# ALU-POWER HPC END MILLS

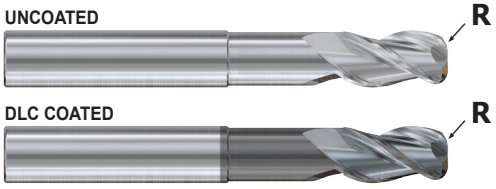
UNCOATED **E5H25 SERIES**
DLC COATED **JAH25 SERIES**
**PLAIN SHANK**

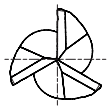
## CARBIDE, 3 FLUTE 37° HELIX CORNER RADIUS with EXTENDED NECK

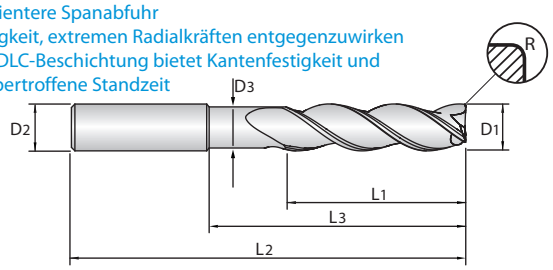
**VOLLHARTMETALL, 3 SCHNEIDEN 37° ECKRADIUS MIT VERLÄNGERTEM HALS**
**FRAISE CARBURE, 3 DENTS, TORIQUE, HÉLICE 37°, DÉTALONNÉE, EXTRA-COURTE**
**3 TAGLIENTI , ELICA 37°, SPIGOLO RAGGIATO SCARICATA**

- Balanced cutting with less vibration
- Ability to run at higher speeds with less heat in aluminum
- More efficient chip evacuation
- Ability to counteract extreme radial forces
- DLC Coating provides edge strength and unsurpassed tool life

- Ausgewogenes Fräsen, mit weniger Vibrationen
- Höhere Schnittgeschwindigkeiten möglich bei weniger Wärmeeinbringung in den Werkstoff Aluminium
- Effizientere Spanabfuhr
- Fähigkeit, extremen Radialkräften entgegenzuwirken
- Die DLC-Beschichtung bietet Kantenfestigkeit und unübertroffene Standzeit






CARBIDE | 3 | 37° | PLAIN | UNCOATED | DLC

p.C518

Recommended ToolHolder
Plain Shank
HYDRAULIC CHUCK
SHRINK FIT HOLDER
POWER MILLING CHUCK
ER COLLET CHUCK
SK SLIM CHUCK

Unit : mm

| EDP No. | | Corner Radius | Mill Diameter | Shank Diameter | Length of Cut | Length Below Shank | Overall Length | Neck Diameter |
|---|---|---|---|---|---|---|---|---|
| UNCOATED | DLC | R | D1 | D2 | L1 | L3 | L2 | D3 |
| **E5H25060** | **JAH25060** | R0.5 | **6.0** | 6 | 10 | 20 | 63 | 5.7 |
| **E5H25901** | **JAH25901** | R1.0 | **6.0** | 6 | 10 | 20 | 63 | 5.7 |
| **E5H25902** | **JAH25902** | R0.5 | **6.0** | 6 | 13 | 30 | 72 | 5.7 |
| **E5H25903** | **JAH25903** | R1.0 | **6.0** | 6 | 13 | 30 | 72 | 5.7 |
| **E5H25080** | **JAH25080** | R0.3 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25904** | **JAH25904** | R0.5 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25905** | **JAH25905** | R0.8 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25906** | **JAH25906** | R1.0 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25907** | **JAH25907** | R1.2 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25908** | **JAH25908** | R1.5 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25909** | **JAH25909** | R1.6 | **8.0** | 8 | 12 | 25 | 75 | 7.4 |
| **E5H25100** | **JAH25100** | R0.3 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25910** | **JAH25910** | R0.5 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25911** | **JAH25911** | R0.8 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25912** | **JAH25912** | R1.0 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25913** | **JAH25913** | R1.2 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25914** | **JAH25914** | R1.5 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25915** | **JAH25915** | R1.6 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |

▶ NEXT PAGE

| Mill Diameter Tolerences (mm) | | Shank Diameter Tolerance |
|---|---|---|
| Diameter | Tolerance | |
| Up to 3 | +0/-0.006 | h5 |
| Over 3 ~ up to 6 | +0/-0.008 | |
| Over 6 ~ up to 10 | +0/-0.009 | |
| Over 10 ~ up to 18 | +0/-0.011 | |
| Over 18 ~ up to 25 | +0/-0.013 | |

◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | | M | | | K | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Non-alloy steel | | | | | Low alloy steel | | | | High alloyed steel, and tool steel | | Stainless steel | | | Grey cast iron | | Nodular cast iron | | Malleable cast iron | |
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| HRc | | 13 | 25 | 28 | 32 | 10 | 29 | 32 | 38 | 15 | 35 | 15 | 23 | 10 | 10 | 26 | 3 | 25 | | 21 |
| HB | 125 | 190 | 250 | 270 | 300 | 180 | 275 | 300 | 350 | 200 | 325 | 200 | 240 | 180 | 180 | 260 | 160 | 250 | 130 | 230 |
| Recommend | | | | | | | | | | | | | | | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Aluminum-wrought alloy | | Aluminum-cast, alloyed | | | Copper and Copper Alloys (Bronze / Brass) | | | Non Metallic Materials | | Heat Resistant Super Alloys | | | | | Titanium Alloys | | Hardened steel | | Chilled Cast Iron | Hardened Cast Iron |
| VDI 3323 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| HRc | | | | | | | | | | | 15 | 30 | 25 | 38 | 34 | | | 55 | 60 | 42 | 55 |
| HB | 60 | 100 | 75 | 90 | 130 | 110 | 90 | 100 | | | 200 | 280 | 250 | 350 | 320 | 400 Rm | 1050 Rm | 550 | 630 | 400 | 550 |
| Recommend | ◎ | ◎ | ◎ | ◎ | ○ | ○ | ○ | ○ | ○ | | | | | | | | | | | | |

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DLC COATED **JAH25** SERIES
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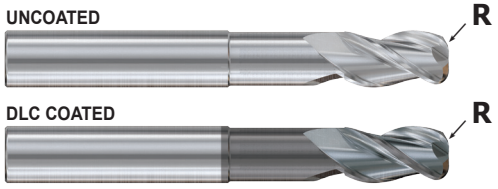


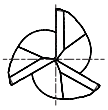

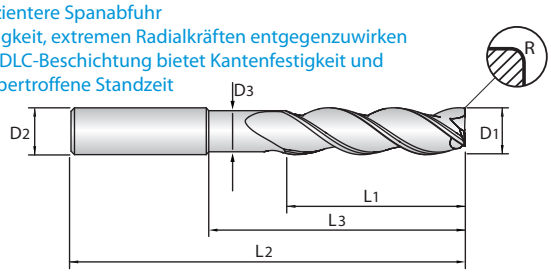


CARBIDE | 3 | 37° | PLAIN | UNCOATED | DLC

p.C518

Recommended ToolHolder
Plain Shank
HYDRAULIC CHUCK
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POWER MILLING CHUCK
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Unit : mm

| EDP No. | | Corner Radius | Mill Diameter | Shank Diameter | Length of Cut | Length Below Shank | Overall Length | Neck Diameter |
|---|---|---|---|---|---|---|---|---|
| UNCOATED | DLC | R | $D_1$ | $D_2$ | $L_1$ | $L_3$ | L2 | D3 |
| **E5H25916** | **JAH25916** | R2.4 | **10.0** | 10 | 14 | 35 | 100 | 9.2 |
| **E5H25120** | **JAH25120** | R0.5 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25917** | **JAH25917** | R0.8 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25918** | **JAH25918** | R1.0 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25919** | **JAH25919** | R1.2 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25920** | **JAH25920** | R1.5 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25921** | **JAH25921** | R1.6 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25922** | **JAH25922** | R2.0 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25923** | **JAH25923** | R2.4 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25924** | **JAH25924** | R2.5 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25925** | **JAH25925** | R3.0 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25926** | **JAH25926** | R4.0 | **12.0** | 12 | 16 | 40 | 100 | 11.0 |
| **E5H25140** | **JAH25140** | R1.0 | **14.0** | 14 | 18 | 45 | 125 | 13.0 |
| **E5H25927** | **JAH25927** | R2.0 | **14.0** | 14 | 18 | 45 | 125 | 13.0 |
| **E5H25928** | **JAH25928** | R3.0 | **14.0** | 14 | 18 | 45 | 125 | 13.0 |
| **E5H25929** | **JAH25929** | R4.0 | **14.0** | 14 | 18 | 45 | 125 | 13.0 |
| **E5H25160** | **JAH25160** | R0.8 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25930** | **JAH25930** | R1.2 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |

▶ NEXT PAGE

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|---|---|---|
| Diameter | Tolerance | |
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| HRc | | 13 | 25 | 28 | 32 | 10 | 29 | 32 | 38 | 15 | 35 | 15 | 23 | 10 | 10 | 26 | 3 | 25 | | 21 |
| HB | 125 | 190 | 250 | 270 | 300 | 180 | 275 | 300 | 350 | 200 | 325 | 200 | 240 | 180 | 180 | 260 | 160 | 250 | 130 | 230 |
| Recommend | | | | | | | | | | | | | | | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| HRc | | | | | | | | | | | 15 | 30 | 25 | 38 | 34 | | | 55 | 60 | 42 | 55 |
| HB | 60 | 100 | 75 | 90 | 130 | 110 | 90 | 100 | | | 200 | 280 | 250 | 350 | 320 | 400 Rm | 1050 Rm | 550 | 630 | 400 | 550 |
| Recommend | ◎ | ◎ | ◎ | ◎ | ○ | ○ | ○ | ○ | ○ | | | | | | | | | | | | |

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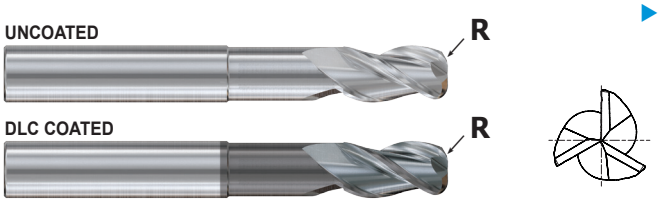


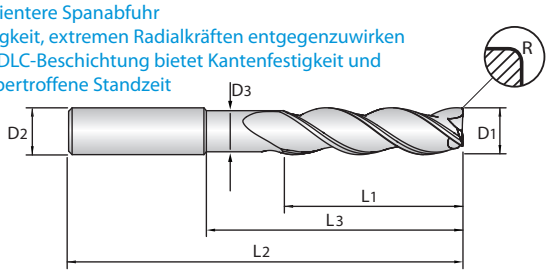


CARBIDE | 3 | 37° | PLAIN | UNCOATED | DLC

p.C518

Recommended ToolHolder
Plain Shank
HYDRAULIC CHUCK
SHRINK FIT HOLDER
POWER MILLING CHUCK
ER COLLET CHUCK
SK SLIM CHUCK

Unit : mm

| EDP No. | | Corner Radius | Mill Diameter | Shank Diameter | Length of Cut | Length Below Shank | Overall Length | Neck Diameter |
|---|---|---|---|---|---|---|---|---|
| UNCOATED | DLC | R | $D_1$ | $D_2$ | $L_1$ | $L_3$ | L2 | D3 |
| **E5H25931** | **JAH25931** | R1.6 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25932** | **JAH25932** | R2.0 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25933** | **JAH25933** | R2.4 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25934** | **JAH25934** | R2.5 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25935** | **JAH25935** | R3.0 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25936** | **JAH25936** | R3.2 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25937** | **JAH25937** | R4.0 | **16.0** | 16 | 20 | 50 | 125 | 15.0 |
| **E5H25200** | **JAH25200** | R0.8 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25938** | **JAH25938** | R1.2 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25939** | **JAH25939** | R1.6 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25940** | **JAH25940** | R2.0 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25941** | **JAH25941** | R2.4 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25942** | **JAH25942** | R2.5 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25943** | **JAH25943** | R3.0 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25944** | **JAH25944** | R3.2 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |
| **E5H25945** | **JAH25945** | R4.0 | **20.0** | 20 | 25 | 65 | 150 | 19.0 |

| Mill Diameter Tolerences (mm) | | Shank Diameter Tolerance |
|---|---|---|
| Diameter | Tolerance | |
| Up to 3 | +0/-0.006 | h5 |
| Over 3 ~ up to 6 | +0/-0.008 | |
| Over 6 ~ up to 10 | +0/-0.009 | |
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◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | | M | | | K | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Non-alloy steel | | | | | Low alloy steel | | | | High alloyed steel, and tool steel | | Stainless steel | | | Grey cast iron | | Nodular cast iron | | Malleable cast iron | |
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| HRc | | 13 | 25 | 28 | 32 | 10 | 29 | 32 | 38 | 15 | 35 | 15 | 23 | 10 | 10 | 26 | 3 | 25 | | 21 |
| HB | 125 | 190 | 250 | 270 | 300 | 180 | 275 | 300 | 350 | 200 | 325 | 200 | 240 | 180 | 180 | 260 | 160 | 250 | 130 | 230 |
| Recommend | | | | | | | | | | | | | | | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Aluminum-wrought alloy | | Aluminum-cast, alloyed | | | Copper and Copper Alloys (Bronze / Brass) | | | Non Metallic Materials | | Heat Resistant Super Alloys | | | | | Titanium Alloys | | Hardened steel | | Chilled Cast Iron | Hardened Cast Iron |
| VDI 3323 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| HRc | | | | | | | | | | | 15 | 30 | 25 | 38 | 34 | | | 55 | 60 | 42 | 55 |
| HB | 60 | 100 | 75 | 90 | 130 | 110 | 90 | 100 | | | 200 | 280 | 250 | 350 | 320 | 400 Rm | 1050 Rm | 550 | 630 | 400 | 550 |
| Recommend | ◎ | ◎ | ◎ | ◎ | ○ | ○ | ○ | ○ | ○ | | | | | | | | | | | | |