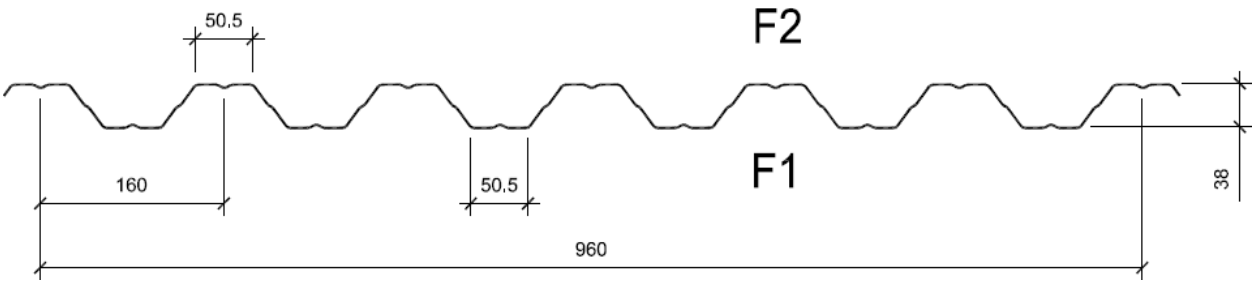
# TECHNICAL DATA SHEET

# OF PROFILE

# Trapeza® 40/160 T

# Trapeza® 40/160 T




## Technical parameters:

| | |
|---|---|
| Coil width: | 1250 mm |
| Profile width: | 960 mm |
| Yield strength: | S320GD, S350GD according to EN 10346 |
| Thickness: | 0,40; 0,50; 0,55; 0,60; 0,63; 0,70; 0,75; 0,80; 0,88, 1,00; 1,25 mm acc. to EN 10143 |
| Durability/Coating quality: | ZM 60, ZM80, ZM100, ZM120, ZM175, ZM275 and Z100, 140, 200, 225, 275, 350 acc. to EN 10346 |
| Organic coating: | Interieur (DU912, DU901), Hairplus, Hairultra, Hairflon, Keyron, Hairexcel, Sinea, (or acc. to Material guide), acc. to EN 10169 |
| Max. length: | 15 m |
| Min. length: | 2 m |

## Tables of resistance of profiled sheeting ArcelorMittal

For all profiles, steel S320 is used. Material characteristics are as follows:

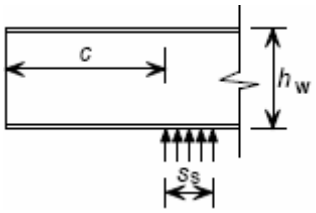
- yield strength $f_y$= 320 MPa
- proof strength $f_u$=390 MPa
- modulus of elasticity E = 210 000 MPa
- density 7850 kg/m$^3$

The design thickness of the sheet given in the tables is the core thickness only. No coatings or paintings are included neither in the thickness nor in the calculated weight of the profiled sheeting. Minus tolerance in the sheet thickness is lower than 5 %.

The design resistances are calculated for uniformly loaded simply supported or continuous beams (where the spans are also uniform).

Ultimate limit state (ULS)

The design resistance according to the ultimate limit state is given by "$q_{Ed}$" which is calculated with respect to the bending resistance, shear resistance, local transverse forces and their interactions as defined in CSN EN 1993-1-3 and other referenced codes. The width of the end support $s_s$ is 40 mm and 120 mm for the internal support respectively. In the tables, two different resistances are given according to the distance "c" (see figure bellow the paragraph) from the end support to the free end. One resistance "$q_{Ed}$ (c<1,5h) " is for profiles which meets the minimal distance of the overhang "c" at least 40 mm. For the second resistance "$q_{Ed}$ (c≥1,5h) ", the distance at least 1.5 x $h_w$ (web height) clear from a free end is considered.




The real design load must be always smaller or at least equal to the resistance given in the tables. The maximal design resistances (load values) in the tables are related to a one-meter width of the profiled sheeting. Units used in the tables are kN/m$^2$. The self-weight of the sheeting must be included in the load.

Serviceability limit state (SLS)

The characteristics load "$q_{Ek}$" that meets the serviceability limit for deflection of L/200 (where L means the span) is given in the table. In view of the fact that the behavior in the SLS is elastic, characteristic load for different limits may be extrapolated from the table. To fulfil the condition of the limit, the real characteristics load must be lower or at least equal to the value given by the tables.

*Used design codes:*

ČSN EN 1993-1-1: Navrhování ocelových konstrukcí, Část 1-1: Obecná pravidla a pravidla pro pozemní stavby, ČNI, 2006. (Design of steel structures, Part 1-1: General rules and rules for buildings)

ČSN EN 1993-1-3: Navrhování ocelových konstrukcí, Část 1-3: Obecná pravidla – Doplňující pravidla pro tenkostěnné za studena tvarované prvky a plošné profily, ČNI, 2008. (Design of steel structures, Part 1-3: General rules - Supplementary rules for cold-formed members and sheeting)

ČSN EN 1993-1-5: Navrhování ocelových konstrukcí, Část 1-5: Boulení stěn, ČNI, 2008. (Design of steel structures, Part 1-5: Plated structural elements)

Single span – symmetric profile


| Trapeza® 40/160 T | | Span [m] | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| t [mm] | S320 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 | 2,75 | 3,00 | 3,25 | 3,50 | 3,75 | 4,00 | 4,25 | 4,50 | 4,75 | 5,00 |
| 0,4 | $q_{Rd}$ (c<1.5h) | 3,596 | 2,997 | 2,537 | 1,942 | 1,535 | 1,243 | 1,027 | 0,863 | 0,736 | 0,634 | 0,552 | 0,486 | 0,430 | 0,384 | 0,344 | 0,311 |
| | $q_{Rd}$ (c≥1.5h) | 4,972 | 3,453 | 2,537 | 1,942 | 1,535 | 1,243 | 1,027 | 0,863 | 0,736 | 0,634 | 0,552 | 0,486 | 0,430 | 0,384 | 0,344 | 0,311 |
| | $q_{Rk}$ (L/200) | 2,838 | 1,642 | 1,034 | 0,693 | 0,487 | 0,355 | 0,267 | 0,205 | 0,161 | 0,129 | 0,105 | 0,087 | 0,072 | 0,061 | 0,052 | 0,044 |
| 0,5 | $q_{Rd}$ (c<1.5h) | 6,188 | 5,157 | 3,999 | 3,062 | 2,419 | 1,960 | 1,619 | 1,361 | 1,160 | 1,000 | 0,871 | 0,765 | 0,678 | 0,605 | 0,543 | 0,490 |
| | $q_{Rd}$ (c≥1.5h) | 7,838 | 5,443 | 3,999 | 3,062 | 2,419 | 1,960 | 1,619 | 1,361 | 1,160 | 1,000 | 0,871 | 0,765 | 0,678 | 0,605 | 0,543 | 0,490 |
| | $q_{Rk}$ (L/200) | 4,164 | 2,410 | 1,518 | 1,017 | 0,714 | 0,521 | 0,391 | 0,301 | 0,237 | 0,190 | 0,154 | 0,127 | 0,106 | 0,089 | 0,076 | 0,065 |
| 0,55 | $q_{Rd}$ (c<1.5h) | 7,823 | 6,519 | 4,822 | 3,692 | 2,917 | 2,363 | 1,953 | 1,641 | 1,398 | 1,206 | 1,050 | 0,923 | 0,818 | 0,729 | 0,655 | 0,591 |
| | $q_{Rd}$ (c≥1.5h) | 9,451 | 6,563 | 4,822 | 3,692 | 2,917 | 2,363 | 1,953 | 1,641 | 1,398 | 1,206 | 1,050 | 0,923 | 0,818 | 0,729 | 0,655 | 0,591 |
| | $q_{Rk}$ (L/200) | 4,867 | 2,816 | 1,774 | 1,188 | 0,834 | 0,608 | 0,457 | 0,352 | 0,277 | 0,222 | 0,180 | 0,149 | 0,124 | 0,104 | 0,089 | 0,076 |
| 0,6 | $q_{Rd}$ (c<1.5h) | 9,717 | 7,486 | 5,500 | 4,211 | 3,327 | 2,695 | 2,227 | 1,872 | 1,595 | 1,375 | 1,198 | 1,053 | 0,933 | 0,832 | 0,747 | 0,674 |
| | $q_{Rd}$ (c≥1.5h) | 10,780 | 7,486 | 5,500 | 4,211 | 3,327 | 2,695 | 2,227 | 1,872 | 1,595 | 1,375 | 1,198 | 1,053 | 0,933 | 0,832 | 0,747 | 0,674 |
| | $q_{Rk}$ (L/200) | 5,483 | 3,173 | 1,998 | 1,339 | 0,940 | 0,685 | 0,515 | 0,397 | 0,312 | 0,250 | 0,203 | 0,167 | 0,140 | 0,118 | 0,100 | 0,086 |
| 0,63 | $q_{Rd}$ (c<1.5h) | 10,986 | 7,975 | 5,859 | 4,486 | 3,544 | 2,871 | 2,373 | 1,994 | 1,699 | 1,465 | 1,276 | 1,121 | 0,993 | 0,886 | 0,795 | 0,718 |
| | $q_{Rd}$ (c≥1.5h) | 11,484 | 7,975 | 5,859 | 4,486 | 3,544 | 2,871 | 2,373 | 1,994 | 1,699 | 1,465 | 1,276 | 1,121 | 0,993 | 0,886 | 0,795 | 0,718 |
| | $q_{Rk}$ (L/200) | 5,822 | 3,369 | 2,122 | 1,421 | 0,998 | 0,728 | 0,547 | 0,421 | 0,331 | 0,265 | 0,216 | 0,178 | 0,148 | 0,125 | 0,106 | 0,091 |
| 0,7 | $q_{Rd}$ (c<1.5h) | 13,095 | 9,094 | 6,681 | 5,115 | 4,042 | 3,274 | 2,706 | 2,273 | 1,937 | 1,670 | 1,455 | 1,279 | 1,133 | 1,010 | 0,907 | 0,818 |
| | $q_{Rd}$ (c≥1.5h) | 13,095 | 9,094 | 6,681 | 5,115 | 4,042 | 3,274 | 2,706 | 2,273 | 1,937 | 1,670 | 1,455 | 1,279 | 1,133 | 1,010 | 0,907 | 0,818 |
| | $q_{Rk}$ (L/200) | 6,602 | 3,821 | 2,406 | 1,612 | 1,132 | 0,825 | 0,620 | 0,478 | 0,376 | 0,301 | 0,245 | 0,201 | 0,168 | 0,142 | 0,120 | 0,103 |
| 0,75 | $q_{Rd}$ (c<1.5h) | 14,241 | 9,890 | 7,266 | 5,563 | 4,395 | 3,560 | 2,942 | 2,472 | 2,107 | 1,816 | 1,582 | 1,391 | 1,232 | 1,099 | 0,986 | 0,890 |
| | $q_{Rd}$ (c≥1.5h) | 14,241 | 9,890 | 7,266 | 5,563 | 4,395 | 3,560 | 2,942 | 2,472 | 2,107 | 1,816 | 1,582 | 1,391 | 1,232 | 1,099 | 0,986 | 0,890 |
| | $q_{Rk}$ (L/200) | 7,159 | 4,143 | 2,609 | 1,748 | 1,227 | 0,895 | 0,672 | 0,518 | 0,407 | 0,326 | 0,265 | 0,218 | 0,182 | 0,153 | 0,130 | 0,112 |
| 0,8 | $q_{Rd}$ (c<1.5h) | 15,391 | 10,688 | 7,852 | 6,012 | 4,750 | 3,848 | 3,180 | 2,672 | 2,277 | 1,963 | 1,710 | 1,503 | 1,331 | 1,188 | 1,066 | 0,962 |
| | $q_{Rd}$ (c≥1.5h) | 15,391 | 10,688 | 7,852 | 6,012 | 4,750 | 3,848 | 3,180 | 2,672 | 2,277 | 1,963 | 1,710 | 1,503 | 1,331 | 1,188 | 1,066 | 0,962 |
| | $q_{Rk}$ (L/200) | 7,717 | 4,466 | 2,812 | 1,884 | 1,323 | 0,965 | 0,725 | 0,558 | 0,439 | 0,352 | 0,286 | 0,235 | 0,196 | 0,165 | 0,141 | 0,121 |
| 0,88 | $q_{Rd}$ (c<1.5h) | 17,235 | 11,968 | 8,793 | 6,732 | 5,319 | 4,309 | 3,561 | 2,992 | 2,549 | 2,198 | 1,915 | 1,683 | 1,491 | 1,330 | 1,194 | 1,077 |
| | $q_{Rd}$ (c≥1.5h) | 17,235 | 11,968 | 8,793 | 6,732 | 5,319 | 4,309 | 3,561 | 2,992 | 2,549 | 2,198 | 1,915 | 1,683 | 1,491 | 1,330 | 1,194 | 1,077 |
| | $q_{Rk}$ (L/200) | 8,612 | 4,984 | 3,139 | 2,103 | 1,477 | 1,077 | 0,809 | 0,623 | 0,490 | 0,392 | 0,319 | 0,263 | 0,219 | 0,185 | 0,157 | 0,135 |
| 1 | $q_{Rd}$ (c<1.5h) | 20,009 | 13,895 | 10,208 | 7,816 | 6,176 | 5,002 | 4,134 | 3,474 | 2,960 | 2,552 | 2,223 | 1,954 | 1,731 | 1,544 | 1,386 | 1,251 |
| | $q_{Rd}$ (c≥1.5h) | 20,009 | 13,895 | 10,208 | 7,816 | 6,176 | 5,002 | 4,134 | 3,474 | 2,960 | 2,552 | 2,223 | 1,954 | 1,731 | 1,544 | 1,386 | 1,251 |
| | $q_{Rk}$ (L/200) | 9,962 | 5,765 | 3,630 | 2,432 | 1,708 | 1,245 | 0,936 | 0,721 | 0,567 | 0,454 | 0,369 | 0,304 | 0,253 | 0,214 | 0,182 | 0,156 |
| 1,25 | $q_{Rd}$ (c<1.5h) | 25,055 | 17,399 | 12,783 | 9,787 | 7,733 | 6,264 | 5,177 | 4,350 | 3,706 | 3,196 | 2,784 | 2,447 | 2,167 | 1,933 | 1,735 | 1,566 |
| | $q_{Rd}$ (c≥1.5h) | 25,055 | 17,399 | 12,783 | 9,787 | 7,733 | 6,264 | 5,177 | 4,350 | 3,706 | 3,196 | 2,784 | 2,447 | 2,167 | 1,933 | 1,735 | 1,566 |
| | $q_{Rk}$ (L/200) | 12,551 | 7,263 | 4,574 | 3,064 | 2,152 | 1,569 | 1,179 | 0,908 | 0,714 | 0,572 | 0,465 | 0,383 | 0,319 | 0,269 | 0,229 | 0,196 |

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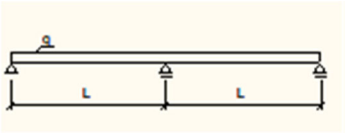
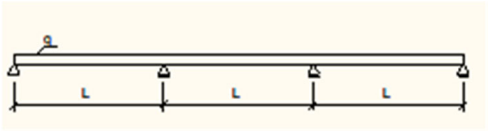
Double span – symmetric profile




| Trapeza® 40/160 T | | Span [m] | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| t [mm] | S320 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 | 2,75 | 3,00 | 3,25 | 3,50 | 3,75 | 4,00 | 4,25 | 4,50 | 4,75 | 5,00 |
| 0,4 | $q_{Rd}$ (c<1.5h) | 3,228 | 2,437 | 1,909 | 1,538 | 1,267 | 1,062 | 0,904 | 0,779 | 0,678 | 0,596 | 0,528 | 0,471 | 0,423 | 0,381 | 0,344 | 0,311 |
| | $q_{Rd}$ (c≥1.5h) | 3,228 | 2,437 | 1,909 | 1,538 | 1,267 | 1,062 | 0,904 | 0,779 | 0,678 | 0,596 | 0,528 | 0,471 | 0,423 | 0,381 | 0,344 | 0,311 |
| | $q_{Rk}$ (L/200) | 7,021 | 4,063 | 2,559 | 1,714 | 1,204 | 0,878 | 0,659 | 0,508 | 0,399 | 0,320 | 0,260 | 0,214 | 0,179 | 0,150 | 0,128 | 0,110 |
| 0,5 | $q_{Rd}$ (c<1.5h) | 5,246 | 3,949 | 3,086 | 2,481 | 2,040 | 1,708 | 1,452 | 1,249 | 1,087 | 0,954 | 0,844 | 0,753 | 0,675 | 0,605 | 0,543 | 0,490 |
| | $q_{Rd}$ (c≥1.5h) | 5,246 | 3,949 | 3,086 | 2,481 | 2,040 | 1,708 | 1,452 | 1,249 | 1,087 | 0,954 | 0,844 | 0,753 | 0,675 | 0,605 | 0,543 | 0,490 |
| | $q_{Rk}$ (L/200) | 10,302 | 5,962 | 3,754 | 2,515 | 1,766 | 1,288 | 0,968 | 0,745 | 0,586 | 0,469 | 0,382 | 0,314 | 0,262 | 0,221 | 0,188 | 0,161 |
| 0,55 | $q_{Rd}$ (c<1.5h) | 6,434 | 4,835 | 3,774 | 3,031 | 2,490 | 2,083 | 1,769 | 1,521 | 1,322 | 1,160 | 1,027 | 0,915 | 0,818 | 0,729 | 0,655 | 0,591 |
| | $q_{Rd}$ (c≥1.5h) | 6,434 | 4,835 | 3,774 | 3,031 | 2,490 | 2,083 | 1,769 | 1,521 | 1,322 | 1,160 | 1,027 | 0,915 | 0,818 | 0,729 | 0,655 | 0,591 |
| | $q_{Rk}$ (L/200) | 12,040 | 6,968 | 4,388 | 2,939 | 2,064 | 1,505 | 1,131 | 0,871 | 0,685 | 0,548 | 0,446 | 0,367 | 0,306 | 0,258 | 0,219 | 0,188 |
| 0,6 | $q_{Rd}$ (c<1.5h) | 7,591 | 5,685 | 4,425 | 3,546 | 2,907 | 2,428 | 2,059 | 1,768 | 1,536 | 1,346 | 1,190 | 1,053 | 0,933 | 0,832 | 0,747 | 0,674 |
| | $q_{Rd}$ (c≥1.5h) | 7,591 | 5,685 | 4,425 | 3,546 | 2,907 | 2,428 | 2,059 | 1,768 | 1,536 | 1,346 | 1,190 | 1,053 | 0,933 | 0,832 | 0,747 | 0,674 |
| | $q_{Rk}$ (L/200) | 13,565 | 7,850 | 4,944 | 3,312 | 2,326 | 1,696 | 1,274 | 0,981 | 0,772 | 0,618 | 0,502 | 0,414 | 0,345 | 0,291 | 0,247 | 0,212 |
| 0,63 | $q_{Rd}$ (c<1.5h) | 8,278 | 6,185 | 4,804 | 3,844 | 3,147 | 2,625 | 2,224 | 1,908 | 1,656 | 1,451 | 1,276 | 1,121 | 0,993 | 0,886 | 0,795 | 0,718 |
| | $q_{Rd}$ (c≥1.5h) | 8,278 | 6,185 | 4,804 | 3,844 | 3,147 | 2,625 | 2,224 | 1,908 | 1,656 | 1,451 | 1,276 | 1,121 | 0,993 | 0,886 | 0,795 | 0,718 |
| | $q_{Rk}$ (L/200) | 14,403 | 8,335 | 5,249 | 3,516 | 2,470 | 1,800 | 1,353 | 1,042 | 0,819 | 0,656 | 0,533 | 0,440 | 0,366 | 0,309 | 0,262 | 0,225 |
| 0,7 | $q_{Rd}$ (c<1.5h) | 9,813 | 7,302 | 5,653 | 4,510 | 3,684 | 3,067 | 2,594 | 2,223 | 1,926 | 1,670 | 1,455 | 1,279 | 1,133 | 1,010 | 0,907 | 0,818 |
| | $q_{Rd}$ (c≥1.5h) | 9,813 | 7,302 | 5,653 | 4,510 | 3,684 | 3,067 | 2,594 | 2,223 | 1,926 | 1,670 | 1,455 | 1,279 | 1,133 | 1,010 | 0,907 | 0,818 |
| | $q_{Rk}$ (L/200) | 16,333 | 9,452 | 5,952 | 3,988 | 2,801 | 2,042 | 1,534 | 1,182 | 0,929 | 0,744 | 0,605 | 0,498 | 0,416 | 0,350 | 0,298 | 0,255 |
| 0,75 | $q_{Rd}$ (c<1.5h) | 10,931 | 8,113 | 6,268 | 4,992 | 4,072 | 3,386 | 2,861 | 2,449 | 2,107 | 1,816 | 1,582 | 1,391 | 1,232 | 1,099 | 0,986 | 0,890 |
| | $q_{Rd}$ (c≥1.5h) | 10,931 | 8,113 | 6,268 | 4,992 | 4,072 | 3,386 | 2,861 | 2,449 | 2,107 | 1,816 | 1,582 | 1,391 | 1,232 | 1,099 | 0,986 | 0,890 |
| | $q_{Rk}$ (L/200) | 17,710 | 10,249 | 6,454 | 4,324 | 3,037 | 2,214 | 1,663 | 1,281 | 1,008 | 0,807 | 0,656 | 0,540 | 0,451 | 0,380 | 0,323 | 0,277 |
| 0,8 | $q_{Rd}$ (c<1.5h) | 12,068 | 8,936 | 6,891 | 5,480 | 4,464 | 3,708 | 3,130 | 2,672 | 2,277 | 1,963 | 1,710 | 1,503 | 1,331 | 1,188 | 1,066 | 0,962 |
| | $q_{Rd}$ (c≥1.5h) | 12,068 | 8,936 | 6,891 | 5,480 | 4,464 | 3,708 | 3,130 | 2,672 | 2,277 | 1,963 | 1,710 | 1,503 | 1,331 | 1,188 | 1,066 | 0,962 |
| | $q_{Rk}$ (L/200) | 19,090 | 11,048 | 6,957 | 4,661 | 3,273 | 2,386 | 1,793 | 1,381 | 1,086 | 0,870 | 0,707 | 0,583 | 0,486 | 0,409 | 0,348 | 0,298 |
| 0,88 | $q_{Rd}$ (c<1.5h) | 13,922 | 10,274 | 7,902 | 6,270 | 5,098 | 4,228 | 3,561 | 2,992 | 2,549 | 2,198 | 1,915 | 1,683 | 1,491 | 1,330 | 1,194 | 1,077 |
| | $q_{Rd}$ (c≥1.5h) | 13,922 | 10,274 | 7,902 | 6,270 | 5,098 | 4,228 | 3,561 | 2,992 | 2,549 | 2,198 | 1,915 | 1,683 | 1,491 | 1,330 | 1,194 | 1,077 |
| | $q_{Rk}$ (L/200) | 21,306 | 12,330 | 7,765 | 5,202 | 3,653 | 2,663 | 2,001 | 1,541 | 1,212 | 0,971 | 0,789 | 0,650 | 0,542 | 0,457 | 0,388 | 0,333 |
| 1 | $q_{Rd}$ (c<1.5h) | 16,769 | 12,322 | 9,445 | 7,474 | 6,064 | 5,002 | 4,134 | 3,474 | 2,960 | 2,552 | 2,223 | 1,954 | 1,731 | 1,544 | 1,386 | 1,251 |
| | $q_{Rd}$ (c≥1.5h) | 16,769 | 12,322 | 9,445 | 7,474 | 6,064 | 5,002 | 4,134 | 3,474 | 2,960 | 2,552 | 2,223 | 1,954 | 1,731 | 1,544 | 1,386 | 1,251 |
| | $q_{Rk}$ (L/200) | 24,645 | 14,262 | 8,981 | 6,017 | 4,226 | 3,081 | 2,314 | 1,783 | 1,402 | 1,123 | 0,913 | 0,752 | 0,627 | 0,528 | 0,449 | 0,385 |
| 1,25 | $q_{Rd}$ (c<1.5h) | 22,421 | 16,344 | 12,450 | 9,787 | 7,733 | 6,264 | 5,177 | 4,350 | 3,706 | 3,196 | 2,784 | 2,447 | 2,167 | 1,933 | 1,735 | 1,566 |
| | $q_{Rd}$ (c≥1.5h) | 22,421 | 16,344 | 12,450 | 9,787 | 7,733 | 6,264 | 5,177 | 4,350 | 3,706 | 3,196 | 2,784 | 2,447 | 2,167 | 1,933 | 1,735 | 1,566 |
| | $q_{Rk}$ (L/200) | 31,050 | 17,969 | 11,316 | 7,581 | 5,324 | 3,881 | 2,916 | 2,246 | 1,767 | 1,414 | 1,150 | 0,948 | 0,790 | 0,666 | 0,566 | 0,485 |

ArcelorMittal

Triple span – symmetric profile




| Trapeza® 40/160 T | | Span [m] | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| t [mm] | S320 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 | 2,75 | 3,00 | 3,25 | 3,50 | 3,75 | 4,00 | 4,25 | 4,50 | 4,75 | 5,00 |
| 0,4 | $q_{Rd}$ (c<1.5h) | 3,850 | 2,919 | 2,295 | 1,855 | 1,532 | 1,287 | 1,097 | 0,947 | 0,826 | 0,727 | 0,645 | 0,576 | 0,517 | 0,467 | 0,424 | 0,387 |
| | $q_{Rd}$ (c≥1.5h) | 3,850 | 2,919 | 2,295 | 1,855 | 1,532 | 1,287 | 1,097 | 0,947 | 0,826 | 0,727 | 0,645 | 0,576 | 0,517 | 0,467 | 0,424 | 0,387 |
| | $q_{Rk}$ (L/200) | 5,192 | 3,005 | 1,892 | 1,268 | 0,890 | 0,649 | 0,488 | 0,376 | 0,295 | 0,237 | 0,192 | 0,158 | 0,132 | 0,111 | 0,095 | 0,081 |
| 0,5 | $q_{Rd}$ (c<1.5h) | 6,266 | 4,737 | 3,715 | 2,996 | 2,470 | 2,073 | 1,765 | 1,521 | 1,325 | 1,165 | 1,032 | 0,921 | 0,827 | 0,747 | 0,678 | 0,612 |
| | $q_{Rd}$ (c≥1.5h) | 6,266 | 4,737 | 3,715 | 2,996 | 2,470 | 2,073 | 1,765 | 1,521 | 1,325 | 1,165 | 1,032 | 0,921 | 0,827 | 0,747 | 0,678 | 0,612 |
| | $q_{Rk}$ (L/200) | 7,618 | 4,409 | 2,776 | 1,860 | 1,306 | 0,952 | 0,715 | 0,551 | 0,433 | 0,347 | 0,282 | 0,232 | 0,194 | 0,163 | 0,139 | 0,119 |
| 0,55 | $q_{Rd}$ (c<1.5h) | 7,692 | 5,805 | 4,547 | 3,663 | 3,017 | 2,529 | 2,152 | 1,853 | 1,614 | 1,418 | 1,256 | 1,120 | 1,005 | 0,908 | 0,818 | 0,738 |
| | $q_{Rd}$ (c≥1.5h) | 7,692 | 5,805 | 4,547 | 3,663 | 3,017 | 2,529 | 2,152 | 1,853 | 1,614 | 1,418 | 1,256 | 1,120 | 1,005 | 0,908 | 0,818 | 0,738 |
| | $q_{Rk}$ (L/200) | 8,903 | 5,152 | 3,245 | 2,174 | 1,527 | 1,113 | 0,836 | 0,644 | 0,507 | 0,406 | 0,330 | 0,272 | 0,227 | 0,191 | 0,162 | 0,139 |
| 0,6 | $q_{Rd}$ (c<1.5h) | 9,092 | 6,838 | 5,341 | 4,292 | 3,528 | 2,952 | 2,508 | 2,158 | 1,876 | 1,647 | 1,457 | 1,299 | 1,165 | 1,040 | 0,933 | 0,842 |
| | $q_{Rd}$ (c≥1.5h) | 9,092 | 6,838 | 5,341 | 4,292 | 3,528 | 2,952 | 2,508 | 2,158 | 1,876 | 1,647 | 1,457 | 1,299 | 1,165 | 1,040 | 0,933 | 0,842 |
| | $q_{Rk}$ (L/200) | 10,031 | 5,805 | 3,656 | 2,449 | 1,720 | 1,254 | 0,942 | 0,726 | 0,571 | 0,457 | 0,372 | 0,306 | 0,255 | 0,215 | 0,183 | 0,157 |
| 0,63 | $q_{Rd}$ (c<1.5h) | 9,927 | 7,448 | 5,806 | 4,658 | 3,823 | 3,195 | 2,712 | 2,331 | 2,025 | 1,776 | 1,571 | 1,399 | 1,242 | 1,108 | 0,994 | 0,897 |
| | $q_{Rd}$ (c≥1.5h) | 9,927 | 7,448 | 5,806 | 4,658 | 3,823 | 3,195 | 2,712 | 2,331 | 2,025 | 1,776 | 1,571 | 1,399 | 1,242 | 1,108 | 0,994 | 0,897 |
| | $q_{Rk}$ (L/200) | 10,651 | 6,164 | 3,881 | 2,600 | 1,826 | 1,331 | 1,000 | 0,770 | 0,606 | 0,485 | 0,394 | 0,325 | 0,271 | 0,228 | 0,194 | 0,166 |
| 0,7 | $q_{Rd}$ (c<1.5h) | 11,793 | 8,812 | 6,846 | 5,477 | 4,484 | 3,741 | 3,169 | 2,719 | 2,360 | 2,067 | 1,819 | 1,598 | 1,416 | 1,263 | 1,134 | 1,023 |
| | $q_{Rd}$ (c≥1.5h) | 11,793 | 8,812 | 6,846 | 5,477 | 4,484 | 3,741 | 3,169 | 2,719 | 2,360 | 2,067 | 1,819 | 1,598 | 1,416 | 1,263 | 1,134 | 1,023 |
| | $q_{Rk}$ (L/200) | 12,078 | 6,990 | 4,402 | 2,949 | 2,071 | 1,510 | 1,134 | 0,874 | 0,687 | 0,550 | 0,447 | 0,369 | 0,307 | 0,259 | 0,220 | 0,189 |
| 0,75 | $q_{Rd}$ (c<1.5h) | 13,156 | 9,804 | 7,600 | 6,069 | 4,962 | 4,134 | 3,498 | 2,999 | 2,600 | 2,271 | 1,978 | 1,738 | 1,540 | 1,374 | 1,233 | 1,113 |
| | $q_{Rd}$ (c≥1.5h) | 13,156 | 9,804 | 7,600 | 6,069 | 4,962 | 4,134 | 3,498 | 2,999 | 2,600 | 2,271 | 1,978 | 1,738 | 1,540 | 1,374 | 1,233 | 1,113 |
| | $q_{Rk}$ (L/200) | 13,096 | 7,579 | 4,773 | 3,197 | 2,246 | 1,637 | 1,230 | 0,947 | 0,745 | 0,597 | 0,485 | 0,400 | 0,333 | 0,281 | 0,239 | 0,205 |
| 0,8 | $q_{Rd}$ (c<1.5h) | 14,543 | 10,811 | 8,364 | 6,669 | 5,445 | 4,531 | 3,831 | 3,281 | 2,843 | 2,454 | 2,138 | 1,879 | 1,664 | 1,484 | 1,332 | 1,202 |
| | $q_{Rd}$ (c≥1.5h) | 14,543 | 10,811 | 8,364 | 6,669 | 5,445 | 4,531 | 3,831 | 3,281 | 2,843 | 2,454 | 2,138 | 1,879 | 1,664 | 1,484 | 1,332 | 1,202 |
| | $q_{Rk}$ (L/200) | 14,117 | 8,169 | 5,145 | 3,446 | 2,421 | 1,765 | 1,326 | 1,021 | 0,803 | 0,643 | 0,523 | 0,431 | 0,359 | 0,303 | 0,257 | 0,221 |
| 0,88 | $q_{Rd}$ (c<1.5h) | 16,807 | 12,452 | 9,607 | 7,643 | 6,228 | 5,174 | 4,368 | 3,737 | 3,187 | 2,748 | 2,394 | 2,104 | 1,864 | 1,662 | 1,492 | 1,346 |
| | $q_{Rd}$ (c≥1.5h) | 16,807 | 12,452 | 9,607 | 7,643 | 6,228 | 5,174 | 4,368 | 3,737 | 3,187 | 2,748 | 2,394 | 2,104 | 1,864 | 1,662 | 1,492 | 1,346 |
| | $q_{Rk}$ (L/200) | 15,755 | 9,118 | 5,742 | 3,847 | 2,702 | 1,969 | 1,480 | 1,140 | 0,896 | 0,718 | 0,584 | 0,481 | 0,401 | 0,338 | 0,287 | 0,246 |
| 1 | $q_{Rd}$ (c<1.5h) | 20,292 | 14,967 | 11,507 | 9,128 | 7,420 | 6,153 | 5,168 | 4,342 | 3,700 | 3,190 | 2,779 | 2,442 | 2,164 | 1,930 | 1,732 | 1,563 |
| | $q_{Rd}$ (c≥1.5h) | 20,292 | 14,967 | 11,507 | 9,128 | 7,420 | 6,153 | 5,168 | 4,342 | 3,700 | 3,190 | 2,779 | 2,442 | 2,164 | 1,930 | 1,732 | 1,563 |
| | $q_{Rk}$ (L/200) | 18,224 | 10,546 | 6,641 | 4,449 | 3,125 | 2,278 | 1,711 | 1,318 | 1,037 | 0,830 | 0,675 | 0,556 | 0,464 | 0,391 | 0,332 | 0,285 |
| 1,25 | $q_{Rd}$ (c<1.5h) | 27,252 | 19,935 | 15,226 | 12,015 | 9,666 | 7,830 | 6,471 | 5,437 | 4,633 | 3,995 | 3,480 | 3,059 | 2,709 | 2,417 | 2,169 | 1,957 |
| | $q_{Rd}$ (c≥1.5h) | 27,252 | 19,935 | 15,226 | 12,015 | 9,666 | 7,830 | 6,471 | 5,437 | 4,633 | 3,995 | 3,480 | 3,059 | 2,709 | 2,417 | 2,169 | 1,957 |
| | $q_{Rk}$ (L/200) | 22,961 | 13,287 | 8,368 | 5,606 | 3,937 | 2,870 | 2,156 | 1,661 | 1,306 | 1,046 | 0,850 | 0,701 | 0,584 | 0,492 | 0,418 | 0,359 |

Explanatory note:

| | | |
|---|---|---|
| $q_{Ed}$ (c<1,5h) | design resistance [kN/m²] | end support width at least 40 mm, end support at distance at least 40 mm clear from a free end<br>internal support width at least 120 mm |
| $q_{Ed}$ (c≥1,5h) | design resistance [kN/m²] | end support width at least 40 mm, end support at distance at least 1.5 x $h_w$ (web height) clear from a free end<br>internal support width at least 120 mm |
| $q_{Ek}$ (δ≤L/200) | characteristics load that meets the serviceability limit for deflection of L/200 [kN/m²] | |