



## MS12300040

**Type:** Ball nose endmill with 2 teeth

| d1   | d2   | l1 | l2   |
|------|------|----|------|
| 4,00 | 4,00 | 50 | 8,00 |

| Coolant holes | Cut   | Head shape                 | Spiral angle | Cutting edges Z |
|---------------|-------|----------------------------|--------------|-----------------|
| No            | Right | Radiused<br>Center cutting | 30°          | 2               |

| Coated | Coating type | Material | Material type | Norm     |
|--------|--------------|----------|---------------|----------|
| No     | -            | MD       | SMG 10        | DIN 6528 |

## Machinable Materials

| Cod.       | Material type                                       | Machinability                                                                                | Cutting speed<br>Vc | Advancement per<br>revolution fn |
|------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------|----------------------------------|
|            |                                                     | <b>Recommended</b><br><b>Part.</b><br><b>recommended</b><br><b>Not</b><br><b>recommended</b> | (m/min)             | (mm/dente)                       |
| <b>P01</b> | Unalloyed steels up to 800 N/mm2                    |             | 80 : 140            | 0,010 - 0,020                    |
| <b>P02</b> | Low alloy steels from 800 N/mm2 to 1100 N/mm2       |             | 60 : 100            | 0,008 - 0,015                    |
| <b>P03</b> | Highly alloyed steels from 1100 N/mm2 to 1400 N/mm2 |             | 30 : 60             | 0,006 - 0,010                    |
| <b>M01</b> | Ferritic stainless steels                           |             | 40 : 80             | 0,006 - 0,010                    |
| <b>M02</b> | Martensitic stainless steels                        |             | 40 : 80             | 0,006 - 0,010                    |
| <b>M03</b> | Martensitic stainless steels - PH                   |             | 40 : 80             | 0,006 - 0,010                    |
| <b>M04</b> | Austenitic stainless steels                         |            | 40 : 80             | 0,006 - 0,010                    |
| <b>K01</b> | Gray/lamellar cast iron                             |           | 60 : 100            | 0,010 - 0,020                    |
| <b>K02</b> | Nodular/nodular cast iron                           |           | 60 : 100            | 0,010 - 0,020                    |
| <b>N01</b> | Drawn aluminum alloys                               |           | 150 : 350           | 0,010 - 0,020                    |
| <b>N02</b> | Die-cast aluminum alloys                            |           | 100 : 250           | 0,010 - 0,020                    |
| <b>N03</b> | Copper                                              |           | 60 : 100            | 0,010 - 0,020                    |
| <b>N04</b> | Brass - Bronze                                      |           | 60 : 100            | 0,010 - 0,020                    |
| <b>N05</b> | Lead-free brass                                     |           | 50 : 80             | 0,007 - 0,015                    |
| <b>S01</b> | Super alloys (Inconel - Hastelloy - Nimonic)        |           | 20 : 50             | 0,005 - 0,100                    |
| <b>S02</b> | Pure titanium (Grade 2 - Grade 4)                   |           | 20 : 40             | 0,006 - 0,010                    |
| <b>S03</b> | Titanium alloys (Grade 5)                           |           | 20 : 40             | 0,006 - 0,010                    |
| <b>S04</b> | Cobalt Chrome Alloys                                |           | 20 : 40             | 0,005 - 0,008                    |
| <b>H01</b> | Hardened steels up to 55 HRC                        |           | 15 : 30             | 0,003 - 0,006                    |

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| Cod. | Material type                                       | Machinability                                                                       | Cutting speed Vc | Advancement per revolution fn |
|------|-----------------------------------------------------|-------------------------------------------------------------------------------------|------------------|-------------------------------|
|      |                                                     | Recommended<br>Part.<br>recommended<br>Not<br>recommended                           | (m/min)          | (mm/dente)                    |
| P01  | Unalloyed steels up to 800 N/mm2                    |    | 80 : 140         | 0,010 - 0,020                 |
| P02  | Low alloy steels from 800 N/mm2 to 1100 N/mm2       |    | 60 : 100         | 0,008 - 0,015                 |
| P03  | Highly alloyed steels from 1100 N/mm2 to 1400 N/mm2 |    | 30 : 60          | 0,006 - 0,010                 |
| M01  | Ferritic stainless steels                           |    | 40 : 80          | 0,006 - 0,010                 |
| M02  | Martensitic stainless steels                        |    | 40 : 80          | 0,006 - 0,010                 |
| M03  | Martensitic stainless steels - PH                   |    | 40 : 80          | 0,006 - 0,010                 |
| M04  | Austenitic stainless steels                         |   | 40 : 80          | 0,006 - 0,010                 |
| K01  | Gray/lamellar cast iron                             |  | 60 : 100         | 0,010 - 0,020                 |
| K02  | Nodular/nodular cast iron                           |  | 60 : 100         | 0,010 - 0,020                 |
| N01  | Drawn aluminum alloys                               |  | 150 : 350        | 0,010 - 0,020                 |
| N02  | Die-cast aluminum alloys                            |  | 100 : 250        | 0,010 - 0,020                 |
| N03  | Copper                                              |  | 60 : 100         | 0,010 - 0,020                 |
| N04  | Brass - Bronze                                      |  | 60 : 100         | 0,010 - 0,020                 |
| N05  | Lead-free brass                                     |  | 50 : 80          | 0,007 - 0,015                 |
| S01  | Super alloys (Inconel - Hastelloy - Nimonic)        |  | 20 : 50          | 0,005 - 0,100                 |
| S02  | Pure titanium (Grade 2 - Grade 4)                   |  | 20 : 40          | 0,006 - 0,010                 |
| S03  | Titanium alloys (Grade 5)                           |  | 20 : 40          | 0,006 - 0,010                 |
| S04  | Cobalt Chrome Alloys                                |  | 20 : 40          | 0,005 - 0,008                 |
| H01  | Hardened steels up to 55 HRC                        |  | 15 : 30          | 0,003 - 0,006                 |
| H02  | Hardened steels from 55 HRC                         |  | -                | -                             |



SWISS HIGH PRECISION TOOLS

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