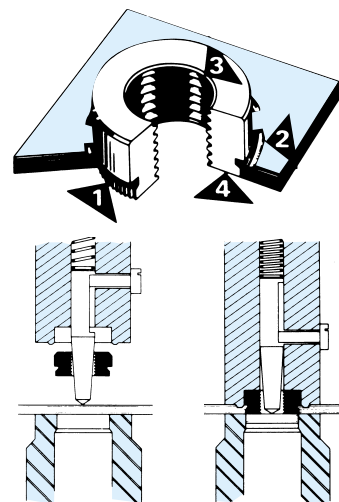
A standard range of steel thread bushes ranging from M2.5 - M10 suitable for 20 SWG - 14 SWG is readily available. A heavy duty version is also in stock from M6 - M16 for thicker sheet.

The Prestincert Self-Piercing System is easy to install, simple to operate and economic for both small and large users, and combines fastener strength with production efficiency.

FEATURES

STRONG TWO-WAY FIXTURE—

- ① Knurled to prevent rotation.
 - ② Swaged for maximum strength
- PLUS**
- ③ Deep thread security - over the full component length.
 - ④ Commercially flush finish.

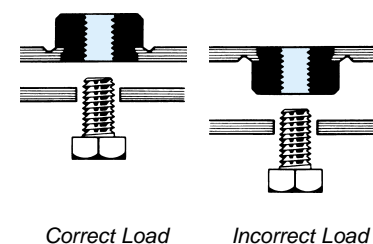


APPLICATION & CHARACTERISTICS

APPLICATION

PRESTINCERT SELF-PIERCING STEEL BUSHES are designed for use in applications where the load applied to the bush is attempting to pull the "bush head" through the material.

PRESTINCERT BUSHES can either be loaded into conventional tools for 'downward' piercing or loaded into inverted tools for 'upward' piercing. In both cases the top and bottom tools must be positioned vertically in line, so that a punch and die situation is created.



APPLICATION & CHARACTERISTICS

TOOL SETTING

1. Install and line-up the Prestincert top and bottom tools in the press. Where provided a setting piece may assist.
2. Position a piece of the sheet metal of the thickness being used between ringstake and die.
3. Close press so that when ram is at bottom of stroke a 'witness' of the ringstake is seen on the sheet.
4. Open press and load bush onto the locating pin of the 'downward' punching tool or into the ringstake cavity of the 'upward' punching bottom tool - whichever is being used.
For 'HD' Heavy Duty 'downward' punching tools the bush is loaded into the retentive cavity of the top tool.
5. Locate the workpiece and operate the press.
6. Open the press and remove workpiece.

CHECK THAT—

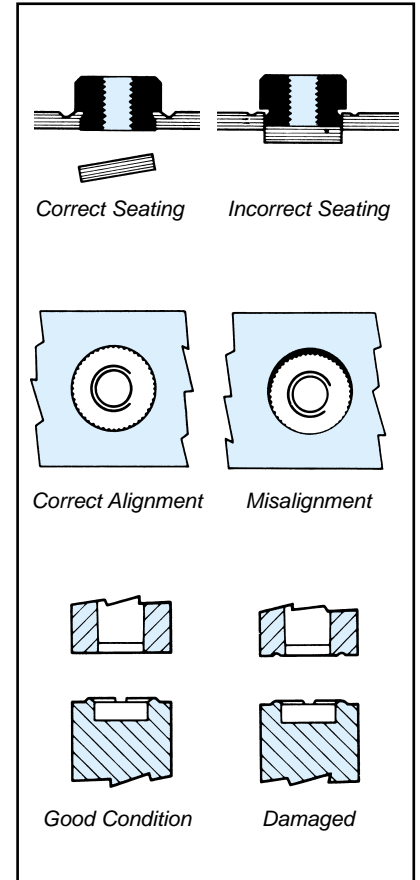
- a) Slug cleared from underside, - if not, check material thickness and press stroke.
- b) Bush firmly seated without gap between bush head and sheet, with full evidence of ringstake around the bush, - if not, increase press stroke.
- c) Alignment is confirmed by concentricity of knurling and punched hole on underside, - if not, re-align.

The press now being set for depth and correct alignment **IF ADEQUATELY GUARDED FOR SAFETY**, is now operational.

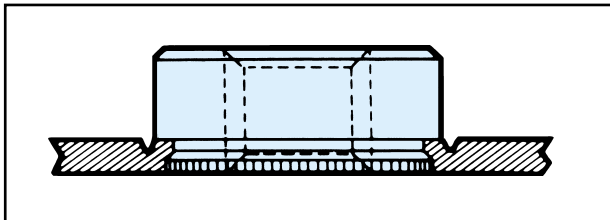
MAINTENANCE

Top and bottom tools should not come into direct contact with each other. When not in use, a piece of mild steel sheet placed between the tool faces will protect the ringstake.

Dies may be reground but in multi-tool set-ups, a common constant die height must be maintained.



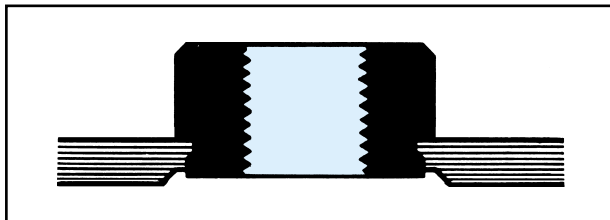
PRESTINCERT STANDARD STEEL BUSHES



Suitable for use with steel and aluminium sheet of tensile strength up to 30 tons per square inch. (47 Kp/mm²) 20-14 swg (1mm-2mm).

Standard Finish:
Zinc Plated and Yellow Passivated or Clean.

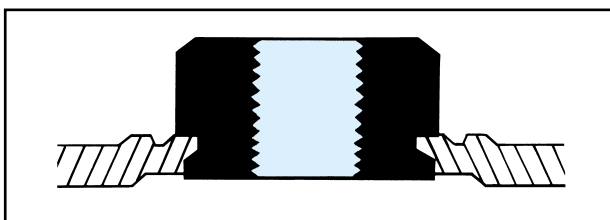
PRESTINCERT HEAVY DUTY STEEL BUSHES



Incorporating the "below flush" finish:

By incorporating a thinning ring as an integral part of the die, the thickness of 2mm, 2,5mm, 3mm, 4mm, 5mm and 6mm sheet is locally reduced. At the same time, a bush with a specially shortened knurl is punched into the material to give a "below-flush" finish. This "below-flush" finish is not available for materials thinner than 2mm.

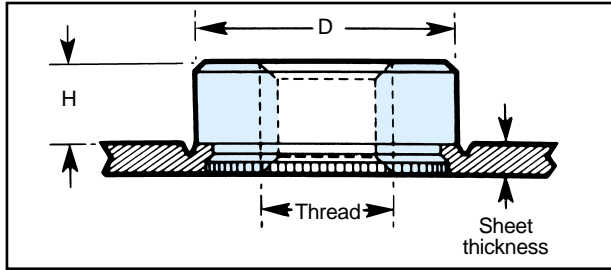
PRESTINCERT EMBOSSED STEEL BUSHES - For thin sheet metal



Embossing of "Thin" steel sheet 20-16 swg. (0,9 1,5mm)

Where no protrusion of the bush knurl can be tolerated, it is sometimes possible to locally emboss around the bush during the piercing operation. The embossment contains the protruding knurl, and additionally locally strengthens the material against flexing.

PRESTINCERT STANDARD STEEL BUSHES - Dimensional Data



Materials:- Mild steel – stainless steel to customer spec.
Finish:- Clean or Zinc & passivated All dimensions in mm

| Bush Code | H | D | Bush Code | H | D |
|-----------|------|-------|-----------|-------|-------|
| 01 | 1.63 | 6.35 | 33 | 6.65 | 19.05 |
| 02 | 2.01 | 7.94 | 34 | 8.86 | 19.05 |
| 03 | 2.80 | 9.53 | 41 | 6.07 | 22.22 |
| 11 | 3.99 | 11.10 | 42 | 7.20 | 22.22 |
| 12 | 4.50 | 14.28 | 43 | 8.23 | 22.22 |
| 13 | 5.16 | 15.88 | 51 | 8.13 | 25.40 |
| 21 | 3.48 | 17.45 | 52 | 9.25 | 25.40 |
| 22 | 5.05 | 17.45 | 53 | 9.90 | 25.40 |
| 23 | 7.29 | 17.45 | 54 | 11.40 | 25.40 |
| 31 | 4.50 | 19.05 | 61 | 10.82 | 28.57 |
| 32 | 4.88 | 19.05 | | | |

METRIC THREADS FOR METRIC SHEET

Note- Last digit of part number denotes finish.
0 = clean 5 = zinc and yellow passivate

| Thread | Sht thickness | Part No. | Std Single Point Tools |
|--------|---------------|--------------|------------------------|
| M 2.5 | 1.0mm | 01.30.025.45 | C7001/01A |
| | 1.25mm | 01.18.025.45 | C7001/01A |
| | 1.5mm | 01.35.025.45 | C7001/01A |
| M 3 | 1.0mm | 02.30.030.45 | C7002/02A |
| | 1.25mm | 02.18.030.45 | C7002/02A |
| | 1.5mm | 02.35.030.45 | C7002/02A |
| | 2.0mm | 03.40.030.45 | C7003/03C |
| M4 | 1.0mm | 03.30.040.45 | C7003/03A |
| | 1.25mm | 03.18.040.45 | C7003/03A |
| | 1.5mm | 03.35.040.45 | C7003/03A |
| | 2.0mm | 11.40.040.40 | C7011/11A |
| M5 | 1.0mm | 11.30.050.40 | C7011/11B |
| | 1.25mm | 11.18.050.40 | C7011/11B |
| | 1.5mm | 11.35.050.40 | C7011/11B |
| | 2.0mm | 12.40.050.40 | C7012/12B |
| M6 | 1.0mm | 11.30.060.40 | C7011/11C |
| | 1.25mm | 11.18.060.40 | C7011/11C |
| | 1.5mm | 11.35.060.40 | C7011/11C |
| | 2.0mm | 12.40.060.40 | C7021/12C |

| Thread | Sht thickness | Part No. | Std Single Point Tools |
|--------|---------------|--------------|------------------------|
| M 8 | 1.0mm | 12.30.080.40 | C7012/R/12D |
| | 1.25mm | 12.18.080.40 | C7012/12D |
| | 1.5mm | 12.35.080.40 | C7012/12D |
| | 2.0mm | 13.40.080.40 | C7013/13C |
| | 2.5mm | 13.45.080.40 | C7013/13C |
| | 3.0mm | 21.50.080.40 | C7201 |
| M10 | 1.0mm | 13.30.100.40 | C7013/R/13D |
| | 1.25mm | 13.18.100.40 | C7013/13D |
| | 1.5mm | 13.35.100.40 | C7013/13D |
| | 2.0mm | 13.40.100.40 | C7013/13D |
| | 2.5mm | 32.45.100.40 | C7032 |
| | 3.0mm | 32.50.100.40 | C7032 |
| M12 | 2.0mm | 34.40.120.40 | C7134 |
| | 2.5mm | 42.45.120.40 | C7042 |
| | 3.0mm | 42.50.120.40 | C7042 |
| M16 | 2.5mm | 53.45.160.40 | C7053 |
| | 3.0mm | 53.50.160.40 | C7053 |
| | M20 | 2.5mm | 63.45.200.40 |
| | 3.0mm | 63.50.200.40 | C7063 |

METRIC THREADS FOR SWG SHEET

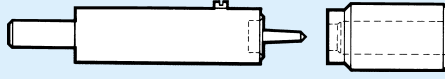
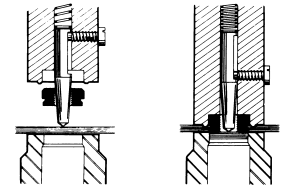
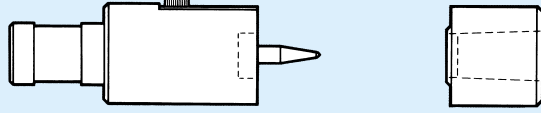
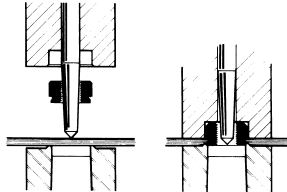
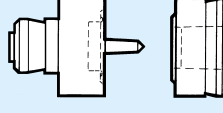
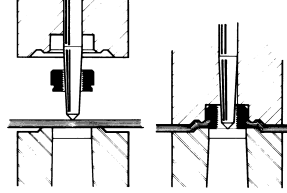
Note- Last digit of part number denotes finish.
0 = clean 5 = zinc and yellow passivate

| Thread | Sht thickness | Part No. | Std Single Point Tools |
|--------|---------------|--------------|------------------------|
| M 2.5 | 20swg | 01.30.025.45 | C7001/01A |
| | 18swg | 01.18.025.45 | C7001/01A |
| | 16swg | 01.16.025.45 | C7001/01A |
| M 3 | 20swg | 02.30.030.45 | C7002/02A |
| | 18swg | 02.18.030.45 | C7002/02A |
| | 16swg | 02.16.030.45 | C7002/02A |
| | 14swg | 03.40.030.45 | C7003/03C |
| M4 | 20swg | 03.30.040.45 | C7003/03A |
| | 18swg | 03.18.040.45 | C7003/03A |
| | 16swg | 03.16.040.45 | C7003/03A |
| | 14swg | 11.40.040.40 | C7011/11A |
| M5 | 20swg | 11.30.050.40 | C7011/11B |
| | 18swg | 11.18.050.40 | C7011/11B |
| | 16swg | 11.16.050.40 | C7011/11B |
| | 14swg | 12.40.050.40 | C7012/12B |
| M6 | 20swg | 11.30.060.40 | C7011/11C |
| | 18swg | 11.18.060.40 | C7011/11C |
| | 16swg | 11.16.060.40 | C7011/11C |
| | 14swg | 12.40.060.40 | C7021/12C |
| | 12swg | 12.12.060.40 | C7012/12C |
| | 10swg | 13.10.060.40 | C7013/12E |

| Thread | Sht thickness | Part No. | Std Single Point Tools |
|--------|---------------|--------------|------------------------|
| M 8 | 20swg | 12.30.080.40 | C7012/R/12D |
| | 18swg | 12.18.080.40 | C7012/12D |
| | 16swg | 12.16.080.40 | C7012/12D |
| | 14swg | 13.40.080.40 | C7013/13C |
| | 12swg | 21.12.080.40 | C7201 |
| | 10swg | 21.10.080.40 | C7201 |
| M10 | 20swg | 13.30.100.40 | C7013/R/13D |
| | 18swg | 13.18.100.40 | C7013/13D |
| | 16swg | 13.16.100.40 | C7013/13D |
| | 14swg | 13.40.100.40 | C7013/13D |
| | 12swg | 32.12.100.40 | C7032 |
| | 10swg | 41.10.100.40 | C7041 |
| M12 | 14swg | 34.40.120.40 | C7134 |
| | 12swg | 42.12.120.40 | C7042 |
| | 10swg | 42.10.120.40 | C7042 |
| M16 | 12swg | 52.12.160.40 | C7053 |
| | 10swg | 61.10.160.40 | C7061 |
| | M20 | 12swg | 63.12.200.40 |
| | 10swg | 63.10.200.40 | C7063 |

Non metric threads/specials available on request

PRESTINCERT TOOLING - For use on guarded equipment

| | |
|--|---|
|  <p>1. STANDARD Single point tools suitable for use with BUSH CODES 01 to 13 and sheet thickness 0.036" (0.9mm) to 0.080" (2.1 mm). Tool Nos. C7001 to C7013.</p> |  |
|  <p>2. HEAVY DUTY Single point tools suitable for use with BUSH CODES 21 to 61 and sheet thickness 0.78" (2.0mm) and over. Tool Nos. C9521 to C9561.</p> |  |
|  <p>3. EMBOSsing Single point tooling inserts for use with BUSH CODES 01 to 13 and sheet thickness up to 0.064" (1.6mm). Tool Nos. C9301 to C9313.</p> <p>Items 1, 2, and 3. Tool Adaptors are available for most types of suitable presses. Information on request.</p> |  |

PRESTINCERT TOOLING - Cross Reference

PUNCHES (Single point tools)

| Bush Code | Standard | Thinning | Embossing |
|-----------|----------|----------|-----------|
| 01 | C7001 | C9501 | C9301 |
| 02 | C7002 | C9502 | C9302 |
| 03 | C7003 | C9503 | C9303 |
| 11 | C7011 | C9511 | C9311 |
| 12 | C7012 | C9512 | C9312 |
| 13 | C7013 | C9513 | C9313 |
| 21 | C7021 | C9521 | - |
| 22 | C7022 | C9522 | - |
| 23 | C7023 | C9523 | - |
| 31 | C7031 | C9531 | - |
| 32 | C7032 | C9532 | - |
| 33 | C7033 | C9533 | - |
| 34 | C7034 | C9534 | - |
| 41 | C7041 | C9541 | - |
| 42 | C7042 | C9542 | - |
| 43 | C7043 | C9543 | - |
| 51 | C7051 | C9551 | - |
| 52 | C7052 | C9552 | - |
| 53 | C7053 | C9553 | - |
| 54 | C7054 | C9554 | - |
| 61 | C7061 | C9561 | - |

When inserting bushes into sheet thickness below 1.25mm [18swg] add /R to the end of PUNCH Nos. C7012, C7013 and all C77 and C88 series.

When inserting bushes into sheet thickness below 2.5mm [12swg] add /R to the end of STANDARD PUNCH Nos.

DIES (Single point tools)

| Bush Code | Standard | Thinning | Embossing |
|-----------|----------|----------|-----------|
| 01 | C7001/D | C9501/D | C9301/D |
| 02 | C7002/D | C9502/D | C9302/D |
| 03 | C7003/D | C9503/D | C9303/D |
| 11 | C7011/D | C9511/D | C9311/D |
| 12 | C7012/D | C9512/D | C9312/D |
| 13 | C7013/D | C9513/D | C9313/D |
| 21 | C7021/D | C9521/D | - |
| 22 | C7022/D | C9522/D | - |
| 23 | C7023/D | C9523/D | - |
| 31 | C7031/D | C9531/D | - |
| 32 | C7032/D | C9532/D | - |
| 33 | C7033/D | C9533/D | - |
| 34 | C7034/D | C9534/D | - |
| 41 | C7041/D | C9541/D | - |
| 42 | C7042/D | C9542/D | - |
| 43 | C7043/D | C9543/D | - |
| 51 | C7051/D | C9551/D | - |
| 52 | C7052/D | C9552/D | - |
| 53 | C7053/D | C9553/D | - |
| 54 | C7054/D | C9554/D | - |
| 61 | C7061/D | C9561/D | - |