

maykestag

















PERFORMANCE
IN PRECISION



A black and white photograph showing a close-up of several HSS tool cutting edges. The tools are arranged in a fan-like pattern, with their sharp, beveled edges pointing towards the center. The lighting highlights the fine, concentric grinding marks on the metal surfaces, creating a sense of depth and precision. The background is dark, making the metallic surfaces stand out.

HSS-Senker und HSS-Reibahlen

















HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

| INFORMATION | Kegelsenker Countersinks Svasatori | | Kegelsenker Countersinks Svasatori | |
|--|---|---|---|---|
| |  |  |  |  |
| <p>Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem MaySpeedGuide.</p> <p>You will find the cutting conditions for all tools in our MaySpeedGuide.</p> <p>Per i parametri di lavorazione per tutti gli utensili richiedete il MaySpeedGuide.</p> | | | | |
| Norm / Standard | DIN 334 | | DIN 335 | |
| Senkwinkel / Counterangle / Angolo di caduta | 60° | 60° | 90° | 90° |
| Form / Forma | C | C | C | C |
| Schneidstoff / Cutting material / Acciaio | HSS-Co5 | HSS-Co5 | HSS-Co5 | HSS-Co5 |
| Beschichtung / Coating / Rivestimento | | | | ALUNIT® |
| Ø mm | 6.3 - 25 mm | 6.3 - 25 mm | 4.3 - 31 mm | 4.3 - 31 mm |
| Code / Codice | 2270 | 2280 | 2390 | 2397 |
| Seite / Page / Pagina | 518 | 519 | 520 | 520 |
| Geeignet für / Suitable for / Adatte per | | | | |
|  Stähle < 400 N/mm² Steels < 400 N/mm ² Acciai < 400 N/mm ² | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Stähle < 850 N/mm² Steels < 850 N/mm ² Acciai < 850 N/mm ² | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Stähle < 1.100 N/mm² Steels < 1.100 N/mm ² Acciai < 1.100 N/mm ² | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
|  Stähle < 1.300 N/mm² Steels < 1.300 N/mm ² Acciai < 1.300 N/mm ² | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
|  Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC | | | | |
|  INOX < 850 N/mm² Rostfreie Stähle < 850 N/mm ² Stainless steels < 850 N/mm ² Acciai inossidabili < 850 N/mm ² | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
|  INOX > 850 N/mm² Rostfreie Stähle > 850 N/mm ² Stainless steels > 850 N/mm ² Acciai inossidabili > 850 N/mm ² | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
|  Grauguss, Temperguss Cast iron, malleable cast iron Chisa grigia, ghisa malleabile | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
|  Kupfer, Messing Copper, brass Rame, ottone | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
|  Aluminium Aluminium Alluminio | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
|  Kunststoffe Plastics Materie plastiche | ■■□□ | ■■□□ | ■■□□ | ■■□□ |

| Kegelsenker Countersinks Svasatori | | Kegelsenker Countersinks Svasatori | | Kegelsenker Countersinks Svasatori |
|--|--------------------|--|--------------------|--|
| | | | | |
| DIN 335 | | | | |
| 90° | 90° | 90° | 90° | 90° |
| C | C | C | C | C |
| HSS-Co5 | HSS-Co5 ALUNIT® | HSS-Co5 | HSS-Co5 ALUNIT® | HSS-Co5 |
| 4.3 - 31 mm | 4.3 - 31 mm | 6.3 - 31 mm | 6.3 - 31 mm | 4.3 - 31 mm |
| 2380 | 2387 | 2340 | 2347 | 2290 |
| 521 | 521 | 522 | 522 | 523 |
| ■■■■ | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
| ■■■■ | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
| ■■■□ | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
| ■■■□ | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
| ■■■■ | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
| ■■■□ | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
| ■■□□ | ■■□□ | ■■□□ | ■■□□ | ■■□□ |



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

| INFORMATION | Kegelsenker Countersinks Svasatori | | Flachsenker Counterbores Allargatori per sedi viti | |
|---|---|---|---|---|
| |  |  |  |  |
| <p>Die Schnittwerte für alle Werkzeuge entnehmen Sie bitte unserem MaySpeedGuide.</p> <p>You will find the cutting conditions for all tools in our MaySpeedGuide.</p> <p>Per i parametri di lavorazione per tutti gli utensili richiedete il MaySpeedGuide.</p> | | | | |
| Norm / Standard | DIN 335 | | DIN 373 | |
| Senkwinkel / Counterangle / Angolo di caduta | 90° | 90° | 180° | 180° |
| Form / Forma | C | D | | |
| Schneidstoff / Cutting material / Acciaio | HSS-Co5 | HSS-Co5 | HSS | HSS |
| Beschichtung / Coating / Rivestimento | ALUNIT® | | | |
| Ø mm | 5 - 31 mm | 25 - 50 mm | M3 - M12 | M4 - M12 |
| Code / Codice | 2297 | 2330 | 2140 | 2150 |
| Seite / Page / Pagina | 523 | 524 | 527 | 528 |
| Geeignet für / Suitable for / Adatte per | | | | |
|  Stähle < 400 N/mm ² Steels < 400 N/mm ² Acciai < 400 N/mm ² | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Stähle < 850 N/mm ² Steels < 850 N/mm ² Acciai < 850 N/mm ² | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Stähle < 1.100 N/mm ² Steels < 1.100 N/mm ² Acciai < 1.100 N/mm ² | ■■■□ | ■■■□ | ■■□□ | ■■□□ |
|  Stähle < 1.300 N/mm ² Steels < 1.300 N/mm ² Acciai < 1.300 N/mm ² | ■■□□ | ■■□□ | | |
|  Stähle > 45 HRC Steels > 45 HRC Acciai > 45 HRC | | | | |
|  Rostfreie Stähle < 850 N/mm ² Stainless steels < 850 N/mm ² Acciai inossidabili < 850 N/mm ² | ■■■□ | ■■■□ | | |
|  Rostfreie Stähle > 850 N/mm ² Stainless steels > 850 N/mm ² Acciai inossidabili > 850 N/mm ² | ■■□□ | ■■□□ | | |
|  Grauguss, Temperguss Cast iron, malleable cast iron Chisa grigia, ghisa malleabile | ■■■■ | ■■■■ | ■■■■ | ■■■■ |
|  Titan- und Titanlegierung Titanium and titanium alloys Titanio e leghe di Titanio | ■■□□ | ■■□□ | | |
|  Kupfer, Messing Copper, brass Rame, ottone | ■■□□ | ■■□□ | ■■□□ | ■■□□ |
|  Aluminium Aluminium Alluminio | ■■■□ | ■■■□ | ■■■□ | ■■■□ |
|  Kunststoffe Plastics Materie plastiche | ■■□□ | ■■□□ | ■■□□ | ■■□□ |

| NC-Maschinenreibahlen NC-machine reamers Alesatori a macchina NC | | NC-Maschinenreibahlen NC-machine reamers Alesatori a macchina NC | Handreibahle Hand reamers Alesatori a mano | Kegelreibahlen Taper pin reamers Alesatori per ferri di spine coniche | Kegelreibahlen Taper pin reamers Alesatori per ferri di spine coniche |
|---|---|---|---|--|---|
|  |  |  |  |  |  |
| WN | | DIN 208 | DIN 206 | DIN 2179 | DIN 9 |
| D | D | B | B | | B |
| HSS-E | HSS-E | HSS-E | HSS | HSS-E | HSS |
| 1.5 - 20 mm | 1 - 12.03 mm | 10 - 30 mm | 2 - 20 mm | 5 - 10 mm | 3 - 12 mm |
| 3080 | 3082 | 3130 | 3020 | 3320 | 3300 |
| 529 | 531 | 533 | 534 | 535 | 536 |
| ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ ■ |
| ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ ■ | ■ ■ ■ □ | ■ ■ ■ ■ | ■ ■ ■ □ |
| ■ ■ ■ □ | ■ ■ ■ □ | ■ ■ ■ □ | ■ ■ □ □ | ■ ■ ■ □ | ■ ■ □ □ |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | | ■ ■ □ □ | |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | | ■ ■ □ □ | |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | | ■ ■ □ □ | |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | | ■ ■ □ □ | |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ |
| ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ | ■ ■ □ □ |
| | | | | | |



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

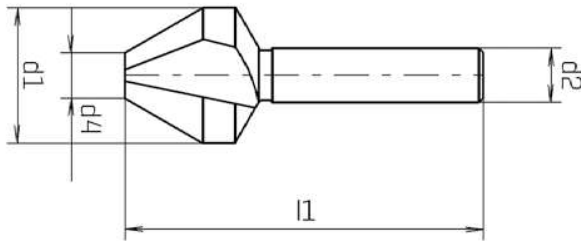
D HSS Cobalt Kegelsenker
ungleiche Teilung
DIN 334 C, 60°

E HSS Cobalt countersinks
different partition,
DIN 334 C, 60°

I Svasatori HSS Cobalt
disuguale tagliente,
DIN 334 C, 60°



| | | | | |
|---------------------------|---|--------------------------|---------------|-----------|
| HSS Co5 | DIN 334 | Form Form Forme C | 60° | |
| | | | | |
| | | | | |
| INOX >850 N/mm² | GRAUGUSS CAST IRON G-45FA GR101A | Ti | Cu, Ms | AL |
| | | | | |
| | | | | |

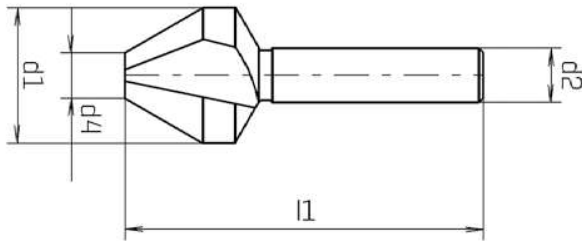
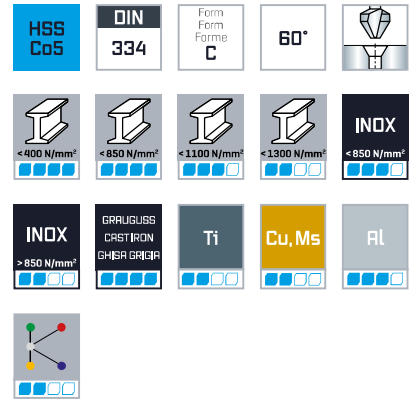


| d1 mm | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2270 Art.-Nr. |
|--------------|------------------------|----------|----------|---|-----------------------|
| 6,30 | 5,00 | 1,6 | 45 | 3 | 0227000630100 |
| 8,00 | 6,00 | 2 | 50 | 3 | 0227000800100 |
| 10,00 | 6,00 | 2,5 | 50 | 3 | 0227001000100 |
| 12,50 | 8,00 | 3,2 | 56 | 3 | 0227001250100 |
| 16,00 | 10,00 | 4 | 63 | 3 | 0227001600100 |
| 20,00 | 10,00 | 5 | 67 | 3 | 0227002000100 |
| 25,00 | 10,00 | 6,3 | 71 | 3 | 0227002500100 |

D HSS Cobalt Kegelsenker
DIN 334 C, 60°

E HSS Cobalt countersinks
DIN 334 C, 60°

I Svasatori HSS Cobalt
DIN 334 C, 60°



| d1 mm | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2280 Art.-Nr. |
|----------|------------------------|----------|----------|---|-----------------------|
| 6,30 | 5,00 | 1,6 | 45 | 3 | 0228000630100 |
| 8,00 | 6,00 | 2 | 50 | 3 | 0228000800100 |
| 12,50 | 8,00 | 3,2 | 56 | 3 | 0228001250100 |
| 16,00 | 10,00 | 4 | 63 | 3 | 0228001600100 |
| 20,00 | 10,00 | 5 | 67 | 3 | 0228002000100 |
| 25,00 | 10,00 | 6,3 | 71 | 3 | 0228002500100 |



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

**D HSS Cobalt Kegelsenker,
ungleiche Teilung
DIN 335 C, 90°**

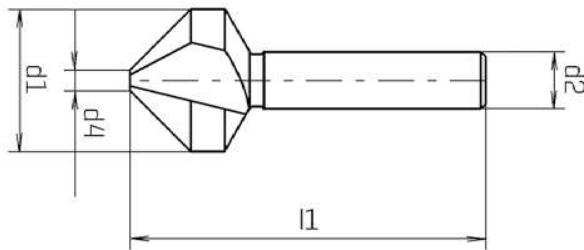
**E HSS Cobalt countersinks,
different partition
DIN 335 C, 90°**


**I Svasatori HSS Cobalt
disuguale tagliente
DIN 335 C, 90°**



Material and performance icons:

- HSS Co5
- DIN 335
- Form Forme Forme C
- 90°
- 102°-138°
- <400 N/mm²
- <850 N/mm²
- <1100 N/mm²
- <1300 N/mm²
- <850 N/mm²
- INOX >850 N/mm²
- GRAUGUSS CAST IRON G-45A G-103A
- Ti
- Cu, Ms
- AL

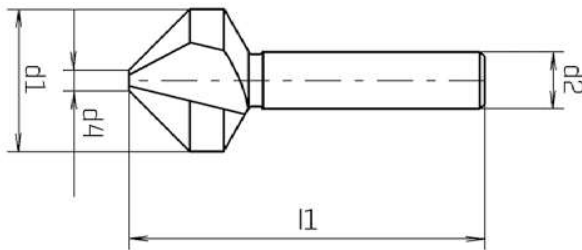
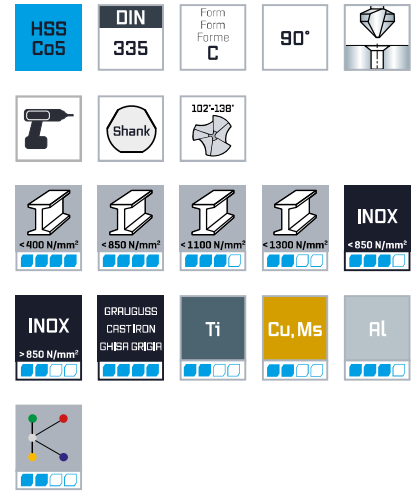


| | | | | | | ALUNIT® | |
|----------|---|------------------------|----------|----------|---|-----------------------|-----------------------|
| d1 mm |  | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2390 Art.-Nr. | Code 2397 Art.-Nr. |
| 4,30 | M 2 | 4,00 | 1,3 | 40 | 3 | 0239000430100 | 0239700430100 |
| 6,00 | M 3 | 5,00 | 1,5 | 45 | 3 | 0239000600100 | 0239700600100 |
| 6,30 | M 3 | 5,00 | 1,5 | 45 | 3 | 0239000630100 | 0239700630100 |
| 8,00 | M 4 | 6,00 | 2 | 50 | 3 | 0239000800100 | 0239700800100 |
| 8,30 | M 4 | 6,00 | 2 | 50 | 3 | 0239000830100 | 0239700830100 |
| 10,00 | M 5 | 6,00 | 2,5 | 50 | 3 | 0239001000100 | 0239701000100 |
| 10,40 | M 5 | 6,00 | 2,5 | 50 | 3 | 0239001040100 | 0239701040100 |
| 11,50 | M 6 | 8,00 | 2,8 | 56 | 3 | 0239001150100 | 0239701150100 |
| 12,40 | M 6 | 8,00 | 2,8 | 56 | 3 | 0239001240100 | 0239701240100 |
| 15,00 | M 8 | 10,00 | 3,2 | 60 | 3 | 0239001500100 | 0239701500100 |
| 16,50 | M 8 | 10,00 | 3,2 | 60 | 3 | 0239001650100 | 0239701650100 |
| 19,00 | M 10 | 10,00 | 3,5 | 63 | 3 | 0239001900100 | 0239701900100 |
| 20,50 | M 10 | 10,00 | 3,5 | 63 | 3 | 0239002050100 | 0239702050100 |
| 23,00 | M 12 | 10,00 | 3,8 | 67 | 3 | 0239002300100 | 0239702300100 |
| 25,00 | M 12 | 10,00 | 3,8 | 67 | 3 | 0239002500100 | 0239702500100 |
| 31,00 | M 16 | 12,00 | 4,2 | 71 | 3 | 0239003100100 | 0239703100100 |

D HSS Cobalt Kegelsenker,
3-Flächenschaft, ungleiche
Teilung,
DIN 335 C, 90°

E HSS Cobalt countersinks,
3-surface shank, different
partition,
DIN 335 C, 90°

I Svasatori conici in acciaio
super-rapido al cobalto,
codolo a 3 superfici, con
passo irregolare,
DIN 335 C, 90°



| | | | | | | ALUNIT® | |
|----------|------|------------------------|----------|----------|---|-----------------------|-----------------------|
| d1 mm | | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2380 Art.-Nr. | Code 2387 Art.-Nr. |
| 4,30 | M 2 | 4,00 | 1,3 | 40 | 3 | 0238000430100 | 0238700430100 |
| 6,00 | M 3 | 5,00 | 1,5 | 45 | 3 | 0238000600100 | 0238700600100 |
| 6,30 | M 3 | 5,00 | 1,5 | 45 | 3 | 0238000630100 | 0238700630100 |
| 8,00 | M 4 | 6,00 | 2 | 50 | 3 | 0238000800100 | 0238700800100 |
| 8,30 | M 4 | 6,00 | 2 | 50 | 3 | 0238000830100 | 0238700830100 |
| 10,00 | M 5 | 6,00 | 2,5 | 50 | 3 | 0238001000100 | 0238701000100 |
| 10,40 | M 5 | 6,00 | 2,5 | 50 | 3 | 0238001040100 | 0238701040100 |
| 11,50 | M 6 | 8,00 | 2,8 | 56 | 3 | 0238001150100 | 0238701150100 |
| 12,40 | M 6 | 8,00 | 2,8 | 56 | 3 | 0238001240100 | 0238701240100 |
| 15,00 | M 8 | 10,00 | 3,2 | 60 | 3 | 0238001500100 | 0238701500100 |
| 16,50 | M 8 | 10,00 | 3,2 | 60 | 3 | 0238001650100 | 0238701650100 |
| 19,00 | M 10 | 10,00 | 3,5 | 63 | 3 | 0238001900100 | 0238701900100 |
| 20,50 | M 10 | 10,00 | 3,5 | 63 | 3 | 0238002050100 | 0238702050100 |
| 23,00 | M 12 | 10,00 | 3,8 | 67 | 3 | 0238002300100 | 0238702300100 |
| 25,00 | M 12 | 10,00 | 3,8 | 67 | 3 | 0238002500100 | 0238702500100 |
| 31,00 | M 16 | 12,00 | 4,2 | 71 | 3 | 0238003100100 | 0238703100100 |



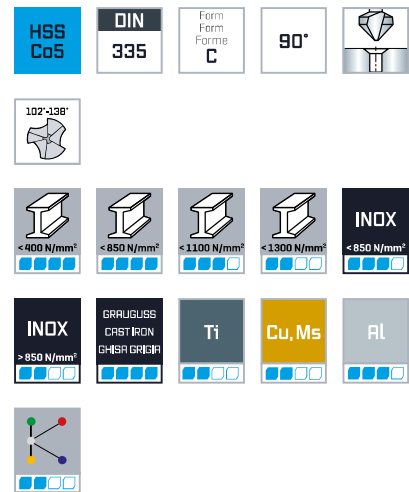
HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori


D HSS Cobalt Kegelsenker
lang, ungleiche Teilung
DIN 335 C, 90°



E HSS Cobalt countersinks
long series, different
partition,
DIN 335 C, 90°

I Svasatori HSS Cobalt serie
lunga, disuguale tagliente,
DIN 335 C, 90°

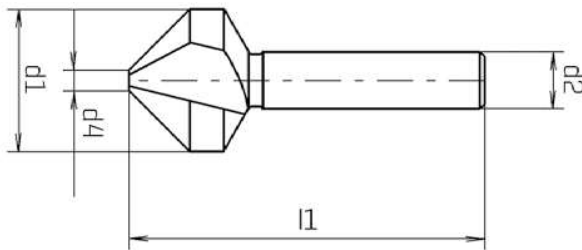
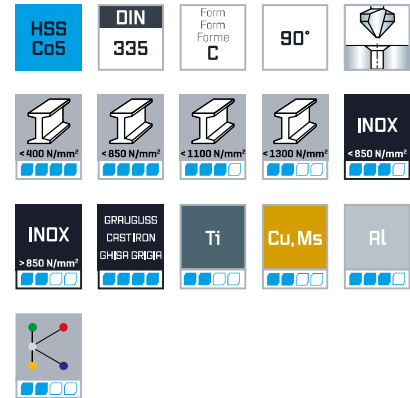


| | | | | | | ALUNIT® | |
|----------|---|------------------------|----------|----------|---|-----------------------|-----------------------|
| d1 mm |  | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2340 Art.-Nr. | Code 2347 Art.-Nr. |
| 6,30 | M 3 | 5,00 | 1,5 | 104 | 3 | 0234000630100 | 0234700630100 |
| 8,30 | M 4 | 6,00 | 2 | 105 | 3 | 0234000830100 | 0234700830100 |
| 10,40 | M 5 | 6,00 | 2,5 | 107 | 3 | 0234001040100 | 0234701040100 |
| 12,40 | M 6 | 8,00 | 2,8 | 108 | 3 | 0234001240100 | 0234701240100 |
| 16,50 | M 8 | 10,00 | 3,2 | 111 | 3 | 0234001650100 | 0234701650100 |
| 20,50 | M 10 | 10,00 | 3,5 | 114 | 3 | 0234002050100 | 0234702050100 |
| 25,00 | M 12 | 10,00 | 3,8 | 118 | 3 | 0234002500100 | 0234702500100 |
| 31,00 | M 16 | 12,00 | 4,2 | 140 | 3 | 0234003100100 | 0234703100100 |

D Kegelsenker
DIN 335 C, 90°

E Countersinks
DIN 335 C, 90°

I Svasatori
DIN 335 C, 90°



| | | | | | | ALUNIT® | |
|----------|------|------------------------|----------|----------|---|-----------------------|-----------------------|
| d1 mm | | d2 _{h9} mm | d4 mm | l1 mm | Z | Code 2290 Art.-Nr. | Code 2297 Art.-Nr. |
| 4,30 | M 2 | 4,00 | 1,3 | 40 | 3 | 0229000430100 | |
| 5,00 | | 4,00 | 1,5 | 40 | 3 | 0229000500100 | 0229700500100 |
| 5,30 | | 4,00 | 1,5 | 40 | 3 | 0229000530100 | |
| 6,00 | | 5,00 | 1,5 | 45 | 3 | 0229000600100 | 0229700600100 |
| 6,30 | M 3 | 5,00 | 1,5 | 45 | 3 | 0229000630100 | 0229700630100 |
| 8,00 | | 6,00 | 2 | 50 | 3 | 0229000800100 | 0229700800100 |
| 8,30 | M 4 | 6,00 | 2 | 50 | 3 | 0229000830100 | 0229700830100 |
| 9,40 | | 6,00 | 2,2 | 50 | 3 | 0229000940100 | |
| 10,00 | | 6,00 | 2,5 | 50 | 3 | 0229001000100 | 0229701000100 |
| 10,40 | M 5 | 6,00 | 2,5 | 50 | 3 | 0229001040100 | 0229701040100 |
| 11,50 | | 8,00 | 2,8 | 56 | 3 | 0229001150100 | |
| 12,40 | M 6 | 8,00 | 2,8 | 56 | 3 | 0229001240100 | 0229701240100 |
| 13,40 | | 8,00 | 2,9 | 56 | 3 | 0229001340100 | |
| 15,00 | | 10,00 | 3,2 | 60 | 3 | 0229001500100 | 0229701500100 |
| 16,50 | M 8 | 10,00 | 3,2 | 60 | 3 | 0229001650100 | 0229701650100 |
| 19,00 | | 10,00 | 3,5 | 63 | 3 | 0229001900100 | 0229701900100 |
| 20,50 | M 10 | 10,00 | 3,5 | 63 | 3 | 0229002050100 | 0229702050100 |
| 23,00 | | 10,00 | 3,8 | 67 | 3 | 0229002300100 | |
| 25,00 | M 12 | 10,00 | 3,8 | 67 | 3 | 0229002500100 | 0229702500100 |
| 31,00 | | 12,00 | 4,2 | 71 | 3 | 0229003100100 | 0229703100100 |



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

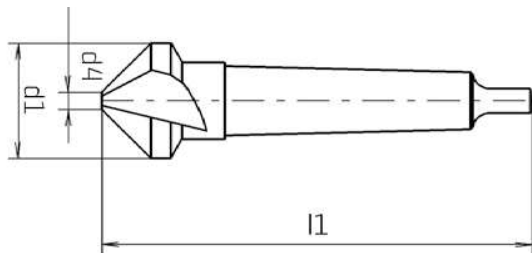
D Kegelsenker mit MK-Schaft
DIN 335 D, 90°



| | | | | |
|---------------------------|--|--------------------------|-----------------|---------------------------|
| HSS Co5 | DIN 335 | Form Form Forme 0 | 90° | |
| <400 N/mm² | <850 N/mm² | <1100 N/mm² | <1300 N/mm² | INOX <850 N/mm² |
| INOX >850 N/mm² | GRAUGUSS CAST IRON GHISA GRIGIA | Ti | Cu, Ms | Al |
| | | | | |

E Countersinks with MT-Shank
DIN 335 D, 90°

I Svasatori cono morse
DIN 335 D, 90°



| d1 mm | d4 mm | l1 mm | | Z | Code 2330 Art.-Nr. |
|--------------|----------|----------|---|---|-----------------------|
| 25,00 | 3,8 | 106 | 2 | 3 | 0233002500100 |
| 31,00 | 4,2 | 112 | 2 | 3 | 0233003100100 |
| 34,00 | 4,5 | 118 | 2 | 3 | 0233003400100 |
| 37,00 | 4,8 | 118 | 2 | 3 | 0233003700100 |
| 40,00 | 10 | 140 | 3 | 3 | 0233004000100 |
| 50,00 | 14 | 150 | 3 | 3 | 0233005000100 |

**D HSS-Co5
Kegelsenkersätze
DIN 335 C, 90°**



**E HSS-Co5
Countersink-sets
DIN 335 C, 90°**

**I Assortimenti svasatori
HSS-Co5
DIN 335 C, 90°**



Alunit®-Beschichtung
Alunit®-coating
Alunit®



**HSS Co5-Kegelsenker-Satz, 4-tlg.
HSS Co5-Countersink set, 4 pcs.
Assortimento svasatori HSS Co5, 4 pz.**

Inhalt / Contents / Contenuto:
Code 2397 Ø 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2397000041 00

**HSS Co5-Kegelsenker-Satz, 4-tlg.
HSS Co5-Countersink set, 4 pcs.
Assortimento svasatori HSS Co5, 4 pz.**

Inhalt / Contents / Contenuto:
Code 2390 Ø 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2390000041 00



Alunit®-Beschichtung
Alunit®-coating
Alunit®



**HSS Co5 Kegelsenker-Satz, 5-tlg.
HSS Co5 Countersink set, 5 pcs.
Assortimenti svasatori HSS Co5, 5 pz.**

Inhalt / Contents / Contenuto:
Code 2397 Ø 6,3 | 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2397000051 00



**HSS Co5 Kegelsenker-Satz, 5-tlg.
HSS Co5 Countersink set, 5 pcs.
Assortimenti svasatori HSS Co5, 5 pz.**

Inhalt / Contents / Contenuto:
Code 2390 Ø 6,3 | 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2390000051 00



Alunit®-Beschichtung
Alunit®-coating
Alunit®



**HSS Co5-Kegelsenker-Satz, 4-tlg.
HSS Co5-Countersink set, 4 pcs.
Assortimento svasatori HSS Co5, 4 pz.**

Inhalt / Contents / Contenuto:
Code 2387 Ø 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2387000041 00



**HSS Co5-Kegelsenker-Satz, 4-tlg.
HSS Co5-Countersink set, 4 pcs.
Assortimento svasatori HSS Co5, 4 pz.**

Inhalt / Contents / Contenuto:
Code 2380 Ø 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2380000041 00



Alunit®-Beschichtung
Alunit®-coating
Alunit®



**HSS Co5 Kegelsenker-Satz, 5-tlg.
HSS Co5 Countersink set, 5 pcs.
Assortimenti svasatori HSS Co5, 5 pz.**

Inhalt / Contents / Contenuto:
Code 2387 Ø 6,3 | 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2387000051 00



**HSS Co5 Kegelsenker-Satz, 5-tlg.
HSS Co5 Countersink set, 5 pcs.
Assortimenti svasatori HSS Co5, 5 pz.**

Inhalt / Contents / Contenuto:
Code 2380 Ø 6,3 | 10,4 | 16,5 | 20,5 | 25,0
Art.-Nr. Ø 2380000051 00

**D HSS-Co5
Kegelsenkersätze
DIN 335 C, 90°**



**E HSS-Co5
Countersink-sets
DIN 335 C, 90°**

**I Assortimenti svasatori
HSS-Co5
DIN 335 C, 90°**



HSS Co5 Kegelsenker-Satz, 6-tlg.
HSS Co5 Countersink set, 6 pcs.
Assortimenti svasatori HSS Co5, 6 pz.

Inhalt / Contents / Contenuto:

Code 2340 Ø 6,3 | 8,3 | 10,4 | 12,4 | 16,5 | 20,5

Art.-Nr. 0 2340000061 00



Alunit®-Beschichtung
Alunit®-coating
Alunit®



HSS Co5 Kegelsenker-Satz, 6-tlg.
HSS Co5 Countersink set, 6 pcs.
Assortimenti svasatori HSS Co5, 6 pz.

Inhalt / Contents / Contenuto:

Code 2347 Ø 6,3 | 8,3 | 10,4 | 12,4 | 16,5 | 20,5

Art.-Nr. 0 2347000061 00

LANGE AUSFÜHRUNG
LONG SERIES
SERIE LUNGA



Alunit®-Beschichtung
Alunit®-coating
Alunit®

HSS Co5-Kegelsenker-Satz, 4-tlg., Alunit®
HSS Co5 Countersink set, 4 pcs., Alunit®
Assortimenti svasatori HSS Co5, 4 pz., Alunit®

Inhalt / Contents / Contenuto:

Code 2297 Ø 10,4 | 16,5 | 20,5 | 25,0

Art.-Nr. 0 2297000041 00



HSS Co5-Kegelsenker-Satz, 4-tlg.
HSS Co5 Countersink set, 4 pcs.
Assortimenti svasatori HSS Co5, 4 pz.

Inhalt / Contents / Contenuto:

Code 2290 Ø 10,4 | 16,5 | 20,5 | 25,0

Art.-Nr. 0 2290000041 00



HSS Co5-Kegelsenker-Satz, 6-tlg.
HSS Co5-Countersink set, 6 pcs.
Assortimento svasatori HSS Co5, 6 pz.

Inhalt / Contents / Contenuto:

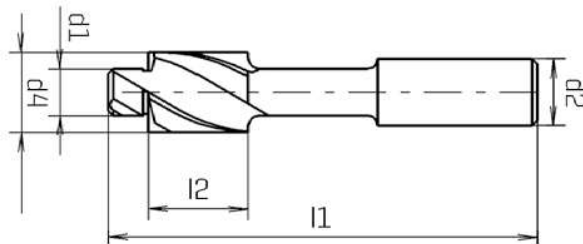
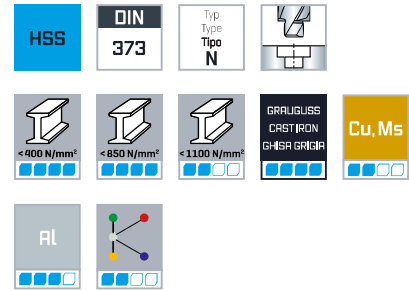
Code 2290 Ø 6,3 | 8,3 | 10,4 | 12,4 | 16,5 | 20,5

Art.-Nr. 0 2290000061 00

D Flachsenker
DIN 373, fein

E Counterbores
DIN 373, fine

I Allargatori per sedi viti
DIN 373, fine



| | d1 mm | d2 _{h9} mm | d4 _{e8} mm | l1 mm | l2 mm | Z | Code 2140 Art.-Nr. |
|-------------|----------|------------------------|------------------------|----------|----------|---|-----------------------|
| M 3 | 3,20 | 5,00 | 6 | 71 | 14 | 3 | 0214000600100 |
| M 4 | 4,30 | 5,00 | 8 | 71 | 14 | 3 | 0214000800100 |
| M 5 | 5,30 | 8,00 | 10 | 80 | 18 | 3 | 0214001000100 |
| M 6 | 6,40 | 8,00 | 11 | 80 | 18 | 3 | 0214001100100 |
| M 8 | 8,40 | 12,50 | 15 | 100 | 22 | 3 | 0214001500100 |
| M 10 | 10,50 | 12,50 | 18 | 100 | 22 | 3 | 0214001800100 |
| M 12 | 13,00 | 12,50 | 20 | 100 | 22 | 3 | 0214002000100 |

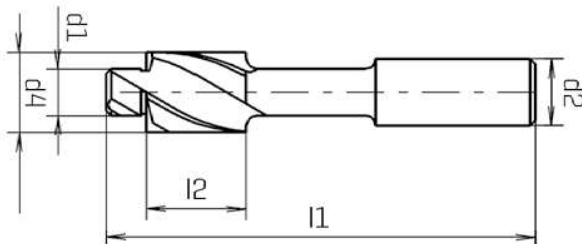
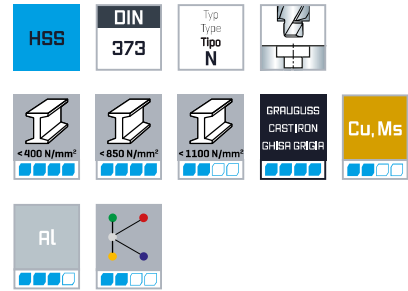


HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

D Flachsenker
DIN 373, mittel

E Counterbores
DIN 373, medium

I Allargatori per sedi viti
DIN 373, media

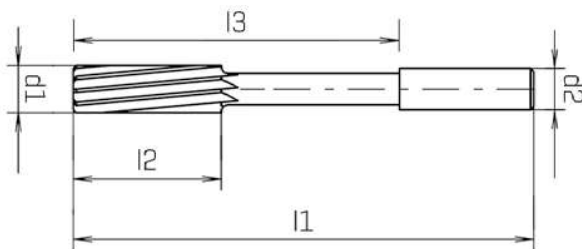
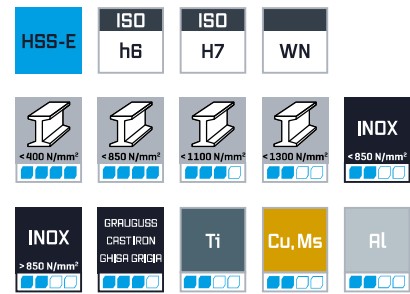


| | d1 mm | d2 _{h9} mm | d4 _{e8} mm | l1 mm | l2 mm | Z | Code 2150 Art.-Nr. |
|-------------|----------|------------------------|------------------------|----------|----------|---|-----------------------|
| M 4 | 4,50 | 5,00 | 8 | 71 | 14 | 3 | 0215000800100 |
| M 5 | 5,50 | 8,00 | 10 | 80 | 18 | 3 | 0215001000100 |
| M 6 | 6,60 | 8,00 | 11 | 80 | 18 | 3 | 0215001100100 |
| M 8 | 9,00 | 12,50 | 15 | 100 | 22 | 3 | 0215001500100 |
| M 10 | 11,00 | 12,50 | 18 | 100 | 22 | 3 | 0215001800100 |
| M 12 | 13,50 | 12,50 | 20 | 100 | 22 | 3 | 0215002000100 |

D NC-Maschinenreibahlen
Linksspirale, ähnlich
DIN 212

E NC-machine reamers left
hand spiral, similar to
DIN 212

I Alesatori a macchina NC
tagliante elic. sinistri,
simile DIN 212




| d1 _{H7} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z | | Code 3080 Art.-Nr. |
|------------------------|------------------------|----------|----------|----------|---|------|-----------------------|
| 1,50 | 2,00 | 40 | 8 | 18 | 3 | Ø1,4 | 0308000150100 |
| 1,60 | 2,00 | 43 | 9 | 20 | 3 | Ø1,5 | 0308000160100 |
| 1,70 | 2,00 | 43 | 9 | 20 | 3 | Ø1,6 | 0308000170100 |
| 1,80 | 2,00 | 46 | 10 | 22 | 4 | Ø1,7 | 0308000180100 |
| 1,90 | 2,00 | 46 | 10 | 18 | 4 | Ø1,8 | 0308000190100 |
| 2,00 | 2,00 | 49 | 11 | 24 | 4 | Ø1,9 | 0308000200100 |
| 2,10 | 2,00 | 49 | 11 | 24 | 4 | Ø2 | 0308000210100 |
| 2,20 | 3,00 | 53 | 12 | 25 | 4 | Ø2,1 | 0308000220100 |
| 2,30 | 3,00 | 53 | 12 | 25 | 4 | Ø2,2 | 0308000230100 |
| 2,40 | 3,00 | 57 | 14 | 29 | 4 | Ø2,3 | 0308000240100 |
| 2,50 | 3,00 | 57 | 14 | 29 | 4 | Ø2,4 | 0308000250100 |
| 2,60 | 3,00 | 57 | 14 | 29 | 4 | Ø2,5 | 0308000260100 |
| 2,70 | 3,00 | 61 | 15 | 33 | 6 | Ø2,6 | 0308000270100 |
| 2,80 | 3,00 | 61 | 15 | 33 | 6 | Ø2,7 | 0308000280100 |
| 2,90 | 3,00 | 61 | 15 | 33 | 6 | Ø2,8 | 0308000290100 |
| 3,00 | 3,00 | 61 | 15 | 33 | 6 | Ø2,9 | 0308000300100 |
| 3,10 | 4,00 | 65 | 16 | 37 | 6 | Ø3 | 0308000310100 |
| 3,20 | 4,00 | 65 | 16 | 37 | 6 | Ø3,1 | 0308000320100 |
| 3,30 | 4,00 | 65 | 16 | 37 | 6 | Ø3,2 | 0308000330100 |
| 3,40 | 4,00 | 70 | 18 | 42 | 6 | Ø3,3 | 0308000340100 |
| 3,50 | 4,00 | 70 | 18 | 42 | 6 | Ø3,4 | 0308000350100 |


| d1 _{H7} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z | | Code 3080 Art.-Nr. |
|------------------------|------------------------|----------|----------|----------|---|------|-----------------------|
| 3,60 | 4,00 | 70 | 18 | 42 | 6 | Ø3,5 | 0308000360100 |
| 3,70 | 4,00 | 70 | 18 | 42 | 6 | Ø3,6 | 0308000370100 |
| 3,80 | 4,00 | 75 | 19 | 47 | 6 | Ø3,7 | 0308000380100 |
| 3,90 | 4,00 | 75 | 19 | 47 | 6 | Ø3,8 | 0308000390100 |
| 4,00 | 4,00 | 75 | 19 | 47 | 6 | Ø3,9 | 0308000400100 |
| 4,10 | 4,00 | 75 | 19 | 47 | 6 | Ø4 | 0308000410100 |
| 4,20 | 4,00 | 75 | 19 | 47 | 6 | Ø4,1 | 0308000420100 |
| 4,30 | 5,00 | 80 | 21 | 52 | 6 | Ø4,2 | 0308000430100 |
| 4,40 | 5,00 | 80 | 21 | 52 | 6 | Ø4,3 | 0308000440100 |
| 4,50 | 5,00 | 80 | 21 | 52 | 6 | Ø4,4 | 0308000450100 |
| 4,60 | 5,00 | 80 | 21 | 52 | 6 | Ø4,5 | 0308000460100 |
| 4,70 | 5,00 | 80 | 21 | 52 | 6 | Ø4,6 | 0308000470100 |
| 4,80 | 5,00 | 86 | 23 | 58 | 6 | Ø4,7 | 0308000480100 |
| 4,90 | 5,00 | 86 | 23 | 58 | 6 | Ø4,8 | 0308000490100 |
| 5,00 | 5,00 | 86 | 23 | 58 | 6 | Ø4,9 | 0308000500100 |
| 5,10 | 5,00 | 86 | 23 | 58 | 6 | Ø4,9 | 0308000510100 |
| 5,20 | 5,00 | 86 | 23 | 58 | 6 | Ø5 | 0308000520100 |
| 5,30 | 5,00 | 86 | 23 | 58 | 6 | Ø5,1 | 0308000530100 |
| 5,40 | 6,00 | 93 | 26 | 57 | 6 | Ø5,2 | 0308000540100 |
| 5,50 | 6,00 | 93 | 26 | 57 | 6 | Ø5,3 | 0308000550100 |
| 5,60 | 6,00 | 93 | 26 | 57 | 6 | Ø5,4 | 0308000560100 |

h6 = ganzzahliger Schaftdurchmesser / h6 = nominal shank / h6 = diam. codolo nominale



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

| d1 _{H7} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z |  | Code 3080 Art.-Nr. |
|------------------------|------------------------|----------|----------|----------|---|---|-----------------------|
| 5,70 | 6,00 | 93 | 26 | 57 | 6 | Ø5,5 | 0308000570100 |
| 5,80 | 6,00 | 93 | 26 | 57 | 6 | Ø5,6 | 0308000580100 |
| 5,90 | 6,00 | 93 | 26 | 57 | 6 | Ø5,7 | 0308000590100 |
| 6,00 | 6,00 | 93 | 26 | 57 | 6 | Ø5,8 | 0308000600100 |
| 6,10 | 6,00 | 101 | 28 | 65 | 6 | Ø5,9 | 0308000610100 |
| 6,20 | 6,00 | 101 | 28 | 65 | 6 | Ø6 | 0308000620100 |
| 6,30 | 6,00 | 101 | 28 | 65 | 6 | Ø6,1 | 0308000630100 |
| 6,40 | 6,00 | 101 | 28 | 65 | 6 | Ø6,2 | 0308000640100 |
| 6,50 | 6,00 | 101 | 28 | 65 | 6 | Ø6,3 | 0308000650100 |
| 6,60 | 6,00 | 101 | 28 | 65 | 6 | Ø6,4 | 0308000660100 |
| 6,70 | 6,00 | 101 | 28 | 65 | 6 | Ø6,5 | 0308000670100 |
| 6,80 | 8,00 | 109 | 31 | 73 | 6 | Ø6,6 | 0308000680100 |
| 6,90 | 8,00 | 109 | 31 | 73 | 6 | Ø6,7 | 0308000690100 |
| 7,00 | 8,00 | 109 | 31 | 73 | 6 | Ø6,8 | 0308000700100 |
| 7,10 | 8,00 | 109 | 31 | 73 | 6 | Ø6,9 | 0308000710100 |
| 7,20 | 8,00 | 109 | 31 | 73 | 6 | Ø7 | 0308000720100 |
| 7,30 | 8,00 | 109 | 31 | 73 | 6 | Ø7,1 | 0308000730100 |
| 7,40 | 8,00 | 109 | 31 | 73 | 6 | Ø7,2 | 0308000740100 |
| 7,50 | 8,00 | 109 | 31 | 73 | 6 | Ø7,3 | 0308000750100 |
| 7,60 | 8,00 | 117 | 33 | 81 | 6 | Ø7,4 | 0308000760100 |
| 7,70 | 8,00 | 117 | 33 | 81 | 6 | Ø7,5 | 0308000770100 |
| 7,80 | 8,00 | 117 | 33 | 81 | 6 | Ø7,6 | 0308000780100 |
| 7,90 | 8,00 | 117 | 33 | 81 | 6 | Ø7,7 | 0308000790100 |
| 8,00 | 8,00 | 117 | 33 | 81 | 6 | Ø7,8 | 0308000800100 |
| 8,10 | 8,00 | 117 | 33 | 81 | 6 | Ø7,9 | 0308000810100 |
| 8,20 | 8,00 | 117 | 33 | 81 | 6 | Ø8 | 0308000820100 |
| 8,30 | 8,00 | 117 | 33 | 81 | 6 | Ø8,1 | 0308000830100 |

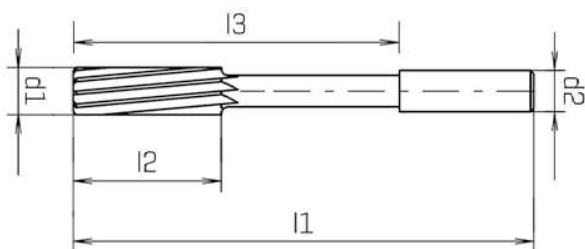
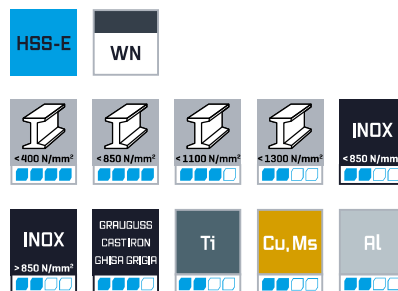
| d1 _{H7} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z |  | Code 3080 Art.-Nr. |
|------------------------|------------------------|----------|----------|----------|---|---|-----------------------|
| 8,40 | 8,00 | 117 | 33 | 81 | 6 | Ø8,2 | 0308000840100 |
| 8,50 | 8,00 | 117 | 33 | 81 | 6 | Ø8,3 | 0308000850100 |
| 8,60 | 10,00 | 125 | 36 | 85 | 6 | Ø8,4 | 0308000860100 |
| 8,70 | 10,00 | 125 | 36 | 85 | 6 | Ø8,5 | 0308000870100 |
| 8,80 | 10,00 | 125 | 36 | 85 | 6 | Ø8,6 | 0308000880100 |
| 8,90 | 10,00 | 125 | 36 | 85 | 6 | Ø8,7 | 0308000890100 |
| 9,00 | 10,00 | 125 | 36 | 85 | 6 | Ø8,8 | 0308000900100 |
| 9,10 | 10,00 | 125 | 36 | 85 | 6 | Ø8,9 | 0308000910100 |
| 9,20 | 10,00 | 125 | 36 | 85 | 6 | Ø9 | 0308000920100 |
| 9,30 | 10,00 | 125 | 36 | 85 | 6 | Ø9,1 | 0308000930100 |
| 9,40 | 10,00 | 125 | 36 | 85 | 6 | Ø9,2 | 0308000940100 |
| 9,50 | 10,00 | 125 | 36 | 85 | 6 | Ø9,3 | 0308000950100 |
| 9,60 | 10,00 | 133 | 38 | 93 | 6 | Ø9,4 | 0308000960100 |
| 9,70 | 10,00 | 133 | 38 | 93 | 6 | Ø9,5 | 0308000970100 |
| 9,80 | 10,00 | 133 | 38 | 93 | 6 | Ø9,6 | 0308000980100 |
| 9,90 | 10,00 | 133 | 38 | 93 | 6 | Ø9,7 | 0308000990100 |
| 10,00 | 10,00 | 133 | 38 | 93 | 6 | Ø9,8 | 0308001000100 |
| 11,00 | 10,00 | 142 | 41 | 102 | 6 | Ø10,8 | 0308001100100 |
| 12,00 | 10,00 | 151 | 44 | 111 | 6 | Ø11,8 | 0308001200100 |
| 13,00 | 10,00 | 151 | 44 | 111 | 6 | Ø12,8 | 0308001300100 |
| 14,00 | 14,00 | 160 | 47 | 120 | 8 | Ø13,8 | 0308001400100 |
| 15,00 | 14,00 | 162 | 50 | 122 | 8 | Ø14,8 | 0308001500100 |
| 16,00 | 14,00 | 170 | 52 | 130 | 8 | Ø15,8 | 0308001600100 |
| 17,00 | 14,00 | 175 | 54 | 135 | 8 | Ø16,8 | 0308001700100 |
| 18,00 | 14,00 | 182 | 56 | 142 | 8 | Ø17,8 | 0308001800100 |
| 19,00 | 16,00 | 189 | 58 | 149 | 8 | Ø18,8 | 0308001900100 |
| 20,00 | 16,00 | 195 | 60 | 155 | 8 | Ø19,8 | 0308002000100 |

h6 = ganzzahliger Schaftdurchmesser / h6 = nominal shank / h6 = diam. codolo nominale

D NC-Werkzeugmacherreibahlen,
ganzzahliger Schaftdurchmesser,
ähnlich DIN 212

E NC-machine reamers with
nominal shank,
similar to DIN 212

I Alesatori a macchina NC
taglienti elicoidali, diam. codolo
nominale,
simile DIN 212





| d1 _{1/100} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z | | Code 3082 Art.-Nr. |
|---------------------------|------------------------|----------|----------|----------|---|------|-----------------------|
| 1,00 | 1,00 | 35 | 6 | 17 | 3 | 00,9 | 0308200100100 |
| 1,01 | 1,00 | 35 | 6 | 17 | 3 | 00,9 | 0308200101100 |
| 1,02 | 1,00 | 35 | 6 | 17 | 3 | 00,9 | 0308200102100 |
| 1,03 | 1,00 | 35 | 6 | 17 | 3 | 00,9 | 0308200103100 |
| 1,51 | 2,00 | 43 | 9 | 23 | 3 | 01,4 | 0308200151100 |
| 1,52 | 2,00 | 43 | 9 | 23 | 3 | 01,4 | 0308200152100 |
| 1,53 | 2,00 | 43 | 9 | 23 | 3 | 01,4 | 0308200153100 |
| 1,97 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200197100 |
| 1,98 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200198100 |
| 1,99 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200199100 |
| 2,01 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200201100 |
| 2,02 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200202100 |
| 2,03 | 2,00 | 49 | 11 | 27 | 4 | 01,9 | 0308200203100 |
| 2,47 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200247100 |
| 2,48 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200248100 |
| 2,49 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200249100 |
| 2,51 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200251100 |
| 2,52 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200252100 |
| 2,53 | 3,00 | 57 | 14 | 28 | 4 | 02,4 | 0308200253100 |
| 2,97 | 3,00 | 61 | 15 | 30 | 6 | 02,9 | 0308200297100 |
| 2,98 | 3,00 | 61 | 15 | 30 | 6 | 02,9 | 0308200298100 |

| d1 _{1/100} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | Z | | Code 3082 Art.-Nr. |
|---------------------------|------------------------|----------|----------|----------|---|------|-----------------------|
| 2,99 | 3,00 | 61 | 15 | 30 | 6 | 02,9 | 0308200299100 |
| 3,01 | 4,00 | 65 | 16 | 34 | 6 | 02,9 | 0308200301100 |
| 3,02 | 4,00 | 65 | 16 | 34 | 6 | 02,9 | 0308200302100 |
| 3,03 | 4,00 | 65 | 16 | 34 | 6 | 02,9 | 0308200303100 |
| 3,97 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200397100 |
| 3,98 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200398100 |
| 3,99 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200399100 |
| 4,01 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200401100 |
| 4,02 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200402100 |
| 4,03 | 4,00 | 75 | 19 | 47 | 6 | 03,9 | 0308200403100 |
| 4,97 | 5,00 | 86 | 23 | 58 | 6 | 04,9 | 0308200497100 |
| 4,98 | 5,00 | 86 | 23 | 58 | 6 | 04,9 | 0308200498100 |
| 4,99 | 5,00 | 86 | 23 | 58 | 6 | 04,9 | 0308200499100 |
| 5,01 | 5,00 | 86 | 23 | 58 | 6 | 04,8 | 0308200501100 |
| 5,02 | 5,00 | 86 | 23 | 58 | 6 | 04,8 | 0308200502100 |
| 5,03 | 5,00 | 86 | 23 | 58 | 6 | 04,8 | 0308200503100 |
| 5,97 | 6,00 | 93 | 26 | 57 | 6 | 05,8 | 0308200597100 |
| 5,98 | 6,00 | 93 | 26 | 57 | 6 | 05,8 | 0308200598100 |
| 5,99 | 6,00 | 93 | 26 | 57 | 6 | 05,8 | 0308200599100 |
| 6,01 | 6,00 | 101 | 28 | 65 | 6 | 05,8 | 0308200601100 |
| 6,02 | 6,00 | 101 | 28 | 65 | 6 | 05,8 | 0308200602100 |

Toleranz Ø 1,00-5,03=0/+0,004mm / Tolerance Ø 1,00-5,03=0/+0,004mm / Tolleranza Ø 1,00-5,03=0/+0,004mm
Toleranz Ø 5,97-12,03=0/+0,005mm / Tolerance Ø 5,97-12,03=0/+0,005mm / Tolleranza Ø 5,97-12,03=0/+0,005mm

HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

| d1 $\frac{1}{100}$ mm | d2 h_6 mm | l1 mm | l2 mm | l3 mm | Z |  | Code 3082 Art.-Nr. |
|--------------------------|----------------|----------|----------|----------|---|---|-----------------------|
| 6,03 | 6,00 | 101 | 28 | 65 | 6 | 05,8 | 0308200603100 |
| 7,97 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200797100 |
| 7,98 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200798100 |
| 7,99 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200799100 |
| 8,01 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200801100 |
| 8,02 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200802100 |
| 8,03 | 8,00 | 117 | 33 | 81 | 6 | 07,8 | 0308200803100 |
| 9,01 | 10,00 | 125 | 36 | 85 | 6 | 08,8 | 0308200901100 |
| 9,02 | 10,00 | 125 | 36 | 85 | 6 | 08,8 | 0308200902100 |
| 9,03 | 10,00 | 125 | 36 | 85 | 6 | 08,8 | 0308200903100 |
| 9,97 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308200997100 |

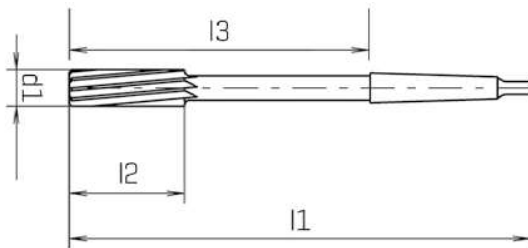
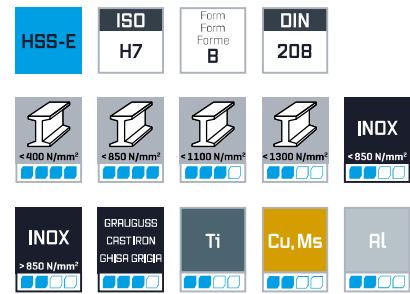
| d1 $\frac{1}{100}$ mm | d2 h_6 mm | l1 mm | l2 mm | l3 mm | Z |  | Code 3082 Art.-Nr. |
|--------------------------|----------------|----------|----------|----------|---|---|-----------------------|
| 9,98 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308200998100 |
| 9,99 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308200999100 |
| 10,01 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308201001100 |
| 10,02 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308201002100 |
| 10,03 | 10,00 | 133 | 38 | 93 | 6 | 09,8 | 0308201003100 |
| 11,97 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201197100 |
| 11,98 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201198100 |
| 11,99 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201199100 |
| 12,01 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201201100 |
| 12,02 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201202100 |
| 12,03 | 10,00 | 151 | 44 | 111 | 6 | 011,8 | 0308201203100 |

Toleranz \emptyset 1,00-5,03=0/+0,004mm / Tolerance \emptyset 1,00-5,03=0/+0,004mm / Tolleranza \emptyset 1,00-5,03=0/+0,004mm
 Toleranz \emptyset 5,97-12,03=0/+0,005mm / Tolerance \emptyset 5,97-12,03=0/+0,005mm / Tolleranza \emptyset 5,97-12,03=0/+0,005mm

D Maschinenreibahlen mit Morsekegel, DIN 208 B, mit 8° Linksspirale

E Machine reamers with morse taper shank, DIN 208 B, 8° left hand spiral

I Machine reamers with morse taper shank, DIN 208 B, elica sinistra ca. 8°



| d1 H7 mm | l1 mm | l2 mm | l3 mm | | Z | | Code 3130 Art.-Nr. |
|----------------|----------|----------|----------|---|----|-------|-----------------------|
| 10,00 | 168 | 38 | 102,5 | 1 | 6 | Ø9,8 | 0313001000100 |
| 11,00 | 175 | 41 | 109,5 | 1 | 6 | Ø10,8 | 0313001100100 |
| 12,00 | 182 | 44 | 116,5 | 1 | 6 | Ø11,8 | 0313001200100 |
| 13,00 | 182 | 44 | 116,5 | 1 | 6 | Ø12,8 | 0313001300100 |
| 14,00 | 189 | 47 | 123,5 | 1 | 8 | Ø13,8 | 0313001400100 |
| 15,00 | 204 | 50 | 124,5 | 2 | 8 | Ø14,8 | 0313001500100 |
| 16,00 | 210 | 52 | 130 | 2 | 8 | Ø15,8 | 0313001600100 |
| 17,00 | 214 | 54 | 134 | 2 | 8 | Ø16,8 | 0313001700100 |
| 18,00 | 219 | 56 | 139 | 2 | 8 | Ø17,8 | 0313001800100 |
| 19,00 | 223 | 58 | 143 | 2 | 8 | Ø18,8 | 0313001900100 |
| 20,00 | 228 | 60 | 148 | 2 | 8 | Ø19,8 | 0313002000100 |
| 21,00 | 232 | 62 | 152 | 2 | 8 | Ø20,6 | 0313002100100 |
| 22,00 | 237 | 64 | 157 | 2 | 8 | Ø21,6 | 0313002200100 |
| 23,00 | 241 | 66 | 161 | 2 | 8 | Ø22,6 | 0313002300100 |
| 24,00 | 268 | 68 | 169 | 3 | 8 | Ø23,6 | 0313002400100 |
| 25,00 | 268 | 68 | 169 | 3 | 8 | Ø24,6 | 0313002500100 |
| 26,00 | 273 | 70 | 174 | 3 | 8 | Ø25,6 | 0313002600100 |
| 27,00 | 277 | 71 | 178 | 3 | 8 | Ø26,6 | 0313002700100 |
| 28,00 | 277 | 71 | 178 | 3 | 8 | Ø27,6 | 0313002800100 |
| 30,00 | 281 | 73 | 182 | 3 | 10 | Ø29,6 | 0313003000100 |

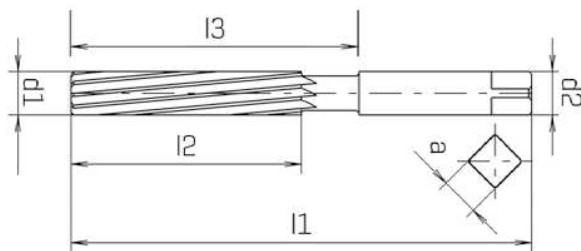
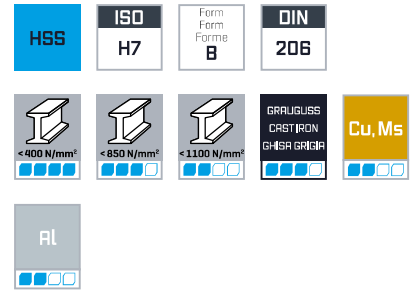



HSS-Senker und HSS-Reibahlen
 HSS countersinks and HSS reamers
 HSS svasatori e HSS alesatori

**D Handreibahlen
DIN 206 B**

**E Hand reamers,
DIN 206 B**

**I Alesatori a mano,
DIN 206 B**



| d1 _{h7} mm | d2 _{h6} mm | l1 mm | l2 mm | l3 mm | a _{h12} mm | Z |  | Code 3020 Art.-Nr. |
|------------------------|------------------------|----------|----------|----------|------------------------|---|---|-----------------------|
| 2,00 | 2,00 | 50 | 25 | 30 | 1,6 | 4 | 01,9 | 0302000200100 |
| 2,50 | 2,50 | 58 | 29 | 34 | 2,1 | 4 | 02,4 | 0302000250100 |
| 3,00 | 3,00 | 62 | 31 | 36 | 2,1 | 6 | 02,9 | 0302000300100 |
| 3,50 | 3,50 | 71 | 35 | 43 | 2,7 | 6 | 03,4 | 0302000350100 |
| 4,00 | 4,00 | 76 | 38 | 46 | 3 | 6 | 03,9 | 0302000400100 |
| 4,50 | 4,50 | 81 | 41 | 49 | 3,4 | 6 | 04,4 | 0302000450100 |
| 5,00 | 5,00 | 87 | 44 | 54 | 3,8 | 6 | 04,9 | 0302000500100 |
| 5,50 | 5,50 | 93 | 47 | 57 | 4,3 | 6 | 05,3 | 0302000550100 |
| 6,00 | 6,00 | 93 | 47 | 57 | 4,3 | 6 | 05,8 | 0302000600100 |
| 7,00 | 7,00 | 107 | 54 | 66 | 5,5 | 6 | 06,8 | 0302000700100 |
| 8,00 | 8,00 | 115 | 58 | 70 | 6,2 | 6 | 07,8 | 0302000800100 |
| 9,00 | 9,00 | 124 | 62 | 74 | 7 | 6 | 08,8 | 0302000900100 |
| 10,00 | 10,00 | 133 | 66 | 78 | 8 | 6 | 09,8 | 0302001000100 |
| 11,00 | 11,00 | 142 | 71 | 86 | 9 | 6 | 010,8 | 0302001100100 |
| 12,00 | 12,00 | 152 | 76 | 91 | 10 | 6 | 011,8 | 0302001200100 |
| 13,00 | 13,00 | 152 | 76 | 91 | 10 | 6 | 012,8 | 0302001300100 |
| 14,00 | 14,00 | 163 | 81 | 96 | 11 | 6 | 013,8 | 0302001400100 |
| 15,00 | 15,00 | 163 | 81 | 96 | 11 | 6 | 014,8 | 0302001500100 |
| 16,00 | 16,00 | 175 | 87 | 107 | 12 | 6 | 015,8 | 0302001600100 |
| 18,00 | 18,00 | 188 | 93 | 113 | 14,5 | 6 | 017,8 | 0302001800100 |
| 20,00 | 20,00 | 201 | 100 | 120 | 16 | 6 | 019,8 | 0302002000100 |

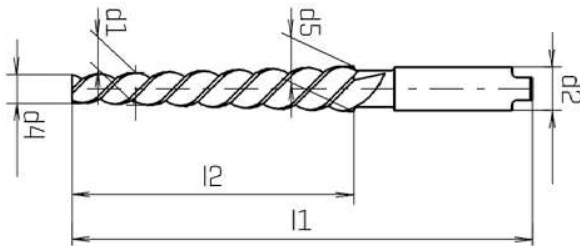
D Maschinen-Kegel-
Schälreibahlen Kegel 1:50,
DIN 2179

E Machine taper pin reamers
high helix, taper 1:50,
DIN 2179

I Alesatori a macchina per
fori di spine coniche a forte
torsione, conicità 1:50,
DIN 2179



| | | | | |
|--------------------------------|---------------------------------------|-----------------------------|-----------------------------|--------------------------------|
| HSS-E | DIN 2179 | 1:50 | | |
| <400 N/mm ² | <850 N/mm ² | <1100 N/mm ² | <1300 N/mm ² | INOX <850 N/mm ² |
| INOX >850 N/mm ² | GRAUGUSS CAST IRON GHISA GRIGIA | Cu, Ms | Al | |



| d1 mm | d2 mm | d4 mm | d5 mm | l1 mm | l2 mm | Z | Code 3320 Art.-Nr. |
|----------|----------|----------|----------|----------|----------|---|-----------------------|
| 5,00 | 6,30 | 4,9 | 6,36 | 122 | 73 | 3 | 0332000500100 |
| 6,00 | 8,00 | 5,9 | 8 | 160 | 105 | 3 | 0332000600100 |
| 8,00 | 10,00 | 7,9 | 10,8 | 207 | 145 | 3 | 0332000800100 |
| 10,00 | 12,50 | 9,9 | 13,4 | 245 | 175 | 3 | 0332001000100 |



HSS-Senker und HSS-Reibahlen
HSS countersinks and HSS reamers
HSS svasatori e HSS alesatori

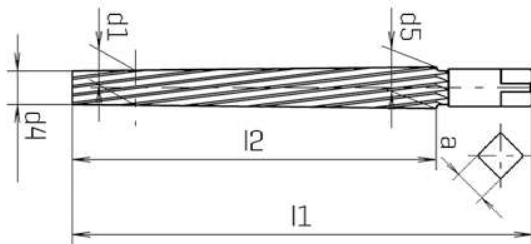
D Hand-Kegelreibahlen
drallgenutet, Kegel 1:50,
DIN 9 B

E Hand taper pin reamers
slow helix, taper 1:50,
DIN 9 B

I Alesatori a mano per fori
di spine coniche, taglienti
elicoidali, conicità 1:50,
DIN 9 B



| | | | |
|------------|-------------|---------------------|--|
| HSS | 1:50 | Form Forme B | DIN 9 |
| | | | GRAUGUSS CASTIRON GHSH GRGR |
| | | | Cu, Ms |
| Al | | | |



| d1 mm | d4 mm | d5 mm | l1 mm | l2 mm | a h12 mm | Z | Code 3300 Art.-Nr. |
|----------|----------|----------|----------|----------|-------------|---|-----------------------|
| 3,00 | 2,9 | 4,06 | 80 | 58 | 3 | 5 | 0330000300100 |
| 4,00 | 3,9 | 5,26 | 93 | 68 | 3 | 5 | 0330000400100 |
| 5,00 | 4,9 | 6,36 | 100 | 73 | 4,9 | 5 | 0330000500100 |
| 6,00 | 5,9 | 8 | 135 | 105 | 6,2 | 6 | 0330000600100 |
| 7,00 | 6,9 | 9,5 | 160 | 130 | 6,2 | 6 | 0330000700100 |
| 8,00 | 7,9 | 10,8 | 180 | 145 | 8 | 6 | 0330000800100 |
| 10,00 | 9,9 | 13,4 | 215 | 175 | 10 | 6 | 0330001000100 |
| 12,00 | 11,8 | 16 | 255 | 210 | 11 | 8 | 0330001200100 |