

## PU Linear AT20 Steel NT

Article code: TBP000077

### General information

|                             |  |
|-----------------------------|--|
| <b>Productgroup</b>         | Timing belts, PU Linear  |
| <b>Industry segment</b>     | General industry; Wood; Building materials: Stone & ceramics, Bricks & tiles |
| <b>Main product feature</b> | Low friction tooth side, Low noise, Positive drive, Wear resistant           |

### Belt construction

|                       |                   |                  |
|-----------------------|-------------------|------------------|
| <b>Tension member</b> |                   | steel            |
| <b>Material</b>       | <b>body</b>       | Polyurethane     |
| <b>Surface</b>        | <b>tooth side</b> | Polyamide fabric |
|                       | <b>back side</b>  | Polyurethane     |

### Characteristics

|                                 |      |
|---------------------------------|------|
| <b>Food Grade (FG)</b>          | no   |
| <b>Anti-static (AS)</b>         | no   |
| <b>Oil &amp; Fat resistance</b> | Good |

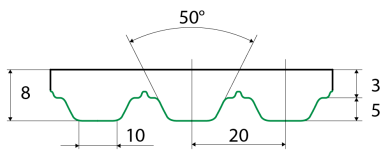
### Technical data

|                                |                            |                     |                       |                          |
|--------------------------------|----------------------------|---------------------|-----------------------|--------------------------|
| <b>Tooth</b>                   | profile                    |                     | AT20                  |                          |
|                                | pitch                      |                     | 20 mm                 | 0.79 in.                 |
| <b>Hardness body material</b>  | according to ISO 868       |                     | 92A Shore             |                          |
| <b>Belt thickness</b>          |                            |                     | 8 mm                  | 0.31 in.                 |
| <b>Belt weight</b>             |                            |                     | 9.7 kg/m <sup>2</sup> | 1.99 lbs/ft <sup>2</sup> |
| <b>Coefficient of friction</b> | tooth side to steel        | dynamic             | 0.3                   |                          |
| <b>Operating temperature</b>   | continuous                 | from/to             | -10 / 80 °C           | 14 / 176 °F              |
| <b>Minimum pulley diameter</b> | A) without counter flexing | number of teeth, t1 | 18                    |                          |
|                                |                            | d1                  | 111.75 mm             | 4.4 in.                  |
|                                |                            | d2                  | 120 mm                | 4.72 in.                 |
|                                | B) with counter flexing    | number of teeth, t1 | 25                    |                          |
|                                |                            | d1                  | 156.32 mm             | 6.15 in.                 |
|                                |                            | d2                  | 180 mm                | 7.09 in.                 |
| <b>Belt width*</b>             | maximum                    |                     | 150 mm                | 5.91 in.                 |
| <b>Endless length</b>          | minimum                    |                     | 1200 mm               | 47.24 in.                |
| <b>Manufacturing length</b>    | standard                   |                     | 100000 mm             | 328.08 ft.               |

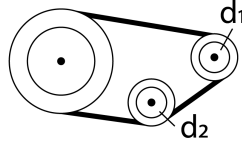
\* some timing belt types are available in greater belt widths.

## Reference images

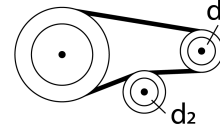
### Side view



### A) without counter flexing



### B) with counter flexing



## Fabrication

This information on the fabrication options is general, please contact Ammeraal Beltech for the specific fabrication possibilities of the timing belt of your choice.

Open end, prepared splice, spliced endless with mechanical fastener or a pin joint fastener.

Cleats welded or mechanically attached, metal teeth, guides welded or glued.

Covers can be welded, glued, coated or vulcanized onto the back side of the timing belt.

Thermoplastic covers can be embossed. Perforations, lateral and longitudinal slots, lateral and longitudinal profiles

## Additional Information

Tooth profile according to standard: metric ISO 17396 , imperial ISO 5296-1, curvilinear ISO 13050, depending on the belt type.

This sheet contains typical values, which apply to a temperature of approx. 20 °C (68 °F) unless otherwise stated, individual data may differ.

Consult our specialists for further information like technical calculations. Instructions regarding joining, storage & maintenance and tracking & tensioning.

## Belt load

| Standard belt width [mm] | Allow. tensile load<br>Linear open end<br>& Torque [N] | Allow. tensile load<br>Linear welded endless [N] | Breaking force [N] | Spring force [N] |
|--------------------------|--|--|--------------------|------------------|
| 25                       | 5600   | 2800   | 15500              | 1375000          |
| 32                       | 7200   | 3600   | 20800              | 1875000          |
| 50                       | 11700  | 5850   | 32500              | 3000000          |
| 75                       | 18000  | 9000   | 48500              | 4625000          |
| 100                      | 25200  | 12600  | 65000              | 6125000          |
| 150.1                    | 37000  | 18500  | 98000              | 9250000          |

## Tooth load

| Speed rpm [1/min] | Specific tooth force [N/mm] | Specific power [W/mm] | Specific torque<br>[Ncm/mm] |
|-------------------|-----------------------------|-----------------------|-----------------------------|
| 0                 | 15.140                      | 0.000                 | 4.819                       |
| 25                | 14.810                      | 0.123                 | 4.714                       |
| 50                | 14.410                      | 0.240                 | 4.587                       |
| 75                | 14.200                      | 0.355                 | 4.520                       |
| 100               | 13.870                      | 0.462                 | 4.415                       |
| 150               | 13.360                      | 0.668                 | 4.253                       |
| 200               | 12.940                      | 0.863                 | 4.119                       |
| 300               | 12.230                      | 1.223                 | 3.893                       |
| 400               | 11.590                      | 1.545                 | 3.689                       |
| 500               | 11.040                      | 1.840                 | 3.514                       |
| 750               | 9.940                       | 2.485                 | 3.164                       |
| 1000              | 9.080                       | 3.027                 | 2.890                       |
| 1250              | 8.370                       | 3.488                 | 2.664                       |
| 1500              | 7.780                       | 3.890                 | 2.476                       |
| 1750              | 7.210                       | 4.206                 | 2.295                       |
| 2000              | 6.820                       | 4.547                 | 2.171                       |
| 3000              | 5.420                       | 5.420                 | 1.725                       |
| 4000              | 4.390                       | 5.853                 | 1.397                       |

## Belt pulleys

| Number of teeth | outer Ø [mm] | Effective Ø [mm] | Ø with flanges [mm] | Max. bore [mm] |
|-----------------|--------------|------------------|---------------------|----------------|
| 18              | 111.75       | 114.59           | 122                 | 86             |
| 19              | 118.12       | 120.96           | 128                 | 93             |
| 20              | 124.48       | 127.32           | 134                 | 100            |
| 21              | 130.85       | 133.69           | 141                 | 105            |
| 22              | 137.22       | 140.06           | 147                 | 112            |
| 23              | 143.58       | 146.42           | 153                 | 118            |
| 24              | 149.95       | 152.79           | 160                 | 125            |
| 25              | 156.32       | 159.16           | 166                 | 131            |
| 26              | 162.68       | 165.52           | 173                 | 137            |
| 27              | 169.05       | 171.89           | 179                 | 144            |
| 28              | 175.41       | 178.25           | 185                 | 150            |
| 29              | 181.78       | 184.62           | 192                 | 156            |
| 30              | 188.15       | 190.99           | 198                 | 163            |
| 31              | 194.51       | 197.35           | 204                 | 169            |
| 32              | 200.88       | 203.72           | 211                 | 175            |
| 33              | 207.24       | 210.08           | 217                 | 182            |
| 34              | 213.61       | 216.45           | 224                 | 188            |
| 35              | 219.98       | 222.82           | 230                 | 195            |
| 36              | 226.34       | 229.18           | 236                 | 201            |
| 37              | 232.71       | 235.55           | 243                 | 207            |
| 38              | 239.08       | 241.92           | 249                 | 214            |
| 39              | 245.44       | 248.28           | 255                 | 220            |
| 40              | 251.81       | 254.65           | 262                 | 226            |
| 41              | 258.17       | 261.01           | 268                 | 233            |
| 42              | 264.54       | 267.38           | 274                 | 239            |
| 43              | 270.91       | 273.75           | 281                 | 245            |
| 44              | 277.27       | 280.11           | 287                 | 252            |
| 45              | 283.64       | 286.48           | 294                 | 258            |
| 46              | 290.01       | 292.85           | 300                 | 265            |
| 47              | 296.37       | 299.21           | 306                 | 271            |
| 48              | 302.74       | 305.58           | 313                 | 278            |
| 49              | 309.10       | 311.94           | 319                 | 284            |
| 50              | 315.47       | 318.31           | 325                 | 290            |
| 51              | 321.84       | 324.68           | 332                 | 296            |
| 52              | 328.20       | 331.04           | 338                 | 303            |
| 53              | 334.57       | 337.41           | 344                 | 310            |
| 54              | 340.93       | 343.77           | 351                 | 315            |
| 55              | 347.30       | 350.14           | 357                 | 322            |
| 56              | 353.67       | 356.51           | 364                 | 328            |
| 57              | 360.03       | 362.87           | 370                 | 335            |
| 58              | 366.40       | 369.24           | 376                 | 341            |
| 59              | 372.77       | 375.61           | 383                 | 347            |
| 60              | 379.13       | 381.97           | 389                 | 354            |
| 61              | 385.50       | 388.34           | 395                 | 360            |
| 62              | 391.86       | 394.70           | 402                 | 366            |
| 63              | 398.23       | 401.07           | 408                 | 373            |
| 64              | 404.60       | 407.44           | 414                 | 379            |
| 65              | 410.96       | 413.80           | 421                 | 385            |
| 66              | 417.33       | 420.17           | 427                 | 392            |
| 67              | 423.70       | 426.54           | 434                 | 398            |
| 68              | 430.05       | 432.90           | 440                 | 405            |
| 69              | 436.42       | 439.27           | 446                 | 406            |

Standard

| Number of teeth | outer Ø [mm] | Effective Ø [mm] | Ø with flanges [mm] | Max. bore [mm] |
|-----------------|--------------|------------------|---------------------|----------------|
| 70              | 442.78       | 445.63           | 453                 | 412            |
| 71              | 449.15       | 452.00           | 459                 | 419            |
| 72              | 455.52       | 458.37           | 465                 | 425            |
| 73              | 461.88       | 464.73           | 472                 | 431            |
| 74              | 468.25       | 471.01           | 478                 | 438            |
| 75              | 474.61       | 477.46           | 485                 | 444            |
| 76              | 480.98       | 483.83           | 491                 | 450            |
| 77              | 487.35       | 490.20           | 497                 | 457            |
| 78              | 493.71       | 496.56           | 504                 | 463            |
| 79              | 500.08       | 502.93           | 510                 | 470            |
| 80              | 506.45       | 509.30           | 516                 | 476            |
| 81              | 512.81       | 515.66           | 523                 | 482            |
| 82              | 519.18       | 522.03           | 529                 | 489            |
| 83              | 525.54       | 528.39           | 535                 | 495            |
| 84              | 531.91       | 534.76           | 542                 | 501            |
| 85              | 538.28       | 541.13           | 548                 | 503            |
| 86              | 544.64       | 547.49           | 555                 | 509            |
| 87              | 551.01       | 553.86           | 561                 | 516            |
| 88              | 557.38       | 560.23           | 567                 | 522            |
| 89              | 563.74       | 566.59           | 574                 | 528            |
| 90              | 570.11       | 572.96           | 580                 | 535            |
| 91              | 576.47       | 579.32           | 586                 | 541            |
| 92              | 582.84       | 585.69           | 593                 | 548            |
| 93              | 589.21       | 592.06           | 599                 | 554            |
| 94              | 595.57       | 598.42           | 605                 | 580            |
| 95              | 601.94       | 604.79           | 612                 | 566            |
| 96              | 608.31       | 611.16           | 618                 | 573            |
| 97              | 614.67       | 617.52           | 625                 | 579            |
| 98              | 621.04       | 623.89           | 631                 | 586            |
| 99              | 627.40       | 630.25           | 637                 | 592            |
| 100             | 633.77       | 636.62           | 644                 | 598            |
| 101             | 640.14       | 642.99           | 650                 | 605            |
| 102             | 646.50       | 649.35           | 656                 | 611            |
| 103             | 652.87       | 655.72           | 663                 | 617            |
| 104             | 659.23       | 662.08           | 669                 | 624            |
| 105             | 665.60       | 668.45           | 676                 | 630            |
| 106             | 671.97       | 674.82           | 682                 | 636            |
| 107             | 678.33       | 681.18           | 688                 | 643            |
| 108             | 684.70       | 687.55           | 695                 | 649            |
| 109             | 691.07       | 693.92           | 701                 | 656            |
| 110             | 697.43       | 700.28           | 707                 | 662            |
| 111             | 703.80       | 706.65           | 714                 | 663            |
| 112             | 710.16       | 713.01           | 720                 | 670            |
| 113             | 716.53       | 719.38           | 726                 | 676            |
| 114             | 722.90       | 725.75           | 733                 | 682            |
| 115             | 729.26       | 732.11           | 739                 | 688            |
| 116             | 735.63       | 738.48           | 746                 | 694            |
| 117             | 742.00       | 744.85           | 752                 | 700            |
| 118             | 748.36       | 751.21           | 758                 | 707            |
| 119             | 754.73       | 757.58           | 765                 | 714            |
| 120             | 761.09       | 763.94           | 771                 | 720            |