



Leading Through Innovation



HSS Co8 & HSS-E

HPD STRAIGHT SHANK DRILLS

HPD BOHRER

- High Precision Drilling for General Steels & Stainless Steels
- Hochpräzises Bohren für allgemeine Stähle und rostfreie Stähle

SELECTION GUIDE



| SERIES | D4541 | D4542 | DJ543 | DJ544 |
|----------|-------|--------|-------|--------|
| LENGTH | STUB | JOBBER | STUB | JOBBER |
| SIZE MIN | D2.0 | D2.0 | D2.0 | D2.0 |
| SIZE MAX | D13.0 | D32.0 | D13.0 | D20.0 |
| PAGE | A173 | A177 | A183 | A186 |

SURFACE TREATMENT

TiN

HSS Co8 & HSS-E HPD STRAIGHT SHANK DRILLS

High Precision Drilling for General Steels & Stainless Steels



Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A189

| ISO | VDI 3323 | Material Description | Composition / Structure / Heat Treatment | HB | HRc | D4541 | D4542 | DJ543 | DJ544 | |
|-----|---------------------|-----------------------------|--|-----------------------|-----|-------|-------|-------|-------|--|
| P | 1 | Non-alloy steel | About 0.15% C Annealed | 125 | | ◎ | ◎ | ○ | ○ | |
| | 2 | | About 0.45% C Annealed | 190 | 13 | ◎ | ◎ | | | |
| | 3 | | About 0.45% C Quenched & Tempered | 250 | 25 | ○ | ○ | | | |
| | 4 | | About 0.75% C Annealed | 270 | 28 | | | | | |
| | 5 | | About 0.75% C Quenched & Tempered | 300 | 32 | | | | | |
| | 6 | Low alloy steel | Annealed | 180 | 10 | ◎ | ◎ | | | |
| | 7 | | Quenched & Tempered | 275 | 29 | ○ | ○ | | | |
| | 8 | | Quenched & Tempered | 300 | 32 | | | | | |
| | 9 | | Quenched & Tempered | 350 | 38 | | | | | |
| | 10 | | High alloyed steel, and tool steel | Annealed | 200 | 15 | ○ | ○ | | |
| | 11 | | | Quenched & Tempered | 325 | 35 | | | | |
| M | 12 | Stainless steel | Ferritic / Martensitic Annealed | 200 | 15 | | | ◎ | ◎ | |
| | 13 | | Martensitic Quenched & Tempered | 240 | 23 | | | ○ | ○ | |
| | 14 | | Austenitic | 180 | 10 | | | ◎ | ◎ | |
| K | 15 | Grey cast iron | Pearlitic / ferritic | 180 | 10 | ◎ | ◎ | | | |
| | 16 | | Pearlitic (Martensitic) | 260 | 26 | | | | | |
| | 17 | Nodular cast iron | Ferritic | 160 | 3 | | | | | |
| | 18 | | Pearlitic | 250 | 25 | | | | | |
| | 19 | | Ferritic | 130 | | | | | | |
| 20 | Malleable cast iron | Pearlitic | 230 | 21 | | | | | | |
| N | 21 | Aluminum-wrought alloy | Not Curable | 60 | | | | ◎ | ◎ | |
| | 22 | | Curable Hardened | 100 | | | ◎ | ◎ | | |
| | 23 | Aluminum-cast, alloyed | ≤ 12% Si, Not Curable | 75 | | | | | | |
| | 24 | | ≤ 12% Si, Curable Hardened | 90 | | | | | | |
| | 25 | | > 12% Si, Not Curable | 130 | | | | | | |
| | 26 | | Copper and Copper Alloys (Bronze / Brass) | Cutting Alloys, PB>1% | 110 | | | ○ | ○ | |
| | 27 | Non Metallic Materials | CuSn, lead-free copper and electrolytic copper | 100 | | | | | | |
| | 28 | | Duroplastic, Fiber Reinforced Plastic | | | | | | | |
| | 29 | | Rubber, Wood, etc. | | | | | | | |
| | 30 | | | | | | | | | |
| S | 31 | Heat Resistant Super Alloys | Fe Based Annealed | 200 | 15 | | | | | |
| | 32 | | Cured | 280 | 30 | | | | | |
| | 33 | | Annealed | 250 | 25 | | | | | |
| | 34 | | Ni or Co Based Cured | 350 | 38 | | | | | |
| | 35 | | Cast | 320 | 34 | | | | | |
| | 36 | Titanium Alloys | Pure Titanium | 400 Rm | | | | | | |
| | 37 | | Alpha + Beta Alloys Hardened | 1050 Rm | | | | | | |
| H | 38 | Hardened steel | Hardened | 550 | 55 | | | | | |
| | 39 | | Hardened | 630 | 60 | | | | | |
| | 40 | Chilled Cast Iron | Cast | 400 | 42 | | | | | |
| | 41 | Hardened Cast Iron | Hardened | 550 | 55 | | | | | |



HSS Co8, HPD TWIST DRILLS for STEELS

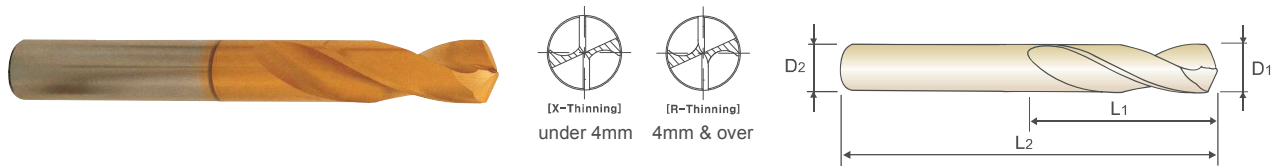
STUB

- PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
- Forets HPD HSSCo Premium pour Aciers, série extra-courte
- PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

- Application** : Designed for accurate drilling on NC/CNC machines. Drilling hard and tough materials, alloyed tool steels, inconel, nimonic, cast iron, aluminum die casting, etc.
- Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and stub length - increasing rigidity, reducing vibration and deflection. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity

- Anwendung** : Für präzises Bohren mit NC/CNC Maschinen, geeignet zum Bearbeiten von harten und zähen Werkstücken, Legierungen, Werkzeugstahl, Nimonic, Inconel, Gusseisen, Aluminium-Guss usw.
- Vorteile** : Durch Kreuzanschliff gute Spanentfernung, reduzierter Druck, verbesserte Genauigkeit, selbstzentriert, extra kurze Ausführung, verbesserte Stabilität, weniger Vibrationen und Abdrängung, Premium Kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



HSS Co8
25°
h7
h8
130°
TiN
p.A189

Plain Shank
Recommended ToolHolder
ER COLLET CHUCK

D1=D2

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| D4541042 | 4.20 | 22 | 66 |
| D4541942 | 4.25 | 22 | 66 |
| D4541043 | 4.30 | 24 | 68 |
| D4541943 | 4.35 | 24 | 68 |
| D4541044 | 4.40 | 24 | 68 |
| D4541944 | 4.45 | 24 | 68 |
| D4541045 | 4.50 | 24 | 68 |
| D4541945 | 4.55 | 24 | 68 |
| D4541046 | 4.60 | 24 | 68 |
| D4541946 | 4.65 | 24 | 68 |
| D4541047 | 4.70 | 24 | 68 |
| D4541947 | 4.75 | 24 | 68 |
| D4541048 | 4.80 | 26 | 70 |
| D4541948 | 4.85 | 26 | 70 |
| D4541049 | 4.90 | 26 | 70 |
| D4541949 | 4.95 | 26 | 70 |
| D4541050 | 5.00 | 26 | 70 |
| D4541950 | 5.05 | 26 | 70 |
| D4541051 | 5.10 | 26 | 70 |
| D4541951 | 5.15 | 26 | 70 |
| D4541052 | 5.20 | 26 | 70 |
| D4541952 | 5.25 | 26 | 70 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| D4541053 | 5.30 | 26 | 70 |
| D4541953 | 5.35 | 28 | 72 |
| D4541054 | 5.40 | 28 | 72 |
| D4541954 | 5.45 | 28 | 72 |
| D4541055 | 5.50 | 28 | 72 |
| D4541955 | 5.55 | 28 | 72 |
| D4541056 | 5.60 | 28 | 72 |
| D4541956 | 5.65 | 28 | 72 |
| D4541057 | 5.70 | 28 | 72 |
| D4541957 | 5.75 | 28 | 72 |
| D4541058 | 5.80 | 28 | 72 |
| D4541958 | 5.85 | 28 | 72 |
| D4541059 | 5.90 | 28 | 72 |
| D4541959 | 5.95 | 28 | 72 |
| D4541060 | 6.00 | 28 | 72 |
| D4541061 | 6.10 | 31 | 75 |
| D4541062 | 6.20 | 31 | 75 |
| D4541063 | 6.30 | 31 | 75 |
| D4541064 | 6.40 | 31 | 75 |
| D4541065 | 6.50 | 31 | 75 |
| D4541965 | 6.55 | 31 | 75 |
| D4541066 | 6.60 | 31 | 75 |

TiCN(D7541), TiAlN(DQ541) are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | M | | | | K | | | | | | | |
|-------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|--|
| | Non-alloy steel | | | | | Low alloy steel | | | | | High alloyed steel, and tool steel | | | | Stainless steel | | | | Grey cast iron | | Nodular 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 | 36 | 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 | | |
| Recommended | ◎ | ◎ | ○ | | | ◎ | | | | ○ | | | | | ◎ | | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | H | | | | |
|-------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-------|-----------------|-----|----------------|-------------------|--------------------|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | | | | | | | | | | | | | | | | |

HSS Co8, HPD TWIST DRILLS for STEELS

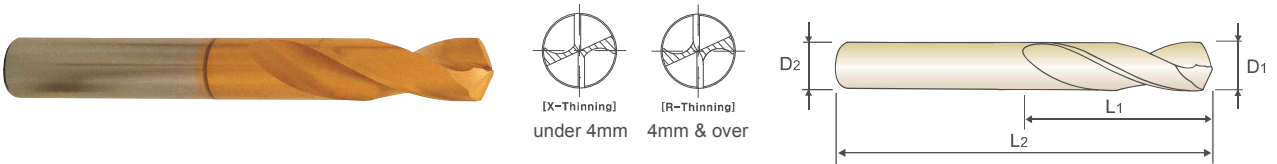
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HSS Co8
25°
h7
h8
130°
TiN
p.A189

Plain Shank
Recommended ToolHolder
ER COLLET CHUCK

D1=D2

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| D4541099 | 9.90 | 43 | 93 |
| D4541999 | 9.95 | 43 | 93 |
| D4541100 | 10.00 | 43 | 93 |
| D4541101 | 10.10 | 43 | 100 |
| D4541102 | 10.20 | 43 | 100 |
| D4541802 | 10.25 | 43 | 100 |
| D4541103 | 10.30 | 43 | 100 |
| D4541803 | 10.35 | 43 | 100 |
| D4541104 | 10.40 | 43 | 100 |
| D4541105 | 10.50 | 43 | 100 |
| D4541805 | 10.55 | 43 | 100 |
| D4541106 | 10.60 | 43 | 100 |
| D4541806 | 10.65 | 47 | 104 |
| D4541107 | 10.70 | 47 | 104 |
| D4541108 | 10.80 | 47 | 104 |
| D4541109 | 10.90 | 47 | 104 |
| D4541809 | 10.95 | 47 | 104 |
| D4541110 | 11.00 | 47 | 104 |
| D4541111 | 11.10 | 47 | 104 |
| D4541112 | 11.20 | 47 | 104 |
| D4541812 | 11.25 | 47 | 104 |
| D4541113 | 11.30 | 47 | 104 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| D4541813 | 11.35 | 47 | 104 |
| D4541114 | 11.40 | 47 | 104 |
| D4541115 | 11.50 | 47 | 104 |
| D4541815 | 11.55 | 47 | 104 |
| D4541116 | 11.60 | 47 | 104 |
| D4541117 | 11.70 | 47 | 104 |
| D4541118 | 11.80 | 47 | 104 |
| D4541119 | 11.90 | 51 | 108 |
| D4541120 | 12.00 | 51 | 108 |
| D4541121 | 12.10 | 51 | 108 |
| D4541122 | 12.20 | 51 | 108 |
| D4541123 | 12.30 | 51 | 108 |
| D4541124 | 12.40 | 51 | 108 |
| D4541125 | 12.50 | 51 | 108 |
| D4541126 | 12.60 | 51 | 108 |
| D4541127 | 12.70 | 51 | 108 |
| D4541128 | 12.80 | 51 | 108 |
| D4541129 | 12.90 | 51 | 108 |
| D4541130 | 13.00 | 51 | 108 |

TiCN(D7541), TiAlN(DQ541) are available on your request.

◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | M | | | | K | | | | | | | |
|-------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|--|
| | Non-alloy steel | | | | | Low alloy steel | | | | | High alloyed steel, and tool steel | | | | Stainless steel | | | | Grey cast iron | | Nodular 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 | 30 | 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 | | |
| Recommended | ◎ | ◎ | ○ | | | ◎ | | | | ○ | | | | | ◎ | | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|-------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-----------------|--------|----------------|-------------------|--------------------|-----|
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| 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | | | | | | | | | | | | | | | | |



HSS Co8, HPD TWIST DRILLS for STEELS

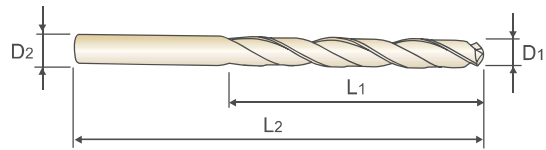
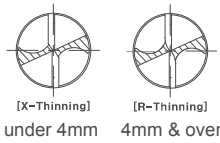
JOBBER

- PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
- Forets HPD HSSCo Premium pour Aciers, série courte
- PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

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COURTE
CORTA

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- Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



HSS Co8 30° h7 h6 h8 130° TiN p.A189

D1=D2 Plain Shank Recommended ToolHolder ER COLLET CHUCK

up to 13mm over 13mm

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| D4542042 | 4.20 | 43 | 87 |
| D4542942 | 4.25 | 43 | 87 |
| D4542043 | 4.30 | 47 | 91 |
| D4542943 | 4.35 | 47 | 91 |
| D4542044 | 4.40 | 47 | 91 |
| D4542944 | 4.45 | 47 | 91 |
| D4542045 | 4.50 | 47 | 91 |
| D4542945 | 4.55 | 47 | 91 |
| D4542046 | 4.60 | 47 | 91 |
| D4542946 | 4.65 | 47 | 91 |
| D4542047 | 4.70 | 47 | 91 |
| D4542947 | 4.75 | 47 | 91 |
| D4542048 | 4.80 | 52 | 96 |
| D4542948 | 4.85 | 52 | 96 |
| D4542049 | 4.90 | 52 | 96 |
| D4542949 | 4.95 | 52 | 96 |
| D4542050 | 5.00 | 52 | 96 |
| D4542950 | 5.05 | 52 | 96 |
| D4542051 | 5.10 | 52 | 96 |
| D4542951 | 5.15 | 52 | 96 |
| D4542052 | 5.20 | 52 | 96 |
| D4542952 | 5.25 | 52 | 96 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| D4542053 | 5.30 | 52 | 96 |
| D4542953 | 5.35 | 57 | 101 |
| D4542054 | 5.40 | 57 | 101 |
| D4542954 | 5.45 | 57 | 101 |
| D4542055 | 5.50 | 57 | 101 |
| D4542955 | 5.55 | 57 | 101 |
| D4542056 | 5.60 | 57 | 101 |
| D4542956 | 5.65 | 57 | 101 |
| D4542057 | 5.70 | 57 | 101 |
| D4542957 | 5.75 | 57 | 101 |
| D4542058 | 5.80 | 57 | 101 |
| D4542958 | 5.85 | 57 | 101 |
| D4542059 | 5.90 | 57 | 101 |
| D4542959 | 5.95 | 57 | 101 |
| D4542060 | 6.00 | 57 | 101 |
| D4542960 | 6.05 | 63 | 107 |
| D4542061 | 6.10 | 63 | 107 |
| D4542961 | 6.15 | 63 | 107 |
| D4542062 | 6.20 | 63 | 107 |
| D4542962 | 6.25 | 63 | 107 |
| D4542063 | 6.30 | 63 | 107 |
| D4542963 | 6.35 | 63 | 107 |

TiCN(D7542), TiAlN(DQ542) are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

| ISO Material Description | P | | | | | | | | | | M | | | | K | | | | | | |
|--------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|-----|---------------------|
| | 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 | 36 | 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 | |
| Recommended | ◎ | ◎ | ○ | | | ◎ | ○ | | | ○ | | | | | ◎ | | | | | | |

| ISO Material Description | N | | | | | | | | | | S | | | | | | H | | | | |
|--------------------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-----------------|--------|----------------|-------------------|--------------------|-----|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | | | | | | | | | | | | | | | | |

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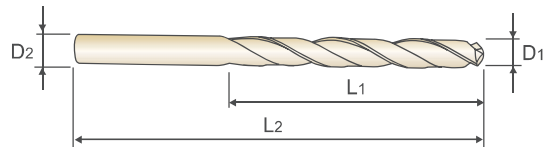
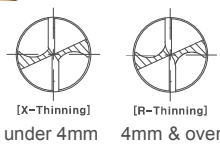
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► **Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.

► **Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



HSS Co8
30°
h7
h6
h8
130°
TiN
p.A189

up to 13mm over 13mm

D1=D2
Plain Shank
Recommended ToolHolder
ER COLLET CHUCK

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | TiN D1 | L1 | L2 |
| D4542086 | 8.60 | 81 | 131 |
| D4542986 | 8.65 | 81 | 131 |
| D4542087 | 8.70 | 81 | 131 |
| D4542987 | 8.75 | 81 | 131 |
| D4542088 | 8.80 | 81 | 131 |
| D4542988 | 8.85 | 81 | 131 |
| D4542089 | 8.90 | 81 | 131 |
| D4542989 | 8.95 | 81 | 131 |
| D4542090 | 9.00 | 81 | 131 |
| D4542990 | 9.05 | 81 | 131 |
| D4542091 | 9.10 | 81 | 131 |
| D4542991 | 9.15 | 81 | 131 |
| D4542092 | 9.20 | 81 | 131 |
| D4542992 | 9.25 | 81 | 131 |
| D4542093 | 9.30 | 81 | 131 |
| D4542993 | 9.35 | 81 | 131 |
| D4542094 | 9.40 | 81 | 131 |
| D4542994 | 9.45 | 81 | 131 |
| D4542095 | 9.50 | 81 | 131 |
| D4542995 | 9.55 | 87 | 137 |
| D4542096 | 9.60 | 87 | 137 |
| D4542996 | 9.65 | 87 | 137 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | TiN D1 | L1 | L2 |
| D4542097 | 9.70 | 87 | 137 |
| D4542997 | 9.75 | 87 | 137 |
| D4542098 | 9.80 | 87 | 137 |
| D4542998 | 9.85 | 87 | 137 |
| D4542099 | 9.90 | 87 | 137 |
| D4542999 | 9.95 | 87 | 137 |
| D4542100 | 10.00 | 87 | 137 |
| D4542800 | 10.05 | 87 | 144 |
| D4542101 | 10.10 | 87 | 144 |
| D4542801 | 10.15 | 87 | 144 |
| D4542102 | 10.20 | 87 | 144 |
| D4542802 | 10.25 | 87 | 144 |
| D4542103 | 10.30 | 87 | 144 |
| D4542803 | 10.35 | 87 | 144 |
| D4542104 | 10.40 | 87 | 144 |
| D4542804 | 10.45 | 87 | 144 |
| D4542105 | 10.50 | 87 | 144 |
| D4542805 | 10.55 | 87 | 144 |
| D4542106 | 10.60 | 87 | 144 |
| D4542806 | 10.65 | 94 | 151 |
| D4542107 | 10.70 | 94 | 151 |
| D4542807 | 10.75 | 94 | 151 |

► TiCN(D7542), TiAlN(DQ542) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

| ISO Material Description | P | | | | | | | | | | M | | | | K | | | | | |
|--------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|-----|
| | Non-alloy steel | | | | | Low alloy steel | | | | | High alloyed steel, and tool steel | | Stainless steel | | | | Grey cast iron | | Nodular 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 | 36 | 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 |
| Recommended | ◎ | ◎ | ○ | | | ◎ | | | | ○ | | | | | ◎ | | | | | |

| ISO Material Description | N | | | | | | | | | | S | | | | | | H | | | | |
|--------------------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----------------|-------|----------------|-------------------|--------------------|-----|-----|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | | | | | | | | | | | | | | | | |



HSS Co8, HPD TWIST DRILLS for STEELS

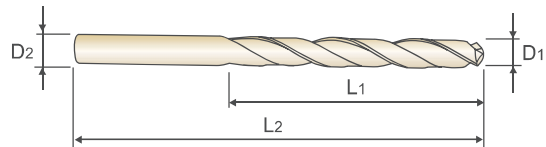
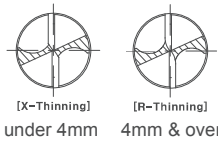
JOBBER

- PREMIUM HSS KOBALT, HPD SPIRALBOHRER für STÄHLE
- Forets HPD HSSCo Premium pour Aciers, série courte
- PUNTE ELICOIDALI HPD IN PREMIUM HSS Co, PER ACCIAI

KURZ
COURTE
CORTA

- Application** : Designed for high speed non-step 4D~5D drilling. Drilling mild steels, cast iron, aluminum, alloyed tool steels, etc.
- Advantage** : Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy. Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling. Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer tool life. High quality & good surface finish, high productivity.

- Anwendung** : Zum Hochgeschwindigkeitsbohren 4D~5D Bohrtiefe geeignet zum Bearbeiten von Stahl, Gusseisen, Aluminium, Legierungen, Werkzeugstahl, usw.
- Vorteile** : Gute Spanabfuhr, selbstzentriert, geringere Abdrängung und verbesserte Genauigkeit, kurze Ausführung, verbesserte Stabilität, zum Bearbeiten von Premium kobalt HSS mit hochwertiger TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



D1=D2

HSS Co8
30°
h7
h6
h8
130°
TiN
p.A189

Plain Shank
Recommended ToolHolder
ER COLLET CHUCK

up to 13mm over 13mm

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| D4542170 | 17.00 | 106 | 172 |
| D4542175 | 17.50 | 112 | 178 |
| D4542176 | 17.60 | 112 | 178 |
| D4542180 | 18.00 | 112 | 178 |
| D4542185 | 18.50 | 118 | 184 |
| D4542190 | 19.00 | 118 | 194 |
| D4542195 | 19.50 | 125 | 201 |
| D4542196 | 19.60 | 125 | 201 |
| D4542200 | 20.00 | 125 | 201 |
| D4542205 | 20.50 | 128 | 204 |
| D4542210 | 21.00 | 128 | 204 |
| D4542211 | 21.10 | 128 | 204 |
| D4542215 | 21.50 | 132 | 208 |
| D4542220 | 22.00 | 132 | 208 |
| D4542225 | 22.50 | 136 | 212 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| D4542230 | 23.00 | 136 | 212 |
| D4542235 | 23.50 | 136 | 212 |
| D4542240 | 24.00 | 140 | 220 |
| D4542245 | 24.50 | 140 | 220 |
| D4542250 | 25.00 | 140 | 220 |
| D4542255 | 25.50 | 145 | 225 |
| D4542260 | 26.00 | 145 | 225 |
| D4542265 | 26.50 | 145 | 225 |
| D4542270 | 27.00 | 150 | 230 |
| D4542280 | 28.00 | 150 | 230 |
| D4542290 | 29.00 | 155 | 235 |
| D4542300 | 30.00 | 155 | 235 |
| D4542310 | 31.00 | 160 | 240 |
| D4542320 | 32.00 | 165 | 245 |

TiCN(D7542), TiAlN(DQ542) are available on your request.

◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | M | | | | K | | | | | |
|-------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|----------------|-----|-------------------|-----|---------------------|-----|
| | 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 | 30 | 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 |
| Recommended | ◎ | ◎ | ○ | | | ◎ | ○ | | | ○ | | | | | ◎ | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|-------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-----------------|--------|----------------|-------------------|--------------------|-----|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | | | | | | | | | | | | | | | | |

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

STUB

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série extra-courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

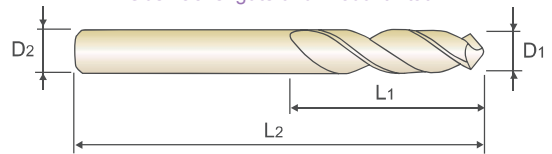
EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

► **Application** : Designed for drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Geeignet zum Bearbeiten von rostfreier stähle, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierungen usw.

► **Vorteile** : Durch hohen Helix wird Spanstau vermieden, geeignet zum Hochleistungsbohren, durch die breiten Schneiden und die kurze Ausführung wird die Spanabfuhr erhöht und Vibrationen und Stoß reduziert. Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Oberflächengüte und Produktivität.



for STAINLESS STEELS
für rostfreier Stäle



HSS-E
38°
h7
h8
130°
120°
TiN

Plain Shank
 ER COLLET CHUCK
 Recommended ToolHolder

p.A189

up to 4mm over 4mm

D1=D2

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| DJ543064 | 6.40 | 31 | 75 |
| DJ543065 | 6.50 | 31 | 75 |
| DJ543066 | 6.60 | 31 | 75 |
| DJ543067 | 6.70 | 31 | 75 |
| DJ543068 | 6.80 | 34 | 78 |
| DJ543069 | 6.90 | 34 | 78 |
| DJ543070 | 7.00 | 34 | 78 |
| DJ543071 | 7.10 | 34 | 78 |
| DJ543072 | 7.20 | 34 | 78 |
| DJ543073 | 7.30 | 34 | 78 |
| DJ543074 | 7.40 | 34 | 78 |
| DJ543075 | 7.50 | 34 | 78 |
| DJ543076 | 7.60 | 37 | 81 |
| DJ543077 | 7.70 | 37 | 81 |
| DJ543078 | 7.80 | 37 | 81 |
| DJ543079 | 7.90 | 37 | 81 |
| DJ543080 | 8.00 | 37 | 81 |
| DJ543081 | 8.10 | 37 | 87 |
| DJ543082 | 8.20 | 37 | 87 |
| DJ543083 | 8.30 | 37 | 87 |
| DJ543084 | 8.40 | 37 | 87 |
| DJ543085 | 8.50 | 37 | 87 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| TiN | D1 | L1 | L2 |
| DJ543086 | 8.60 | 40 | 90 |
| DJ543087 | 8.70 | 40 | 90 |
| DJ543088 | 8.80 | 40 | 90 |
| DJ543089 | 8.90 | 40 | 90 |
| DJ543090 | 9.00 | 40 | 90 |
| DJ543091 | 9.10 | 40 | 90 |
| DJ543092 | 9.20 | 40 | 90 |
| DJ543093 | 9.30 | 40 | 90 |
| DJ543094 | 9.40 | 40 | 90 |
| DJ543095 | 9.50 | 40 | 90 |
| DJ543096 | 9.60 | 43 | 93 |
| DJ543097 | 9.70 | 43 | 93 |
| DJ543098 | 9.80 | 43 | 93 |
| DJ543099 | 9.90 | 43 | 93 |
| DJ543100 | 10.00 | 43 | 93 |
| DJ543101 | 10.10 | 43 | 100 |
| DJ543102 | 10.20 | 43 | 100 |
| DJ543103 | 10.30 | 43 | 100 |
| DJ543104 | 10.40 | 43 | 100 |
| DJ543105 | 10.50 | 43 | 100 |
| DJ543106 | 10.60 | 43 | 100 |
| DJ543107 | 10.70 | 47 | 104 |

► TiCN(DW543), TiAlN(DY543) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

| ISO Material Description | P | | | | | | | | | | M | | | | K | | | | | | |
|-----------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|-----|---------------------|
| | 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 | 36 | 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 | |
| Recommended | ○ | | | | | | | | | | | ◎ | ○ | ◎ | | | | | | | |

| ISO Material Description | N | | | | | | | | | | S | | | | | | H | | | | |
|-----------------------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-------|-----------------|-----|----------------|-------------------|--------------------|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | ◎ | ◎ | | | | ○ | | | | | | | | | | | | | | | |

HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

JOBBER

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

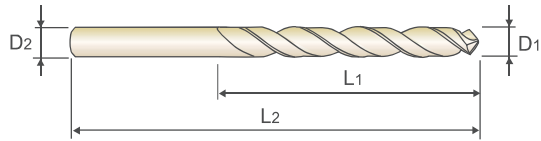
**KURZ
COURTE
CORTA**

► **Application** : Designed for 4D~5D drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

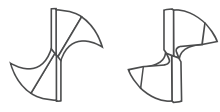
► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.

► **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



**for STAINLESS STEELS
für rostfreier Stäle**



up to 13mm over 13mm

HSS-E
38°
h7
h8
130°
120°
TiN

p.A189



D1=D2

Plain Shank

ER COLLET CHUCK

up to 4mm over 4mm

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| DJ544020 | 2.00 | 24 | 56 |
| DJ544021 | 2.10 | 24 | 56 |
| DJ544022 | 2.20 | 27 | 59 |
| DJ544023 | 2.30 | 27 | 59 |
| DJ544024 | 2.40 | 30 | 62 |
| DJ544025 | 2.50 | 30 | 62 |
| DJ544026 | 2.60 | 30 | 62 |
| DJ544027 | 2.70 | 33 | 65 |
| DJ544028 | 2.80 | 33 | 65 |
| DJ544029 | 2.90 | 33 | 65 |
| DJ544030 | 3.00 | 33 | 65 |
| DJ544031 | 3.10 | 36 | 68 |
| DJ544032 | 3.20 | 36 | 68 |
| DJ544033 | 3.30 | 36 | 68 |
| DJ544034 | 3.40 | 39 | 71 |
| DJ544035 | 3.50 | 39 | 71 |
| DJ544036 | 3.60 | 39 | 71 |
| DJ544037 | 3.70 | 39 | 71 |
| DJ544038 | 3.80 | 43 | 75 |
| DJ544039 | 3.90 | 43 | 75 |
| DJ544040 | 4.00 | 43 | 75 |
| DJ544041 | 4.10 | 43 | 87 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| DJ544042 | 4.20 | 43 | 87 |
| DJ544043 | 4.30 | 47 | 91 |
| DJ544044 | 4.40 | 47 | 91 |
| DJ544045 | 4.50 | 47 | 91 |
| DJ544046 | 4.60 | 47 | 91 |
| DJ544047 | 4.70 | 47 | 91 |
| DJ544048 | 4.80 | 52 | 96 |
| DJ544049 | 4.90 | 52 | 96 |
| DJ544050 | 5.00 | 52 | 96 |
| DJ544051 | 5.10 | 52 | 96 |
| DJ544052 | 5.20 | 52 | 96 |
| DJ544053 | 5.30 | 52 | 96 |
| DJ544054 | 5.40 | 57 | 101 |
| DJ544055 | 5.50 | 57 | 101 |
| DJ544056 | 5.60 | 57 | 101 |
| DJ544057 | 5.70 | 57 | 101 |
| DJ544058 | 5.80 | 57 | 101 |
| DJ544059 | 5.90 | 57 | 101 |
| DJ544060 | 6.00 | 57 | 101 |
| DJ544061 | 6.10 | 63 | 107 |
| DJ544062 | 6.20 | 63 | 107 |
| DJ544063 | 6.30 | 63 | 107 |

► TiCN(DW544), TiAlN(DY544) are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

| ISO Material Description | P | | | | | | | | | | M | | | | K | | | | | | |
|-----------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|-----|---------------------|
| | 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 | 30 | 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 | |
| Recommended | ○ | | | | | | | | | | | ◎ | ○ | ◎ | | | | | | | |

| ISO Material Description | N | | | | | | | | | | S | | | | | | H | | | | |
|-----------------------------|------------------------|-----|------------------------|----|-----|--|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-------|-----------------|-----|----------------|-------------------|--------------------|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | ◎ | ◎ | | | | ○ | | | | | | | | | | | | | | | |



HSS-E, HPD-SUS TWIST DRILLS for STAINLESS STEELS

JOBBER

- HSS-E, HPD-SUS SPIRALBOHRER für ROSTFREIER STÄHLE
- Forets HPD-SUS HSS-E pour INOX, série courte
- PUNTE ELICOIDALI HPD-SUS IN HSS-E, PER ACCIAI INOX

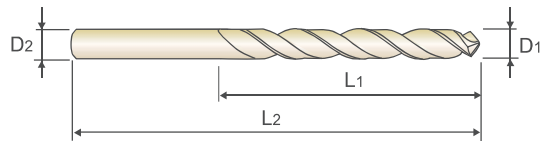
**KURZ
COURTE
CORTA**

► **Application** : Designed for 4D~5D drilling stainless steels, mild steels, aluminum, aluminum alloys, aluminum die casting, copper, copper alloys, etc.

► **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Reinforced web and jobbers length-increasing rigidity and suitable for 4D~5D drilling.
High vanadium HSS-E material with superior TiN coating - higher speed and feed, longer tool life
High quality & good surface finish, high productivity.

► **Anwendung** : Für 4D~5D Bohrtiefe, geeignet für rostfreier stähle, Stahl, Aluminium, Aluminium-Legierungen, Aluminium-Guss, Kupfer, Kupfer-Legierung usw.

► **Vorteile** : Helixwinkel, durch scharfe Hauptschneide wird Spanstau vermieden, geeignet zum Hochleistungsbohren, verstärkte Kerndicke, kurze Ausführung, Hoch Vanadium HSS-E-Material mit TiN-Beschichtung, höhere Geschwindigkeit und Vorschub, längere Standzeit, verbesserte Stabilität, Oberflächengüte und Produktivität.



for STAINLESS STEELS
für rostfreier Stäle



up to 13mm over 13mm



p.A189



D1=D2

Plain Shank

ER COLLET CHUCK

up to 4mm over 4mm

Unit : mm

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| DJ544108 | 10.80 | 94 | 151 |
| DJ544109 | 10.90 | 94 | 151 |
| DJ544110 | 11.00 | 94 | 151 |
| DJ544111 | 11.10 | 94 | 151 |
| DJ544112 | 11.20 | 94 | 151 |
| DJ544113 | 11.30 | 94 | 151 |
| DJ544114 | 11.40 | 94 | 151 |
| DJ544115 | 11.50 | 94 | 151 |
| DJ544116 | 11.60 | 94 | 151 |
| DJ544117 | 11.70 | 94 | 151 |
| DJ544118 | 11.80 | 94 | 151 |
| DJ544119 | 11.90 | 101 | 158 |
| DJ544120 | 12.00 | 101 | 158 |
| DJ544121 | 12.10 | 101 | 158 |
| DJ544122 | 12.20 | 101 | 158 |
| DJ544123 | 12.30 | 101 | 158 |
| DJ544124 | 12.40 | 101 | 158 |
| DJ544125 | 12.50 | 101 | 158 |
| DJ544126 | 12.60 | 101 | 158 |
| DJ544127 | 12.70 | 101 | 158 |
| DJ544128 | 12.80 | 101 | 158 |
| DJ544129 | 12.90 | 101 | 158 |

| EDP No. | Drill Diameter | Flute Length | Overall Length |
|----------|----------------|--------------|----------------|
| | D1 | L1 | L2 |
| DJ544130 | 13.00 | 101 | 158 |
| DJ544135 | 13.50 | 106 | 166 |
| DJ544140 | 14.00 | 106 | 166 |
| DJ544141 | 14.10 | 109 | 169 |
| DJ544145 | 14.50 | 109 | 169 |
| DJ544150 | 15.00 | 109 | 169 |
| DJ544155 | 15.50 | 112 | 172 |
| DJ544156 | 15.60 | 112 | 172 |
| DJ544160 | 16.00 | 112 | 172 |
| DJ544165 | 16.50 | 115 | 181 |
| DJ544170 | 17.00 | 115 | 181 |
| DJ544175 | 17.50 | 118 | 184 |
| DJ544176 | 17.60 | 118 | 184 |
| DJ544180 | 18.00 | 118 | 184 |
| DJ544185 | 18.50 | 122 | 188 |
| DJ544190 | 19.00 | 122 | 188 |
| DJ544195 | 19.50 | 125 | 191 |
| DJ544196 | 19.60 | 125 | 191 |
| DJ544200 | 20.00 | 125 | 191 |

► TiCN(DW544), TiAlN(DY544) are available on your request.

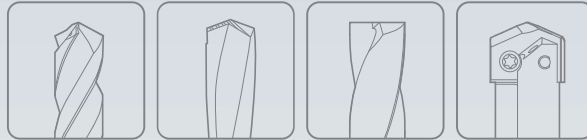
◎ : Excellent ○ : Good

| ISO Material Description | P | | | | | | | | | | M | | | | K | | | | | | |
|-----------------------------|-----------------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|------------------------------------|-----|-----------------|-----|-----|-----|----------------|-----|-------------------|-----|---------------------|
| | 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 | 30 | 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 | |
| Recommended | ○ | | | | | | | | | | | ◎ | ○ | ◎ | | | | | | | |

| ISO Material Description | N | | | | | | | | | | S | | | | | | H | | | | |
|-----------------------------|------------------------|-----|------------------------|----|-----|---|----|-----|------------------------|----|-----------------------------|-----|-----|-----|-----|-------|-----------------|-----|----------------|-------------------|--------------------|
| | 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 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | ◎ | ◎ | | | | ○ | | | | | | | | | | | | | | | |



Global Cutting Tool Leader **YG-1**



HOLEMAKING