



**TL**



**TLS**

Tassello rapido ad espansione controllata  
Quick fastening anchor controlled expansion  
Cheville rapide à expansion contrôlée  
Schnellbefestigungdübel mit Kontrollierte Expansion



**TLA-X**



AISI 304 (Chiodo > Nail) + ALU (Corpo > Body)



**TLC**



Zama > Zamac > Zamak



**DZ-N**



**BC**



Block-up dado quadro, tiranti per copertura  
Block-up squared washer  
Block-up rondelle carrée > Block-up Quadratischer Scheibe

## > Materiale > Material > Matériel > Material



Acciaio zincato bianco  
White zinc plated steel  
Acier zingué blanc  
Blau / Weiß Verzinkter Stahl



Inox A2 AISI 304



Zama > Zamac > Zamak



Alluminio  
Alluminium

**NOTA:** Dati tecnici, di installazione e di carico possono essere oggetto di revisione. Per una versione aggiornata consultare le schede tecniche sul sito [www.bossong.com](http://www.bossong.com) o contattare il nostro Ufficio Tecnico.

**WARNING:** Installation and loads technical data can be modified by us. For update technical data sheet see [www.bossong.com](http://www.bossong.com) or be in contact with our Technical Office.

**NOTE:** données techniques, d'installation et de charge peuvent être objet de révision. Pour une version mise à jour, consulter les fiches techniques dans le site internet [www.bossong.com](http://www.bossong.com) ou contacter notre Bureau Technique.

**ANMERKUNG:** technische Daten, Anschlussdaten und Lastdaten können modifiziert werden. Für die aktualisierte Version sind die technischen Blätter auf der Webseite [www.bossong.com](http://www.bossong.com) nachzuschauen, oder unser Technisches Büro soll konsultiert werden.

## > Applicazioni > Applications > Applications > Anwendungen



Edilizia Civile Leggera  
Light Building Construction  
Construction Civile Légère  
Leichtes Zivilbauwesen



Edilizia Industriale Leggera  
Light Industrial Construction  
Construction Industriel Légère  
Leichtes Industriebauwesen



Settore Elettrico Leggero  
Light Electricity Area  
Secteur Electrique Legèr  
Leichtes Elektrischenwesen



Settore Idraulico e Lattoneria  
Hydraulic and Tilling Area  
Secteur Hydraulique et Ferblanterie  
Leichte Hydraulikwesen und Blecharbeiten



Ambiente Urbano Medio Inquinamento  
Middle Urban Pollution  
Moyenne Pollution en Ville  
Mittlere Stadtverschmutzung



Calcestruzzo C20/25  
Concrete C20/25  
Béton C20/25  
Beton C20/25



Ambiente Urbano Alto Inquinamento  
Heavy Urban Pollution  
Pollution en Ville importante  
Starke Stadtverschmutzung



Presenza d'acqua  
Water in place  
Eau sur place  
Wasser in Platz



Ambiente Industriale  
Industry Area  
Zone Industrielle  
Industriebereich



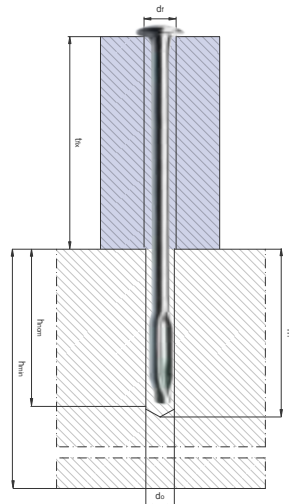
Tetto  
Roof  
Toit  
Dach



# SCHEDA TECNICA TECHNICAL DATA SHEET FICHE TECHNIQUE TECHNISCHES DATENBLATT

## > Dati tecnici > Technical data > Données techniques > Technische Angaben

|                             |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------|
| <b>L</b> [mm]               | Lunghezza totale > Total length > Longueur > Totallänge                                            |
| <b>Ø</b> [mm]               | Diametro testa > Head diameter > Diamètre de la Tête > Kopfdurchmesser                             |
| <b>t<sub>fix</sub></b> [mm] | Spessore fissabile (max) > Fixture thickness (max) > Épaisseur fixable (max) > Max. Anbauteildicke |
| <b>d<sub>nom</sub></b> [mm] | Diametro esterno > Outside diameter > Diamètre externe > Außendurchmesser                          |
| <b>d</b> [mm]               | Diametro filettatura > Thread diameter > Diamètre du filetage > Gewindedurchmesser                 |
| <b>P</b> [mm]               | Passo della vite > Pitch screw > Pas de la vis > Schrambesteigung                                  |



### TLS



Tassello rapido ad espansione controllata  
Quick fastening anchor controlled expansion



| CODICE<br>CODE | ARTICOLO<br>ITEM | LUNGH.TOT.<br>TOT LENGTH | Ø TESTA<br>HEAD Ø | SPESS. FIX<br>MAX THICK. |  |
|----------------|------------------|--------------------------|-------------------|--------------------------|---------------------------------------------------------------------------------------|
|                | TLS              | L [mm]                   | Ø [mm]            | t <sub>fix</sub> [mm]    | Nr.                                                                                   |
| 707003         | TLS 5 x 30       | 30                       | 12                | 5                        | 100 / 500                                                                             |
| 707004         | TLS 5 x 40       | 40                       | 12                | 10                       | 100 / 500                                                                             |
| 707005         | TLS 5 x 50       | 50                       | 12                | 20                       | 100 / 500                                                                             |
| 707006         | TLS 5 x 60       | 60                       | 12                | 30                       | 100 / 500                                                                             |
| 707007         | TLS 5 x 70       | 70                       | 12                | 40                       | 100 / 500                                                                             |
| 707008         | TLS 5 x 80       | 80                       | 12                | 50                       | 100 / 500                                                                             |
| 707009         | TLS 5 x 90       | 90                       | 12                | 60                       | 100 / 500                                                                             |
| 707011         | TLS 5 x 110      | 110                      | 12                | 80                       | 100 / 500                                                                             |
| 707012         | TLS 5 x 120      | 120                      | 12                | 90                       | 100 / 500                                                                             |
| 707013         | TLS 5 x 135      | 135                      | 12                | 105                      | 500                                                                                   |
| 707024         | TLS 7 x 140      | 140                      | 12                | 110                      | 500                                                                                   |
| 707023         | TLS 7 x 150      | 150                      | 12                | 120                      | 500                                                                                   |
| 707025         | TLS 7 x 160      | 160                      | 12                | 130                      | 500                                                                                   |
| 707026         | TLS 7 x 180      | 180                      | 12                | 150                      | 300                                                                                   |
| 707027         | TLS 7 x 200      | 200                      | 12                | 170                      | 300                                                                                   |
| 707028         | TLS 7 x 225      | 225                      | 12                | 195                      | 300                                                                                   |
| 707029         | TLS 7 x 250      | 250                      | 12                | 220                      | 300                                                                                   |
| 707030         | TLS 7 x 275      | 275                      | 12                | 245                      | 200                                                                                   |
| 707031         | TLS 7 x 300      | 300                      | 12                | 270                      | 200                                                                                   |

### TLA-X



AISI 304 (Chiodo > Nail) + ALU (Corpo > Body)



| CODICE<br>CODE | ARTICOLO<br>ITEM | Ø ESTERNO<br>OUTSIDE Ø | LUNGH.TOT.<br>TOT LENGTH | Ø TESTA<br>HEAD Ø | SPESS. FIX<br>MAX THICK. |  |
|----------------|------------------|------------------------|--------------------------|-------------------|--------------------------|---------------------------------------------------------------------------------------|
|                | TLA-X            | d <sub>nom</sub> [mm]  | L [mm]                   | Ø [mm]            | t <sub>fix</sub> [mm]    | Nr.                                                                                   |
| 970080         | TLA-X 5x15       | 5                      | 15                       | 15                | 5                        | 200                                                                                   |
| 970081         | TLA-X 5x25       | 5                      | 25                       | 15                | 15                       | 200                                                                                   |



## TLC



| CODICE CODE                                                                       | ARTICOLO ITEM | Ø ESTERNO OUTSIDE Ø   | LUNGH.TOT. TOT LENGTH | Ø TESTA HEAD Ø | SPESS. FIX MAX THICK. |  |
|-----------------------------------------------------------------------------------|---------------|-----------------------|-----------------------|----------------|-----------------------|-------------------------------------------------------------------------------------|
|  | <b>TLC</b>    | d <sub>nom</sub> [mm] | L [mm]                | Ø [mm]         | t <sub>fix</sub> [mm] | Nr.                                                                                 |
| 706630                                                                            | TLC 630       | 6                     | 30                    | 14             | 5                     | ext. pack 1000                                                                      |
| 706640                                                                            | TLC 640       | 6                     | 40                    | 14             | 15                    | ext. pack 1000                                                                      |
| 706650                                                                            | TLC 650       | 6                     | 50                    | 14             | 25                    | 200                                                                                 |
| 706658                                                                            | TLC 660       | 6                     | 60                    | 14             | 35                    | 200                                                                                 |
| 706660                                                                            | TLC 665       | 6                     | 65                    | 14             | 40                    | 200                                                                                 |

## DZ-N



| CODICE CODE | ARTICOLO ITEM | Ø ESTERNO OUTSIDE Ø   | LUNGH.TOT. TOT LENGTH | Ø TESTA HEAD Ø | SPESS. FIX MAX THICK. |  |
|-------------|---------------|-----------------------|-----------------------|----------------|-----------------------|-------------------------------------------------------------------------------------|
|             | <b>DZ - N</b> | d <sub>nom</sub> [mm] | L [mm]                | Ø [mm]         | t <sub>fix</sub> [mm] | Nr.                                                                                 |
| 707035      | DZ-N 6 x 35   | 6                     | 35                    | 15             | 4,5                   | 100                                                                                 |
| 707065      | DZ-N 6 x 65   | 6                     | 65                    | 15             | 35                    | 100                                                                                 |

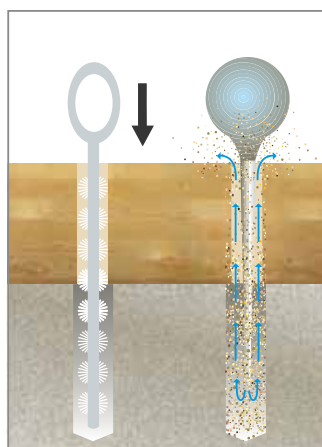
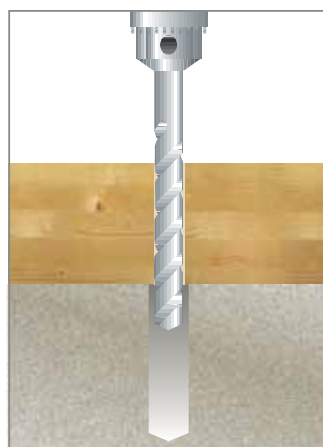
## BC



Block-up dado quadro, tiranti per copertura > Block-up squared washer  
Block-up rondelle carrée > Block-up Quadratischer Scheibe



| CODICE CODE | ARTICOLO ITEM | Ø FILETTATURA THREAD Ø | Ø ESTERNO OUTSIDE Ø   | LUNGH.TOT. TOT LENGTH | PASSO VITE |  |
|-------------|---------------|------------------------|-----------------------|-----------------------|------------|---------------------------------------------------------------------------------------|
|             | <b>BC</b>     | d [mm]                 | d <sub>nom</sub> [mm] | L [mm]                | P [mm]     | Nr.                                                                                   |
| 708554      | BC 6 x 110    | M6                     | 6                     | 110                   | 9/32       | 250                                                                                   |
| 708553      | BC 6 x 120    | M6                     | 6                     | 120                   | 9/32       | 250                                                                                   |
| 708555      | BC 6 x 140    | M6                     | 6                     | 140                   | 9/32       | 250                                                                                   |
| 708558      | BC 6 x 170    | M6                     | 6                     | 170                   | 9/32       | 250                                                                                   |
| 708559      | BC 6 x 180    | M6                     | 6                     | 180                   | 9/32       | 250                                                                                   |
| 708560      | BC 6 x 200    | M6                     | 6                     | 200                   | 9/32       | 250                                                                                   |

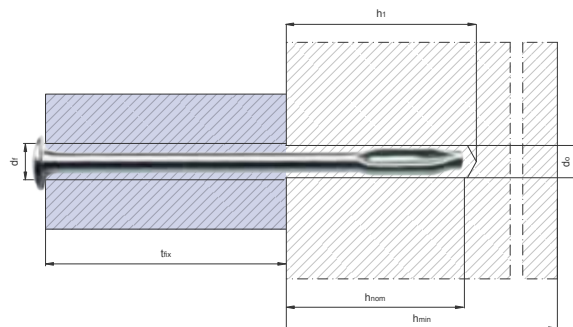




# SCHEDA TECNICA TECHNICAL DATA SHEET FICHE TECHNIQUE TECHNISCHES DATENBLATT

## > Dati installazione > Installation data > Données de installation > Installationsangaben

|                |                |                                                                                                                                                     |
|----------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LEGENDA</b> | $h_{min}$ [mm] | Spessore minimo del supporto > Minimum thickness of base material<br>> Épaisseur minimal du matériau base > Mindestbauteildicke                     |
|                | $d_o$ [mm]     | Diametro foro > Hole diameter > Diamètre du trou > Bohrerennendurchmesser                                                                           |
|                | $h_1$ [mm]     | Profondità del foro > Hole depth > Profondeur du trou > Bohrlochtiefe                                                                               |
|                | $h_{nom}$ [mm] | Profondità di inserimento > Embedment depth > Profondeur d'enfocé > Setztiefe                                                                       |
|                | $h_{ef}$ [mm]  | Profondità effettiva ancoraggio > Effective anchorage depth<br>Profondeur efficace d'ancrage > Effektive Verankerungstiefe                          |
|                | $d_f$ [mm]     | Diametro foro spessore fissabile > Diameter of clearance hole in the fixture<br>Diamètre du trou de épaisseur fixable > Durchgangsloch im Anbauteil |



## TLS



Tassello rapido ad espansione controllata  
Quick fastening anchor controlled expansion



| CODICE CODE | ARTICOLO ITEM | SPESSORE MIN SUPPORTO MIN THICKNESS BASE MATERIAL | DIAM. FORO HOLE DIAM. | PROFONDITÀ DEL FORO HOLE DEPTH | PROFONDITÀ DI INSERIMENTO EMBEDMENT DEPTH | PROFONDITÀ EFFETTIVA ANCORAGGIO EFFECTIVE ANCHORAGE DEPTH | DIAM. FORO SPESSORE FISSABILE DIAM. CLEARANCE HOLE IN THE FIXTURE |
|-------------|---------------|---------------------------------------------------|-----------------------|--------------------------------|-------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
|             | <b>TLS</b>    | $h_{min}$ [mm]                                    | $d_o$ [mm]            | $h_1$ [mm]                     | $h_{nom}$ [mm]                            | $h_{ef}$ [mm]                                             | $d_f$ [mm]                                                        |
| 707003      | TLS 5 x 30    | 60                                                | 5                     | 35                             | 25                                        | 25                                                        | 6,5                                                               |
| 707004      | TLS 5 x 40    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707005      | TLS 5 x 50    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707006      | TLS 5 x 60    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707007      | TLS 5 x 70    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707008      | TLS 5 x 80    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707009      | TLS 5 x 90    | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707011      | TLS 5 x 110   | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707012      | TLS 5 x 120   | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707013      | TLS 5 x 135   | 60                                                | 5                     | 40                             | 30                                        | 30                                                        | 6,5                                                               |
| 707024      | TLS 7 x 140   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707023      | TLS 7 x 150   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707025      | TLS 7 x 160   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707026      | TLS 7 x 180   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707027      | TLS 7 x 200   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707028      | TLS 7 x 225   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707029      | TLS 7 x 250   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707030      | TLS 7 x 275   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |
| 707031      | TLS 7 x 300   | 60                                                | 7                     | 40                             | 30                                        | 30                                                        | 9                                                                 |

## TLA-X



ALU (Corpo > Body) AISI 304 (Chiodo > Nail)



| CODICE CODE | ARTICOLO ITEM | SPESSORE MIN SUPPORTO MIN THICKNESS BASE MATERIAL | DIAM. FORO HOLE DIAM. | PROFONDITÀ DEL FORO HOLE DEPTH | PROFONDITÀ DI INSERIMENTO EMBEDMENT DEPTH | PROFONDITÀ EFFETTIVA ANCORAGGIO EFFECTIVE ANCHORAGE DEPTH | DIAM. FORO SPESSORE FISSABILE DIAM. CLEARANCE HOLE IN THE FIXTURE |
|-------------|---------------|---------------------------------------------------|-----------------------|--------------------------------|-------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
|             | <b>TLA-X</b>  | $h_{min}$ [mm]                                    | $d_o$ [mm]            | $h_1$ [mm]                     | $h_{nom}$ [mm]                            | $h_{ef}$ [mm]                                             | $d_f$ [mm]                                                        |
| 970080      | TLA-X 5x15    | 60                                                | 5                     | 20                             | 10                                        | 10                                                        | 6                                                                 |
| 970081      | TLA-X 5x25    | 60                                                | 5                     | 20                             | 10                                        | 10                                                        | 6                                                                 |



## TLC



Zama > Zamac > Zamak



| CODICE CODE | ARTICOLO ITEM | SPESSORE MIN SUPPORTO MIN THICKNESS BASE MATERIAL | DIAM. FORO HOLE DIAM. | PROFONDITÀ DEL FORO HOLE DEPTH | PROFONDITÀ DI INSERIMENTO EMBEDMENT DEPTH | PROFONDITÀ EFFETTIVA ANCORAGGIO EFFECTIVE ANCHORAGE DEPTH | DIAM. FORO SPESSORE FISSABILE DIAM. CLEARANCE HOLE IN THE FIXTURE |
|-------------|---------------|---------------------------------------------------|-----------------------|--------------------------------|-------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
|             | <b>TLC</b>    | $h_{min}$ [mm]                                    | $d_0$ [mm]            | $h_1$ [mm]                     | $h_{nom}$ [mm]                            | $h_{ef}$ [mm]                                             | $d_f$ [mm]                                                        |
| 706630      | TLC 630       | 60                                                | 6                     | 35                             | 25                                        | 25                                                        | 7                                                                 |
| 706640      | TLC 640       | 60                                                | 6                     | 35                             | 25                                        | 25                                                        | 7                                                                 |
| 706650      | TLC 650       | 60                                                | 6                     | 35                             | 25                                        | 25                                                        | 7                                                                 |
| 706658      | TLC 660       | 60                                                | 6                     | 35                             | 25                                        | 25                                                        | 7                                                                 |
| 706660      | TLC 665       | 60                                                | 6                     | 35                             | 25                                        | 25                                                        | 7                                                                 |

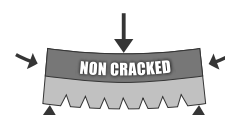
## DZ-N



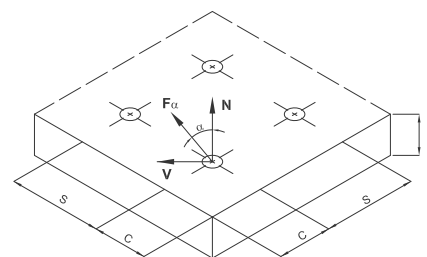
| CODICE CODE | ARTICOLO ITEM | SPESSORE MIN SUPPORTO MIN THICKNESS BASE MATERIAL | DIAM. FORO HOLE DIAM. | PROFONDITÀ DEL FORO HOLE DEPTH | PROFONDITÀ DI INSERIMENTO EMBEDMENT DEPTH | PROFONDITÀ EFFETTIVA ANCORAGGIO EFFECTIVE ANCHORAGE DEPTH | DIAM. FORO SPESSORE FISSABILE DIAM. CLEARANCE HOLE IN THE FIXTURE |
|-------------|---------------|---------------------------------------------------|-----------------------|--------------------------------|-------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
|             | <b>DZ-N</b>   | $h_{min}$ [mm]                                    | $d_0$ [mm]            | $h_1$ [mm]                     | $h_{nom}$ [mm]                            | $h_{ef}$ [mm]                                             | $d_f$ [mm]                                                        |
| 707035      | DZ-N 6 x 35   | 60                                                | 6                     | 40                             | 30,5                                      | 32                                                        | 7                                                                 |
| 707065      | DZ-N 6 x 65   | 60                                                | 6                     | 40                             | 30,0                                      | 32                                                        | 7                                                                 |

### > Dati carico > Load data > Données de charge > Lastdaten

|               |                                           |                                                                         |
|---------------|-------------------------------------------|-------------------------------------------------------------------------|
| <b>LEGEND</b> | $f_{ck}/f_{ck,cube}$ [N/mm <sup>2</sup> ] | Classe calcestruzzo > Concrete > Beton > Beton                          |
|               | $F_{rec}$ [kN]                            | Carico consigliato > Recommended load > Charge conseillée > Projectlast |



1 kN = 100 Kg



| ARTICOLO ITEM | CLASSE CALCESTRUZZO CONCRETE              | CARICO CONSIGLIATO RECOMMENDED LOAD |
|---------------|-------------------------------------------|-------------------------------------|
|               | $f_{ck}/f_{ck,cube}$ [N/mm <sup>2</sup> ] | $F_{rec}$ [kN]                      |
| TLS 5         | C20/25                                    | 0,50                                |
| TLS 7         | C20/25                                    | 1,80                                |
| TLA-X         | C20/25                                    | 0,40                                |
| TLC           | C20/25                                    | 0,55                                |
| DZ-N          | C20/25                                    | 0,85                                |

> Carichi validi per singolo ancorante senza influenza di interasse e distanza dal bordo  
> Loads valid for single anchoring element with no influence on spacing and distance from side  
> Charges valables pour chaque ancrage sans influence d'interaxe et distance du bord  
> Passende Ringe für den einzelnen Veranker, ohne Achsenabstandseinfluss und des Randabstands

> Coefficiente di sicurezza incluso  
> Safety factor included  
> Coefficient de sécurité inclu  
> Sicherheitskoeffizient Inbegriffen