

Advanced Engineering

MMC Hitachi Tool

No. 404.3

MINIATURE

Miniature
Micro Grain Carbide End Mills
D 0.2 mm ~ D 6.0 mm (HSC-HPC-HHG)



MMC Hitachi Tool Engineering Europe GmbH
www.high-speed-cutting.com

Ball Type

3D-Cut

Hyper Ball Short
HPBS



D
1 – 6 mm



3

Hyper Ball
HYPB



0.2 – 6 mm



4

Hyper Ball Long Neck
HPBLN



0.5 – 6 mm

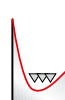


5

Epoch Ball Pencil Neck
EPBPN



1 – 6 mm



6

Square Type

Epoch21

Hyper Square
HYPS



0.2 – 6 mm

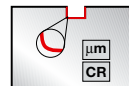


7

Hyper Square Corner Radius
HYPS-00



0.5 – 3 mm

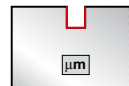


8

Hyper Square Long Neck
HPSLN



0.5 – 6 mm

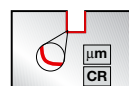


9

Hyper Square Long Neck Corner Radius
HPSLN-00



0.5 – 4 mm



10

Epoch Power Mill Long Shank
EPPLS



3 – 5 mm



11

Epoch Power Mill Long Shank Corner Radius
EPPLS-00

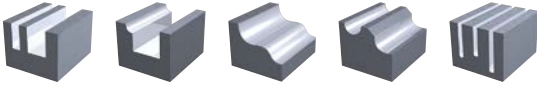


11

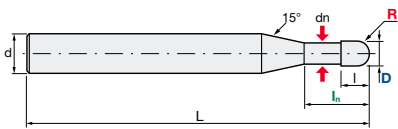
Ball Type

HPBS | Hyper Ball Short

| | | | | | |
|----------------------------|-----------------------------|-------------------------|------------------|-----------------------|--------------------------|
| V max High Speed | ▽▽ Semi-Finishing | ▽▽▽ Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|-----------------------------|-------------------------|------------------|-----------------------|--------------------------|



A



B



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|----|-------------|
| CR | ± 0.005 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

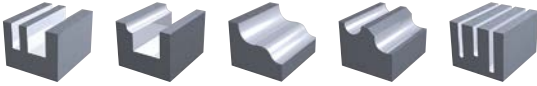
| ID Code | Item Code | Stock | Z | R | D | l _n | l | dn | L | d | Type |
|---------|------------|-------|---|-----|---|----------------|-----|------|----|---|------|
| CC132 | HPBS-2010C | ■ | 2 | 0.5 | 1 | 2 | 1.3 | 0.95 | 50 | 6 | A |
| CC133 | HPBS-2020C | | | 1 | 2 | 3.5 | 2.5 | 1.95 | | | |
| CC134 | HPBS-2030C | | | 1.5 | 3 | 5 | 4 | 2.9 | | | |
| CC135 | HPBS-2040C | | | 2 | 4 | 6 | 5 | 3.9 | | | |
| CC136 | HPBS-2050C | | | 2.5 | 5 | 7 | 6 | 4.9 | | | |
| CC137 | HPBS-2060C | | | 3 | 6 | 9 | 7.5 | 5.9 | | | B |

■ = Stock | Germany

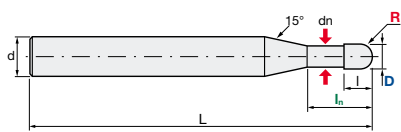
Ball Type

HYPB | Hyper Ball

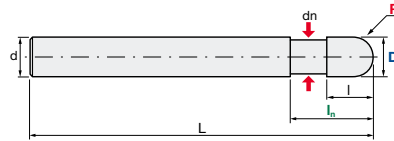
| | | | | | |
|----------------------------|-----------------------------|-------------------------|------------------|-----------------------|--------------------------|
| V max High Speed | ▽▽ Semi-Finishing | ▽▽▽ Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|-----------------------------|-------------------------|------------------|-----------------------|--------------------------|



A



B



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|----|-------------|
| CR | ± 0.005 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

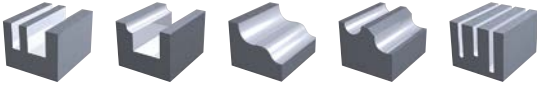
| ID Code | Item Code | Stock | Z | R | D | l _n | l | dn | L | d | Type | |
|---------|------------|-------|---|------|-----|----------------|-----|------|----|---|------|---|
| CC086 | HYPB-2002C | ■ | 2 | 0.1 | 0.2 | - | 0.3 | - | 50 | 6 | A | |
| CC087 | HYPB-2003C | | | 0.15 | 0.3 | | 0.4 | | | | | |
| CC026 | HYPB-2004C | | | 0.2 | 0.4 | | 0.5 | | | | | |
| CC088 | HYPB-2005C | | | 0.25 | 0.5 | 1.6 | 0.6 | 0.45 | | | | |
| CC027 | HYPB-2006C | | | 0.3 | 0.6 | 1.7 | 0.7 | 0.55 | | | | |
| CC089 | HYPB-2008C | | | 0.4 | 0.8 | 2.5 | 1 | 0.75 | | | | |
| CC028 | HYPB-2010C | | | 0.5 | 1 | 3.3 | 1.3 | 0.95 | | | | |
| CC090 | HYPB-2012C | | | 0.6 | 1.2 | 3.5 | 1.5 | 1.15 | | | | |
| CC091 | HYPB-2014C | | | 0.7 | 1.4 | 3.8 | 1.8 | 1.35 | | | | |
| CC029 | HYPB-2015C | | | 0.75 | 1.5 | 4.9 | 1.9 | 1.45 | | | | |
| CC092 | HYPB-2016C | | | 0.8 | 1.6 | 5 | 2 | 1.55 | | | | |
| CC093 | HYPB-2018C | | | 0.9 | 1.8 | 5.3 | 2.3 | 1.75 | | | | |
| CC030 | HYPB-2020C | | | 1 | 2 | 5.5 | 2.5 | 1.95 | | | | |
| CC094 | HYPB-2025C | | | 1.25 | 2.5 | 6 | 3 | 2.4 | | | | |
| CC031 | HYPB-2030C | | | 1.5 | 3 | 8 | 4 | 2.9 | | | | |
| CC095 | HYPB-2035C | | | 1.75 | 3.5 | 8.5 | 4.5 | 3.4 | | | | |
| CC032 | HYPB-2040C | | | 2 | 4 | 10 | 5 | 3.9 | | | | |
| CC033 | HYPB-2050C | | | 2.5 | 5 | 11 | 6 | 4.9 | | | | |
| CC034 | HYPB-2060C | | | 3 | 6 | 12.5 | 7.5 | 5.9 | | | | B |

■ = Stock | Germany

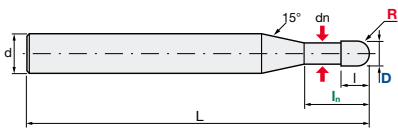
Ball Type

HPBLN | Hyper Ball Long Neck

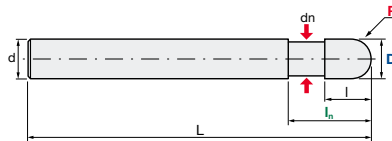
| | | | | | |
|----------------------------|----------------|-----------|------------------|----------------|--------------------------|
| V max High Speed | Semi-Finishing | Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|----------------|-----------|------------------|----------------|--------------------------|



A



B



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|---|-------------|
| R | ± 0.005 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

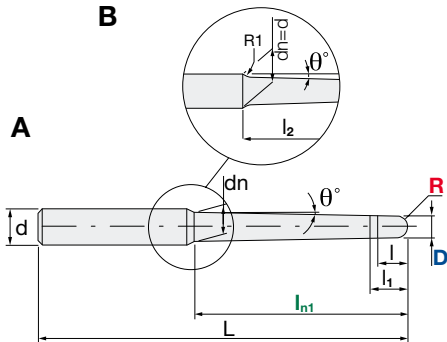
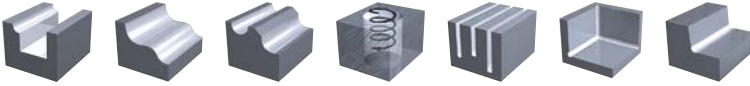
| ID Code | Item Code | Stock | Z | R | D | I _n | I | dn | L | d | Type |
|---------|-------------|-------|---|------|-----|----------------|-----|------|----|---|------|
| CC138 | HPBLN-2005C | ■ | 2 | 0.25 | 0.5 | 2.5 | 0.6 | 0.45 | 60 | 6 | A |
| CC139 | HPBLN-2006C | | | 0.3 | 0.6 | 3 | 0.7 | 0.55 | | | |
| CC140 | HPBLN-2008C | | | 0.4 | 0.8 | 4 | 1 | 0.75 | | | |
| CC141 | HPBLN-2010C | | | 0.5 | 1 | 5 | 1.3 | 0.95 | | | |
| CC142 | HPBLN-2012C | | | 0.6 | 1.2 | 6 | 1.5 | 1.15 | | | |
| CC143 | HPBLN-2014C | | | 0.7 | 1.4 | 7 | 1.8 | 1.35 | | | |
| CC144 | HPBLN-2015C | | | 0.75 | 1.5 | 7.5 | 1.9 | 1.45 | | | |
| CC145 | HPBLN-2016C | | | 0.8 | 1.6 | 8 | 2 | 1.55 | | | |
| CC146 | HPBLN-2018C | | | 0.9 | 1.8 | 9 | 2.3 | 1.75 | | | |
| CC147 | HPBLN-2020C | | | 1 | 2 | 10 | 2.5 | 1.95 | | | |
| CC148 | HPBLN-2025C | | | 1.25 | 2.5 | 12.5 | 3 | 2.4 | | | |
| CC149 | HPBLN-2030C | | | 1.5 | 3 | 15 | 4 | 2.9 | | | |
| CC150 | HPBLN-2035C | | | 1.75 | 3.5 | 17.5 | 4.5 | 3.4 | | | |
| CC151 | HPBLN-2040C | | | 2 | 4 | 20 | 5 | 3.9 | | | |
| CC152 | HPBLN-2050C | | | 2.5 | 5 | 25 | 6 | 4.9 | | | |
| CC153 | HPBLN-2060C | 3 | 6 | 30 | 7.5 | 5.9 | 80 | B | | | |

■ = Stock | Germany

Ball Type

EPBPN | Epoch Ball Pencil Neck

| | | | | |
|----------------------------|-------------------------|------------------|------------------------------|--------------------------|
| V max High Speed | ▽▽▽ Finishing | HRC 65 | ▬▬▬ Rib. Miniature | No. of Teeth 2 |
|----------------------------|-------------------------|------------------|------------------------------|--------------------------|



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|---|-------------|
| R | ± 0.005 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

| ID Code | Item Code | Stock | Z | R | D | l _{n1} | θ° | l | l ₁ | dn | L | d | Type |
|---------|---------------|-------|---|------|-------|-----------------|-------|-----|----------------|-----|-----|---|------|
| EP186 | EPBPN-2010-15 | ■ | 2 | 0.5 | 1 | 20 | 1°30' | 2.5 | 4 | 1.8 | 60 | 6 | A |
| EP187 | EPBPN-2010-30 | | | | | 40 | 3° | | | 4.8 | 80 | | |
| EP188 | EPBPN-2010-50 | | | | | 20 | 5° | | | 3.8 | 60 | | |
| EP189 | EPBPN-2020-15 | | | 1 | 2 | 20 | 1°30' | 5 | 7 | 2.7 | 60 | | |
| EP190 | EPBPN-2020-30 | | | | | 40 | 3° | | | 5.5 | 80 | | |
| EP191 | EPBPN-2020-50 | | | | | 20 | 5° | | | 4.3 | 60 | | |
| EP192 | EPBPN-2030-15 | | | 1.5 | 3 | 50 | 1°30' | 8 | 10 | 5.1 | 90 | 8 | B |
| EP193 | EPBPN-2030-30 | | | | | 30 | 3° | | | 70 | | | |
| EP194 | EPBPN-2040-15 | | | | | 48.2 | 1°30' | | | 6 | 70 | | |
| EP195 | EPBPN-2040-30 | | | 2 | 4 | 29.1 | 3° | 10 | 12 | 7.5 | 110 | 8 | A |
| EP196 | EPBPN-2050-15 | | | | | 60 | 1°30' | | | 90 | | | |
| EP197 | EPBPN-2050-30 | | | | | 40.6 | 3° | | | 110 | | | |
| EP198 | EPBPN-2060-15 | 2.5 | 5 | 52.2 | 1°30' | 12 | 14 | 8 | 110 | 8 | B | | |
| EP199 | EPBPN-2060-30 | | | 33.1 | 3° | | | 90 | | | | | |

■ = Stock | Germany

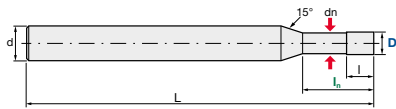
Square Type

HYPS | Hyper Square

| | | | | |
|----------------------------|------------------|------------------|-----------------------|--------------------------|
| V max High Speed | Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|------------------|------------------|-----------------------|--------------------------|



A



B



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|---|------------|
| D | 0/-0.015mm |
| d | 0/-0.005mm |

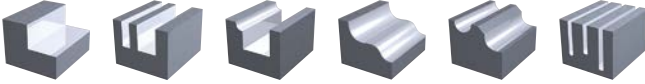
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|---------|-------------------|-------|------|-----|-------|-----|------|----|---|------|
| CC096 | HYPS-2002C | ■ | 2 | 0.2 | - | 0.3 | - | 50 | 6 | A |
| CC035 | HYPS-2003C | | | 0.3 | | 0.4 | | | | |
| CC097 | HYPS-2004C | | | 0.4 | | 0.5 | | | | |
| CC036 | HYPS-2005C | | | 0.5 | 1.6 | 0.6 | 0.45 | | | |
| CC037 | HYPS-2006C | | | 0.6 | 1.7 | 0.7 | 0.55 | | | |
| CC098 | HYPS-2008C | | | 0.8 | 2.5 | 1 | 0.75 | | | |
| CC038 | HYPS-2010C | | | 1 | 3.3 | 1.3 | 0.95 | | | |
| CC099 | HYPS-2012C | | | 1.2 | 3.5 | 1.5 | 1.15 | | | |
| CC100 | HYPS-2014C | | | 1.4 | 3.8 | 1.8 | 1.35 | | | |
| CC039 | HYPS-2015C | | | 1.5 | 4.9 | 1.9 | 1.45 | | | |
| CC101 | HYPS-2016C | | | 1.6 | 5 | 2 | 1.55 | | | |
| CC102 | HYPS-2018C | | | 1.8 | 5.3 | 2.3 | 1.75 | | | |
| CC040 | HYPS-2020C | | | 2 | 5.5 | 2.5 | 1.95 | | | |
| CC103 | HYPS-2025C | | | 2.5 | 6 | 3 | 2.4 | | | |
| CC104 | HYPS-2030C | | | 3 | 8 | 4 | 2.9 | | | |
| CC105 | HYPS-2035C | | | 3.5 | 8.5 | 4.5 | 3.4 | | | |
| CC106 | HYPS-2040C | | | 4 | 10 | 5 | 3.9 | | | |
| CC107 | HYPS-2050C | | | 5 | 11 | 6 | 4.9 | | | |
| CC108 | HYPS-2060C | 6 | 12.5 | 7.5 | 5.9 | B | | | | |

■ = Stock | Germany

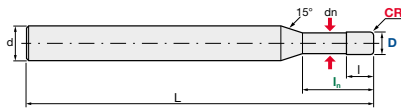
Square Type

HYPS-00 | Hyper Square Corner Radius

| | | | | |
|----------------------------|---------------|------------------|--------------------|--------------------------|
| V max High Speed | Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|---------------|------------------|--------------------|--------------------------|



A



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|---|-------------|
| R | ± 0.01 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

| ID Code | Item Code | Stock | Z | CR | D | I_n | l | dn | L | d | Type |
|---------|---------------|-------|---|-----|-----|-------|-----|------|----|---|------|
| CC188 | HYPS-2005-01C | ■ | 2 | 0.1 | 0.5 | 1.6 | 0.6 | 0.45 | 50 | 6 | A |
| CC189 | HYPS-2010-02C | | | | 1 | 3.3 | 1.3 | 0.95 | | | |
| CC190 | HYPS-2015-02C | | | 0.2 | 1.5 | 4.9 | 1.9 | 1.45 | | | |
| CC191 | HYPS-2020-02C | | | | 2 | 5.5 | 2.5 | 1.95 | | | |
| CC192 | HYPS-2020-05C | | | 0.5 | | | | | | | |
| CC193 | HYPS-2025-02C | | | 0.2 | 2.5 | 6 | 3 | 2.4 | | | |
| CC194 | HYPS-2025-05C | | | 0.5 | | | | | | | |
| CC195 | HYPS-2030-02C | | | 0.2 | 3 | 8 | 4 | 2.9 | | | |
| CC196 | HYPS-2030-05C | 0.5 | | | | | | | | | |

■ = Stock | Germany

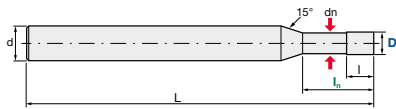
Square Type

HPSLN | Hyper Square Long Neck

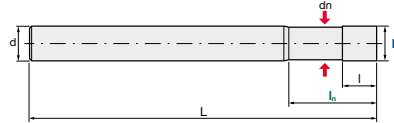
| | | | | |
|----------------------------|------------------|------------------|-----------------------|--------------------------|
| V max High Speed | Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|------------------|------------------|-----------------------|--------------------------|



A



B



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|---|------------|
| D | 0/-0.015mm |
| d | 0/-0.005mm |

| ID Code | Item Code | Stock | Z | D | l_n | l | dn | L | d | Type | |
|---------|-------------|-------|---|-----|-------|-----|------|----|---|------|---|
| CC154 | HPSLN-2005C | ■ | 2 | 0.5 | 2.5 | 0.6 | 0.45 | 60 | 6 | A | |
| CC155 | HPSLN-2006C | | | 0.6 | 3 | 0.7 | 0.55 | | | | |
| CC156 | HPSLN-2008C | | | 0.8 | 4 | 1 | 0.75 | | | | |
| CC157 | HPSLN-2010C | | | 1 | 5 | 1.3 | 0.95 | | | | |
| CC158 | HPSLN-2012C | | | 1.2 | 6 | 1.5 | 1.15 | | | | |
| CC159 | HPSLN-2014C | | | 1.4 | 7 | 1.8 | 1.35 | | | | |
| CC160 | HPSLN-2015C | | | 1.5 | 7.5 | 1.9 | 1.45 | | | | |
| CC161 | HPSLN-2016C | | | 1.6 | 8 | 2 | 1.55 | | | | |
| CC162 | HPSLN-2018C | | | 1.8 | 9 | 2.3 | 1.75 | | | | |
| CC163 | HPSLN-2020C | | | 2 | 10 | 2.5 | 1.95 | | | | |
| CC164 | HPSLN-2025C | | | 2.5 | 12.5 | 3 | 2.4 | | | | |
| CC165 | HPSLN-2030C | | | 3 | 15 | 4 | 2.9 | | | | |
| CC166 | HPSLN-2035C | | | 3.5 | 17.5 | 4.5 | 3.4 | | | | |
| CC167 | HPSLN-2040C | | | 4 | 20 | 5 | 3.9 | | | | |
| CC168 | HPSLN-2050C | | | 5 | 25 | 6 | 4.9 | | | | |
| CC169 | HPSLN-2060C | | | 6 | 30 | 7.5 | 5.9 | 80 | | | B |

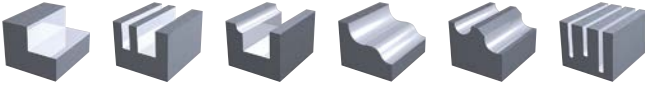
■ = Stock | Germany



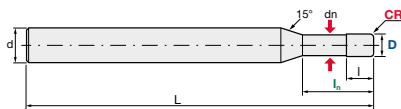
Square Type

HPSLN-00 | Hyper Square Long Neck Corner Radius

| | | | | |
|----------------------------|---------------|------------------|--------------------|--------------------------|
| V max High Speed | Finishing | HRC 65 | Rib. Miniature | No. of Teeth 2 |
|----------------------------|---------------|------------------|--------------------|--------------------------|



A



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|

| | |
|----|-------------|
| CR | ± 0.01 mm |
| D | 0/-0.015 mm |
| d | 0/-0.005 mm |

| ID Code | Item Code | Stock | Z | CR | D | I_n | l | dn | L | d | Type |
|---------|----------------|-------|---|-----|-----|-------|-----|------|----|---|------|
| CC172 | HPSLN-2005-01C | ■ | 2 | 0.1 | 0.5 | 2.5 | 0.6 | 0.45 | 60 | 6 | A |
| CC173 | HPSLN-2010-02C | | | 0.2 | 1 | 5 | 1.3 | 0.95 | | | |
| CC174 | HPSLN-2015-02C | | | 0.2 | 1.5 | 7.5 | 1.9 | 1.45 | | | |
| CC175 | HPSLN-2020-02C | | | 0.5 | 2 | 10 | 2.5 | 1.95 | | | |
| CC176 | HPSLN-2020-05C | | | 0.2 | 2.5 | 12.5 | 3 | 2.4 | | | |
| CC177 | HPSLN-2025-02C | | | 0.2 | | | | | | | |
| CC178 | HPSLN-2025-05C | | | 0.5 | 3 | 15 | 4 | 2.9 | | | |
| CC179 | HPSLN-2030-02C | | | 0.2 | | | | | | | |
| CC180 | HPSLN-2030-05C | 0.5 | | | | | 80 | | | | |

■ = Stock | Germany

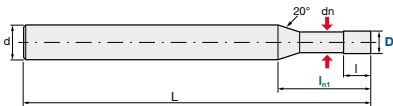
Square Type

EPPLS | Epoch Power Mill Long Shank

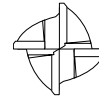
| | | | |
|----------------|-----------|------------------|--------------------------|
| Semi-Finishing | Finishing | HRC 60 | No. of Teeth 4 |
|----------------|-----------|------------------|--------------------------|



A



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|



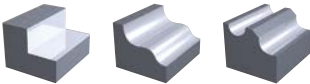
| | |
|-------------|-----------------|
| D 3.0 | -0.014/-0.028mm |
| D 4.0~D 5.0 | -0.020/-0.038mm |
| d | h6 |

| ID Code | Item Code | Stock | Z | D | In1 | l | dn | L | d | Type |
|---------|-------------------|-------|---|---|------|-----|-----|-----|---|------|
| EP156 | EPPLS-4030 | ■ | 4 | 3 | 10.5 | 4.5 | 2.9 | 80 | 6 | A |
| EP157 | EPPLS-4040 | | | 4 | 14 | 6 | 3.8 | | | |
| EP158 | EPPLS-4050 | | | 5 | 17.5 | 7.5 | 4.8 | 100 | | |

■ = Stock | Germany

EPPLS-00 | Epoch Power Mill Long Shank Corner Radius

| | | | |
|----------------|-----------|------------------|--------------------------|
| Semi-Finishing | Finishing | HRC 60 | No. of Teeth 4 |
|----------------|-----------|------------------|--------------------------|



A



| | | |
|-------------------------------|-----------------------------|-------------------------------|
| Carbide Micro Grain | C Century Coating | Rake Angle Positive |
|-------------------------------|-----------------------------|-------------------------------|



| | |
|-------------|-----------------|
| CR | ± 0.015mm |
| D 3.0 | -0.014/-0.028mm |
| D 4.0~D 5.0 | -0.020/-0.038mm |
| d | h6 |

| ID Code | Item Code | Stock | Z | CR | D | In1 | l | dn | L | d | Type |
|---------|----------------------|-------|---|-----|---|------|-----|-----|-----|---|------|
| EP164 | EPPLS-4030-02 | ■ | 4 | 0.2 | 3 | 10.5 | 4.5 | 2.9 | 80 | 6 | A |
| EP165 | EPPLS-4030-05 | | | 0.5 | | | | | | | |
| EP166 | EPPLS-4040-02 | | | 0.2 | 4 | 14 | 6 | 3.8 | | | |
| EP167 | EPPLS-4040-05 | | | 0.5 | | | | | | | |
| EP168 | EPPLS-4050-02 | | | 0.2 | 5 | 17.5 | 7.5 | 4.8 | 100 | | |
| EP169 | EPPLS-4050-05 | | | 0.5 | | | | | | | |

■ = Stock | Germany

Always up to date: Please check our P50 QuickFinder



Product Range

Solid Carbide End Mills



Indexable Milling Tools



WHNSB Drills



Milling Chucks



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