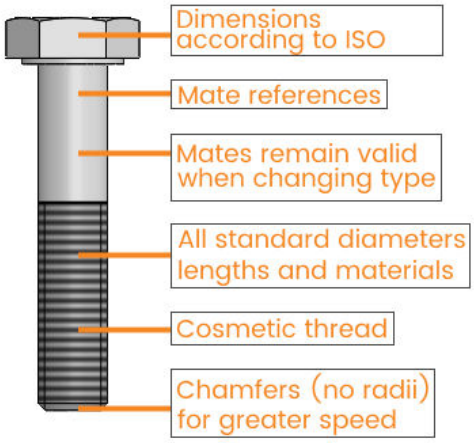
# Fastener Models

CAD BOOSTER
SOLIDWORKS AUTOMATION

## Your own Toolbox

Engineers use nuts and bolts in their designs every single day. Then why are high-quality 3D fastener models so hard to come by?

Randomly downloaded 3D files aren't going to cut it and the standard Toolbox from SOLIDWORKS doesn't work well. The dimensions don't match the standards, any engineer can add sizes and sharing the files with customers and suppliers breaks assemblies. That is why we developed our own library.




## Our vision

In our opinion, fastener models should have the following properties:

- Correct dimensions
- Very fast
- Freely shareable
- Native SOLIDWORKS models, so not imported

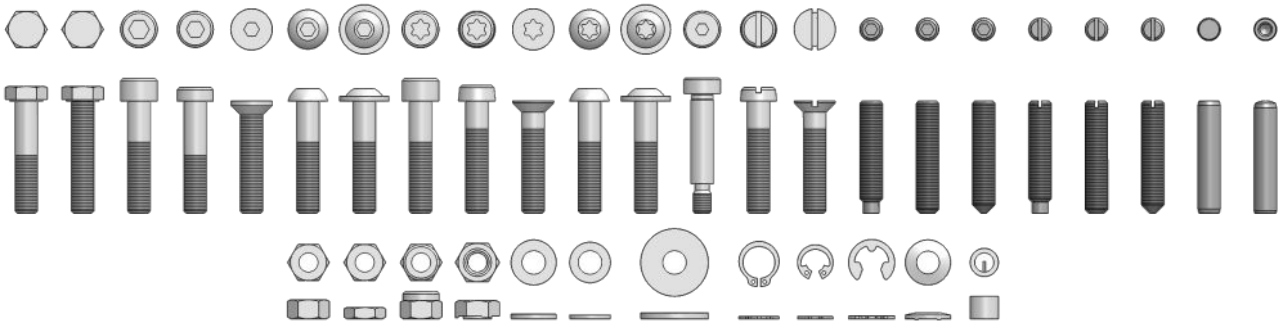
To meet these requirements, we spent more than 800 hours developing software that generates 3D models. Right now it can create thousands of models across 60+ fastener types. We check every model for anomalies to make sure that every single file is perfect.

## The standard is leading

We always start with the ISO or DIN standard. We buy the standard, plough through the document and add all relevant data to our database. We even partner with NEN, the Dutch arm of ISO, to sell our fasteners together with the standards in their webshop.

## Advantages of our fastener library

1. Generated by software for great consistency.
2. Optimized for speed to make sure large assemblies remain snappy.
3. Data is taken directly from ISO and DIN standards to make sure the models are correct.
4. You only purchase the standards you need.
5. Our library is a one-time investment. We don't charge a subscription or maintenance fees.
6. You can use our defaults or we can create a custom export for you.



CAD Booster B.V.
Oldenzaalsestraat 100-A
7511 DT Enschede, The Netherlands

+31 85 06 53 776
https://cadbooster.com
hello@cadbooster.com

CoC: 67786545
VAT: NL857173352B01
IBAN: NL82TRIO0338511199

## Model properties

- *Native models*, generated in a SOLIDWORKS version of your choice.
- One configuration per file so the models are as fast as they can be.
- Contains *mate references* so mates are added automatically.
- Mates give no errors when you switch between different types.
- Material and coating are specified.
- *Custom properties* with a description and extra information like the thread pitch and tensile strength.

## About custom exports

You can download a few sample models on our website to check out our defaults. If you prefer any changes to these defaults, we can create a custom export for you. To do that, we change our code and/or the data. We can:

- Change filenames
- Add or remove custom properties
- Use different materials or colors
- Add sizes that are not in the standard

## DIN vs ISO

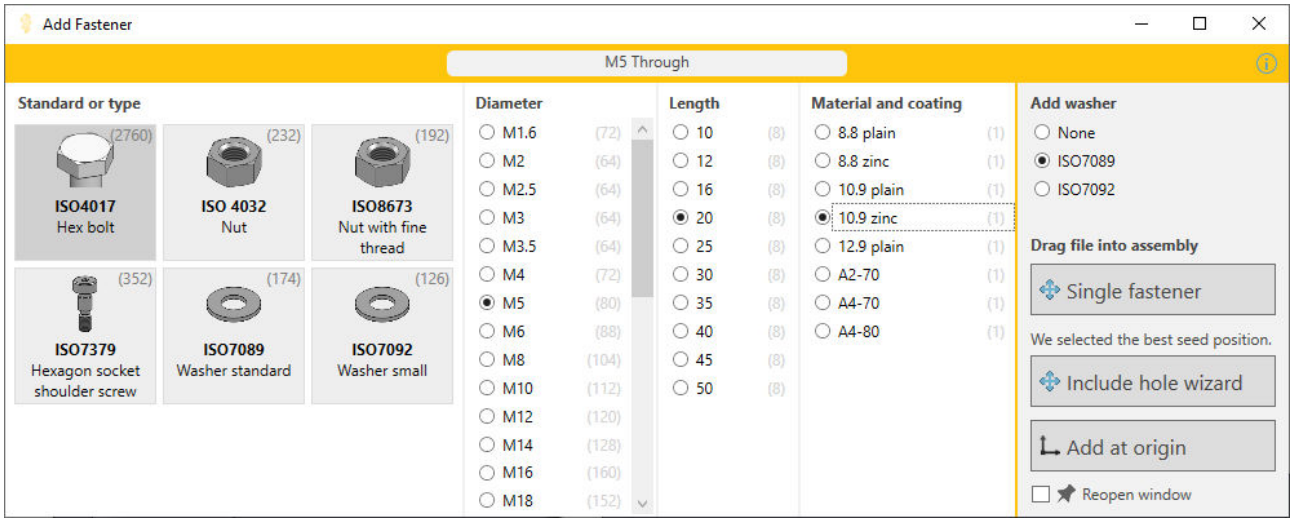
Most DIN fastener standards have been withdrawn since 1992, so it's time to start using their ISO replacements. We know that engineers still love to use the DIN standards and suppliers are happy to sell them, but since we cannot buy these documents anymore, we cannot access the source data.

We have listed our current offering on the next few pages, which mentions the withdrawn DIN standards in light gray.

## Spend less time searching with Lightning

Because we were few up with scrolling through endless lists of fasteners in SOLIDWORKS, we created Lightning. Lightning is a SOLIDWORKS add-in that makes working with fasteners fun again. You can add, edit and replace fasteners in just a few clicks thanks to our intuitive software that is built just for fasteners. We'll even add a washer and a pattern for you.

You can try Lightning for free for two weeks. For a super-fast demo: https://cadbooster.com/lightning

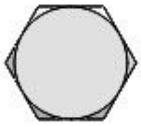
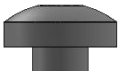


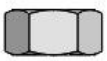
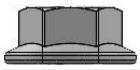
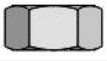


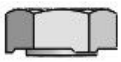
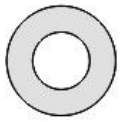
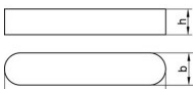
CAD Booster B.V.
Oldenzaalsestraat 100-A
7511 DT Enschede, The Netherlands

+31 85 06 53 776
https://cadbooster.com
hello@cadbooster.com

CoC: 67786545
VAT: NL857173352B01
IBAN: NL82TRIO0338511199

| Group | # | Image | Standard<br>Withdrawn | Description<br>Unique sizes * material/coating | Default options | Custom export |
|---|---|---|---|---|---|---|
| Hexagon head  | 1 | | ISO 4014<br>DIN 931 | Hexagon head<br>289 * 8 = 2312 files | €50 | €90 |
| | 2 | | ISO 4017<br>DIN 933 | Hexagon head, full thread<br>345 * 8 = 2760 files | €50 | €90 |
| | 3 | | ISO 8676<br>DIN 960 | Hexagon head, fine pitch thread<br>440 * 8 = 3520 files | €50 | €90 |
| | 4 | | ISO 8765<br>DIN 960 | Hexagon head, full thread, fine pitch<br>284 * 10 = 2840 files | €50 | €90 |
| | 5 | | EN 1665<br>- | Hexagon head bolt with flange<br>110 * 6 = 660 files | €50 | €90 |
| Hexagon socket | 6 | | ISO 4762<br>DIN 912 | Hexagon socket head cap<br>288 * 8 = 2304 files | €50 | €90 |
| | 7 | | ISO 7380-1<br>- | Hexagon socket button head<br>94 * 4 = 376 files | €50 | €90 |
| | 8 | | ISO 7380-2<br>- | Hexagon socket button head with flange<br>94 * 4 = 376 files | €50 | €90 |
| | 9 | | ISO 10642<br>DIN 7991 | Hexagon socket countersunk head<br>121 * 6 = 726 files | €50 | €90 |
| | 10 | | ISO 12474<br>- | Hexagon socket, fine pitch thread<br>200 * 3 = 600 files | €50 | €90 |
| | 11 | | DIN 7984<br>- | Hexagon socket head cap, low head<br>136 * 4 = 544 files | €50 | €90 |
| Hexalobular socket (torx) | 12 | | ~ISO 7380-1<br>- | Torx socket button head<br>69 * 4 = 276 files | €50 | €90 |
| | 13 | | ~ISO 7380-2<br>- | Torx socket button head with flange<br>69 * 2 = 138 files | €50 | €90 |
| | 14 | | ISO 14579<br>- | Torx socket head cap<br>180 * 5 = 900 files | €50 | €90 |
| | 15 | | ~ISO 14579<br>- | Torx socket, fine pitch thread<br>152 * 4 = 608 files | €50 | €90 |
| | 16 | | ISO 14580<br>- | Torx socket head cap, cheese head<br>115 * 3 = 345 files | €50 | €90 |
| | 17 | | ISO 14581<br>- | Torx socket countersunk head<br>107 * 4 = 428 files | €50 | €90 |
| | 18 | | ISO 14583<br>- | Torx socket pan head screw<br>107 * 6 = 642 files | €50 | €90 |
| | 19 |  | ISO 14585<br>- | Hexalobular socket pan head tapping screw<br>45 * 4 * 3 types = 540 files | €50 | €90 |
| Cross recess | 20 | | ISO 7045<br>DIN 965 | Cross recessed pan head screw, type H and Z<br>231 * 5 = 1155 files | €50 | €90 |
| | 21 | | ISO 7046-1<br>ISO 7046-2<br>DIN 965 | Countersunk flat head screw, type H and Z<br>232 * 6 + 214 * 6 = 2676 files | €50 | €90 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fit bolts | 22 | | ISO 7379<br>- | Hexagon socket head shoulder screw. H8 + F9<br>88 * 2 fits * 2 materials = 352 files | €50 | €90 |
| Eye bolts | 23 | | DIN 444<br>- | Eye bolt<br>190 * 6 = 1140 files | €50 | €90 |
| Cup head bolts | 24 | | DIN 603<br>- | Cup head bolt<br>123 * 8 = 784 files | €50 | €90 |
| Slotted screws | 25 | | ISO 1207<br>DIN 84 | Slotted cheese head screw<br>113 * 1 = 113 files | €50 | €90 |
| | 26 | | ISO 2009<br>DIN 963 | Slotted countersunk flat head screw<br>113 * 3 = 339 files | €50 | €90 |
| Set screws | 27 | | ISO 4026<br>DIN 913 | Hexagon socket set screw, flat point<br>112 * 4 = 448 files | €50 | €90 |
| | 28 | | ISO 4027<br>DIN 914 | Hexagon socket set screw, cone point<br>112 * 4 = 448 files | €50 | €90 |
| | 29 | | ISO 4028<br>DIN 915 | Hexagon socket set screw, dog point<br>105 * 4 = 420 files | €50 | €90 |
| | 30 | | ISO 4029<br>DIN 916 | Hexagon socket set screw, cup point<br>112 * 4 = 448 files | €50 | €90 |
| | 31 | | ISO 4766<br>DIN 551 | Slotted set screw, flat point<br>107 * 5 = 535 files | €50 | €90 |
| | 32 | | ISO 7434<br>DIN 553 | Slotted set screw, cone point<br>94 * 3 = 282 files | €50 | €90 |
| | 33 | | ISO 7435<br>DIN 417 | Slotted set screw, long dog point<br>85 * 3 = 255 files | €50 | €90 |
| Headless screws | 34 | | ISO 2342<br>DIN 427 | Slotted headless screw with shank<br>48 * 9 = 434 files | €50 | €90 |
| Nuts | 35 |  | ISO 4032<br>DIN 934 | Hexagon regular nut<br>29 * 8 = 232 files | €30 | €50 |
| | 36 | | ISO 4035<br>DIN 439 | Hexagon thin nut, chamfered<br>29 * 8 = 232 files | €30 | €50 |
| | 37 |  | ISO 4161<br>DIN 6923 | Hexagon nut with flange<br>8 * 8 = 64 files | €30 | €50 |
| | 38 | | ISO 7040<br>DIN 982 | Prevailing torque hexagon nut<br>13 * 8 = 104 files | €30 | €50 |
| | 39 | | ISO 7042<br>DIN 6925 | Prevailing torque all metal hexagon high nut<br>11 * 7 = 77 files | €30 | €50 |
| | 40 |  | ISO 8673<br>DIN 934 | Hexagon regular nut, fine pitch thread<br>24 * 8 = 192 files | €30 | €50 |
| | 41 | | ISO 8675<br>DIN 439 | Hexagon thin nut, fine pitch thread<br>24 * 6 = 144 files | €30 | €50 |
| | 42 | | ISO 10511<br>DIN 985 | Prevailing torque nut with nylon insert<br>13 * 4 = 52 files | €30 | €50 |
| | 43 | | ISO 10512<br>DIN 982 | Prevailing torque nut with nylon insert, fine pitch – 11 * 6 = 66 files | €30 | €50 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 44 |  | DIN 929<br>– | Hexagon weld nut<br>16 * 3 = 48 files | €30 | €50 |
| | 45 | | DIN 981<br>– | Lock nut<br>47 * 1 = 47 files | €30 | €50 |
| | 46 | | DIN 1587<br>– | Dome nut<br>26 * 4 = 104 files | €30 | €50 |
| Washers | 47 |  | ISO 7089<br>DIN 125 | Plain washer, normal<br>29 * 6 = 174 files | €30 | €50 |
| | 48 | | ISO 7092<br>DIN 433 | Plain washer, small<br>21 * 6 = 126 files | €30 | €50 |
| | 49 | | ISO 7093<br>DIN 9021 | Plain washer, large<br>18 * 6 = 108 files | €30 | €50 |
| | 50 | | ISO 7094<br>DIN 440 | Plain washer, extra large<br>15 * 5 = 60 files | €30 | €50 |
| | 51 | | NF E25-511 | Contact washer<br>8 * 2 = 16 files | €30 | €50 |
| | 52 | | DIN 471<br>– | Retaining ring for shafts<br>86 * 3 = 258 files | €30 | €50 |
| | 53 | | DIN 472<br>– | Retaining ring for bores<br>88 * 3 = 264 files | €30 | €50 |
| | 54 | | DIN 6799<br>– | Retaining washer for shafts<br>18 * 2 = 36 files | €30 | €50 |
| | 55 | | DIN 988<br>– | Shim rings and supporting rings<br>796 + 59 = 855 files | €30 | €50 |
| | 56 | | DIN 5406<br>– | Lock washers – for use with DIN 981<br>47 * 1 = 47 files | €30 | €50 |
| | 57 | | DIN 6796<br>– | Conical spring washer<br>19 * 2 = 38 files | €30 | €50 |
| | 58 | | DIN 127B | Spring lock washers<br>34 * 4 = 136 files | €30 | €50 |
| Pins | 59 | | ISO 2338<br>DIN 7 | Parallel pin, unhardened, m6 and h8<br>260 * 2 fits * 2 materials = 1040 files | €50 | €90 |
| | 60 | | ISO 8734A<br>DIN 6325 | Parallel pin, hardened, m6 and h6<br>170 * 2 fits * 2 materials = 680 files | €50 | €90 |
| | 61 | | ISO 8735A<br>DIN 7979 | Parallel pin, hardened, internal thread, m6<br>154 * 2 materials = 308 files | €50 | €90 |
| Inserts | 62 | | DIN 8140-1A<br>– | Wire thread insert<br>147 * 2 = 294 files | €30 | €50 |
| Keys | 63 |  | DIN 6885A<br>– | Parallel key<br>252 * 1 = 252 files | €30 | €50 |
| Stud bolts | 64 | | DIN 976-1<br>– | Stud bolt<br>1518 * 9 = 13.662 files | €50 | €90 |