

# NiTCo 45

Uncover the high performance series  
for Stainless Steel and Superalloys,  
with hardness **36 – 52 HRC**

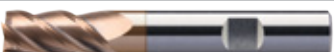




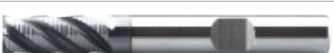
## SQUARE ENDMILL

|                                                                                   | EDP No. | Type                                   | Z | Diameter Range | Page |
|-----------------------------------------------------------------------------------|---------|----------------------------------------|---|----------------|------|
|  | K92     | NiTiCo 45 DP/DH                        | 4 | 3 - 20         | 5    |
|  | K93     | NiTiCo 45 DP/DH with Recess            | 4 | 3 - 20         | 6    |
|  | K94     | NiTiCo 45 DP/DH with Weldon            | 4 | 3 - 20         | 7    |
|  | K95     | NiTiCo 45 DP/DH with Recess and Weldon | 4 | 3 - 20         | 8    |

## TORUS ENDMILL

|                                                                                     | EDP No. | Type                                   | Z | Diameter Range | Page |
|-------------------------------------------------------------------------------------|---------|----------------------------------------|---|----------------|------|
|    | K96     | NiTiCo 45 DP/DH                        | 4 | 3 - 20         | 10   |
|    | K97     | NiTiCo 45 DP/DH with Recess            | 4 | 3 - 20         | 12   |
|   | K98     | NiTiCo 45 DP/DH with Weldon            | 4 | 3 - 20         | 14   |
|  | K99     | NiTiCo 45 DP/DH with Recess and Weldon | 4 | 3 - 20         | 16   |

## ROUGHING ENDMILL

|                                                                                     | EDP No. | Type                                | Z | Diameter Range | Page |
|-------------------------------------------------------------------------------------|---------|-------------------------------------|---|----------------|------|
|  | G38     | NiTiCo 45 DP                        | 4 | 6 - 20         | 20   |
|  | G41     | NiTiCo 45 DP with Recess            | 4 | 6 - 20         | 21   |
|  | G44     | NiTiCo 45 DP with Weldon            | 4 | 6 - 20         | 22   |
|  | G47     | NiTiCo 45 DP with Recess and Weldon | 4 | 6 - 20         | 23   |

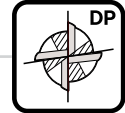
## NiTiCo 45 - HIGH FEED ENDMILL

|                                                                                     | EDP No. | Type                                                 | Z     | Diameter Range | Page |
|-------------------------------------------------------------------------------------|---------|------------------------------------------------------|-------|----------------|------|
|  | M15     | NiTiCo 45 High Feed Endmill with Recess              | 3 - 4 | 1 - 3          | 26   |
|  | M16     | NiTiCo 45 High Feed Endmill with Oil Hole and Recess | 4 - 6 | 4 - 16         | 27   |

K92

## Differential Pitch (DP)

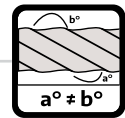
- Reduces chatter to provide excellent surface finishing.



## Differential Helix (DH)

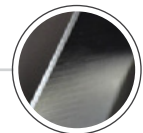
Reduces the cutting force:

- Allows high speed machining.
- Improves surface finishing.



## Ideal Cutting Edge

- Provides edge protection to prolong tool life.



## Proven Tough PVD Silicon Based Coating

- Prolong the tool life.
- Increases hardness and higher abrasive wear resistance.
- Smoother chip evacuation.



K92

DP/DH

K93

DP/DH  
with Recess

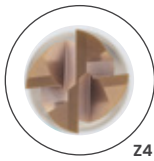
K94

DP/DH  
with Weldon

K95

DP/DH  
with Recess  
& Weldon

# K92 NiTiCo 45 DP/DH Endmill, 4 Flutes



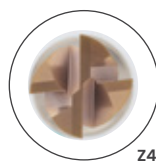
| Order Number | D  | I1 | I2 | L   | d2 h6 | Availability |
|--------------|----|----|----|-----|-------|--------------|
| K92 0300     | 3  | 4  |    | 57  | 6     | ●            |
| K92 0400     | 4  | 6  |    | 57  | 6     | ●            |
| K92 0500     | 5  | 13 |    | 57  | 6     | ●            |
| K92 0600     | 6  |    |    | 57  | 6     | ●            |
| K92 0800     | 8  | 19 |    | 63  | 8     | ●            |
| K92 1000     | 10 | 22 |    | 72  | 10    | ●            |
| K92 1200     | 12 | 26 |    | 83  | 12    | ●            |
| K92 1400     | 14 |    |    | 83  | 14    | ●            |
| K92 1600     | 16 | 32 |    | 92  | 16    | ●            |
| K92 1800     | 18 |    |    | 92  | 18    | ●            |
| K92 2000     | 20 | 38 |    | 104 | 20    | ●            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K93 NiTiCo 45 DP/DH Endmill with Recess, 4 Flutes



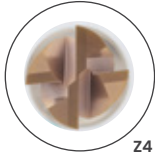
| Order Number | D  | I1 | I2 | L   | d2 h6 | Availability |
|--------------|----|----|----|-----|-------|--------------|
| K93 0300     | 3  | 4  | 14 | 57  | 6     | ●            |
| K93 0400     | 4  | 6  | 18 | 57  | 6     | ●            |
| K93 0500     | 5  | 13 | 18 | 57  | 6     | ●            |
| K93 0600     | 6  |    | 20 | 57  | 6     | ●            |
| K93 0800     | 8  | 19 | 26 | 63  | 8     | ●            |
| K93 1000     | 10 | 22 | 32 | 72  | 10    | ●            |
| K93 1200     | 12 | 26 | 36 | 83  | 12    | ●            |
| K93 1400     | 14 |    | 36 | 83  | 14    | ●            |
| K93 1600     | 16 | 32 | 42 | 92  | 16    | ●            |
| K93 1800     | 18 |    | 42 | 92  | 18    | ●            |
| K93 2000     | 20 | 38 | 52 | 104 | 20    | ●            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K94 NiTiCo 45 DP/DH Endmill with Weldon, 4 Flutes



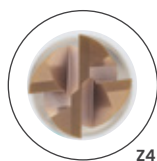
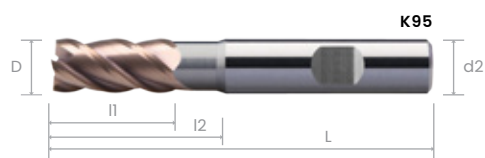
| Order Number | D  | L1 | L2 | L   | d2 h6 | Availability |
|--------------|----|----|----|-----|-------|--------------|
| K94 0300     | 3  | 4  |    | 57  | 6     | O            |
| K94 0400     | 4  | 6  |    | 57  | 6     | O            |
| K94 0500     | 5  | 13 |    | 57  | 6     | O            |
| K94 0600     | 6  |    |    | 57  | 6     | O            |
| K94 0800     | 8  | 19 |    | 63  | 8     | O            |
| K94 1000     | 10 | 22 |    | 72  | 10    | O            |
| K94 1200     | 12 | 26 |    | 83  | 12    | O            |
| K94 1400     | 14 |    |    | 83  | 14    | O            |
| K94 1600     | 16 | 32 |    | 92  | 16    | O            |
| K94 1800     | 18 |    |    | 92  | 18    | O            |
| K94 2000     | 20 | 38 |    | 104 | 20    | O            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K95 NiTiCo 45 DP/DH Endmill with Recess and Weldon, 4 Flutes



| Order Number | D  | I1 | I2 | L   | d2 h6 | Availability |
|--------------|----|----|----|-----|-------|--------------|
| K95 0300     | 3  | 4  | 14 | 57  | 6     | ●            |
| K95 0400     | 4  | 6  | 18 | 57  | 6     | ●            |
| K95 0500     | 5  | 13 | 18 | 57  | 6     | ●            |
| K95 0600     | 6  |    | 20 | 57  | 6     | ●            |
| K95 0800     | 8  | 19 | 26 | 63  | 8     | ●            |
| K95 1000     | 10 | 22 | 32 | 72  | 10    | ●            |
| K95 1200     | 12 | 26 | 36 | 83  | 12    | ●            |
| K95 1400     | 14 |    | 36 | 83  | 14    | ●            |
| K95 1600     | 16 | 32 | 42 | 92  | 16    | ●            |
| K95 1800     | 18 |    | 42 | 92  | 18    | ●            |
| K95 2000     | 20 | 38 | 52 | 104 | 20    | ●            |

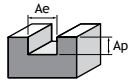
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

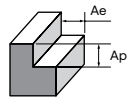


### NiTiCo 45 DP/DH Endmill, 4 Flutes - K92, K93, K94, K95



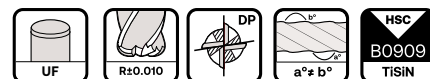
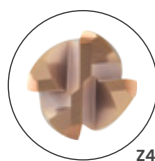
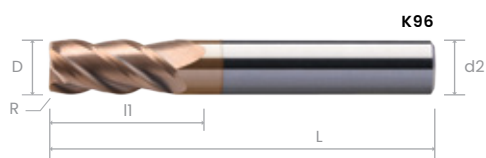
| Slotting         | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | -                 |       | -            |       |
| Ap (mm)          | 0.08 × D      |       | 0.45 × D          |       | 0.80 × D          |       | 0.30 × D     |       |
| Ae (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 3                | 100           | 0.013 | 55                | 0.014 | 80                | 0.012 | 25           | 0.011 |
| 4                |               | 0.018 |                   | 0.018 |                   | 0.017 |              | 0.015 |
| 5                |               | 0.023 |                   | 0.023 |                   | 0.022 |              | 0.019 |
| 6                |               | 0.028 |                   | 0.029 |                   | 0.027 |              | 0.024 |
| 8                |               | 0.038 |                   | 0.039 |                   | 0.036 |              | 0.032 |
| 10               |               | 0.049 |                   | 0.050 |                   | 0.046 |              | 0.043 |
| 12               |               | 0.059 |                   | 0.061 |                   | 0.057 |              | 0.054 |
| 14               |               | 0.069 |                   | 0.070 |                   | 0.065 |              | 0.060 |
| 16               |               | 0.077 |                   | 0.078 |                   | 0.073 |              | 0.065 |
| 18               |               | 0.086 |                   | 0.087 |                   | 0.081 |              | 0.073 |
| 20               |               | 0.095 |                   | 0.095 |                   | 0.088 |              | 0.079 |

### NiTiCo 45 DP/DH Endmill, 4 Flutes - K92, K93, K94, K95



| Side Milling     | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | -                 |       | -            |       |
| Ap (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| Ae (mm)          | 0.18 × D      |       | 0.18 × D          |       | 0.18 × D          |       | 0.10 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 3                | 120           | 0.014 | 70                | 0.016 | 90                | 0.014 | 35           | 0.014 |
| 4                |               | 0.021 |                   | 0.023 |                   | 0.019 |              | 0.019 |
| 5                |               | 0.027 |                   | 0.029 |                   | 0.026 |              | 0.024 |
| 6                |               | 0.032 |                   | 0.035 |                   | 0.031 |              | 0.030 |
| 8                |               | 0.045 |                   | 0.048 |                   | 0.043 |              | 0.041 |
| 10               |               | 0.058 |                   | 0.062 |                   | 0.055 |              | 0.052 |
| 12               |               | 0.072 |                   | 0.078 |                   | 0.068 |              | 0.067 |
| 14               |               | 0.081 |                   | 0.088 |                   | 0.077 |              | 0.076 |
| 16               |               | 0.090 |                   | 0.098 |                   | 0.087 |              | 0.084 |
| 18               |               | 0.099 |                   | 0.106 |                   | 0.095 |              | 0.094 |
| 20               |               | 0.108 |                   | 0.113 |                   | 0.102 |              | 0.101 |

# K96 NiTiCo 45 DP/DH Torus Endmill, 4 Flutes



| Order Number          | D  | I1 | I2 | L  | d2 h6 | R   | Availability |  |
|-----------------------|----|----|----|----|-------|-----|--------------|--|
| K96 0300 050 0600 030 | 3  | 8  |    | 57 | 6     | 0.3 | ●            |  |
| K96 0300 050 0600 050 |    |    |    | 57 | 6     | 0.5 | ●            |  |
| K96 0400 057 0600 030 | 4  | 11 |    | 57 | 6     | 0.3 | ●            |  |
| K96 0400 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ●            |  |
| K96 0400 057 0600 100 |    |    |    | 57 | 6     | 1   | ●            |  |
| K96 0500 057 0600 030 | 5  | 13 |    | 57 | 6     | 0.3 | ●            |  |
| K96 0500 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ●            |  |
| K96 0600 057 0600 030 | 6  |    |    | 57 | 6     | 0.3 | ●            |  |
| K96 0600 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ●            |  |
| K96 0600 057 0600 100 |    |    |    | 57 | 6     | 1   | ●            |  |
| K96 0800 064 0800 030 | 8  | 19 |    | 64 | 8     | 0.3 | ●            |  |
| K96 0800 064 0800 050 |    |    |    | 64 | 8     | 0.5 | ●            |  |
| K96 0800 064 0800 100 |    |    |    | 64 | 8     | 1   | ●            |  |
| K96 0800 064 0800 150 |    |    |    | 64 | 8     | 1.5 | ●            |  |
| K96 0800 064 0800 200 |    |    |    | 64 | 8     | 2   | ●            |  |
| K96 1000 072 1000 030 | 10 | 22 |    | 72 | 10    | 0.3 | ●            |  |
| K96 1000 072 1000 050 |    |    |    | 72 | 10    | 0.5 | ●            |  |
| K96 1000 072 1000 100 |    |    |    | 72 | 10    | 1   | ●            |  |
| K96 1000 072 1000 150 |    |    |    | 72 | 10    | 1.5 | ●            |  |
| K96 1000 072 1000 200 |    |    |    | 72 | 10    | 2   | ●            |  |
| K96 1200 083 1200 030 | 12 | 26 |    | 83 | 12    | 0.3 | ●            |  |
| K96 1200 083 1200 050 |    |    |    | 83 | 12    | 0.5 | ●            |  |
| K96 1200 083 1200 100 |    |    |    | 83 | 12    | 1   | ●            |  |
| K96 1200 083 1200 200 |    |    |    | 83 | 12    | 2   | ●            |  |
| K96 1200 083 1200 250 |    |    |    | 83 | 12    | 2.5 | ●            |  |
| K96 1200 083 1200 300 |    |    | 83 | 12 | 3     | ●   |              |  |
| K96 1400 083 1400 030 | 14 |    |    | 83 | 14    | 0.3 | ●            |  |
| K96 1400 083 1400 050 |    |    |    | 83 | 14    | 0.5 | ●            |  |
| K96 1400 083 1400 100 |    |    |    | 83 | 14    | 1   | ●            |  |
| K96 1400 083 1400 200 |    |    |    | 83 | 14    | 2   | ●            |  |
| K96 1400 083 1400 300 |    |    |    | 83 | 14    | 3   | ●            |  |

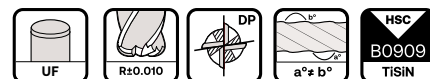
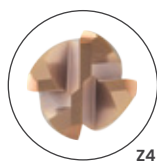
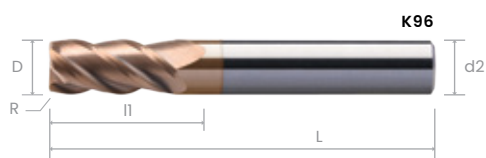
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| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K96 NiTiCo 45 DP/DH Torus Endmill, 4 Flutes



| Order Number          | D  | I1 | I2 | L   | d2 h6 | R   | Availability |
|-----------------------|----|----|----|-----|-------|-----|--------------|
| K96 1600 092 1600 030 | 16 | 32 |    | 92  | 16    | 0.3 | ●            |
| K96 1600 092 1600 050 |    |    |    | 92  | 16    | 0.5 | ●            |
| K96 1600 092 1600 100 |    |    |    | 92  | 16    | 1   | ●            |
| K96 1600 092 1600 200 |    |    |    | 92  | 16    | 2   | ●            |
| K96 1600 092 1600 250 |    |    |    | 92  | 16    | 2.5 | ●            |
| K96 1600 092 1600 300 |    |    |    | 92  | 16    | 3   | ●            |
| K96 1600 092 1600 400 |    |    |    | 92  | 16    | 4   | ●            |
| K96 1800 092 1800 030 | 18 |    |    | 92  | 18    | 0.3 | ●            |
| K96 1800 092 1800 050 |    |    |    | 92  | 18    | 0.5 | ●            |
| K96 1800 092 1800 100 |    |    |    | 92  | 18    | 1   | ●            |
| K96 1800 092 1800 200 |    |    |    | 92  | 18    | 2   | ●            |
| K96 1800 092 1800 300 |    |    | 92 | 18  | 3     | ●   |              |
| K96 2000 104 2000 030 | 20 | 38 |    | 104 | 20    | 0.3 | ●            |
| K96 2000 104 2000 050 |    |    |    | 104 | 20    | 0.5 | ●            |
| K96 2000 104 2000 100 |    |    |    | 104 | 20    | 1   | ●            |
| K96 2000 104 2000 200 |    |    |    | 104 | 20    | 2   | ●            |
| K96 2000 104 2000 250 |    |    |    | 104 | 20    | 2.5 | ●            |
| K96 2000 104 2000 300 |    |    |    | 104 | 20    | 3   | ●            |
| K96 2000 104 2000 400 |    |    |    | 104 | 20    | 4   | ●            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



**K97****NiTiCo 45 DP/DH Torus Endmill with Recess, 4 Flutes****HPMT**

| Order Number          | D  | I1 | I2 | L  | d2 h6 | R   | Availability |
|-----------------------|----|----|----|----|-------|-----|--------------|
| K97 0300 057 0600 030 | 3  | 8  | 15 | 57 | 6     | 0.3 | ○            |
| K97 0300 057 0600 050 |    |    | 15 | 57 | 6     | 0.5 | ○            |
| K97 0400 057 0600 030 | 4  | 11 | 18 | 57 | 6     | 0.3 | ○            |
| K97 0400 057 0600 050 |    |    | 18 | 57 | 6     | 0.5 | ○            |
| K97 0400 057 0600 100 |    |    | 18 | 57 | 6     | 1   | ○            |
| K97 0500 057 0600 030 | 5  | 13 | 18 | 57 | 6     | 0.3 | ○            |
| K97 0500 057 0600 050 |    |    | 18 | 57 | 6     | 0.5 | ○            |
| K97 0600 057 0600 030 | 6  |    | 20 | 57 | 6     | 0.3 | ○            |
| K97 0600 057 0600 050 |    |    | 20 | 57 | 6     | 0.5 | ○            |
| K97 0600 057 0600 100 |    |    | 20 | 57 | 6     | 1   | ○            |
| K97 0800 064 0800 030 | 8  | 19 | 26 | 64 | 8     | 0.3 | ○            |
| K97 0800 064 0800 050 |    |    | 26 | 64 | 8     | 0.5 | ○            |
| K97 0800 064 0800 100 |    |    | 26 | 64 | 8     | 1   | ○            |
| K97 0800 064 0800 150 |    |    | 26 | 64 | 8     | 1.5 | ○            |
| K97 0800 064 0800 200 |    |    | 26 | 64 | 8     | 2   | ○            |
| K97 1000 072 1000 030 | 10 | 22 | 30 | 72 | 10    | 0.3 | ○            |
| K97 1000 072 1000 050 |    |    | 30 | 72 | 10    | 0.5 | ○            |
| K97 1000 072 1000 100 |    |    | 30 | 72 | 10    | 1   | ○            |
| K97 1000 072 1000 150 |    |    | 30 | 72 | 10    | 1.5 | ○            |
| K97 1000 072 1000 200 |    |    | 30 | 72 | 10    | 2   | ○            |
| K97 1200 083 1200 030 | 12 | 26 | 36 | 83 | 12    | 0.3 | ○            |
| K97 1200 083 1200 050 |    |    | 36 | 83 | 12    | 0.5 | ○            |
| K97 1200 083 1200 100 |    |    | 36 | 83 | 12    | 1   | ○            |
| K97 1200 083 1200 200 |    |    | 36 | 83 | 12    | 2   | ○            |
| K97 1200 083 1200 250 |    |    | 36 | 83 | 12    | 2.5 | ○            |
| K97 1200 083 1200 300 |    |    | 36 | 83 | 12    | 3   | ○            |
| K97 1400 083 1400 030 | 14 |    | 36 | 83 | 14    | 0.3 | ○            |
| K97 1400 083 1400 050 |    |    | 36 | 83 | 14    | 0.5 | ○            |
| K97 1400 083 1400 100 |    |    | 36 | 83 | 14    | 1   | ○            |
| K97 1400 083 1400 200 |    |    | 36 | 83 | 14    | 2   | ○            |
| K97 1400 083 1400 300 |    |    | 36 | 83 | 14    | 3   | ○            |

cont'd ►

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

**Material Group** | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K97

## NiTiCo 45 DP/DH Torus Endmill with Recess, 4 Flutes



| Order Number          | D  | I1 | I2 | L   | d2 h6 | R   | Availability |   |
|-----------------------|----|----|----|-----|-------|-----|--------------|---|
| K97 1600 092 1600 030 | 16 | 32 | 42 | 92  | 16    | 0.3 | ○            |   |
| K97 1600 092 1600 050 |    |    | 42 | 92  | 16    | 0.5 | ○            |   |
| K97 1600 092 1600 100 |    |    | 42 | 92  | 16    | 1   | ○            |   |
| K97 1600 092 1600 200 |    |    | 42 | 92  | 16    | 2   | ○            |   |
| K97 1600 092 1600 250 |    |    | 42 | 92  | 16    | 2.5 | ○            |   |
| K97 1600 092 1600 300 |    |    | 42 | 92  | 16    | 3   | ○            |   |
| K97 1600 092 1600 400 |    |    | 42 | 92  | 16    | 4   | ○            |   |
| K97 1800 092 1800 030 | 18 |    | 42 | 92  | 18    | 0.3 | ○            |   |
| K97 1800 092 1800 050 |    |    | 42 | 92  | 18    | 0.5 | ○            |   |
| K97 1800 092 1800 100 |    |    | 42 | 92  | 18    | 1   | ○            |   |
| K97 1800 092 1800 200 |    |    | 42 | 92  | 18    | 2   | ○            |   |
| K97 1800 092 1800 300 |    |    | 42 | 92  | 18    | 3   | ○            |   |
| K97 2000 104 2000 030 | 20 |    | 38 | 52  | 104   | 20  | 0.3          | ○ |
| K97 2000 104 2000 050 |    |    |    | 52  | 104   | 20  | 0.5          | ○ |
| K97 2000 104 2000 100 |    | 52 |    | 104 | 20    | 1   | ○            |   |
| K97 2000 104 2000 200 |    | 52 |    | 104 | 20    | 2   | ○            |   |
| K97 2000 104 2000 250 |    | 52 |    | 104 | 20    | 2.5 | ○            |   |
| K97 2000 104 2000 300 |    | 52 |    | 104 | 20    | 3   | ○            |   |
| K97 2000 104 2000 400 |    | 52 |    | 104 | 20    | 4   | ○            |   |

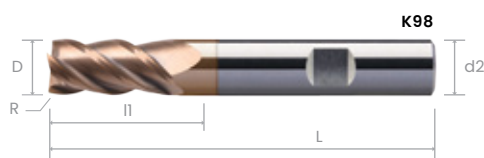
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

**Material Group** | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



# K98 NiTiCo 45 DP/DH Torus Endmill with Weldon, 4 Flutes



| Order Number          | D  | I1 | I2 | L  | d2 h6 | R   | Availability |  |
|-----------------------|----|----|----|----|-------|-----|--------------|--|
| K98 0300 050 0600 030 | 3  | 8  |    | 57 | 6     | 0.3 | ○            |  |
| K98 0300 050 0600 050 |    |    |    | 57 | 6     | 0.5 | ○            |  |
| K98 0400 057 0600 030 | 4  | 11 |    | 57 | 6     | 0.3 | ○            |  |
| K98 0400 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ○            |  |
| K98 0400 057 0600 100 |    |    |    | 57 | 6     | 1   | ○            |  |
| K98 0500 057 0600 030 | 5  | 13 |    | 57 | 6     | 0.3 | ○            |  |
| K98 0500 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ○            |  |
| K98 0600 057 0600 030 | 6  |    |    | 57 | 6     | 0.3 | ○            |  |
| K98 0600 057 0600 050 |    |    |    | 57 | 6     | 0.5 | ○            |  |
| K98 0600 057 0600 100 |    |    |    | 57 | 6     | 1   | ○            |  |
| K98 0800 064 0800 030 | 8  | 19 |    | 64 | 8     | 0.3 | ○            |  |
| K98 0800 064 0800 050 |    |    |    | 64 | 8     | 0.5 | ○            |  |
| K98 0800 064 0800 100 |    |    |    | 64 | 8     | 1   | ○            |  |
| K98 0800 064 0800 150 |    |    |    | 64 | 8     | 1.5 | ○            |  |
| K98 0800 064 0800 200 |    |    |    | 64 | 8     | 2   | ○            |  |
| K98 1000 072 1000 030 | 10 | 22 |    | 72 | 10    | 0.3 | ○            |  |
| K98 1000 072 1000 050 |    |    |    | 72 | 10    | 0.5 | ○            |  |
| K98 1000 072 1000 100 |    |    |    | 72 | 10    | 1   | ○            |  |
| K98 1000 072 1000 150 |    |    |    | 72 | 10    | 1.5 | ○            |  |
| K98 1000 072 1000 200 |    |    |    | 72 | 10    | 2   | ○            |  |
| K98 1200 083 1200 030 | 12 | 26 |    | 83 | 12    | 0.3 | ○            |  |
| K98 1200 083 1200 050 |    |    |    | 83 | 12    | 0.5 | ○            |  |
| K98 1200 083 1200 100 |    |    |    | 83 | 12    | 1   | ○            |  |
| K98 1200 083 1200 200 |    |    |    | 83 | 12    | 2   | ○            |  |
| K98 1200 083 1200 250 |    |    |    | 83 | 12    | 2.5 | ○            |  |
| K98 1200 083 1200 300 |    |    | 83 | 12 | 3     | ○   |              |  |
| K98 1400 083 1400 030 | 14 |    |    | 83 | 14    | 0.3 | ○            |  |
| K98 1400 083 1400 050 |    |    |    | 83 | 14    | 0.5 | ○            |  |
| K98 1400 083 1400 100 |    |    |    | 83 | 14    | 1   | ○            |  |
| K98 1400 083 1400 200 |    |    |    | 83 | 14    | 2   | ○            |  |
| K98 1400 083 1400 300 |    |    |    | 83 | 14    | 3   | ○            |  |

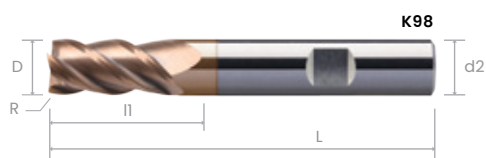
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| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K98 NiTiCo 45 DP/DH Torus Endmill with Weldon, 4 Flutes

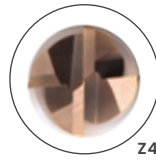
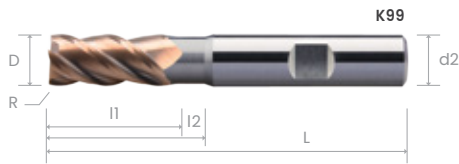


| Order Number          | D  | I1 | I2 | L   | d2 h6 | R   | Availability |   |
|-----------------------|----|----|----|-----|-------|-----|--------------|---|
| K98 1600 092 1600 030 | 16 | 32 |    | 92  | 16    | 0.3 | ○            |   |
| K98 1600 092 1600 050 |    |    |    | 92  | 16    | 0.5 | ○            |   |
| K98 1600 092 1600 100 |    |    |    | 92  | 16    | 1   | ○            |   |
| K98 1600 092 1600 200 |    |    |    | 92  | 16    | 2   | ○            |   |
| K98 1600 092 1600 250 |    |    |    | 92  | 16    | 2.5 | ○            |   |
| K98 1600 092 1600 300 |    |    |    | 92  | 16    | 3   | ○            |   |
| K98 1600 092 1600 400 |    |    |    | 92  | 16    | 4   | ○            |   |
| K98 1800 092 1800 030 | 18 |    |    | 92  | 18    | 0.3 | ○            |   |
| K98 1800 092 1800 050 |    |    |    | 92  | 18    | 0.5 | ○            |   |
| K98 1800 092 1800 100 |    |    |    | 92  | 18    | 1   | ○            |   |
| K98 1800 092 1800 200 |    |    |    | 92  | 18    | 2   | ○            |   |
| K98 1800 092 1800 300 |    |    |    | 92  | 18    | 3   | ○            |   |
| K98 2000 104 2000 030 | 20 |    | 38 |     | 104   | 20  | 0.3          | ○ |
| K98 2000 104 2000 050 |    |    |    |     | 104   | 20  | 0.5          | ○ |
| K98 2000 104 2000 100 |    |    |    | 104 | 20    | 1   | ○            |   |
| K98 2000 104 2000 200 |    |    |    | 104 | 20    | 2   | ○            |   |
| K98 2000 104 2000 250 |    |    |    | 104 | 20    | 2.5 | ○            |   |
| K98 2000 104 2000 300 |    |    |    | 104 | 20    | 3   | ○            |   |
| K98 2000 104 2000 400 |    |    |    | 104 | 20    | 4   | ○            |   |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

**K99****NiTiCo 45 DP/DH Torus Endmill with Recess and Weldon, 4 Flutes****HPMT**

| Order Number          | D  | I1 | I2 | L  | d2 h6 | R   | Availability |
|-----------------------|----|----|----|----|-------|-----|--------------|
| K99 0300 057 0600 030 | 3  | 8  | 15 | 57 | 6     | 0.3 | ●            |
| K99 0300 057 0600 050 |    |    | 15 | 57 | 6     | 0.5 | ●            |
| K99 0400 057 0600 030 | 4  | 11 | 18 | 57 | 6     | 0.3 | ●            |
| K99 0400 057 0600 050 |    |    | 18 | 57 | 6     | 0.5 | ●            |
| K99 0400 057 0600 100 |    |    | 18 | 57 | 6     | 1   | ●            |
| K99 0500 057 0600 030 | 5  | 13 | 18 | 57 | 6     | 0.3 | ●            |
| K99 0500 057 0600 050 |    |    | 18 | 57 | 6     | 0.5 | ●            |
| K99 0600 057 0600 030 | 6  |    | 20 | 57 | 6     | 0.3 | ●            |
| K99 0600 057 0600 050 |    |    | 20 | 57 | 6     | 0.5 | ●            |
| K99 0600 057 0600 100 |    |    | 20 | 57 | 6     | 1   | ●            |
| K99 0800 064 0800 030 | 8  | 19 | 26 | 64 | 8     | 0.3 | ●            |
| K99 0800 064 0800 050 |    |    | 26 | 64 | 8     | 0.5 | ●            |
| K99 0800 064 0800 100 |    |    | 26 | 64 | 8     | 1   | ●            |
| K99 0800 064 0800 150 |    |    | 26 | 64 | 8     | 1.5 | ●            |
| K99 0800 064 0800 200 |    |    | 26 | 64 | 8     | 2   | ●            |
| K99 1000 072 1000 030 | 10 | 22 | 30 | 72 | 10    | 0.3 | ●            |
| K99 1000 072 1000 050 |    |    | 30 | 72 | 10    | 0.5 | ●            |
| K99 1000 072 1000 100 |    |    | 30 | 72 | 10    | 1   | ●            |
| K99 1000 072 1000 150 |    |    | 30 | 72 | 10    | 1.5 | ●            |
| K99 1000 072 1000 200 |    |    | 30 | 72 | 10    | 2   | ●            |
| K99 1200 083 1200 030 | 12 | 26 | 36 | 83 | 12    | 0.3 | ●            |
| K99 1200 083 1200 050 |    |    | 36 | 83 | 12    | 0.5 | ●            |
| K99 1200 083 1200 100 |    |    | 36 | 83 | 12    | 1   | ●            |
| K99 1200 083 1200 200 |    |    | 36 | 83 | 12    | 2   | ●            |
| K99 1200 083 1200 250 |    |    | 36 | 83 | 12    | 2.5 | ●            |
| K99 1200 083 1200 300 | 36 |    | 83 | 12 | 3     | ●   |              |
| K99 1400 083 1400 030 | 14 |    | 36 | 83 | 14    | 0.3 | ●            |
| K99 1400 083 1400 050 |    |    | 36 | 83 | 14    | 0.5 | ●            |
| K99 1400 083 1400 100 |    |    | 36 | 83 | 14    | 1   | ●            |
| K99 1400 083 1400 200 |    |    | 36 | 83 | 14    | 2   | ●            |
| K99 1400 083 1400 300 |    |    | 36 | 83 | 14    | 3   | ●            |

cont'd ►

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

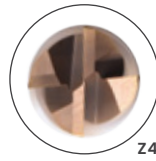
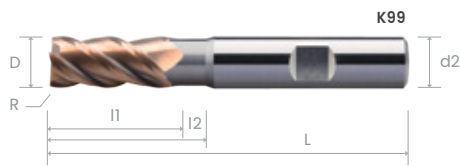
**Material Group** | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# K99

## NiTiCo 45 DP/DH Torus Endmill with Recess and Weldon, 4 Flutes

### HPMT



| Order Number          | D  | I1 | I2 | L   | d2 h6 | R   | Availability |
|-----------------------|----|----|----|-----|-------|-----|--------------|
| K99 1600 092 1600 030 | 16 | 32 | 42 | 92  | 16    | 0.3 | ●            |
| K99 1600 092 1600 050 |    |    | 42 | 92  | 16    | 0.5 | ●            |
| K99 1600 092 1600 100 |    |    | 42 | 92  | 16    | 1   | ●            |
| K99 1600 092 1600 200 |    |    | 42 | 92  | 16    | 2   | ●            |
| K99 1600 092 1600 250 |    |    | 42 | 92  | 16    | 2.5 | ●            |
| K99 1600 092 1600 300 |    |    | 42 | 92  | 16    | 3   | ●            |
| K99 1600 092 1600 400 |    |    | 42 | 92  | 16    | 4   | ●            |
| K99 1800 092 1800 030 | 18 |    | 42 | 92  | 18    | 0.3 | ●            |
| K99 1800 092 1800 050 |    |    | 42 | 92  | 18    | 0.5 | ●            |
| K99 1800 092 1800 100 |    |    | 42 | 92  | 18    | 1   | ●            |
| K99 1800 092 1800 200 |    |    | 42 | 92  | 18    | 2   | ●            |
| K99 1800 092 1800 300 |    | 42 | 92 | 18  | 3     | ●   |              |
| K99 2000 104 2000 030 | 20 | 38 | 52 | 104 | 20    | 0.3 | ●            |
| K99 2000 104 2000 050 |    |    | 52 | 104 | 20    | 0.5 | ●            |
| K99 2000 104 2000 100 |    |    | 52 | 104 | 20    | 1   | ●            |
| K99 2000 104 2000 200 |    |    | 52 | 104 | 20    | 2   | ●            |
| K99 2000 104 2000 250 |    |    | 52 | 104 | 20    | 2.5 | ●            |
| K99 2000 104 2000 300 |    |    | 52 | 104 | 20    | 3   | ●            |
| K99 2000 104 2000 400 |    |    | 52 | 104 | 20    | 4   | ●            |

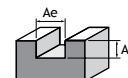
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

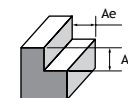


### NiTiCo 45 DP/DH Torus Endmill, 4 Flutes – K96, K97, K98, K99



| Slotting         | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | –                 |       | –            |       |
| Ap (mm)          | 0.08 × D      |       | 0.45 × D          |       | 0.80 × D          |       | 0.30 × D     |       |
| Ae (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 3                | 125           | 0.013 | 70                | 0.013 | 100               | 0.012 | 30           | 0.011 |
| 4                |               | 0.018 |                   | 0.018 |                   | 0.017 |              | 0.016 |
| 5                |               | 0.023 |                   | 0.024 |                   | 0.022 |              | 0.020 |
| 6                |               | 0.028 |                   | 0.029 |                   | 0.027 |              | 0.027 |
| 8                |               | 0.038 |                   | 0.039 |                   | 0.036 |              | 0.036 |
| 10               |               | 0.049 |                   | 0.049 |                   | 0.046 |              | 0.047 |
| 12               |               | 0.059 |                   | 0.060 |                   | 0.057 |              | 0.056 |
| 14               |               | 0.070 |                   | 0.069 |                   | 0.065 |              | 0.066 |
| 16               |               | 0.078 |                   | 0.077 |                   | 0.073 |              | 0.071 |
| 18               |               | 0.087 |                   | 0.087 |                   | 0.082 |              | 0.080 |
| 20               |               | 0.094 |                   | 0.097 |                   | 0.090 |              | 0.089 |

### NiTiCo 45 DP/DH Torus Endmill, 4 Flutes – K96, K97, K98, K99



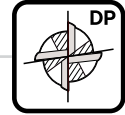
| Side Milling     | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | –                 |       | –            |       |
| Ap (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| Ae (mm)          | 0.18 × D      |       | 0.18 × D          |       | 0.18 × D          |       | 0.10 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 3                | 150           | 0.014 | 85                | 0.017 | 110               | 0.014 | 45           | 0.013 |
| 4                |               | 0.021 |                   | 0.023 |                   | 0.019 |              | 0.019 |
| 5                |               | 0.027 |                   | 0.030 |                   | 0.026 |              | 0.024 |
| 6                |               | 0.032 |                   | 0.036 |                   | 0.032 |              | 0.029 |
| 8                |               | 0.045 |                   | 0.050 |                   | 0.045 |              | 0.041 |
| 10               |               | 0.058 |                   | 0.064 |                   | 0.056 |              | 0.051 |
| 12               |               | 0.072 |                   | 0.081 |                   | 0.070 |              | 0.067 |
| 14               |               | 0.081 |                   | 0.091 |                   | 0.079 |              | 0.074 |
| 16               |               | 0.091 |                   | 0.102 |                   | 0.089 |              | 0.081 |
| 18               |               | 0.099 |                   | 0.112 |                   | 0.097 |              | 0.091 |
| 20               |               | 0.109 |                   | 0.117 |                   | 0.104 |              | 0.101 |

G38



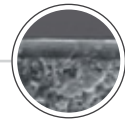
## Differential Pitch (DP)

- Reduces chatter to provide excellent surface finishing.



## Superior Coating

- Enhances heat resistance to prolong tool life.



**G38**

DP

**G41**

DP  
with Recess

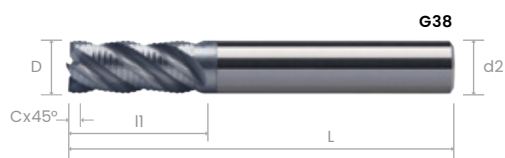
**G44**

DP  
with Weldon

**G47**

DP  
with Recess  
& Weldon

# G38 NiTiCo 45 DP Roughing Endmill, 4 Flutes



| Order Number | D  | I1 | I2 | L   | d2 h6 | C   | Availability |
|--------------|----|----|----|-----|-------|-----|--------------|
| G38 0600     | 6  | 13 |    | 57  | 6     | 0.1 | ○            |
| G38 0800     | 8  | 20 |    | 64  | 8     | 0.2 | ○            |
| G38 1000     | 10 | 22 |    | 72  | 10    | 0.2 | ○            |
| G38 1200     | 12 | 26 |    | 83  | 12    | 0.2 | ○            |
| G38 1400     | 14 |    |    | 83  | 14    | 0.3 | ○            |
| G38 1600     | 16 | 32 |    | 92  | 16    | 0.3 | ○            |
| G38 1800     | 18 |    |    | 92  | 18    | 0.3 | ○            |
| G38 2000     | 20 | 38 |    | 104 | 20    | 0.4 | ○            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# G41

## NiTiCo 45 DP Roughing Endmill with Recess, 4 Flutes

# HPMT



| Order Number | D  | I1 | I2 | L   | d2 h6 | C   | Availability |
|--------------|----|----|----|-----|-------|-----|--------------|
| G41 0600 *   | 6  | 13 | 20 | 57  | 6     | 0.1 | ○            |
| G41 0800     | 8  | 20 | 30 | 64  | 8     | 0.2 | ○            |
| G41 1000 *   | 10 | 22 | 32 | 72  | 10    | 0.2 | ○            |
| G41 1200 *   | 12 | 26 | 37 | 83  | 12    | 0.2 | ○            |
| G41 1400     | 14 |    | 44 | 83  | 14    | 0.3 | ○            |
| G41 1600     | 16 | 32 | 46 | 92  | 16    | 0.3 | ○            |
| G41 1800     | 18 |    | 53 | 92  | 18    | 0.3 | ○            |
| G41 2000     | 20 | 38 | 58 | 104 | 20    | 0.4 | ○            |

\* - DIN 6535

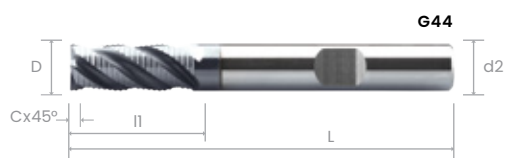
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



# G44 NiTiCo 45 DP Roughing Endmill with Weldon, 4 Flutes



| Order Number | D  | I1 | I2 | L   | d2 h6 | C   | Availability |
|--------------|----|----|----|-----|-------|-----|--------------|
| G44 0600     | 6  | 13 |    | 57  | 6     | 0.1 | ○            |
| G44 0800     | 8  | 20 |    | 64  | 8     | 0.2 | ○            |
| G44 1000     | 10 | 22 |    | 72  | 10    | 0.2 | ○            |
| G44 1200     | 12 | 26 |    | 83  | 12    | 0.2 | ○            |
| G44 1400     | 14 |    |    | 83  | 14    | 0.3 | ○            |
| G44 1600     | 16 | 32 |    | 92  | 16    | 0.3 | ○            |
| G44 1800     | 18 |    |    | 92  | 18    | 0.3 | ○            |
| G44 2000     | 20 | 38 |    | 104 | 20    | 0.4 | ○            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

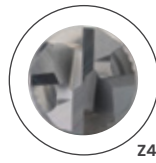
Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

# G47

## NiTiCo 45 DP Roughing Endmill with Recess and Weldon, 4 Flutes

### HPMT



| Order Number | D  | I1 | I2 | L   | d2 h6 | C   | Availability |
|--------------|----|----|----|-----|-------|-----|--------------|
| G47 0600 *   | 6  | 13 | 20 | 57  | 6     | 0.1 | ●            |
| G47 0800     | 8  | 20 | 30 | 64  | 8     | 0.2 | ●            |
| G47 1000 *   | 10 | 22 | 32 | 72  | 10    | 0.2 | ●            |
| G47 1200 *   | 12 | 26 | 37 | 83  | 12    | 0.2 | ●            |
| G47 1400     | 14 |    | 44 | 83  | 14    | 0.3 | ●            |
| G47 1600     | 16 | 32 | 46 | 92  | 16    | 0.3 | ●            |
| G47 1800     | 18 |    | 53 | 92  | 18    | 0.3 | ●            |
| G47 2000     | 20 | 38 | 58 | 104 | 20    | 0.4 | ●            |

\* - DIN 6535

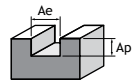
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有存库 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无存库 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

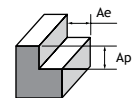


### NiTiCo 45 DP Roughing Endmill, 4 Flutes – G38, G41, G44, G47



| Slotting         | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | –                 |       | –            |       |
| Ap (mm)          | 0.80 × D      |       | 0.80 × D          |       | 0.45 × D          |       | 0.30 × D     |       |
| Ae (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 6                | 115           | 0.034 | 55                | 0.035 | 90                | 0.033 | 35           | 0.030 |
| 8                |               | 0.046 |                   | 0.048 |                   | 0.044 |              | 0.040 |
| 10               |               | 0.059 |                   | 0.061 |                   | 0.056 |              | 0.052 |
| 12               |               | 0.073 |                   | 0.075 |                   | 0.069 |              | 0.065 |
| 14               |               | 0.084 |                   | 0.086 |                   | 0.079 |              | 0.072 |
| 16               |               | 0.095 |                   | 0.096 |                   | 0.089 |              | 0.079 |
| 18               |               | 0.106 |                   | 0.108 |                   | 0.099 |              | 0.089 |
| 20               |               | 0.116 |                   | 0.116 |                   | 0.108 |              | 0.098 |

### NiTiCo 45 DP Roughing Endmill, 4 Flutes – G38, G41, G44, G47



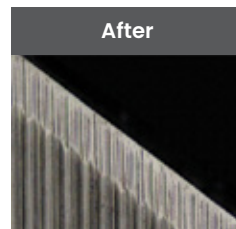
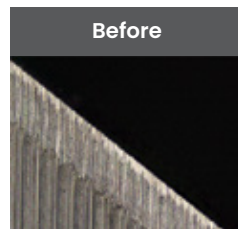
| Side Milling     | P             |       | M                 |       | K                 |       | S            |       |
|------------------|---------------|-------|-------------------|-------|-------------------|-------|--------------|-------|
| Working Material | Carbon Steel  |       | Stainless Steel   |       | Ductile Cast Iron |       | Nickel Alloy |       |
| Properties       | 35 ≤ HRC < 45 |       | Low Machinability |       | –                 |       | –            |       |
| Ap (mm)          | 1.00 × D      |       | 1.00 × D          |       | 1.00 × D          |       | 1.00 × D     |       |
| Ae (mm)          | 0.18 × D      |       | 0.18 × D          |       | 0.18 × D          |       | 0.18 × D     |       |
| D                | Vc            | Fz    | Vc                | Fz    | Vc                | Fz    | Vc           | Fz    |
| 6                | 130           | 0.041 | 65                | 0.043 | 100               | 0.038 | 45           | 0.037 |
| 8                |               | 0.055 |                   | 0.058 |                   | 0.053 |              | 0.051 |
| 10               |               | 0.070 |                   | 0.076 |                   | 0.066 |              | 0.063 |
| 12               |               | 0.088 |                   | 0.096 |                   | 0.083 |              | 0.081 |
| 14               |               | 0.099 |                   | 0.108 |                   | 0.093 |              | 0.092 |
| 16               |               | 0.110 |                   | 0.119 |                   | 0.105 |              | 0.101 |
| 18               |               | 0.121 |                   | 0.129 |                   | 0.115 |              | 0.113 |
| 20               |               | 0.132 |                   | 0.139 |                   | 0.125 |              | 0.122 |

M15



## Supreme Edge Technology

- Uniform cutting edges ensure consistent machining.
- Smooth edge surface enhances coating adhesion and chip flow for superior surface finishing.
- Reduced friction and abrasion resistance contribute to longer tool life.



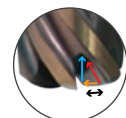
## High Feed Profile

- Enables high-feed machining with thin-chip formation for higher MRR and improved chip evacuation.



### Axial Cutting Force Design

- Directs most cutting forces along the spindle axis, minimizing tool deflection.
- Enhances stability during high-feed machining, even in long overhang setups.



### Central Coolant Hole

- Enhances chip evacuation and thermal control, especially effective in deep cavity or blind hole applications.



## Proven Tough PVD Silicon Based Coating

- Prolong the tool life.
- Increases hardness and higher abrasive wear resistance.
- Smoother chip evacuation.



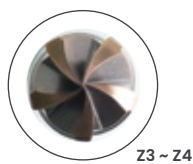
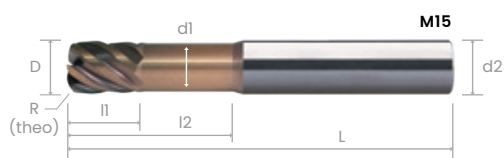
M15

High Feed  
Endmill  
with Recess

M16

Oil Hole  
High Feed  
Endmill  
with Recess

# M15 NiTiCo 45 High Feed Endmill with Recess, 3 - 4 Flutes



| Order Number       | Length     | D   | I1  | I2  | d1   | L  | d2 h6 | R (theo) | Z | Availability |
|--------------------|------------|-----|-----|-----|------|----|-------|----------|---|--------------|
| M15 0100 050 04    | Standard   | 1   | 1   | 3   | 0.9  | 50 | 4     | 0.145    | 3 | ○            |
| M15 0150 050 04    |            | 1.5 | 1.5 | 4.5 | 1.35 | 50 | 4     | 0.215    | 3 | ○            |
| M15 0200 050 04    |            | 2   | 2   | 6   | 1.8  | 50 | 4     | 0.291    | 3 | ○            |
| M15 0250 050 04    |            | 2.5 | 2.5 | 7.5 | 2.25 | 50 | 4     | 0.352    | 3 | ○            |
| M15 0300 050 04    |            | 3   | 3   | 9   | 2.7  | 50 | 4     | 0.436    | 4 | ●            |
| M15 0300 050 04    |            |     |     | 15  | 2.7  | 50 | 4     | 0.436    | 4 | ●            |
| M15 0100 050 04 16 | Extra-Long | 1   | 1   | 16  | 0.9  | 50 | 4     | 0.145    | 3 | ●            |

| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

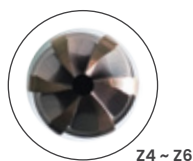
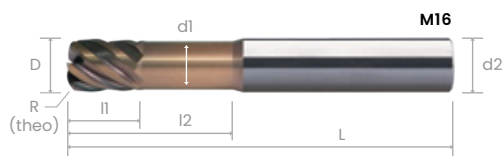
**Material Group** | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
| ●   | ○   | ●   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   |

# M16

## NiTiCo 45 High Feed Endmill with Oil Hole and Recess, 4 – 6 Flutes

HPMT



| Order Number       | Length     | D  | l1 | l2  | d1   | L   | d2 h6 | R (theo) | Z | Availability |
|--------------------|------------|----|----|-----|------|-----|-------|----------|---|--------------|
| M16 0400 050 04    | Standard   | 4  | 4  | 12  | 3.6  | 50  | 4     | 0.673    | 4 | ○            |
| M16 0400 050 04 22 |            |    |    | 22  | 3.6  | 50  | 4     | 0.673    | 4 | ●            |
| M16 0600 060 06    |            | 6  | 6  | 24  | 5.4  | 60  | 6     | 0.755    | 5 | ○            |
| M16 0800 064 08    |            |    |    | 28  | 7.2  | 64  | 8     | 1.379    | 5 | ●            |
| M16 1000 070 10    |            | 10 | 10 | 30  | 9    | 70  | 10    | 1.998    | 6 | ●            |
| M16 1200 075 12    |            |    |    | 30  | 11   | 75  | 12    | 2.103    | 6 | ●            |
| M16 1600 090 16    |            | 16 | 16 | 44  | 14.5 | 90  | 16    | 2.747    | 6 | ○            |
| M16 0600 075 06    | Long       | 6  | 6  | 36  | 5.4  | 75  | 6     | 0.755    | 5 | ○            |
| M16 0800 080 08    |            | 8  | 8  | 40  | 7.2  | 80  | 8     | 1.379    | 5 | ○            |
| M16 1000 100 10    |            | 10 | 10 | 60  | 9    | 100 | 10    | 1.998    | 6 | ○            |
| M16 1200 100 12    |            | 12 | 12 | 55  | 11   | 100 | 12    | 2.103    | 6 | ○            |
| M16 1600 125 16    |            | 16 | 16 | 77  | 14.5 | 125 | 16    | 2.747    | 6 | ○            |
| M16 0600 082 06    | Extra-Long | 6  | 6  | 46  | 5.4  | 82  | 6     | 0.755    | 5 | ○            |
| M16 0800 100 08    |            | 8  | 8  | 56  | 7.2  | 100 | 8     | 1.379    | 5 | ○            |
| M16 1000 125 10    |            | 10 | 10 | 85  | 9    | 125 | 10    | 1.998    | 6 | ○            |
| M16 1200 125 12    |            | 12 | 12 | 80  | 11   | 125 | 12    | 2.103    | 6 | ○            |
| M16 1600 150 16    |            | 16 | 16 | 102 | 14.5 | 150 | 16    | 2.747    | 6 | ○            |

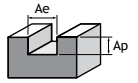
| ● Ex Stock     | ab Lager    | De Stock     | Da Magazzino   | 有库存 |
|----------------|-------------|--------------|----------------|-----|
| ○ Upon Request | auf Anfrage | à la demande | Su ordinazione | 无库存 |

Material Group | Materialgruppe | Groupe Matière | Gruppo Materiali | 材质主类

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N01 | N02 | N03 | K01 | K02 | P01 | P02 | P03 | M01 | M02 | S01 | S02 | S03 | H01 | H02 | O01 | O02 |
| ●   | ○   | ●   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   | ●   | ○   |

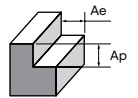


### NiTiCo 45 High Feed Endmill with Recess, Standard Length, 3/6 Flutes – M15, M16



| Slotting         | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.06 × D     |       | 0.06 × D        |       | 0.04 × D          |       | 0.05 × D           |       | 0.04 × D          |       | 0.06 × D       |       | 0.04 × D          |       | 0.03 × D       |       | 0.03 × D     |       |
| Ae (mm)          | 1.00 × D     |       | 1.00 × D        |       | 1.00 × D          |       | 1.00 × D           |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 1                | 240          | 0.032 | 170             | 0.030 | 160               | 0.028 | 140                | 0.016 | 80                | 0.013 | 200            | 0.032 | 140               | 0.030 | 110            | 0.013 | 45           | 0.011 |
| 1.5              |              | 0.048 |                 | 0.045 |                   | 0.043 |                    | 0.025 |                   | 0.021 |                | 0.046 |                   | 0.044 |                | 0.021 |              | 0.017 |
| 2                |              | 0.065 |                 | 0.061 |                   | 0.058 |                    | 0.040 |                   | 0.034 |                | 0.063 |                   | 0.060 |                | 0.034 |              | 0.028 |
| 2.5              |              | 0.084 |                 | 0.079 |                   | 0.075 |                    | 0.051 |                   | 0.043 |                | 0.080 |                   | 0.077 |                | 0.043 |              | 0.036 |
| 3                |              | 0.104 |                 | 0.098 |                   | 0.093 |                    | 0.066 |                   | 0.056 |                | 0.099 |                   | 0.096 |                | 0.056 |              | 0.047 |
| 4                |              | 0.138 |                 | 0.131 |                   | 0.124 |                    | 0.089 |                   | 0.076 |                | 0.132 |                   | 0.128 |                | 0.076 |              | 0.064 |
| 6                |              | 0.208 |                 | 0.197 |                   | 0.187 |                    | 0.144 |                   | 0.122 |                | 0.199 |                   | 0.192 |                | 0.122 |              | 0.104 |
| 8                |              | 0.273 |                 | 0.259 |                   | 0.245 |                    | 0.200 |                   | 0.169 |                | 0.262 |                   | 0.254 |                | 0.168 |              | 0.144 |
| 10               |              | 0.330 |                 | 0.310 |                   | 0.290 |                    | 0.260 |                   | 0.220 |                | 0.310 |                   | 0.300 |                | 0.180 |              | 0.180 |
| 12               |              | 0.420 |                 | 0.390 |                   | 0.370 |                    | 0.310 |                   | 0.260 |                | 0.400 |                   | 0.390 |                | 0.200 |              | 0.220 |
| 16               |              | 0.510 |                 | 0.480 |                   | 0.460 |                    | 0.390 |                   | 0.330 |                | 0.490 |                   | 0.470 |                | 0.220 |              | 0.280 |

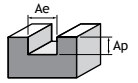
### NiTiCo 45 High Feed Endmill with Recess, Standard Length, 3/6 Flutes – M15, M16



| Side Milling     | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.06 × D     |       | 0.06 × D        |       | 0.04 × D          |       | 0.05 × D           |       | 0.04 × D          |       | 0.06 × D       |       | 0.04 × D          |       | 0.03 × D       |       | 0.03 × D     |       |
| Ae (mm)          | 0.45 × D     |       | 0.45 × D        |       | 0.45 × D          |       | 0.45 × D           |       | 0.45 × D          |       | 0.45 × D       |       | 0.45 × D          |       | 0.40 × D       |       | 0.40 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 1                | 240          | 0.041 | 170             | 0.038 | 160               | 0.036 | 140                | 0.020 | 80                | 0.017 | 200            | 0.040 | 140               | 0.038 | 110            | 0.017 | 45           | 0.014 |
| 1.5              |              | 0.061 |                 | 0.057 |                   | 0.054 |                    | 0.032 |                   | 0.027 |                | 0.058 |                   | 0.056 |                | 0.027 |              | 0.022 |
| 2                |              | 0.082 |                 | 0.077 |                   | 0.073 |                    | 0.051 |                   | 0.043 |                | 0.079 |                   | 0.076 |                | 0.043 |              | 0.036 |
| 2.5              |              | 0.105 |                 | 0.099 |                   | 0.094 |                    | 0.064 |                   | 0.054 |                | 0.100 |                   | 0.097 |                | 0.054 |              | 0.045 |
| 3                |              | 0.130 |                 | 0.123 |                   | 0.117 |                    | 0.083 |                   | 0.070 |                | 0.124 |                   | 0.120 |                | 0.070 |              | 0.059 |
| 4                |              | 0.173 |                 | 0.164 |                   | 0.155 |                    | 0.112 |                   | 0.095 |                | 0.165 |                   | 0.160 |                | 0.095 |              | 0.080 |
| 6                |              | 0.260 |                 | 0.247 |                   | 0.234 |                    | 0.181 |                   | 0.153 |                | 0.249 |                   | 0.241 |                | 0.153 |              | 0.130 |
| 8                |              | 0.342 |                 | 0.324 |                   | 0.307 |                    | 0.250 |                   | 0.212 |                | 0.328 |                   | 0.318 |                | 0.210 |              | 0.180 |
| 10               |              | 0.416 |                 | 0.395 |                   | 0.374 |                    | 0.327 |                   | 0.277 |                | 0.398 |                   | 0.386 |                | 0.230 |              | 0.235 |
| 12               |              | 0.526 |                 | 0.499 |                   | 0.473 |                    | 0.393 |                   | 0.334 |                | 0.504 |                   | 0.489 |                | 0.250 |              | 0.283 |
| 16               |              | 0.644 |                 | 0.611 |                   | 0.579 |                    | 0.496 |                   | 0.421 |                | 0.616 |                   | 0.598 |                | 0.280 |              | 0.357 |

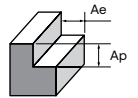


### NiTiCo 45 High Feed Endmill with Recess, Long Length, 4/6 Flutes – M15, M16



| Slotting         | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.04 × D     |       | 0.04 × D        |       | 0.03 × D          |       | 0.04 × D           |       | 0.03 × D          |       | 0.04 × D       |       | 0.03 × D          |       | 0.02 × D       |       | 0.02 × D     |       |
| Ae (mm)          | 1.00 × D     |       | 1.00 × D        |       | 1.00 × D          |       | 1.00 × D           |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 6                | 190          | 0.166 | 140             | 0.157 | 130               | 0.149 | 100                | 0.115 | 65                | 0.097 | 150            | 0.159 | 100               | 0.153 | 90             | 0.097 | 40           | 0.083 |
| 8                |              | 0.218 |                 | 0.207 |                   | 0.196 |                    | 0.160 |                   | 0.135 |                | 0.209 |                   | 0.203 |                | 0.134 |              | 0.115 |
| 10               |              | 0.265 |                 | 0.252 |                   | 0.239 |                    | 0.208 |                   | 0.176 |                | 0.254 |                   | 0.246 |                | 0.147 |              | 0.150 |
| 12               |              | 0.336 |                 | 0.319 |                   | 0.302 |                    | 0.251 |                   | 0.213 |                | 0.322 |                   | 0.312 |                | 0.160 |              | 0.180 |
| 16               |              | 0.412 |                 | 0.390 |                   | 0.370 |                    | 0.316 |                   | 0.268 |                | 0.393 |                   | 0.382 |                | 0.179 |              | 0.228 |

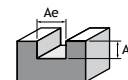
### NiTiCo 45 High Feed Endmill with Recess, Long Length, 4/6 Flutes – M15, M16



| Side Milling     | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.04 × D     |       | 0.04 × D        |       | 0.03 × D          |       | 0.04 × D           |       | 0.03 × D          |       | 0.04 × D       |       | 0.03 × D          |       | 0.02 × D       |       | 0.02 × D     |       |
| Ae (mm)          | 0.45 × D     |       | 0.45 × D        |       | 0.45 × D          |       | 0.45 × D           |       | 0.45 × D          |       | 0.45 × D       |       | 0.45 × D          |       | 0.40 × D       |       | 0.40 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 6                | 190          | 0.208 | 140             | 0.197 | 130               | 0.187 | 100                | 0.144 | 65                | 0.122 | 150            | 0.199 | 100               | 0.192 | 90             | 0.122 | 40           | 0.104 |
| 8                |              | 0.273 |                 | 0.259 |                   | 0.245 |                    | 0.200 |                   | 0.169 |                | 0.262 |                   | 0.254 |                | 0.168 |              | 0.144 |
| 10               |              | 0.332 |                 | 0.316 |                   | 0.299 |                    | 0.261 |                   | 0.221 |                | 0.318 |                   | 0.308 |                | 0.184 |              | 0.188 |
| 12               |              | 0.420 |                 | 0.399 |                   | 0.378 |                    | 0.314 |                   | 0.267 |                | 0.403 |                   | 0.391 |                | 0.200 |              | 0.226 |
| 16               |              | 0.515 |                 | 0.488 |                   | 0.463 |                    | 0.396 |                   | 0.336 |                | 0.492 |                   | 0.478 |                | 0.224 |              | 0.285 |

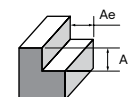


### NiTiCo 45 High Feed Endmill with Recess, Extra-Long Length, 4/6 Flutes – M15, M16



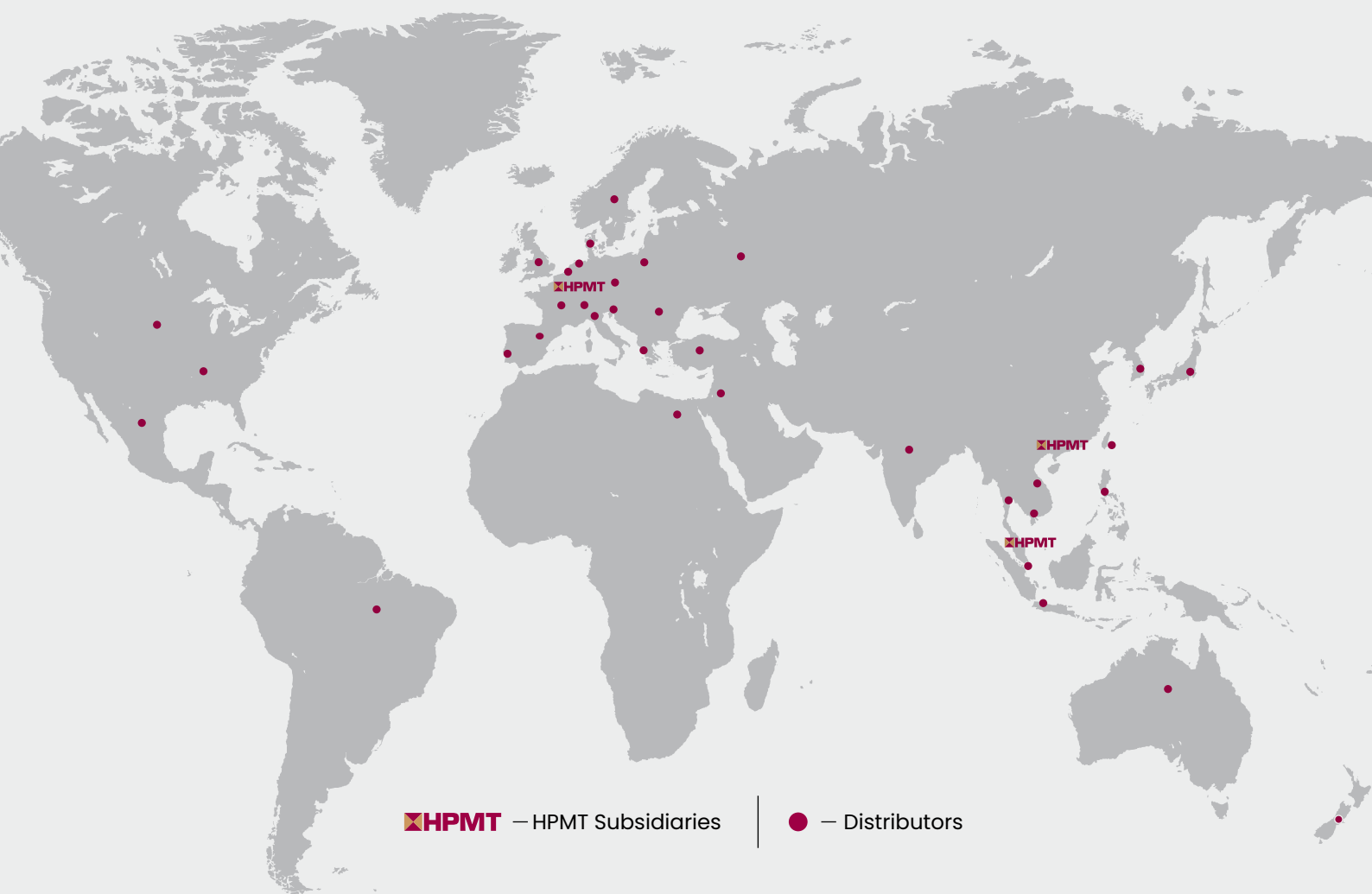
| Slotting         | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.03 × D     |       | 0.03 × D        |       | 0.02 × D          |       | 0.03 × D           |       | 0.02 × D          |       | 0.03 × D       |       | 0.02 × D          |       | 0.01 × D       |       | 0.01 × D     |       |
| Ae (mm)          | 0.45 × D     |       | 0.45 × D        |       | 0.45 × D          |       | 0.45 × D           |       | 0.45 × D          |       | 0.45 × D       |       | 0.45 × D          |       | 0.40 × D       |       | 0.40 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 6                | 140          | 0.104 | 100             | 0.098 | 95                | 0.093 | 75                 | 0.072 | 45                | 0.060 | 110            | 0.099 | 75                | 0.096 | 60             | 0.060 | 30           | 0.052 |
| 8                |              | 0.136 |                 | 0.129 |                   | 0.122 |                    | 0.100 |                   | 0.084 |                | 0.131 |                   | 0.127 |                | 0.084 |              | 0.072 |
| 10               |              | 0.166 |                 | 0.157 |                   | 0.149 |                    | 0.130 |                   | 0.110 |                | 0.159 |                   | 0.154 |                | 0.092 |              | 0.093 |
| 12               |              | 0.210 |                 | 0.199 |                   | 0.188 |                    | 0.156 |                   | 0.133 |                | 0.201 |                   | 0.195 |                | 0.100 |              | 0.112 |
| 16               |              | 0.257 |                 | 0.244 |                   | 0.231 |                    | 0.198 |                   | 0.168 |                | 0.246 |                   | 0.239 |                | 0.112 |              | 0.142 |

### NiTiCo 45 High Feed Endmill with Recess, Extra-Long Length, 4/6 Flutes – M15, M16



| Side Milling     | P            |       |                 |       |                   |       | M                  |       |                   |       | K              |       |                   |       | S              |       |              |       |
|------------------|--------------|-------|-----------------|-------|-------------------|-------|--------------------|-------|-------------------|-------|----------------|-------|-------------------|-------|----------------|-------|--------------|-------|
| Working Material | Carbon Steel |       | Alloy Steel     |       | Prehardened Steel |       | Stainless Steel    |       | Stainless Steel   |       | Grey Cast Iron |       | Ductile Cast Iron |       | Titanium Alloy |       | Nickel Alloy |       |
| Properties       | -            |       | 520 < Rm < 1200 |       | 35 ≤ HRC < 45     |       | High Machinability |       | Low Machinability |       | -              |       | -                 |       | -              |       | -            |       |
| Ap (mm)          | 0.03 × D     |       | 0.03 × D        |       | 0.02 × D          |       | 0.03 × D           |       | 0.02 × D          |       | 0.03 × D       |       | 0.02 × D          |       | 0.01 × D       |       | 0.01 × D     |       |
| Ae (mm)          | 1.00 × D     |       | 1.00 × D        |       | 1.00 × D          |       | 1.00 × D           |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D          |       | 1.00 × D       |       | 1.00 × D     |       |
| D                | Vc           | Fz    | Vc              | Fz    | Vc                | Fz    | Vc                 | Fz    | Vc                | Fz    | Vc             | Fz    | Vc                | Fz    | Vc             | Fz    | Vc           | Fz    |
| 6                | 140          | 0.130 | 100             | 0.123 | 95                | 0.117 | 75                 | 0.072 | 45                | 0.060 | 110            | 0.099 | 75                | 0.096 | 60             | 0.060 | 30           | 0.052 |
| 8                |              | 0.171 |                 | 0.162 |                   | 0.153 |                    | 0.100 |                   | 0.084 |                | 0.131 |                   | 0.127 |                | 0.084 |              | 0.072 |
| 10               |              | 0.208 |                 | 0.197 |                   | 0.187 |                    | 0.130 |                   | 0.110 |                | 0.159 |                   | 0.154 |                | 0.092 |              | 0.093 |
| 12               |              | 0.263 |                 | 0.249 |                   | 0.236 |                    | 0.156 |                   | 0.133 |                | 0.201 |                   | 0.195 |                | 0.100 |              | 0.112 |
| 16               |              | 0.322 |                 | 0.305 |                   | 0.289 |                    | 0.198 |                   | 0.168 |                | 0.246 |                   | 0.239 |                | 0.112 |              | 0.142 |





 — HPMT Subsidiaries

 — Distributors



#### HPMT INDUSTRIES SDN BHD

5, Jalan Sungai Kayu Ara 32/39,  
Taman Berjaya, Seksyen 32,  
40460 Shah Alam,  
Selangor Darul Ehsan, Malaysia

**T** +603 5870 0098

**E** [info@hpmt-industries.com](mailto:info@hpmt-industries.com)

**W** [www.hpmt-industries.com](http://www.hpmt-industries.com)

#### HERROZ SDN BHD

5, Jalan Sungai Kayu Ara 32/39,  
Taman Berjaya, Seksyen 32,  
40460 Shah Alam,  
Selangor Darul Ehsan, Malaysia

**T** +603 5870 0098 (Selangor)

+607 351 9910 (Johor)

**F** +607 355 2461 (Johor)

**E** [info@herroz.com](mailto:info@herroz.com)

**W** [www.herroz.com](http://www.herroz.com)

#### HPMT (SHEN ZHEN) LTD

1223, Kerry Centre  
2008 Renminnan Road  
Shen Zhen China

**T** +86-755 2518 1722

**F** +86-755 2518 1728

**E** [info@hpmt-industries.com.cn](mailto:info@hpmt-industries.com.cn)

**W** [www.hpmt-industries.com.cn](http://www.hpmt-industries.com.cn)

#### HPMT DEUTSCHLAND GMBH

Vorkamp 6, D-23879 Mölln

**T** +49 (0) 45 42 / 84 21 10

**F** +49 (0) 45 42 / 84 21 08

**E** [info@hpmt-deutschland.de](mailto:info@hpmt-deutschland.de)

**W** [www.hpmt-deutschland.de](http://www.hpmt-deutschland.de)