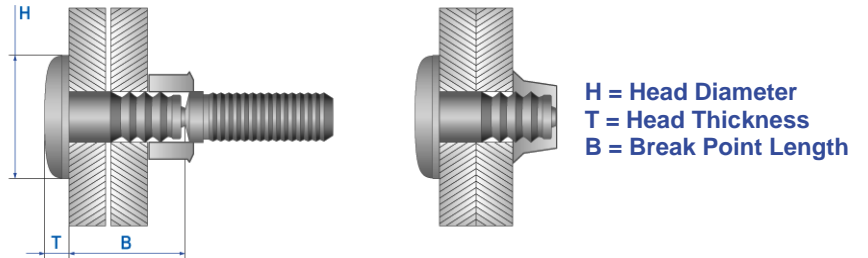




|                  |              |
|------------------|--------------|
| <b>Head Type</b> | Truss Head   |
| <b>Material</b>  | Carbon Steel |
| <b>Finish</b>    | Polished     |



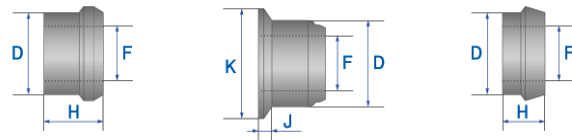
\*Dimensions in millimeters

| Part Number   | Rivet Diameter (D) nom. | Hole Size | Break Point Length(B) | Grip Range | Head Diameter (H) max. | Head Thickness (T) max. | Standard Strength (kN) typ. |         |
|---------------|-------------------------|-----------|-----------------------|------------|------------------------|-------------------------|-----------------------------|---------|
|               |                         |           |                       |            |                        |                         | Shear                       | Tensile |
| LLPTCZ-048100 | 4.8                     | 5.2       | 10.0                  | 1.6~4.8    | 10.3~12.0              | 1.9~2.3                 | 4.7                         | 4.4     |
| LLPTCZ-048116 |                         |           | 11.6                  | 3.2~6.4    |                        |                         |                             |         |
| LLPTCZ-048132 |                         |           | 13.2                  | 4.8~7.9    |                        |                         |                             |         |
| LLPTCZ-048148 |                         |           | 14.8                  | 6.4~9.5    |                        |                         |                             |         |
| LLPTCZ-048164 |                         |           | 16.4                  | 7.9~11.1   |                        |                         |                             |         |
| LLPTCZ-048180 |                         |           | 18.0                  | 9.5~12.7   |                        |                         |                             |         |
| LLPTCZ-048195 |                         |           | 19.5                  | 11.1~14.3  |                        |                         |                             |         |
| LLPTCZ-048211 |                         |           | 21.1                  | 12.7~15.9  |                        |                         |                             |         |
| LLPTCZ-048227 |                         |           | 22.7                  | 14.3~17.5  |                        |                         |                             |         |
| LLPTCZ-048243 |                         |           | 24.3                  | 15.9~19.1  |                        |                         |                             |         |
| LLPTCZ-048259 |                         |           | 25.9                  | 17.5~20.6  |                        |                         |                             |         |
| LLPTCZ-048275 |                         |           | 27.5                  | 19.1~22.2  |                        |                         |                             |         |
| LLPTCZ-048291 |                         |           | 29.1                  | 20.6~23.8  |                        |                         |                             |         |
| LLPTCZ-048307 |                         |           | 30.7                  | 22.2~25.4  |                        |                         |                             |         |
| LLPTCZ-048322 |                         |           | 32.2                  | 23.8~27.0  |                        |                         |                             |         |
| LLPTCZ-048338 |                         |           | 33.8                  | 25.4~28.6  |                        |                         |                             |         |
| LLPTCZ-048354 |                         |           | 35.4                  | 27.0~30.2  |                        |                         |                             |         |
| LLPTCZ-048370 |                         |           | 37.0                  | 28.6~31.8  |                        |                         |                             |         |
| LLPTCZ-048386 |                         |           | 38.6                  | 30.2~33.3  |                        |                         |                             |         |
| LLPTCZ-048402 |                         |           | 40.2                  | 31.8~34.9  |                        |                         |                             |         |
| LLPTCZ-048418 |                         |           | 41.8                  | 33.3~36.5  |                        |                         |                             |         |
| LLPTCZ-048434 |                         |           | 43.4                  | 34.9~38.1  |                        |                         |                             |         |
| LLPTCZ-048449 |                         |           | 44.9                  | 36.5~39.7  |                        |                         |                             |         |
| LLPTCZ-048465 |                         |           | 46.5                  | 38.1~41.3  |                        |                         |                             |         |
| LLPTCZ-048481 |                         |           | 48.1                  | 39.7~42.9  |                        |                         |                             |         |
| LLPTCZ-048497 |                         |           | 49.7                  | 41.3~44.5  |                        |                         |                             |         |
| LLPTCZ-048513 |                         |           | 51.3                  | 42.9~46.0  |                        |                         |                             |         |
| LLPTCZ-048529 |                         |           | 52.9                  | 44.5~47.6  |                        |                         |                             |         |
| LLPTCZ-048545 | 54.5                    | 46.0~49.2 |                       |            |                        |                         |                             |         |
| LLPTCZ-048561 | 56.1                    | 47.6~50.8 |                       |            |                        |                         |                             |         |
| LLPTCZ-048576 | 57.6                    | 49.2~52.4 |                       |            |                        |                         |                             |         |

| Part Number   | Rivet Diameter (D) nom. | Hole Size | Break Point Length(B) | Grip Range | Head Diameter (H) max. | Head Thickness (T) max. | Standard Strength (kN) typ. |         |
|---------------|-------------------------|-----------|-----------------------|------------|------------------------|-------------------------|-----------------------------|---------|
|               |                         |           |                       |            |                        |                         | Shear                       | Tensile |
| LLPTCZ-064123 | 6.4                     | 6.8       | 12.3                  | 1.6~4.8    | 13.4~15.1              | 2.6~3.0                 | 8.3                         | 8.0     |
| LLPTCZ-064139 |                         |           | 13.9                  | 3.2~6.4    |                        |                         |                             |         |
| LLPTCZ-064155 |                         |           | 15.5                  | 4.8~7.9    |                        |                         |                             |         |
| LLPTCZ-064171 |                         |           | 17.1                  | 6.4~9.5    |                        |                         |                             |         |
| LLPTCZ-064187 |                         |           | 18.7                  | 7.9~11.1   |                        |                         |                             |         |
| LLPTCZ-064203 |                         |           | 20.3                  | 9.5~12.7   |                        |                         |                             |         |
| LLPTCZ-064218 |                         |           | 21.8                  | 11.1~14.3  |                        |                         |                             |         |
| LLPTCZ-064234 |                         |           | 23.4                  | 12.7~15.9  |                        |                         |                             |         |
| LLPTCZ-064250 |                         |           | 25.0                  | 14.3~17.5  |                        |                         |                             |         |
| LLPTCZ-064266 |                         |           | 26.6                  | 15.9~19.1  |                        |                         |                             |         |
| LLPTCZ-064282 |                         |           | 28.2                  | 17.5~20.6  |                        |                         |                             |         |
| LLPTCZ-064298 |                         |           | 29.8                  | 19.1~22.2  |                        |                         |                             |         |
| LLPTCZ-064314 |                         |           | 31.4                  | 20.6~23.8  |                        |                         |                             |         |
| LLPTCZ-064330 |                         |           | 33.0                  | 22.2~25.4  |                        |                         |                             |         |
| LLPTCZ-064345 |                         |           | 34.5                  | 23.8~27.0  |                        |                         |                             |         |
| LLPTCZ-064361 |                         |           | 36.1                  | 25.4~28.6  |                        |                         |                             |         |
| LLPTCZ-064377 |                         |           | 37.7                  | 27.0~30.2  |                        |                         |                             |         |
| LLPTCZ-064393 |                         |           | 39.3                  | 28.6~31.8  |                        |                         |                             |         |
| LLPTCZ-064409 |                         |           | 40.9                  | 30.2~33.3  |                        |                         |                             |         |
| LLPTCZ-064425 |                         |           | 42.5                  | 31.8~34.9  |                        |                         |                             |         |
| LLPTCZ-064441 |                         |           | 44.1                  | 33.3~36.5  |                        |                         |                             |         |
| LLPTCZ-064457 |                         |           | 45.7                  | 34.9~38.1  |                        |                         |                             |         |
| LLPTCZ-064472 |                         |           | 47.2                  | 36.5~39.7  |                        |                         |                             |         |
| LLPTCZ-064488 |                         |           | 48.8                  | 38.1~41.3  |                        |                         |                             |         |
| LLPTCZ-064504 |                         |           | 50.4                  | 39.7~42.9  |                        |                         |                             |         |
| LLPTCZ-064520 |                         |           | 52.0                  | 41.3~44.5  |                        |                         |                             |         |
| LLPTCZ-064536 |                         |           | 53.6                  | 42.9~46.0  |                        |                         |                             |         |
| LLPTCZ-064552 |                         |           | 55.2                  | 44.5~47.6  |                        |                         |                             |         |
| LLPTCZ-064568 | 56.8                    | 46.0~49.2 |                       |            |                        |                         |                             |         |
| LLPTCZ-064584 | 58.4                    | 47.6~50.8 |                       |            |                        |                         |                             |         |
| LLPTCZ-064599 | 59.9                    | 49.2~52.4 |                       |            |                        |                         |                             |         |
| LLPTCZ-080190 | 8                       | 8.3       | 19.0                  | 3.2~9.5    | 17.8~20.3              | 3.2~3.6                 | 13.0                        | 12.6    |
| LLPTCZ-080222 |                         |           | 22.2                  | 6.4~12.7   |                        |                         |                             |         |
| LLPTCZ-080254 |                         |           | 25.4                  | 9.5~15.9   |                        |                         |                             |         |
| LLPTCZ-080285 |                         |           | 28.5                  | 12.7~19.1  |                        |                         |                             |         |
| LLPTCZ-080317 |                         |           | 31.7                  | 15.9~22.2  |                        |                         |                             |         |
| LLPTCZ-080349 |                         |           | 34.9                  | 19.1~25.4  |                        |                         |                             |         |
| LLPTCZ-080381 |                         |           | 38.1                  | 22.2~28.6  |                        |                         |                             |         |
| LLPTCZ-080412 |                         |           | 41.2                  | 25.4~31.8  |                        |                         |                             |         |
| LLPTCZ-080444 |                         |           | 44.4                  | 28.6~34.9  |                        |                         |                             |         |
| LLPTCZ-080476 |                         |           | 47.6                  | 31.8~38.1  |                        |                         |                             |         |
| LLPTCZ-080508 |                         |           | 50.8                  | 34.9~41.3  |                        |                         |                             |         |
| LLPTCZ-080539 |                         |           | 53.9                  | 38.1~44.5  |                        |                         |                             |         |
| LLPTCZ-080571 |                         |           | 57.1                  | 41.3~47.6  |                        |                         |                             |         |
| LLPTCZ-080603 |                         |           | 60.3                  | 44.5~50.8  |                        |                         |                             |         |
| LLPTCZ-080635 |                         |           | 63.5                  | 47.6~54.0  |                        |                         |                             |         |
| LLPTCZ-096205 |                         |           | 9.6                   | 9.9        |                        |                         |                             |         |
| LLPTCZ-096237 | 23.7                    | 6.4~12.7  |                       |            |                        |                         |                             |         |
| LLPTCZ-096269 | 26.9                    | 9.5~15.9  |                       |            |                        |                         |                             |         |
| LLPTCZ-096301 | 30.1                    | 12.7~19.1 |                       |            |                        |                         |                             |         |
| LLPTCZ-096332 | 33.2                    | 15.9~22.2 |                       |            |                        |                         |                             |         |
| LLPTCZ-096364 | 36.4                    | 19.1~25.4 |                       |            |                        |                         |                             |         |

| Part Number   | Rivet Diameter (D) nom. | Hole Size | Break Point Length(B) | Grip Range | Head Diameter (H) max. | Head Thickness (T) max. | Standard Strength (kN) typ. |         |
|---------------|-------------------------|-----------|-----------------------|------------|------------------------|-------------------------|-----------------------------|---------|
|               |                         |           |                       |            |                        |                         | Shear                       | Tensile |
| LLPTCZ-096396 | 9.6                     | 9.9       | 39.6                  | 22.2~28.6  | 21.0~23.5              | 3.8~4.3                 | 18.7                        | 18.7    |
| LLPTCZ-096428 |                         |           | 42.8                  | 25.4~31.8  |                        |                         |                             |         |
| LLPTCZ-096459 |                         |           | 45.9                  | 28.6~34.9  |                        |                         |                             |         |
| LLPTCZ-096491 |                         |           | 49.1                  | 31.8~38.1  |                        |                         |                             |         |
| LLPTCZ-096523 |                         |           | 52.3                  | 34.9~41.3  |                        |                         |                             |         |
| LLPTCZ-096555 |                         |           | 55.5                  | 38.1~44.5  |                        |                         |                             |         |
| LLPTCZ-096586 |                         |           | 58.6                  | 41.3~47.6  |                        |                         |                             |         |
| LLPTCZ-096618 |                         |           | 61.8                  | 44.5~50.8  |                        |                         |                             |         |
| LLPTCZ-096650 |                         |           | 65.0                  | 47.6~54.0  |                        |                         |                             |         |

|             |                        |
|-------------|------------------------|
| Collar Type | Standard, Flange, Half |
| Material    | Carbon Steel           |
| Finish      | Zinc Plate             |



| Part Number   | Pin Diameter (D) nom. | F        | G         | H         | J       | K         | Type     |
|---------------|-----------------------|----------|-----------|-----------|---------|-----------|----------|
| LLCSCZ-048000 | 4.8                   | 4.7~5.0  | 7.7~7.9   | 5.5~6.3   |         |           | Standard |
| LLCSCZ-064000 | 6.4                   | 6.5~6.8  | 10.2~10.4 | 7.2~8.2   |         |           |          |
| LLCSCZ-080000 | 8.0                   | 7.7~8.0  | 12.3~12.6 | 8.8~9.7   |         |           |          |
| LLCSCZ-096000 | 9.6                   | 9.5~9.8  | 15.0~15.3 | 10.9~11.7 |         |           |          |
| LLFCZ-048000  | 4.8                   | 4.7~5.0  | 7.7~7.9   | 6.3~7.2   | 0.7~1.6 | 9.1~10.0  | Flange   |
| LLFCZ-064000  | 6.4                   | 6.5~6.8  | 10.2~10.4 | 8.8~9.7   | 1.1~2.0 | 12.2~13.2 |          |
| LLFCZ-080000  | 8.0                   | 7.7~8.0  | 12.6~12.9 | 10.0~10.9 | 1.5~2.4 | 15.4~16.3 |          |
| LLFCZ-096000  | 9.6                   | 9.6~10.0 | 15.2~15.5 | 12.7~13.6 | 1.5~3.2 | 18.2~19.9 |          |
| LLHCZ-048000  | 4.8                   | 4.7~5.0  | 7.7~7.9   | 3.3~4.2   | 2.4     |           | Half     |
| LLHCZ-064000  | 6.4                   | 6.5~6.8  | 10.2~10.4 | 4.3~5.2   | 3.2     |           |          |
| LLHCZ-080000  | 8.0                   | 7.7~8.0  | 12.3~12.6 | 5.7~6.5   | 3.2     |           |          |
| LLHCZ-096000  | 9.6                   | 9.5~9.8  | 14.9~15.3 | 7.6~9.5   | 4.0     |           |          |

NOTE)

1. When using flange collar, select the grip range after addition of dimension(J) from thickness of part.
2. When using half collar, select the grip range after subtraction of dimension(J) from thickness of part.
3. When using half collar, tensile is reduced to approximately 45%