

Décolletage



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|  <small>advanced solutions in metal</small> | ● | ● | ● | ● | ● | ● | ● | ● | |
|---|-----------------|-------|-------|--------|--------|---------------|------|------|--|
| | | h11 | h10 | h9 | h8 | h9 | h8 | h7 | |
| | gezogen / étiré | | | | | geschliffen / | | | |
| Werkstoffe | Abmessungen | | | | | | | | |
| Blankstahl | | | | | | | | | |
| 1.0715 | | | | 3-100 | | | | | |
| 1.0718 | | | | 3-100 | 3-30 | 3-30 | 3-30 | | |
| 1.0737 | | | | 3-100 | 3-30 | 3-30 | 3-30 | | |
| 1.0737BT | | | | 4-25 | | | | | |
| 1.0758 | | | | 5-20 | | | | | |
| ETG100 | | 6-60 | | | | | | | |
| S355J2 | | | | | 3-30 | 3-30 | 3-30 | | |
| C15Pb | | | | 3-30 | | | | | |
| C45E | | | | 3-30 | 3-30 | 3-30 | 3-30 | | |
| C45Pb | | | | 3-30 | | | | | |
| 16MnCrS5 | | | | 3-30 | | | | | |
| 42CrMoS4 | | | | 3-30 | | | | | |
| SANDVIK | | | | | | | | | |
| 20AP | 0,55-3 | | | | | | | 3-13 | |
| FINEMAC | 1-3 | | | | | | | 3-10 | |
| Silberstahl | | | | | | | | | |
| 1.2210 | | | | | | 2-40 | | | |
| Federdraht | | | | | | | | | |
| 1.1211 | 0,08-8 | | | | | | | | |
| Rostbeständig | | | | | | | | | |
| 1.4035 | | | | | | 4-12 | | | |
| 1.4104 | | | | 3-25 | 3-60 | 3-30 | 3-16 | | |
| 1.4301 | | | | 2-22 | 3-80 | 3-35 | 3-20 | | |
| 1.4305 | | | | 3-20 | 3-100 | 3-30 | 3-30 | | |
| 1.4307 | | | | | 3-30 | 3-30 | 3-20 | | |
| 1.4404 | | | | 4-20 | 3-60 | 3-30 | 3-22 | | |
| 1.4435 | | | | | | 4-50 | | | |
| 1.4570 | | | | | 1-2,5 | | | | |
| Federdraht | | | | | | | | | |
| 1.4310 | 0,1-14 | | | | | | | | |
| 1.4401 | 1-10 | | | | | | | | |
| Aluminium | | | | | | | | | |
| AW-2011 | | 19-60 | | 3-18 | | | | | |
| AW-6026 | | 32-60 | | 7-30 | | | | | |
| AW-6082 | | 4-60 | | | | | | | |
| Messing | | | | | | | | | |
| CuZn35Pb2 | | | | 3-8 | | | | | |
| CuZn38Pb1,5 | | | | 3-8 | | | | | |
| CuZn39Pb3 | | 45-80 | 31-44 | 1,5-38 | 1,5-30 | | | | |
| Neusilber | | | | | | | | | |
| CuNi7Zn39Mn2Pb | | | | | 1,5-40 | | | | |
| Kupfer-Beryllium | | | | | | | | | |
| Beryllco 25 | | | 20-50 | | | | | | |
| Beryllco 33/25 | | | | 15-28 | 2-14 | | | | |


Weitere Abmessungen oder Zwischenmasse aus Vorrat oder Neuproduktion verfügbar.


| ● h6 | ● h5 | ● | ● | ● h11 | ■ h11 | ■ |  NOTZ METALL <small>advanced solutions in metal</small> |
|-------------------------|---------|------------------|-------------------|-----------------|------------------|--------|---|
| rectifié | | gewalzt / laminé | gepresst / pressé | gezogen / étiré | gewalzt / laminé | | |
| Dimensions [mm] | | | | | | | Nuances |
| Aciers | | | | | | | |
| | | | | | | | 1.0715 |
| 3-30 | | | | 5-70 | 5-25 | | 1.0718 |
| 3-30 | | | | 5-70 | 5-25 | | 1.0737 |
| | | | | | | | 1.0737BT |
| | | | | | | | 1.0758 |
| 6-30 | | | | | | | ETG100 |
| 3-30 | | | | | | | S355J2 |
| | | | | | | | C15Pb |
| 3-30 | | | | | | | C45E |
| | | | | | | | C45Pb |
| | | | | | | | 16MnCrS5 |
| | | | | | | | 42CrMoS4 |
| SANDVIK | | | | | | | |
| | 2-12,5 | | | | | | 20AP |
| | 2-9,5 | | | | | | FINEMAC |
| Aciers argent | | | | | | | |
| | | | | | | | 1.2210 |
| Aciers ressort | | | | | | | |
| | | | | | | | 1.1211 |
| Inoxydable | | | | | | | |
| | | | | | | | 1.4035 |
| 3-16 | | | | 4-36 | | | 1.4104 |
| 3-20 | | 31-300 | | 8-46 | 4-60 | 10-100 | 1.4301 |
| 3-30 | | 110-150 | | 4-36 | 4-30 | | 1.4305 |
| 3-20 | | | | | | | 1.4307 |
| 3-22 | | 31-300 | | 8-46 | 10-50 | | 1.4404 |
| | | | | | | | 1.4435 |
| | | | | | | | 1.4570 |
| Aciers ressort | | | | | | | |
| | | | | | | | 1.4310 |
| | | | | | | | 1.4401 |
| Aluminium | | | | | | | |
| | | | | | | | AW-2011 |
| | | | 60-180 | | | | AW-6026 |
| | | | 60-180 | | | | AW-6082 |
| Laiton | | | | | | | |
| | | | | | | | CuZn35Pb2 |
| | | | | | | | CuZn38Pb1,5 |
| | | | | 4,5-50 | 3-40 | | CuZn39Pb3 |
| Maillechort | | | | | | | |
| | | | | | | | CuNi7Zn39Mn2Pb |
| Cuivre-Béryllium | | | | | | | |
| | | | | | | | Berylco 25 |
| | | | | | | | Berylco 33/25 |

Autres dimensions et dimensions intermédiaires sont disponibles du stock ou sur nouvelle production.

| Werkstoffe | Normenvergleich | | | |
|------------------|------------------------|---|--|-----------------|
| | Marke <i>marque</i> | DIN-Bezeichnung <i>désignation DIN</i> | Werkstoff-Nr. <i>no. de matière</i> | France AFNOR |
| Blankstahl | | | | |
| 1.0715 | | 11SMn30 | 1.0715 | S250 |
| 1.0718 | | 11SMnPb30 | 1.0718 | S250Pb |
| 1.0737 | | 11SMnPb37 | 1.0737 | S300Pb |
| 1.0737BT | TELBY Plus | 11SMnPb37+Bi+Te | 1.0737 | S300Pb+Bi+Te |
| 1.0758 | | 60SPb20 | 1.0758 | |
| ETG100 | ETG100 | 44SMn28 | 1.0762 | |
| S355J2 | | S355J2C | 1.0570 | E36-3 |
| C15Pb | | C15Pb | 1.0403 | |
| C45E | | Ck45 | 1.1191 | XC42 |
| C45Pb | | C45Pb | 1.0504 | |
| 16MnCrS5 | | 16MnCrS5 | 1.7139 | |
| 42CrMoS4 | | 42CrMoS4 | 1.7227 | |
| SANDVIK | | | | |
| 20AP | 20AP | | | |
| FINEMAC | FINEMAC | | | |
| Silberstahl | | | | |
| 1.2210 | | 115CrV3 | 1.2210 | 100C3 |
| Federdraht | | | | |
| 1.1211 | Röslau Extra | | 1.2111 | |
| Rostbeständig | | | | |
| 1.4035 | | X46CrS13 | 1.4035 | X45CrS13 |
| 1.4104 | | X14CrMoS17 | 1.4104 | Z13CF17 |
| 1.4301 | | X5CrNi1810 | 1.4301 | Z7CN18.09 |
| 1.4305 | | X8CrNiS188 | 1.4305 | Z8CNF18.09 |
| 1.4307 | | X2CrNi189 | 1.4307 | Z2CN18.10 |
| 1.4404 | | X2CrNiMo1722 | 1.4404 | Z3CND18.12.2 |
| 1.4435 | | X2CrNiMo18143 | 1.4435 | Z3CND18.14.3 |
| 1.4570 | | X6CrNiCuS1892 | 1.4570 | |
| Federdraht | | | | |
| 1.4310 | | X10CrNi188 | 1.4310 | Z10CN18.09 |
| 1.4401 | | X5CrNiMo17122 | 1.4401 | Z7CND17.11.02 |
| Aluminium | | | | |
| AW-2011 | Decotal-500 | AlCuBiPb | 3.1655 | |
| AW-6026 | | AlMgSiMnBi | | |
| AW-6082 | Anticorodal-112 | AlMgSi1 | 3.2315 | |
| Messing | | | | |
| CuZn35Pb2 | Ms63Pb | CuZn35Pb2 | 2.0331 | |
| CuZn38Pb1,5 | Ms60Pb | CuZn38Pb1,5 | 2.0371 | |
| CuZn39Pb3 | Ms58Pb | CuZn39Pb3 | 2.0401 | |
| Neusilber | | | | |
| CuNi7Zn39Mn2Pb3 | NM2 | CuNi7Zn39Mn2Pb3 | 2.0771 | |
| Kupfer-Beryllium | | | | |
| Berylco 25 | Berylco 25 | CuBe2 | 2.1247 | |
| Berylco 33/25 | Berylco 33/25 | CuBe2Pb | 2.1248 | |


| Equivalence des Normes | | | |  |
|-------------------------|--------------------|--|------------------------------------|---|
| USA ASTM/UNS | USA AISI | Aluminium-Nr. <i>no. d'aluminum</i> | Kupfer-Nr. <i>no. de cuivre</i> | Nuances |
| Aciers | | | | |
| | 1213 | | | 1.0715 |
| | 12L13 | | | 1.0718 |
| | 12L14 | | | 1.0737 |
| | 12L14+Bi+Te | | | 1.0737BT |
| | | | | 1.0758 |
| | | | | ETG100 |
| | | | | S355J2 |
| | 1045 | | | C15Pb |
| | | | | C45E |
| | | | | C45Pb |
| | | | | 16MnCrS5 |
| | | | | 42CrMoS4 |
| SANDVIK | | | | |
| | | | | 20AP |
| | | | | FINEMAC |
| Aciers argent | | | | |
| | A681 / L2 | | | 1.2210 |
| Aciers ressort | | | | |
| | 1060 | | | 1.1211 |
| Inoxydable | | | | |
| | 420 | | | 1.4035 |
| | 430F | | | 1.4104 |
| | 304 | | | 1.4301 |
| | 303 | | | 1.4305 |
| | 304L | | | 1.4307 |
| | 316L | | | 1.4404 |
| | 316L | | | 1.4435 |
| S30331 | 303K | | | 1.4570 |
| Aciers ressort | | | | |
| | 302 | | | 1.4310 |
| | 316 | | | 1.4401 |
| Aluminium | | | | |
| | | AW-2011 | | AW-2011 |
| | | AW-6026 | | AW-6026 |
| | | AW-6082 | | AW-6082 |
| Laiton | | | | |
| C34200 | | | CW-601N | CuZn35Pb2 |
| C35300 | | | CW-608N | CuZn38Pb1,5 |
| C38500 | | | CW-614N | CuZn39Pb3 |
| Maillechort | | | | |
| | | | CW400J | CuNi7Zn39Mn2Pb3 |
| Cuivre-Béryllium | | | | |
| C17200 | | | CW-101C | Berylco 25 |
| C17300 | | | CW-102C | Berylco 33/25 |


|  | Chemische Analyse | | | | | | | | | | |
|--|-------------------|-----------|-----------|-------------|-------------|------|-----------|---------|---------|-------|------|
| | C | Si | Mn | P | S | N | Pb | Bi | Be | Te | Fe |
| Werkstoffe | max. | max. | max. | max. | max. | max. | max. | max. | max. | max. | |
| Blankstahl | | | | | | | | | | | |
| 1.0715 | 0,14 | 0,05 | 0,90-1,30 | 0,11 | 0,27-0,33 | | | | | | |
| 1.0718 | 0,14 | 0,05 | 0,90-1,30 | 0,11 | 0,27-0,33 | | 0,20-0,35 | | | | |
| 1.0737 | 0,14 | 0,05 | 1,00-1,50 | 0,11 | 0,34-0,40 | | 0,20-0,35 | | | | |
| 1.0737BT | 0,14 | 0,05 | | 0,10 | 0,27-0,40 | | 0,25 | 0,05 | | 0,015 | |
| 1.0758 | 0,62-0,70 | 0,10-0,30 | 1,20-1,40 | 0,06 | 0,15-0,20 | | 0,15-0,30 | 0,05 | | | |
| ETG100 | 0,40-0,48 | 0,10-0,30 | 1,35-1,65 | 0,04 | 0,24-0,33 | | | | | | |
| S355J2 | 0,22-0,26 | 0,55-0,60 | 1,60-1,70 | 0,035-0,045 | 0,035-0,045 | | | | | | |
| C15Pb | 0,12-0,18 | 0,40 | 0,30-0,80 | 0,045 | 0,045 | | 0,15-0,35 | | | | |
| C45E | 0,42-0,50 | 0,40 | 0,50-0,80 | 0,03 | 0,035 | | | | | | |
| C45Pb | 0,42-0,50 | 0,40 | 0,50-0,80 | 0,045 | 0,045 | | 0,15-0,35 | | | | |
| 16MnCrS5 | 0,14-0,19 | 0,40 | 1,00-1,30 | 0,035 | 0,02-0,04 | | | | | | |
| 42CrMoS4 | 0,38-0,45 | 0,40 | 0,60-0,90 | 0,035 | 0,02-0,04 | | | | | | |
| SANDVIK | | | | | | | | | | | |
| 20AP | 1,00 | 0,20 | 0,40 | 0,03 | 0,05 | | 0,20 | | | | |
| FINEMAC | 1,00 | 0,27 | 0,50 | 0,03 | 0,10 | | | | | | |
| Silberstahl | | | | | | | | | | | |
| 1.2210 | 1,20 | | | | | | | | | | |
| Federdraht | | | | | | | | | | | |
| 1.1211 | 0,57-0,65 | 0,15-0,35 | 0,60-0,90 | 0,025 | 0,01 | | | | | | |
| Rostbeständig | | | | | | | | | | | |
| 1.4035 | 0,40-0,48 | 1,00 | 2,00 | 0,04 | 0,15-0,25 | | | | | | |
| 1.4104 | 0,10-0,17 | 1,00 | 1,50 | 0,40 | 0,15-0,35 | | | | | | |
| 1.4301 | 0,07 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| 1.4305 | 0,1 | 1,00 | 2,00 | 0,045 | 0,15-0,35 | 0,11 | | | | | |
| 1.4307 | 0,03 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| 1.4404 | 0,03 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| 1.4435 | 0,03 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| 1.4570 | 0,08 | 1,00 | 2,00 | 0,045 | 0,15-0,35 | 0,11 | | | | | |
| Federdraht | | | | | | | | | | | |
| 1.4310 | 0,05-0,15 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| 1.4401 | 0,03 | 1,00 | 2,00 | 0,045 | 0,015 | 0,11 | | | | | |
| Aluminium | | | | | | | | | | | |
| AW-2011 | | 0,40 | | | | | | | | | 0,70 |
| AW-6026 | | 0,6-1,4 | 0,2-1,0 | | | | 0,40 | 0,4-2,0 | | | 0,70 |
| AW-6082 | | 0,7-1,3 | 0,4-1,0 | | | | | | | | 0,50 |
| Messing | | | | | | | | | | | |
| CuZn35Pb2 | | | | | | | 1,5-2,5 | | | | 0,20 |
| CuZn38Pb1,5 | | | | | | | 1,0-2,0 | | | | 0,30 |
| CuZn39Pb3 | | | | | | | 2,5-3,5 | | | | 0,30 |
| Neusilber | | | | | | | | | | | |
| CuNi7Zn39Mn2Pb3 | | | 1,5-3,0 | | | | 2,3-3,3 | | | | 0,20 |
| Kupfer-Beryllium | | | | | | | | | | | |
| Berylico 25 | | | | | | | | | 1,8-2,0 | | |
| Berylico 33/25 | | | | | | | 0,20 | | 1,8-2,0 | | |


| Composition chimique | | | | | | | | | |  <small>advanced solutions in metal</small> |
|-------------------------|------------|---------|-----------|-----------|------|------|------|-----------|--------|---|
| Cu | Zn | Mg | Cr | Ni | Ti | Sn | Al | Mo | Andere | |
| max. | | | max. | max. | | | | max. | | Nuances |
| Aciers | | | | | | | | | | |
| | | | | | | | | | | 1.0715 |
| | | | | | | | | | | 1.0718 |
| | | | | | | | | | | 1.0737 |
| | | | | | | | | | | 1.0737BT |
| | | | | | | | | | | 1.0758 |
| | | | | | | | | | | ETG100 |
| | | | | | | | | | | S355J2 |
| | | | | | | | | | | C15Pb |
| | | | 0,40 | 0,40 | | | | 0,10 | | C45E |
| | | | | | | | | | | C45Pb |
| | | | 0,80-1,10 | | | | | | | 16MnCrS5 |
| | | | 0,90-1,20 | | | | | 0,15-0,30 | | 42CrMoS4 |
| SANDVIK | | | | | | | | | | |
| | | | | | | | | | | 20AP |
| | | | 0,45 | | | | | | | FINEMAC |
| Aciers argent | | | | | | | | | | |
| | | | 0,70 | | | | | | 0,10 | 1.2210 |
| Aciers ressort | | | | | | | | | | |
| | | | 0,40 | 0,40 | | | | 0,10 | | 1.1211 |
| Inoxydable | | | | | | | | | | |
| | | | 12,0-14,0 | | | | | | | 1.4035 |
| | | | 15,5-17,5 | | | | | 0,20-0,60 | | 1.4104 |
| | | | 17,0-19,5 | 8,0-10,5 | | | | | | 1.4301 |
| 1,0 | | | 17,0-19,0 | 8,0-11,0 | | | | | | 1.4305 |
| | | | 17,5-19,5 | 8,0-10,0 | | | | | | 1.4307 |
| | | | 15,5-18,5 | 10,0-13,0 | | | | 2,0-2,5 | | 1.4404 |
| | | | 17,0-19,0 | 12,5-15,0 | | | | 2,5-3,0 | | 1.4435 |
| 1,40-1,80 | | | 17,0-19,0 | 8,0-10,0 | | | | | | 1.4570 |
| Aciers ressort | | | | | | | | | | |
| | | | 16,0-19,0 | 6,0-9,5 | | | | 0,80 | | 1.4310 |
| | | | 16,5-18,5 | 10,0-13,0 | | | | 2,0-2,5 | | 1.4401 |
| Aluminium | | | | | | | | | | |
| 5,0-6,0 | 0,30 | | | | | | | | | AW-2011 |
| 0,50 | 0,30 | 0,6-1,2 | 0,30 | | 0,20 | 0,05 | | | | AW-6026 |
| 0,10 | 0,20 | 0,6-1,2 | 0,25 | | 0,10 | | | | 0,05 | AW-6082 |
| Laiton | | | | | | | | | | |
| 62,0-64,0 | Rest/reste | | | 0,30 | | 0,10 | 0,05 | | 0,10 | CuZn35Pb2 |
| 59,5-61,5 | Rest/reste | | | 0,30 | | 0,20 | 0,05 | | 0,20 | CuZn38Pb1,5 |
| 57,0-59,0 | Rest/reste | | | 0,30 | | 0,30 | 0,10 | | 0,20 | CuZn39Pb3 |
| Maillechort | | | | | | | | | | |
| 47,0-50,0 | | | | 6,0-8,0 | | 0,20 | | | 0,10 | CuNi7Zn39Mn2Pb3 |
| Cuivre-Béryllium | | | | | | | | | | |
| Rest/reste | | | | | | | | | 0,60 | Berylco 25 |
| Rest/reste | | | | | | | | | 0,60 | Berylco 33/25 |


| Werkstoffe | Eigenschaften | | | | | |
|------------------|--|--------------------------------------|---|----------------------------------|---------------------------|-------------------------------------|
| | Zugfestigkeit <i>résistance à la traction</i> | Zerspanbarkeit <i>usinabilité</i> | Kaltverformbarkeit <i>déformation froide</i> | Schweisbarkeit <i>soudage</i> | Lötbar <i>brassage</i> | Einsatzhärbar <i>cémentation</i> |
| Blankstahl | | | | | | |
| 1.0715 | | | | | | |
| 1.0718 | | | | | | |
| 1.0737 | | | | | | |
| 1.0737BT | | | | | | |
| 1.0758 | | | | | | |
| ETG100 | | | | | | |
| S355J2 | | | | | | |
| C15Pb | | | | | | |
| C45E | | | | | | |
| C45Pb | | | | | | |
| 16MnCrS5 | | | | | | |
| 42CrMoS4 | | | | | | |
| SANDVIK | | | | | | |
| 20AP | | | | | | |
| FINEMAC | | | | | | |
| Silberstahl | | | | | | |
| 1.2210 | | | | | | |
| Federdraht | | | | | | |
| 1.1211 | | | | | | |
| Rostbeständig | | | | | | |
| 1.4035 | | | | | | |
| 1.4104 | | | | | | |
| 1.4301 | | | | | | |
| 1.4305 | | | | | | |
| 1.4307 | | | | | | |
| 1.4404 | | | | | | |
| 1.4435 | | | | | | |
| 1.4570 | | | | | | |
| Federdraht | | | | | | |
| 1.4310 | | | | | | |
| 1.4401 | | | | | | |
| Aluminium | | | | | | |
| AW-2011 | | | | | | |
| AW-6026 | | | | | | |
| AW-6082 | | | | | | |
| Messing | | | | | | |
| CuZn35Pb2 | | | | | | |
| CuZn38Pb1,5 | | | | | | |
| CuZn39Pb3 | | | | | | |
| Neusilber | | | | | | |
| CuNi7Zn39Mn2Pb3 | | | | | | |
| Kupfer-Beryllium | | | | | | |
| Berylco 25 | | | | | | |
| Berylco 33/25 | | | | | | |

 sehr gut geeignet

 nicht geeignet oder nicht angewendet

| Propriétés | | | | | |  <small>Standard steel and stainless steel</small> |
|-------------------------|---|--|--------------------------|--------------------------|----------------------------|--|
| Vergüten à la trempe | Oberflächenhärten à la trempe superficielle | Anodisieren à l'oxidation anodique | C-Gehalt proportion-C | S-Gehalt proportion-S | Pb-Gehalt proportion-Pb | |
| Aciers | | | | | | |
| | | | | | | 1.0715 |
| | | | | | | 1.0718 |
| | | | | | | 1.0737 |
| | | | | | | 1.0737BT |
| | | | | | | 1.0758 |
| | | | | | | ETG100 |
| | | | | | | S355J2 |
| | | | | | | C15Pb |
| | | | | | | C45E |
| | | | | | | C45Pb |
| | | | | | | 16MnCrS5 |
| | | | | | | 42CrMoS4 |
| SANDVIK | | | | | | |
| | | | | | | 20AP |
| | | | | | | FINEMAC |
| Aciers argent | | | | | | |
| | | | | | | 1.2210 |
| Aciers ressort | | | | | | |
| | | | | | | 1.1211 |
| Inoxydable | | | | | | |
| | | | | | | 1.4035 |
| | | | | | | 1.4104 |
| | | | | | | 1.4301 |
| | | | | | | 1.4305 |
| | | | | | | 1.4307 |
| | | | | | | 1.4404 |
| | | | | | | 1.4435 |
| | | | | | | 1.4570 |
| Aciers ressort | | | | | | |
| | | | | | | 1.4310 |
| | | | | | | 1.4401 |
| Aluminium | | | | | | |
| | | | | | | AW-2011 |
| | | | | | | AW-6026 |
| | | | | | | AW-6082 |
| Laiton | | | | | | |
| | | | | | | CuZn35Pb2 |
| | | | | | | CuZn38Pb1,5 |
| | | | | | | CuZn39Pb3 |
| Maillechort | | | | | | |
| | | | | | | CuNi7Zn39Mn2Pb3 |
| Cuivre-Béryllium | | | | | | |
| | | | | | | Berylco 25 |
| | | | | | | Berylco 33/25 |

 convient pas ou non appliqué

 convient très bien

| | Messing / Laiton | | | Aluminium |
|------|------------------|-------|-------|-----------|
| mm | ● | ■ | ● | ● |
| 1 | 0.007 | 0.009 | 0.007 | 0.002 |
| 1.5 | 0.015 | 0.019 | 0.017 | 0.005 |
| 2 | 0.027 | 0.034 | 0.029 | 0.008 |
| 2.5 | 0.042 | 0.053 | 0.046 | 0.013 |
| 3 | 0.060 | 0.077 | 0.066 | 0.019 |
| 3.5 | 0.082 | 0.104 | 0.090 | 0.026 |
| 4 | 0.107 | 0.136 | 1.118 | 0.034 |
| 4.5 | 0.135 | 0.172 | 0.149 | 0.043 |
| 5 | 0.167 | 0.213 | 0.184 | 0.053 |
| 5.5 | 0.202 | 0.257 | 0.223 | 0.064 |
| 6 | 0.240 | 0.306 | 0.265 | 0.077 |
| 6.3 | 0.265 | 0.337 | 0.292 | 0.085 |
| 6.5 | 0.282 | 0.359 | 0.311 | 0.090 |
| 7 | 0.327 | 0.417 | 0.361 | 0.104 |
| 7.5 | 0.376 | 0.478 | 0.414 | 0.120 |
| 8 | 0.427 | 0.544 | 0.471 | 0.137 |
| 8.5 | 0.482 | 0.614 | 0.532 | 0.154 |
| 9 | 0.541 | 0.689 | 0.596 | 0.172 |
| 9.5 | 0.602 | 0.767 | 0.664 | 0.193 |
| 10 | 0.668 | 0.850 | 0.736 | 0.214 |
| 10.5 | 0.736 | 0.937 | 0.812 | 0.236 |
| 11 | 0.808 | 1.029 | 0.891 | 0.256 |
| 11.5 | 0.883 | 1.124 | 0.973 | 0.283 |
| 12 | 0.961 | 1.224 | 1.060 | 0.308 |
| 12.5 | 1.043 | 1.328 | 1.150 | 0.334 |
| 13 | 1.128 | 1.437 | 1.244 | 0.361 |
| 13.5 | 1.217 | 1.549 | 1.342 | 0.389 |
| 14 | 1.308 | 1.666 | 1.443 | 0.419 |
| 14.5 | 1.404 | 1.787 | 1.548 | 0.449 |

| Aluminium | Eisen / Aciers | | | |
|-----------|----------------|-------|-------|------|
| ● | ● | ■ | ● | mm |
| 0.002 | 0.006 | 0.008 | 0.007 | 1 |
| 0.006 | 0.014 | 0.018 | 0.015 | 1.5 |
| 0.009 | 0.025 | 0.031 | 0.027 | 2 |
| 0.015 | 0.039 | 0.049 | 0.042 | 2.5 |
| 0.022 | 0.055 | 0.071 | 0.061 | 3 |
| 0.029 | 0.076 | 0.096 | 0.083 | 3.5 |
| 0.038 | 0.099 | 0.126 | 0.109 | 4 |
| 0.048 | 0.125 | 0.159 | 0.138 | 4.5 |
| 0.059 | 0.154 | 0.196 | 0.170 | 5 |
| 0.071 | 0.187 | 0.237 | 0.206 | 5.5 |
| 0.085 | 0.222 | 0.283 | 0.245 | 6 |
| 0.093 | 0.245 | 0.312 | 0.270 | 6.3 |
| 0.100 | 0.260 | 0.332 | 0.287 | 6.5 |
| 0.115 | 0.302 | 0.385 | 0.333 | 7 |
| 0.132 | 0.347 | 0.442 | 0.382 | 7.5 |
| 0.151 | 0.395 | 0.502 | 0.435 | 8 |
| 0.170 | 0.445 | 0.567 | 0.491 | 8.5 |
| 0.191 | 0.499 | 0.636 | 0.551 | 9 |
| 0.213 | 0.556 | 0.708 | 0.613 | 9.5 |
| 0.236 | 0.616 | 0.785 | 0.680 | 10 |
| 0.260 | 0.680 | 0.865 | 0.749 | 10.5 |
| 0.285 | 0.746 | 0.950 | 0.822 | 11 |
| 0.312 | 0.815 | 1.038 | 0.899 | 11.5 |
| 0.339 | 0.888 | 1.130 | 0.979 | 12 |
| 0.368 | 0.963 | 1.226 | 1.062 | 12.5 |
| 0.398 | 1.042 | 1.326 | 1.149 | 13 |
| 0.429 | 1.124 | 1.430 | 1.239 | 13.5 |
| 0.462 | 1.208 | 1.538 | 1.332 | 14 |
| 0.495 | 1.296 | 1.650 | 1.429 | 14.5 |

| mm | Messing / Laiton | | | Aluminium |
|------|------------------|--------|--------|-----------|
| | ● | ■ | ● | ● |
| 15 | 1.502 | 1.913 | 1.656 | 0.481 |
| 15.5 | 1.604 | 2.042 | 1.768 | 0.513 |
| 16 | 1.709 | 2.176 | 1.884 | 0.547 |
| 16.5 | 1.818 | 2.314 | 2.004 | 0.582 |
| 17 | 1.929 | 2.457 | 2.127 | 0.617 |
| 17.5 | 2.044 | 2.603 | 2.254 | 0.654 |
| 18 | 2.163 | 2.754 | 2.385 | 0.692 |
| 18.5 | 2.285 | 2.909 | 2.519 | 0.731 |
| 19 | 2.410 | 3.069 | 2.657 | 0.771 |
| 19.5 | 2.539 | 3.232 | 2.799 | 0.812 |
| 20 | 2.670 | 3.400 | 2.944 | 0.855 |
| 21 | 2.944 | 3.749 | 3.246 | 0.942 |
| 22 | 3.231 | 4.114 | 3.563 | 1.034 |
| 23 | 3.531 | 4.497 | 3.894 | 1.130 |
| 24 | 3.845 | 4.896 | 4.240 | 1.230 |
| 25 | 4.172 | 5.313 | 4.601 | 1.335 |
| 26 | 4.513 | 5.746 | 4.976 | 1.444 |
| 27 | 4.867 | 6.197 | 5.366 | 1.557 |
| 28 | 5.234 | 6.664 | 5.771 | 1.675 |
| 29 | 5.614 | 7.149 | 6.191 | 1.797 |
| 30 | 6.008 | 7.650 | 6.625 | 1.923 |
| 31 | 6.416 | 8.169 | 7.074 | 2.053 |
| 32 | 6.836 | 8.704 | 7.538 | 2.188 |
| 33 | 7.270 | 9.257 | 8.016 | 2.326 |
| 34 | 7.717 | 9.826 | 8.509 | 2.470 |
| 35 | 8.178 | 10.413 | 9.017 | 2.617 |
| 36 | 8.652 | 11.016 | 9.540 | 2.769 |
| 37 | 9.139 | 11.637 | 10.077 | 2.920 |
| 38 | 9.640 | 12.274 | 10.629 | 3.085 |
| 39 | 10.154 | 12.929 | 11.196 | 3.249 |
| 40 | 10.681 | 13.600 | 11.778 | 3.418 |

| Aluminium | Eisen / Aciers | | | |
|-----------|----------------|--------|--------|------|
| ● | ● | ■ | ● | mm |
| 0.530 | 1.387 | 1.766 | 1.529 | 15 |
| 0.566 | 1.481 | 1.886 | 1.633 | 15.5 |
| 0.603 | 1.578 | 2.009 | 1.740 | 16 |
| 0.641 | 1.678 | 2.137 | 1.851 | 16.5 |
| 0.681 | 1.782 | 2.269 | 1.965 | 17 |
| 0.721 | 1.888 | 2.404 | 2.082 | 17.5 |
| 0.763 | 1.998 | 2.544 | 2.203 | 18 |
| 0.571 | 2.110 | 2.686 | 2.326 | 18.5 |
| 0.850 | 2.226 | 2.834 | 2.455 | 19 |
| 0.896 | 2.344 | 2.985 | 2.585 | 19.5 |
| 0.942 | 2.466 | 3.140 | 2.719 | 20 |
| 1.039 | 2.719 | 3.462 | 2.998 | 21 |
| 1.140 | 2.984 | 3.800 | 3.290 | 22 |
| 1.246 | 3.262 | 4.153 | 3.597 | 23 |
| 1.357 | 3.551 | 4.521 | 3.916 | 24 |
| 1.472 | 3.853 | 4.906 | 4.249 | 25 |
| 1.592 | 4.168 | 5.307 | 4.596 | 26 |
| 1.717 | 4.495 | 5.723 | 4.957 | 27 |
| 1.847 | 4.834 | 6.155 | 5.330 | 28 |
| 1.981 | 5.185 | 6.602 | 5.717 | 29 |
| 2.120 | 5.549 | 7.065 | 6.119 | 30 |
| 2.264 | 5.925 | 7.544 | 6.533 | 31 |
| 2.412 | 6.313 | 8.038 | 6.961 | 32 |
| 2.565 | 6.714 | 8.548 | 7.404 | 33 |
| 2.723 | 7.127 | 9.074 | 7.859 | 34 |
| 2.886 | 7.553 | 9.616 | 8.329 | 35 |
| 3.053 | 7.990 | 10.173 | 8.810 | 36 |
| 3.225 | 8.440 | 10.746 | 9.307 | 37 |
| 3.401 | 8.903 | 11.335 | 9.817 | 38 |
| 3.583 | 9.378 | 11.940 | 10.341 | 39 |
| 3.769 | 9.855 | 12.547 | 10.867 | 40 |

| | Messing / Laiton | | | Aluminium |
|----|------------------|--------|--------|-----------|
| mm | ● | ■ | ● | ● |
| 41 | 11.222 | 14.289 | 12.374 | 3.591 |
| 42 | 11.776 | 14.994 | 12.985 | 3.768 |
| 43 | 12.344 | 15.717 | 13.610 | 3.950 |
| 44 | 12.924 | 16.456 | 14.251 | 4.136 |
| 45 | 13.519 | 17.213 | 14.906 | 4.326 |
| 46 | 14.126 | 17.986 | 15.576 | 4.520 |
| 47 | 14.747 | 18.777 | 16.260 | 4.719 |
| 48 | 15.381 | 19.584 | 16.960 | 4.922 |
| 49 | 16.029 | 20.409 | 17.674 | 5.129 |
| 50 | 16.690 | 21.250 | 18.403 | 5.341 |
| 51 | 17.364 | 22.109 | 19.146 | 5.556 |
| 52 | 18.052 | 22.984 | 19.904 | 5.777 |
| 53 | 18.753 | 23.877 | 20.677 | 6.001 |
| 54 | 19.467 | 24.786 | 21.465 | 6.229 |
| 55 | 20.195 | 25.713 | 22.267 | 6.462 |
| 56 | 20.936 | 26.656 | 23.084 | 6.699 |
| 57 | 21.690 | 27.617 | 23.916 | 6.941 |
| 58 | 22.458 | 28.594 | 24.762 | 7.186 |
| 59 | 23.239 | 29.589 | 25.624 | 7.436 |
| 60 | 24.033 | 30.600 | 26.500 | 7.691 |
| 61 | 24.841 | 31.629 | 27.390 | 7.949 |
| 62 | 25.662 | 32.674 | 28.296 | 8.212 |
| 63 | 26.497 | 33.737 | 29.216 | 8.479 |
| 64 | 27.344 | 34.816 | 30.151 | 8.750 |
| 65 | 28.206 | 35.913 | 31.100 | 9.026 |
| 66 | 29.080 | 37.026 | 32.065 | 9.306 |
| 67 | 29.968 | 38.157 | 33.044 | 9.590 |
| 68 | 30.869 | 39.304 | 34.037 | 9.878 |
| 69 | 31.784 | 40.469 | 35.046 | 10.171 |
| 70 | 32.712 | 41.650 | 36.069 | 10.468 |

| Aluminium | Eisen / Aciers | | | |
|-----------|----------------|--------|--------|----|
| ● | ● | ■ | ● | mm |
| 3.960 | 10.360 | 13.190 | 11.420 | 41 |
| 4.155 | 10.880 | 13.850 | 11.990 | 42 |
| 4.355 | 11.400 | 14.510 | 12.570 | 43 |
| 4.560 | 11.940 | 15.200 | 13.170 | 44 |
| 4.770 | 12.480 | 15.890 | 13.760 | 45 |
| 4.984 | 13.050 | 16.620 | 14.390 | 46 |
| 5.203 | 13.620 | 17.340 | 15.020 | 47 |
| 5.427 | 14.200 | 18.080 | 15.660 | 48 |
| 5.656 | 14.800 | 18.840 | 16.320 | 49 |
| 5.889 | 15.410 | 19.620 | 16.990 | 50 |
| 6.127 | 16.040 | 20.420 | 17.690 | 51 |
| 6.369 | 16.670 | 21.220 | 18.380 | 52 |
| 6.617 | 17.320 | 22.050 | 19.100 | 53 |
| 6.869 | 17.980 | 22.890 | 19.830 | 54 |
| 7.125 | 18.650 | 23.740 | 20.560 | 55 |
| 7.387 | 19.340 | 24.620 | 21.330 | 56 |
| 7.653 | 20.030 | 25.500 | 22.090 | 57 |
| 7.924 | 20.740 | 26.410 | 22.870 | 58 |
| 8.200 | 21.460 | 27.320 | 23.660 | 59 |
| 8.480 | 22.200 | 28.260 | 24.480 | 60 |
| 8.764 | 22.940 | 29.210 | 25.300 | 61 |
| 9.055 | 23.700 | 30.710 | 26.130 | 62 |
| 9.349 | 24.470 | 31.160 | 26.980 | 63 |
| 9.648 | 25.250 | 32.150 | 27.840 | 64 |
| 9.952 | 26.050 | 33.170 | 28.720 | 65 |
| 10.261 | 26.860 | 34.200 | 29.620 | 66 |
| 10.574 | 27.680 | 35.240 | 30.520 | 67 |
| 10.892 | 28.510 | 36.300 | 31.440 | 68 |
| 11.215 | 29.350 | 37.370 | 32.360 | 69 |
| 11.542 | 30.210 | 38.460 | 33.310 | 70 |

| | Messing / Laiton | | | Aluminium |
|-----|------------------|--------|--------|-----------|
| mm | ● | ■ | ● | ● |
| 71 | 33.653 | 42.849 | 37.107 | 10.770 |
| 72 | 34.608 | 44.064 | 38.159 | 11.070 |
| 73 | 35.576 | 45.297 | 39.227 | 11.380 |
| 74 | 36.557 | 46.546 | 40.309 | 11.700 |
| 75 | 37.552 | 47.813 | 41.406 | 12.020 |
| 76 | 38.560 | 49.096 | 42.517 | 12.340 |
| 77 | 39.581 | 50.397 | 43.643 | 12.670 |
| 78 | 40.616 | 51.714 | 44.784 | 13.000 |
| 79 | 41.664 | 53.049 | 45.940 | 13.330 |
| 80 | 42.726 | 54.400 | 47.110 | 13.670 |
| 81 | 43.800 | 55.769 | 48.296 | 14.020 |
| 82 | 44.889 | 57.154 | 49.495 | 14.360 |
| 83 | 45.990 | 58.557 | 50.710 | 14.720 |
| 84 | 47.105 | 59.976 | 51.939 | 15.070 |
| 85 | 48.233 | 61.413 | 53.183 | 15.430 |
| 86 | 49.375 | 62.866 | 54.442 | 15.800 |
| 87 | 50.530 | 64.337 | 55.715 | 16.170 |
| 88 | 51.698 | 65.824 | 57.004 | 16.540 |
| 89 | 52.880 | 67.329 | 58.306 | 16.920 |
| 90 | 54.075 | 68.850 | 59.624 | 17.300 |
| 91 | 55.283 | 70.389 | 60.956 | 17.690 |
| 92 | 56.505 | 71.944 | 62.304 | 18.080 |
| 93 | 57.740 | 73.517 | 63.665 | 18.480 |
| 94 | 58.988 | 75.106 | 65.042 | 18.880 |
| 95 | 60.250 | 76.713 | 66.433 | 19.280 |
| 96 | 61.525 | 78.336 | 67.839 | 19.690 |
| 97 | 62.814 | 79.977 | 69.260 | 20.100 |
| 98 | 64.115 | 81.634 | 70.695 | 20.520 |
| 99 | 65.430 | 83.309 | 72.145 | 20.940 |
| 100 | 66.759 | 85.000 | 73.610 | 21.360 |

| Aluminium | Eisen / Aciers | | | |
|-----------|----------------|--------|--------|-----|
| ● | ● | ■ | ● | mm |
| 11.870 | 31.080 | 39.570 | 34.270 | 71 |
| 12.210 | 31.960 | 40.690 | 35.240 | 72 |
| 12.550 | 32.860 | 41.840 | 36.230 | 73 |
| 12.900 | 33.760 | 42.980 | 37.230 | 74 |
| 13.250 | 34.680 | 44.150 | 38.240 | 75 |
| 13.610 | 35.610 | 45.340 | 39.270 | 76 |
| 13.970 | 36.560 | 46.550 | 40.310 | 77 |
| 14.330 | 37.510 | 47.760 | 41.360 | 78 |
| 14.700 | 38.480 | 48.990 | 42.430 | 79 |
| 15.070 | 39.460 | 50.240 | 43.510 | 80 |
| 15.450 | 40.450 | 51.500 | 44.600 | 81 |
| 15.840 | 41.460 | 52.790 | 45.720 | 82 |
| 16.230 | 42.470 | 54.070 | 46.830 | 83 |
| 16.620 | 43.500 | 55.380 | 47.970 | 84 |
| 17.020 | 44.540 | 56.710 | 49.110 | 85 |
| 17.420 | 45.600 | 58.060 | 50.280 | 86 |
| 17.830 | 46.670 | 59.420 | 51.460 | 87 |
| 18.240 | 47.740 | 60.780 | 52.640 | 88 |
| 18.660 | 48.840 | 62.180 | 53.860 | 89 |
| 19.080 | 49.940 | 63.580 | 55.070 | 90 |
| 19.510 | 51.060 | 65.010 | 56.300 | 91 |
| 19.940 | 52.180 | 66.440 | 57.540 | 92 |
| 20.370 | 53.320 | 67.890 | 58.800 | 93 |
| 20.810 | 54.480 | 69.360 | 60.080 | 94 |
| 21.260 | 55.640 | 70.840 | 61.350 | 95 |
| 21.710 | 56.820 | 72.340 | 62.660 | 96 |
| 22.160 | 58.010 | 73.860 | 63.970 | 97 |
| 22.620 | 59.210 | 75.390 | 65.290 | 98 |
| 23.090 | 60.430 | 76.940 | 66.640 | 99 |
| 23.560 | 61.650 | 78.490 | 67.980 | 100 |

Beziehungen zwischen verschiedenen Härtezahlen und Zugfestigkeit

| Zugfestigkeit N/mm ² | Vickershärte HV | Brinellhärte HB | Rockwellhärte | |
|------------------------------------|--------------------|--------------------|---------------|------|
| | | | HRB | HRC |
| 255 | 80 | 76.0 | | |
| 270 | 85 | 80.7 | 41.0 | |
| 285 | 90 | 85.5 | 48.0 | |
| 305 | 95 | 90.2 | 52.0 | |
| 320 | 100 | 95.0 | 56.2 | |
| 335 | 105 | 99.8 | | |
| 350 | 110 | 105 | 62.3 | |
| 370 | 115 | 109 | | |
| 385 | 120 | 114 | 66.7 | |
| 400 | 125 | 119 | | |
| 415 | 130 | 124 | 71.2 | |
| 430 | 135 | 128 | | |
| 450 | 140 | 133 | 75 | |
| 465 | 145 | 138 | | |
| 480 | 150 | 143 | 78.7 | |
| 495 | 155 | 147 | | |
| 510 | 160 | 152 | 81.7 | |
| 530 | 165 | 156 | | |
| 545 | 170 | 162 | 85.0 | |
| 560 | 175 | 166 | | |
| 575 | 180 | 171 | 87.1 | |
| 595 | 185 | 176 | | |
| 610 | 190 | 181 | 89.5 | |
| 625 | 195 | 185 | | |
| 640 | 200 | 190 | 91.5 | |
| 660 | 205 | 195 | 92.5 | |
| 675 | 210 | 199 | 93.5 | |
| 690 | 215 | 204 | 94.0 | |
| 705 | 220 | 209 | 95.0 | |
| 720 | 225 | 214 | 96.0 | |
| 740 | 230 | 219 | 96.7 | |
| 755 | 235 | 223 | | |
| 770 | 240 | 228 | 98.1 | 20.3 |
| 785 | 245 | 233 | | 21.3 |
| 800 | 250 | 238 | 99.5 | 22.2 |
| 820 | 255 | 242 | | 23.1 |
| 835 | 260 | 247 | (101) | 24.0 |
| 850 | 265 | 252 | | 24.8 |
| 865 | 270 | 257 | (102) | 25.6 |
| 880 | 275 | 261 | | 26.4 |
| 900 | 280 | 266 | (104) | 27.1 |
| 915 | 285 | 271 | | 27.8 |
| 930 | 290 | 276 | (105) | 28.5 |
| 950 | 295 | 280 | | 29.2 |
| 965 | 300 | 285 | | 29.8 |
| 995 | 310 | 295 | | 31.0 |
| 1030 | 320 | 304 | | 32.2 |
| 1060 | 330 | 314 | | 33.3 |
| 1095 | 340 | 323 | | 34.4 |

Errechnet aus: $HB=0.95 \times HV$

Regeln für die Anwendung der Tabelle:

- Die Umwertungstabelle ist nur für unlegierte und niedriglegierte Stähle gültig.
- Die Umwertung ist grundsätzlich mit Ungenauigkeiten behaftet und ergibt lediglich Näherungswerte.
- Im Schieds- oder Zweifelsfall gilt die in der Produktspezifikation angegebene Prüfmethode.

Relations entre différentes unités de dureté et résistance à la traction

| Zugfestigkeit N/mm ² | Vickershärte HV | Brinellhärte HB | Rockwellhärte | |
|------------------------------------|--------------------|--------------------|---------------|------|
| | | | HRB | HRC |
| 1125 | 350 | 333 | | 35.5 |
| 1155 | 360 | 342 | | 36.6 |
| 1190 | 370 | 352 | | 37.7 |
| 1220 | 380 | 361 | | 38.8 |
| 1255 | 390 | 371 | | 39.8 |
| 1290 | 400 | 380 | | 40.8 |
| 1320 | 410 | 390 | | 41.8 |
| 1350 | 420 | 399 | | 42.7 |
| 1385 | 430 | 409 | | 43.6 |
| 1420 | 440 | 418 | | 44.5 |
| 1455 | 450 | 428 | | 45.3 |
| 1485 | 460 | 437 | | 46.1 |
| 1520 | 470 | 447 | | 46.9 |
| 1555 | 480 | (456) | | 47.7 |
| 1595 | 490 | (466) | | 48.4 |
| 1630 | 500 | (475) | | 49.1 |
| 1665 | 510 | (485) | | 49.8 |
| 1700 | 520 | (494) | | 50.5 |
| 1740 | 530 | (504) | | 51.1 |
| 1775 | 540 | (513) | | 51.7 |
| 1810 | 550 | (523) | | 52.3 |
| 1845 | 560 | (532) | | 53.0 |
| 1880 | 570 | (542) | | 53.6 |
| 1920 | 580 | (551) | | 54.1 |
| 1955 | 590 | (561) | | 54.7 |
| 1995 | 600 | (570) | | 55.2 |
| 2030 | 610 | (580) | | 55.7 |
| 2070 | 620 | (589) | | 56.3 |
| 2105 | 630 | (599) | | 56.8 |
| 2145 | 640 | (608) | | 57.3 |
| 2180 | 650 | (618) | | 57.8 |
| | 660 | | | 58.3 |
| | 670 | | | 58.8 |
| | 680 | | | 59.2 |
| | 690 | | | 59.7 |
| | 700 | | | 60.1 |
| | 720 | | | 61.0 |
| | 740 | | | 61.8 |
| | 760 | | | 62.5 |
| | 780 | | | 63.6 |
| | 800 | | | 64.0 |
| | 820 | | | 64.7 |
| | 840 | | | 65.3 |
| | 860 | | | 65.9 |
| | 880 | | | 66.4 |
| | 900 | | | 67.0 |
| | 920 | | | 67.5 |
| | 940 | | | 68.0 |

Calculation: $HB=0.95 \times HV$

Règles pour l'utilisation du tableau:

- Les valeurs de conversion portées dans le tableau ne sont valables que pour les aciers non alliés et faiblement alliés.
- Les valeurs de conversion ne constituent pas des rapports précis, mais sont seulement des correspondances approximatives.
- En cas d'arbitrage ou dans les cas douteux, seule la méthode d'essai indiquée dans les spécifications fait foi.

ISO-Toleranzen / Tolérances-ISO

| | ≤ 3mm | >3-6mm | >6-10mm | >10-18mm | >18-30mm | >30-50mm | >50-80mm | >80-120mm | >120-180mm |
|----|-------------|---------|---------|----------|----------|----------|----------|-----------|------------|
| 5 | g 5 -2 -6 | -4 -9 | -5 -11 | -6 -14 | -7 -16 | -9 -20 | -10 -23 | -12 -27 | -14 -32 |
| | h 5 0 -4 | 0 -5 | 0 -6 | 0 -8 | 0 -9 | 0 -11 | 0 -13 | 0 -15 | 0 -18 |
| | j 5 +2 -2 | -3 -2 | +4 -2 | +5 -3 | +5 -4 | +6 -5 | +6 -7 | +6 -9 | +7 -11 |
| | k 5 +4 0 | +6 +1 | +7 +1 | +9 +1 | +11 +2 | +13 +2 | +15 +2 | +18 +3 | +21 +3 |
| | m 5 +6 +2 | +9 +4 | +12 +6 | +15 +7 | +17 +8 | +20 +9 | +24 +11 | +28 +13 | +33 +15 |
| 6 | g 6 +8 +4 | +13 +8 | +16 +10 | +20 +12 | +24 +15 | +28 +15 | +33 +20 | +38 +23 | +45 +27 |
| | h 6 -2 -8 | -4 -12 | -5 -14 | -6 -17 | -7 -20 | -9 -25 | -10 -29 | -12 -34 | -14 -39 |
| | j 6 0 -6 | 0 -8 | 0 -9 | 0 -11 | 0 -13 | 0 -16 | 0 -19 | 0 -22 | 0 -25 |
| | k 6 +4 -2 | +6 -2 | +7 -2 | -8 -3 | +9 -4 | +11 -5 | +12 -7 | +13 -9 | +14 -11 |
| | m 6 +6 +2 | +9 +1 | +10 +1 | +12 +1 | +15 +2 | +18 +2 | +21 +2 | +25 +3 | +28 +3 |
| 7 | g 7 +8 +2 | +12 +4 | +15 +6 | +18 +7 | +21 +8 | +25 +9 | +30 +11 | +35 +13 | +40 +15 |
| | h 7 +10 +4 | +16 +8 | +19 +10 | +23 +12 | +28 +15 | +33 +17 | +39 +20 | +45 +23 | +52 +27 |
| | j 7 +12 +2 | +20 +4 | +24 +6 | +29 +7 | +35 +10 | +42 +12 | +50 +15 | +58 +18 | +68 +23 |
| | k 7 +14 +4 | +25 +8 | +30 +12 | +36 +15 | +42 +18 | +50 +22 | +60 +27 | +70 +33 | +83 +43 |
| | m 7 +16 +6 | +32 +10 | +39 +14 | +47 +18 | +56 +22 | +66 +27 | +78 +33 | +92 +40 | +110 +53 |
| 8 | g 8 -2 -8 | -4 -12 | -5 -14 | -6 -17 | -7 -20 | -9 -25 | -10 -29 | -12 -34 | -14 -39 |
| | h 8 0 -6 | 0 -8 | 0 -9 | 0 -11 | 0 -13 | 0 -16 | 0 -19 | 0 -22 | 0 -25 |
| | j 8 +2 -4 | +6 -2 | +7 -2 | -8 -3 | +9 -4 | +11 -5 | +12 -7 | +13 -9 | +14 -11 |
| | k 8 +4 0 | +9 +1 | +10 +1 | +12 +1 | +15 +2 | +18 +2 | +21 +2 | +25 +3 | +28 +3 |
| | m 8 +6 +2 | +12 +4 | +15 +6 | +18 +7 | +21 +8 | +25 +9 | +30 +11 | +35 +13 | +40 +15 |
| 9 | g 9 +8 +4 | +13 +8 | +16 +10 | +20 +12 | +24 +15 | +28 +15 | +33 +20 | +38 +23 | +45 +27 |
| | h 9 -2 -8 | -4 -12 | -5 -14 | -6 -17 | -7 -20 | -9 -25 | -10 -29 | -12 -34 | -14 -39 |
| | j 9 0 -6 | 0 -8 | 0 -9 | 0 -11 | 0 -13 | 0 -16 | 0 -19 | 0 -22 | 0 -25 |
| | k 9 +2 -4 | +6 -2 | +7 -2 | -8 -3 | +9 -4 | +11 -5 | +12 -7 | +13 -9 | +14 -11 |
| | m 9 +4 0 | +9 +1 | +10 +1 | +12 +1 | +15 +2 | +18 +2 | +21 +2 | +25 +3 | +28 +3 |
| 10 | g 10 +10 +4 | +16 +8 | +19 +10 | +23 +12 | +28 +15 | +33 +17 | +39 +20 | +45 +23 | +52 +27 |
| | h 10 +12 +2 | +20 +4 | +24 +6 | +29 +7 | +35 +10 | +42 +12 | +50 +15 | +58 +18 | +68 +23 |
| | j 10 +14 +4 | +25 +8 | +30 +12 | +36 +15 | +42 +18 | +50 +22 | +60 +27 | +70 +33 | +83 +43 |
| | k 10 +16 +6 | +32 +10 | +39 +14 | +47 +18 | +56 +22 | +66 +27 | +78 +33 | +92 +40 | +110 +53 |
| | m 10 +18 +8 | +40 +14 | +48 +18 | +58 +22 | +69 +26 | +82 +31 | +98 +37 | +118 +45 | +145 +59 |
| 11 | g 11 -2 -8 | -4 -12 | -5 -14 | -6 -17 | -7 -20 | -9 -25 | -10 -29 | -12 -34 | -14 -39 |
| | h 11 0 -6 | 0 -8 | 0 -9 | 0 -11 | 0 -13 | 0 -16 | 0 -19 | 0 -22 | 0 -25 |
| | j 11 +2 -4 | +6 -2 | +7 -2 | -8 -3 | +9 -4 | +11 -5 | +12 -7 | +13 -9 | +14 -11 |
| | k 11 +4 0 | +9 +1 | +10 +1 | +12 +1 | +15 +2 | +18 +2 | +21 +2 | +25 +3 | +28 +3 |
| | m 11 +6 +2 | +12 +4 | +15 +6 | +18 +7 | +21 +8 | +25 +9 | +30 +11 | +35 +13 | +40 +15 |