

# Technical Sheet

**FRUL  
SIDER**

**SIMPSON**  
**StrongTie**

## TSA-PATTEN Metal Sleeve Anchor

TSA-PATTEN is a sleeve anchor which allows for quick and easy installation in solid materials due to the low installation torque needed to install it.

### Features

#### Material

- Steel
- White zinc plated

#### Benefits

- Uniform expansion ensured by the three expanding segments made out of a single pressed steel body
- Special shaped slots on the three expanding segments pull down gaps between the fixture and base material

### Applications

#### Applications

- Brackets
- Garage doors
- Signs

#### Suitable for

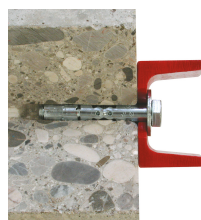
- Non-cracked concrete
- Solid brick (partially suitable)
- Solid stone

**NEW**

**EZ**



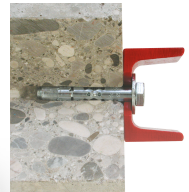
**INDOOR**



TSA-PATTEN  
Metal Sleeve Anchor

Technical Data

Product Dimensions - Hex head screw grade 8.8



Product Dimensions - Hex head  
screw grade 8.8  
See full table online [→](#)



Product Dimensions - Hex socket countersunk head

| Reference | Metallic fixings dimensions                                                         |                                |                        |                   |                   |                   |                   |                   |                   |                   | Installation data |
|-----------|-------------------------------------------------------------------------------------|--------------------------------|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|           | Other                                                                               |                                | Product Dimensions[mm] |                   |                   |                   |                   |                   |                   |                   |                   |
|           | Hole diameter<br>[d <sub>o</sub> ] x depth<br>[h <sub>1</sub> ] in<br>substrate[mm] | [h <sub>ef</sub> ,stD]<br>[mm] | [h <sub>1</sub> ]      | [h <sub>2</sub> ] | [h <sub>3</sub> ] | [h <sub>4</sub> ] | [h <sub>5</sub> ] | [h <sub>6</sub> ] | [h <sub>7</sub> ] | [h <sub>8</sub> ] |                   |
|           |                                                                                     |                                |                        |                   |                   |                   |                   |                   |                   |                   |                   |

Product Dimensions - Hex  
socket countersunk head  
See full table online [→](#)



Product Dimensions - Flanged Nut

| Reference | Metallic fixings dimensions                                                         |                                |  |  |  |                        |  |  |  |  | Installation data |  |
|-----------|-------------------------------------------------------------------------------------|--------------------------------|--|--|--|------------------------|--|--|--|--|-------------------|--|
|           | Other                                                                               |                                |  |  |  | Product Dimensions[mm] |  |  |  |  | Installation data |  |
|           | Hole diameter<br>[d <sub>o</sub> ] x depth<br>[h <sub>1</sub> ] in<br>substrate[mm] | [h <sub>ef</sub> ,stD]<br>[mm] |  |  |  |                        |  |  |  |  |                   |  |
|           |                                                                                     |                                |  |  |  |                        |  |  |  |  |                   |  |

Product Dimensions - Flanged  
Nut  
See full table online [→](#)



## TSA-PATTEN Metal Sleeve Anchor

Recommended capacities - single anchor

| Reference     | Metallic fixings dimensions | Metallic fixings loads                   |                       | Installation data                |                                         |
|---------------|-----------------------------|------------------------------------------|-----------------------|----------------------------------|-----------------------------------------|
|               | Product Reference           | Recommended loads - Non-cracked concrete |                       | Spacing and edge distances       |                                         |
|               |                             | Tension - $N_{rec}[kN]$                  | Shear - $V_{rec}[kN]$ | Characteristic edge distance[mm] | Characteristic spacing(5) - $Scr,N[mm]$ |
|               |                             | C20/25[kN]                               | C20/25[kN]            |                                  |                                         |
| 79602B0804500 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0806000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0808000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0810000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0812000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0814000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B0816000 | TSA-PATTEN                  | 1.2                                      | 1.2                   | 75                               | 100                                     |
| 79602B1006000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1008000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1010000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1012000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1014000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1016000 | TSA-PATTEN                  | 1.6                                      | 1.6                   | 85                               | 120                                     |
| 79602B1207000 | TSA-PATTEN                  | 2.2                                      | 2.2                   | 110                              | 155                                     |
| 79602B1210000 | TSA-PATTEN                  | 2.2                                      | 2.2                   | 110                              | 155                                     |
| 79602B1213000 | TSA-PATTEN                  | 2.2                                      | 2.2                   | 110                              | 155                                     |
| 79602B1215000 | TSA-PATTEN                  | 2.2                                      | 2.2                   | 110                              | 155                                     |
| 79602B1607000 | TSA-PATTEN                  | 3.8                                      | 3.8                   | 115                              | 160                                     |
| 79602B1611000 | TSA-PATTEN                  | 3.8                                      | 3.8                   | 115                              | 160                                     |
| 79602B1615000 | TSA-PATTEN                  | 3.8                                      | 3.8                   | 115                              | 160                                     |

*\*These values are for guidance only*

## TSA-PATTEN Metal Sleeve Anchor

### Installation

