

Inserts

Face milling cutters

Square shoulder cutters

Slot cutters

Porcupine cutters

Specific applications and Sets

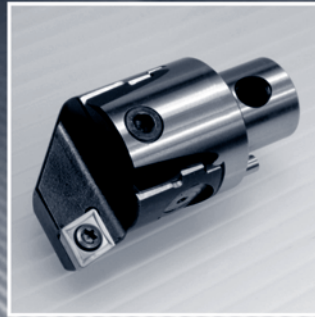
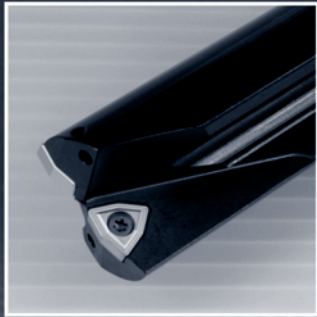
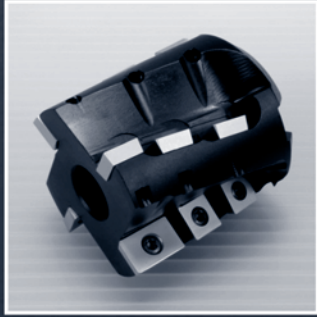
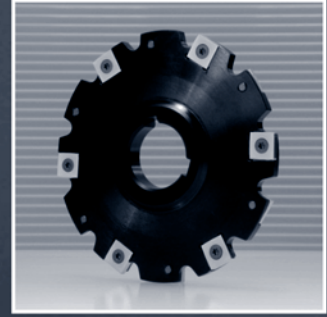
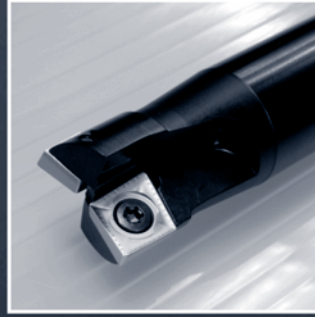
Profile milling

Solid carbide

Drills

Boring heads

Arbors and adaptors



# CANELA

# Technical information

|                             |      |
|-----------------------------|------|
| Reference list of materials | L.02 |
| Spare parts                 | L.08 |
| Alphanumeric index          | L.15 |

### Reference list of materials (Steels)

| ISO      | Germany |            | U.S.A.<br>AIS/SAE | Japan<br>JIS   | Spain<br>UNE | U.K.            |       | Sweden<br>SS | France<br>AFNOR | Italy<br>UNI    |
|----------|---------|------------|-------------------|----------------|--------------|-----------------|-------|--------------|-----------------|-----------------|
|          | W.-nr.  | DIN        |                   |                |              | BS              | EN    |              |                 |                 |
| <b>P</b> | 1.0038  | RSt.37-2   | A570.36           | STKM 12A;C     | -            | 4360 40 C       | -     | 1311         | E 24-2 Ne       | -               |
|          | 1.0038  | GS-CK16    | 1115              | -              | -            | 030A04          | 1A    | 1325         | -               | -               |
|          | 1.0116  | St.37-3    | A573-81 65        | -              | F.111        | 4360 40 B       | -     | 1312         | E 24-U          | Fe37-3          |
|          | 1.0401  | C15        | 1015              | -              | F.112        | 080M15          | -     | 1350         | CC12            | C15C16          |
|          | 1.0402  | C22        | 1020              | -              | 11SMn28      | 050A20          | 2C/2D | 1450         | CC20            | C20C21          |
|          | 1.0715  | 9SMn28     | 1213              | SUM22          | 11SMnPb28    | 230M07          | -     | 1912         | S250            | CF9SMn28        |
|          | 1.0718  | 9SMnPb28   | 12L13             | SUM22L         | 10SPb20      | -               | -     | 1914         | S250Pb          | CF9SMnPb28      |
|          | 1.0722  | 10SPb20    | -                 | -              | 12SMn35      | -               | -     | -            | 10PbF2          | CF10Pb20        |
|          | 1.0736  | 9SMn36     | 1215              | -              | 12SMnPb36    | 240M07          | 1B    | -            | S300            | CF9SMn36        |
|          | 1.0737  | 9SMnPb36   | 12L14             | -              | C15K         | -               | -     | 1926         | S300Pb          | CF9SMnPb36      |
|          | 1.1141  | Ck15       | 1015              | S15C           | -            | 080M15          | 32C   | 1370         | XC12            | C16             |
|          | 1.1158  | Ck25       | 1025              | S25C           | -            | -               | -     | -            | -               | -               |
|          | 1.8900  | StE 380    | A572-60           | -              | -            | 4360 55 E       | -     | 2145         | -               | FeE390KG        |
|          | -       | 17 MnV 6   | A572-60           | -              | -            | 4360 55 E       | -     | 2142         | NFA 35-501 E36  | -               |
|          | 1.0501  | C35        | 1035              | -              | F.113        | 060A35          | -     | 1550         | CC35            | C35             |
|          | 1.0503  | C45        | 1045              | -              | F.114        | 080M46          | -     | 1650         | CC45            | C45             |
|          | 1.0726  | 35S20      | 1140              | -              | F210G        | 212M36          | 8M    | 1657         | 35MF4           | -               |
|          | 1.1157  | 40Mn4      | 1039              | -              | -            | 150M36          | 15    | -            | 35M5            | -               |
|          | 1.1167  | 36Mn5      | 1335              | SMn438(H)      | 36Mn5        | -               | -     | 2120         | 40M5            | -               |
|          | 1.1170  | 28Mn6      | 1330              | SCMn1          | -            | 150M28          | 14A   | -            | 20M5            | C28Mn           |
|          | 1.1183  | Cf35       | 1035              | S35C           | -            | 060A35          | -     | 1572         | XC38TS          | C36             |
|          | 1.1191  | Ck45       | 1045              | S45C           | C45K         | 080M46          | -     | 1672         | CX42            | C45             |
|          | 1.1213  | Cf53       | 1050              | S50C           | -            | 060A52          | -     | 1674         | XC48TS          | C53             |
|          | 1.0535  | C55        | 1055              | -              | -            | 070M55          | -     | 1655         | -               | C55             |
|          | 1.0601  | C60        | 1060              | -              | -            | 080A62          | 43D   | -            | CC55            | C60             |
|          | 1.1203  | Ck55       | 1055              | S55c           | C55K         | 070M55          | -     | -            | XC55            | C50             |
| 1.1221   | Ck60    | 1060       | S58C              | -              | 080A62       | 43D             | 1678  | XC60         | C60             |                 |
| 1.1274   | CK 101  | 1095       | -                 | F-5117         | 060A96       | -               | 1870  | XC100        | -               |                 |
| 1.1545   | C105W1  | W 1        | SK 3              | F-5118         | BW1A         | -               | 1880  | Y105         | C36KU           |                 |
| 1.1545   | C105W1  | W210       | SUP4              | F.515          | BW2          | -               | 2900  | Y120         | C120KU          |                 |
| <b>P</b> | 1.0144  | St.44-2    | A573-81           | SM400A;B;C     | -            | 4360 43C        | -     | 1412         | E28-3           | -               |
|          | 1.0570  | St.52-3    | -                 | SM490A;B;YA;YB | -            | 4360 50B        | -     | 2132         | E36-3           | Fe52BFN/Fe52CFN |
|          | 1.0841  | St.52-3    | 5120              | -              | F-431        | 150 M 19        | -     | 2172         | 20 MC 5         | Fe52            |
|          | 1.0904  | 55Si7      | 9255              | -              | 56Si7        | 250A53          | 45    | 2085         | 55S7            | 55Si8           |
|          | 1.0961  | 60SiCr7    | 9262              | -              | 60SiCr8      | -               | -     | -            | 60SC7           | 60SiCr8         |
|          | 1.3505  | 100Cr      | 52100             | SUJ2           | F.131        | 534A99          | 31    | 2258         | 100C6           | 100Cr6          |
|          | 1.5415  | 15Mo3      | ASTM A204Gr.A     | -              | 16Mo3        | 1501-240        | -     | 2912         | 15D3            | 16Mo3KW         |
|          | 1.5423  | 16Mo5      | 4520              | -              | 16Mo5        | 1503-245-420    | -     | -            | -               | 16Mo5           |
|          | 1.5622  | 14Ni6      | ASTM A350LF5      | -              | 15Ni6        | -               | -     | -            | 16N6            | 14Ni6           |
|          | 1.6523  | 21NiCrMo2  | 8620              | SNCM220(H)     | 20NiCrMo2    | 805M20          | 362   | 2506         | 20NCD2          | 20NiCrMo2       |
|          | 1.6546  | 40NiCrMo22 | 8740              | SNCM240        | 40NiCrMo2    | 311-Type7       | -     | -            | -               | 40NiCrMo2(KB)   |
|          | 1.6587  | 17CrNiMo6  | -                 | -              | 14NiCrMo13   | 820A16          | -     | -            | 18NCD6          | -               |
|          | 1.7015  | 15Cr3      | 5015              | SCr415(H)      | -            | 523M15          | -     | -            | 12C3            | -               |
|          | 1.7045  | 42Cr4      | 5140              | SCr440         | 42Cr4        | -               | -     | 2245         | -               | -               |
|          | 1.7176  | 55Cr3      | 5155              | SUP9(A)        | -            | 527A60          | 48    | -            | 55C3            | -               |
|          | 1.7262  | 15CrMo5    | -                 | SCM415(H)      | 12CrMo4      | -               | -     | 2216         | 12CD4           | -               |
|          | 1.7335  | 13CrMo4 4  | ASTM A182F11;F12  | -              | 14CrMo45     | 1501-620Gr27    | -     | -            | 15CD3.5         | 14CrMo4 5       |
|          | 1.7380  | 10CrMo9 10 | ASTM A182F.22     | -              | TU.H         | 1501-622Gr31;45 | -     | 2218         | 12CD9, 10       | 12CrMo9, 10     |

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| ISO    | Germany            |         | U.S.A.<br>AISI/SAE | Japan<br>JIS | Spain<br>UNE  | U.K.        |              | Sweden<br>SS | France<br>AFNOR | Italy<br>UNI |               |   |
|--------|--------------------|---------|--------------------|--------------|---------------|-------------|--------------|--------------|-----------------|--------------|---------------|---|
|        | W.-nr.             | DIN     |                    |              |               | BS          | EN           |              |                 |              |               |   |
| P      | Low alloyed steel  | 1.7715  | 14MoV6 3           | -            | -             | 13MoCrV6    | 1503-660-440 | -            | -               | -            |               |   |
|        |                    | 1.8515  | 31 CeMo 12         | -            | -             | F-1712      | 722 M 24     | -            | 2240            | -            | 30CrMo12      |   |
|        |                    | 1.8523  | 39CrMoV13 9        | -            | -             | -           | 897M39       | -            | -               | 30 CD 12     | 36CrMoV12     |   |
|        |                    | 1.7039  | 34MoCrS4 G         | L1           | -             | -           | 524A14       | 40C          | 2092            | -            | 105WCR 5      |   |
|        |                    | 1.5419  | 20MoCrS4           | 8620         | -             | -           | F520.S       | 605A32       | -               | 2108         | -             |   |
|        |                    | 1.7228  | 55NiCrMoV6G        | -            | -             | -           | 823M30       | -            | 2512            | -            | 653M31        |   |
|        |                    | 1.7139  | 16MnCr5            | -            | -             | -           | -            | 33           | 2127            | -            | -             |   |
|        |                    | -       | 31NiCrMo134        | -            | -             | -           | F-1270       | 830M31       | -               | 2534         | -             | - |
|        |                    | 1.271   | 50NiCr13           | L6           | -             | -           | F-528        | -            | -               | 2550         | 55NCV6        | - |
|        |                    | 1.5710  | 36NiCr6            | 3135         | SNC236        | -           | 640A35       | 111A         | -               | 35NC6        | -             |   |
|        |                    | 1.5732  | 14NiCr10           | 3415         | SNC415(H)     | 15NiCr11    | -            | -            | -               | 14NC11       | 16NiCr11      |   |
|        |                    | 1.5752  | 14NiCr14           | 3415;3310    | SNC815(H)     | -           | 655M13;A12   | 36A          | -               | 12NC15       | -             |   |
|        |                    | 1.0904  | 55Si7              | 9255         | -             | -           | -            | -            | 2090            | 55S7         | -             |   |
|        |                    | 1.6511  | 36CrNiMo4          | 9840         | -             | 35NiCrMo4   | 816M40       | 110          | -               | 40NCD3       | 38NiCrMo4(KB) |   |
|        |                    | 1.6582  | 35CrNiMo6          | 4340         | -             | -           | 817M40       | 24           | 2541            | 35NCD6       | 35NiCrMo6(KB) |   |
|        |                    | 1.7033  | 34Cr4              | 5132         | SCr430(H)     | 35Cr4       | 530A32       | 18B          | -               | 32C4         | 34Cr4(KB)     |   |
|        |                    | 1.7035  | 41Cr4              | 5140         | SCr440(H)     | 42Cr4       | 530A40       | 18           | -               | 42C4         | 41Cr4         |   |
|        |                    | 1.7131  | 16MnCr5            | 5115         | -             | 16MnCr5     | (527M20)     | -            | 2511            | 16MC5        | 16MnCr5       |   |
|        |                    | 1.7218  | 25CrMo4            | 4130         | SCM420;SCM430 | 55Cr3       | 1717CDS110   | -            | 2225            | 25CD4        | 25CrMo4(KB)   |   |
|        |                    | 1.7220  | 34CrMo4            | 4137;4135    | SCM432;SCCRM3 | 34CrMo4     | 708A37       | 19B          | 2234            | 35CD4        | 35CrMo4       |   |
|        |                    | 1.7223  | 41CrMo4            | 4140;4142    | SCM440        | 42CrMo4     | 708M40       | 19A          | 2244            | 42CD4TS      | 41CrMo4       |   |
|        |                    | 1.7225  | 42CrMo4            | 4140         | SCM440(H)     | 42CrMo4     | 708M40       | 19A          | 2244            | 42CD4        | 42CrMo4       |   |
|        |                    | 1.7361  | 32CrMo12           | -            | -             | F.124.A     | 722M24       | 40B          | 2240            | 30CD12       | 32CrMo12      |   |
|        |                    | 1.8159  | 50CrV4             | 6150         | SUP10         | 51CrV4      | 735A50       | 47           | 2230            | 50CV4        | 50CrV4        |   |
|        |                    | 1.8509  | 41CrAlMo7          | -            | -             | 41CrAlMo7   | 905M39       | 41B          | 2940            | 40CAD6,12    | 41CrAlMo7     |   |
|        |                    | 1.2067  | 100Cr6             | L3           | -             | 100Cr6      | BL3          | -            | -               | Y100C6       | -             |   |
| 1.2419 | 105WCr6            | -       | SKS31,SKS2,SKS3    | 105WCr5      | -             | -           | 2140         | 105WC13      | 10WCr6          |              |               |   |
| 1.2713 | 55NiCrMoV6         | L6      | SKT4               | F.520.S      | -             | -           | -            | 55NCDV7      | -               |              |               |   |
| P      | High alloyed steel | 1.5662  | X8Ni9              | ASTM A353    | -             | XBNi09      | 1501-509;510 | -            | -               | X10Ni9       |               |   |
|        |                    | 1.5680  | 12Ni19             | 2515         | -             | -           | -            | -            | Z18N5           | -            |               |   |
|        |                    | 1.6657  | 14NiCrMo134        | -            | -             | 14NiCrMo131 | 832M13       | 36C          | -               | 15NiCrMo131  |               |   |
|        |                    | 1.2.080 | X210Cr12           | D3           | SKD1          | X210Cr12    | BD3          | -            | -               | Z200C12      | X210Cr13KU    |   |
|        |                    | 1.2083  | -                  | -            | -             | -           | -            | -            | 2314            | -            | X250Cr12KU    |   |
|        |                    | 1.2344  | X40CrMoV5 1        | H13          | SKD61         | X40CrMoV5   | BH13         | -            | 2242            | Z40CDV5      | X35CrMoV05KU  |   |
|        |                    | 1.2363  | X100CrMoV5 1       | A2           | SKD12         | X100CrMoV5  | BA2          | -            | 2260            | Z100CDV5     | X40CrMoV511KU |   |
|        |                    | 1.2436  | X210CrW12          | -            | SKD2          | X210CrW12   | -            | -            | 2312            | -            | X100CrMoV51KU |   |
|        |                    | 1.2542  | 45WCrV7            | S1           | -             | 45WCrSi8    | BS1          | -            | 2710            | -            | X215CrW12 1KU |   |
|        |                    | 1.2581  | X30wCrV9 3         | H21          | SKD5          | X30WCrV9    | BH21         | -            | -               | Z30WCV9      | 45WCrV8KU     |   |
|        |                    | 1.2601  | X165CrMoV 12       | -            | -             | X160CrMoV12 | -            | -            | 2310            | -            | X28W09KU      |   |
|        |                    | 1.4718  | X45GrSi93          | HW3          | SUH1          | F322        | 401S45       | 52           | -               | Z45CS9       | X160CrMoV12   |   |
|        |                    | 1.3343  | S6-5-2             | D3           | SUH3          | -           | 4959BA2      | -            | 2715            | Z40CSD10     | F322          |   |
|        |                    | 1.3343  | S6/5/2             | M 2          | SKH 51        | F-5603      | BM 2         | -            | 2722            | Z 85 WDCV    | -             |   |
|        |                    | 1.3243  | S6/5/2/5           | M 35         | SKH 55        | F-5613      | BM 35        | -            | 2723            | 6-5-2-5      | F-5603        |   |
|        |                    | 1.3348  | S2/9/2             | M 7          | -             | F-5607      | -            | -            | 2782            | -            | F-5607        |   |
| 1.2379 | X210Cr12 G         | HNV3    | -                  | -            | -             | -           | 2736         | -            | -               |              |               |   |
| P      | Steel castings     | -       | -                  | -            | -             | -           | -            | 2223         | -               | -            |               |   |
|        |                    | 1.3401  | G-X210Mn12         | -            | SCMnH/1       | X120Mn12    | Z120M12      | -            | -               | Z120M12      | XG120Mn12     |   |
|        |                    | 1.3401  | -                  | -            | SEMn H1       | F-8251      | BW 10        | -            | 2183            | 2120 M12     | Gx120 Mn12    |   |

## Reference list of materials (Stainless steels)

| ISO      | Germany                                     |        | U.S.A.         | Japan       | Spain        | U.K.     |          | Sweden        | France          | Italy         |                |
|----------|---|--------|----------------|-------------|--------------|----------|----------|---------------|-----------------|---------------|----------------|
|          | W.-nr.                                      | DIN    |                |             |              | AISI/SAE | JIS      |               |                 |               | UNE            |
| <b>M</b> | Stainless steel<br>(Ferritic / Martensitic) | 1.4000 | X7Cr13         | 403         | SUS403       | F.3110   | 403S17   | -             | 2301            | Z6Cr13        | X6Cr13         |
|          |   | 1.4001 | X7Cr14         | -           | -            | F.8401   | -        | -             | -               | -             | -              |
|          |   | 1.4005 | X12CrS13       | 416         | SUS416       | F-3411   | 416 S 21 | -             | 2380            | Z11CF13       | X12 CrS 13     |
|          |   | 1.4016 | X8Cr17         | 430         | SUS430       | F3113    | 430S15   | 960           | 2320            | Z8C17         | X8Cr17         |
|          |   | 1.4006 | X10Cr17        | 410         | SUS410       | F.3401   | 410S21   | 56A           | 2302            | Z10C14        | X12Cr13        |
|          |   | -      | X8Cr17         | 430         | SUS430       | F.3113   | 430S17   | 60            | 2320            | Z8C17         | X8Cr17         |
|          |   | 1.4034 | X46Cr13        | -           | SUS420J2     | F.3405   | 420S45   | 56D           | 2304            | Z40CM         | X40Cr14        |
|          |   | -      | -              | -           | -            | -        | -        | -             | -               | Z38C13M       | -              |
|          |   | 1.4003 | -              | 405         | -            | -        | 405S17   | -             | -               | Z8CA12        | X6CrAl13       |
|          |   | 1.4021 | -              | 420         | -            | -        | 420S37   | -             | 2303            | Z20C13        | X20Cr13        |
|          |   | 1.4057 | X22CrNi17      | 431         | SUS431       | F.3427   | 431S29   | 57            | 2321            | Z15CNi6.02    | X16CrNi16      |
|          |   | 1.4104 | X12CrMoS17     | 430F        | SUS430F      | F.3117   | -        | -             | 2383            | Z10CF17       | X10CrS17       |
|          |   | 1.4113 | X6CrMo17       | 434         | SUS434       | -        | 434S17   | -             | 2325            | Z8CD17.01     | X8CrMo17       |
|          |   | 1.4313 | X5CrNi13 4     | CA6-NM      | SCS5         | -        | 425C11   | -             | 2385            | Z4CND13.4M    | (G)X6CrNi304   |
|          |   | 1.4724 | X10CrA113      | 405         | SUS405       | F.311    | 403S17   | -             | -               | Z10C13        | X10CrA112      |
|          |   | 1.4742 | X10CrA118      | 430         | SUS430       | F.3113   | 430S15   | 60            | -               | Z10CAS18      | X8Cr17         |
|          |   | 1.4747 | X80CrNiSi20    | HNV6        | SUH4         | F.320B   | 443S65   | 59            | -               | Z80CSN20.02   | X80CrSiNi20    |
|          |   | 1.4762 | X10CrA124      | 446         | SUH446       | -        | -        | -             | 2322            | Z10CAS24      | X16Cr26        |
|          |   | 1.4871 | X53CrMnNiN21 9 | EV8         | SUH35, SUH36 | -        | 349S54   | -             | -               | Z52CMN21.09   | X53CrMnNiN219  |
|          |   | 1.4521 | X1CrMoTi18 2   | S44400      | -            | -        | -        | -             | 2326            | -             | -              |
| 1.4922   | X20CrMoV12-1                                | -      | -              | -           | -            | -        | 2317     | -             | X20CrMoNi 12 01 |               |                |
| 1.4542/  | -   | 630    | -              | -           | -            | -        | -        | Z7CNU17-04    | -               |               |                |
| 1.4548   | -   | -      | -              | -           | -            | -        | -        | -             | -               |               |                |
| <b>M</b> | Stainless steel<br>(Austenitic)             | 1.4306 | -              | 304L        | -            | -        | 304S11   | -             | 2352            | Z2CrNi18 11   | X2CrNi18 11    |
|          |   | 1.4350 | X5CrNi189      | 304         | SUS304       | F.3551   | 304S31   | 58E           | 2332/2333       | Z6CN18.09     | X5CrNi18 10    |
|          |   | -      | -              | -           | -            | F.3541   | -        | -             | -               | -             | -              |
|          |   | -      | -              | -           | -            | F.3504   | -        | -             | -               | -             | -              |
|          |   | 1.4305 | X12CrNiS18 8   | 303         | SUS303       | F.3508   | 303S21   | 58M           | 2346            | Z10CNF 18.09  | X10CrNiS 18.09 |
|          |   | 1.4301 | X5CrNi189      | 304         | SUS304       | F.3551   | 304S15   | 58E           | 2332            | Z6CN18.09     | X5CrNi18 10    |
|          |   | -      | -              | -           | SUS304L      | -        | 304C12   | -             | 2333            | Z3CN19.10     | -              |
|          |   | 1.4306 | X2CrNi18 9     | 304L        | SCS19        | F.3503   | 304S12   | -             | 2352            | Z2CrNi18 10   | X2CrNi18 11    |
|          |   | 1.4310 | X12CrNi17 7    | 301         | SUS301       | F.3517   | -        | -             | 2331            | Z12CN17.07    | X12CrNi17 07   |
|          |   | 1.4311 | X2CrNiN18 10   | 304LN       | SUS304LN     | -        | 304S62   | -             | 2371            | Z2CN18.10     | -              |
|          |   | 1.4401 | X5CrNiMo18 10  | 316         | SUS316       | F.3543   | 316S16   | 58J           | 2347            | Z6CND17.11    | X5CrNiMo17 12  |
|          |   | 1.4429 | X2CrNiMoN18 13 | 316LN       | SUS316LN     | -        | -        | -             | 2375            | Z2CND17.13    | -              |
|          |   | 1.4404 | -              | 316L        | -            | -        | 316S13   | -             | 2348            | Z2CND17-12    | X2CrNiMo1712   |
|          |   | 1.4435 | X2CrNiMo18 12  | 316L        | SCS16        | -        | 316S13   | -             | 2353            | Z2CND17.12    | X2CrNiMo17 12  |
|          |   | -      | -              | -           | SUS316L      | -        | -        | -             | -               | -             | -              |
|          |   | 1.4436 | -              | 316         | -            | -        | 316S33   | -             | 2343            | Z6CND18-12-03 | X8CrNiMo1713   |
|          |   | -      | -              | -           | -            | -        | -        | -             | 2347            | -             | -              |
|          |   | 1.4438 | X2CrNiMo18 16  | 317L        | SUS317L      | -        | 317S12   | -             | 2367            | Z2 NCDU25-20  | X2CrNiMo18 16  |
|          |   | 1.4539 | X1NiCrMo       | UNS V 0890A | -            | -        | -        | -             | 2562            | Z6CNT18.10    | -              |
|          |   | 1.4541 | X10CrNiTi18 9  | 321         | SUS321       | F.3553   | 321S12   | 58B           | 2337            | -             | X6CrNiTi18 11  |
|          |   | -      | -              | -           | -            | F.3523   | -        | -             | -               | Z6CNNb18.10   | -              |
|          |   | 1.4550 | X10CrNiNb18 9  | 347         | SUS347       | F.3552   | 347S17   | 58F           | 2338            | -             | X6CrNiNb18 11  |
|          |   | -      | -              | -           | -            | F.3524   | -        | -             | -               | -             | -              |
| 1.4571   | X10CrNiMoTi18 10                            | 316Ti  | -              | F.3535      | 320S17       | 58J      | 2350     | Z6NDT17.12    | X6CrNiMoNb17 13 |               |                |
| 1.4583   | X10CrNiMoNb 18 12                           | 318    | -              | -           | -            | -        | -        | Z6CNDNb17 13B | -               |               |                |
| 1.4828   | X15CrNiSi20 12                              | 309    | SUH309         | -           | 309S24       | -        | -        | Z15CNS20.12   | X6CrNi25 20     |               |                |

## Reference list of materials (Stainless steels)

| ISO  | Germany           |                | U.S.A.   | Japan  | Spain  | U.K.    |     | Sweden | France           | Italy        |
|--|-------------------|----------------|----------|--------|--------|---------|-----|--------|------------------|--------------|
|  | W.-nr.            | DIN            | AISI/SAE | JIS    | UNE    | BS      | EN  | SS     | AFNOR            | UNI          |
| M<br>Stainless steel<br>(Austenitic)                     | 1.4845            | X12CrNi25 21   | 310S     | SUH310 | F.331  | 310S24  | -   | 2361   | Z12CN25 20       | -            |
|  | 1.4406            | X10CrNi18.08   | 308      | SCS17  | F.8414 | 301S21  | 58C | 2370   | Z1NCDU25.20      | -            |
|  | 1.4418            | X4 CrNiMo16 5  | -        | -      | -      | -       | -   | 2387   | Z6CND16-04-01    | X2CrNiMo1712 |
|  | 1.4568/<br>1.4504 | -              | 17-7PH   | -      | -      | 316S111 | -   | -      | Z8CNA17-07       | -            |
|  | 1.4563            | -              | NO8028   | -      | -      | -       | -   | 2584   | Z1NCDU31-27-03   | -            |
|  | -                 | -              | S31254   | -      | -      | -       | -   | 2378   | Z1CNDU20-18-06AZ | -            |
| M<br>Stainless steel<br>(Austenitic / Ferritic (Duplex)) | 1.4417            | X2CrNiMoSi19 5 | S31500   | -      | -      | -       | -   | 2376   | -                | -            |
|  | -                 | X8CrNiMo27 5   | S32900   | -      | -      | -       | -   | 2324   | -                | -            |
|  | -                 | X2CrNiN23 4    | S322304  | -      | -      | -       | -   | 2327   | Z2CN23-04AZ      | -            |
|  | -                 | -              | -        | -      | -      | -       | -   | 2328   | -                | -            |
|  | -                 | X2CrNiMoN22 53 | S31803   | -      | -      | -       | -   | 2377   | Z2CND22-05-03    | -            |

Inserts

Face milling cutters

Square shoulder cutters

Slot cutters

Porcupine cutters

Specific applications and Sets

Profile milling

Solid carbide

Drills

Boring heads

Arbors and adaptors

### Reference list of materials (Castings)

| ISO                             | Germany     |             | U.S.A.     | Japan   | Spain       | U.K.       |      | Sweden   | France     | Italy     |
|---------------------------------|-------------|-------------|------------|---------|-------------|------------|------|----------|------------|-----------|
|                                 | W.-nr.      | DIN         | AISI/SAE   | JIS     | UNE         | BS         | EN   | SS       | AFNOR      | UNI       |
| <b>K</b><br>Malleable cast iron | -           | -           | -          | FCMB310 | -           | 8 290/6    | -    | 0814     | MN 32-8    | -         |
|                                 | -           | GTS-35      | 32510      | FCMW330 | -           | B 340/12   | -    | 0815     | MN 35-10   | -         |
|                                 | 0.8145      | GTS-45      | 40010      | FCMW370 | -           | P 440/7    | -    | 0852     | Mn 450     | GMN 45    |
|                                 | 0.8155      | GTS-55      | 50005      | FCMP490 | -           | P 510/4    | -    | 0854     | MP 50-5    | GMN 55    |
|                                 | -           | GTS-65      | 70003      | FCMP540 | -           | P 570/3    | -    | 0858     | MP 60-3    | -         |
|                                 | 0.8165      | GTS-65-02   | A220-70003 | FCMP590 | -           | P570/3     | -    | 0856     | Mn 650-3   | GMN 65    |
|                                 | 0.8170      | GTS-70-02   | A220-80002 | FCMP690 | -           | P690/2     | -    | 0862     | Mn700-2    | GMN 70    |
| <b>K</b><br>Cast iron           | -           | -           | -          | -       | -           | -          | -    | 0100     | -          | -         |
|                                 | -           | GG10        | No 20 B    | FC100   | -           | -          | -    | 0110     | Ft 10 D    | -         |
|                                 | 0.6015      | GG15        | No 25 B    | FC150   | FG 15       | Grade 150  | -    | 0115     | Ft 15 D    | G 15      |
|                                 | 0.6020      | GG20        | No 30 B    | FC200   | -           | Grade 220  | -    | 0120     | Ft 20 D    | G 20      |
|                                 | 0.6025      | GG25        | No 35 B    | FC250   | FG25        | Grade 260  | -    | 0125     | Ft 25 D    | G 25      |
|                                 | -           | -           | No 40 B    | -       | -           | -          | -    | -        | -          | -         |
|                                 | 0.6030      | GG30        | No 45 B    | FC300   | FG30        | Grade 300  | -    | 0130     | Ft 30D     | G 30      |
|                                 | 0.6035      | GG35        | No 50 B    | FC350   | FG35        | Grade 350  | -    | 0135     | Ft 35 D    | G 35      |
|                                 | 0.6040      | GG40        | No 55 B    | -       | -           | Grade 400  | -    | 0140     | Ft 40 D    | -         |
| 0.6660                          | GGL-NiCr202 | A436 Type 2 | -          | -       | L-NiCuCr202 | -          | 0523 | L-NC 202 | -          |           |
| <b>K</b><br>Nodular SG iron     | 0.7040      | GGG 40      | 60-40-18   | FCD400  | FGE 38-17   | SNG 420/12 | -    | 0717-02  | FCS 400-12 | GS 370-17 |
|                                 | -           | GGG 40.3    | -          | -       | -           | SNG 370/17 | -    | 0717-12  | FGS 370-17 | -         |
|                                 | 0.7033      | GGG 35.3    | -          | -       | -           | -          | -    | 0717-15  | -          | -         |
|                                 | 0.7050      | GGG 50      | 80-55-06   | FCD500  | FGE 50-7    | SNG 500/7  | -    | 0727-02  | FGS 500-7  | GS 500    |
|                                 | 0.7660      | GGG-NiCr202 | A43D2      | -       | -           | Grade S6   | -    | 0776     | S-NC 202   | -         |
|                                 | -           | GGG 60      | -          | FCD600  | -           | SNG 600/3  | -    | 0732-03  | FGS 600-3  | -         |
|                                 | 0.7070      | GGG 70      | 100-70-03  | FCD700  | FGS 70-2    | SNG 700/2  | -    | 0737-01  | FGS 700-2  | GS 700-2  |

### Reference list of materials (Non ferrous materials)

| ISO                               | Germany |                | U.S.A.    | Japan | Spain | U.K. |    | Sweden | France | Italy |
|-----------------------------------|---------|----------------|-----------|-------|-------|------|----|--------|--------|-------|
|                                   | W.-nr.  | DIN            | AISI/SAE  | JIS   | UNE   | BS   | EN | SS     | AFNOR  | UNI   |
| <b>N</b><br>Non ferrous materials | 3.2373  | G-AISI9MGWA    | SC64D     | C4BS  | -     | -    | -  | 4251   | A-STG  | -     |
|                                   | -       | G-ALMG5        | GD-AISI12 | AC4A  | -     | LM5  | -  | 4252   | A-SU12 | -     |
|                                   | -       | -              | 356.1     | A5052 | -     | LM25 | -  | 4244   | -      | -     |
|                                   | -       | GD-AISI12      | A413.0    | A6061 | -     | -    | -  | 4247   | -      | -     |
|                                   | -       | GD-AISI8Cu3    | A380.1    | A7075 | -     | LM24 | -  | 4250   | -      | -     |
|                                   | -       | G-AISI12(Cu)   | A413.1    | ADC12 | -     | LM20 | -  | 4260   | -      | -     |
|                                   | -       | G-AISI12       | A413.2    | -     | -     | LM6  | -  | 4261   | -      | -     |
|                                   | -       | G-AISI10Mg(Cu) | A360.2    | -     | -     | LM9  | -  | 4253   | -      | -     |

## Reference list of materials (Heat resistant super-alloys)

| ISO                                 | Germany     |                  | U.S.A.<br>AISI/SAE | Japan<br>JIS | Spain<br>UNE | U.K.         |    | Sweden<br>SS | France<br>AFNOR | Italy<br>UNI  |
|-------------------------------------|-------------|------------------|--------------------|--------------|--------------|--------------|----|--------------|-----------------|---------------|
|                                     | W.-nr.      | DIN              |                    |              |              | BS           | EN |              |                 |               |
| S<br>Heat resistant<br>super-alloys | 1.4864      | X12NiCrSi36 16   | 330                | SUH330       | -            | -            | -  | -            | Z12NCS35.16     | F-3313        |
|                                     | 1.4865      | G-X40NiCrSi38 18 | -                  | SCH15        | -            | 330C11       | -  | -            | -               | XG50NiCr39 19 |
|                                     | 2.4603      | -                | 5390A              | -            | -            | -            | -  | -            | NC22FeD         | -             |
|                                     | 2.4856      | NiCr22Mo9Nb      | 5666               | -            | -            | -            | -  | -            | NC22FeDNB       | -             |
|                                     | 2.4630      | NiCr20Ti         | -                  | -            | -            | HR5,203-4    | -  | -            | NC20T           | -             |
|                                     | LW2.4662    | NiFe35Cr14MoTi   | 5660               | -            | -            | -            | -  | -            | ZSNCDT42        | -             |
|                                     | LW2.4670    | S-NiCr13A16MoNb  | 5391               | -            | -            | 3146-3       | -  | -            | NC12AD          | -             |
|                                     | LW2.4668    | NiCr19Fe19NbMo   | 5383               | -            | -            | HR8          | -  | -            | NC19eNB         | -             |
|                                     | 2.4375      | NiCu30Al         | 4676               | -            | -            | 3072-76      | -  | -            | -               | -             |
|                                     | 2.4631      | NiCr20TiAk       | -                  | -            | -            | Hr401,601    | -  | -            | NC20TA          | -             |
|                                     | 2.4973      | NiCr19Co11MoTi   | AMS 5399           | -            | -            | -            | -  | -            | NC19KDT         | -             |
|                                     | LW2.4668    | NiCr19Fe19NbMo   | AMS 5544           | -            | -            | -            | -  | -            | NC20K14         | -             |
|                                     | LW2.4674    | NiCo15Cr10MoAlTi | AMS 5397           | -            | -            | -            | -  | -            | -               | -             |
|                                     | LW2.4964    | CoCr20W15Ni      | 5537C              | -            | -            | -            | -  | -            | KC20WN          | -             |
| -                                   | CoCr22W14Ni | AMS 5772         | -                  | -            | -            | -            | -  | KC22WN       | -               |               |
| S<br>Titanium alloys                | -           | TiAl5Sn2.5       | AMS R54520         | -            | -            | TA14/17      | -  | -            | T-A5E           | -             |
|                                     | -           | TiAl6V4          | AMS R56400         | -            | -            | TA10-13/TA28 | -  | -            | T-A6V           | -             |
|                                     | -           | TiAl6V4ELI       | AMS R56401         | -            | -            | TA11         | -  | -            | -               | -             |
|                                     | -           | TiAl4MoSn4Si0.5  | -                  | -            | -            | -            | -  | -            | -               | -             |

## Reference list of materials (Hardened materials)

| ISO                        | Germany |             | U.S.A.<br>AISI/SAE | Japan<br>JIS | Spain<br>UNE | U.K. |    | Sweden<br>SS | France<br>AFNOR | Italy<br>UNI |
|----------------------------|---------|-------------|--------------------|--------------|--------------|------|----|--------------|-----------------|--------------|
|                            | W.-nr.  | DIN         |                    |              |              | BS   | EN |              |                 |              |
| H<br>Hardened<br>materials | 1.4108  | X100CrMo13  | 440A               | C4BS         | -            | -    | -  | -            | -               | -            |
|                            | 1.4111  | X110CrMoV15 | 610                | AC4A         | -            | -    | -  | -            | -               | -            |
|                            | -       | X65CrMo14   | 0-2                | AC4A         | -            | -    | -  | -            | -               | -            |



Screws (Allen)

**1004**  
Allen 2

Ø5.6  
10  
6.8  
M4x0.7

**1005**  
Allen 2.5

Ø6.8  
12  
8.7  
M5x0.8

**1006**  
Allen 4

Ø9  
17  
11.2  
M6x1

**1006L**  
Allen 4

Ø9  
17  
11.2  
M6x1L

**1008**  
Allen 5

Ø11  
22  
16.6  
M8x1.25L

**1016**  
Allen 4

Ø9  
12.4  
6.6  
M6x1

**1025**  
Allen 3

Ø8.0  
12.5  
8  
M5x0.8

**1058**  
Allen 5

Ø10.95  
35  
M8

**1076**  
Allen 5

Ø9.7  
36.1  
31  
M6x1

**1094**  
Allen 3

Ø6.9  
12.3  
8  
M4x0.7

**1095**  
Allen 4

Ø8.4  
11.8  
8.2  
M5x0.8

**1195**  
Allen 4

Ø8.3  
10.8  
6  
M5x0.8

**1196**  
Allen 5

Ø9.8  
14  
8  
M6x1

**1295**  
Allen 4

Ø8.3  
8.2  
4.8  
M5x0.8

**1296**  
Allen 5

Ø9.75  
13.9  
10  
M6x1

**1396**  
Allen 5

Ø9.75  
21.9  
16  
M6x1

**1750**  
Allen 3.5

Ø8.25  
8.5  
5  
M3.5x0.6  
M5x0.5

**912.10**  
Allen 8

Ø16  
35  
25  
M10

**912.12**  
Allen 10

Ø18  
42.25  
32.25  
M12

**912.16**  
Allen 14

Ø18  
51  
35  
M16

**912.17**  
Allen 12

Ø18  
44.25  
32.25  
M12

**912.20**  
Allen 14

Ø30  
53  
41  
M20

**912.52**  
Allen 10

Ø18  
62  
50  
M12

**912.56**  
Allen 14

Ø24  
76  
60  
M16

Screws (Torx)

**1182**  
Torx T-25

Ø11  
13.5  
9.5  
M8x1

**1194**  
Torx T-9

Ø6.9  
4.6  
3  
M4

**1222**  
Torx T-6

Ø3.3  
6  
3.5  
M2.2x0.45

**1225**  
Torx T-7

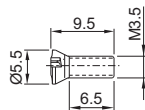
Ø3.3  
7  
4  
M2.5x0.45

**1230**  
Torx T-8

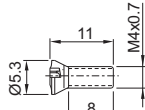
Ø4.4  
9  
5.6  
M3x0.5

**1235**

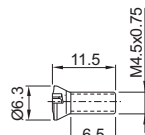
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**1240**

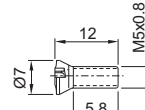
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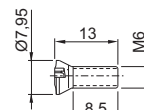
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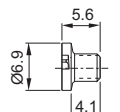
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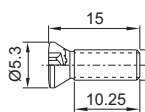
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**1294**

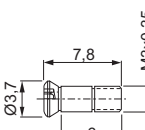
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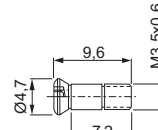
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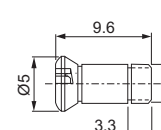
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**1354**

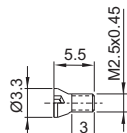
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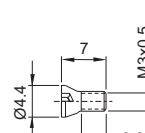
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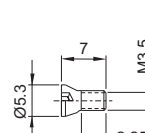
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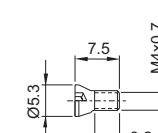
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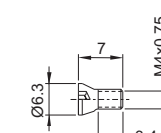
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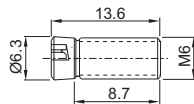
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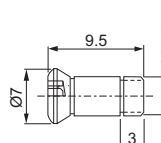
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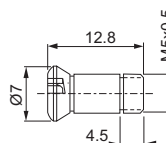
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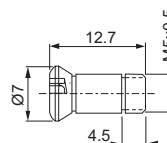
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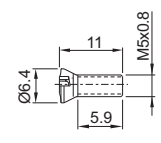
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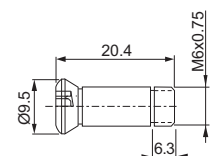
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**1550**

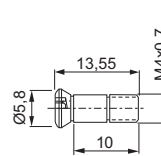
Torx T-20

**1609**

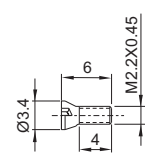
Torx T-30

**1619**

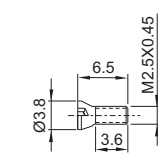
Torx T-15

**1622**

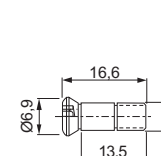
Torx T-7

**1625**

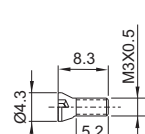
Torx T-8

**1629**

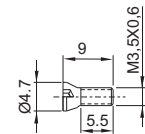
Torx T-20

**1630**

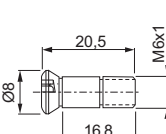
Torx T-9

**1635**

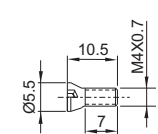
Torx T-10

**1639**

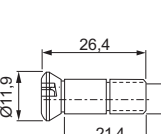
Torx T-25

**1640**

Torx T-15

**1649**

Torx T-30



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**1735**  
Torx T-7

**1745**  
Torx T-15

**1809**  
Torx T-30

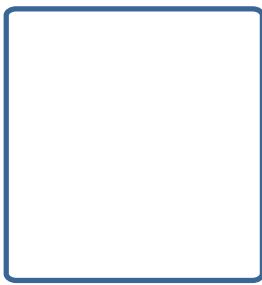
**1835**  
Torx T-7

**1840**  
Torx T-15

**1845**  
Torx T-15

**1846**  
Torx T-15

**1847**  
Torx T-15



Clamp screws

**1066**  
Torx T-15

**1077**  
Torx T-20

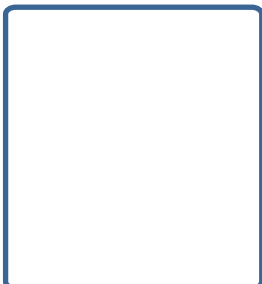
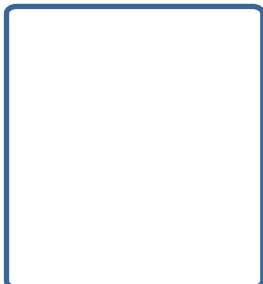
**1088**  
Allen 4

**1156**  
Torx T-15

**1166**  
Torx T-15

**1266**  
Torx T-15

**1388**  
Allen 4



Screws

**1503**  
Allen 1.5

**1504**  
Allen 2

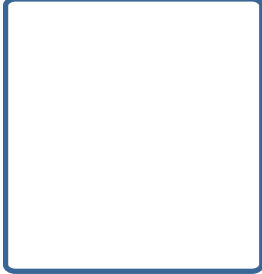
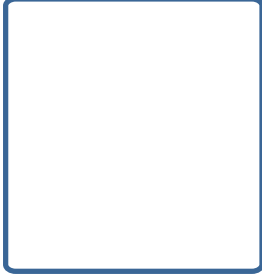
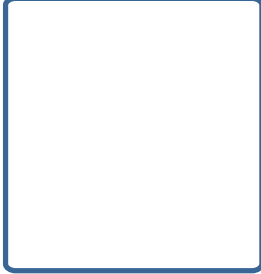
**1505**  
Allen 2.5

**1506**  
Allen 3

**1508**  
Allen 4

Adj. Screws

**1405**



Washers

|                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| <p><b>2009</b></p> | <p><b>2010</b></p> | <p><b>2054</b></p> | <p><b>2063</b></p> | <p><b>2064</b></p> |
| <p><b>2066</b></p> | <p><b>2088</b></p> |                    |                    |                    |

Square - Shim seats

|                    |                    |                    |                    |  |
|--------------------|--------------------|--------------------|--------------------|--|
| <p><b>3010</b></p> | <p><b>3012</b></p> | <p><b>3212</b></p> | <p><b>3511</b></p> |  |
|--------------------|--------------------|--------------------|--------------------|--|

Triangular - Shim seats

|                    |                    |  |  |  |
|--------------------|--------------------|--|--|--|
| <p><b>3016</b></p> | <p><b>3022</b></p> |  |  |  |
|--------------------|--------------------|--|--|--|

Lock pins

|                    |                    |                    |  |  |
|--------------------|--------------------|--------------------|--|--|
| <p><b>4012</b></p> | <p><b>4016</b></p> | <p><b>4022</b></p> |  |  |
|--------------------|--------------------|--------------------|--|--|

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**6011**

**6013**

**6031**

**6032**

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**6110**

**6111**

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**6436**

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**6438**

**6439**

**6440**

**6488**

**6489**

**6490**

**6491**

**6230**

**6240**

**6245**







**6748**

**684**


Seats

|                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| <p><b>6846</b></p> |                    |                    |                    |                    |
| <p><b>6526</b></p> | <p><b>6912</b></p> | <p><b>6914</b></p> | <p><b>6915</b></p> | <p><b>6918</b></p> |
| <p><b>6920</b></p> | <p><b>6927</b></p> | <p><b>6942</b></p> |                    |                    |
| <p><b>6562</b></p> | <p><b>6563</b></p> | <p><b>6564</b></p> | <p><b>6565</b></p> |                    |
| <p><b>6806</b></p> | <p><b>6816</b></p> |                    |                    |                    |
| <p><b>6921</b></p> | <p><b>6926</b></p> | <p><b>6925</b></p> | <p><b>6935</b></p> | <p><b>6944</b></p> |

Allen Wrenches

|   |   |   |   |   |
|---|---|---|---|---|
| <b>5002</b><br><br>Allen 2   | <b>5003</b><br><br>Allen 3 | <b>5004</b><br><br>Allen 4 | <b>5005</b><br><br>Allen 5 | <b>5006</b><br><br>Allen 6 |
| <b>5025</b><br><br>Allen 2,5 |   |   |   |   |

Torx Wrenches

|  |  |  |  |  |
|--|--|--|--|--|
| <b>5506</b><br><br>Torx T6   | <b>5507</b><br><br>Torx T7   | <b>5508</b><br><br>Torx T8   | <b>5509</b><br><br>Torx T9   | <b>5510</b><br><br>Torx T10  |
| <b>5515</b><br><br>Torx T15 | <b>5520</b><br><br>Torx T20 | <b>5530</b><br><br>Torx T30 |  |  |
| <b>5607</b><br><br>Torx T7  | <b>5608</b><br><br>Torx T8  | <b>5615</b><br><br>Torx T15 | <b>5620</b><br><br>Torx T20 | <b>5625</b><br><br>Torx T25 |

Blades Wrenches

|  |
|--|
| <b>5733</b><br> |
|--|

CLS Wrenches

|  |   |   |
|--|---|---|
| <b>5201</b><br> | <b>5204</b><br><br>Allen 4 | <b>5205</b><br><br>Allen 5 |
|--|---|---|

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| HX-BT      | K.30 |
| HX-CIL     | K.43 |
| HX-DIN     | K.12 |
| HX-HSK     | K.36 |
| HX-ID      | K.21 |
| HX-MT      | K.39 |
| HX-R8      | K.42 |
| NPU-BT     | K.30 |
| NPU-CIL    | K.44 |
| NPU-DIN    | K.13 |
| NPU-HSK    | K.37 |
| NPU-ID     | K.21 |
| PS-BT      | K.31 |
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| SER        | K.61 |
| SET        | K.61 |
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**Eines Canela, S.A.**

**Conditions of sale:**

All sales are made in accordance with our standard conditions of sale, current at the time orders are accepted. Specifications and prices subject to change without notice.

**Product warranty:**

Eines Canela will repair or replace any of its products, which in its judgement, are found to be defective in material or workmanship. All claims must be made in writing within thirty days after receipt of product. No claims for labor or damages will be allowed. In no event shall Eines Canela be liable for consequential or special damages of any kind.

**Special tool quotation:**

Orders for special tools must be confirmed in writing before manufacturing can begin. Special items and non-stock standard items cannot be cancelled or returned for exchange or credit.

**Delivery terms:**

Barcelona. Full transportation costs will be charged to the buyer. Specify shipment to be made by other than regular means of transportation.

**Claims:**

Claims for loss in transit must be made against the transportation company. The foregoing shall constitute the sole and exclusive remedies of the customer and are in lieu of all other warranties, expressed, implied or statutory, including but not limited to any implied warranty of merchantability or fitness.

**Returns:**

No merchandise will be accepted for return after 30 days of shipment. All returns must be pre-paid and must be accompanied by our Return Goods Authorization (RGA) number. This number must appear on the outside of the box. Merchandise must be received in good condition or will be refused.

## Eines Canela, S.A.

This catalog contains information and specifications concerning cutting tools sold by Eines Canela. Although some of the cutting tools made from carbides are very tough and resist breakage, most are brittle and special safety precautions are required when using them.

Small fragment and chips may be thrown from a cutting tool when a fracture occurs. Since these fragments or chips are thrown at very high speeds and are very hot, contact with the skin or eyes could cause severe injury. Also, the grinding of these cutting tools will produce fine carbide and cobalt or nickel dust which may be harmful to the lungs. Listed below are some suggestions on how to minimize the potential for injury while using cutting tools.

For more information about the product hazards and safety precautions that must be taken to minimize the possibility of injury while using cutting tools, please call your Eines Canela Sales Engineer.

Eines Canela has no control over use of these cutting tools. The user must determine the suitability of these tools in its particular application.

**WARNING: Very hot chip fragments may be thrown from cutting tools at very high speeds. These chips can cause severe burns, cuts or punctures to the skin, or damage to the eyes. The following are some of the safety precautions that must be followed by operators and observers while using cutting tools:**

1. Make sure that the insert size and shape are adequate for use to which it is being put.
2. Chip control is necessary to prevent a continuous chip catching in the workpiece.
3. Chips are very hot and have sharp edges and should not be moved by hand.
4. Turn off the machine whenever chips are removed or when the cutting tools are changed.
5. Do not use air hoses to blow chips away from the machine.
6. To prevent tool breakage use the correct size toolholder.
7. Make sure that the overhang on the toolholder is as short as possible. Too much overhang can result in chatter and tool breakage.
8. To prevent the workpiece from coming loose during use, be sure the workpiece is tight and secure in its holder.
9. Overloading of tungsten carbide cutting tools may cause fractures of these tools.
10. A slug may be ejected at high speeds during drilling.

To protect the operator and observer from possible flying objects which could result in severe injury, the following protective devices should be worn or used while using cutting tools:

1. Wear hard hats.
2. Wear safety glasses with side shields.
3. Wear closed shoes with steel toes.
4. Keep protective enclosure on machine in place during operation.

**WARNING: Grinding or finishing carbide produces fine carbide and cobalt or nickel dust. This dust may cause injury to the lungs. Operators and observers must take the following safety precautions to minimize the possibility of such injury:**

1. Use with adequate ventilation.
2. Maintain the dust or mist level below recommended levels.
3. Avoid breathing dust or mist. If not possible, wear appropriate respirators, particularly when grinding tungsten carbide.
4. Minimize prolonged skin contact.
5. Wash hands thoroughly after handling.

**WARNING: Use of cutting fluids and work materials create hazards. Be careful at all times.**

1. Keep the cutting fluid clean so no particles can be carried back across the workpiece and possibly scratch it.
2. Cutting fluids may catch on fire when exposed to high temperatures generated during cutting.
3. Work materials such as aluminium, magnesium, uranium and titanium are flammable and could catch on fire.
4. Cutting fluids should be treated or replaced to reduce bacterial levels which may cause illness.

### **-WARNING-**

Speeds, Feeds and Grades information within this catalogue are for reference only. If the operator does not feel safe using our speeds, feeds and grades, then the operator should use what is comfortable to him or her. Eines Canela is not responsible for any damage or injury that occurs using the speeds, feeds and grades information within catalogue.

**Conditions, terms, and prices are subject to change without notice.  
Any typographical or other error in this catalogue is subject to correction.**



Inserts

Face milling cutters

Square shoulder cutters

Slot cutters

Porcupine cutters

Specific applications and Sets

Profile milling

Solid carbide

Drills

Boring heads

Arbors and adaptors

