

SERIE DI PUNTE MS

PUNTE PER LAVORAZIONI UNIVERSALI



SERIE DI PUNTE MS

PUNTE INTEGRALI



Una nuova serie di utensili di qualità per ottimizzare costi e prestazioni. Un'affidabile combinazione di tecnologia integrale rivestimento per le esigenze moderne in merito al taglio dei metalli.

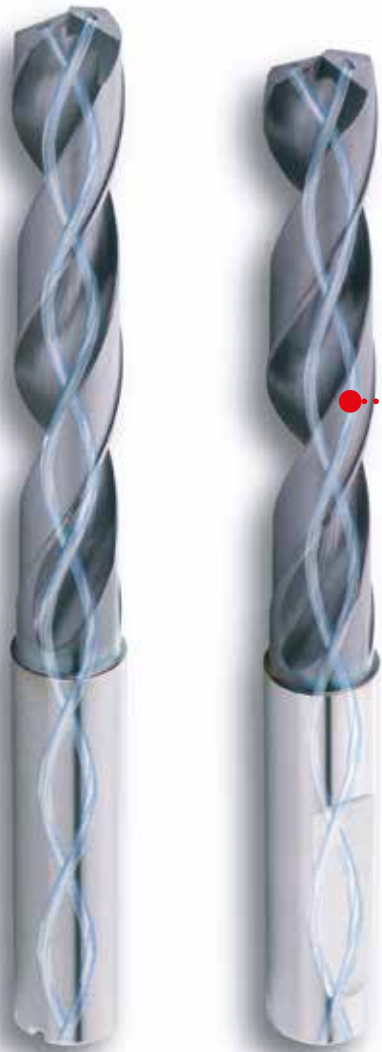
Le soluzioni ai problemi di taglio basate su decenni di esperienza hanno consentito di offrire una serie di utensili completa che ottimizza al meglio i costi.



La nostra attenzione alla qualità e all'affidabilità viene riproposta in questa nuova serie di punte MS prodotte in conformità agli standard DIN 6537.

CARATTERISTICHE

PUNTE INTEGRALI



- Refrigerante interno
- Lunghezza di taglio 3 x D e 5 x D
- Per una vasta gamma di materiali
- Tipi di stelo cilindrico e con Whistle Notch
- Carburo cementato micrograno extra fine
- Rivestimento PVD per una lunga durata dell'utensile



DESCRIZIONE CODICE DI ORDINAZIONE

MS○○○○○-S○○○ (refrigerante interno)

∅ 5.2

MS0520-SLK

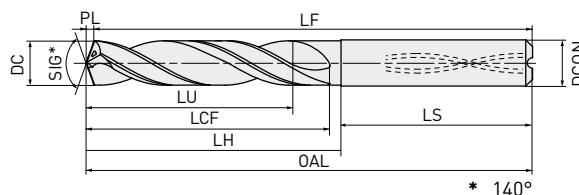
| | | | | | |
|----------|-----------------|----------|---------------------|----------|--------------------------------------|
| S | Refrig. interno | L | DIN6537L ~ 5 x D | K | Stelo con Whistle Notch (DIN6535HEK) |
| | | S | DIN6537K ~ 3 x D | A | Stelo cilindrico (DIN6535HA) |

SERIE DI PUNTE MS



| Tolleranza D | D≤3.0 | 3.0<D≤6.0 | 6.0<D≤10.0 | 10.0<D≤14.0 |
|--------------|--------|-----------|------------|-------------|
| m7 | +0.016 | +0.016 | +0.021 | +0.025 |
| | +0.004 | +0.004 | +0.006 | +0.007 |

MS○○○○○-S○○○ (refrigerante interno)



| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|-----|--------------------|--------|---------------------|---------------|-----|------|-----|----|----|-----|----|------|
| 3.0 | MS0300-SSA | -3 | Int. | Cilindrico | 62 | 15 | 20 | 25 | 61 | 0.5 | 36 | 6 |
| | MS0300-SSK | -3 | Int. | Whistle notch | 62 | 15 | 20 | 25 | 61 | 0.5 | 36 | 6 |
| | MS0300-SLA | -5 | Int. | Cilindrico | 66 | 23 | 28 | 29 | 65 | 0.5 | 36 | 6 |
| | MS0300-SLK | -5 | Int. | Whistle notch | 66 | 23 | 28 | 29 | 65 | 0.5 | 36 | 6 |
| 3.1 | MS0310-SSA | -3 | Int. | Cilindrico | 62 | 14.9 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0310-SSK | -3 | Int. | Whistle notch | 62 | 14.9 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0310-SLA | -5 | Int. | Cilindrico | 66 | 22.9 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| | MS0310-SLK | -5 | Int. | Whistle notch | 66 | 22.9 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| 3.3 | MS0330-SSA | -3 | Int. | Cilindrico | 62 | 14.7 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0330-SSK | -3 | Int. | Whistle notch | 62 | 14.7 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0330-SLA | -5 | Int. | Cilindrico | 66 | 22.7 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| | MS0330-SLK | -5 | Int. | Whistle notch | 66 | 22.7 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| 3.4 | MS0340-SSA | -3 | Int. | Cilindrico | 62 | 14.5 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0340-SSK | -3 | Int. | Whistle notch | 62 | 14.5 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0340-SLA | -5 | Int. | Cilindrico | 66 | 22.5 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| | MS0340-SLK | -5 | Int. | Whistle notch | 66 | 22.5 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| 3.5 | MS0350-SSA | -3 | Int. | Cilindrico | 62 | 14.4 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0350-SSK | -3 | Int. | Whistle notch | 62 | 14.4 | 20 | 25 | 61 | 0.6 | 36 | 6 |
| | MS0350-SLA | -5 | Int. | Cilindrico | 66 | 22.4 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| | MS0350-SLK | -5 | Int. | Whistle notch | 66 | 22.4 | 28 | 29 | 65 | 0.6 | 36 | 6 |
| 3.7 | MS0370-SSA | -3 | Int. | Cilindrico | 62 | 14.1 | 20 | 25 | 61 | 0.7 | 36 | 6 |
| | MS0370-SSK | -3 | Int. | Whistle notch | 62 | 14.1 | 20 | 25 | 61 | 0.7 | 36 | 6 |
| | MS0370-SLA | -5 | Int. | Cilindrico | 66 | 22.1 | 28 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0370-SLK | -5 | Int. | Whistle notch | 66 | 22.1 | 28 | 29 | 65 | 0.7 | 36 | 6 |
| 3.8 | MS0380-SSA | -3 | Int. | Cilindrico | 66 | 18 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0380-SSK | -3 | Int. | Whistle notch | 66 | 18 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0380-SLA | -5 | Int. | Cilindrico | 74 | 30 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| | MS0380-SLK | -5 | Int. | Whistle notch | 74 | 30 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| 3.9 | MS0390-SSA | -3 | Int. | Cilindrico | 66 | 17.9 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0390-SSK | -3 | Int. | Whistle notch | 66 | 17.9 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0390-SLA | -5 | Int. | Cilindrico | 74 | 29.9 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| | MS0390-SLK | -5 | Int. | Whistle notch | 74 | 29.9 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| 4.0 | MS0400-SSA | -3 | Int. | Cilindrico | 66 | 17.7 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0400-SSK | -3 | Int. | Whistle notch | 66 | 17.7 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0400-SLA | -5 | Int. | Cilindrico | 74 | 29.7 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| | MS0400-SLK | -5 | Int. | Whistle notch | 74 | 29.7 | 36 | 37 | 73 | 0.7 | 36 | 6 |

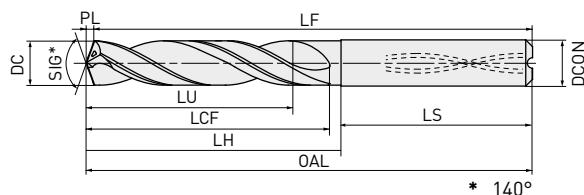
| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|-----|--------------------|--------|---------------------|---------------|-----|------|-----|----|----|-----|----|------|
| 4.1 | MS0410-SSA | -3 | Int. | Cilindrico | 66 | 17.6 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0410-SSK | -3 | Int. | Whistle notch | 66 | 17.6 | 24 | 29 | 65 | 0.7 | 36 | 6 |
| | MS0410-SLA | -5 | Int. | Cilindrico | 74 | 29.6 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| | MS0410-SLK | -5 | Int. | Whistle notch | 74 | 29.6 | 36 | 37 | 73 | 0.7 | 36 | 6 |
| 4.2 | MS0420-SSA | -3 | Int. | Cilindrico | 66 | 17.5 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0420-SSK | -3 | Int. | Whistle notch | 66 | 17.5 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0420-SLA | -5 | Int. | Cilindrico | 74 | 29.5 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| | MS0420-SLK | -5 | Int. | Whistle notch | 74 | 29.5 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| 4.3 | MS0430-SSA | -3 | Int. | Cilindrico | 66 | 17.3 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0430-SSK | -3 | Int. | Whistle notch | 66 | 17.3 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0430-SLA | -5 | Int. | Cilindrico | 74 | 29.3 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| | MS0430-SLK | -5 | Int. | Whistle notch | 74 | 29.3 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| 4.5 | MS0450-SSA | -3 | Int. | Cilindrico | 66 | 17.1 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0450-SSK | -3 | Int. | Whistle notch | 66 | 17.1 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0450-SLA | -5 | Int. | Cilindrico | 74 | 29.1 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| | MS0450-SLK | -5 | Int. | Whistle notch | 74 | 29.1 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| 4.6 | MS0460-SSA | -3 | Int. | Cilindrico | 66 | 16.9 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0460-SSK | -3 | Int. | Whistle notch | 66 | 16.9 | 24 | 29 | 65 | 0.8 | 36 | 6 |
| | MS0460-SLA | -5 | Int. | Cilindrico | 74 | 28.9 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| | MS0460-SLK | -5 | Int. | Whistle notch | 74 | 28.9 | 36 | 37 | 73 | 0.8 | 36 | 6 |
| 4.8 | MS0480-SSA | -3 | Int. | Cilindrico | 66 | 20.7 | 28 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0480-SSK | -3 | Int. | Whistle notch | 66 | 20.7 | 28 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0480-SLA | -5 | Int. | Cilindrico | 74 | 36.7 | 44 | 45 | 81 | 0.9 | 36 | 6 |
| | MS0480-SLK | -5 | Int. | Whistle notch | 74 | 36.7 | 44 | 45 | 81 | 0.9 | 36 | 6 |
| 5.0 | MS0500-SSA | -3 | Int. | Cilindrico | 66 | 20.4 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0500-SSK | -3 | Int. | Whistle notch | 66 | 20.4 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0500-SLA | -5 | Int. | Cilindrico | 82 | 36.4 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| | MS0500-SLK | -5 | Int. | Whistle notch | 82 | 36.4 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| 5.1 | MS0510-SSA | -3 | Int. | Cilindrico | 66 | 20.3 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0510-SSK | -3 | Int. | Whistle notch | 66 | 20.3 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0510-SLA | -5 | Int. | Cilindrico | 82 | 36.3 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| | MS0510-SLK | -5 | Int. | Whistle notch | 82 | 36.3 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| 5.2 | MS0520-SSA | -3 | Int. | Cilindrico | 66 | 20.1 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0520-SSK | -3 | Int. | Whistle notch | 66 | 20.1 | 30 | 29 | 65 | 0.9 | 36 | 6 |
| | MS0520-SLA | -5 | Int. | Cilindrico | 82 | 36.1 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| | MS0520-SLK | -5 | Int. | Whistle notch | 82 | 36.1 | 46 | 45 | 81 | 0.9 | 36 | 6 |
| 5.5 | MS0550-SSA | -3 | Int. | Cilindrico | 66 | 19.8 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0550-SSK | -3 | Int. | Whistle notch | 66 | 19.8 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0550-SLA | -5 | Int. | Cilindrico | 82 | 35.8 | 46 | 45 | 81 | 1 | 36 | 6 |
| | MS0550-SLK | -5 | Int. | Whistle notch | 82 | 35.8 | 46 | 45 | 81 | 1 | 36 | 6 |
| 5.6 | MS0560-SSA | -3 | Int. | Cilindrico | 66 | 19.6 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0560-SSK | -3 | Int. | Whistle notch | 66 | 19.6 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0560-SLA | -5 | Int. | Cilindrico | 82 | 35.6 | 46 | 45 | 81 | 1 | 36 | 6 |
| | MS0560-SLK | -5 | Int. | Whistle notch | 82 | 35.6 | 46 | 45 | 81 | 1 | 36 | 6 |
| 5.7 | MS0570-SSA | -3 | Int. | Cilindrico | 66 | 19.5 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0570-SSK | -3 | Int. | Whistle notch | 66 | 19.5 | 30 | 29 | 65 | 1 | 36 | 6 |
| | MS0570-SLA | -5 | Int. | Cilindrico | 82 | 35.5 | 46 | 45 | 81 | 1 | 36 | 6 |
| | MS0570-SLK | -5 | Int. | Whistle notch | 82 | 35.5 | 46 | 45 | 81 | 1 | 36 | 6 |
| 5.8 | MS0580-SSA | -3 | Int. | Cilindrico | 66 | 19.4 | 30 | 29 | 65 | 1.1 | 36 | 6 |
| | MS0580-SSK | -3 | Int. | Whistle notch | 66 | 19.4 | 30 | 29 | 65 | 1.1 | 36 | 6 |
| | MS0580-SLA | -5 | Int. | Cilindrico | 82 | 35.4 | 46 | 45 | 81 | 1.1 | 36 | 6 |
| | MS0580-SLK | -5 | Int. | Whistle notch | 82 | 35.4 | 46 | 45 | 81 | 1.1 | 36 | 6 |

SERIE DI PUNTE MS



| Tolleranza D | D≤3.0 | 3.0<D≤6.0 | 6.0<D≤10.0 | 10.0<D≤14.0 |
|--------------|------------------|------------------|------------------|------------------|
| m7 | +0.016 +0.004 | +0.016 +0.004 | +0.021 +0.006 | +0.025 +0.007 |

MS○○○○○-S○○○ (refrigerante interno)



| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|-----|--------------------|--------|---------------------|---------------|-----|------|-----|----|----|-----|----|------|
| 6.0 | MS0600-SSA | -3 | Int. | Cilindrico | 66 | 19.1 | 30 | 29 | 65 | 1.1 | 36 | 6 |
| | MS0600-SSK | -3 | Int. | Whistle notch | 66 | 19.1 | 30 | 29 | 65 | 1.1 | 36 | 6 |
| | MS0600-SLA | -5 | Int. | Cilindrico | 82 | 35.1 | 46 | 45 | 81 | 1.1 | 36 | 6 |
| | MS0600-SLK | -5 | Int. | Whistle notch | 82 | 35.1 | 46 | 45 | 81 | 1.1 | 36 | 6 |
| 6.1 | MS0610-SSA | -3 | Int. | Cilindrico | 79 | 25 | 34 | 42 | 78 | 1.1 | 36 | 8 |
| | MS0610-SSK | -3 | Int. | Whistle notch | 79 | 25 | 34 | 42 | 78 | 1.1 | 36 | 8 |
| | MS0610-SLA | -5 | Int. | Cilindrico | 91 | 44 | 53 | 54 | 90 | 1.1 | 36 | 8 |
| | MS0610-SLK | -5 | Int. | Whistle notch | 91 | 44 | 53 | 54 | 90 | 1.1 | 36 | 8 |
| 6.2 | MS0620-SSA | -3 | Int. | Cilindrico | 79 | 24.8 | 34 | 42 | 78 | 1.1 | 36 | 8 |
| | MS0620-SSK | -3 | Int. | Whistle notch | 79 | 24.8 | 34 | 42 | 78 | 1.1 | 36 | 8 |
| | MS0620-SLA | -5 | Int. | Cilindrico | 91 | 43.8 | 53 | 54 | 90 | 1.1 | 36 | 8 |
| | MS0620-SLK | -5 | Int. | Whistle notch | 91 | 43.8 | 53 | 54 | 90 | 1.1 | 36 | 8 |
| 6.5 | MS0650-SSA | -3 | Int. | Cilindrico | 79 | 24.4 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0650-SSK | -3 | Int. | Whistle notch | 79 | 24.4 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0650-SLA | -5 | Int. | Cilindrico | 91 | 43.4 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| | MS0650-SLK | -5 | Int. | Whistle notch | 91 | 43.4 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| 6.6 | MS0660-SSA | -3 | Int. | Cilindrico | 79 | 24.3 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0660-SSK | -3 | Int. | Whistle notch | 79 | 24.3 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0660-SLA | -5 | Int. | Cilindrico | 91 | 43.3 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| | MS0660-SLK | -5 | Int. | Whistle notch | 91 | 43.3 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| 6.8 | MS0680-SSA | -3 | Int. | Cilindrico | 79 | 24 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0680-SSK | -3 | Int. | Whistle notch | 79 | 24 | 34 | 42 | 78 | 1.2 | 36 | 8 |
| | MS0680-SLA | -5 | Int. | Cilindrico | 91 | 43 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| | MS0680-SLK | -5 | Int. | Whistle notch | 91 | 43 | 53 | 54 | 90 | 1.2 | 36 | 8 |
| 6.9 | MS0690-SSA | -3 | Int. | Cilindrico | 79 | 23.9 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0690-SSK | -3 | Int. | Whistle notch | 79 | 23.9 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0690-SLA | -5 | Int. | Cilindrico | 91 | 42.9 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| | MS0690-SLK | -5 | Int. | Whistle notch | 91 | 42.9 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| 7.0 | MS0700-SSA | -3 | Int. | Cilindrico | 79 | 23.8 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0700-SSK | -3 | Int. | Whistle notch | 79 | 23.8 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0700-SLA | -5 | Int. | Cilindrico | 91 | 42.8 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| | MS0700-SLK | -5 | Int. | Whistle notch | 91 | 42.8 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| 7.3 | MS0730-SSA | -3 | Int. | Cilindrico | 79 | 30.4 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0730-SSK | -3 | Int. | Whistle notch | 79 | 30.4 | 34 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0730-SLA | -5 | Int. | Cilindrico | 91 | 42.4 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| | MS0730-SLK | -5 | Int. | Whistle notch | 91 | 42.4 | 53 | 54 | 90 | 1.3 | 36 | 8 |

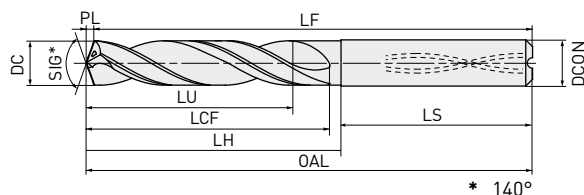
| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|-----|--------------------|--------|---------------------|---------------|-----|------|-----|----|-----|-----|----|------|
| 7.4 | MS0740-SSA | -3 | Int. | Cilindrico | 79 | 30.2 | 41 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0740-SSK | -3 | Int. | Whistle notch | 79 | 30.2 | 41 | 42 | 78 | 1.3 | 36 | 8 |
| | MS0740-SLA | -5 | Int. | Cilindrico | 91 | 42.2 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| | MS0740-SLK | -5 | Int. | Whistle notch | 91 | 42.2 | 53 | 54 | 90 | 1.3 | 36 | 8 |
| 7.5 | MS0750-SSA | -3 | Int. | Cilindrico | 79 | 30.1 | 41 | 42 | 78 | 1.4 | 36 | 8 |
| | MS0750-SSK | -3 | Int. | Whistle notch | 79 | 30.1 | 41 | 42 | 78 | 1.4 | 36 | 8 |
| | MS0750-SLA | -5 | Int. | Cilindrico | 91 | 42.1 | 53 | 54 | 90 | 1.4 | 36 | 8 |
| | MS0750-SLK | -5 | Int. | Whistle notch | 91 | 42.1 | 53 | 54 | 90 | 1.4 | 36 | 8 |
| 7.8 | MS0780-SSA | -3 | Int. | Cilindrico | 79 | 29.7 | 41 | 42 | 78 | 1.4 | 36 | 8 |
| | MS0780-SSK | -3 | Int. | Whistle notch | 79 | 29.7 | 41 | 42 | 78 | 1.4 | 36 | 8 |
| | MS0780-SLA | -5 | Int. | Cilindrico | 91 | 41.7 | 53 | 54 | 90 | 1.4 | 36 | 8 |
| | MS0780-SLK | -5 | Int. | Whistle notch | 91 | 41.7 | 53 | 54 | 90 | 1.4 | 36 | 8 |
| 8.0 | MS0800-SSA | -3 | Int. | Cilindrico | 79 | 29.5 | 41 | 42 | 78 | 1.5 | 36 | 10 |
| | MS0800-SSK | -3 | Int. | Whistle notch | 79 | 29.5 | 41 | 42 | 78 | 1.5 | 36 | 10 |
| | MS0800-SLA | -5 | Int. | Cilindrico | 91 | 41.5 | 53 | 54 | 90 | 1.5 | 36 | 10 |
| | MS0800-SLK | -5 | Int. | Whistle notch | 91 | 41.5 | 53 | 54 | 90 | 1.5 | 36 | 10 |
| 8.3 | MS0830-SSA | -3 | Int. | Cilindrico | 89 | 34.1 | 47 | 48 | 87 | 1.5 | 40 | 10 |
| | MS0830-SSK | -3 | Int. | Whistle notch | 89 | 34.1 | 47 | 48 | 87 | 1.5 | 40 | 10 |
| | MS0830-SLA | -5 | Int. | Cilindrico | 103 | 48.1 | 61 | 62 | 101 | 1.5 | 40 | 10 |
| | MS0830-SLK | -5 | Int. | Whistle notch | 103 | 48.1 | 61 | 62 | 101 | 1.5 | 40 | 10 |
| 8.5 | MS0850-SSA | -3 | Int. | Cilindrico | 89 | 33.8 | 47 | 48 | 87 | 1.5 | 40 | 10 |
| | MS0850-SSK | -3 | Int. | Whistle notch | 89 | 33.8 | 47 | 48 | 87 | 1.5 | 40 | 10 |
| | MS0850-SLA | -5 | Int. | Cilindrico | 103 | 47.8 | 61 | 62 | 101 | 1.5 | 40 | 10 |
| | MS0850-SLK | -5 | Int. | Whistle notch | 103 | 47.8 | 61 | 62 | 101 | 1.5 | 40 | 10 |
| 8.6 | MS0860-SSA | -3 | Int. | Cilindrico | 89 | 33.7 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0860-SSK | -3 | Int. | Whistle notch | 89 | 33.7 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0860-SLA | -5 | Int. | Cilindrico | 103 | 47.7 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| | MS0860-SLK | -5 | Int. | Whistle notch | 103 | 47.7 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| 8.7 | MS0870-SSA | -3 | Int. | Cilindrico | 89 | 33.5 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0870-SSK | -3 | Int. | Whistle notch | 89 | 33.5 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0870-SLA | -5 | Int. | Cilindrico | 103 | 47.5 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| | MS0870-SLK | -5 | Int. | Whistle notch | 103 | 47.5 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| 8.8 | MS0880-SSA | -3 | Int. | Cilindrico | 89 | 33.4 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0880-SSK | -3 | Int. | Whistle notch | 89 | 33.4 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0880-SLA | -5 | Int. | Cilindrico | 103 | 47.4 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| | MS0880-SLK | -5 | Int. | Whistle notch | 103 | 47.4 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| 9.0 | MS0900-SSA | -3 | Int. | Cilindrico | 89 | 33.3 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0900-SSK | -3 | Int. | Whistle notch | 89 | 33.3 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0900-SLA | -5 | Int. | Cilindrico | 103 | 47.3 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| | MS0900-SLK | -5 | Int. | Whistle notch | 103 | 47.3 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| 9.3 | MS0930-SSA | -3 | Int. | Cilindrico | 89 | 33.1 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0930-SSK | -3 | Int. | Whistle notch | 89 | 33.1 | 47 | 48 | 87 | 1.6 | 40 | 10 |
| | MS0930-SLA | -5 | Int. | Cilindrico | 103 | 47.1 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| | MS0930-SLK | -5 | Int. | Whistle notch | 103 | 47.1 | 61 | 62 | 101 | 1.6 | 40 | 10 |
| 9.5 | MS0950-SSA | -3 | Int. | Cilindrico | 89 | 32.5 | 47 | 48 | 87 | 1.7 | 40 | 10 |
| | MS0950-SSK | -3 | Int. | Whistle notch | 89 | 32.5 | 47 | 48 | 87 | 1.7 | 40 | 10 |
| | MS0950-SLA | -5 | Int. | Cilindrico | 103 | 46.5 | 61 | 62 | 101 | 1.7 | 40 | 10 |
| | MS0950-SLK | -5 | Int. | Whistle notch | 103 | 46.5 | 61 | 62 | 101 | 1.7 | 40 | 10 |
| 9.8 | MS0980-SSA | -3 | Int. | Cilindrico | 89 | 32.1 | 47 | 48 | 87 | 1.8 | 40 | 10 |
| | MS0980-SSK | -3 | Int. | Whistle notch | 89 | 32.1 | 47 | 48 | 87 | 1.8 | 40 | 10 |
| | MS0980-SLA | -5 | Int. | Cilindrico | 103 | 46.1 | 61 | 62 | 101 | 1.8 | 40 | 10 |
| | MS0980-SLK | -5 | Int. | Whistle notch | 103 | 46.1 | 61 | 62 | 101 | 1.8 | 40 | 10 |

SERIE DI PUNTE MS



| Tolleranza D | D≤3.0 | 3.0<D≤6.0 | 6.0<D≤10.0 | 10.0<D≤14.0 |
|--------------|------------------|------------------|------------------|------------------|
| m7 | +0.016 +0.004 | +0.016 +0.004 | +0.021 +0.006 | +0.025 +0.007 |

MS○○○○○-S○○○ (refrigerante interno)



| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|------|--------------------|--------|---------------------|---------------|-----|------|-----|----|-----|-----|----|------|
| 10.0 | MS1000-SSA | -3 | Int. | Cilindrico | 89 | 31.8 | 47 | 48 | 87 | 1.8 | 40 | 10 |
| | MS1000-SSK | -3 | Int. | Whistle notch | 89 | 31.8 | 47 | 48 | 87 | 1.8 | 40 | 10 |
| | MS1000-SLA | -5 | Int. | Cilindrico | 103 | 45.8 | 61 | 62 | 101 | 1.8 | 40 | 10 |
| | MS1000-SLK | -5 | Int. | Whistle notch | 103 | 45.8 | 61 | 62 | 101 | 1.8 | 40 | 10 |
| 10.2 | MS1020-SSA | -3 | Int. | Cilindrico | 102 | 39.6 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1020-SSK | -3 | Int. | Whistle notch | 102 | 39.6 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1020-SLA | -5 | Int. | Cilindrico | 118 | 55.6 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| | MS1020-SLK | -5 | Int. | Whistle notch | 118 | 55.6 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| 10.3 | MS1030-SSA | -3 | Int. | Cilindrico | 102 | 39.4 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1030-SSK | -3 | Int. | Whistle notch | 102 | 39.4 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1030-SLA | -5 | Int. | Cilindrico | 118 | 55.4 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| | MS1030-SLK | -5 | Int. | Whistle notch | 118 | 55.4 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| 10.4 | MS1040-SSA | -3 | Int. | Cilindrico | 102 | 39.3 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1040-SSK | -3 | Int. | Whistle notch | 102 | 39.3 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1040-SLA | -5 | Int. | Cilindrico | 118 | 55.3 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| | MS1040-SLK | -5 | Int. | Whistle notch | 118 | 55.3 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| 10.5 | MS1050-SSA | -3 | Int. | Cilindrico | 102 | 39.2 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1050-SSK | -3 | Int. | Whistle notch | 102 | 39.2 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1050-SLA | -5 | Int. | Cilindrico | 118 | 55.2 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| | MS1050-SLK | -5 | Int. | Whistle notch | 118 | 55.2 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| 10.7 | MS1070-SSA | -3 | Int. | Cilindrico | 102 | 38.9 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1070-SSK | -3 | Int. | Whistle notch | 102 | 38.9 | 55 | 56 | 100 | 1.9 | 45 | 12 |
| | MS1070-SLA | -5 | Int. | Cilindrico | 118 | 54.9 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| | MS1070-SLK | -5 | Int. | Whistle notch | 118 | 54.9 | 71 | 72 | 116 | 1.9 | 45 | 12 |
| 10.8 | MS1080-SSA | -3 | Int. | Cilindrico | 102 | 38.8 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1080-SSK | -3 | Int. | Whistle notch | 102 | 38.8 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1080-SLA | -5 | Int. | Cilindrico | 118 | 54.8 | 71 | 72 | 116 | 2 | 45 | 12 |
| | MS1080-SLK | -5 | Int. | Whistle notch | 118 | 54.8 | 71 | 72 | 116 | 2 | 45 | 12 |
| 11.0 | MS1100-SSA | -3 | Int. | Cilindrico | 102 | 38.5 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1100-SSK | -3 | Int. | Whistle notch | 102 | 38.5 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1100-SLA | -5 | Int. | Cilindrico | 118 | 54.5 | 71 | 72 | 116 | 2 | 45 | 12 |
| | MS1100-SLK | -5 | Int. | Whistle notch | 118 | 54.5 | 71 | 72 | 116 | 2 | 45 | 12 |
| 11.2 | MS1120-SSA | -3 | Int. | Cilindrico | 102 | 38.2 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1120-SSK | -3 | Int. | Whistle notch | 102 | 38.2 | 55 | 56 | 100 | 2 | 45 | 12 |
| | MS1120-SLA | -5 | Int. | Cilindrico | 118 | 54.2 | 71 | 72 | 116 | 2 | 45 | 12 |
| | MS1120-SLK | -5 | Int. | Whistle notch | 118 | 54.2 | 71 | 72 | 116 | 2 | 45 | 12 |

| DC | Codice ordinazione | L x DC | Refrig. (Int./Est.) | Tipo di stelo | OAL | LU | LCF | LH | LF | PL | LS | DCON |
|------|--------------------|--------|---------------------|---------------|-----|------|-----|----|-----|-----|----|------|
| 11.4 | MS1140-SSA | -3 | Int. | Cilindrico | 102 | 38 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1140-SSK | -3 | Int. | Whistle notch | 102 | 38 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1140-SLA | -5 | Int. | Cilindrico | 118 | 54 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| | MS1140-SLK | -5 | Int. | Whistle notch | 118 | 54 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| 11.5 | MS1150-SSA | -3 | Int. | Cilindrico | 102 | 37.8 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1150-SSK | -3 | Int. | Whistle notch | 102 | 37.8 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1150-SLA | -5 | Int. | Cilindrico | 118 | 53.8 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| | MS1150-SLK | -5 | Int. | Whistle notch | 118 | 53.8 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| 11.7 | MS1170-SSA | -3 | Int. | Cilindrico | 102 | 37.6 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1170-SSK | -3 | Int. | Whistle notch | 102 | 37.6 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1170-SLA | -5 | Int. | Cilindrico | 118 | 53.6 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| | MS1170-SLK | -5 | Int. | Whistle notch | 118 | 53.6 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| 11.8 | MS1180-SSA | -3 | Int. | Cilindrico | 102 | 37.4 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1180-SSK | -3 | Int. | Whistle notch | 102 | 37.4 | 55 | 56 | 100 | 2.1 | 45 | 12 |
| | MS1180-SLA | -5 | Int. | Cilindrico | 118 | 53.4 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| | MS1180-SLK | -5 | Int. | Whistle notch | 118 | 53.4 | 71 | 72 | 116 | 2.1 | 45 | 12 |
| 12.0 | MS1200-SSA | -3 | Int. | Cilindrico | 102 | 37.2 | 55 | 56 | 100 | 2.2 | 45 | 12 |
| | MS1200-SSK | -3 | Int. | Whistle notch | 102 | 37.2 | 55 | 56 | 100 | 2.2 | 45 | 12 |
| | MS1200-SLA | -5 | Int. | Cilindrico | 118 | 53.2 | 71 | 72 | 116 | 2.2 | 45 | 12 |
| | MS1200-SLK | -5 | Int. | Whistle notch | 118 | 53.2 | 71 | 72 | 116 | 2.2 | 45 | 12 |
| 12.5 | MS1250-SSA | -3 | Int. | Cilindrico | 107 | 41.5 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1250-SSK | -3 | Int. | Whistle notch | 107 | 41.5 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1250-SLA | -5 | Int. | Cilindrico | 124 | 58.5 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| | MS1250-SLK | -5 | Int. | Whistle notch | 124 | 58.5 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| 12.6 | MS1260-SSA | -3 | Int. | Cilindrico | 107 | 41.4 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1260-SSK | -3 | Int. | Whistle notch | 107 | 41.4 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1260-SLA | -5 | Int. | Cilindrico | 124 | 58.4 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| | MS1260-SLK | -5 | Int. | Whistle notch | 124 | 58.4 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| 12.7 | MS1270-SSA | -3 | Int. | Cilindrico | 107 | 41.3 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1270-SSK | -3 | Int. | Whistle notch | 107 | 41.3 | 60 | 61 | 105 | 2.3 | 45 | 14 |
| | MS1270-SLA | -5 | Int. | Cilindrico | 124 | 58.3 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| | MS1270-SLK | -5 | Int. | Whistle notch | 124 | 58.3 | 77 | 78 | 122 | 2.3 | 45 | 14 |
| 13.0 | MS1300-SSA | -3 | Int. | Cilindrico | 107 | 40.9 | 60 | 61 | 105 | 2.4 | 45 | 14 |
| | MS1300-SSK | -3 | Int. | Whistle notch | 107 | 40.9 | 60 | 61 | 105 | 2.4 | 45 | 14 |
| | MS1300-SLA | -5 | Int. | Cilindrico | 124 | 57.9 | 77 | 78 | 122 | 2.4 | 45 | 14 |
| | MS1300-SLK | -5 | Int. | Whistle notch | 124 | 57.9 | 77 | 78 | 122 | 2.4 | 45 | 14 |
| 13.5 | MS1350-SSA | -3 | Int. | Cilindrico | 107 | 40.2 | 60 | 61 | 105 | 2.5 | 45 | 14 |
| | MS1350-SSK | -3 | Int. | Whistle notch | 107 | 40.2 | 60 | 61 | 105 | 2.5 | 45 | 14 |
| | MS1350-SLA | -5 | Int. | Cilindrico | 124 | 57.2 | 77 | 78 | 122 | 2.5 | 45 | 14 |
| | MS1350-SLK | -5 | Int. | Whistle notch | 124 | 57.2 | 77 | 78 | 122 | 2.5 | 45 | 14 |
| 13.7 | MS1370-SSA | -3 | Int. | Cilindrico | 107 | 39.9 | 60 | 61 | 105 | 2.5 | 45 | 14 |
| | MS1370-SSK | -3 | Int. | Whistle notch | 107 | 39.9 | 60 | 61 | 105 | 2.5 | 45 | 14 |
| | MS1370-SLA | -5 | Int. | Cilindrico | 124 | 56.9 | 77 | 78 | 122 | 2.5 | 45 | 14 |
| | MS1370-SLK | -5 | Int. | Whistle notch | 124 | 56.9 | 77 | 78 | 122 | 2.5 | 45 | 14 |
| 14.0 | MS1400-SSA | -3 | Int. | Cilindrico | 107 | 39.5 | 60 | 62 | 105 | 2.5 | 45 | 14 |
| | MS1400-SSK | -3 | Int. | Whistle notch | 107 | 39.5 | 60 | 62 | 105 | 2.5 | 45 | 14 |
| | MS1400-SLA | -5 | Int. | Cilindrico | 124 | 56.5 | 77 | 79 | 122 | 2.5 | 45 | 14 |
| | MS1400-SLK | -5 | Int. | Whistle notch | 124 | 56.5 | 77 | 79 | 122 | 2.5 | 45 | 14 |

CONDIZIONI DI TAGLIO RACCOMANDATE

| Pezzo da lavorare | Condizione | Res. alla trazione N/mm ² | Durezza HB | Ø 3.0 - 5.9 | | Ø 6.0 - 9.9 | | Ø 10.0 - 14.0 | | |
|-------------------|-------------------------------------|--------------------------------------|------------|-------------|----------|-------------|----------|---------------|----------|------|
| | | | | Vc (m/min) | f (mm/U) | Vc (m/min) | f (mm/U) | Vc (m/min) | f (mm/U) | |
| P | Non legato zolfo ≤0.25%C | ricotto | <500 | 150 | 100 | 0.18 | 110 | 0.25 | 130 | 0.30 |
| | Acciaio al fosforo ≤0.25%C | ricotto | -680 | 200 | 100 | 0.18 | 110 | 0.25 | 130 | 0.30 |
| | Acciaio al carbonio ≤0.55%C | temprato | >800 | 275 | 80 | 0.18 | 90 | 0.25 | 100 | 0.30 |
| | Acciaio temprato ≤0.55%C | ricotto | -680 | 300 | 60 | 0.18 | 70 | 0.25 | 80 | 0.30 |
| | Acciaio fuso/ Fuso in getti | temprato | >800 | 350 | 50 | 0.15 | 60 | 0.20 | 70 | 0.25 |
| | Acciaio a bassa lega/fuso | ricotto | <680 | <200 | 50 | 0.18 | 80 | 0.25 | 80 | 0.30 |
| | Acciaio per molle, nitrurato | temprato | 850 | 250 | 60 | 0.18 | 70 | 0.25 | 80 | 0.30 |
| | Acciaio temprato | temprato | >850 | >250 | 60 | 0.18 | 70 | 0.25 | 80 | 0.30 |
| | Acciaio cuscinetti, acciaio fuso | temprato | >1000 | >300 | 50 | 0.15 | 60 | 0.20 | 70 | 0.30 |
| | Acc. ad alta lega resist. al calore | ricotto | <680 | <200 | 50 | 0.15 | 55 | 0.20 | 60 | 0.25 |
| | Acciaio per valvole | temprato | 850 | 250 | 45 | 0.15 | 50 | 0.20 | 55 | 0.25 |
| | Acciaio trafilato | temprato | >850 | >250 | 50 | 0.18 | 55 | 0.20 | 60 | 0.25 |
| Acciaio fuso | temprato | >1000 | >300 | 45 | 0.15 | 50 | 0.20 | 55 | 0.25 | |
| M | Acciaio inossidabile | ferrit./mart. | 680 | 200 | 45 | 0.15 | 50 | 0.20 | 60 | 0.25 |
| | Acciaio resistente al calore | martensite | 850 | 250 | 45 | 0.15 | 50 | 0.20 | 60 | 0.25 |
| | Acciaio fuso | austenitico | -950 | 230 | 45 | 0.15 | 50 | 0.20 | 60 | 0.25 |
| K | Ghisa laminata | ferritico | 100 - 400 | <180 | 100 | 0.20 | 100 | 0.25 | 110 | 0.30 |
| | Grafite | perlitico | | 220 | 90 | 0.20 | 90 | 0.25 | 100 | 0.30 |
| | Ghisa sferoide | ferritico | 400 - 800 | <180 | 80 | 0.20 | 80 | 0.25 | 90 | 0.30 |
| | Ghisa duttile | perlitico | | 250 | 80 | 0.20 | 80 | 0.25 | 90 | 0.30 |
| | Temperata e ghisa | ferritico | 350 - 700 | <180 | 50 | 0.20 | 65 | 0.20 | 75 | 0.25 |
| | Ghisa, nera | perlitico | | 220 | 50 | 0.15 | 60 | 0.20 | 70 | 0.22 |

PROMEMORIA

A series of horizontal dotted lines for writing.

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