## walraven




## Protección óptima

- Todos los tratamientos aplicados en superficie superan 1.000 horas de ensayo en cámara de niebla salina según ISO $9227^{*}$
- Apto para ambientes corrosivos C1-C4 según ISO 12944-2

Mejor que el galvanizado en caliente

- Resistencia anticorrosiva notablemente superior ( 1.000 vs. 300-600 horas*), con una capa de revestimiento de grosor más fino
- Partes roscadas protegidas y totalmente funcionales
- Acabado resistente, liso y visualmente atractivo


## Sistema completo

- Gama integral para realizar instalaciones completas con protección anticorrosiva superior
- Se pueden combinar con productos de acero inoxidable **


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* Hasta la aparición de un máximo de $5 \%$ de óxido rojo.
** Para más información sobre términos de garantía, FAQs y consejos para su instalación, véase en walraven.com.


Resultado tras ensayo de 1.000 horas en cámara de niebla salina


## BIS Yeti 335 sistema de soportación (BUP1000)



## Características y ventajas

$\square$ sistema modular de soportación para instalaciones de climatización, paneles solares, pasarelas, etc. sobre suelo de cubiertas

- para tejados planos
para aplicaciones horizontales y verticales
- conector rotable $360^{\circ}$ para carriles BIS

RapidStrut ${ }^{\oplus} 41 \times 41$ o BIS RapidStrut ${ }^{\oplus}$ DS 5 ( $41 \times 52 \mathrm{~mm}$ )

- con alfombrilla antivibratoria no deslizante
reducción del sonido de acuerdo con DIN EN ISO 10140-1 y DIN EN ISO 10140-3
hasta $31 \mathrm{~dB}(\mathrm{~A})$

| Pieza ${ }^{\circ}$ | Modelo | L | $\begin{array}{\|c\|} \hline \mathbf{B} \\ (\mathrm{mm}) \end{array}$ | $\begin{aligned} & \mathrm{F}_{\mathrm{a}, \mathrm{z}} \\ & (\mathrm{~N}) \end{aligned}$ | $\begin{array}{r} \mathrm{F}_{\mathrm{a}, \mathrm{z}} 2 \\ (\mathrm{~N}) \end{array}$ | $\begin{gathered} \mathrm{M}_{\mathrm{a}, \mathrm{y}} \\ (\mathrm{Nm}) \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 67685201 | Vertical | 335 mm | 335 | 20.000* | 30.000** | 200,0 |  |  |  |
| 67685302 | H -set | 335 mm | 335 | 20.000* | 30.000** | 200,0 |  |  |  |
| * = Máxima carga permitida para carril Strut 41×41x2,5. <br> ** = Máxima carga permitida para carril Strut 41×51×2,0 - DS5. <br> La carga Fa,z es sólo la carga de rotura, para el cálculo de una carga detallada, por favor, contacte con el Soporte Técnico Walraven. <br> En casos donde un pie sea usado en aplicaciones de cubiertas, el instalador está obligado a verificar la capacidad de carga máxima de la cubierta antes de la instalación. |  |  |  |  |  |  |  |  |  |

- molduras hechas de WPC, una composición de plástico reciclado y fibras de madera
- resistente a rayos UV e influencias químicas
BIS Yeti 335 H -set juego compuesto por:
- $2 \times$ BIS Yeti ${ }^{8} 335$ con alfombrilla antivibratoria (hecho de goma)
- $2 \times$ BIS Strut Tapones de carril
$\square 4 \times$ BIS Strut Conectores de $90^{\circ}$
■ $8 \times$ tornillos de cabeza hexagonal y tuercas



## BIS HD1501 Abrazaderas de carga pesada (BUP1000)



## Características y ventajas

- abrazadera de dos piezas con dos tuercas bloqueantes
- hasta 5" inclusive: la tuerca de cierre es prisionera, está escondida dentro del soporte de plástico
- diseño pesado
- tornillos de seguridad con arandela antipérdida
- con tuerca soldada al $\mathrm{CO}_{2}$
- material: acero
- aislante de ruido conforme a DIN 4109
tratamiento de la superficie:
- este producto forma parte del Sistema BIS UItraProtect ${ }^{\bullet} 1000$
- idóneo para aplicaciones en interior y al aire libre
- resistencia mínima de 1.000 horas en un test de niebla salina (max. 5\% óxido rojo) de acuerdo con ISO 9227
- revestimiento aislante de ruido, goma de EPDM, negro
- también disponible: revestimiento aislante del ruido goma de silicona (marrón rojizo), resistente a altas temperaturas hasta $+200^{\circ} \mathrm{C}$ (A 35 15)
- goma resistente al envejecimiento seguridad contra incendios probada


| Pieza ${ }^{\text {o }}$ | $\underset{(\mathrm{mm})}{\mathrm{D}}$ | $\begin{aligned} & \hline \text { D } \\ & \left({ }^{\prime \prime}\right) \end{aligned}$ | DN | G | $\begin{gathered} \text { B } \\ (m \mathrm{~m}) \end{gathered}$ | $\begin{gathered} \mathrm{H} \\ (\mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \mathrm{h} \\ (\mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \hline \mathrm{b} \times \mathrm{s} \\ (\mathrm{~mm}) \end{gathered}$ | cs | $\begin{array}{r} \mathrm{F}_{\mathrm{a}, \mathrm{z}} \\ (\mathrm{~N}) \end{array}$ | RAL | U.m.v. 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33138019 | 15-19 | 3/8 | 10 | M8/10 | 81 | 55 | 35 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138023 | 19-23 | 1/2 | 15 | M8/10 | 84 | 58 | 37 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138029 | 25-29 | 3/4 | 20 | M8/10 | 91 | 64 | 40 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138035 | 30-35 | 1 | 25 | M8/10 | 98 | 70 | 43 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138045 | 40-45 | $11 / 4$ | 32 | M8/10 | 109 | 80 | 48 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138051 | 46-51 | $11 / 2$ | 40 | M8/10 | 115 | 86 | 51 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138059 | 53-59 | - | - | M8/10 | 122 | 93 | 55 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33138064 | 59-64 | 2 | 50 | M8/10 | 129 | 99 | 57 | $30 \times 2,5$ | M8 | 1.500 | RAL ${ }^{2}$ | 25 |
| 33148071 | 65-71 | - | - | M 10/12 | 136 | 116 | 71 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148078 | 72-78 | $2^{1 / 2}$ | 65 | M 10/12 | 144 | 123 | 74 | $30 \times 3,0$ | M8 | 2.300 | $R A L^{2}$ | 25 |
| 33148085 | 79-85 | - | - | M 10/12 | 152 | 130 | 78 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148092 | 86-92 | 3 | 80 | M 10/12 | 159 | 136 | 81 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148109 | 101-109 | - | - | M 10/12 | 175 | 154 | 90 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148116 | 108-116 | 4 | 100 | M 10/12 | 182 | 160 | 93 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148133 | 125-133 | - | - | M 10/12 | 200 | 178 | 102 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 25 |
| 33148140 | 132-140 | 5 | 125 | M 10/12 | 207 | 184 | 104 | $30 \times 3,0$ | M8 | 2.300 | RAL ${ }^{2}$ | 15 |
| 33148169 | 159-169 | 6 | 150 | M 10/12 | 254 | 223 | 124 | $38 \times 4,0$ | M10 | 3.800 | RAL ${ }^{2}$ | 15 |
| 33148188 | 178-188 | - | - | M 10/12 | 274 | 242 | 133 | $38 \times 4,0$ | M10 | 3.800 | $R A L^{2}$ | 15 |
| 33148204 | 194-204 | - | - | M 10/12 | 290 | 258 | 141 | $38 \times 4,0$ | M10 | 3.800 | RAL ${ }^{2}$ | 15 |
| 33148213 | 203-213 | - | - | M 10/12 | 299 | 267 | 146 | $38 \times 4,0$ | M10 | 3.800 | RAL ${ }^{2}$ | 15 |
| 33148227 | 217-227 | 8 | 200 | M 10/12 | 322 | 282 | 152 | $38 \times 4,0$ | M12 | 3.800 | RAL ${ }^{2}$ | 2 |

[^0]BIS RapidStrut Sistemas de Fijación BIS Accesorios de fijación BIS Fijaciones

## Complementarios

BIS Perfiles de silicona


## BIS RapidStrut ${ }^{\oplus}$ Carril de fijación (BUP1000)

## Características y ventajas

- sistema de carriles universal
- la protección a la corrosión se mantiene material: acero 1.0242 después del corte
- con perforación continua
- la distancia entre el extremo final del carril y el primer orificio es siempre la misma
- con una escala de graduación continua en un lado
- con bordes interiores con perfil serrado para un agarre adicional
desde Strut $41 \times 41 \times 2,5$ seguridad probada contra incendios

| Pieza ${ }^{\circ}$ | L | $\begin{gathered} \hline \text { B } \\ (\mathrm{mm}) \end{gathered}$ | $\begin{gathered} \mathrm{H} \\ (\mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \mathrm{S} \\ (\mathrm{~mm}) \end{gathered}$ | $\underset{(\mathrm{mm})}{\mathrm{S}}$ | RAL | At.peq. | At.gr. | Unid. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65018227 | 2 m | 41 | 21 | 2,50 | 22 | RAL ${ }^{1}$ | 20 | 200 | m. |
| 65018327 | 3 m | 41 | 21 | 2,50 | 22 | RAL ${ }^{1}$ | 30 | 300 | m. |
| 65018627 | 6 m | 41 | 21 | 2,50 | 22 | RAL ${ }^{1}$ | 60 | 600 | m. |
| 65018247 | 2 m | 41 | 41 | 2,50 | 22 | RAL ${ }^{1}$ | 20 | 100 | m. |
| 65018347 | 3 m | 41 | 41 | 2,50 | 22 | RAL ${ }^{1}$ | 30 | 150 | m. |
| 65018647 | 6 m | 41 | 41 | 2,50 | 22 | RAL ${ }^{1}$ | 60 | 300 | m. |
| 65018367 | 3 m | 41 | 62 | 2,50 | 22 | - | 90 | - | m. |
| 65018667 | 6 m | 41 | 62 | 2,50 | 22 | - | 36 | 216 | m. |

$R A L^{1}=$ probado, certificado y controlado por un tercero, de acuerdo con RAL-GZ 655/C.
Desde Strut $41 \times 41 \times 2,5$ seguridad probada contra incendios.
Para información técnica detallada sobre nuestros productos certificados RAL, por favor miren la tabla de datos RAL en nuestro catálogo web.
Para más información sobre la carga máxima permitida (Fa,z) por favor remitanse a las tablas de carga o a nuestra ficha técnica online 'Detalles Técnicos BIS RapidStrut ${ }^{\text {', }}$


RAL-GZ 655/C Cert.Nr. 2015-02


## walraven

Rail section properties and load tables


Technical Data
BIS RapidStrut ${ }^{\oplus}$ Profiles

## System BIS RapidStrut ${ }^{\circledR}$ - Table of rail section properties



See Rail load tables for safe working loads.

## Perforation pattern of rails

Distance between rail end and first hole is always equal.

## BIS RapidStrut ${ }^{\circ}$ - 1.5 / 2.0 / 2.5 mm



BIS RapidStrut ${ }^{\circ}$ DS 5-2.0 mm


## Calculation method

The published safe working loads are calculated with perforated (slotted) rail, open side of the rail down.

Loads are calculated taking into consideration a maximum deflection (f) of L/200 (according to RAL-GZ 655/B) and a maximum bending stress of $160 \mathrm{~N} / \mathrm{mm}^{2}$. (see picture1)
$1 \mathrm{~N}($ Newton $)=0.102 \mathrm{~kg}$
$1 \mathrm{~kg}=9.8 \mathrm{~N}$ (Newton)

## Fixing of rails to walls or ceilings

The strength of the anchoring of the rail has not been taken into consideration. The installer must verify that the bolts and wall plugs used are suitable for the maximum permitted loading of the rail.

## Reading the rail loading tables

The stated values are only valid for the fixing rail. The maximum safe load of all other construction parts have to be verified. The stated maximum safe load is calculated for a static load at free bending support. (see picture 2)

Where the segment is marked with a hyphen, the stated length cannot be safely loaded.

## Special conditions

In case of doubt or for special conditions not stated in the loading tables, please do not hesitate to contact our technical department for their advice.

## Hanging of rails from the ceiling

When hanging rails from the ceiling we recommend the use of U -formed washers on the open side of the rail (see picture 3).

## Methods of loading

Where loads are suspended beneath rails (e.g. hanging pipes), the load must not exceed the relevant safe load of the slide nut. To increase rigidity of the installation we recommend the use of a U-formed washer (see picture 4).


Picture 1



Picture 3


## BIS RapidStrut ${ }^{\oplus}$ Fixing rail: suspension on 1 point



|  | Single |  |  |  |  |  |  |  |  | Double |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41x21D | 41x41D | 41x62D | 41x82D |
| 250 | 1,848 | 2,153 | 2,381 | 5,427 | 6,556 | 7,611 | 8,812 | 14,730 | 23,035 | 7,081 | 22,797 | 46,461 | 75,937 |
| 300 | 1,540 | 1,794 | 1,984 | 4,523 | 5,463 | 6,342 | 7,343 | 12,275 | 19,196 | 5,901 | 18,997 | 38,718 | 63,281 |
| 350 | 1,320 | 1,538 | 1,701 | 3,877 | 4,683 | 5,436 | 6,294 | 10,522 | 16,453 | 5,058 | 16,283 | 33,187 | 54,241 |
| 400 | 1,155 | 1,346 | 1,488 | 3,392 | 4,098 | 4,757 | 5,507 | 9,206 | 14,397 | 4,426 | 14,248 | 29,038 | 47,461 |
| 450 | 1,027 | 1,196 | 1,323 | 3,015 | 3,642 | 4,228 | 4,895 | 8,183 | 12,797 | 3,934 | 12,665 | 25,812 | 42,187 |
| 500 | 924 | 1,076 | 1,190 | 2,714 | 3,278 | 3,805 | 4,406 | 7,365 | 11,517 | 3,540 | 11,398 | 23,231 | 37,969 |
| 600 | 770 | 897 | 992 | 2,261 | 2,732 | 3,171 | 3,671 | 6,138 | 9,598 | 2,950 | 9,499 | 19,359 | 31,641 |
| 700 | 660 | 769 | 850 | 1,938 | 2,341 | 2,718 | 3,147 | 5,261 | 8,227 | 2,529 | 8,142 | 16,593 | 27,120 |
| 800 | 557 | 642 | 719 | 1,696 | 2,049 | 2,378 | 2,754 | 4,603 | 7,198 | 2,213 | 7,124 | 14,519 | 23,730 |
| 900 | 440 | 508 | 568 | 1,508 | 1,821 | 2,114 | 2,448 | 4,092 | 6,399 | 1,967 | 6,332 | 12,906 | 21,094 |
| 1,000 | 356 | 411 | 460 | 1,357 | 1,639 | 1,903 | 2,203 | 3,683 | 5,759 | 1,770 | 5,699 | 11,615 | 18,984 |
| 1,200 | 247 | 286 | 320 | 1,131 | 1,366 | 1,586 | 1,836 | 3,069 | 4,799 | 1,475 | 4,749 | 9,679 | 15,820 |
| 1,400 | 182 | 210 | 235 | 969 | 1,171 | 1,359 | 1,573 | 2,630 | 4,113 | 1,264 | 4,071 | 8,297 | 13,560 |
| 1,600 | 139 | 161 | 180 | 794 | 952 | 1,114 | 1,377 | 2,302 | 3,599 | 1,015 | 3,562 | 7,260 | 11,865 |
| 1,800 | 110 | 127 | 142 | 628 | 752 | 881 | 1,224 | 2,046 | 3,199 | 802 | 3,166 | 6,453 | 10,547 |
| 2,000 | 89 | 103 | 115 | 508 | 609 | 713 | 1,004 | 1,841 | 2,879 | 650 | 2,850 | 5,808 | 9,492 |
| 2,250 | 70 | 81 | 91 | 402 | 481 | 564 | 794 | 1,624 | 2,559 | 513 | 2,533 | 5,162 | 8,437 |
| 2,500 | 57 | 66 | 74 | 325 | 390 | 456 | 643 | 1,315 | 2,303 | 416 | 2,280 | 4,646 | 7,594 |
| 2,750 | 47 | 54 | 61 | 269 | 322 | 377 | 531 | 1,087 | 2,094 | 344 | 2,072 | 4,224 | 6,903 |
| 3,000 | 40 | 46 | 51 | 226 | 271 | 317 | 446 | 913 | 1,890 | 289 | 1,863 | 3,872 | 6,328 |
| 3,250 | 34 | 39 | 44 | 193 | 231 | 270 | 380 | 778 | 1,611 | 246 | 1,588 | 3,574 | 5,841 |
| 3,500 | 29 | 34 | 38 | 166 | 199 | 233 | 328 | 671 | 1,389 | 212 | 1,369 | 3,319 | 5,424 |
| 3,750 | 25 | 29 | 33 | 145 | 173 | 203 | 286 | 584 | 1,210 | 185 | 1,193 | 3,097 | 5,062 |
| 4,000 | 22 | 26 | 29 | 127 | 152 | 178 | 251 | 514 | 1,063 | 162 | 1,048 | 2,904 | 4,746 |
| 4,250 | 20 | 23 | 25 | 113 | 135 | 158 | 222 | 455 | 942 | 144 | 928 | 2,733 | 4,467 |
| 4,500 | 18 | 20 | 23 | 100 | 120 | 141 | 198 | 406 | 840 | 128 | 828 | 2,504 | 4,219 |
| 4,750 | 16 | 18 | 20 | 90 | 108 | 126 | 178 | 364 | 754 | 115 | 743 | 2,248 | 3,997 |
| 5,000 | 14 | 16 | 18 | 81 | 97 | 114 | 161 | 329 | 680 | 104 | 671 | 2,029 | 3,797 |
| 5,250 | 13 | 15 | 17 | 74 | 88 | 104 | 146 | 298 | 617 | 94 | 608 | 1,840 | 3,616 |
| 5,500 | 12 | 14 | 15 | 67 | 81 | 94 | 133 | 272 | 562 | 86 | 554 | 1,676 | 3,452 |
| 5,750 | 11 | 12 | 14 | 62 | 74 | 86 | 122 | 249 | 515 | 79 | 507 | 1,534 | 3,302 |
| 6,000 | - | 11 | 13 | 56 | 68 | 79 | 112 | 228 | 473 | 72 | 466 | 1,409 | 3,052 |

Max. allowed load in $N$.
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks (> $=62 \mathrm{~mm}$ ), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

## BIS RapidStrut ${ }^{\oplus}$ Fixing rail: 2 equal loads



|  | Single |  |  |  |  |  |  |  |  | Double |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \text { x1.5 } \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41×21D | 41x41D | $41 \times 62 \mathrm{D}$ | 41×82D |
| 250 | 1,386 | 1,615 | 1,786 | 4,070 | 4,917 | 5,708 | 6,609 | 11,048 | 17,276 | 5,311 | 17,098 | 34,846 | 56,953 |
| 300 | 1,155 | 1,346 | 1,488 | 3,392 | 4,098 | 4,757 | 5,507 | 9,206 | 14,397 | 4,426 | 14,248 | 29,038 | 47,461 |
| 350 | 990 | 1,153 | 1,275 | 2,907 | 3,512 | 4,077 | 4,720 | 7,891 | 12,340 | 3,793 | 12,213 | 24,890 | 40,681 |
| 400 | 866 | 1,009 | 1,116 | 2,544 | 3,073 | 3,568 | 4,130 | 6,905 | 10,798 | 3,319 | 10,686 | 21,779 | 35,596 |
| 450 | 770 | 897 | 992 | 2,261 | 2,732 | 3,171 | 3,671 | 6,138 | 9,598 | 2,950 | 9,499 | 19,359 | 31,641 |
| 500 | 693 | 807 | 893 | 2,035 | 2,459 | 2,854 | 3,304 | 5,524 | 8,638 | 2,655 | 8,549 | 17,423 | 28,476 |
| 600 | 578 | 670 | 744 | 1,696 | 2,049 | 2,378 | 2,754 | 4,603 | 7,198 | 2,213 | 7,124 | 14,519 | 23,730 |
| 700 | 427 | 492 | 552 | 1,454 | 1,756 | 2,039 | 2,360 | 3,946 | 6,170 | 1,897 | 6,106 | 12,445 | 20,340 |
| 800 | 327 | 377 | 422 | 1,272 | 1,537 | 1,784 | 2,065 | 3,452 | 5,399 | 1,660 | 5,343 | 10,889 | 17,798 |
| 900 | 258 | 298 | 334 | 1,131 | 1,366 | 1,586 | 1,836 | 3,069 | 4,799 | 1,475 | 4,749 | 9,679 | 15,820 |
| 1,000 | 209 | 241 | 270 | 1,018 | 1,229 | 1,427 | 1,652 | 2,762 | 4,319 | 1,328 | 4,274 | 8,712 | 14,238 |
| 1,200 | 145 | 168 | 188 | 829 | 993 | 1,163 | 1,377 | 2,302 | 3,599 | 1,059 | 3,562 | 7,260 | 11,865 |
| 1,400 | 107 | 123 | 138 | 609 | 730 | 854 | 1,180 | 1,973 | 3,085 | 778 | 3,053 | 6,223 | 10,170 |
| 1,600 | 82 | 94 | 106 | 466 | 559 | 654 | 921 | 1,726 | 2,699 | 596 | 2,672 | 5,445 | 8,899 |
| 1,800 | 65 | 74 | 83 | 368 | 442 | 517 | 728 | 1,489 | 2,399 | 471 | 2,375 | 4,840 | 7,910 |
| 2,000 | 52 | 60 | 68 | 298 | 358 | 419 | 590 | 1,206 | 2,160 | 381 | 2,137 | 4,356 | 7,119 |
| 2,250 | 41 | 48 | 53 | 236 | 283 | 331 | 466 | 953 | 1,920 | 301 | 1,900 | 3,872 | 6,328 |
| 2,500 | 33 | 39 | 43 | 191 | 229 | 268 | 377 | 772 | 1,598 | 244 | 1,575 | 3,485 | 5,695 |
| 2,750 | 28 | 32 | 36 | 158 | 189 | 221 | 312 | 638 | 1,320 | 202 | 1,302 | 3,168 | 5,178 |
| 3,000 | 23 | 27 | 30 | 133 | 159 | 186 | 262 | 536 | 1,109 | 169 | 1,094 | 2,904 | 4,746 |
| 3,250 | 20 | 23 | 26 | 113 | 135 | 159 | 223 | 457 | 945 | 144 | 932 | 2,680 | 4,381 |
| 3,500 | 17 | 20 | 22 | 97 | 117 | 137 | 192 | 394 | 815 | 124 | 804 | 2,430 | 4,068 |
| 3,750 | 15 | 17 | 19 | 85 | 102 | 119 | 168 | 343 | 710 | 108 | 700 | 2,117 | 3,797 |
| 4,000 | 13 | 15 | 17 | 75 | 89 | 105 | 147 | 302 | 624 | 95 | 615 | 1,860 | 3,560 |
| 4,250 | 12 | 13 | 15 | 66 | 79 | 93 | 131 | 267 | 553 | 84 | 545 | 1,648 | 3,350 |
| 4,500 | 10 | 12 | 13 | 59 | 71 | 83 | 116 | 238 | 493 | 75 | 486 | 1,470 | 3,164 |
| 4,750 | - | 11 | 12 | 53 | 63 | 74 | 105 | 214 | 443 | 68 | 436 | 1,319 | 2,858 |
| 5,000 | - | - | 11 | 48 | 57 | 67 | 94 | 193 | 399 | 61 | 394 | 1,191 | 2,579 |
| 5,250 | - | - | - | 43 | 52 | 61 | 86 | 175 | 362 | 55 | 357 | 1,080 | 2,340 |
| 5,500 | - | - | - | 39 | 47 | 55 | 78 | 159 | 330 | 50 | 325 | 984 | 2,132 |
| 5,750 | - | - | - | 36 | 43 | 51 | 71 | 146 | 302 | 46 | 298 | 900 | 1,950 |
| 6,000 | - | - | - | 33 | 40 | 47 | 66 | 134 | 277 | 42 | 273 | 827 | 1,791 |

Max. allowed load in N. per suspension point (F).
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks (> $=62 \mathrm{~mm}$ ), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

## BIS RapidStrut Fixing rail: 3 equal loads



|  | Single |  |  |  |  |  |  |  | Double |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \text { x1.5 } \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41x21D | 41x41D | 41x62D | 41×82D |
| 250 | 924 | 1,076 | 1,190 | 2,714 | 3,278 | 3,805 | 4,406 | 7,365 | 11,517 | 3,540 | 11,398 | 23,231 | 37,969 |
| 300 | 770 | 897 | 992 | 2,261 | 2,732 | 3,171 | 3,671 | 6,138 | 9,598 | 2,950 | 9,499 | 19,359 | 31,641 |
| 350 | 660 | 769 | 850 | 1,938 | 2,341 | 2,718 | 3,147 | 5,261 | 8,227 | 2,529 | 8,142 | 16,593 | 27,120 |
| 400 | 578 | 673 | 744 | 1,696 | 2,049 | 2,378 | 2,754 | 4,603 | 7,198 | 2,213 | 7,124 | 14,519 | 23,730 |
| 450 | 513 | 598 | 661 | 1,508 | 1,821 | 2,114 | 2,448 | 4,092 | 6,399 | 1,967 | 6,332 | 12,906 | 21,094 |
| 500 | 462 | 538 | 595 | 1,357 | 1,639 | 1,903 | 2,203 | 3,683 | 5,759 | 1,770 | 5,699 | 11,615 | 18,984 |
| 600 | 385 | 449 | 496 | 1,131 | 1,366 | 1,586 | 1,836 | 3,069 | 4,799 | 1,475 | 4,749 | 9,679 | 15,820 |
| 700 | 306 | 353 | 396 | 969 | 1,171 | 1,359 | 1,573 | 2,630 | 4,113 | 1,264 | 4,071 | 8,297 | 13,560 |
| 800 | 234 | 270 | 303 | 848 | 1,024 | 1,189 | 1,377 | 2,302 | 3,599 | 1,106 | 3,562 | 7,260 | 11,865 |
| 900 | 185 | 214 | 239 | 754 | 911 | 1,057 | 1,224 | 2,046 | 3,199 | 983 | 3,166 | 6,453 | 10,547 |
| 1,000 | 150 | 173 | 194 | 678 | 820 | 951 | 1,101 | 1,841 | 2,879 | 885 | 2,850 | 5,808 | 9,492 |
| 1,200 | 104 | 120 | 135 | 565 | 683 | 793 | 918 | 1,534 | 2,399 | 738 | 2,375 | 4,840 | 7,910 |
| 1,400 | 77 | 88 | 99 | 437 | 524 | 613 | 787 | 1,315 | 2,057 | 558 | 2,035 | 4,148 | 6,780 |
| 1,600 | 59 | 68 | 76 | 335 | 401 | 469 | 661 | 1,151 | 1,800 | 427 | 1,781 | 3,630 | 5,933 |
| 1,800 | 46 | 53 | 60 | 264 | 317 | 371 | 522 | 1,023 | 1,600 | 338 | 1,583 | 3,226 | 5,273 |
| 2,000 | 38 | 43 | 48 | 214 | 257 | 300 | 423 | 865 | 1,440 | 274 | 1,425 | 2,904 | 4,746 |
| 2,250 | 30 | 34 | 38 | 169 | 203 | 237 | 334 | 684 | 1,280 | 216 | 1,266 | 2,581 | 4,219 |
| 2,500 | 24 | 28 | 31 | 137 | 164 | 192 | 271 | 554 | 1,146 | 175 | 1,130 | 2,323 | 3,797 |
| 2,750 | 20 | 23 | 26 | 113 | 136 | 159 | 224 | 458 | 947 | 145 | 934 | 2,112 | 3,452 |
| 3,000 | 17 | 19 | 22 | 95 | 114 | 133 | 188 | 385 | 796 | 122 | 785 | 1,936 | 3,164 |
| 3,250 | 14 | 16 | 18 | 81 | 97 | 114 | 160 | 328 | 678 | 104 | 669 | 1,787 | 2,921 |
| 3,500 | 12 | 14 | 16 | 70 | 84 | 98 | 138 | 283 | 585 | 89 | 576 | 1,659 | 2,712 |
| 3,750 | 11 | 12 | 14 | 61 | 73 | 85 | 120 | 246 | 509 | 78 | 502 | 1,518 | 2,531 |
| 4,000 | - | 11 | 12 | 54 | 64 | 75 | 106 | 216 | 448 | 68 | 441 | 1,335 | 2,373 |
| 4,250 | - | - | 11 | 47 | 57 | 67 | 94 | 192 | 397 | 61 | 391 | 1,182 | 2,233 |
| 4,500 | - | - | - | 42 | 51 | 59 | 84 | 171 | 354 | 54 | 349 | 1,054 | 2,109 |
| 4,750 | - | - | - | 38 | 45 | 53 | 75 | 153 | 317 | 48 | 313 | 946 | 1,998 |
| 5,000 | - | - | - | 34 | 41 | 48 | 68 | 138 | 287 | 44 | 282 | 854 | 1,850 |
| 5,250 | - | - | - | 31 | 37 | 44 | 61 | 126 | 260 | 40 | 256 | 775 | 1,678 |
| 5,500 | - | - | - | 28 | 34 | 40 | 56 | 114 | 237 | 36 | 233 | 706 | 1,529 |
| 5,750 | - | - | - | 26 | 31 | 36 | 51 | 105 | 217 | 33 | 214 | 646 | 1,399 |
| 6,000 | - | - | - | 24 | 29 | 33 | 47 | 96 | 199 | 30 | 196 | 593 | 1,285 |

Max. allowed load in N. per suspension point (F).
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

## BIS RapidStrut ${ }^{\oplus}$ Fixing rail: uniformly distributed load



|  | Single |  |  |  |  |  |  |  |  | Double |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \text { x2.5 } \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & x 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41x21D | 41x41D | 41x62D | 41x82D |
| 250 | 3,697 | 4,306 | 4,762 | 10,854 | 13,112 | 15,222 | 17,623 | 29,460 | 46,070 | 14,162 | 45,594 | 92,923 | 151,875 |
| 300 | 3,081 | 3,588 | 3,968 | 9,045 | 10,927 | 12,685 | 14,686 | 24,550 | 38,391 | 11,802 | 37,995 | 77,436 | 126,562 |
| 350 | 2,640 | 3,076 | 3,401 | 7,753 | 9,366 | 10,873 | 12,588 | 21,043 | 32,907 | 10,116 | 32,567 | 66,373 | 108,482 |
| 400 | 2,310 | 2,691 | 2,976 | 6,784 | 8,195 | 9,514 | 11,014 | 18,413 | 28,794 | 8,851 | 28,496 | 58,077 | 94,922 |
| 450 | 2,054 | 2,392 | 2,645 | 6,030 | 7,285 | 8,457 | 9,791 | 16,367 | 25,594 | 7,868 | 25,330 | 51,624 | 84,375 |
| 500 | 1,848 | 2,153 | 2,381 | 5,427 | 6,556 | 7,611 | 8,812 | 14,730 | 23,035 | 7,081 | 22,797 | 46,461 | 75,937 |
| 600 | 1,540 | 1,794 | 1,984 | 4,523 | 5,463 | 6,342 | 7,343 | 12,275 | 19,196 | 5,901 | 18,997 | 38,718 | 63,281 |
| 700 | 1,163 | 1,342 | 1,503 | 3,877 | 4,683 | 5,436 | 6,294 | 10,522 | 16,453 | 5,058 | 16,283 | 33,187 | 54,241 |
| 800 | 891 | 1,028 | 1,151 | 3,392 | 4,098 | 4,757 | 5,507 | 9,206 | 14,397 | 4,426 | 14,248 | 29,038 | 47,461 |
| 900 | 704 | 812 | 909 | 3,015 | 3,642 | 4,228 | 4,895 | 8,183 | 12,797 | 3,934 | 12,665 | 25,812 | 42,187 |
| 1,000 | 570 | 658 | 737 | 2,714 | 3,278 | 3,805 | 4,406 | 7,365 | 11,517 | 3,540 | 11,398 | 23,231 | 37,969 |
| 1,200 | 396 | 457 | 512 | 2,260 | 2,708 | 3,170 | 3,671 | 6,138 | 9,598 | 2,887 | 9,499 | 19,359 | 31,641 |
| 1,400 | 291 | 336 | 376 | 1,660 | 1,989 | 2,329 | 3,147 | 5,261 | 8,227 | 2,121 | 8,142 | 16,593 | 27,120 |
| 1,600 | 223 | 257 | 288 | 1,271 | 1,523 | 1,783 | 2,511 | 4,603 | 7,198 | 1,624 | 7,124 | 14,519 | 23,730 |
| 1,800 | 176 | 203 | 227 | 1,004 | 1,204 | 1,409 | 1,984 | 4,059 | 6,399 | 1,283 | 6,332 | 12,906 | 21,094 |
| 2,000 | 143 | 164 | 184 | 814 | 975 | 1,141 | 1,607 | 3,288 | 5,759 | 1,039 | 5,699 | 11,615 | 18,984 |
| 2,250 | 113 | 130 | 146 | 643 | 770 | 902 | 1,270 | 2,598 | 5,119 | 821 | 5,066 | 10,325 | 16,875 |
| 2,500 | 91 | 105 | 118 | 521 | 624 | 730 | 1,028 | 2,104 | 4,355 | 665 | 4,293 | 9,292 | 15,187 |
| 2,750 | 75 | 87 | 97 | 430 | 516 | 604 | 850 | 1,739 | 3,599 | 550 | 3,548 | 8,448 | 13,807 |
| 3,000 | 63 | 73 | 82 | 362 | 433 | 507 | 714 | 1,461 | 3,024 | 462 | 2,981 | 7,744 | 12,656 |
| 3,250 | 54 | 62 | 70 | 308 | 369 | 432 | 609 | 1,245 | 2,577 | 394 | 2,540 | 7,148 | 11,683 |
| 3,500 | 47 | 54 | 60 | 266 | 318 | 373 | 525 | 1,074 | 2,222 | 339 | 2,190 | 6,624 | 10,848 |
| 3,750 | 41 | 47 | 52 | 231 | 277 | 325 | 457 | 935 | 1,936 | 296 | 1,908 | 5,770 | 10,125 |
| 4,000 | 36 | 41 | 46 | 203 | 244 | 285 | 402 | 822 | 1,701 | 260 | 1,677 | 5,071 | 9,492 |
| 4,250 | 32 | 36 | 41 | 180 | 216 | 253 | 356 | 728 | 1,507 | 230 | 1,486 | 4,492 | 8,934 |
| 4,500 | 28 | 32 | 36 | 161 | 193 | 225 | 317 | 649 | 1,344 | 205 | 1,325 | 4,007 | 8,437 |
| 4,750 | 25 | 29 | 33 | 144 | 173 | 202 | 285 | 583 | 1,206 | 184 | 1,189 | 3,596 | 7,791 |
| 5,000 | 23 | 26 | 29 | 130 | 156 | 183 | 257 | 526 | 1,089 | 166 | 1,073 | 3,246 | 7,031 |
| 5,250 | 21 | 24 | 27 | 118 | 141 | 166 | 233 | 477 | 988 | 151 | 974 | 2,944 | 6,378 |
| 5,500 | 19 | 22 | 24 | 108 | 129 | 151 | 212 | 435 | 900 | 137 | 887 | 2,682 | 5,811 |
| 5,750 | 17 | 20 | 22 | 98 | 118 | 138 | 194 | 398 | 823 | 126 | 812 | 2,454 | 5,317 |
| 6,000 | 16 | 18 | 20 | 90 | 108 | 127 | 179 | 365 | 756 | 115 | 745 | 2,254 | 4,883 |

Max. allowed load in $N$.
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

## BIS RapidStrut ${ }^{\circledR}$ Cantilever arms: suspension on 1 point



|  | Single |  |  |  |  |  |  |  |  | Double |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{array}{\|l} 41 \times 21 \\ \times 1.5 \end{array}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41x21D | 41×41D | $41 \times 62 \mathrm{D}$ | $41 \times 82 \mathrm{D}$ |
| 100 | 1,155 | 1,346 | 1,488 | 3,392 | 4,098 | 4,757 | 5,507 | 9,206 | 14,397 | 4,426 | 14,248 | 29,038 | 47,461 |
| 150 | 770 | 897 | 992 | 2,261 | 2,732 | 3,171 | 3,671 | 6,138 | 9,598 | 2,950 | 9,499 | 19,359 | 31,641 |
| 200 | 557 | 642 | 719 | 1,696 | 2,049 | 2,378 | 2,754 | 4,603 | 7,198 | 2,213 | 7,124 | 14,519 | 23,730 |
| 250 | 356 | 411 | 460 | 1,357 | 1,639 | 1,903 | 2,203 | 3,683 | 5,759 | 1,770 | 5,699 | 11,615 | 18,984 |
| 300 | 247 | 286 | 320 | 1,131 | 1,366 | 1,586 | 1,836 | 3,069 | 4,799 | 1,475 | 4,749 | 9,679 | 15,820 |
| 350 | 182 | 210 | 235 | 969 | 1,171 | 1,359 | 1,573 | 2,630 | 4,113 | 1,264 | 4,071 | 8,297 | 13,560 |
| 400 | 139 | 161 | 180 | 794 | 952 | 1,114 | 1,377 | 2,302 | 3,599 | 1,015 | 3,562 | 7,260 | 11,865 |
| 450 | 110 | 127 | 142 | 628 | 752 | 881 | 1,224 | 2,046 | 3,199 | 802 | 3,166 | 6,453 | 10,547 |
| 500 | 89 | 103 | 115 | 508 | 609 | 713 | 1,004 | 1,841 | 2,879 | 650 | 2,850 | 5,808 | 9,492 |
| 550 | 74 | 85 | 95 | 420 | 504 | 589 | 830 | 1,674 | 2,618 | 537 | 2,591 | 5,280 | 8,629 |
| 600 | 62 | 71 | 80 | 353 | 423 | 495 | 697 | 1,427 | 2,399 | 451 | 2,375 | 4,840 | 7,910 |
| 700 | 45 | 52 | 59 | 259 | 311 | 364 | 512 | 1,048 | 2,057 | 331 | 2,035 | 4,148 | 6,780 |
| 800 | 35 | 40 | 45 | 199 | 238 | 279 | 392 | 803 | 1,661 | 254 | 1,638 | 3,630 | 5,933 |
| 900 | 27 | 32 | 36 | 157 | 188 | 220 | 310 | 634 | 1,313 | 200 | 1,294 | 3,226 | 5,273 |
| 1,000 | 22 | 26 | 29 | 127 | 152 | 178 | 251 | 514 | 1,063 | 162 | 1,048 | 2,904 | 4,746 |
| 1,100 | 18 | 21 | 24 | 105 | 126 | 147 | 208 | 425 | 879 | 134 | 866 | 2,619 | 4,315 |
| 1,200 | 15 | 18 | 20 | 88 | 106 | 124 | 174 | 357 | 738 | 113 | 728 | 2,201 | 3,955 |
| 1,300 | 13 | 15 | 17 | 75 | 90 | 106 | 149 | 304 | 629 | 96 | 620 | 1,875 | 3,651 |
| 1,400 | 11 | 13 | 15 | 65 | 78 | 91 | 128 | 262 | 542 | 83 | 535 | 1,617 | 3,390 |
| 1,500 | - | 11 | 13 | 56 | 68 | 79 | 112 | 228 | 473 | 72 | 466 | 1,409 | 3,052 |

Max. allowed load in $N$.
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks $(>=62 \mathrm{~mm})$, depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut ${ }^{\oplus}$ Cantilever arms: uniformly distributed load


|  | Single |  |  |  |  |  |  |  |  | Double |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{L} \\ & (\mathrm{~mm}) \end{aligned}$ | $\begin{array}{\|l} 41 \times 21 \\ \times 1.5 \end{array}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 21 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 1.5 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 41 \\ & \times 2.5 \end{aligned}$ | $\begin{aligned} & 41 \times 51 \\ & \times 2.0 \end{aligned}$ | $\begin{aligned} & 41 \times 62 \\ & x) 5 \end{aligned}$ | $\begin{aligned} & 41 \times 82 \\ & \times 2.5 \end{aligned}$ | 41x21D | 41x41D | 41x62D | $41 \times 82 \mathrm{D}$ |
| 100 | 2,310 | 2,691 | 2,976 | 6,784 | 8,195 | 9,514 | 11,014 | 18,413 | 28,794 | 8,851 | 28,496 | 58,077 | 94,922 |
| 150 | 1,540 | 1,794 | 1,984 | 4,523 | 5,463 | 6,342 | 7,343 | 12,275 | 19,196 | 5,901 | 18,997 | 38,718 | 63,281 |
| 200 | 1,155 | 1,346 | 1,488 | 3,392 | 4,098 | 4,757 | 5,507 | 9,206 | 14,397 | 4,426 | 14,248 | 29,038 | 47,461 |
| 250 | 924 | 1,076 | 1,190 | 2,714 | 3,278 | 3,805 | 4,406 | 7,365 | 11,517 | 3,540 | 11,398 | 23,231 | 37,969 |
| 300 | 660 | 761 | 853 | 2,261 | 2,732 | 3,171 | 3,671 | 6,138 | 9,598 | 2,950 | 9,499 | 19,359 | 31,641 |
| 350 | 485 | 559 | 626 | 1,938 | 2,341 | 2,718 | 3,147 | 5,261 | 8,227 | 2,529 | 8,142 | 16,593 | 27,120 |
| 400 | 371 | 428 | 480 | 1,696 | 2,049 | 2,378 | 2,754 | 4,603 | 7,198 | 2,213 | 7,124 | 14,519 | 23,730 |
| 450 | 293 | 338 | 379 | 1,508 | 1,821 | 2,114 | 2,448 | 4,092 | 6,399 | 1,967 | 6,332 | 12,906 | 21,094 |
| 500 | 238 | 274 | 307 | 1,356 | 1,625 | 1,902 | 2,203 | 3,683 | 5,759 | 1,732 | 5,699 | 11,615 | 18,984 |
| 550 | 196 | 227 | 254 | 1,121 | 1,343 | 1,572 | 2,003 | 3,348 | 5,235 | 1,432 | 5,181 | 10,559 | 17,258 |
| 600 | 165 | 190 | 213 | 942 | 1,128 | 1,321 | 1,836 | 3,069 | 4,799 | 1,203 | 4,749 | 9,679 | 15,820 |
| 700 | 121 | 140 | 157 | 692 | 829 | 970 | 1,367 | 2,630 | 4,113 | 884 | 4,071 | 8,297 | 13,560 |
| 800 | 93 | 107 | 120 | 530 | 635 | 743 | 1,046 | 2,140 | 3,599 | 677 | 3,562 | 7,260 | 11,865 |
| 900 | 73 | 85 | 95 | 418 | 501 | 587 | 827 | 1,691 | 3,199 | 535 | 3,166 | 6,453 | 10,547 |
| 1,000 | 59 | 69 | 77 | 339 | 406 | 476 | 670 | 1,370 | 2,835 | 433 | 2,795 | 5,808 | 9,492 |
| 1,100 | 49 | 57 | 63 | 280 | 336 | 393 | 553 | 1,132 | 2,343 | 358 | 2,310 | 5,280 | 8,629 |
| 1,200 | 41 | 48 | 53 | 235 | 282 | 330 | 465 | 951 | 1,969 | 301 | 1,941 | 4,840 | 7,910 |
| 1,300 | 35 | 41 | 45 | 201 | 240 | 281 | 396 | 811 | 1,678 | 256 | 1,654 | 4,467 | 7,302 |
| 1,400 | 30 | 35 | 39 | 173 | 207 | 243 | 342 | 699 | 1,447 | 221 | 1,426 | 4,148 | 6,780 |
| 1,500 | 26 | 30 | 34 | 151 | 181 | 211 | 298 | 609 | 1,260 | 192 | 1,242 | 3,757 | 6,328 |

Max. allowed load in N.
The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.
For large spans and high rail flanks (> $=62 \mathrm{~mm}$ ), depending on the load, appropriate measures against occurring torsional forces may have to be taken.



[^0]:    $R A L^{2}=$ probado, certificado y controlado por un tercero, de acuerdo con RAL-GZ 655/B y RAL-GZ 656.

    Para información técnica detallada sobre nuestros productos certificados RAL, por favor miren la tabla de datos RAL en nuestro catálogo web.

