



Carbide Drill Series

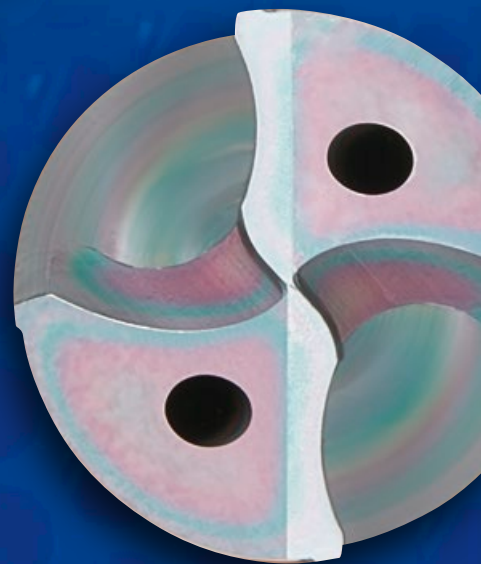
Vol.7

超硬ドリルシリーズ

ADO · AD · AD-LDS

- ・ ギャッシュ R Gash仕様で低抵抗と圧倒的な切りくず排出性を実現!
(ADO-3D ~ 50Dに採用)
- ・ 2D ~ 50Dの加工深さに対応
- ・ Achieves low resistance and exceptional chip evacuation with the R Gash specification (applies to ADO-3D to 50D)!
- ・ For drilling depths of 2 x D up to 50 x D

全1,952アイテム!
A total of 1,952 items!



油穴付き超硬ドリルADO

Carbide Drill with Oil Hole

特長 Features P.3

加工データ Cutting Data P.7

寸法表 Dimension

ADO-3D/5D/8D P.11

ADO-10D/15D/20D/25D/30D P.24

ADO-40D/50D P.36

ADO-PLT P.37

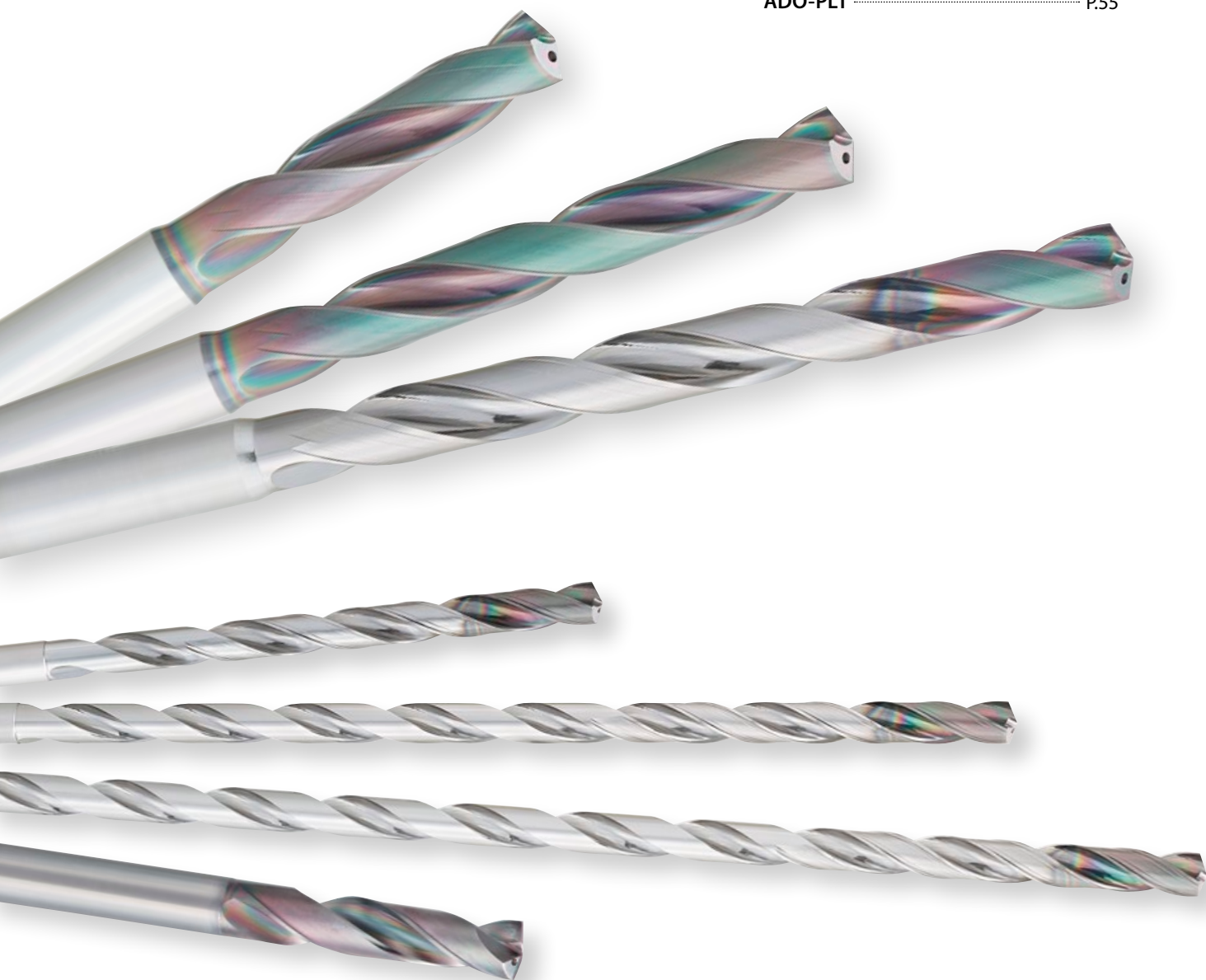
条件表 Cutting Condition

ADO-3D/5D/8D P.52

ADO-10D/15D/20D/25D/30D P.53

ADO-40D/50D P.54

ADO-PLT P.55



超硬ドリルAD

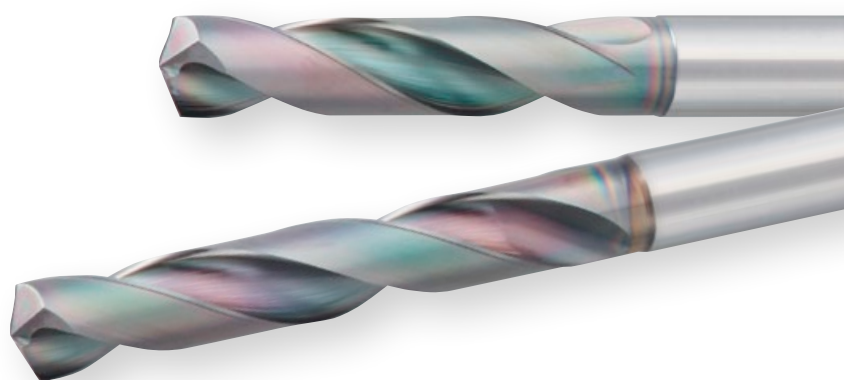
Carbide Drill

特長 Features P.5

加工データ Cutting Data P.7

寸法表 Dimension
AD-2D/4D P.39

条件表 Cutting Condition
AD-2D/4D P.56



超硬リーディングドリルAD-LDS

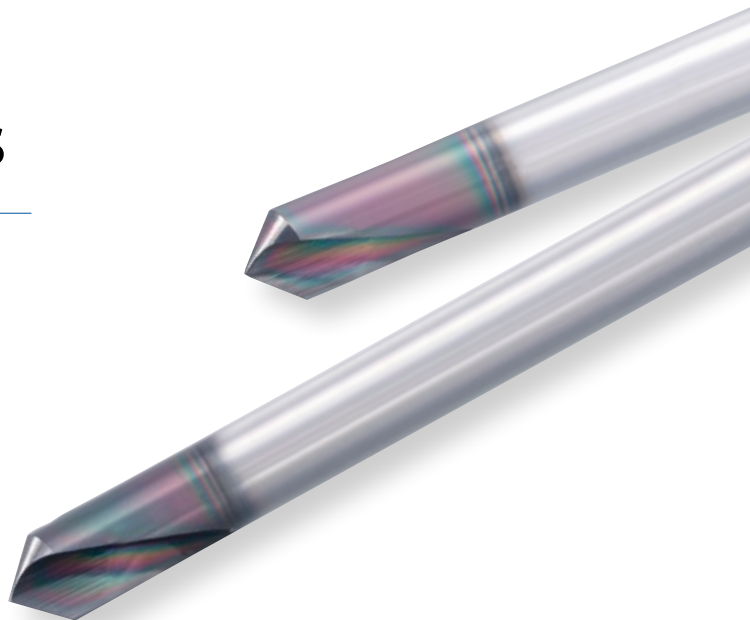
Carbide Starter Drill

特長 Features P.6

寸法表 Dimension
AD-LDS P.50
AD-LS-LDS P.51

条件表 Cutting Condition P.57

■ ドリル直径別製作対応表 P.59
Production Table by Drill Diameter



■ アイコンの種類について Guide for Icons

1 材質 Tool Materials

CARBIDE 超硬合金
Tungsten Carbide

2 表面処理 Surface Treatment

EgiAs イージアスコーティング
EgiAs Coating

WXL WXLコーティング
WXL Coating

3 直径の許容差 Tolerance for Drill Diameter

h8 ドリル直径の許容差を
表示します
Tolerance for drill diameter

4 シャンク Shank

SHANK h7 シャンク精度を表示します
Tolerance for shank diameter

SHRINK FIT シュリンクフィット(焼きばめ)
システムにもお奨めします
Suitable for the shrink holder system

5 ねじれ角 Helix Angle

30° ドリル溝のねじれ角を
表示します
Helix angle of flute for drills

6 切削条件 Cutting Conditions

SPEED FEED 切削条件基準表掲載ページを
表示します
Indicates page number for cutting conditions

油穴付き超硬ドリルADO

Carbide Drill with Oil Hole

加工深さに応じた最適仕様

Optimum specifications for every drilling depth

ウェーブ刃形 Wavy Point Form

- ・低スラスト・安定トルクで長寿命
Long tool life is possible by low thrust resistance and stable torque
- ・切りくずを細かく分断
Breaks chips into small manageable pieces

ギャッシュ **R Gash** PAT. in Japan

低抵抗と圧倒的な切りくず安定性を実現
Unique R Gash geometry enables super low cutting resistance and exceptional chip control

切りくず排出性を向上させるワイド溝

Wide flute room facilitates stable chip evacuation

長寿命を実現するEgiAsコーティング

EgiAs coating enables long tool life

ダブルマージン採用で安定性を向上

Double margin improves stability

Point Specification

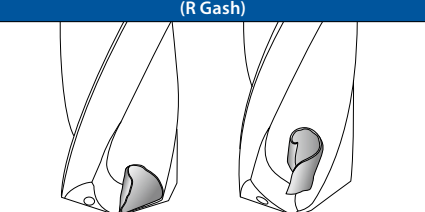
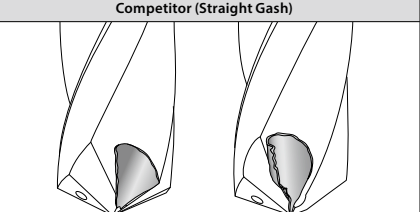


刃形仕様

ギャッシュ

R Gash 形状 R Gash geometry

切りくずを細かく分断し、優れた切りくず排出性を実現します

Breaks chips into small and manageable pieces with superior chip evacuation capability

| ADO-3D/5D/8D/10D/15D/20D/25D/30D (R Gash) | 他社品(ストレートギャッシュ) Competitor (Straight Gash) |
|--|---|
|  |  |
| 切りくずは、綺麗にカールし伸びない Chips are curled tightly with no elongation | 切りくずは、カールが緩く伸びやすい Chips are loosely curled and are prone to elongation |
|  |  |

被削材：SUS304
Work Material

R Gashはオーエスジー株式会社の登録商標です。R Gash is a registered trademark of OSG Corporation.

Coating

コーティング

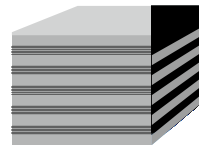
耐摩耗性・じん性の高い EgiAs コーティング

EgiAs coating with high toughness and wear resistance characteristics

高い耐摩耗性・耐熱性に加え、じん性に優れる
皮膜で、長寿命と寿命安定化を実現

Constructed with extreme toughness, high wear and heat resistance characteristics to ensure stable and consistent tool life

被膜断面 Coating Structure

耐摩耗層
Wear Resistanceナノ周期積層
割れの伝播を防止
Periodic Nano-Layered Coating

| 被膜色 Coating Color | 被膜構造 Coating Structure | 硬さ (GPa) Hardness | 酸化開始 温度 (°C) Oxidation Temperature | 耐熱性 Heat Resistance | 付着力 Adhesion Strength | 面粗さ Surface roughness | 耐摩耗性 Wear Resistance | 耐凝着性 Welding Resistance | じん性 Toughness |
|---------------------------|--|----------------------|---|---------------------------|-----------------------------|-----------------------------|----------------------------|-------------------------------|------------------|
| 干渉色 Interference Color | Cr, Si系 ナノ周期積層 Nano Periodical Layer | 40 | 1,100 | ◎ | ◎ | ○ | ◎ | ◎ | ◎ |

(標準) ○ → ◎ (最適)
(Fair) (Best)

EgiAsはオーエスジー株式会社の登録商標です。 EgiAs is a registered trademark of OSG Corporation.



詳細はP.62参照
Refer to p.62 for details

ギャッシュ

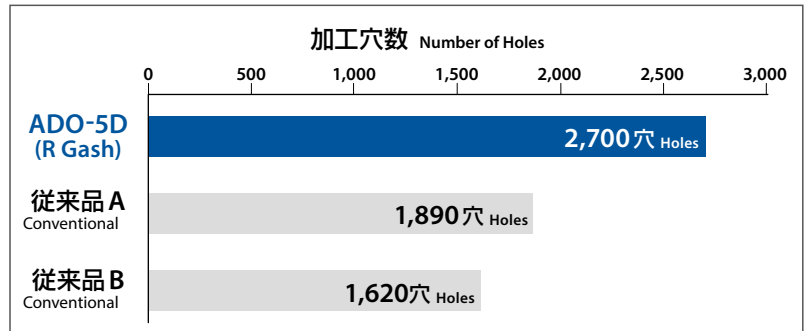
R Gashの効果で圧倒的な低スラストと長寿命化を実現

Achieves overwhelmingly low thrust and long tool life with the effect of the R Gash

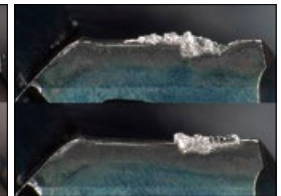
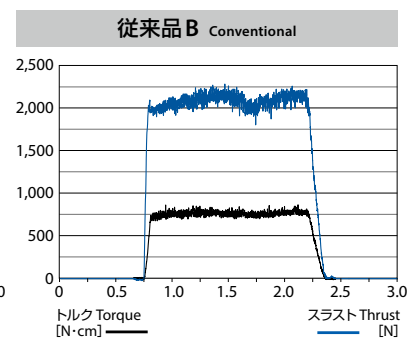
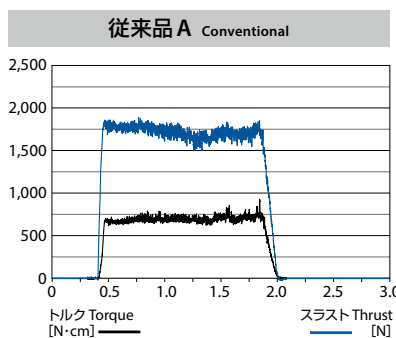
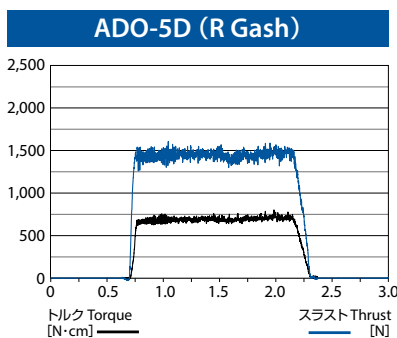
低スラストによる高能率加工は、消費電力の削減につながります。
さらに、工具の長寿命化は廃棄物の削減と省資源化に貢献します。

High-efficiency machining with low thrust leads to reduction of power consumption. In addition, extending the life of tools contributes to waste reduction and resource saving.

| | |
|----------------------------|---|
| 使用工具 Tool | ADO-5D φ8 (R Gash) |
| 被削材 Work Material | SCM440 |
| 切削速度 Cutting Speed | 100m/min (3,979min ⁻¹) |
| 送り速度 Feed | 1,591mm/min (0.4mm/rev) |
| 穴深さ Depth of Hole | 40mm (止り) Blind |
| 切削油剤 Coolant | 水溶性切削油剤 (内部給油) Water-Soluble (Internal) |
| クーラント圧 Coolant Pressure | 2MPa |
| 使用機械 Machine | 横形マシニングセンタ (HSK-A63) Horizontal Machining Center |

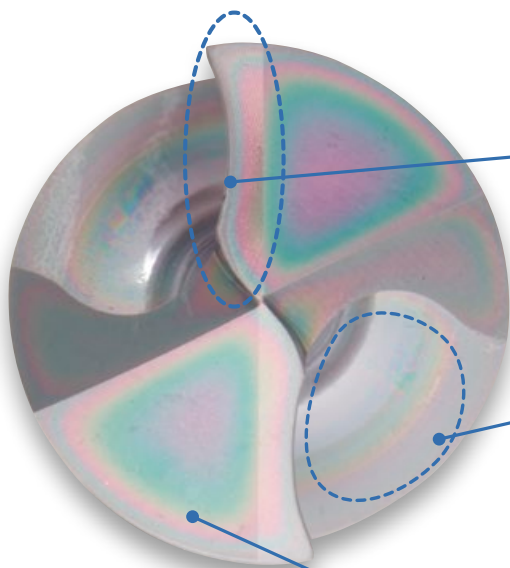
2,700穴加工後
After drilling 2,700 holes

ADO-5D (R Gash)

1,890穴加工後
After drilling 1,890 holes従来品 A
Conventional1,620穴加工後
After drilling 1,620 holes従来品 B
Conventional

幅広い被削材に対応

Suitable for a wide variety of work materials



切りくずを細かく分断する ウェーブ刃形

Wavy point form breaks chip into small manageable pieces

*φ4を超えるサイズに適用
Applies only to diameter sizes over 4mm

切りくず排出性を 向上させるワイド溝

Wide flute room facilitates stable chip evacuation

長寿命を実現する EgiAsコーティング

EgiAs coating enables long tool life

Point Specification

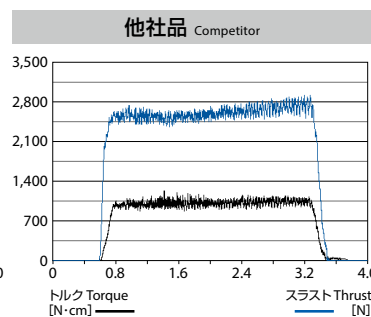
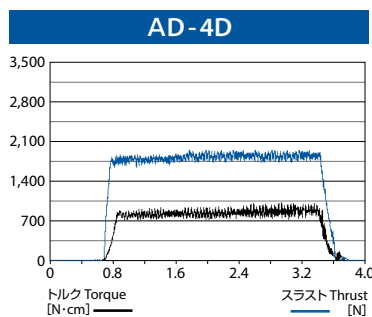
刃形仕様

低スラスト・安定トルク

Low thrust resistance and stable torque

ウェーブ刃形と低心厚仕様により、低スラスト・安全加工を実現
Low thrust resistance and stable torque are possible by the new wavy point form and low web thickness

| | |
|-----------------------|--|
| 使用工具 Tool | AD-4D φ10 |
| 被削材 Work Material | SCM440 |
| 切削速度 Cutting Speed | 70m/min (2,229min ⁻¹) |
| 送り速度 Feed | 668mm/min (0.3mm/rev) |
| 穴深さ Depth of Hole | 30mm (止り) Blind |
| 切削油剤 Coolant | 水溶性切削油剤 (外部給油) Water-Soluble (External) |
| 使用機械 Machine | 立形マシニングセンタ (BT40) Vertical Machining Center |



超硬リーディングドリルAD-LDS

Carbide Starter Drill

特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
10D/1.5D/20D/25D/30D

ガイド穴用ドリル
Pilot Drill
40D/50D

油穴無 Non Oil Hole
2D/4D

リーディングドリル Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter

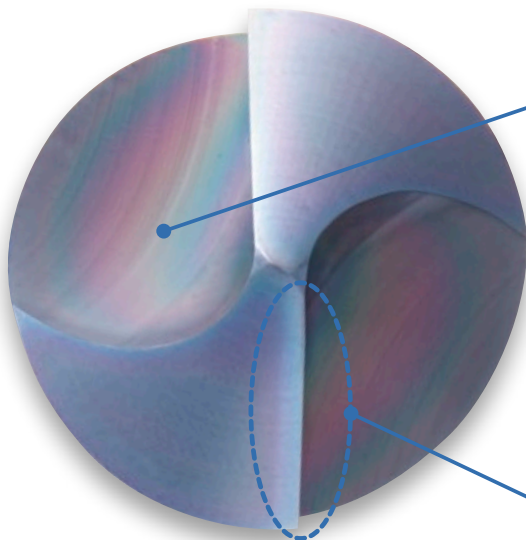
EgiAsコーティング[※]採用で 耐摩耗性・じん性が向上

Improved wear resistance and toughness with EgiAs coating

※ EgiAsコーティングはφ2以上のサイズに採用。
EgiAs coating applies only to diameter sizes above 2mm.

切れ味がよく 欠けにくい刃先形状

Cutting geometry with superior sharpness and high chipping resistance



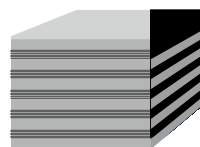
イージアス 耐摩耗性・じん性の高い EgiAs コーティング

EgiAs coating with high toughness and wear resistance characteristics

高い耐摩耗性・耐熱性に加え、
じん性に優れる皮膜で、
長寿命と寿命安定化を実現

Constructed with extreme toughness, high wear and
heat resistance characteristics to ensure stable and
consistent tool life

被膜断面 Coating Structure



耐摩耗層
Wear Resistance

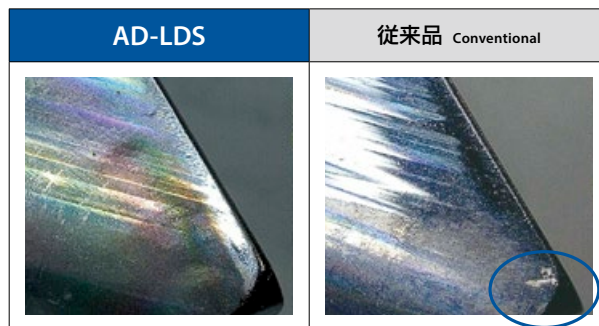
ナノ周期積層
割れの伝播を防止
Periodic Nano-Layered Coating

| 被膜色 Coating Color | 被膜構造 Coating Structure | 硬さ (GPa) Hardness | 酸化開始 温度 (°C) Oxidation Temperature | 耐熱性 Heat Resistance | 付着力 Adhesion Strength | 面粗さ Surface roughness | 耐摩耗性 Wear Resistance | 耐凝着性 Welding Resistance | じん性 Toughness |
|---------------------------|--|----------------------|---|---------------------------|-----------------------------|-----------------------------|----------------------------|-------------------------------|------------------|
| 干渉色 Interference Color | Cr, Si系 ナノ周期積層 Nano Periodical Layer | 40 | 1,100 | ◎ | ◎ | ○ | ◎ | ◎ | ◎ |

(標準) ○ → ◎ (最適)
(Fair) (Best)

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| | |
|------------------------|--|
| 使用工具 Tool | AD-LDS φ12×90° |
| 被削材 Work Material | S50C |
| 加工形態 Cutting Method | センタリング加工 Centering |
| 切削速度 Cutting Speed | 50m/min (1,326min ⁻¹) |
| 送り速度 Feed | 239mm/min (0.18mm/rev) |
| 切削油剤 Coolant | 水溶性切削油剤 Water-Soluble |
| 使用機械 Machine | 横形マシニングセンタ (BT40) Horizontal Machining Center |

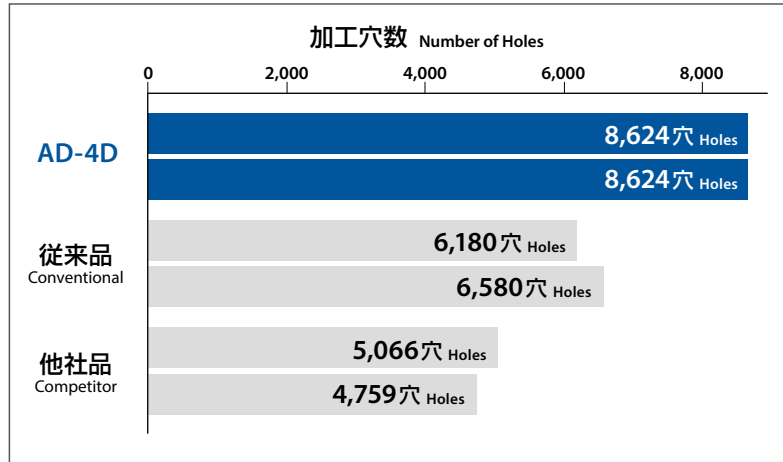


汎用工具として更に性能向上 An all-purpose tool upgraded with even greater capabilities

EgiAsコーティングの効果により、摩耗抑制に抜群の効果を発揮

Superior protection against friction with OSG's EgiAs coating

| | |
|-----------------------|--|
| 使用工具 Tool | AD-4D φ6 |
| 被削材 Work Material | SCM440 (30HRC) |
| 切削速度 Cutting Speed | 70m/min (3,715min ⁻¹) |
| 送り速度 Feed | 668mm/min (0.18mm/rev) |
| 穴深さ Depth of Hole | 18mm (止り) Blind |
| 切削油剤 Coolant | 水溶性切削油剤 (外部給油) Water-Soluble (External) |
| 使用機械 Machine | 立形マシニングセンタ (BT40) Vertical Machining Center |

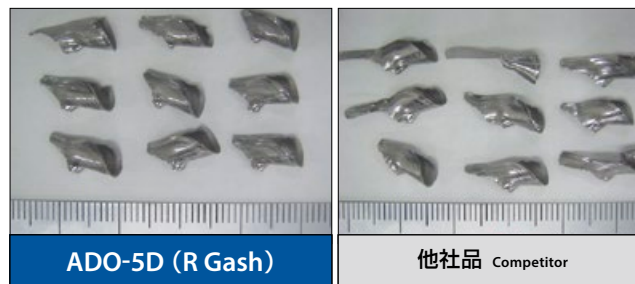
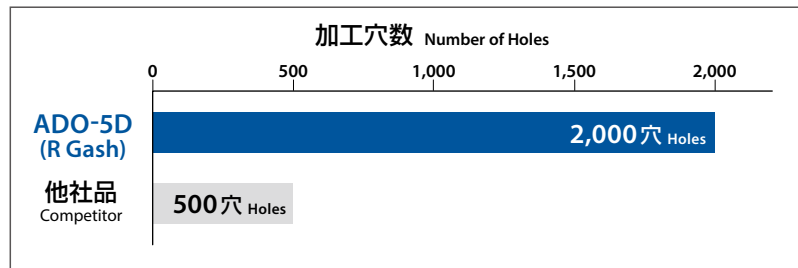


小型マシニングセンタでも高能率かつ安定加工を実現 Achieves high efficiency and stable machining even in small machining centers

切りくずを細かく分断し、安定した長寿命化を実現

Achieves stable and long tool life by finely dividing cutting chips

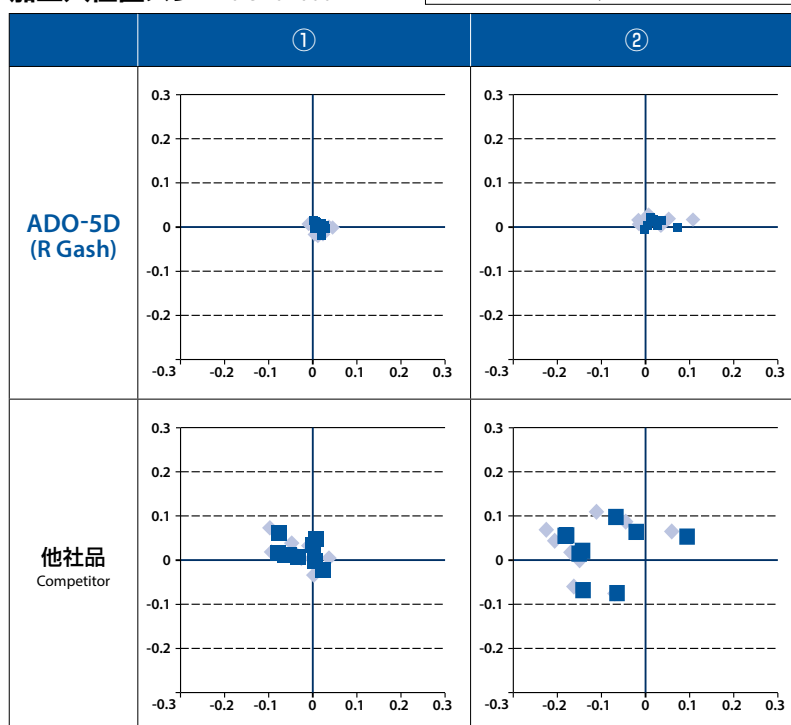
| | | |
|----------------------------|--|---------------------------|
| 使用工具 Tool | ADO-5D φ13 (R Gash) | 他社品 φ13 Competitor |
| 被削材 Work Material | SCM415 | |
| 切削速度 Cutting Speed | 60m/min (1,469min ⁻¹) | |
| 送り速度 Feed | 485mm/min (0.33mm/rev) | 367mm/min (0.25mm/rev) |
| 穴深さ Depth of Hole | 65mm (止り) Blind | |
| 切削油剤 Coolant | 水溶性切削油剤 (内部給油) Water-Soluble (Internal) | |
| クーラント圧 Coolant Pressure | 2.2MPa | |
| 使用機械 Machine | 立形マシニングセンタ (BT30) Vertical Machining Center | |



高い穴位置精度 High hole position accuracy

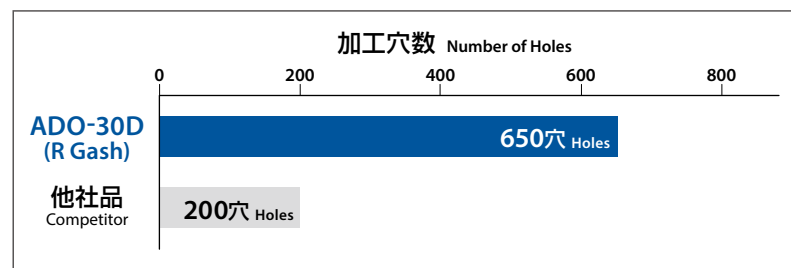
| | | |
|----------------------------|---|----------------------------------|
| 使用工具 Tool | ADO-5D ϕ 14 (R Gash) | |
| 被削材 Work Material | S50C | |
| 切削速度 Cutting Speed | 80m/min (1,819min ⁻¹) | |
| 送り速度 Feed | ① 764mm/min (0.42mm/rev) | ② 1,019mm/min (0.56mm/rev) |
| 穴深さ Depth of Hole | 50mm (通り) Through | |
| 切削油剤 Coolant | MQL (内部給油) (Internal) | |
| クーラント圧 Coolant Pressure | 0.45MPa | |
| 使用機械 Machine | 横形マシニングセンタ (HSK-A63) Horizontal Machining Center | |

加工穴位置ズレ Hole Runout

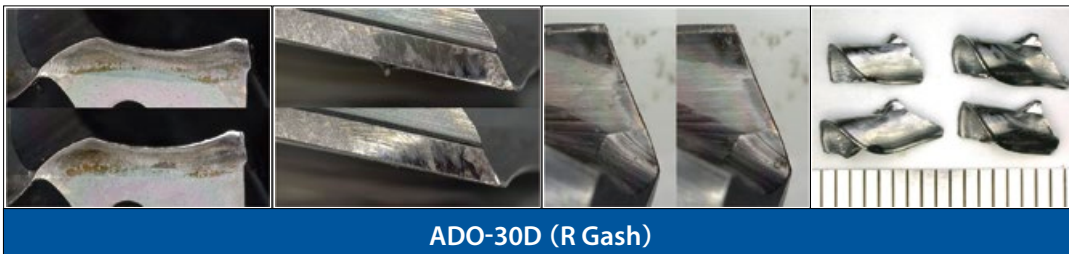


深穴でも高能率加工を実現 Achieves high efficiency even in deep hole drilling

| | | |
|----------------------------|--|--------------------------------------|
| 使用工具 Tool | ADO-30D ϕ 8 (R Gash) | 他社品 ϕ 8 Competitor |
| 被削材 Work Material | SCM440相当材 SCM440 equivalent material | |
| 切削速度 Cutting Speed | 75m/min (2,984min ⁻¹) | 50m/min (1,989min ⁻¹) |
| 送り速度 Feed | 1,223mm/min (0.41mm/rev) | 318mm/min (0.16mm/rev) |
| 穴深さ Depth of Hole | 240mm (止り) Blind | |
| 切削油剤 Coolant | 水溶性切削油剤 (内部給油) Water-Soluble (Internal) | |
| クーラント圧 Coolant Pressure | 3.8MPa | |
| 使用機械 Machine | 横形マシニングセンタ (BT50) Horizontal Machining Center | |



650穴加工後 After drilling 650 holes



ADO-30D (R Gash)



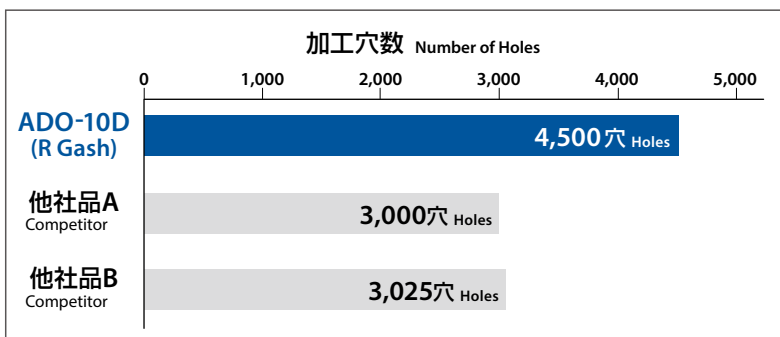
MQLでも安定した切りくず形状で長寿命

Stable chip shape and long tool life even with MQL

油剤の使用が極少量で廃棄処理が不要なMQLでも安定加工が可能です。
さらに、工具の長寿命化は廃棄物の削減につながり省資源化に貢献します。

Stable machining is possible even with MQL, which uses a very small amount of oil and does not require disposal. Furthermore, extending the life of tools leads to reduction of waste and contributes to resource saving.

| | |
|----------------------------|---|
| 使用工具 Tool | ADO-10D φ4 (R Gash) |
| 被削材 Work Material | S50C |
| 切削速度 Cutting Speed | 100m/min (7,958min ⁻¹) |
| 送り速度 Feed | 1,273mm/min (0.16mm/rev) |
| 穴深さ Depth of Hole | 40mm (止り) Blind |
| 切削油剤 Coolant | MQL (内部給油) MQL (Internal) |
| クーラント圧 Coolant Pressure | 0.45MPa |
| 使用機械 Machine | 横形マシニングセンタ (HSK-A63) Horizontal Machining Center |



| 加工穴数 Number of Holes | 3,000穴 Holes | | 4,500穴 Holes | |
|-------------------------|-----------------|--|-----------------|--|
| ADO-10D (R Gash) | | | | |
| 他社品A Competitor | | | | |
| 他社品B Competitor | | | | |

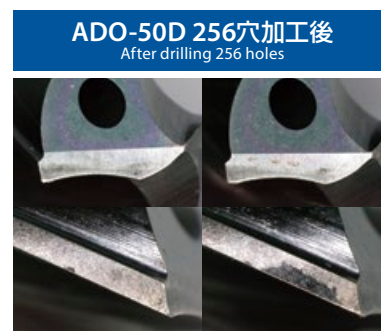


超深穴加工でも長寿命

Long tool life even in ultra-deep-hole drilling applications

| | | | | | |
|----------------------|---|--|--|--------------------------------------|--------------------------------------|
| サイズ Size | ADO-50D φ8 (R Gash) | 使用工具 Tool | 第2工程 Second Step | | |
| 被削材 Work Material | SCM440(生材) | | ① ADO-50D | ② 他社品(50Dタイプ) Competitor | ③ 他社ガンドリル Gun Drill |
| 穴深さ Depth of Cut | 391mm | 切削速度 Cutting Speed | 62.8m/min (2,500min ⁻¹) | 70m/min (2,787min ⁻¹) | 60m/min (2,389min ⁻¹) |
| 切削油剤 Coolant | 水溶性切削油剤 Water-Soluble | 送り速度 Feed | 750mm/min (0.3mm/rev) | 418mm/min (0.15mm/rev) | 143mm/min (0.06mm/rev) |
| 使用機械 Machine | 横形マシニングセンタ Horizontal Machining Center | 第1工程 : ガイド穴深さ40mm First Step : pilot hole at depth of 40mm | | | |

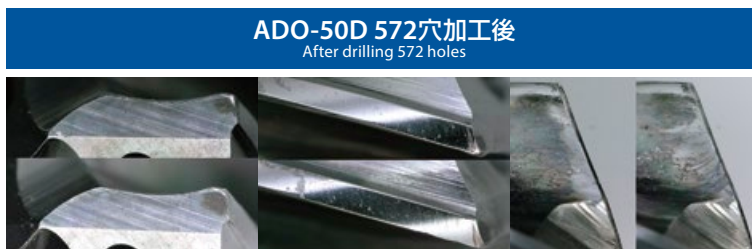
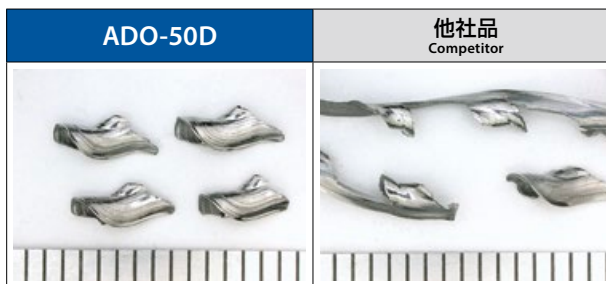
| | 加工穴数 Number of Holes | 加工時間 Cutting Time | |
|-----------------------------|-------------------------|----------------------------------|----------------|
| | | 100 | 200 |
| ① ADO-50D | 256穴 Holes | 256穴 Holes 継続可能 Still Running | 1分04秒 1'4" |
| ② 他社品(50Dタイプ) Competitor | 60穴 Holes | 折損 Breakage | 1分29秒 1'29" |
| ③ 他社ガンドリル Gun Drill | 65穴 Holes | 摩耗・交換 Wear and replacement | 3分17秒 3'17" |



ねばい被削材でも切りくずを細かく分断

Effectively breaks chips into small and manageable pieces even in sticky work material

| | | |
|-----------------------|--------------------------------------|--------------------------------------|
| 使用工具 Tool | ADO-50D (R Gash) | 他社品(50Dタイプ) Competitor |
| サイズ Size | φ5 | |
| 被削材 Work Material | SCM420H | |
| 切削速度 Cutting Speed | 60m/min (3,822min ⁻¹) | 50m/min (3,185min ⁻¹) |
| 送り速度 Feed | 955mm/min (0.25mm/rev) | 636mm/min (0.2mm/rev) |
| 穴深さ Depth of Hole | 250mm (止り) Blind | |
| 切削油剤 Coolant | 水溶性切削油剤 Water-Soluble | |
| 使用機械 Machine | 複合旋盤 Multifunction Lathe | |



| | 加工穴数 Number of Holes | | | | | |
|-------------------|--|-----|-----|-----|-----|-----|
| | 100 | 200 | 300 | 400 | 500 | 600 |
| ADO-50D | 572穴 Holes 摩耗・交換 Wear and replacement | | | | | |
| 他社品 Competitor | 360穴 Holes 折損 Breakage | | | | | |

ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ADO-3D



ADO-5D



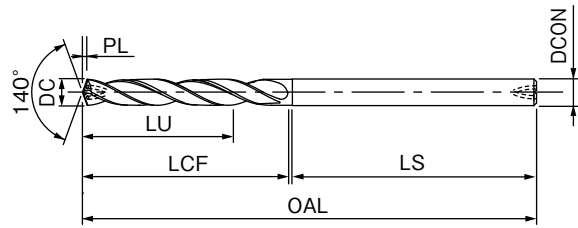
ADO-8D



R Gash



R形シンニング
R thinning



単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690200 | 2 - 3 | 3D | 6 | 12 | 66 | 3 | 51.2 | 0.4 | ● | 10,200 | |
| 8692200 | | 5D | 10 | 18 | 70 | | 49.2 | 0.4 | B | ● | 14,300 |
| 8694200 | | 8D | 16 | 22 | 75 | | 50.1 | 0.4 | ● | ● | 17,200 |
| 8690210 | 2.1 - 3 | 3D | 7 | 13 | 66 | 3 | 50.3 | 0.4 | ● | 10,200 | |
| 8692210 | | 5D | 11 | 19 | 70 | | 48.3 | 0.4 | B | ● | 14,300 |
| 8694210 | | 8D | 17 | 24 | 75 | | 48.3 | 0.4 | ● | ● | 17,200 |
| 8690220 | 2.2 - 3 | 3D | 7 | 14 | 66 | 3 | 49.5 | 0.4 | ● | 10,200 | |
| 8692220 | | 5D | 11 | 20 | 70 | | 47.5 | 0.4 | B | ● | 14,300 |
| 8694220 | | 8D | 18 | 25 | 75 | | 47.5 | 0.4 | ● | ● | 17,200 |
| 8690230 | 2.3 - 3 | 3D | 7 | 14 | 66 | 3 | 49.7 | 0.4 | ● | 10,200 | |
| 8692230 | | 5D | 12 | 21 | 70 | | 46.7 | 0.4 | B | ● | 14,300 |
| 8694230 | | 8D | 19 | 26 | 75 | | 46.7 | 0.4 | ● | ● | 17,200 |
| 8690240 | 2.4 - 3 | 3D | 8 | 15 | 66 | 3 | 48.9 | 0.4 | ● | 10,200 | |
| 8692240 | | 5D | 12 | 22 | 70 | | 45.9 | 0.4 | B | ● | 14,300 |
| 8694240 | | 8D | 20 | 27 | 75 | | 45.9 | 0.4 | ● | ● | 17,200 |
| 8690250 | 2.5 - 3 | 3D | 8 | 15 | 66 | 3 | 49.1 | 0.5 | ● | 10,200 | |
| 8692250 | | 5D | 13 | 23 | 70 | | 45.1 | 0.5 | B | ● | 14,300 |
| 8694250 | | 8D | 20 | 28 | 75 | | 45.1 | 0.5 | ● | ● | 17,200 |
| 8690260 | 2.6 - 3 | 3D | 8 | 16 | 66 | 3 | 48.3 | 0.5 | ● | 10,200 | |
| 8692260 | | 5D | 13 | 24 | 78 | | 52.3 | 0.5 | B | ● | 14,300 |
| 8694260 | | 8D | 21 | 29 | 80 | | 49.3 | 0.5 | ● | ● | 17,200 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690265 | 2.65 - 3 | 3D | 8 | 16 | 66 | 3 | 48.3 | 0.5 | B | ● | 10,200 |
| 8692265 | | 5D | 14 | 24 | 78 | | 52.3 | 0.5 | ● | ● | 14,300 |
| 8690270 | 2.7 - 3 | 3D | 9 | 17 | 66 | 3 | 47.4 | 0.5 | ● | 10,200 | |
| 8692270 | | 5D | 14 | 25 | 78 | | 51.4 | 0.5 | B | ● | 14,300 |
| 8694270 | | 8D | 22 | 30 | 80 | | 48.4 | 0.5 | ● | ● | 17,200 |
| 8692276 | 2.76 - 3 | 5D | 14 | 25 | 78 | 3 | 51.6 | 0.5 | B | ● | 14,300 |
| 8692278 | 2.78 - 3 | 5D | 14 | 26 | 78 | 3 | 50.6 | 0.5 | B | ● | 14,300 |
| 8690280 | 2.8 - 3 | 3D | 9 | 17 | 66 | 3 | 47.6 | 0.5 | ● | 10,200 | |
| 8692280 | | 5D | 14 | 26 | 78 | | 50.6 | 0.5 | B | ● | 14,300 |
| 8694280 | | 8D | 23 | 31 | 80 | | 47.6 | 0.5 | ● | ● | 17,200 |
| 8690290 | 2.9 - 3 | 3D | 9 | 18 | 66 | 3 | 46.8 | 0.5 | ● | 10,200 | |
| 8692290 | | 5D | 15 | 27 | 78 | | 49.8 | 0.5 | B | ● | 14,300 |
| 8694290 | | 8D | 24 | 32 | 80 | | 46.8 | 0.5 | ● | ● | 17,200 |
| 8690300 | 3 - 3 | 3D | 9 | 18 | 66 | 3 | 47 | 0.5 | ● | 10,200 | |
| 8692300 | | 5D | 15 | 27 | 78 | | 50 | 0.5 | B | ● | 14,300 |
| 8694300 | | 8D | 24 | 33 | 80 | | 46 | 0.5 | ● | ● | 17,200 |
| 8690310 | 3.1 | 3D | 10 | 19 | 74 | 4 | 52.3 | 0.6 | ● | 11,000 | |
| 8692310 | | 5D | 16 | 28 | 86 | | 55.3 | 0.6 | B | ● | 14,800 |
| 8694310 | | 8D | 25 | 34 | 95 | | 58.3 | 0.6 | ● | ● | 17,500 |
| 8690315 | 3.15 | 3D | 10 | 19 | 74 | 4 | 52.4 | 0.6 | ● | 11,000 | |
| 8692315 | | 5D | 16 | 29 | 86 | | 54.4 | 0.6 | B | ● | 14,800 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT →



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690320 | 3.2 | 3D | 10 | 20 | 74 | 4 | 51.5 | 0.6 | ● | 11,000 | |
| 8692320 | | 5D | 16 | 29 | 86 | | 54.5 | 0.6 | B | ● | 14,800 |
| 8694320 | | 8D | 26 | 35 | 95 | | 57.5 | 0.6 | ● | 17,500 | |
| 8690330 | 3.3 | 3D | 10 | 20 | 74 | 4 | 51.7 | 0.6 | ● | 11,000 | |
| 8692330 | | 5D | 17 | 30 | 86 | | 53.7 | 0.6 | B | ● | 14,800 |
| 8694330 | | 8D | 27 | 36 | 95 | | 56.7 | 0.6 | ● | 17,500 | |
| 8690340 | 3.4 | 3D | 11 | 21 | 74 | 4 | 50.9 | 0.6 | ● | 11,000 | |
| 8692340 | | 5D | 17 | 31 | 86 | | 52.9 | 0.6 | B | ● | 14,800 |
| 8694340 | | 8D | 28 | 37 | 95 | | 55.9 | 0.6 | ● | 17,500 | |
| 8690350 | 3.5 | 3D | 11 | 21 | 74 | 4 | 51.1 | 0.6 | ● | 11,000 | |
| 8692350 | | 5D | 18 | 32 | 86 | | 52.1 | 0.6 | B | ● | 14,800 |
| 8694350 | | 8D | 28 | 39 | 95 | | 55 | 0.6 | ● | 17,500 | |
| 8690360 | 3.6 | 3D | 11 | 22 | 74 | 4 | 50.3 | 0.7 | ● | 11,600 | |
| 8692360 | | 5D | 18 | 33 | 86 | | 51.3 | 0.7 | B | ● | 14,900 |
| 8694360 | | 8D | 29 | 40 | 95 | | 53.3 | 0.7 | ● | 17,600 | |
| 8692366 | 3.66 | 5D | 19 | 33 | 86 | 4 | 51.4 | 0.7 | B | ● | 14,900 |
| 8692368 | 3.68 | 5D | 19 | 34 | 86 | 4 | 50.4 | 0.7 | B | ● | 14,900 |
| 8690370 | 3.7 | 3D | 12 | 23 | 74 | 4 | 49.4 | 0.7 | ● | 11,600 | |
| 8692370 | | 5D | 19 | 34 | 86 | | 50.4 | 0.7 | B | ● | 14,900 |
| 8694370 | | 8D | 30 | 41 | 95 | | 52.4 | 0.7 | ● | 17,600 | |
| 8690375 | 3.75 | 3D | 12 | 23 | 74 | 4 | 49.5 | 0.7 | ● | 11,600 | |
| 8692375 | | 5D | 19 | 34 | 86 | | 50.5 | 0.7 | B | ● | 14,900 |
| 8690380 | 3.8 | 3D | 12 | 23 | 74 | 4 | 49.6 | 0.7 | ● | 11,600 | |
| 8692380 | | 5D | 19 | 35 | 86 | | 49.6 | 0.7 | B | ● | 14,900 |
| 8694380 | | 8D | 31 | 42 | 95 | | 51.6 | 0.7 | ● | 17,600 | |
| 8690390 | 3.9 | 3D | 12 | 24 | 74 | 4 | 48.8 | 0.7 | ● | 11,600 | |
| 8692390 | | 5D | 20 | 36 | 86 | | 48.8 | 0.7 | B | ● | 14,900 |
| 8694390 | | 8D | 32 | 43 | 95 | | 50.8 | 0.7 | ● | 17,600 | |
| 8690400 | 4 | 3D | 12 | 24 | 74 | 4 | 49 | 0.7 | ● | 11,600 | |
| 8692400 | | 5D | 20 | 36 | 86 | | 49 | 0.7 | B | ● | 14,900 |
| 8694400 | | 8D | 32 | 44 | 95 | | 50 | 0.7 | ● | 17,600 | |
| 8690410 | 4.1 - 5 | 3D | 13 | 25 | 80 | 5 | 52.3 | 0.7 | ● | 12,500 | |
| 8692410 | | 5D | 21 | 37 | 95 | | 55.3 | 0.7 | B | ● | 15,200 |
| 8694410 | | 8D | 33 | 45 | 105 | | 57.3 | 0.7 | ● | 18,200 | |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8700410 | 4.1 | 3D | 13 | 25 | 80 | 6 | 50.5 | 0.7 | ● | 12,500 | |
| 8702410 | | 5D | 21 | 37 | 95 | | 53.5 | 0.7 | B | ● | 15,200 |
| 8704410 | | 8D | 33 | 45 | 105 | | 55.5 | 0.7 | ● | 18,200 | |
| 8690420 | 4.2 - 5 | 3D | 13 | 26 | 80 | 5 | 51.5 | 0.8 | ● | 12,500 | |
| 8692420 | | 5D | 21 | 38 | 95 | | 54.5 | 0.8 | B | ● | 15,200 |
| 8694420 | | 8D | 34 | 46 | 105 | | 56.5 | 0.8 | ● | 18,200 | |
| 8700420 | 4.2 | 3D | 13 | 26 | 80 | 6 | 49.6 | 0.8 | ● | 12,500 | |
| 8702420 | | 5D | 21 | 38 | 95 | | 52.6 | 0.8 | B | ● | 15,200 |
| 8704420 | | 8D | 34 | 46 | 105 | | 54.6 | 0.8 | ● | 18,200 | |
| 8690430 | 4.3 - 5 | 3D | 13 | 26 | 80 | 5 | 51.7 | 0.8 | ● | 12,500 | |
| 8692430 | | 5D | 22 | 39 | 95 | | 53.7 | 0.8 | B | ● | 15,200 |
| 8694430 | | 8D | 35 | 47 | 105 | | 55.7 | 0.8 | ● | 18,200 | |
| 8700430 | 4.3 | 3D | 13 | 26 | 80 | 6 | 49.8 | 0.8 | ● | 12,500 | |
| 8702430 | | 5D | 22 | 39 | 95 | | 51.8 | 0.8 | B | ● | 15,200 |
| 8704430 | | 8D | 35 | 47 | 105 | | 53.8 | 0.8 | ● | 18,200 | |
| 8690440 | 4.4 - 5 | 3D | 14 | 27 | 80 | 5 | 50.9 | 0.8 | ● | 12,500 | |
| 8692440 | | 5D | 22 | 40 | 95 | | 52.9 | 0.8 | B | ● | 15,200 |
| 8694440 | | 8D | 36 | 48 | 105 | | 54.9 | 0.8 | ● | 18,200 | |
| 8700440 | 4.4 | 3D | 14 | 27 | 80 | 6 | 49 | 0.8 | ● | 12,500 | |
| 8702440 | | 5D | 22 | 40 | 95 | | 51 | 0.8 | B | ● | 15,200 |
| 8704440 | | 8D | 36 | 48 | 105 | | 53 | 0.8 | ● | 18,200 | |
| 8690450 | 4.5 - 5 | 3D | 14 | 27 | 80 | 5 | 51.1 | 0.8 | ● | 12,500 | |
| 8692450 | | 5D | 23 | 41 | 95 | | 52.1 | 0.8 | B | ● | 15,200 |
| 8694450 | | 8D | 36 | 50 | 105 | | 54 | 0.8 | ● | 18,200 | |
| 8700450 | 4.5 | 3D | 14 | 27 | 80 | 6 | 49.2 | 0.8 | ● | 12,500 | |
| 8702450 | | 5D | 23 | 41 | 95 | | 50.2 | 0.8 | B | ● | 15,200 |
| 8704450 | | 8D | 36 | 50 | 105 | | 51.2 | 0.8 | ● | 18,200 | |
| 8690460 | 4.6 - 5 | 3D | 14 | 28 | 80 | 5 | 50.3 | 0.8 | ● | 13,400 | |
| 8692460 | | 5D | 23 | 42 | 95 | | 51.3 | 0.8 | B | ● | 15,700 |
| 8694460 | | 8D | 37 | 51 | 105 | | 52.3 | 0.8 | ● | 18,500 | |
| 8700460 | 4.6 | 3D | 14 | 28 | 80 | 6 | 48.4 | 0.8 | ● | 13,400 | |
| 8702460 | | 5D | 23 | 42 | 95 | | 49.4 | 0.8 | B | ● | 15,700 |
| 8704460 | | 8D | 37 | 51 | 105 | | 50.4 | 0.8 | ● | 18,500 | |
| 8692462 | 4.62 - 5 | 5D | 24 | 42 | 95 | 5 | 51.3 | 0.8 | B | ● | 15,700 |
| 8692464 | 4.64 - 5 | 5D | 24 | 42 | 95 | 5 | 51.3 | 0.8 | B | ● | 15,700 |

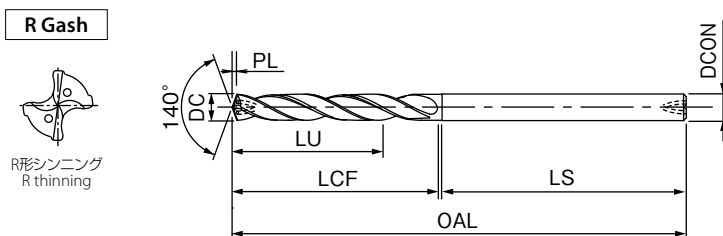
● = 標準在庫品 ● = Standard stock item

NEXT



ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690470 | 4.7 - 5 | 3D | 15 | 29 | 80 | 5 | 49.4 | 0.9 | ● | 13,400 | |
| 8692470 | | 5D | 24 | 43 | 95 | | 50.4 | 0.9 | B | ● | 15,700 |
| 8694470 | | 8D | 38 | 52 | 105 | | 51.4 | 0.9 | ● | 18,500 | |
| 8700470 | 4.7 | 3D | 15 | 29 | 80 | 6 | 47.6 | 0.9 | ● | 13,400 | |
| 8702470 | | 5D | 24 | 43 | 95 | | 48.6 | 0.9 | B | ● | 15,700 |
| 8704470 | | 8D | 38 | 52 | 105 | | 49.6 | 0.9 | ● | 18,500 | |
| 8690480 | 4.8 - 5 | 3D | 15 | 29 | 80 | 5 | 49.6 | 0.9 | ● | 13,400 | |
| 8692480 | | 5D | 24 | 44 | 95 | | 49.6 | 0.9 | B | ● | 15,700 |
| 8694480 | | 8D | 39 | 53 | 105 | | 50.6 | 0.9 | ● | 18,500 | |
| 8700480 | 4.8 | 3D | 15 | 29 | 80 | 6 | 47.8 | 0.9 | ● | 13,400 | |
| 8702480 | | 5D | 24 | 44 | 95 | | 47.8 | 0.9 | B | ● | 15,700 |
| 8704480 | | 8D | 39 | 53 | 105 | | 48.8 | 0.9 | ● | 18,500 | |
| 8690490 | 4.9 - 5 | 3D | 15 | 30 | 80 | 5 | 48.8 | 0.9 | ● | 13,400 | |
| 8692490 | | 5D | 25 | 45 | 95 | | 48.8 | 0.9 | B | ● | 15,700 |
| 8694490 | | 8D | 40 | 54 | 105 | | 49.8 | 0.9 | ● | 18,500 | |
| 8700490 | 4.9 | 3D | 15 | 30 | 80 | 6 | 46.9 | 0.9 | ● | 13,400 | |
| 8702490 | | 5D | 25 | 45 | 95 | | 46.9 | 0.9 | B | ● | 15,700 |
| 8704490 | | 8D | 40 | 54 | 105 | | 47.9 | 0.9 | ● | 18,500 | |
| 8690500 | 5 - 5 | 3D | 15 | 25 | 80 | 5 | 54 | 0.9 | ● | 13,400 | |
| 8692500 | | 5D | 25 | 45 | 95 | | 49 | 0.9 | B | ● | 15,700 |
| 8694500 | | 8D | 40 | 55 | 105 | | 49 | 0.9 | ● | 18,500 | |
| 8700500 | 5 | 3D | 15 | 25 | 80 | 6 | 52.1 | 0.9 | ● | 13,400 | |
| 8702500 | | 5D | 25 | 45 | 95 | | 47.1 | 0.9 | B | ● | 15,700 |
| 8704500 | | 8D | 40 | 55 | 105 | | 47.1 | 0.9 | ● | 18,500 | |
| 8690510 | 5.1 | 3D | 16 | 26 | 82 | 6 | 53.3 | 0.9 | ● | 14,100 | |
| 8692510 | | 5D | 26 | 41 | 100 | | 56.3 | 0.9 | B | ● | 16,500 |
| 8704510 | | 8D | 41 | 56 | 115 | | 56.3 | 0.9 | ● | 19,300 | |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690520 | 5.2 | 3D | 16 | 26 | 82 | 6 | 53.5 | 0.9 | ● | 14,100 | |
| 8692520 | | 5D | 26 | 42 | 100 | | 55.5 | 0.9 | B | ● | 16,500 |
| 8704520 | | 8D | 42 | 57 | 115 | | 55.5 | 0.9 | ● | 19,300 | |
| 8690525 | 5.25 | 3D | 16 | 27 | 82 | 6 | 52.6 | 1 | ● | 14,100 | |
| 8692525 | | 5D | 27 | 42 | 100 | | 55.6 | 1 | B | ● | 16,500 |
| 8690530 | 5.3 | 3D | 16 | 27 | 82 | 6 | 52.7 | 1 | ● | 14,100 | |
| 8692530 | | 5D | 27 | 43 | 100 | | 54.7 | 1 | B | ● | 16,500 |
| 8704530 | | 8D | 43 | 58 | 115 | | 54.7 | 1 | ● | 19,300 | |
| 8690540 | 5.4 | 3D | 17 | 27 | 82 | 6 | 52.9 | 1 | ● | 14,100 | |
| 8692540 | | 5D | 27 | 44 | 100 | | 53.9 | 1 | B | ● | 16,500 |
| 8704540 | | 8D | 44 | 59 | 115 | | 53.9 | 1 | ● | 19,300 | |
| 8690550 | 5.5 | 3D | 17 | 28 | 82 | 6 | 52.1 | 1 | ● | 14,100 | |
| 8692550 | | 5D | 28 | 44 | 100 | | 54.1 | 1 | B | ● | 16,500 |
| 8694550 | | 8D | 44 | 61 | 115 | | 52.1 | 1 | ● | 19,300 | |
| 8692552 | 5.52 | 5D | 28 | 45 | 100 | 6 | 53.1 | 1 | B | ● | 17,400 |
| 8692554 | 5.54 | 5D | 28 | 45 | 100 | 6 | 53.1 | 1 | B | ● | 17,400 |
| 8690560 | 5.6 | 3D | 17 | 28 | 82 | 6 | 52.3 | 1 | ● | 14,800 | |
| 8692560 | | 5D | 28 | 45 | 100 | | 53.3 | 1 | B | ● | 17,400 |
| 8704560 | | 8D | 45 | 62 | 115 | | 51.3 | 1 | ● | 19,700 | |
| 8690570 | 5.7 | 3D | 18 | 29 | 82 | 6 | 51.4 | 1 | ● | 14,800 | |
| 8692570 | | 5D | 29 | 46 | 100 | | 52.4 | 1 | B | ● | 17,400 |
| 8704570 | | 8D | 46 | 63 | 115 | | 50.4 | 1 | ● | 19,700 | |
| 8690580 | 5.8 | 3D | 18 | 29 | 82 | 6 | 51.6 | 1.1 | ● | 14,800 | |
| 8692580 | | 5D | 29 | 47 | 100 | | 51.6 | 1.1 | B | ● | 17,400 |
| 8704580 | | 8D | 47 | 64 | 115 | | 49.6 | 1.1 | ● | 19,700 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
 All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690590 | 5.9 | 3D | 18 | 30 | 82 | 6 | 50.8 | 1.1 | ● | 14,800 | |
| 8692590 | | 5D | 30 | 48 | 100 | | 50.8 | 1.1 | B | ● | 17,400 |
| 8704590 | | 8D | 48 | 65 | 115 | | 48.8 | 1.1 | | ● | 19,700 |
| 8690600 | 6 | 3D | 18 | 30 | 82 | 6 | 51 | 1.1 | ● | 14,800 | |
| 8692600 | | 5D | 30 | 48 | 100 | | 51 | 1.1 | B | ● | 17,400 |
| 8694600 | | 8D | 48 | 66 | 115 | | 48 | 1.1 | | ● | 19,700 |
| 8690610 | 6.1 - 7 | 3D | 19 | 31 | 88 | 7 | 56 | 1.1 | ● | 14,800 | |
| 8692610 | | 5D | 31 | 49 | 109 | | 59 | 1.1 | B | ● | 17,400 |
| 8694610 | | 8D | 49 | 67 | 125 | | 57 | 1.1 | | ● | 20,900 |
| 8700610 | 6.1 | 3D | 19 | 31 | 88 | 8 | 52.5 | 1.1 | ● | 14,800 | |
| 8702610 | | 5D | 31 | 49 | 109 | | 55.5 | 1.1 | B | ● | 17,400 |
| 8704610 | | 8D | 49 | 67 | 125 | | 53.5 | 1.1 | | ● | 20,900 |
| 8690620 | 6.2 - 7 | 3D | 19 | 31 | 88 | 7 | 56 | 1.1 | ● | 14,800 | |
| 8692620 | | 5D | 31 | 50 | 109 | | 58 | 1.1 | B | ● | 17,400 |
| 8694620 | | 8D | 50 | 68 | 125 | | 56 | 1.1 | | ● | 20,900 |
| 8700620 | 6.2 | 3D | 19 | 31 | 88 | 8 | 52.6 | 1.1 | ● | 14,800 | |
| 8702620 | | 5D | 31 | 50 | 109 | | 54.6 | 1.1 | B | ● | 17,400 |
| 8704620 | | 8D | 50 | 68 | 125 | | 52.6 | 1.1 | | ● | 20,900 |
| 8690625 | 6.25 - 7 | 3D | 19 | 32 | 88 | 7 | 55 | 1.1 | B | ● | 14,800 |
| 8692625 | | 5D | 32 | 50 | 109 | | 58 | 1.1 | | ● | 17,400 |
| 8690630 | 6.3 - 7 | 3D | 19 | 32 | 88 | 7 | 55 | 1.1 | ● | 14,800 | |
| 8692630 | | 5D | 32 | 51 | 109 | | 57 | 1.1 | B | ● | 17,400 |
| 8694630 | | 8D | 51 | 69 | 125 | | 55 | 1.1 | | ● | 20,900 |
| 8700630 | 6.3 | 3D | 19 | 32 | 88 | 8 | 51.8 | 1.1 | ● | 14,800 | |
| 8702630 | | 5D | 32 | 51 | 109 | | 53.8 | 1.1 | B | ● | 17,400 |
| 8704630 | | 8D | 51 | 69 | 125 | | 51.8 | 1.1 | | ● | 20,900 |
| 8690640 | 6.4 - 7 | 3D | 20 | 32 | 88 | 7 | 55 | 1.2 | ● | 14,800 | |
| 8692640 | | 5D | 32 | 52 | 109 | | 56 | 1.2 | B | ● | 17,400 |
| 8694640 | | 8D | 52 | 70 | 125 | | 54 | 1.2 | | ● | 20,900 |
| 8700640 | 6.4 | 3D | 20 | 32 | 88 | 8 | 52 | 1.2 | ● | 14,800 | |
| 8702640 | | 5D | 32 | 52 | 109 | | 53 | 1.2 | B | ● | 17,400 |
| 8704640 | | 8D | 52 | 70 | 125 | | 51 | 1.2 | | ● | 20,900 |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690650 | 6.5 - 7 | 3D | 20 | 33 | 88 | 7 | 54 | 1.2 | ● | 14,800 | |
| 8692650 | | 5D | 33 | 52 | 109 | | 56 | 1.2 | B | ● | 17,400 |
| 8694650 | | 8D | 52 | 72 | 125 | | 52 | 1.2 | | ● | 20,900 |
| 8700650 | 6.5 | 3D | 20 | 33 | 88 | 8 | 51.2 | 1.2 | ● | 14,800 | |
| 8702650 | | 5D | 33 | 52 | 109 | | 53.2 | 1.2 | B | ● | 17,400 |
| 8704650 | | 8D | 52 | 72 | 125 | | 49.2 | 1.2 | | ● | 20,900 |
| 8690660 | 6.6 - 7 | 3D | 20 | 33 | 88 | 7 | 54 | 1.2 | ● | 15,700 | |
| 8692660 | | 5D | 33 | 53 | 109 | | 55 | 1.2 | B | ● | 18,700 |
| 8694660 | | 8D | 53 | 73 | 125 | | 51 | 1.2 | | ● | 21,100 |
| 8700660 | 6.6 | 3D | 20 | 33 | 88 | 8 | 51.4 | 1.2 | ● | 15,700 | |
| 8702660 | | 5D | 33 | 53 | 109 | | 52.4 | 1.2 | B | ● | 18,700 |
| 8704660 | | 8D | 53 | 73 | 125 | | 48.4 | 1.2 | | ● | 21,100 |
| 8690670 | 6.7 - 7 | 3D | 21 | 34 | 88 | 7 | 53 | 1.2 | ● | 15,700 | |
| 8692670 | | 5D | 34 | 54 | 109 | | 54 | 1.2 | B | ● | 18,700 |
| 8694670 | | 8D | 54 | 74 | 125 | | 50 | 1.2 | | ● | 21,100 |
| 8700670 | 6.7 | 3D | 21 | 34 | 88 | 8 | 50.6 | 1.2 | ● | 15,700 | |
| 8702670 | | 5D | 34 | 54 | 109 | | 51.6 | 1.2 | B | ● | 18,700 |
| 8704670 | | 8D | 54 | 74 | 125 | | 47.6 | 1.2 | | ● | 21,100 |
| 8690675 | 6.75 - 7 | 3D | 21 | 34 | 88 | 7 | 53 | 1.2 | B | ● | 15,700 |
| 8692675 | | 5D | 34 | 54 | 109 | | 54 | 1.2 | | ● | 18,700 |
| 8690680 | 6.8 - 7 | 3D | 21 | 34 | 88 | 7 | 53 | 1.2 | ● | 15,700 | |
| 8692680 | | 5D | 34 | 55 | 109 | | 53 | 1.2 | B | ● | 18,700 |
| 8694680 | | 8D | 55 | 75 | 125 | | 49 | 1.2 | | ● | 21,100 |
| 8700680 | 6.8 | 3D | 21 | 34 | 88 | 8 | 50.8 | 1.2 | ● | 15,700 | |
| 8702680 | | 5D | 34 | 55 | 109 | | 50.8 | 1.2 | B | ● | 18,700 |
| 8704680 | | 8D | 55 | 75 | 125 | | 46.8 | 1.2 | | ● | 21,100 |
| 8690690 | 6.9 - 7 | 3D | 21 | 35 | 88 | 7 | 52 | 1.3 | ● | 15,700 | |
| 8692690 | | 5D | 35 | 56 | 109 | | 52 | 1.3 | B | ● | 18,700 |
| 8694690 | | 8D | 56 | 76 | 125 | | 48 | 1.3 | | ● | 21,100 |
| 8700690 | 6.9 | 3D | 21 | 35 | 88 | 8 | 49.9 | 1.3 | ● | 15,700 | |
| 8702690 | | 5D | 35 | 56 | 109 | | 49.9 | 1.3 | B | ● | 18,700 |
| 8704690 | | 8D | 56 | 76 | 125 | | 45.9 | 1.3 | | ● | 21,100 |

● = 標準在庫品 ● = Standard stock item

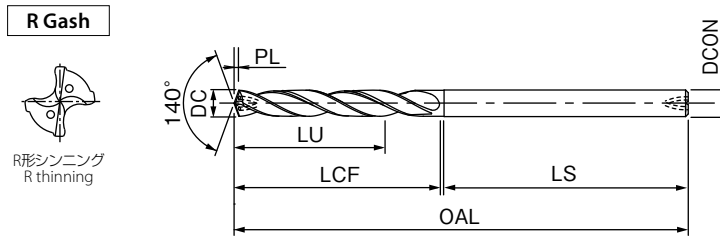
特長 Feature
 加工データ Cutting Data
 3D/5D/8D
 油穴付き with Oil Hole
 ガイド穴用ドリル Pilot Drill
 40D/50D 10D/15D/20D/25D/30D
 油穴無 Non Oil Hole
 2D/4D
 リーディングドリル Starter Drill
 AD-LDS
 切削条件表 Cutting Conditions
 特殊品対応表 Production Table by Drill Diameter

NEXT



ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690700 | 7 - 7 | 3D | 21 | 35 | 88 | 7 | 52 | 1.3 | ● | 15,700 | |
| 8692700 | | 5D | 35 | 56 | 109 | | 52 | 1.3 | B | ● | 18,700 |
| 8694700 | | 8D | 56 | 77 | 125 | | 47 | 1.3 | ● | 21,100 | |
| 8700700 | 7 | 3D | 21 | 35 | 88 | 8 | 50.1 | 1.3 | ● | 15,700 | |
| 8702700 | | 5D | 35 | 56 | 109 | | 50.1 | 1.3 | B | ● | 18,700 |
| 8704700 | | 8D | 56 | 77 | 125 | | 45.1 | 1.3 | ● | 21,100 | |
| 8690710 | 7.1 | 3D | 22 | 36 | 94 | 8 | 57 | 1.3 | ● | 16,500 | |
| 8692710 | | 5D | 36 | 57 | 118 | | 60 | 1.3 | B | ● | 19,300 |
| 8704710 | | 8D | 57 | 78 | 140 | | 61 | 1.3 | ● | 22,900 | |
| 8690720 | 7.2 | 3D | 22 | 36 | 94 | 8 | 57 | 1.3 | ● | 16,500 | |
| 8692720 | | 5D | 36 | 58 | 118 | | 59 | 1.3 | B | ● | 19,300 |
| 8704720 | | 8D | 58 | 79 | 140 | | 60 | 1.3 | ● | 22,900 | |
| 8690725 | 7.25 | 3D | 22 | 37 | 94 | 8 | 56 | 1.3 | ● | 16,500 | |
| 8692725 | | 5D | 37 | 58 | 118 | | 59 | 1.3 | B | ● | 19,300 |
| 8690730 | 7.3 | 3D | 22 | 37 | 94 | 8 | 56 | 1.3 | ● | 16,500 | |
| 8692730 | | 5D | 37 | 59 | 118 | | 58 | 1.3 | B | ● | 19,300 |
| 8704730 | | 8D | 59 | 80 | 140 | | 59 | 1.3 | ● | 22,900 | |
| 8692736 | 7.36 | 5D | 37 | 59 | 118 | 8 | 58 | 1.3 | B | ● | 19,300 |
| 8692738 | 7.38 | 5D | 37 | 60 | 118 | 8 | 57 | 1.3 | B | ● | 19,300 |
| 8690740 | 7.4 | 3D | 23 | 37 | 94 | 8 | 56 | 1.3 | ● | 16,500 | |
| 8692740 | | 5D | 37 | 60 | 118 | | 57 | 1.3 | B | ● | 19,300 |
| 8704740 | | 8D | 60 | 81 | 140 | | 58 | 1.3 | ● | 22,900 | |
| 8690750 | 7.5 | 3D | 23 | 38 | 94 | 8 | 55 | 1.4 | ● | 16,500 | |
| 8692750 | | 5D | 38 | 60 | 118 | | 57 | 1.4 | B | ● | 19,300 |
| 8694750 | | 8D | 60 | 83 | 140 | | 56 | 1.4 | ● | 22,900 | |
| 8692752 | 7.52 | 5D | 38 | 61 | 118 | 8 | 56 | 1.4 | B | ● | 20,400 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8692754 | 7.54 | 5D | 38 | 61 | 118 | 8 | 56 | 1.4 | B | ● | 20,400 |
| 8690760 | 7.6 | 3D | 23 | 38 | 94 | 8 | 55 | 1.4 | ● | 17,500 | |
| 8692760 | | 5D | 38 | 61 | 118 | | 56 | 1.4 | B | ● | 20,400 |
| 8704760 | | 8D | 61 | 84 | 140 | | 55 | 1.4 | ● | 23,300 | |
| 8690770 | 7.7 | 3D | 24 | 39 | 94 | 8 | 54 | 1.4 | ● | 17,500 | |
| 8692770 | | 5D | 39 | 62 | 118 | | 55 | 1.4 | B | ● | 20,400 |
| 8704770 | | 8D | 62 | 85 | 140 | | 54 | 1.4 | ● | 23,300 | |
| 8690775 | 7.75 | 3D | 24 | 39 | 94 | 8 | 54 | 1.4 | ● | 17,500 | |
| 8692775 | | 5D | 39 | 62 | 118 | | 55 | 1.4 | B | ● | 20,400 |
| 8690780 | 7.8 | 3D | 24 | 39 | 94 | 8 | 54 | 1.4 | ● | 17,500 | |
| 8692780 | | 5D | 39 | 63 | 118 | | 54 | 1.4 | B | ● | 20,400 |
| 8704780 | | 8D | 63 | 86 | 140 | | 53 | 1.4 | ● | 23,300 | |
| 8690790 | 7.9 | 3D | 24 | 40 | 94 | 8 | 53 | 1.4 | ● | 17,500 | |
| 8692790 | | 5D | 40 | 64 | 118 | | 53 | 1.4 | B | ● | 20,400 |
| 8704790 | | 8D | 64 | 87 | 140 | | 52 | 1.4 | ● | 23,300 | |
| 8690800 | 8 | 3D | 24 | 40 | 94 | 8 | 53 | 1.5 | ● | 17,500 | |
| 8692800 | | 5D | 40 | 64 | 118 | | 53 | 1.5 | B | ● | 20,400 |
| 8694800 | | 8D | 64 | 88 | 140 | | 51 | 1.5 | ● | 23,300 | |
| 8690810 | 8.1 - 9 | 3D | 25 | 41 | 101 | 9 | 59 | 1.5 | ● | 19,000 | |
| 8692810 | | 5D | 41 | 65 | 128 | | 62 | 1.5 | B | ● | 21,700 |
| 8694810 | | 8D | 65 | 89 | 150 | | 60 | 1.5 | ● | 25,100 | |
| 8700810 | 8.1 | 3D | 25 | 41 | 101 | 10 | 55.5 | 1.5 | ● | 19,000 | |
| 8702810 | | 5D | 41 | 65 | 128 | | 58.5 | 1.5 | B | ● | 21,700 |
| 8704810 | | 8D | 65 | 89 | 150 | | 56.5 | 1.5 | ● | 25,100 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
 All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8690820 | 8.2 - 9 | 3D | 25 | 41 | 101 | 9 | 61 | 1.5 | ● | 19,000 | |
| 8692820 | | 5D | 41 | 66 | 128 | | | 1.5 | B | ● | 21,700 |
| 8694820 | | 8D | 66 | 90 | 150 | | | 1.5 | ● | 25,100 | |
| 8700820 | 8.2 | 3D | 25 | 41 | 101 | 10 | 57.6 | 1.5 | ● | 19,000 | |
| 8702820 | | 5D | 41 | 66 | 128 | | | 1.5 | B | ● | 21,700 |
| 8704820 | | 8D | 66 | 90 | 150 | | | 1.5 | ● | 25,100 | |
| 8690825 | 8.25 - 9 | 3D | 25 | 42 | 101 | 9 | 58 | 1.5 | ● | 19,000 | |
| 8692825 | | 5D | 42 | 66 | 128 | | | 1.5 | B | ● | 21,700 |
| 8690830 | 8.3 - 9 | 3D | 25 | 42 | 101 | 9 | 60 | 1.5 | ● | 19,000 | |
| 8692830 | | 5D | 42 | 67 | 128 | | | 1.5 | B | ● | 21,700 |
| 8694830 | | 8D | 67 | 91 | 150 | | | 1.5 | ● | 25,100 | |
| 8700830 | 8.3 | 3D | 25 | 42 | 101 | 10 | 56.8 | 1.5 | ● | 19,000 | |
| 8702830 | | 5D | 42 | 67 | 128 | | | 1.5 | B | ● | 21,700 |
| 8704830 | | 8D | 67 | 91 | 150 | | | 1.5 | ● | 25,100 | |
| 8690840 | 8.4 - 9 | 3D | 26 | 42 | 101 | 9 | 59 | 1.5 | ● | 19,000 | |
| 8692840 | | 5D | 42 | 68 | 128 | | | 1.5 | B | ● | 21,700 |
| 8694840 | | 8D | 68 | 92 | 150 | | | 1.5 | ● | 25,100 | |
| 8700840 | 8.4 | 3D | 26 | 42 | 101 | 10 | 56 | 1.5 | ● | 19,000 | |
| 8702840 | | 5D | 42 | 68 | 128 | | | 1.5 | B | ● | 21,700 |
| 8704840 | | 8D | 68 | 92 | 150 | | | 1.5 | ● | 25,100 | |
| 8690850 | 8.5 - 9 | 3D | 26 | 43 | 101 | 9 | 59 | 1.5 | ● | 19,000 | |
| 8692850 | | 5D | 43 | 68 | 128 | | | 1.5 | B | ● | 21,700 |
| 8694850 | | 8D | 68 | 94 | 150 | | | 1.5 | ● | 25,100 | |
| 8700850 | 8.5 | 3D | 26 | 43 | 101 | 10 | 56.2 | 1.5 | ● | 19,000 | |
| 8702850 | | 5D | 43 | 68 | 128 | | | 1.5 | B | ● | 21,700 |
| 8704850 | | 8D | 68 | 94 | 150 | | | 1.5 | ● | 25,100 | |
| 8690860 | 8.6 - 9 | 3D | 26 | 43 | 101 | 9 | 58 | 1.6 | ● | 19,800 | |
| 8692860 | | 5D | 43 | 69 | 128 | | | 1.6 | B | ● | 22,900 |
| 8694860 | | 8D | 69 | 95 | 150 | | | 1.6 | ● | 25,600 | |
| 8700860 | 8.6 | 3D | 26 | 43 | 101 | 10 | 54.4 | 1.6 | ● | 19,800 | |
| 8702860 | | 5D | 43 | 69 | 128 | | | 1.6 | B | ● | 22,900 |
| 8704860 | | 8D | 69 | 95 | 150 | | | 1.6 | ● | 25,600 | |
| 8690870 | 8.7 - 9 | 3D | 27 | 44 | 101 | 9 | 57 | 1.6 | ● | 19,800 | |
| 8692870 | | 5D | 44 | 70 | 128 | | | 1.6 | B | ● | 22,900 |
| 8694870 | | 8D | 70 | 96 | 150 | | | 1.6 | ● | 25,600 | |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8700870 | 8.7 | 3D | 27 | 44 | 101 | 10 | 53.6 | 1.6 | ● | 19,800 | |
| 8702870 | | 5D | 44 | 70 | 128 | | | 1.6 | B | ● | 22,900 |
| 8704870 | | 8D | 70 | 96 | 150 | | | 1.6 | ● | 25,600 | |
| 8690875 | 8.75 - 9 | 3D | 27 | 44 | 101 | 9 | 56 | 1.6 | ● | 19,800 | |
| 8692875 | | 5D | 44 | 70 | 128 | | | 1.6 | B | ● | 22,900 |
| 8690880 | 8.8 - 9 | 3D | 27 | 44 | 101 | 9 | 56 | 1.6 | ● | 19,800 | |
| 8692880 | | 5D | 44 | 71 | 128 | | | 1.6 | B | ● | 22,900 |
| 8694880 | | 8D | 71 | 97 | 150 | | | 1.6 | ● | 25,600 | |
| 8700880 | 8.8 | 3D | 27 | 44 | 101 | 10 | 53.8 | 1.6 | ● | 19,800 | |
| 8702880 | | 5D | 44 | 71 | 128 | | | 1.6 | B | ● | 22,900 |
| 8704880 | | 8D | 71 | 97 | 150 | | | 1.6 | ● | 25,600 | |
| 8690890 | 8.9 - 9 | 3D | 27 | 45 | 101 | 9 | 55 | 1.6 | ● | 19,800 | |
| 8692890 | | 5D | 45 | 72 | 128 | | | 1.6 | B | ● | 22,900 |
| 8694890 | | 8D | 72 | 98 | 150 | | | 1.6 | ● | 25,600 | |
| 8700890 | 8.9 | 3D | 27 | 45 | 101 | 10 | 52.9 | 1.6 | ● | 19,800 | |
| 8702890 | | 5D | 45 | 72 | 128 | | | 1.6 | B | ● | 22,900 |
| 8704890 | | 8D | 72 | 98 | 150 | | | 1.6 | ● | 25,600 | |
| 8690900 | 9 - 9 | 3D | 27 | 45 | 101 | 9 | 55 | 1.6 | ● | 19,800 | |
| 8692900 | | 5D | 45 | 72 | 128 | | | 1.6 | B | ● | 22,900 |
| 8694900 | | 8D | 72 | 99 | 150 | | | 1.6 | ● | 25,600 | |
| 8700900 | 9 | 3D | 27 | 45 | 101 | 10 | 53.1 | 1.6 | ● | 19,800 | |
| 8702900 | | 5D | 45 | 72 | 128 | | | 1.6 | B | ● | 22,900 |
| 8704900 | | 8D | 72 | 99 | 150 | | | 1.6 | ● | 25,600 | |
| 8690910 | 9.1 | 3D | 28 | 46 | 106 | 10 | 62 | 1.7 | ● | 20,900 | |
| 8692910 | | 5D | 46 | 73 | 136 | | | 1.7 | B | ● | 23,800 |
| 8704910 | | 8D | 73 | 100 | 160 | | | 1.7 | ● | 27,800 | |
| 8690920 | 9.2 | 3D | 28 | 46 | 106 | 10 | 59 | 1.7 | ● | 20,900 | |
| 8692920 | | 5D | 46 | 74 | 136 | | | 1.7 | B | ● | 23,800 |
| 8704920 | | 8D | 74 | 101 | 160 | | | 1.7 | ● | 27,800 | |
| 8692924 | 9.24 | 5D | 47 | 74 | 136 | 10 | 61 | 1.7 | B | ● | 23,800 |
| 8690925 | 9.25 | 3D | 28 | 47 | 106 | 10 | 58 | 1.7 | ● | 20,900 | |
| 8692925 | | 5D | 47 | 74 | 136 | | | 1.7 | B | ● | 23,800 |
| 8692926 | 9.26 | 5D | 47 | 75 | 136 | 10 | 60 | 1.7 | B | ● | 23,800 |
| 8690930 | 9.3 | 3D | 28 | 47 | 106 | 10 | 60 | 1.7 | ● | 20,900 | |
| 8692930 | | 5D | 47 | 75 | 136 | | | 1.7 | B | ● | 23,800 |
| 8704930 | | 8D | 75 | 102 | 160 | | | 1.7 | ● | 27,800 | |
| 8692936 | 9.36 | 5D | 47 | 75 | 136 | 10 | 60 | 1.7 | B | ● | 23,800 |

● = 標準在庫品 ● = Standard stock item

NEXT

特長 Feature

加工データ Cutting Data

油穴付き with Oil Hole

油穴無 Non Oil Hole

リーディングドリル Starter Drill

AD-LDS

ガイド穴用ドリル Pilot Drill

3D/5D/8D

40D/50D 10D/15D/20D/25D/30D

2D/4D

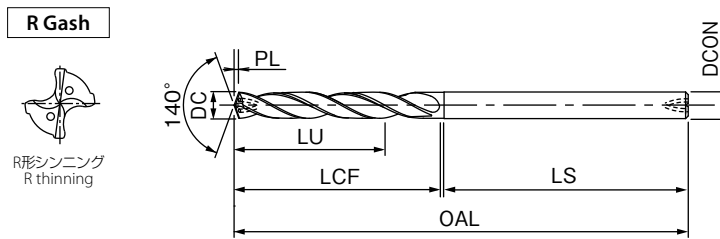
切削条件表 Cutting Conditions

特殊品対応表 Production Table by Drill Diameter



ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8692938 | 9.38 | 5D | 47 | 76 | 136 | 10 | 59 | 1.7 | B | ● 23,800 |
| 8690940 | 9.4 | 3D | 29 | 47 | 106 | 10 | 58 | 1.7 | B | ● 20,900 |
| 8692940 | | 5D | 47 | 76 | 136 | | 59 | 1.7 | B | ● 23,800 |
| 8704940 | 9.5 | 8D | 76 | 103 | 160 | 10 | 56 | 1.7 | B | ● 27,800 |
| 8690950 | | 3D | 29 | 48 | 106 | | 57 | 1.7 | B | ● 20,900 |
| 8692950 | 9.52 | 5D | 48 | 76 | 136 | 10 | 59 | 1.7 | B | ● 23,800 |
| 8694950 | | 8D | 76 | 105 | 160 | | 54 | 1.7 | B | ● 27,800 |
| 8692952 | 9.54 | 5D | 48 | 77 | 136 | 10 | 58 | 1.7 | B | ● 24,100 |
| 8692954 | | 8D | 76 | 106 | 160 | | 53 | 1.7 | B | ● 28,600 |
| 8690960 | 9.6 | 3D | 29 | 48 | 106 | 10 | 57 | 1.7 | B | ● 21,400 |
| 8692960 | | 5D | 48 | 77 | 136 | | 58 | 1.7 | B | ● 24,100 |
| 8704960 | 9.7 | 8D | 77 | 106 | 160 | 10 | 53 | 1.7 | B | ● 28,600 |
| 8690970 | | 3D | 30 | 49 | 106 | | 56 | 1.8 | B | ● 21,400 |
| 8692970 | 9.75 | 5D | 49 | 78 | 136 | 10 | 57 | 1.8 | B | ● 24,100 |
| 8704970 | | 8D | 78 | 107 | 160 | | 52 | 1.8 | B | ● 28,600 |
| 8690975 | 9.8 | 3D | 30 | 49 | 106 | 10 | 56 | 1.8 | B | ● 21,400 |
| 8692975 | | 5D | 49 | 78 | 136 | | 57 | 1.8 | B | ● 24,100 |
| 8690980 | 9.8 | 3D | 30 | 49 | 106 | 10 | 56 | 1.8 | B | ● 21,400 |
| 8692980 | | 5D | 49 | 79 | 136 | | 56 | 1.8 | B | ● 24,100 |
| 8704980 | 9.9 | 8D | 79 | 108 | 160 | 10 | 51 | 1.8 | B | ● 28,600 |
| 8690990 | | 3D | 30 | 50 | 106 | | 55 | 1.8 | B | ● 21,400 |
| 8692990 | 10 | 5D | 50 | 80 | 136 | 10 | 55 | 1.8 | B | ● 24,100 |
| 8704990 | | 8D | 80 | 109 | 160 | | 50 | 1.8 | B | ● 28,600 |
| 8691000 | 10 | 3D | 30 | 50 | 106 | 10 | 55 | 1.8 | B | ● 21,400 |
| 8693000 | | 5D | 50 | 80 | 136 | | 55 | 1.8 | B | ● 24,100 |
| 8695000 | 10.1 | 8D | 80 | 110 | 160 | 10 | 49 | 1.8 | B | ● 28,600 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8691010 | 10.1 - 11 | 3D | 31 | 51 | 113 | 11 | 61 | 1.8 | B | ● 22,200 |
| 8693010 | | 5D | 51 | 81 | 146 | | 64 | 1.8 | B | ● 25,600 |
| 8695010 | | 8D | 81 | 111 | 182 | | 70 | 1.8 | B | ● 31,500 |
| 8701010 | 10.1 | 3D | 31 | 51 | 113 | 12 | 57.5 | 1.8 | B | ● 22,200 |
| 8703010 | | 5D | 51 | 81 | 146 | | 60.5 | 1.8 | B | ● 25,600 |
| 8705010 | | 8D | 81 | 111 | 182 | | 66.5 | 1.8 | B | ● 31,500 |
| 8691020 | 10.2 - 11 | 3D | 31 | 51 | 113 | 11 | 61 | 1.9 | B | ● 22,200 |
| 8693020 | | 5D | 51 | 82 | 146 | | 63 | 1.9 | B | ● 25,600 |
| 8695020 | | 8D | 82 | 112 | 182 | | 69 | 1.9 | B | ● 31,500 |
| 8701020 | 10.2 | 3D | 31 | 51 | 113 | 12 | 57.6 | 1.9 | B | ● 22,200 |
| 8703020 | | 5D | 51 | 82 | 146 | | 59.6 | 1.9 | B | ● 25,600 |
| 8705020 | | 8D | 82 | 112 | 182 | | 65.6 | 1.9 | B | ● 31,500 |
| 8691025 | 10.25 - 11 | 3D | 31 | 52 | 113 | 11 | 60 | 1.9 | B | ● 22,200 |
| 8693025 | | 5D | 52 | 82 | 146 | | 63 | 1.9 | B | ● 25,600 |
| 8691030 | 10.3 - 11 | 3D | 31 | 52 | 113 | 11 | 60 | 1.9 | B | ● 22,200 |
| 8693030 | | 5D | 52 | 83 | 146 | | 62 | 1.9 | B | ● 25,600 |
| 8695030 | | 8D | 83 | 113 | 182 | | 68 | 1.9 | B | ● 31,500 |
| 8701030 | 10.3 | 3D | 31 | 52 | 113 | 12 | 56.8 | 1.9 | B | ● 22,200 |
| 8703030 | | 5D | 52 | 83 | 146 | | 58.8 | 1.9 | B | ● 25,600 |
| 8705030 | | 8D | 83 | 113 | 182 | | 64.8 | 1.9 | B | ● 31,500 |
| 8691040 | 10.4 - 11 | 3D | 32 | 52 | 113 | 11 | 60 | 1.9 | B | ● 22,200 |
| 8693040 | | 5D | 52 | 84 | 146 | | 61 | 1.9 | B | ● 25,600 |
| 8695040 | | 8D | 84 | 114 | 182 | | 67 | 1.9 | B | ● 31,500 |
| 8701040 | 10.4 | 3D | 32 | 52 | 113 | 12 | 57 | 1.9 | B | ● 22,200 |
| 8703040 | | 5D | 52 | 84 | 146 | | 58 | 1.9 | B | ● 25,600 |
| 8705040 | | 8D | 84 | 114 | 182 | | 64 | 1.9 | B | ● 31,500 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | | | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|-----|---|--------|
| 8691050 | 10.5 - 11 | 3D | 32 | 53 | 113 | 11 | 59 | 1.9 | ● | 22,200 | | | |
| 8693050 | | 5D | 53 | 84 | 146 | | | | | 61 | 1.9 | B | 25,600 |
| 8695050 | | 8D | 84 | 116 | 182 | | | | | 65 | 1.9 | ● | 31,500 |
| 8701050 | 10.5 | 3D | 32 | 53 | 113 | 12 | 56.2 | 1.9 | ● | 22,200 | | | |
| 8703050 | | 5D | 53 | 84 | 146 | | | | | 58.2 | 1.9 | B | 25,600 |
| 8705050 | | 8D | 84 | 116 | 182 | | | | | 62.2 | 1.9 | ● | 31,500 |
| 8691060 | 10.6 - 11 | 3D | 32 | 53 | 113 | 11 | 59 | 1.9 | ● | 23,100 | | | |
| 8693060 | | 5D | 53 | 85 | 146 | | | | | 60 | 1.9 | B | 26,700 |
| 8695060 | | 8D | 85 | 117 | 182 | | | | | 64 | 1.9 | ● | 32,000 |
| 8701060 | 10.6 | 3D | 32 | 53 | 113 | 12 | 56.4 | 1.9 | ● | 23,100 | | | |
| 8703060 | | 5D | 53 | 85 | 146 | | | | | 57.4 | 1.9 | B | 26,700 |
| 8705060 | | 8D | 85 | 117 | 182 | | | | | 61.4 | 1.9 | ● | 32,000 |
| 8691070 | 10.7 - 11 | 3D | 33 | 54 | 113 | 11 | 58 | 1.9 | ● | 23,100 | | | |
| 8693070 | | 5D | 54 | 86 | 146 | | | | | 59 | 1.9 | B | 26,700 |
| 8695070 | | 8D | 86 | 118 | 182 | | | | | 63 | 1.9 | ● | 32,000 |
| 8701070 | 10.7 | 3D | 33 | 54 | 113 | 12 | 55.6 | 1.9 | ● | 23,100 | | | |
| 8703070 | | 5D | 54 | 86 | 146 | | | | | 56.6 | 1.9 | B | 26,700 |
| 8705070 | | 8D | 86 | 118 | 182 | | | | | 60.6 | 1.9 | ● | 32,000 |
| 8691075 | 10.75 - 11 | 3D | 33 | 54 | 113 | 11 | 58 | 2 | B | 23,100 | | | |
| 8693075 | | 5D | 54 | 86 | 146 | | | | | 59 | 2 | ● | 26,700 |
| 8691080 | 10.8 - 11 | 3D | 33 | 54 | 113 | 11 | 58 | 2 | ● | 23,100 | | | |
| 8693080 | | 5D | 54 | 87 | 146 | | | | | 58 | 2 | B | 26,700 |
| 8695080 | | 8D | 87 | 119 | 182 | | | | | 62 | 2 | ● | 32,000 |
| 8701080 | 10.8 | 3D | 33 | 54 | 113 | 12 | 55.8 | 2 | ● | 23,100 | | | |
| 8703080 | | 5D | 54 | 87 | 146 | | | | | 55.8 | 2 | B | 26,700 |
| 8705080 | | 8D | 87 | 119 | 182 | | | | | 59.8 | 2 | ● | 32,000 |
| 8691090 | 10.9 - 11 | 3D | 33 | 55 | 113 | 11 | 57 | 2 | ● | 23,100 | | | |
| 8693090 | | 5D | 55 | 88 | 146 | | | | | 57 | 2 | B | 26,700 |
| 8695090 | | 8D | 88 | 120 | 182 | | | | | 61 | 2 | ● | 32,000 |
| 8701090 | 10.9 | 3D | 33 | 55 | 113 | 12 | 54.9 | 2 | ● | 23,100 | | | |
| 8703090 | | 5D | 55 | 88 | 146 | | | | | 54.9 | 2 | B | 26,700 |
| 8705090 | | 8D | 88 | 120 | 182 | | | | | 58.9 | 2 | ● | 32,000 |
| 8691100 | 11 - 11 | 3D | 33 | 55 | 113 | 11 | 57 | 2 | ● | 23,100 | | | |
| 8693100 | | 5D | 55 | 88 | 146 | | | | | 57 | 2 | B | 26,700 |
| 8695100 | | 8D | 88 | 121 | 182 | | | | | 60 | 2 | ● | 32,000 |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | | | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|-----|---|--------|
| 8701100 | 11 | 3D | 33 | 55 | 113 | 12 | 55.1 | 2 | ● | 23,100 | | | |
| 8703100 | | 5D | 55 | 88 | 146 | | | | | 55.1 | 2 | B | 26,700 |
| 8705100 | | 8D | 88 | 121 | 182 | | | | | 58.1 | 2 | ● | 32,000 |
| 8691110 | 11.1 | 3D | 34 | 56 | 120 | 12 | 63 | 2 | ● | 24,100 | | | |
| 8693110 | | 5D | 56 | 89 | 156 | | | | | 66 | 2 | B | 27,800 |
| 8705110 | | 8D | 89 | 122 | 194 | | | | | 71 | 2 | ● | 35,400 |
| 8691120 | 11.2 | 3D | 34 | 56 | 120 | 12 | 63 | 2 | ● | 24,100 | | | |
| 8693120 | | 5D | 56 | 90 | 156 | | | | | 65 | 2 | B | 27,800 |
| 8705120 | | 8D | 90 | 123 | 194 | | | | | 70 | 2 | ● | 35,400 |
| 8693122 | 11.22 | 5D | 57 | 90 | 156 | 12 | 65 | 2 | B | 27,800 | | | |
| 8693124 | 11.24 | 5D | 57 | 90 | 156 | 12 | 65 | 2 | B | 27,800 | | | |
| 8691130 | 11.3 | 3D | 34 | 57 | 120 | 12 | 62 | 2.1 | ● | 24,100 | | | |
| 8693130 | | 5D | 57 | 91 | 156 | | | | | 64 | 2.1 | B | 27,800 |
| 8705130 | | 8D | 91 | 124 | 194 | | | | | 69 | 2.1 | ● | 35,400 |
| 8693136 | 11.36 | 5D | 57 | 91 | 156 | 12 | 64 | 2.1 | B | 27,800 | | | |
| 8693138 | 11.38 | 5D | 57 | 92 | 156 | 12 | 63 | 2.1 | B | 27,800 | | | |
| 8691140 | 11.4 | 3D | 35 | 57 | 120 | 12 | 62 | 2.1 | ● | 24,100 | | | |
| 8693140 | | 5D | 57 | 92 | 156 | | | | | 63 | 2.1 | B | 27,800 |
| 8705140 | | 8D | 92 | 125 | 194 | | | | | 68 | 2.1 | ● | 35,400 |
| 8691150 | 11.5 | 3D | 35 | 58 | 120 | 12 | 61 | 2.1 | ● | 24,100 | | | |
| 8693150 | | 5D | 58 | 92 | 156 | | | | | 63 | 2.1 | B | 27,800 |
| 8695150 | | 8D | 92 | 127 | 194 | | | | | 66 | 2.1 | ● | 35,400 |
| 8691160 | 11.6 | 3D | 35 | 58 | 120 | 12 | 61 | 2.1 | ● | 24,700 | | | |
| 8693160 | | 5D | 58 | 93 | 156 | | | | | 62 | 2.1 | B | 28,900 |
| 8705160 | | 8D | 93 | 128 | 194 | | | | | 65 | 2.1 | ● | 36,100 |
| 8691170 | 11.7 | 3D | 36 | 59 | 120 | 12 | 60 | 2.1 | ● | 24,700 | | | |
| 8693170 | | 5D | 59 | 94 | 156 | | | | | 61 | 2.1 | B | 28,900 |
| 8705170 | | 8D | 94 | 129 | 194 | | | | | 64 | 2.1 | ● | 36,100 |
| 8691180 | 11.8 | 3D | 36 | 59 | 120 | 12 | 60 | 2.1 | ● | 24,700 | | | |
| 8693180 | | 5D | 59 | 95 | 156 | | | | | 60 | 2.1 | B | 28,900 |
| 8705180 | | 8D | 95 | 130 | 194 | | | | | 63 | 2.1 | ● | 36,100 |
| 8691190 | 11.9 | 3D | 36 | 60 | 120 | 12 | 59 | 2.2 | ● | 24,700 | | | |
| 8693190 | | 5D | 60 | 96 | 156 | | | | | 59 | 2.2 | B | 28,900 |
| 8705190 | | 8D | 96 | 131 | 194 | | | | | 62 | 2.2 | ● | 36,100 |

● = 標準在庫品 ● = Standard stock item

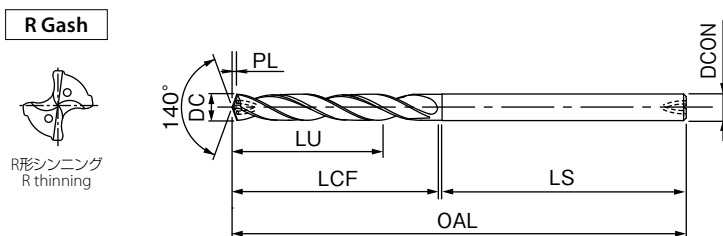
特長 Feature
加工データ Cutting Data
3D/5D/8D
油穴付き with Oil Hole
ガイド穴用ドリル 40D/50D 10D/15D/20D/25D/30D
Pilot Drill
油穴無 Non Oil Hole
2D/4D
リーディングドリル Starter Drill
AD-LDS
切削条件表 Cutting Conditions
特殊品対応表 Production Table by Drill Diameter

NEXT



ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8691200 | 12 | 3D | 36 | 60 | 120 | 12 | 59 | 2.2 | ● | 24,700 | |
| 8693200 | | 5D | 60 | 96 | 156 | | 59 | 2.2 | B | ● | 28,900 |
| 8695200 | | 8D | 96 | 132 | 194 | | 61 | 2.2 | ● | 36,100 | |
| 8691210 | 12.1 - 13 | 3D | 37 | 61 | 128 | 13 | 66 | 2.2 | B | ● | 25,700 |
| 8693210 | | 5D | 61 | 97 | 167 | | 69 | 2.2 | ● | 29,700 | |
| 8701210 | 12.1 | 3D | 37 | 61 | 128 | 14 | 62.5 | 2.2 | ● | 25,700 | |
| 8703210 | | 5D | 61 | 97 | 167 | | 65.5 | 2.2 | B | ● | 29,700 |
| 8705210 | | 8D | 97 | 133 | 206 | | 68.5 | 2.2 | ● | 40,100 | |
| 8691220 | 12.2 - 13 | 3D | 37 | 61 | 128 | 13 | 66 | 2.2 | B | ● | 25,700 |
| 8693220 | | 5D | 61 | 98 | 167 | | 68 | 2.2 | ● | 29,700 | |
| 8701220 | 12.2 | 3D | 37 | 61 | 128 | 14 | 62.6 | 2.2 | ● | 25,700 | |
| 8703220 | | 5D | 61 | 98 | 167 | | 64.6 | 2.2 | B | ● | 29,700 |
| 8705220 | | 8D | 98 | 134 | 206 | | 67.6 | 2.2 | ● | 40,100 | |
| 8691230 | 12.3 - 13 | 3D | 37 | 62 | 128 | 13 | 65 | 2.2 | B | ● | 25,700 |
| 8693230 | | 5D | 62 | 99 | 167 | | 67 | 2.2 | ● | 29,700 | |
| 8701230 | 12.3 | 3D | 37 | 62 | 128 | 14 | 61.8 | 2.2 | ● | 25,700 | |
| 8703230 | | 5D | 62 | 99 | 167 | | 63.8 | 2.2 | B | ● | 29,700 |
| 8705230 | | 8D | 99 | 135 | 206 | | 66.8 | 2.2 | ● | 40,100 | |
| 8691240 | 12.4 - 13 | 3D | 38 | 62 | 128 | 13 | 65 | 2.3 | B | ● | 25,700 |
| 8693240 | | 5D | 62 | 100 | 167 | | 66 | 2.3 | ● | 29,700 | |
| 8701240 | 12.4 | 3D | 38 | 62 | 128 | 14 | 62 | 2.3 | ● | 25,700 | |
| 8703240 | | 5D | 62 | 100 | 167 | | 63 | 2.3 | B | ● | 29,700 |
| 8705240 | | 8D | 100 | 136 | 206 | | 66 | 2.3 | ● | 40,100 | |
| 8691250 | 12.5 - 13 | 3D | 38 | 63 | 128 | 13 | 64 | 2.3 | ● | 25,700 | |
| 8693250 | | 5D | 63 | 100 | 167 | | 66 | 2.3 | B | ● | 29,700 |
| 8695250 | | 8D | 100 | 138 | 206 | | 67 | 2.3 | ● | 40,100 | |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8701250 | 12.5 | 3D | 38 | 63 | 128 | 14 | 61.2 | 2.3 | ● | 25,700 | |
| 8703250 | | 5D | 63 | 100 | 167 | | 63.2 | 2.3 | B | ● | 29,700 |
| 8705250 | | 8D | 100 | 138 | 206 | | 64.2 | 2.3 | ● | 40,100 | |
| 8691260 | 12.6 - 13 | 3D | 38 | 63 | 128 | 13 | 64 | 2.3 | B | ● | 26,300 |
| 8693260 | | 5D | 63 | 101 | 167 | | 65 | 2.3 | ● | 31,000 | |
| 8701260 | 12.6 | 3D | 38 | 63 | 128 | 14 | 61.4 | 2.3 | ● | 26,300 | |
| 8703260 | | 5D | 63 | 101 | 167 | | 62.4 | 2.3 | B | ● | 31,000 |
| 8705260 | | 8D | 101 | 139 | 206 | | 63.4 | 2.3 | ● | 40,700 | |
| 8691270 | 12.7 - 13 | 3D | 39 | 64 | 128 | 13 | 63 | 2.3 | B | ● | 26,300 |
| 8693270 | | 5D | 64 | 102 | 167 | | 64 | 2.3 | ● | 31,000 | |
| 8701270 | 12.7 | 3D | 39 | 64 | 128 | 14 | 60.6 | 2.3 | ● | 26,300 | |
| 8703270 | | 5D | 64 | 102 | 167 | | 61.6 | 2.3 | B | ● | 31,000 |
| 8705270 | | 8D | 102 | 140 | 206 | | 62.6 | 2.3 | ● | 40,700 | |
| 8691275 | 12.75 - 13 | 3D | 39 | 64 | 128 | 13 | 63 | 2.3 | B | ● | 26,300 |
| 8693275 | | 5D | 64 | 103 | 167 | | 63 | 2.3 | ● | 31,000 | |
| 8691280 | 12.8 - 13 | 3D | 39 | 64 | 128 | 13 | 63 | 2.3 | B | ● | 26,300 |
| 8693280 | | 5D | 64 | 103 | 167 | | 63 | 2.3 | ● | 31,000 | |
| 8701280 | 12.8 | 3D | 39 | 64 | 128 | 14 | 60.8 | 2.3 | ● | 26,300 | |
| 8703280 | | 5D | 64 | 103 | 167 | | 60.8 | 2.3 | B | ● | 31,000 |
| 8705280 | | 8D | 103 | 141 | 206 | | 61.8 | 2.3 | ● | 40,700 | |
| 8691290 | 12.9 - 13 | 3D | 39 | 65 | 128 | 13 | 62 | 2.3 | B | ● | 26,300 |
| 8693290 | | 5D | 65 | 104 | 167 | | 62 | 2.3 | ● | 31,000 | |
| 8701290 | 12.9 | 3D | 39 | 65 | 128 | 14 | 59.9 | 2.3 | ● | 26,300 | |
| 8703290 | | 5D | 65 | 104 | 167 | | 59.9 | 2.3 | B | ● | 31,000 |
| 8705290 | | 8D | 104 | 142 | 206 | | 60.9 | 2.3 | ● | 40,700 | |
| 8691300 | 13 - 13 | 3D | 39 | 65 | 128 | 13 | 62 | 2.4 | ● | 26,300 | |
| 8693300 | | 5D | 65 | 104 | 167 | | 62 | 2.4 | B | ● | 31,000 |
| 8695300 | | 8D | 104 | 143 | 206 | | 62 | 2.4 | ● | 40,700 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
 All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC-DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|---------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8701300 | 13 | 3D | 39 | 65 | 128 | 14 | 60.1 | 2.4 | ● | 26,300 | |
| 8703300 | | 5D | 65 | 104 | 167 | | 60.1 | 2.4 | B | ● | 31,000 |
| 8705300 | | 8D | 104 | 143 | 206 | | 60.1 | 2.4 | ● | 40,700 | |
| 8691310 | 13.1 | 3D | 40 | 66 | 134 | 14 | 67 | 2.4 | ● | 27,200 | |
| 8693310 | | 5D | 66 | 105 | 176 | | 70 | 2.4 | B | ● | 31,800 |
| 8705310 | | 8D | 105 | 144 | 218 | | 73 | 2.4 | ● | 45,400 | |
| 8691320 | 13.2 | 3D | 40 | 66 | 134 | 14 | 67 | 2.4 | ● | 27,200 | |
| 8693320 | | 5D | 66 | 106 | 176 | | 69 | 2.4 | B | ● | 31,800 |
| 8705320 | | 8D | 106 | 145 | 218 | | 72 | 2.4 | ● | 45,400 | |
| 8693325 | 13.25 | 5D | 67 | 106 | 176 | 14 | 69 | 2.4 | B | ● | 31,800 |
| 8691330 | 13.3 | 3D | 40 | 67 | 134 | 14 | 66 | 2.4 | ● | 27,200 | |
| 8693330 | | 5D | 67 | 107 | 176 | | 68 | 2.4 | B | ● | 31,800 |
| 8705330 | | 8D | 107 | 146 | 218 | | 71 | 2.4 | ● | 45,400 | |
| 8691340 | 13.4 | 3D | 41 | 67 | 134 | 14 | 66 | 2.4 | ● | 27,200 | |
| 8693340 | | 5D | 67 | 108 | 176 | | 67 | 2.4 | B | ● | 31,800 |
| 8705340 | | 8D | 108 | 147 | 218 | | 70 | 2.4 | ● | 45,400 | |
| 8691350 | 13.5 | 3D | 41 | 68 | 134 | 14 | 65 | 2.5 | ● | 27,800 | |
| 8693350 | | 5D | 68 | 108 | 176 | | 67 | 2.5 | B | ● | 31,800 |
| 8705350 | | 8D | 108 | 149 | 218 | | 68 | 2.5 | ● | 45,400 | |
| 8691360 | 13.6 | 3D | 41 | 68 | 134 | 14 | 65 | 2.5 | ● | 27,800 | |
| 8693360 | | 5D | 68 | 109 | 176 | | 66 | 2.5 | B | ● | 32,900 |
| 8705360 | | 8D | 109 | 150 | 218 | | 67 | 2.5 | ● | 46,000 | |
| 8691370 | 13.7 | 3D | 42 | 69 | 134 | 14 | 64 | 2.5 | ● | 27,800 | |
| 8693370 | | 5D | 69 | 110 | 176 | | 65 | 2.5 | B | ● | 32,900 |
| 8705370 | | 8D | 110 | 151 | 218 | | 66 | 2.5 | ● | 46,000 | |
| 8691380 | 13.8 | 3D | 42 | 69 | 134 | 14 | 64 | 2.5 | ● | 27,800 | |
| 8693380 | | 5D | 69 | 111 | 176 | | 64 | 2.5 | B | ● | 32,900 |
| 8705380 | | 8D | 111 | 152 | 218 | | 65 | 2.5 | ● | 46,000 | |
| 8691390 | 13.9 | 3D | 42 | 70 | 134 | 14 | 63 | 2.5 | ● | 27,800 | |
| 8693390 | | 5D | 70 | 112 | 176 | | 63 | 2.5 | B | ● | 32,900 |
| 8705390 | | 8D | 112 | 153 | 218 | | 64 | 2.5 | ● | 46,000 | |
| 8691400 | 14 | 3D | 42 | 70 | 134 | 14 | 63 | 2.5 | ● | 27,800 | |
| 8693400 | | 5D | 70 | 112 | 176 | | 63 | 2.5 | B | ● | 32,900 |
| 8705400 | | 8D | 112 | 154 | 218 | | 63 | 2.5 | ● | 46,000 | |
| 8691410 | 14.1 - 15 | 3D | 43 | 71 | 140 | 15 | 68 | 2.6 | ● | 28,800 | |
| 8693410 | | 5D | 71 | 113 | 185 | | 71 | 2.6 | B | ● | 34,200 |

| ツールNo. EDP No. | 直径-シャンク径 DC-DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|---------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8701410 | 14.1 | 3D | 43 | 71 | 140 | 16 | 64.5 | 2.6 | ● | 28,800 | |
| 8703410 | | 5D | 71 | 113 | 185 | | 67.5 | 2.6 | B | ● | 34,200 |
| 8705410 | | 8D | 113 | 155 | 230 | | 70.5 | 2.6 | ● | 51,600 | |
| 8691420 | 14.2 - 15 | 3D | 43 | 71 | 140 | 15 | 68 | 2.6 | ● | 28,800 | |
| 8693420 | | 5D | 71 | 114 | 185 | | 70 | 2.6 | B | ● | 34,200 |
| 8701420 | 14.2 | 3D | 43 | 71 | 140 | 16 | 64.6 | 2.6 | ● | 28,800 | |
| 8703420 | | 5D | 71 | 114 | 185 | | 66.6 | 2.6 | B | ● | 34,200 |
| 8705420 | | 8D | 114 | 156 | 230 | | 69.6 | 2.6 | ● | 51,600 | |
| 8691430 | 14.3 - 15 | 3D | 43 | 72 | 140 | 15 | 67 | 2.6 | ● | 28,800 | |
| 8693430 | | 5D | 72 | 115 | 185 | | 69 | 2.6 | B | ● | 34,200 |
| 8701430 | 14.3 | 3D | 43 | 72 | 140 | 16 | 63.8 | 2.6 | ● | 28,800 | |
| 8703430 | | 5D | 72 | 115 | 185 | | 65.8 | 2.6 | B | ● | 34,200 |
| 8705430 | | 8D | 115 | 157 | 230 | | 68.8 | 2.6 | ● | 51,600 | |
| 8691440 | 14.4 - 15 | 3D | 44 | 72 | 140 | 15 | 67 | 2.6 | ● | 28,800 | |
| 8693440 | | 5D | 72 | 116 | 185 | | 68 | 2.6 | B | ● | 34,200 |
| 8701440 | 14.4 | 3D | 44 | 72 | 140 | 16 | 64 | 2.6 | ● | 28,800 | |
| 8703440 | | 5D | 72 | 116 | 185 | | 65 | 2.6 | B | ● | 34,200 |
| 8705440 | | 8D | 116 | 158 | 230 | | 68 | 2.6 | ● | 51,600 | |
| 8691450 | 14.5 - 15 | 3D | 44 | 73 | 140 | 15 | 66 | 2.6 | ● | 28,800 | |
| 8693450 | | 5D | 73 | 116 | 185 | | 68 | 2.6 | B | ● | 34,200 |
| 8701450 | 14.5 | 3D | 44 | 73 | 140 | 16 | 63.2 | 2.6 | ● | 28,800 | |
| 8703450 | | 5D | 73 | 116 | 185 | | 65.2 | 2.6 | B | ● | 34,200 |
| 8705450 | | 8D | 116 | 160 | 230 | | 66.2 | 2.6 | ● | 51,600 | |
| 8691460 | 14.6 - 15 | 3D | 44 | 73 | 140 | 15 | 66 | 2.7 | ● | 29,500 | |
| 8693460 | | 5D | 73 | 117 | 185 | | 67 | 2.7 | B | ● | 34,800 |
| 8701460 | 14.6 | 3D | 44 | 73 | 140 | 16 | 63.4 | 2.7 | ● | 29,500 | |
| 8703460 | | 5D | 73 | 117 | 185 | | 64.4 | 2.7 | B | ● | 34,800 |
| 8705460 | | 8D | 117 | 161 | 230 | | 65.4 | 2.7 | ● | 52,200 | |
| 8691470 | 14.7 - 15 | 3D | 45 | 74 | 140 | 15 | 65 | 2.7 | ● | 29,500 | |
| 8693470 | | 5D | 74 | 118 | 185 | | 66 | 2.7 | B | ● | 34,800 |
| 8701470 | 14.7 | 3D | 45 | 74 | 140 | 16 | 62.6 | 2.7 | ● | 29,500 | |
| 8703470 | | 5D | 74 | 118 | 185 | | 63.6 | 2.7 | B | ● | 34,800 |
| 8705470 | | 8D | 118 | 162 | 230 | | 64.6 | 2.7 | ● | 52,200 | |
| 8691480 | 14.8 - 15 | 3D | 45 | 74 | 140 | 15 | 65 | 2.7 | ● | 29,500 | |
| 8693480 | | 5D | 74 | 119 | 185 | | 65 | 2.7 | B | ● | 34,800 |

● = 標準在庫品 ● = Standard stock item

NEXT



特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
10D/15D/20D/25D/30D

ガイド穴用ドリル
Pilot Drill
40D/50D

油穴無 Non Oil Hole
2D/4D

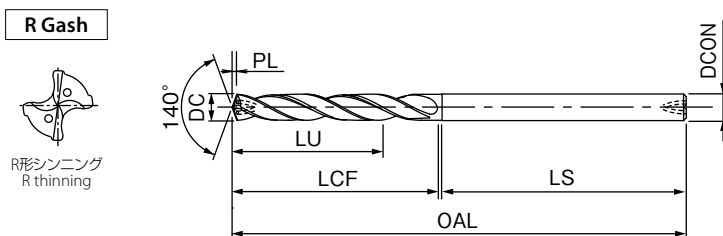
リーディングドリル Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter

ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8701480 | 14.8 | 3D | 45 | 74 | 140 | 16 | 62.8 | 2.7 | ● | 29,500 | |
| 8703480 | | 5D | 74 | 119 | 185 | | 62.8 | 2.7 | B | ● | 34,800 |
| 8705480 | | 8D | 119 | 163 | 230 | | 63.8 | 2.7 | | ● | 52,200 |
| 8691490 | 14.9 - 15 | 3D | 45 | 75 | 140 | 15 | 64 | 2.7 | B | ● | 29,500 |
| 8693490 | | 5D | 75 | 120 | 185 | | 64 | 2.7 | | ● | 34,800 |
| 8701490 | 14.9 | 3D | 45 | 75 | 140 | 16 | 61.9 | 2.7 | ● | 29,500 | |
| 8703490 | | 5D | 75 | 120 | 185 | | 61.9 | 2.7 | B | ● | 34,800 |
| 8705490 | | 8D | 120 | 164 | 230 | | 62.9 | 2.7 | | ● | 52,200 |
| 8691500 | 15 - 15 | 3D | 45 | 75 | 140 | 15 | 64 | 2.7 | B | ● | 29,500 |
| 8693500 | | 5D | 75 | 120 | 185 | | 64 | 2.7 | | ● | 34,800 |
| 8701500 | 15 | 3D | 45 | 75 | 140 | 16 | 62.1 | 2.7 | ● | 29,500 | |
| 8703500 | | 5D | 75 | 120 | 185 | | 62.1 | 2.7 | B | ● | 34,800 |
| 8705500 | | 8D | 120 | 165 | 230 | | 62.1 | 2.7 | | ● | 52,200 |
| 8691510 | 15.1 | 3D | 46 | 76 | 145 | 16 | 68 | 2.7 | ● | 30,800 | |
| 8693510 | | 5D | 76 | 121 | 193 | | 71 | 2.7 | B | ● | 35,900 |
| 8705510 | | 8D | 121 | 166 | 241 | | 74 | 2.7 | | ● | 58,400 |
| 8691520 | 15.2 | 3D | 46 | 76 | 145 | 16 | 68 | 2.8 | ● | 30,800 | |
| 8693520 | | 5D | 76 | 122 | 193 | | 70 | 2.8 | B | ● | 35,900 |
| 8705520 | | 8D | 122 | 167 | 241 | | 73 | 2.8 | | ● | 58,400 |
| 8693525 | 15.25 | 5D | 77 | 122 | 193 | 16 | 70 | 2.8 | B | ● | 35,900 |
| 8691530 | 15.3 | 3D | 46 | 77 | 145 | 16 | 67 | 2.8 | ● | 30,800 | |
| 8693530 | | 5D | 77 | 123 | 193 | | 69 | 2.8 | B | ● | 35,900 |
| 8705530 | | 8D | 123 | 168 | 241 | | 72 | 2.8 | | ● | 58,400 |
| 8691540 | 15.4 | 3D | 47 | 77 | 145 | 16 | 67 | 2.8 | ● | 30,800 | |
| 8693540 | | 5D | 77 | 124 | 193 | | 68 | 2.8 | B | ● | 35,900 |
| 8705540 | | 8D | 124 | 169 | 241 | | 71 | 2.8 | | ● | 58,400 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8691550 | 15.5 | 3D | 47 | 78 | 145 | 16 | 66 | 2.8 | ● | 30,800 | |
| 8693550 | | 5D | 78 | 124 | 193 | | 68 | 2.8 | B | ● | 35,900 |
| 8705550 | | 8D | 124 | 171 | 241 | | 69 | 2.8 | | ● | 58,400 |
| 8691560 | 15.6 | 3D | 47 | 78 | 145 | 16 | 66 | 2.8 | ● | 31,500 | |
| 8693560 | | 5D | 78 | 125 | 193 | | 67 | 2.8 | B | ● | 37,200 |
| 8705560 | | 8D | 125 | 172 | 241 | | 68 | 2.8 | | ● | 58,800 |
| 8691570 | 15.7 | 3D | 48 | 79 | 145 | 16 | 65 | 2.9 | ● | 31,500 | |
| 8693570 | | 5D | 79 | 126 | 193 | | 66 | 2.9 | B | ● | 37,200 |
| 8705570 | | 8D | 126 | 173 | 241 | | 67 | 2.9 | | ● | 58,800 |
| 8691580 | 15.8 | 3D | 48 | 79 | 145 | 16 | 65 | 2.9 | ● | 31,500 | |
| 8693580 | | 5D | 79 | 127 | 193 | | 65 | 2.9 | B | ● | 37,200 |
| 8705580 | | 8D | 127 | 174 | 241 | | 66 | 2.9 | | ● | 58,800 |
| 8691590 | 15.9 | 3D | 48 | 80 | 145 | 16 | 64 | 2.9 | ● | 31,500 | |
| 8693590 | | 5D | 80 | 128 | 193 | | 64 | 2.9 | B | ● | 37,200 |
| 8705590 | | 8D | 128 | 175 | 241 | | 65 | 2.9 | | ● | 58,800 |
| 8691600 | 16 | 3D | 48 | 80 | 145 | 16 | 64 | 2.9 | ● | 31,500 | |
| 8693600 | | 5D | 80 | 128 | 193 | | 64 | 2.9 | B | ● | 37,200 |
| 8705600 | | 8D | 128 | 176 | 241 | | 64 | 2.9 | | ● | 58,800 |
| | 16.1 | 3D | 49 | 81 | 150 | 18 | 64.5 | 2.9 | □ | — | |
| | | 5D | 81 | 129 | 201 | | 67.5 | 2.9 | □ | — | |
| | 16.2 | 3D | 49 | 81 | 150 | 18 | 64.7 | 2.9 | □ | — | |
| | | 5D | 81 | 130 | 201 | | 66.6 | 2.9 | □ | — | |
| | 16.3 | 3D | 49 | 82 | 150 | 18 | 63.8 | 3 | □ | — | |
| | | 5D | 82 | 131 | 201 | | 65.8 | 3 | □ | — | |
| | 16.4 | 3D | 50 | 82 | 150 | 18 | 64 | 3 | □ | — | |
| | | 5D | 82 | 132 | 201 | | 65 | 3 | □ | — | |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

- = 標準在庫品 ● = Standard stock item
 - = 特定代理店在庫品 □ = Stocked by specific distributors.
- Contact us for price & availability.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
 All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8691650 | 16.5 - 17 | 3D | 50 | 83 | 150 | 17 | 66 | 3 | ● | 38,600 |
| 8693650 | | 5D | 83 | 132 | 201 | | 68 | 3 | ● | 41,800 |
| 8701650 | 16.5 | 3D | 50 | 83 | 150 | 18 | 63.2 | 3 | ● | 38,600 |
| 8703650 | | 5D | 83 | 132 | 201 | | 65.2 | 3 | ● | 41,800 |
| | 16.6 | 3D | 50 | 83 | 150 | 18 | 63.4 | 3 | □ | - |
| | | 5D | 83 | 133 | 201 | | 64.4 | 3 | □ | - |
| | 16.7 | 3D | 51 | 84 | 150 | 18 | 62.6 | 3 | □ | - |
| | | 5D | 84 | 134 | 201 | | 63.6 | 3 | □ | - |
| | 16.8 | 3D | 51 | 84 | 150 | 18 | 62.8 | 3.1 | □ | - |
| | | 5D | 84 | 135 | 201 | | 62.8 | 3.1 | □ | - |
| | 16.9 | 3D | 51 | 85 | 150 | 18 | 61.9 | 3.1 | □ | - |
| | | 5D | 85 | 136 | 201 | | 61.9 | 3.1 | □ | - |
| 8691700 | 17 - 17 | 3D | 51 | 85 | 150 | 17 | 64 | 3.1 | ● | 39,000 |
| 8693700 | | 5D | 85 | 136 | 201 | | 64 | 3.1 | ● | 45,000 |
| 8701700 | 17 | 3D | 51 | 85 | 150 | 18 | 62.1 | 3.1 | ● | 39,000 |
| 8703700 | | 5D | 85 | 136 | 201 | | 62.1 | 3.1 | ● | 45,000 |
| | 17.1 | 3D | 52 | 86 | 155 | 18 | 68 | 3.1 | □ | - |
| | | 5D | 86 | 137 | 209 | | 71 | 3.1 | □ | - |
| | 17.2 | 3D | 52 | 86 | 155 | 18 | 68 | 3.1 | □ | - |
| | | 5D | 86 | 138 | 209 | | 70 | 3.1 | □ | - |
| | 17.3 | 3D | 52 | 87 | 155 | 18 | 67 | 3.1 | □ | - |
| | | 5D | 87 | 139 | 209 | | 69 | 3.1 | □ | - |
| | 17.4 | 3D | 53 | 87 | 155 | 18 | 67 | 3.2 | □ | - |
| | | 5D | 87 | 140 | 209 | | 68 | 3.2 | □ | - |
| 8691750 | 17.5 | 3D | 53 | 88 | 155 | 18 | 66 | 3.2 | ● | 45,200 |
| 8693750 | | 5D | 88 | 140 | 209 | | 68 | 3.2 | ● | 49,200 |
| | 17.6 | 3D | 53 | 88 | 155 | 18 | 66 | 3.2 | □ | - |
| | | 5D | 88 | 141 | 209 | | 67 | 3.2 | □ | - |
| | 17.7 | 3D | 54 | 89 | 155 | 18 | 65 | 3.2 | □ | - |
| | | 5D | 89 | 142 | 209 | | 66 | 3.2 | □ | - |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| | 17.8 | 3D | 54 | 89 | 155 | 18 | 65 | 3.2 | □ | - |
| | | 5D | 89 | 143 | 209 | | 65 | 3.2 | □ | - |
| | 17.9 | 3D | 54 | 90 | 155 | 18 | 64 | 3.3 | □ | - |
| | | 5D | 90 | 144 | 209 | | 64 | 3.3 | □ | - |
| 8691800 | 18 | 3D | 54 | 90 | 155 | 18 | 64 | 3.3 | ● | 45,700 |
| 8693800 | | 5D | 90 | 144 | 209 | | 64 | 3.3 | ● | 53,200 |
| | 18.1 | 3D | 55 | 91 | 160 | 20 | 64.5 | 3.3 | □ | - |
| | | 5D | 91 | 145 | 217 | | 67.5 | 3.3 | □ | - |
| | 18.2 | 3D | 55 | 91 | 160 | 20 | 64.6 | 3.3 | □ | - |
| | | 5D | 91 | 146 | 217 | | 66.6 | 3.3 | □ | - |
| | 18.3 | 3D | 55 | 92 | 160 | 20 | 63.8 | 3.3 | □ | - |
| | | 5D | 92 | 147 | 217 | | 65.8 | 3.3 | □ | - |
| | 18.4 | 3D | 56 | 92 | 160 | 20 | 64 | 3.3 | □ | - |
| | | 5D | 92 | 148 | 217 | | 65 | 3.3 | □ | - |
| 8691850 | 18.5 - 19 | 3D | 56 | 93 | 160 | 19 | 66 | 3.4 | ● | 52,400 |
| 8693850 | | 5D | 93 | 148 | 217 | | 68 | 3.4 | ● | 58,000 |
| 8701850 | 18.5 | 3D | 56 | 93 | 160 | 20 | 63.2 | 3.4 | ● | 52,400 |
| 8703850 | | 5D | 93 | 148 | 217 | | 65.2 | 3.4 | ● | 58,000 |
| | 18.6 | 3D | 56 | 93 | 160 | 20 | 63.4 | 3.4 | □ | - |
| | | 5D | 93 | 149 | 217 | | 64.4 | 3.4 | □ | - |
| | 18.7 | 3D | 57 | 94 | 160 | 20 | 62.6 | 3.4 | □ | - |
| | | 5D | 94 | 150 | 217 | | 63.6 | 3.4 | □ | - |
| | 18.8 | 3D | 57 | 94 | 160 | 20 | 62.8 | 3.4 | □ | - |
| | | 5D | 94 | 151 | 217 | | 62.8 | 3.4 | □ | - |
| | 18.9 | 3D | 57 | 95 | 160 | 20 | 61.9 | 3.4 | □ | - |
| | | 5D | 95 | 152 | 217 | | 61.9 | 3.4 | □ | - |
| 8691900 | 19 - 19 | 3D | 57 | 95 | 160 | 19 | 64 | 3.5 | ● | 52,500 |
| 8693900 | | 5D | 95 | 152 | 217 | | 64 | 3.5 | ● | 60,400 |
| 8701900 | 19 | 3D | 57 | 95 | 160 | 20 | 62.1 | 3.5 | ● | 52,500 |
| 8703900 | | 5D | 95 | 152 | 217 | | 62.1 | 3.5 | ● | 60,400 |

● = 標準在庫品 ● = Standard stock item
 □ = 特定代理店在庫品 □ = Stocked by specific distributors.
 Contact us for price & availability.

NEXT



特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
40D/50D 10D/15D/20D/25D/30D

ガイド穴用ドリル
Pilot Drill

油穴無 Non Oil Hole
2D/4D

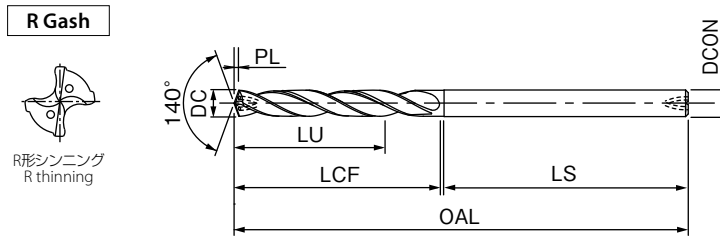
リーディングドリル Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter

ADO-3D/5D/8D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (¥) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|-------------|
| | 19.1 | 3D | 58 | 96 | 165 | 20 | 68 | 3.5 | <input type="checkbox"/> | — |
| | | 5D | 96 | 153 | 225 | | 71 | 3.5 | <input type="checkbox"/> | — |
| | 19.2 | 3D | 58 | 96 | 165 | 20 | 68 | 3.5 | <input type="checkbox"/> | — |
| | | 5D | 96 | 154 | 225 | | 70 | 3.5 | <input type="checkbox"/> | — |
| | 19.3 | 3D | 58 | 97 | 165 | 20 | 67 | 3.5 | <input type="checkbox"/> | — |
| | | 5D | 97 | 155 | 225 | | 69 | 3.5 | <input type="checkbox"/> | — |
| | 19.4 | 3D | 59 | 97 | 165 | 20 | 67 | 3.5 | <input type="checkbox"/> | — |
| | | 5D | 97 | 156 | 225 | | 68 | 3.5 | <input type="checkbox"/> | — |
| 8691950 | 19.5 | 3D | 59 | 98 | 165 | 20 | 66 | 3.5 | ● | 58,900 |
| 8693950 | | 5D | 98 | 156 | 225 | | 68 | 3.5 | B | ● |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (¥) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|-------------|
| | 19.6 | 3D | 59 | 98 | 165 | 20 | 66 | 3.6 | <input type="checkbox"/> | — |
| | | 5D | 98 | 157 | 225 | | 67 | 3.6 | <input type="checkbox"/> | — |
| | 19.7 | 3D | 60 | 99 | 165 | 20 | 65 | 3.6 | <input type="checkbox"/> | — |
| | | 5D | 99 | 158 | 225 | | 66 | 3.6 | <input type="checkbox"/> | — |
| | 19.8 | 3D | 60 | 99 | 165 | 20 | 65 | 3.6 | <input type="checkbox"/> | — |
| | | 5D | 99 | 159 | 225 | | 65 | 3.6 | <input type="checkbox"/> | — |
| | 19.9 | 3D | 60 | 100 | 165 | 20 | 64 | 3.6 | <input type="checkbox"/> | — |
| | | 5D | 100 | 160 | 225 | | 64 | 3.6 | <input type="checkbox"/> | — |
| 8692000 | 20 | 3D | 60 | 100 | 165 | 20 | 64 | 3.6 | ● | 59,400 |
| 8694000 | | 5D | 100 | 160 | 225 | | 64 | 3.6 | B | ● |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

- = 標準在庫品 ● = Standard stock item
 - = 特定代理店在庫品 □ = Stocked by specific distributors.
- Contact us for price & availability.



ADO-10D/15D/20D/25D/30D

ADO-10D



ADO-15D



ADO-20D



ADO-25D



ADO-30D

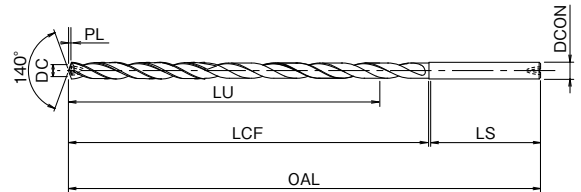


全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



R形シンニング
R thinning



先端角の許容差は $140^{\circ} - \frac{0}{4}$ となります Tolerance of the point angle is $140^{\circ} - \frac{0}{4}$



| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8696200 | 2 - 3 | 10D | 20 | 26 | 75 | 3 | 40 | 0.4 | B | ● 20,800 |
| 8696210 | 2.1 - 3 | 10D | 21 | 33 | 75 | 3 | 40 | 0.4 | B | ● 20,800 |
| 8696220 | 2.2 - 3 | 10D | 22 | 33 | 75 | 3 | 40 | 0.4 | B | ● 20,800 |
| 8696230 | 2.3 - 3 | 10D | 23 | 33 | 75 | 3 | 40 | 0.4 | B | ● 20,800 |
| 8696240 | 2.4 - 3 | 10D | 24 | 33 | 75 | 3 | 40 | 0.4 | B | ● 20,800 |
| 8696250 | 2.5 - 3 | 10D | 25 | 33 | 75 | 3 | 40 | 0.5 | B | ● 20,800 |
| 8696260 | 2.6 - 3 | 10D | 26 | 40 | 90 | 3 | 40 | 0.5 | B | ● 20,800 |
| 8696270 | 2.7 - 3 | 10D | 27 | 40 | 90 | 3 | 40 | 0.5 | B | ● 20,800 |
| 8696280 | 2.8 - 3 | 10D | 28 | 40 | 90 | 3 | 40 | 0.5 | B | ● 20,800 |
| 8696290 | 2.9 - 3 | 10D | 29 | 40 | 90 | 3 | 40 | 0.5 | B | ● 20,800 |
| 8696300 | | 10D | 30 | 40 | 90 | | 50 | 0.5 | | ● 20,800 |
| 8698300 | | 15D | 45 | 55 | 105 | | 50 | 0.5 | | ● 25,100 |
| 8706300 | 3 - 3 | 20D | 60 | 70 | 120 | 3 | 48 | 0.5 | B | ● 28,600 |
| 8726300 | | 25D | 75 | 85 | 135 | | 48 | 0.5 | | ● 30,200 |
| 8708300 | | 30D | 90 | 100 | 150 | | 50 | 0.5 | | ● 33,100 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8696310 | | 10D | 31 | 45 | 100 | | 50 | 0.6 | | ● 20,800 |
| 8698310 | | 15D | 47 | 60 | 125 | | 63 | 0.6 | | ● 25,100 |
| 8706310 | 3.1 | 20D | 62 | 80 | 140 | 4 | 58 | 0.6 | B | ● 28,600 |
| 8724310 | | 25D | 78 | 95 | 165 | | 68 | 0.6 | | ● 30,200 |
| 8708310 | | 30D | 93 | 102 | 185 | | 81 | 0.6 | | ● 33,100 |
| 8696320 | | 10D | 32 | 45 | 100 | | 50 | 0.6 | | ● 20,800 |
| 8698320 | | 15D | 48 | 60 | 125 | | 63 | 0.6 | | ● 25,100 |
| 8706320 | 3.2 | 20D | 64 | 80 | 140 | 4 | 58 | 0.6 | B | ● 28,600 |
| 8724320 | | 25D | 80 | 95 | 165 | | 68 | 0.6 | | ● 30,200 |
| 8708320 | | 30D | 96 | 105 | 185 | | 78 | 0.6 | | ● 33,100 |
| 8696330 | | 10D | 33 | 45 | 100 | | 50 | 0.6 | | ● 20,800 |
| 8698330 | | 15D | 50 | 60 | 125 | | 63 | 0.6 | | ● 25,100 |
| 8706330 | 3.3 | 20D | 66 | 80 | 140 | 4 | 58 | 0.6 | B | ● 28,600 |
| 8724330 | | 25D | 83 | 95 | 165 | | 68 | 0.6 | | ● 30,200 |
| 8708330 | | 30D | 99 | 109 | 185 | | 74 | 0.6 | | ● 33,100 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



特長
Feature

加工データ
Cutting Data

3D/5D/8D

10D/15D/20D/25D/30D

40D/50D

with Oil Hole

油穴付き

ガイド穴用ドリル

Pilot Drill

油穴無

Non Oil Hole

2D/4D

油穴無

Non Oil Hole

2D/4D

油穴付き

with Oil Hole

スタートドリル

Starter Drill

AD-LDS

リーディングドリル

Production Table

by Drill Diameter

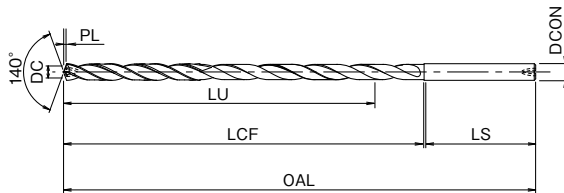
切削条件表
Cutting Conditions

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ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角の許容差は $140^{\circ} \pm 4'$ となります Tolerance of the point angle is $140^{\circ} \pm 4'$

CARBIDE EgiAs e8 30° SHRINK FIT SPEED FEED P53

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8696340 | 3.4 | 10D | 34 | 50 | 100 | 4 | 48 | 0.6 | ● | 20,800 | |
| 8698340 | | 15D | 51 | 65 | 125 | | 58 | 0.6 | ● | 25,100 | |
| 8706340 | | 20D | 68 | 85 | 140 | | 53 | 0.6 | B | ● | 28,600 |
| 8724340 | | 25D | 85 | 105 | 165 | | 58 | 0.6 | ● | 30,200 | |
| 8708340 | | 30D | 102 | 112 | 185 | | 71 | 0.6 | ● | 33,100 | |
| 8696350 | 3.5 | 10D | 35 | 50 | 100 | 4 | 48 | 0.6 | ● | 20,800 | |
| 8698350 | | 15D | 53 | 65 | 125 | | 58 | 0.6 | ● | 25,100 | |
| 8706350 | | 20D | 70 | 85 | 140 | | 53 | 0.6 | B | ● | 28,600 |
| 8724350 | | 25D | 88 | 105 | 165 | | 58 | 0.6 | ● | 30,200 | |
| 8708350 | | 30D | 105 | 116 | 185 | | 67 | 0.6 | ● | 33,100 | |
| 8696360 | 3.6 | 10D | 36 | 50 | 100 | 4 | 48 | 0.7 | ● | 21,300 | |
| 8698360 | | 15D | 54 | 65 | 125 | | 58 | 0.7 | ● | 25,600 | |
| 8706360 | | 20D | 72 | 85 | 140 | | 53 | 0.7 | B | ● | 29,700 |
| 8724360 | | 25D | 90 | 105 | 165 | | 58 | 0.7 | ● | 31,500 | |
| 8708360 | | 30D | 108 | 116 | 185 | | 67 | 0.7 | ● | 34,000 | |
| 8696370 | 3.7 | 10D | 37 | 50 | 100 | 4 | 48 | 0.7 | ● | 21,300 | |
| 8698370 | | 15D | 56 | 65 | 125 | | 58 | 0.7 | ● | 25,600 | |
| 8706370 | | 20D | 74 | 85 | 140 | | 53 | 0.7 | B | ● | 29,700 |
| 8724370 | | 25D | 93 | 105 | 165 | | 58 | 0.7 | ● | 31,500 | |
| 8708370 | | 30D | 111 | 116 | 185 | | 67 | 0.7 | ● | 34,000 | |
| 8696380 | 3.8 | 10D | 38 | 50 | 100 | 4 | 48 | 0.7 | ● | 21,300 | |
| 8698380 | | 15D | 57 | 75 | 125 | | 48 | 0.7 | ● | 25,600 | |
| 8706380 | | 20D | 76 | 90 | 140 | | 48 | 0.7 | B | ● | 29,700 |
| 8724380 | | 25D | 95 | 115 | 165 | | 48 | 0.7 | ● | 31,500 | |
| 8708380 | | 30D | 114 | 132 | 185 | | 51 | 0.7 | ● | 34,000 | |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8696390 | 3.9 | 10D | 39 | 50 | 100 | 4 | 48 | 0.7 | ● | 21,300 | |
| 8698390 | | 15D | 59 | 75 | 125 | | 48 | 0.7 | ● | 25,600 | |
| 8706390 | | 20D | 78 | 90 | 140 | | 48 | 0.7 | B | ● | 29,700 |
| 8724390 | | 25D | 98 | 115 | 165 | | 48 | 0.7 | ● | 31,500 | |
| 8708390 | | 30D | 117 | 132 | 185 | | 51 | 0.7 | ● | 34,000 | |
| 8696400 | 4 | 10D | 40 | 50 | 100 | 4 | 50 | 0.7 | ● | 21,300 | |
| 8698400 | | 15D | 60 | 75 | 125 | | 50 | 0.7 | ● | 25,600 | |
| 8706400 | | 20D | 80 | 90 | 140 | | 50 | 0.7 | B | ● | 29,700 |
| 8724400 | | 25D | 100 | 115 | 165 | | 48 | 0.7 | ● | 31,500 | |
| 8708400 | | 30D | 120 | 132 | 185 | | 51 | 0.7 | ● | 34,000 | |
| 8696410 | 4.1 - 5 | 10D | 41 | 55 | 115 | 5 | 58 | 0.7 | ● | 21,900 | |
| 8698410 | | 15D | 62 | 75 | 140 | | 63 | 0.7 | ● | 26,300 | |
| 8706410 | | 20D | 82 | 100 | 165 | | 63 | 0.7 | B | ● | 30,200 |
| 8726410 | | 25D | 103 | 120 | 190 | | 68 | 0.7 | ● | 32,100 | |
| 8708410 | | 30D | 123 | 140 | 215 | | 73 | 0.7 | ● | 35,000 | |
| 8710410 | 4.1 | 10D | 41 | 55 | 115 | 6 | 48.3 | 0.7 | ● | 21,900 | |
| 8712410 | | 15D | 62 | 75 | 140 | | 45 | 0.7 | ● | 26,300 | |
| 8714410 | | 20D | 82 | 100 | 165 | | 45 | 0.7 | B | ● | 30,200 |
| 8724410 | | 25D | 103 | 120 | 190 | | 45 | 0.7 | ● | 32,100 | |
| 8716410 | | 30D | 123 | 140 | 215 | | 45 | 0.7 | ● | 35,000 | |
| 8696420 | 4.2 - 5 | 10D | 42 | 55 | 115 | 5 | 58 | 0.8 | ● | 21,900 | |
| 8698420 | | 15D | 63 | 75 | 140 | | 63 | 0.8 | ● | 26,300 | |
| 8706420 | | 20D | 84 | 100 | 165 | | 63 | 0.8 | B | ● | 30,200 |
| 8726420 | | 25D | 105 | 120 | 190 | | 68 | 0.8 | ● | 32,100 | |
| 8708420 | | 30D | 126 | 140 | 215 | | 73 | 0.8 | ● | 35,000 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ロングドリルADO-10D ~ 50Dのガイド穴用ドリルとしてADO-3D/5Dもご使用いただけます(p.11 ~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

・ADO-3D φ2 ~ φ20



・ADO-5D φ2 ~ φ20



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710420 | 4.2 | 10D | 42 | 55 | 115 | 6 | 48.4 | 0.8 | ● | 21,900 |
| 8712420 | | 15D | 63 | 75 | 140 | | 45 | 0.8 | ● | 26,300 |
| 8714420 | | 20D | 84 | 100 | 165 | | 45 | 0.8 | B | 30,200 |
| 8724420 | | 25D | 105 | 120 | 190 | | 45 | 0.8 | ● | 32,100 |
| 8716420 | | 30D | 126 | 140 | 215 | | 45 | 0.8 | ● | 35,000 |
| 8696430 | 4.3 - 5 | 10D | 43 | 60 | 115 | 5 | 53 | 0.8 | ● | 21,900 |
| 8698430 | | 15D | 65 | 85 | 140 | | 53 | 0.8 | ● | 26,300 |
| 8706430 | | 20D | 86 | 110 | 165 | | 53 | 0.8 | B | 30,200 |
| 8726430 | | 25D | 108 | 135 | 190 | | 53 | 0.8 | ● | 32,100 |
| 8708430 | | 30D | 129 | 150 | 215 | | 63 | 0.8 | ● | 35,000 |
| 8710430 | 4.3 | 10D | 43 | 60 | 115 | 6 | 48.4 | 0.8 | ● | 21,900 |
| 8712430 | | 15D | 65 | 85 | 140 | | 45 | 0.8 | ● | 26,300 |
| 8714430 | | 20D | 86 | 110 | 165 | | 45 | 0.8 | B | 30,200 |
| 8724430 | | 25D | 108 | 135 | 190 | | 45 | 0.8 | ● | 32,100 |
| 8716430 | | 30D | 129 | 150 | 215 | | 45 | 0.8 | ● | 35,000 |
| 8696440 | 4.4 - 5 | 10D | 44 | 60 | 115 | 5 | 53 | 0.8 | ● | 21,900 |
| 8698440 | | 15D | 66 | 85 | 140 | | 53 | 0.8 | ● | 26,300 |
| 8706440 | | 20D | 88 | 110 | 165 | | 53 | 0.8 | B | 30,200 |
| 8726440 | | 25D | 110 | 135 | 190 | | 53 | 0.8 | ● | 32,100 |
| 8708440 | | 30D | 132 | 150 | 215 | | 63 | 0.8 | ● | 35,000 |
| 8710440 | 4.4 | 10D | 44 | 60 | 115 | 6 | 48.5 | 0.8 | ● | 21,900 |
| 8712440 | | 15D | 66 | 85 | 140 | | 45 | 0.8 | ● | 26,300 |
| 8714440 | | 20D | 88 | 110 | 165 | | 45 | 0.8 | B | 30,200 |
| 8724440 | | 25D | 110 | 135 | 190 | | 45 | 0.8 | ● | 32,100 |
| 8716440 | | 30D | 132 | 150 | 215 | | 45 | 0.8 | ● | 35,000 |
| 8696450 | 4.5 - 5 | 10D | 45 | 60 | 115 | 5 | 53 | 0.8 | ● | 21,900 |
| 8698450 | | 15D | 68 | 85 | 140 | | 53 | 0.8 | ● | 26,300 |
| 8706450 | | 20D | 90 | 110 | 165 | | 53 | 0.8 | B | 30,200 |
| 8726450 | | 25D | 113 | 135 | 190 | | 53 | 0.8 | ● | 32,100 |
| 8708450 | | 30D | 135 | 150 | 215 | | 63 | 0.8 | ● | 35,000 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710450 | 4.5 | 10D | 45 | 60 | 115 | 6 | 48.6 | 0.8 | ● | 21,900 |
| 8712450 | | 15D | 68 | 85 | 140 | | 45 | 0.8 | ● | 26,300 |
| 8714450 | | 20D | 90 | 110 | 165 | | 45 | 0.8 | B | 30,200 |
| 8724450 | | 25D | 113 | 135 | 190 | | 45 | 0.8 | ● | 32,100 |
| 8716450 | | 30D | 135 | 150 | 215 | | 45 | 0.8 | ● | 35,000 |
| 8696460 | 4.6 - 5 | 10D | 46 | 60 | 115 | 5 | 53 | 0.8 | ● | 22,000 |
| 8698460 | | 15D | 69 | 85 | 140 | | 53 | 0.8 | ● | 26,700 |
| 8706460 | | 20D | 92 | 110 | 165 | | 53 | 0.8 | B | 31,100 |
| 8726460 | | 25D | 115 | 135 | 190 | | 53 | 0.8 | ● | 32,700 |
| 8708460 | | 30D | 138 | 150 | 215 | | 63 | 0.8 | ● | 35,400 |
| 8710460 | 4.6 | 10D | 46 | 60 | 115 | 6 | 48.7 | 0.8 | ● | 22,000 |
| 8712460 | | 15D | 69 | 85 | 140 | | 45 | 0.8 | ● | 26,700 |
| 8714460 | | 20D | 92 | 110 | 165 | | 45 | 0.8 | B | 31,100 |
| 8724460 | | 25D | 115 | 135 | 190 | | 45 | 0.8 | ● | 32,700 |
| 8716460 | | 30D | 138 | 150 | 215 | | 45 | 0.8 | ● | 35,400 |
| 8696470 | 4.7 - 5 | 10D | 47 | 65 | 115 | 5 | 48 | 0.9 | ● | 22,000 |
| 8698470 | | 15D | 71 | 85 | 140 | | 53 | 0.9 | ● | 26,700 |
| 8706470 | | 20D | 94 | 110 | 165 | | 53 | 0.9 | B | 31,100 |
| 8726470 | | 25D | 118 | 135 | 190 | | 53 | 0.9 | ● | 32,700 |
| 8708470 | | 30D | 141 | 150 | 215 | | 63 | 0.9 | ● | 35,400 |
| 8710470 | 4.7 | 10D | 47 | 65 | 115 | 6 | 46.8 | 0.9 | ● | 22,000 |
| 8712470 | | 15D | 71 | 85 | 140 | | 45 | 0.9 | ● | 26,700 |
| 8714470 | | 20D | 94 | 110 | 165 | | 45 | 0.9 | B | 31,100 |
| 8724470 | | 25D | 118 | 135 | 190 | | 45 | 0.9 | ● | 32,700 |
| 8716470 | | 30D | 141 | 150 | 215 | | 45 | 0.9 | ● | 35,400 |
| 8696480 | 4.8 - 5 | 10D | 48 | 65 | 115 | 5 | 48 | 0.9 | ● | 22,000 |
| 8698480 | | 15D | 72 | 90 | 140 | | 48 | 0.9 | ● | 26,700 |
| 8706480 | | 20D | 96 | 115 | 165 | | 48 | 0.9 | B | 31,100 |
| 8726480 | | 25D | 120 | 140 | 190 | | 48 | 0.9 | ● | 32,700 |
| 8708480 | | 30D | 144 | 165 | 215 | | 48 | 0.9 | ● | 35,400 |

- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT



特長 Feature
加工データ Cutting Data
油穴付き with Oil Hole
油穴無 Non Oil Hole
リーディングドリル Starter Drill
ガイド穴用ドリル Pilot Drill
AD-LDS
切削条件表 Cutting Conditions
特殊品対応表 Production Table by Drill Diameter

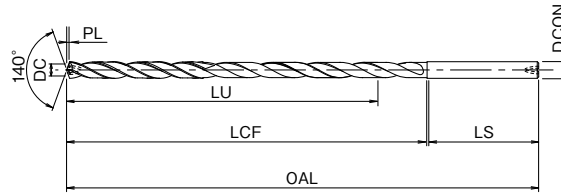
ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



R形シンニング
R thinning



先端角の許容差は $140^{\circ} \pm 4'$ となります Tolerance of the point angle is $140^{\circ} \pm 4'$



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710480 | 4.8 | 10D | 48 | 65 | 115 | 6 | 46.9 | 0.9 | ● | 22,000 | |
| 8712480 | | 15D | 72 | 90 | 140 | | 45 | 0.9 | ● | 26,700 | |
| 8714480 | | 20D | 96 | 115 | 165 | | 45 | 0.9 | B | ● | 31,100 |
| 8724480 | | 25D | 120 | 140 | 190 | | 45 | 0.9 | ● | 32,700 | |
| 8716480 | | 30D | 144 | 165 | 215 | | 45 | 0.9 | ● | 35,400 | |
| 8696490 | 4.9 - 5 | 10D | 49 | 65 | 115 | 5 | 48 | 0.9 | ● | 22,000 | |
| 8698490 | | 15D | 74 | 90 | 140 | | 48 | 0.9 | ● | 26,700 | |
| 8706490 | | 20D | 98 | 115 | 165 | | 48 | 0.9 | B | ● | 31,100 |
| 8726490 | | 25D | 123 | 140 | 190 | | 48 | 0.9 | ● | 32,700 | |
| 8708490 | | 30D | 147 | 165 | 215 | | 48 | 0.9 | ● | 35,400 | |
| 8710490 | 4.9 | 10D | 49 | 65 | 115 | 6 | 47 | 0.9 | ● | 22,000 | |
| 8712490 | | 15D | 74 | 90 | 140 | | 45 | 0.9 | ● | 26,700 | |
| 8714490 | | 20D | 98 | 115 | 165 | | 45 | 0.9 | B | ● | 31,100 |
| 8724490 | | 25D | 123 | 140 | 190 | | 45 | 0.9 | ● | 32,700 | |
| 8716490 | | 30D | 147 | 165 | 215 | | 45 | 0.9 | ● | 35,400 | |
| 8696500 | 5 - 5 | 10D | 50 | 65 | 115 | 5 | 50 | 0.9 | ● | 22,000 | |
| 8698500 | | 15D | 75 | 90 | 140 | | 50 | 0.9 | ● | 26,700 | |
| 8706500 | | 20D | 100 | 115 | 165 | | 50 | 0.9 | B | ● | 31,100 |
| 8726500 | | 25D | 125 | 140 | 190 | | 48 | 0.9 | ● | 32,700 | |
| 8708500 | | 30D | 150 | 165 | 215 | | 50 | 0.9 | ● | 35,400 | |
| 8710500 | 5 | 10D | 50 | 65 | 115 | 6 | 47 | 0.9 | ● | 22,000 | |
| 8712500 | | 15D | 75 | 90 | 140 | | 45 | 0.9 | ● | 26,700 | |
| 8714500 | | 20D | 100 | 115 | 165 | | 45 | 0.9 | B | ● | 31,100 |
| 8724500 | | 25D | 125 | 140 | 190 | | 45 | 0.9 | ● | 32,700 | |
| 8716500 | | 30D | 150 | 165 | 215 | | 45 | 0.9 | ● | 35,400 | |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710510 | 5.1 | 10D | 51 | 70 | 128 | 6 | 50 | 0.9 | ● | 23,800 | |
| 8712510 | | 15D | 77 | 95 | 160 | | 63 | 0.9 | ● | 28,300 | |
| 8714510 | | 20D | 102 | 120 | 190 | | 68 | 0.9 | B | ● | 32,700 |
| 8724510 | | 25D | 128 | 150 | 220 | | 68 | 0.9 | ● | 34,700 | |
| 8716510 | | 30D | 153 | 180 | 250 | | 68 | 0.9 | ● | 37,900 | |
| 8710520 | 5.2 | 10D | 52 | 70 | 128 | 6 | 50 | 0.9 | ● | 23,800 | |
| 8712520 | | 15D | 78 | 95 | 160 | | 63 | 0.9 | ● | 28,300 | |
| 8714520 | | 20D | 104 | 120 | 190 | | 68 | 0.9 | B | ● | 32,700 |
| 8724520 | | 25D | 130 | 150 | 220 | | 68 | 0.9 | ● | 34,700 | |
| 8716520 | | 30D | 156 | 180 | 250 | | 68 | 0.9 | ● | 37,900 | |
| 8710530 | 5.3 | 10D | 53 | 70 | 128 | 6 | 50 | 1 | ● | 23,800 | |
| 8712530 | | 15D | 80 | 95 | 160 | | 63 | 1 | ● | 28,300 | |
| 8714530 | | 20D | 106 | 120 | 190 | | 68 | 1 | B | ● | 32,700 |
| 8724530 | | 25D | 133 | 150 | 220 | | 68 | 1 | ● | 34,700 | |
| 8716530 | | 30D | 159 | 180 | 250 | | 68 | 1 | ● | 37,900 | |
| 8710540 | 5.4 | 10D | 54 | 78 | 128 | 6 | 48 | 1 | ● | 23,800 | |
| 8712540 | | 15D | 81 | 110 | 160 | | 48 | 1 | ● | 28,300 | |
| 8714540 | | 20D | 108 | 140 | 190 | | 48 | 1 | B | ● | 32,700 |
| 8724540 | | 25D | 135 | 170 | 220 | | 48 | 1 | ● | 34,700 | |
| 8716540 | | 30D | 162 | 200 | 250 | | 48 | 1 | ● | 37,900 | |
| 8696550 | 5.5 | 10D | 55 | 78 | 128 | 6 | 48 | 1 | ● | 23,800 | |
| 8698550 | | 15D | 83 | 110 | 160 | | 48 | 1 | ● | 28,300 | |
| 8706550 | | 20D | 110 | 140 | 190 | | 48 | 1 | B | ● | 32,700 |
| 8724550 | | 25D | 138 | 170 | 220 | | 48 | 1 | ● | 34,700 | |
| 8708550 | | 30D | 165 | 200 | 250 | | 48 | 1 | ● | 37,900 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ロングドリルADO-10D ~ 50Dのガイド穴用ドリルとしてADO-3D/5Dもご使用いただけます(p.11 ~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

・ADO-3D φ2 ~ φ20

・ADO-5D φ2 ~ φ20



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710560 | 5.6 | 10D | 56 | 78 | 128 | 6 | 48 | 1 | ● | 25,100 |
| 8712560 | | 15D | 84 | 110 | 160 | | 48 | 1 | ● | 29,900 |
| 8714560 | | 20D | 112 | 140 | 190 | | 48 | 1 | B | ● 34,700 |
| 8724560 | | 25D | 140 | 170 | 220 | | 48 | 1 | ● | 36,900 |
| 8716560 | | 30D | 168 | 200 | 250 | | 48 | 1 | ● | 39,600 |
| 8710570 | 5.7 | 10D | 57 | 78 | 128 | 6 | 48 | 1 | ● | 25,100 |
| 8712570 | | 15D | 86 | 110 | 160 | | 48 | 1 | ● | 29,900 |
| 8714570 | | 20D | 114 | 140 | 190 | | 48 | 1 | B | ● 34,700 |
| 8724570 | | 25D | 143 | 170 | 220 | | 48 | 1 | ● | 36,900 |
| 8716570 | | 30D | 171 | 200 | 250 | | 48 | 1 | ● | 39,600 |
| 8710580 | 5.8 | 10D | 58 | 78 | 128 | 6 | 48 | 1.1 | ● | 25,100 |
| 8712580 | | 15D | 87 | 110 | 160 | | 48 | 1.1 | ● | 29,900 |
| 8714580 | | 20D | 116 | 140 | 190 | | 48 | 1.1 | B | ● 34,700 |
| 8724580 | | 25D | 145 | 170 | 220 | | 48 | 1.1 | ● | 36,900 |
| 8716580 | | 30D | 174 | 200 | 250 | | 48 | 1.1 | ● | 39,600 |
| 8710590 | 5.9 | 10D | 59 | 78 | 128 | 6 | 48 | 1.1 | ● | 25,100 |
| 8712590 | | 15D | 89 | 110 | 160 | | 48 | 1.1 | ● | 29,900 |
| 8714590 | | 20D | 118 | 140 | 190 | | 48 | 1.1 | B | ● 34,700 |
| 8724590 | | 25D | 148 | 170 | 220 | | 48 | 1.1 | ● | 36,900 |
| 8716590 | | 30D | 177 | 200 | 250 | | 48 | 1.1 | ● | 39,600 |
| 8696600 | 6 | 10D | 60 | 78 | 128 | 6 | 50 | 1.1 | ● | 25,100 |
| 8698600 | | 15D | 90 | 110 | 160 | | 50 | 1.1 | ● | 29,900 |
| 8706600 | | 20D | 120 | 140 | 190 | | 50 | 1.1 | B | ● 34,700 |
| 8724600 | | 25D | 150 | 170 | 220 | | 48 | 1.1 | ● | 36,900 |
| 8708600 | | 30D | 180 | 200 | 250 | | 50 | 1.1 | ● | 39,600 |
| 8696610 | 6.1 - 7 | 10D | 61 | 87 | 140 | 7 | 51 | 1.1 | ● | 25,700 |
| 8698610 | | 15D | 92 | 120 | 175 | | 53 | 1.1 | ● | 30,200 |
| 8706610 | | 20D | 122 | 155 | 210 | | 53 | 1.1 | B | ● 35,800 |
| 8726610 | | 25D | 153 | 190 | 250 | | 58 | 1.1 | ● | 38,600 |
| 8708610 | | 30D | 183 | 215 | 280 | | 63 | 1.1 | ● | 41,100 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710610 | 6.1 | 10D | 61 | 87 | 140 | 8 | 48.2 | 1.1 | ● | 25,700 |
| 8712610 | | 15D | 92 | 120 | 175 | | 45 | 1.1 | ● | 30,200 |
| 8714610 | | 20D | 122 | 155 | 210 | | 45 | 1.1 | B | ● 35,800 |
| 8724610 | | 25D | 153 | 190 | 250 | | 45 | 1.1 | ● | 38,600 |
| 8716610 | | 30D | 183 | 215 | 280 | | 45 | 1.1 | ● | 41,100 |
| 8696620 | 6.2 - 7 | 10D | 62 | 87 | 140 | 7 | 51 | 1.1 | ● | 25,700 |
| 8698620 | | 15D | 93 | 120 | 175 | | 53 | 1.1 | ● | 30,200 |
| 8706620 | | 20D | 124 | 155 | 210 | | 53 | 1.1 | B | ● 35,800 |
| 8726620 | | 25D | 155 | 190 | 250 | | 58 | 1.1 | ● | 38,600 |
| 8708620 | | 30D | 186 | 215 | 280 | | 63 | 1.1 | ● | 41,100 |
| 8710620 | 6.2 | 10D | 62 | 87 | 140 | 8 | 48.3 | 1.1 | ● | 25,700 |
| 8712620 | | 15D | 93 | 120 | 175 | | 45 | 1.1 | ● | 30,200 |
| 8714620 | | 20D | 124 | 155 | 210 | | 45 | 1.1 | B | ● 35,800 |
| 8724620 | | 25D | 155 | 190 | 250 | | 45 | 1.1 | ● | 38,600 |
| 8716620 | | 30D | 186 | 215 | 280 | | 45 | 1.1 | ● | 41,100 |
| 8696630 | 6.3 - 7 | 10D | 63 | 87 | 140 | 7 | 51 | 1.1 | ● | 25,700 |
| 8698630 | | 15D | 95 | 120 | 175 | | 53 | 1.1 | ● | 30,200 |
| 8706630 | | 20D | 126 | 155 | 210 | | 53 | 1.1 | B | ● 35,800 |
| 8726630 | | 25D | 158 | 190 | 250 | | 58 | 1.1 | ● | 38,600 |
| 8708630 | | 30D | 189 | 215 | 280 | | 63 | 1.1 | ● | 41,100 |
| 8710630 | 6.3 | 10D | 63 | 87 | 140 | 8 | 48.4 | 1.1 | ● | 25,700 |
| 8712630 | | 15D | 95 | 120 | 175 | | 45 | 1.1 | ● | 30,200 |
| 8714630 | | 20D | 126 | 155 | 210 | | 45 | 1.1 | B | ● 35,800 |
| 8724630 | | 25D | 158 | 190 | 250 | | 45 | 1.1 | ● | 38,600 |
| 8716630 | | 30D | 189 | 215 | 280 | | 45 | 1.1 | ● | 41,100 |
| 8696640 | 6.4 - 7 | 10D | 64 | 87 | 140 | 7 | 51 | 1.2 | ● | 25,700 |
| 8698640 | | 15D | 96 | 120 | 175 | | 53 | 1.2 | ● | 30,200 |
| 8706640 | | 20D | 128 | 155 | 210 | | 53 | 1.2 | B | ● 35,800 |
| 8726640 | | 25D | 160 | 190 | 250 | | 58 | 1.2 | ● | 38,600 |
| 8708640 | | 30D | 192 | 215 | 280 | | 63 | 1.2 | ● | 41,100 |

・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。

・About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT



特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
10D/15D/20D/25D/30D

ガイド穴用ドリル
Pilot Drill
40D/50D

油穴無 Non Oil Hole
2D/4D

リーディングドリル Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter

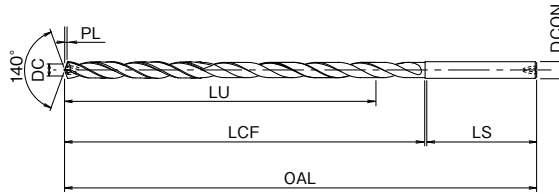
ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



R形シンニング
R thinning



先端角の許容差は $140^{\circ} \pm 4'$ となります Tolerance of the point angle is $140^{\circ} \pm 4'$



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710640 | 6.4 | 10D | 64 | 87 | 140 | 8 | 48.5 | 1.2 | ● | 25,700 | |
| 8712640 | | 15D | 96 | 120 | 175 | | 45 | 1.2 | ● | 30,200 | |
| 8714640 | | 20D | 128 | 155 | 210 | | 45 | 1.2 | B | ● | 35,800 |
| 8724640 | | 25D | 160 | 190 | 250 | | 45 | 1.2 | ● | 38,600 | |
| 8716640 | | 30D | 192 | 215 | 280 | | 45 | 1.2 | ● | 41,100 | |
| 8696650 | 6.5 - 7 | 10D | 65 | 87 | 140 | 7 | 51 | 1.2 | ● | 25,700 | |
| 8698650 | | 15D | 98 | 120 | 175 | | 53 | 1.2 | ● | 30,200 | |
| 8706650 | | 20D | 130 | 155 | 210 | | 53 | 1.2 | B | ● | 35,800 |
| 8726650 | | 25D | 163 | 190 | 250 | | 58 | 1.2 | ● | 38,600 | |
| 8708650 | | 30D | 195 | 215 | 280 | | 63 | 1.2 | ● | 41,100 | |
| 8710650 | 6.5 | 10D | 65 | 87 | 140 | 8 | 48.6 | 1.2 | ● | 25,700 | |
| 8712650 | | 15D | 98 | 120 | 175 | | 45 | 1.2 | ● | 30,200 | |
| 8714650 | | 20D | 130 | 155 | 210 | | 45 | 1.2 | B | ● | 35,800 |
| 8724650 | | 25D | 163 | 190 | 250 | | 45 | 1.2 | ● | 38,600 | |
| 8716650 | | 30D | 195 | 215 | 280 | | 45 | 1.2 | ● | 41,100 | |
| 8696660 | 6.6 - 7 | 10D | 66 | 87 | 140 | 7 | 51 | 1.2 | ● | 26,700 | |
| 8698660 | | 15D | 99 | 120 | 175 | | 53 | 1.2 | ● | 31,800 | |
| 8706660 | | 20D | 132 | 155 | 210 | | 53 | 1.2 | B | ● | 36,600 |
| 8726660 | | 25D | 165 | 190 | 250 | | 58 | 1.2 | ● | 40,600 | |
| 8708660 | | 30D | 198 | 215 | 280 | | 63 | 1.2 | ● | 42,500 | |
| 8710660 | 6.6 | 10D | 66 | 87 | 140 | 8 | 48.7 | 1.2 | ● | 26,700 | |
| 8712660 | | 15D | 99 | 120 | 175 | | 45 | 1.2 | ● | 31,800 | |
| 8714660 | | 20D | 132 | 155 | 210 | | 45 | 1.2 | B | ● | 36,600 |
| 8724660 | | 25D | 165 | 190 | 250 | | 45 | 1.2 | ● | 40,600 | |
| 8716660 | | 30D | 198 | 215 | 280 | | 45 | 1.2 | ● | 42,500 | |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8696670 | 6.7 - 7 | 10D | 67 | 87 | 140 | 7 | 51 | 1.2 | ● | 26,700 | |
| 8698670 | | 15D | 101 | 120 | 175 | | 53 | 1.2 | ● | 31,800 | |
| 8706670 | | 20D | 134 | 155 | 210 | | 53 | 1.2 | B | ● | 36,600 |
| 8726670 | | 25D | 168 | 190 | 250 | | 58 | 1.2 | ● | 40,600 | |
| 8708670 | | 30D | 201 | 215 | 280 | | 63 | 1.2 | ● | 42,500 | |
| 8710670 | 6.7 | 10D | 67 | 87 | 140 | 8 | 48.7 | 1.2 | ● | 26,700 | |
| 8712670 | | 15D | 101 | 120 | 175 | | 45 | 1.2 | ● | 31,800 | |
| 8714670 | | 20D | 134 | 155 | 210 | | 45 | 1.2 | B | ● | 36,600 |
| 8724670 | | 25D | 168 | 190 | 250 | | 45 | 1.2 | ● | 40,600 | |
| 8716670 | | 30D | 201 | 215 | 280 | | 45 | 1.2 | ● | 42,500 | |
| 8696680 | 6.8 - 7 | 10D | 68 | 90 | 140 | 7 | 48 | 1.2 | ● | 26,700 | |
| 8698680 | | 15D | 102 | 125 | 175 | | 48 | 1.2 | ● | 31,800 | |
| 8706680 | | 20D | 136 | 160 | 210 | | 48 | 1.2 | B | ● | 36,600 |
| 8726680 | | 25D | 170 | 200 | 250 | | 48 | 1.2 | ● | 40,600 | |
| 8708680 | | 30D | 204 | 230 | 280 | | 48 | 1.2 | ● | 42,500 | |
| 8710680 | 6.8 | 10D | 68 | 90 | 140 | 8 | 46.8 | 1.2 | ● | 26,700 | |
| 8712680 | | 15D | 102 | 125 | 175 | | 45 | 1.2 | ● | 31,800 | |
| 8714680 | | 20D | 136 | 160 | 210 | | 45 | 1.2 | B | ● | 36,600 |
| 8724680 | | 25D | 170 | 200 | 250 | | 45 | 1.2 | ● | 40,600 | |
| 8716680 | | 30D | 204 | 230 | 280 | | 45 | 1.2 | ● | 42,500 | |
| 8696690 | 6.9 - 7 | 10D | 69 | 90 | 140 | 7 | 48 | 1.3 | ● | 26,700 | |
| 8698690 | | 15D | 104 | 125 | 175 | | 48 | 1.3 | ● | 31,800 | |
| 8706690 | | 20D | 138 | 160 | 210 | | 48 | 1.3 | B | ● | 36,600 |
| 8726690 | | 25D | 173 | 200 | 250 | | 48 | 1.3 | ● | 40,600 | |
| 8708690 | | 30D | 207 | 230 | 280 | | 48 | 1.3 | ● | 42,500 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ロングドリルADO-10D ~ 50Dのガイド穴用ドリルとしてADO-3D/5Dもご使用いただけます(p.11 ~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

・ADO-3D φ2 ~ φ20

・ADO-5D φ2 ~ φ20



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710690 | 6.9 | 10D | 69 | 90 | 140 | 8 | 46.9 | 1.3 | ● | 26,700 | |
| 8712690 | | 15D | 104 | 125 | 175 | | 45 | 1.3 | ● | 31,800 | |
| 8714690 | | 20D | 138 | 160 | 210 | | 45 | 1.3 | B | ● | 36,600 |
| 8724690 | | 25D | 173 | 200 | 250 | | 45 | 1.3 | ● | 40,600 | |
| 8716690 | | 30D | 207 | 230 | 280 | | 45 | 1.3 | ● | 42,500 | |
| 8696700 | 7 - 7 | 10D | 70 | 90 | 140 | 7 | 50 | 1.3 | ● | 26,700 | |
| 8698700 | | 15D | 105 | 125 | 175 | | 48 | 1.3 | ● | 31,800 | |
| 8706700 | | 20D | 140 | 160 | 210 | | 48 | 1.3 | B | ● | 36,600 |
| 8726700 | | 25D | 175 | 200 | 250 | | 48 | 1.3 | ● | 40,600 | |
| 8708700 | | 30D | 210 | 230 | 280 | | 48 | 1.3 | ● | 42,500 | |
| 8710700 | 7 | 10D | 70 | 90 | 140 | 8 | 47 | 1.3 | ● | 26,700 | |
| 8712700 | | 15D | 105 | 125 | 175 | | 45 | 1.3 | ● | 31,800 | |
| 8714700 | | 20D | 140 | 160 | 210 | | 45 | 1.3 | B | ● | 36,600 |
| 8724700 | | 25D | 175 | 200 | 250 | | 45 | 1.3 | ● | 40,600 | |
| 8716700 | | 30D | 210 | 230 | 280 | | 45 | 1.3 | ● | 42,500 | |
| 8710710 | 7.1 | 10D | 71 | 100 | 155 | 8 | 50 | 1.3 | ● | 27,900 | |
| 8712710 | | 15D | 107 | 135 | 195 | | 58 | 1.3 | ● | 33,600 | |
| 8714710 | | 20D | 142 | 170 | 230 | | 58 | 1.3 | B | ● | 38,500 |
| 8724710 | | 25D | 178 | 210 | 275 | | 63 | 1.3 | ● | 42,700 | |
| 8716710 | | 30D | 213 | 250 | 315 | | 63 | 1.3 | ● | 44,700 | |
| 8710720 | 7.2 | 10D | 72 | 100 | 155 | 8 | 50 | 1.3 | ● | 27,900 | |
| 8712720 | | 15D | 108 | 135 | 195 | | 58 | 1.3 | ● | 33,600 | |
| 8714720 | | 20D | 144 | 170 | 230 | | 58 | 1.3 | B | ● | 38,500 |
| 8724720 | | 25D | 180 | 210 | 275 | | 63 | 1.3 | ● | 42,700 | |
| 8716720 | | 30D | 216 | 250 | 315 | | 63 | 1.3 | ● | 44,700 | |
| 8710730 | 7.3 | 10D | 73 | 100 | 155 | 8 | 50 | 1.3 | ● | 27,900 | |
| 8712730 | | 15D | 110 | 135 | 195 | | 58 | 1.3 | ● | 33,600 | |
| 8714730 | | 20D | 146 | 170 | 230 | | 58 | 1.3 | B | ● | 38,500 |
| 8724730 | | 25D | 183 | 210 | 275 | | 63 | 1.3 | ● | 42,700 | |
| 8716730 | | 30D | 219 | 250 | 315 | | 63 | 1.3 | ● | 44,700 | |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710740 | 7.4 | 10D | 74 | 100 | 155 | 8 | 50 | 1.3 | ● | 27,900 | |
| 8712740 | | 15D | 111 | 135 | 195 | | 58 | 1.3 | ● | 33,600 | |
| 8714740 | | 20D | 148 | 170 | 230 | | 58 | 1.3 | B | ● | 38,500 |
| 8724740 | | 25D | 185 | 210 | 275 | | 63 | 1.3 | ● | 42,700 | |
| 8716740 | | 30D | 222 | 250 | 315 | | 63 | 1.3 | ● | 44,700 | |
| 8696750 | 7.5 | 10D | 75 | 100 | 155 | 8 | 53 | 1.4 | ● | 27,900 | |
| 8698750 | | 15D | 113 | 135 | 195 | | 58 | 1.4 | ● | 33,600 | |
| 8706750 | | 20D | 150 | 170 | 230 | | 58 | 1.4 | B | ● | 38,500 |
| 8724750 | | 25D | 188 | 210 | 275 | | 63 | 1.4 | ● | 42,700 | |
| 8708750 | | 30D | 225 | 250 | 315 | | 63 | 1.4 | ● | 44,700 | |
| 8710760 | 7.6 | 10D | 76 | 105 | 155 | 8 | 48 | 1.4 | ● | 29,400 | |
| 8712760 | | 15D | 114 | 145 | 195 | | 48 | 1.4 | ● | 35,000 | |
| 8714760 | | 20D | 152 | 180 | 230 | | 48 | 1.4 | B | ● | 40,900 |
| 8724760 | | 25D | 190 | 225 | 275 | | 48 | 1.4 | ● | 45,000 | |
| 8716760 | | 30D | 228 | 265 | 315 | | 48 | 1.4 | ● | 46,600 | |
| 8710770 | 7.7 | 10D | 77 | 105 | 155 | 8 | 48 | 1.4 | ● | 29,400 | |
| 8712770 | | 15D | 116 | 145 | 195 | | 48 | 1.4 | ● | 35,000 | |
| 8714770 | | 20D | 154 | 180 | 230 | | 48 | 1.4 | B | ● | 40,900 |
| 8724770 | | 25D | 193 | 225 | 275 | | 48 | 1.4 | ● | 45,000 | |
| 8716770 | | 30D | 231 | 265 | 315 | | 48 | 1.4 | ● | 46,600 | |
| 8710780 | 7.8 | 10D | 78 | 105 | 155 | 8 | 48 | 1.4 | ● | 29,400 | |
| 8712780 | | 15D | 117 | 145 | 195 | | 48 | 1.4 | ● | 35,000 | |
| 8714780 | | 20D | 156 | 180 | 230 | | 48 | 1.4 | B | ● | 40,900 |
| 8724780 | | 25D | 195 | 225 | 275 | | 48 | 1.4 | ● | 45,000 | |
| 8716780 | | 30D | 234 | 265 | 315 | | 48 | 1.4 | ● | 46,600 | |
| 8710790 | 7.9 | 10D | 79 | 105 | 155 | 8 | 48 | 1.4 | ● | 29,400 | |
| 8712790 | | 15D | 119 | 145 | 195 | | 48 | 1.4 | ● | 35,000 | |
| 8714790 | | 20D | 158 | 180 | 230 | | 48 | 1.4 | B | ● | 40,900 |
| 8724790 | | 25D | 198 | 225 | 275 | | 48 | 1.4 | ● | 45,000 | |
| 8716790 | | 30D | 237 | 265 | 315 | | 48 | 1.4 | ● | 46,600 | |

- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT

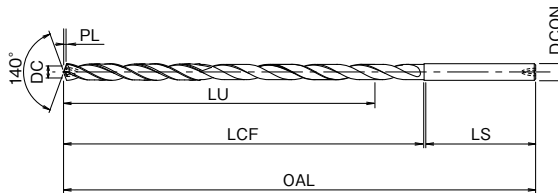


特長 Feature
加工データ Cutting Data
油穴付き with Oil Hole
ガイド穴用ドリル Pilot Drill
油穴無 Non Oil Hole
リーディングドリル Starter Drill
切削条件表 Cutting Conditions
特殊品対応表 Production Table by Drill Diameter

ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



CARBIDE EgiAs e8 30° SHRINK FIT SPEED FEED P53

先端角の許容差は $140^{\circ}_{-4^{\circ}}$ となります Tolerance of the point angle is $140^{\circ}_{-4^{\circ}}$

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8696800 | 8 | 10D | 80 | 105 | 155 | 8 | 50 | 1.5 | ● | 29,400 | |
| 8698800 | | 15D | 120 | 145 | 195 | | 50 | 1.5 | ● | 35,000 | |
| 8706800 | | 20D | 160 | 180 | 230 | | 50 | 1.5 | B | ● | 40,900 |
| 8724800 | | 25D | 200 | 225 | 275 | | 48 | 1.5 | ● | 45,000 | |
| 8708800 | | 30D | 240 | 265 | 315 | | 50 | 1.5 | ● | 46,600 | |
| 8696810 | 8.1 - 9 | 10D | 81 | 110 | 165 | 9 | 53 | 1.5 | ● | 31,000 | |
| 8698810 | | 15D | 122 | 155 | 210 | | 53 | 1.5 | ● | 37,000 | |
| 8706810 | | 20D | 162 | 195 | 260 | | 63 | 1.5 | B | ● | 42,700 |
| 8726810 | | 25D | 203 | 240 | 305 | | 63 | 1.5 | ● | 47,100 | |
| 8708810 | | 30D | 243 | 280 | 350 | | 68 | 1.5 | ● | 49,300 | |
| 8710810 | 8.1 | 10D | 81 | 110 | 165 | 10 | 48.2 | 1.5 | ● | 31,000 | |
| 8712810 | | 15D | 122 | 155 | 210 | | 45 | 1.5 | ● | 37,000 | |
| 8714810 | | 20D | 162 | 195 | 260 | | 45 | 1.5 | B | ● | 42,700 |
| 8724810 | | 25D | 203 | 240 | 305 | | 45 | 1.5 | ● | 47,100 | |
| 8716810 | | 30D | 243 | 280 | 350 | | 45 | 1.5 | ● | 49,300 | |
| 8696820 | 8.2 - 9 | 10D | 82 | 110 | 165 | 9 | 53 | 1.5 | ● | 31,000 | |
| 8698820 | | 15D | 123 | 155 | 210 | | 53 | 1.5 | ● | 37,000 | |
| 8706820 | | 20D | 164 | 195 | 260 | | 63 | 1.5 | B | ● | 42,700 |
| 8726820 | | 25D | 205 | 240 | 305 | | 63 | 1.5 | ● | 47,100 | |
| 8708820 | | 30D | 246 | 280 | 350 | | 68 | 1.5 | ● | 49,300 | |
| 8710820 | 8.2 | 10D | 82 | 110 | 165 | 10 | 48.3 | 1.5 | ● | 31,000 | |
| 8712820 | | 15D | 123 | 155 | 210 | | 45 | 1.5 | ● | 37,000 | |
| 8714820 | | 20D | 164 | 195 | 260 | | 45 | 1.5 | B | ● | 42,700 |
| 8724820 | | 25D | 205 | 240 | 305 | | 45 | 1.5 | ● | 47,100 | |
| 8716820 | | 30D | 246 | 280 | 350 | | 45 | 1.5 | ● | 49,300 | |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8696830 | 8.3 - 9 | 10D | 83 | 110 | 165 | 9 | 53 | 1.5 | ● | 31,000 | |
| 8698830 | | 15D | 125 | 155 | 210 | | 53 | 1.5 | ● | 37,000 | |
| 8706830 | | 20D | 166 | 195 | 260 | | 63 | 1.5 | B | ● | 42,700 |
| 8726830 | | 25D | 208 | 240 | 305 | | 63 | 1.5 | ● | 47,100 | |
| 8708830 | | 30D | 249 | 280 | 350 | | 68 | 1.5 | ● | 49,300 | |
| 8710830 | 8.3 | 10D | 83 | 110 | 165 | 10 | 48.4 | 1.5 | ● | 31,000 | |
| 8712830 | | 15D | 125 | 155 | 210 | | 45 | 1.5 | ● | 37,000 | |
| 8714830 | | 20D | 166 | 195 | 260 | | 45 | 1.5 | B | ● | 42,700 |
| 8724830 | | 25D | 208 | 240 | 305 | | 45 | 1.5 | ● | 47,100 | |
| 8716830 | | 30D | 249 | 280 | 350 | | 45 | 1.5 | ● | 49,300 | |
| 8696840 | 8.4 - 9 | 10D | 84 | 110 | 165 | 9 | 53 | 1.5 | ● | 31,000 | |
| 8698840 | | 15D | 126 | 155 | 210 | | 53 | 1.5 | ● | 37,000 | |
| 8706840 | | 20D | 168 | 195 | 260 | | 63 | 1.5 | B | ● | 42,700 |
| 8726840 | | 25D | 210 | 240 | 305 | | 63 | 1.5 | ● | 47,100 | |
| 8708840 | | 30D | 252 | 280 | 350 | | 68 | 1.5 | ● | 49,300 | |
| 8710840 | 8.4 | 10D | 84 | 110 | 165 | 10 | 48.4 | 1.5 | ● | 31,000 | |
| 8712840 | | 15D | 126 | 155 | 210 | | 45 | 1.5 | ● | 37,000 | |
| 8714840 | | 20D | 168 | 195 | 260 | | 45 | 1.5 | B | ● | 42,700 |
| 8724840 | | 25D | 210 | 240 | 305 | | 45 | 1.5 | ● | 47,100 | |
| 8716840 | | 30D | 252 | 280 | 350 | | 45 | 1.5 | ● | 49,300 | |
| 8696850 | 8.5 - 9 | 10D | 85 | 110 | 165 | 9 | 53 | 1.5 | ● | 31,000 | |
| 8698850 | | 15D | 128 | 155 | 210 | | 53 | 1.5 | ● | 37,000 | |
| 8706850 | | 20D | 170 | 195 | 260 | | 63 | 1.5 | B | ● | 42,700 |
| 8726850 | | 25D | 213 | 240 | 305 | | 63 | 1.5 | ● | 47,100 | |
| 8708850 | | 30D | 255 | 280 | 350 | | 68 | 1.5 | ● | 49,300 | |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ロングドリルADO-10D ~ 50Dのガイド穴用ドリルとしてADO-3D/5Dもご使用いただけます(p.11 ~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

・ADO-3D φ2 ~ φ20



・ADO-5D φ2 ~ φ20



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク径 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710850 | 8.5 | 10D | 85 | 110 | 165 | 10 | 48.5 | 1.5 | ● | 31,000 |
| 8712850 | | 15D | 128 | 155 | 210 | | 45 | 1.5 | ● | 37,000 |
| 8714850 | | 20D | 170 | 195 | 260 | | 45 | 1.5 | B● | 42,700 |
| 8724850 | | 25D | 213 | 240 | 305 | | 45 | 1.5 | ● | 47,100 |
| 8716850 | | 30D | 255 | 280 | 350 | | 45 | 1.5 | ● | 49,300 |
| 8696860 | 8.6 - 9 | 10D | 86 | 115 | 165 | 9 | 48 | 1.6 | ● | 32,600 |
| 8698860 | | 15D | 129 | 160 | 210 | | 48 | 1.6 | ● | 39,100 |
| 8706860 | | 20D | 172 | 210 | 260 | | 48 | 1.6 | B● | 45,000 |
| 8726860 | | 25D | 215 | 255 | 305 | | 48 | 1.6 | ● | 49,800 |
| 8708860 | | 30D | 258 | 300 | 350 | | 48 | 1.6 | ● | 52,200 |
| 8710860 | 8.6 | 10D | 86 | 115 | 165 | 10 | 46.6 | 1.6 | ● | 32,600 |
| 8712860 | | 15D | 129 | 160 | 210 | | 45 | 1.6 | ● | 39,100 |
| 8714860 | | 20D | 172 | 210 | 260 | | 45 | 1.6 | B● | 45,000 |
| 8724860 | | 25D | 215 | 255 | 305 | | 45 | 1.6 | ● | 49,800 |
| 8716860 | | 30D | 258 | 300 | 350 | | 45 | 1.6 | ● | 52,200 |
| 8696870 | 8.7 - 9 | 10D | 87 | 115 | 165 | 9 | 48 | 1.6 | ● | 32,600 |
| 8698870 | | 15D | 131 | 160 | 210 | | 48 | 1.6 | ● | 39,100 |
| 8706870 | | 20D | 174 | 210 | 260 | | 48 | 1.6 | B● | 45,000 |
| 8726870 | | 25D | 218 | 255 | 305 | | 48 | 1.6 | ● | 49,800 |
| 8708870 | | 30D | 261 | 300 | 350 | | 48 | 1.6 | ● | 52,200 |
| 8710870 | 8.7 | 10D | 87 | 115 | 165 | 10 | 46.7 | 1.6 | ● | 32,600 |
| 8712870 | | 15D | 131 | 160 | 210 | | 45 | 1.6 | ● | 39,100 |
| 8714870 | | 20D | 174 | 210 | 260 | | 45 | 1.6 | B● | 45,000 |
| 8724870 | | 25D | 218 | 255 | 305 | | 45 | 1.6 | ● | 49,800 |
| 8716870 | | 30D | 261 | 300 | 350 | | 45 | 1.6 | ● | 52,200 |
| 8696880 | 8.8 - 9 | 10D | 88 | 115 | 165 | 9 | 48 | 1.6 | ● | 32,600 |
| 8698880 | | 15D | 132 | 160 | 210 | | 48 | 1.6 | ● | 39,100 |
| 8706880 | | 20D | 176 | 210 | 260 | | 48 | 1.6 | B● | 45,000 |
| 8726880 | | 25D | 220 | 255 | 305 | | 48 | 1.6 | ● | 49,800 |
| 8708880 | | 30D | 264 | 300 | 350 | | 48 | 1.6 | ● | 52,200 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク径 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8710880 | 8.8 | 10D | 88 | 115 | 165 | 10 | 46.8 | 1.6 | ● | 32,600 |
| 8712880 | | 15D | 132 | 160 | 210 | | 45 | 1.6 | ● | 39,100 |
| 8714880 | | 20D | 176 | 210 | 260 | | 45 | 1.6 | B● | 45,000 |
| 8724880 | | 25D | 220 | 255 | 305 | | 45 | 1.6 | ● | 49,800 |
| 8716880 | | 30D | 264 | 300 | 350 | | 45 | 1.6 | ● | 52,200 |
| 8696890 | 8.9 - 9 | 10D | 89 | 115 | 165 | 9 | 48 | 1.6 | ● | 32,600 |
| 8698890 | | 15D | 134 | 160 | 210 | | 48 | 1.6 | ● | 39,100 |
| 8706890 | | 20D | 178 | 210 | 260 | | 48 | 1.6 | B● | 45,000 |
| 8726890 | | 25D | 223 | 255 | 305 | | 48 | 1.6 | ● | 49,800 |
| 8708890 | | 30D | 267 | 300 | 350 | | 48 | 1.6 | ● | 52,200 |
| 8710890 | 8.9 | 10D | 89 | 115 | 165 | 10 | 46.9 | 1.6 | ● | 32,600 |
| 8712890 | | 15D | 134 | 160 | 210 | | 45 | 1.6 | ● | 39,100 |
| 8714890 | | 20D | 178 | 210 | 260 | | 45 | 1.6 | B● | 45,000 |
| 8724890 | | 25D | 223 | 255 | 305 | | 45 | 1.6 | ● | 49,800 |
| 8716890 | | 30D | 267 | 300 | 350 | | 45 | 1.6 | ● | 52,200 |
| 8696900 | 9 - 9 | 10D | 90 | 115 | 165 | 9 | 50 | 1.6 | ● | 32,600 |
| 8698900 | | 15D | 135 | 160 | 210 | | 48 | 1.6 | ● | 39,100 |
| 8706900 | | 20D | 180 | 210 | 260 | | 48 | 1.6 | B● | 45,000 |
| 8726900 | | 25D | 225 | 255 | 305 | | 48 | 1.6 | ● | 49,800 |
| 8708900 | | 30D | 270 | 300 | 350 | | 48 | 1.6 | ● | 52,200 |
| 8710900 | 9 | 10D | 90 | 115 | 165 | 10 | 47 | 1.6 | ● | 32,600 |
| 8712900 | | 15D | 135 | 160 | 210 | | 45 | 1.6 | ● | 39,100 |
| 8714900 | | 20D | 180 | 210 | 260 | | 45 | 1.6 | B● | 45,000 |
| 8724900 | | 25D | 225 | 255 | 305 | | 45 | 1.6 | ● | 49,800 |
| 8716900 | | 30D | 270 | 300 | 350 | | 45 | 1.6 | ● | 52,200 |
| 8710910 | 9.1 | 10D | 91 | 125 | 190 | 10 | 60 | 1.7 | ● | 34,200 |
| 8712910 | | 15D | 137 | 170 | 240 | | 68 | 1.7 | ● | 40,900 |
| 8714910 | | 20D | 182 | 220 | 290 | | 68 | 1.7 | B● | 47,000 |
| 8724910 | | 25D | 228 | 270 | 340 | | 68 | 1.7 | ● | 52,200 |
| 8716910 | | 30D | 273 | 315 | 390 | | 73 | 1.7 | ● | 54,500 |

・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
・About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT

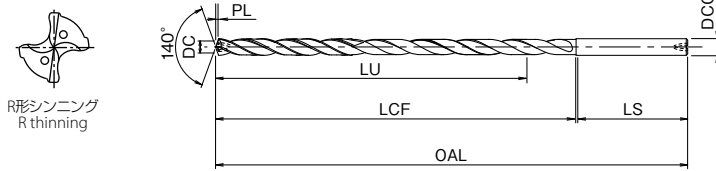


特長 Feature
加工データ Cutting Data
油穴付き with Oil Hole
ガイド穴用ドリル Pilot Drill
油穴無 Non Oil Hole
リーディングドリル Starter Drill
切削条件表 Cutting Conditions
特殊品対応表 Production Table by Drill Diameter

ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角の許容差は $140^{\circ} \pm 4'$ となります Tolerance of the point angle is $140^{\circ} \pm 4'$

CARBIDE EgiAs e8 30° SHRINK FIT SPEED FEED P53

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710920 | 9.2 | 10D | 92 | 125 | 190 | 10 | 60 | 1.7 | ● | 34,200 | |
| 8712920 | | 15D | 138 | 170 | 240 | | 68 | 1.7 | ● | 40,900 | |
| 8714920 | | 20D | 184 | 220 | 290 | | 68 | 1.7 | B | ● | 47,000 |
| 8724920 | | 25D | 230 | 270 | 340 | | 68 | 1.7 | ● | 52,200 | |
| 8716920 | | 30D | 276 | 315 | 390 | | 73 | 1.7 | ● | 54,500 | |
| 8710930 | 9.3 | 10D | 93 | 125 | 190 | 10 | 60 | 1.7 | ● | 34,200 | |
| 8712930 | | 15D | 140 | 170 | 240 | | 68 | 1.7 | ● | 40,900 | |
| 8714930 | | 20D | 186 | 220 | 290 | | 68 | 1.7 | B | ● | 47,000 |
| 8724930 | | 25D | 233 | 270 | 340 | | 68 | 1.7 | ● | 52,200 | |
| 8716930 | | 30D | 279 | 315 | 390 | | 73 | 1.7 | ● | 54,500 | |
| 8710940 | 9.4 | 10D | 94 | 125 | 190 | 10 | 60 | 1.7 | ● | 34,200 | |
| 8712940 | | 15D | 141 | 170 | 240 | | 68 | 1.7 | ● | 40,900 | |
| 8714940 | | 20D | 188 | 220 | 290 | | 68 | 1.7 | B | ● | 47,000 |
| 8724940 | | 25D | 235 | 270 | 340 | | 68 | 1.7 | ● | 52,200 | |
| 8716940 | | 30D | 282 | 315 | 390 | | 73 | 1.7 | ● | 54,500 | |
| 8696950 | 9.5 | 10D | 95 | 125 | 190 | 10 | 63 | 1.7 | ● | 34,200 | |
| 8698950 | | 15D | 143 | 170 | 240 | | 68 | 1.7 | ● | 40,900 | |
| 8706950 | | 20D | 190 | 220 | 290 | | 68 | 1.7 | B | ● | 47,000 |
| 8724950 | | 25D | 238 | 270 | 340 | | 68 | 1.7 | ● | 52,200 | |
| 8708950 | | 30D | 285 | 315 | 390 | | 73 | 1.7 | ● | 54,500 | |
| 8710960 | 9.6 | 10D | 96 | 130 | 190 | 10 | 58 | 1.7 | ● | 35,000 | |
| 8712960 | | 15D | 144 | 180 | 240 | | 58 | 1.7 | ● | 41,800 | |
| 8714960 | | 20D | 192 | 230 | 290 | | 58 | 1.7 | B | ● | 49,200 |
| 8724960 | | 25D | 240 | 280 | 340 | | 58 | 1.7 | ● | 54,500 | |
| 8716960 | | 30D | 288 | 330 | 390 | | 58 | 1.7 | ● | 56,800 | |

| ツールNo. EDP No. | 直径-シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-----------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8710970 | 9.7 | 10D | 97 | 130 | 190 | 10 | 58 | 1.8 | ● | 35,000 | |
| 8712970 | | 15D | 146 | 180 | 240 | | 58 | 1.8 | ● | 41,800 | |
| 8714970 | | 20D | 194 | 230 | 290 | | 58 | 1.8 | B | ● | 49,200 |
| 8724970 | | 25D | 243 | 280 | 340 | | 58 | 1.8 | ● | 54,500 | |
| 8716970 | | 30D | 291 | 330 | 390 | | 58 | 1.8 | ● | 56,800 | |
| 8710980 | 9.8 | 10D | 98 | 130 | 190 | 10 | 58 | 1.8 | ● | 35,000 | |
| 8712980 | | 15D | 147 | 180 | 240 | | 58 | 1.8 | ● | 41,800 | |
| 8714980 | | 20D | 196 | 230 | 290 | | 58 | 1.8 | B | ● | 49,200 |
| 8724980 | | 25D | 245 | 280 | 340 | | 58 | 1.8 | ● | 54,500 | |
| 8716980 | | 30D | 294 | 330 | 390 | | 58 | 1.8 | ● | 56,800 | |
| 8710990 | 9.9 | 10D | 99 | 130 | 190 | 10 | 58 | 1.8 | ● | 35,000 | |
| 8712990 | | 15D | 149 | 180 | 240 | | 58 | 1.8 | ● | 41,800 | |
| 8714990 | | 20D | 198 | 230 | 290 | | 58 | 1.8 | B | ● | 49,200 |
| 8724990 | | 25D | 248 | 280 | 340 | | 58 | 1.8 | ● | 54,500 | |
| 8716990 | | 30D | 297 | 330 | 390 | | 58 | 1.8 | ● | 56,800 | |
| 8697000 | 10 | 10D | 100 | 130 | 190 | 10 | 60 | 1.8 | ● | 35,000 | |
| 8699000 | | 15D | 150 | 180 | 240 | | 60 | 1.8 | ● | 41,800 | |
| 8707000 | | 20D | 200 | 230 | 290 | | 58 | 1.8 | B | ● | 49,200 |
| 8725000 | | 25D | 250 | 280 | 340 | | 58 | 1.8 | ● | 54,500 | |
| 8709000 | | 30D | 300 | 330 | 390 | | 58 | 1.8 | ● | 56,800 | |
| 8697010 | 10.1 - 11 | 10D | 101 | 140 | 205 | 11 | 63 | 1.8 | ● | 37,000 | |
| 8699010 | | 15D | 152 | 190 | 260 | | 68 | 1.8 | ● | 44,700 | |
| 8707010 | | 20D | 202 | 250 | 310 | | 58 | 1.8 | B | ● | 51,100 |
| 8727010 | | 25D | 253 | 310 | 370 | 58 | 1.8 | ● | 56,800 | | |
| 8711010 | 10.1 | 10D | 101 | 140 | 205 | 12 | 58.2 | 1.8 | ● | 37,000 | |
| 8713010 | | 15D | 152 | 190 | 260 | | 45 | 1.8 | B | ● | 44,700 |
| 8715010 | | 20D | 202 | 250 | 310 | | 45 | 1.8 | ● | 51,100 | |
| 8725010 | | 25D | 253 | 310 | 370 | | 45 | 1.8 | ● | 56,800 | |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT



全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ロングドリルADO-10D ~ 50Dのガイド穴用ドリルとしてADO-3D/5Dもご使用いただけます(p.11 ~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

・ADO-3D φ2 ~ φ20



・ADO-5D φ2 ~ φ20



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8697020 | 10.2 - 11 | 10D | 102 | 140 | 205 | 11 | 63 | 1.9 | ● | 37,000 |
| 8699020 | | 15D | 153 | 190 | 260 | | 68 | 1.9 | ● | 44,700 |
| 8707020 | | 20D | 204 | 250 | 310 | | 58 | 1.9 | ● | 51,100 |
| 8727020 | | 25D | 255 | 310 | 370 | | 58 | 1.9 | ● | 56,800 |
| 8711020 | 10.2 | 10D | 102 | 140 | 205 | 12 | 58.3 | 1.9 | ● | 37,000 |
| 8713020 | | 15D | 153 | 190 | 260 | | 45 | 1.9 | ● | 44,700 |
| 8715020 | | 20D | 204 | 250 | 310 | | 45 | 1.9 | ● | 51,100 |
| 8725020 | | 25D | 255 | 310 | 370 | | 45 | 1.9 | ● | 56,800 |
| 8697030 | 10.3 - 11 | 10D | 103 | 140 | 205 | 11 | 63 | 1.9 | ● | 37,000 |
| 8699030 | | 15D | 155 | 190 | 260 | | 68 | 1.9 | ● | 44,700 |
| 8707030 | | 20D | 206 | 250 | 310 | | 58 | 1.9 | ● | 51,100 |
| 8727030 | | 25D | 258 | 310 | 370 | | 58 | 1.9 | ● | 56,800 |
| 8711030 | 10.3 | 10D | 103 | 140 | 205 | 12 | 58.4 | 1.9 | ● | 37,000 |
| 8713030 | | 15D | 155 | 190 | 260 | | 45 | 1.9 | ● | 44,700 |
| 8715030 | | 20D | 206 | 250 | 310 | | 45 | 1.9 | ● | 51,100 |
| 8725030 | | 25D | 258 | 310 | 370 | | 45 | 1.9 | ● | 56,800 |
| 8697040 | 10.4 - 11 | 10D | 104 | 140 | 205 | 11 | 63 | 1.9 | ● | 37,000 |
| 8699040 | | 15D | 156 | 190 | 260 | | 68 | 1.9 | ● | 44,700 |
| 8707040 | | 20D | 208 | 250 | 310 | | 58 | 1.9 | ● | 51,100 |
| 8727040 | | 25D | 260 | 310 | 370 | | 58 | 1.9 | ● | 56,800 |
| 8711040 | 10.4 | 10D | 104 | 140 | 205 | 12 | 58.4 | 1.9 | ● | 37,000 |
| 8713040 | | 15D | 156 | 190 | 260 | | 45 | 1.9 | ● | 44,700 |
| 8715040 | | 20D | 208 | 250 | 310 | | 45 | 1.9 | ● | 51,100 |
| 8725040 | | 25D | 260 | 310 | 370 | | 45 | 1.9 | ● | 56,800 |
| 8697050 | 10.5 - 11 | 10D | 105 | 140 | 205 | 11 | 63 | 1.9 | ● | 37,000 |
| 8699050 | | 15D | 158 | 190 | 260 | | 68 | 1.9 | ● | 44,700 |
| 8707050 | | 20D | 210 | 250 | 310 | | 58 | 1.9 | ● | 51,100 |
| 8727050 | | 25D | 263 | 310 | 370 | | 58 | 1.9 | ● | 56,800 |
| 8711050 | 10.5 | 10D | 105 | 140 | 205 | 12 | 58.5 | 1.9 | ● | 37,000 |
| 8713050 | | 15D | 158 | 190 | 260 | | 45 | 1.9 | ● | 44,700 |
| 8715050 | | 20D | 210 | 250 | 310 | | 45 | 1.9 | ● | 51,100 |
| 8725050 | | 25D | 263 | 310 | 370 | | 45 | 1.9 | ● | 56,800 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8697060 | 10.6 - 11 | 10D | 106 | 140 | 205 | 11 | 63 | 1.9 | ● | 38,800 |
| 8699060 | | 15D | 159 | 190 | 260 | | 68 | 1.9 | ● | 46,600 |
| 8707060 | | 20D | 212 | 250 | 310 | | 58 | 1.9 | ● | 53,400 |
| 8727060 | | 25D | 265 | 310 | 370 | | 58 | 1.9 | ● | 59,100 |
| 8711060 | 10.6 | 10D | 106 | 140 | 205 | 12 | 58.6 | 1.9 | ● | 38,800 |
| 8713060 | | 15D | 159 | 190 | 260 | | 45 | 1.9 | ● | 46,600 |
| 8715060 | | 20D | 212 | 250 | 310 | | 45 | 1.9 | ● | 53,400 |
| 8725060 | | 25D | 265 | 310 | 370 | | 45 | 1.9 | ● | 59,100 |
| 8697070 | 10.7 - 11 | 10D | 107 | 140 | 205 | 11 | 63 | 1.9 | ● | 38,800 |
| 8699070 | | 15D | 161 | 200 | 260 | | 58 | 1.9 | ● | 46,600 |
| 8707070 | | 20D | 214 | 250 | 310 | | 58 | 1.9 | ● | 53,400 |
| 8727070 | | 25D | 268 | 310 | 370 | | 58 | 1.9 | ● | 59,100 |
| 8711070 | 10.7 | 10D | 107 | 140 | 205 | 12 | 58.7 | 1.9 | ● | 38,800 |
| 8713070 | | 15D | 161 | 200 | 260 | | 45 | 1.9 | ● | 46,600 |
| 8715070 | | 20D | 214 | 250 | 310 | | 45 | 1.9 | ● | 53,400 |
| 8725070 | | 25D | 268 | 310 | 370 | | 45 | 1.9 | ● | 59,100 |
| 8697080 | 10.8 - 11 | 10D | 108 | 145 | 205 | 11 | 58 | 2 | ● | 38,800 |
| 8699080 | | 15D | 162 | 200 | 260 | | 58 | 2 | ● | 46,600 |
| 8707080 | | 20D | 216 | 250 | 310 | | 58 | 2 | ● | 53,400 |
| 8727080 | | 25D | 270 | 310 | 370 | | 58 | 2 | ● | 59,100 |
| 8711080 | 10.8 | 10D | 108 | 145 | 205 | 12 | 56.8 | 2 | ● | 38,800 |
| 8713080 | | 15D | 162 | 200 | 260 | | 45 | 2 | ● | 46,600 |
| 8715080 | | 20D | 216 | 250 | 310 | | 45 | 2 | ● | 53,400 |
| 8725080 | | 25D | 270 | 310 | 370 | | 45 | 2 | ● | 59,100 |
| 8697090 | 10.9 - 11 | 10D | 109 | 145 | 205 | 11 | 58 | 2 | ● | 38,800 |
| 8699090 | | 15D | 164 | 200 | 260 | | 58 | 2 | ● | 46,600 |
| 8707090 | | 20D | 218 | 250 | 310 | | 58 | 2 | ● | 53,400 |
| 8727090 | | 25D | 273 | 310 | 370 | | 58 | 2 | ● | 59,100 |
| 8711090 | 10.9 | 10D | 109 | 145 | 205 | 12 | 56.9 | 2 | ● | 38,800 |
| 8713090 | | 15D | 164 | 200 | 260 | | 45 | 2 | ● | 46,600 |
| 8715090 | | 20D | 218 | 250 | 310 | | 45 | 2 | ● | 53,400 |
| 8725090 | | 25D | 273 | 310 | 370 | | 45 | 2 | ● | 59,100 |

・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。

・About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

NEXT



特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
10D/15D/20D/25D/30D

ガイド穴用ドリル
Pilot Drill
40D/50D

油穴無 Non Oil Hole
2D/4D

リーディングドリル Starter Drill

AD-LDS

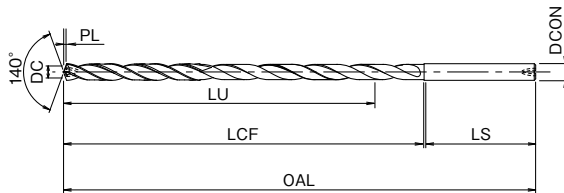
切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter

ADO-10D/15D/20D/25D/30D

全サイズ2021年10月生産分以降順次 **R Gash** に切替え生産となります。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角の許容差は $140^{\circ}_{-4^{\circ}}$ となります Tolerance of the point angle is $140^{\circ}_{-4^{\circ}}$

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8697100 | 11 - 11 | 10D | 110 | 145 | 205 | 11 | 58 | 2 | ● | 38,800 |
| 8699100 | | 15D | 165 | 200 | 260 | | 58 | 2 | ● | 46,600 |
| 8707100 | | 20D | 220 | 250 | 310 | | 58 | 2 | ● | 53,400 |
| 8727100 | | 25D | 275 | 310 | 370 | | 58 | 2 | ● | 59,100 |
| 8711100 | 11 | 10D | 110 | 145 | 205 | 12 | 57 | 2 | ● | 38,800 |
| 8713100 | | 15D | 165 | 200 | 260 | | 45 | 2 | ● | 46,600 |
| 8715100 | | 20D | 220 | 250 | 310 | | 45 | 2 | ● | 53,400 |
| 8725100 | | 25D | 275 | 310 | 370 | | 45 | 2 | ● | 59,100 |
| 8711110 | 11.1 | 10D | 111 | 155 | 215 | 12 | 58 | 2 | ● | 40,600 |
| 8713110 | | 15D | 167 | 210 | 280 | | 68 | 2 | ● | 48,400 |
| 8715110 | | 20D | 222 | 270 | 330 | | 58 | 2 | ● | 55,600 |
| 8725110 | | 25D | 278 | 340 | 400 | | 58 | 2 | ● | 62,000 |
| 8711120 | 11.2 | 10D | 112 | 155 | 215 | 12 | 58 | 2 | ● | 40,600 |
| 8713120 | | 15D | 168 | 210 | 280 | | 68 | 2 | ● | 48,400 |
| 8715120 | | 20D | 224 | 270 | 330 | | 58 | 2 | ● | 55,600 |
| 8725120 | | 25D | 280 | 340 | 400 | | 58 | 2 | ● | 62,000 |
| 8711130 | 11.3 | 10D | 113 | 155 | 215 | 12 | 58 | 2.1 | ● | 40,600 |
| 8713130 | | 15D | 170 | 210 | 280 | | 68 | 2.1 | ● | 48,400 |
| 8715130 | | 20D | 226 | 270 | 330 | | 58 | 2.1 | ● | 55,600 |
| 8725130 | | 25D | 283 | 340 | 400 | | 58 | 2.1 | ● | 62,000 |
| 8711140 | 11.4 | 10D | 114 | 155 | 215 | 12 | 58 | 2.1 | ● | 40,600 |
| 8713140 | | 15D | 171 | 210 | 280 | | 68 | 2.1 | ● | 48,400 |
| 8715140 | | 20D | 228 | 270 | 330 | | 58 | 2.1 | ● | 55,600 |
| 8725140 | | 25D | 285 | 340 | 400 | | 58 | 2.1 | ● | 62,000 |

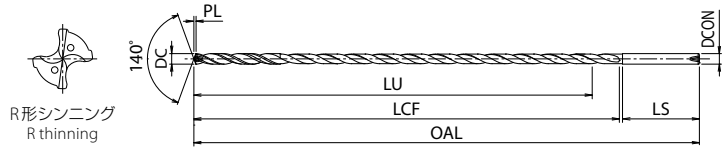
| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8711150 | 11.5 | 10D | 115 | 155 | 215 | 12 | 58 | 2.1 | ● | 40,600 |
| 8713150 | | 15D | 173 | 210 | 280 | | 68 | 2.1 | ● | 48,400 |
| 8715150 | | 20D | 230 | 270 | 330 | | 58 | 2.1 | ● | 55,600 |
| 8725150 | | 25D | 288 | 340 | 400 | | 58 | 2.1 | ● | 62,000 |
| 8711160 | 11.6 | 10D | 116 | 155 | 215 | 12 | 58 | 2.1 | ● | 41,800 |
| 8713160 | | 15D | 174 | 210 | 280 | | 68 | 2.1 | ● | 50,300 |
| 8715160 | | 20D | 232 | 270 | 330 | | 58 | 2.1 | ● | 57,700 |
| 8725160 | | 25D | 290 | 340 | 400 | | 58 | 2.1 | ● | 64,200 |
| 8711170 | 11.7 | 10D | 117 | 155 | 215 | 12 | 58 | 2.1 | ● | 41,800 |
| 8713170 | | 15D | 176 | 210 | 280 | | 68 | 2.1 | ● | 50,300 |
| 8715170 | | 20D | 234 | 270 | 330 | | 58 | 2.1 | ● | 57,700 |
| 8725170 | | 25D | 293 | 340 | 400 | | 58 | 2.1 | ● | 64,200 |
| 8711180 | 11.8 | 10D | 118 | 155 | 215 | 12 | 58 | 2.1 | ● | 41,800 |
| 8713180 | | 15D | 177 | 210 | 280 | | 68 | 2.1 | ● | 50,300 |
| 8715180 | | 20D | 236 | 270 | 330 | | 58 | 2.1 | ● | 57,700 |
| 8725180 | | 25D | 295 | 340 | 400 | | 58 | 2.1 | ● | 64,200 |
| 8711190 | 11.9 | 10D | 119 | 155 | 215 | 12 | 58 | 2.2 | ● | 41,800 |
| 8713190 | | 15D | 179 | 215 | 280 | | 63 | 2.2 | ● | 50,300 |
| 8715190 | | 20D | 238 | 270 | 330 | | 58 | 2.2 | ● | 57,700 |
| 8725190 | | 25D | 298 | 340 | 400 | | 58 | 2.2 | ● | 64,200 |
| 8697200 | 12 | 10D | 120 | 155 | 215 | 12 | 58 | 2.2 | ● | 41,800 |
| 8699200 | | 15D | 180 | 215 | 280 | | 63 | 2.2 | ● | 50,300 |
| 8707200 | | 20D | 240 | 270 | 330 | | 58 | 2.2 | ● | 57,700 |
| 8725200 | | 25D | 300 | 340 | 400 | | 58 | 2.2 | ● | 64,200 |
| 8711250 | 12.5 | 10D | 125 | 155 | 215 | 14 | 56.3 | 2.3 | ● | 43,600 |
| 8713250 | | 15D | 188 | 225 | 290 | | 61.3 | 2.3 | ● | 52,200 |
| 8715250 | | 20D | 250 | 280 | 330 | | 46.3 | 2.3 | ● | 59,600 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.



ADO-40D



先端角の許容差は $140^{\circ} \begin{smallmatrix} 0' \\ -4' \end{smallmatrix}$ となります Tolerance of the point angle is $140^{\circ} \begin{smallmatrix} 0' \\ -4' \end{smallmatrix}$

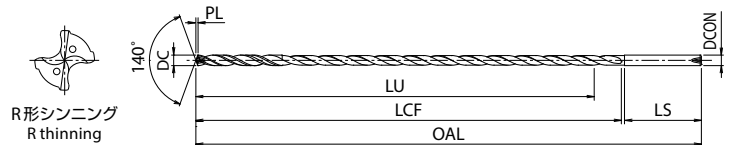
単位:mm Unit:mm

| ツールNo. EDP No. | 直径 DC | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|----------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8717300 | 3 | 120 | 129 | 179 | 3 | 49 | 0.5 | B ● | 36,400 |
| 8717400 | 4 | 160 | 172 | 222 | 4 | 49 | 0.7 | B ● | 37,400 |
| 8717500 | 5 | 200 | 215 | 265 | 5 | 49 | 0.9 | B ● | 39,000 |
| 8717600 | 6 | 240 | 258 | 308 | 6 | 49 | 1.1 | B ● | 43,600 |
| 8717800 | 8 | 320 | 344 | 394 | 8 | 49 | 1.5 | B ● | 51,400 |
| 8718000 | 10 | 400 | 430 | 490 | 10 | 59 | 1.8 | B ● | 62,300 |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

ADO-50D



先端角の許容差は $140^{\circ} \begin{smallmatrix} 0' \\ -4' \end{smallmatrix}$ となります Tolerance of the point angle is $140^{\circ} \begin{smallmatrix} 0' \\ -4' \end{smallmatrix}$

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 DC | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|----------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8718300 | 3 | 150 | 159 | 209 | 3 | 49 | 0.5 | B ● | 40,100 |
| 8718400 | 4 | 200 | 212 | 262 | 4 | 49 | 0.7 | B ● | 41,100 |
| 8718500 | 5 | 250 | 265 | 315 | 5 | 49 | 0.9 | B ● | 42,800 |
| 8718600 | 6 | 300 | 318 | 368 | 6 | 49 | 1.1 | B ● | 47,900 |
| 8718800 | 8 | 400 | 424 | 474 | 8 | 49 | 1.5 | B ● | 56,700 |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・パイロットドリルに関しては、p.38の推奨加工方法を参照下さい。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.
- ・ About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 標準在庫品 ● = Standard stock item

穴の真直性を向上させたいときのポイント

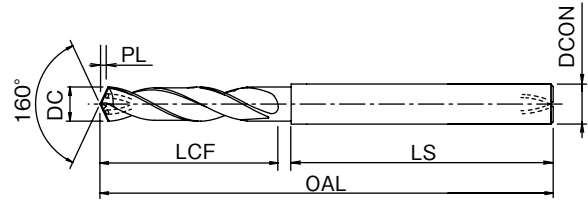
Keys for improving the straightness of hole

ガイド穴加工後にADO-20D/30Dで加工してからADO-40D/50Dで加工して下さい。

First make a pilot hole, followed by the use of the ADO-20D/30D drill, and completing the hole with the ADO-40D/50D drill.



ADO-PLT



| | | | | | |
|---------|-------|----|-----|------------|----------------|
| CARBIDE | EgiAs | h8 | 30° | SHRINK FIT | SPEED FEED P55 |
|---------|-------|----|-----|------------|----------------|

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8688903 | 3.03 - 3 | 15 | 65 | 3 | 50 | 0.3 | C ● | 11,000 |
| 8688923 | 3.53 | 18 | 70 | 4 | 50.1 | 0.3 | C ● | 11,600 |
| 8688904 | 4.03 | 20 | 70 | 4 | 50 | 0.4 | C ● | 12,400 |
| 8688924 | 4.53 - 5 | 23 | 75 | 5 | 50.1 | 0.4 | C ● | 13,200 |
| 8688905 | 5.03 - 5 | 25 | 75 | 5 | 50 | 0.4 | C ● | 14,000 |
| 8688925 | 5.53 | 28 | 80 | 6 | 50.1 | 0.5 | C ● | 14,700 |
| 8688906 | 6.03 | 30 | 80 | 6 | 50 | 0.5 | C ● | 14,700 |
| 8688926 | 6.53 - 7 | 33 | 85 | 7 | 50.1 | 0.6 | C ● | 15,600 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8688907 | 7.03 - 7 | 35 | 85 | 7 | 50 | 0.6 | C ● | 16,500 |
| 8688908 | 8.03 | 40 | 90 | 8 | 50 | 0.7 | C ● | 18,500 |
| 8688928 | 8.53 - 9 | 43 | 95 | 9 | 51 | 0.8 | C ● | 19,200 |
| 8688909 | 9.03 - 9 | 45 | 95 | 9 | 50 | 0.8 | C ● | 20,100 |
| 8688910 | 10.03 | 50 | 100 | 10 | 50 | 0.9 | C ● | 21,700 |
| 8688911 | 11.03 - 11 | 55 | 115 | 11 | 60 | 1 | C ● | 23,500 |
| 8688912 | 12.03 | 60 | 120 | 12 | 60 | 1.1 | C ● | 25,400 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.



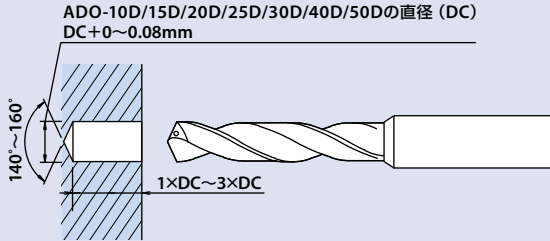
ADO-10D/15D/20D/25D/30D/40D/50D

① ADO-3D/5D, ADO-PLTにてガイド穴加工

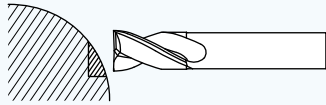
Make a pilot hole with the ADO-3D/5D or ADO-PLT.

ガイド穴加工用工具は、ADO-10D/15D/20D/25D/30D/40D/50Dの直径(DC)+0~0.08mmの範囲でドリル径をお選び下さい。又、穴深さが深い程ガイド穴を深くあける事を推奨します。

For the pilot hole, select 0 - 0.08mm larger size drill than ADO-10D/15D/20D/25D/30D/40D/50D.



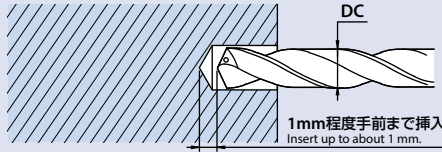
★湾曲部を加工の時は、ガイド穴加工前に座ぐり加工用エンドミル FX-ZDS、超硬フラットドリル ADFにて座ぐり加工を行って下さい。
When working on a curved surface, use the FX-ZDS (end mill for counterboring) or the ADF (carbide flat drill) to counterbore a flat surface before drilling a pilot hole.



② ロングドリルは回転速度(n) = 300 ~ 500min⁻¹程度とし、送り速度(Vf) = 300 ~ 500mm/minで挿入

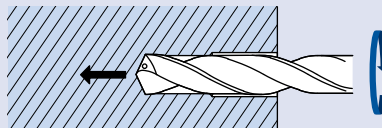
※ ADO-40D/50Dは逆転で挿入

Insert the long drill at a speed of (n) = 300 to 500 min⁻¹ and a feed rate of (Vf) = 300 to 500 mm/min. *Insert the ADO-40D/50D in reverse.



③ 所定の回転速度に上げ加工をスタート

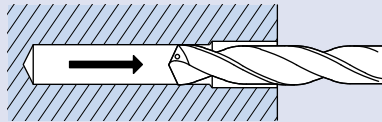
Increase the revolution to the designated speed and start drilling.



通り穴加工時は、抜け際で送り量(f) = 0.05 ~ 0.1mm/rev.に下げて下さい
When drilling through holes, reduce the feed rate to (f) 0.05 to 0.1 mm/rev.

④ 加工後、ドリルを穴から抜く時には回転速度(n) = 300 ~ 500min⁻¹・送り速度(Vf) = 1,000 ~ 3,000mm/min程度に下げて抜いて下さい

After drilling, reduce the speed to (n) = 300 to 500 min⁻¹ and a feed rate of (Vf) = 1,000 to 3,000 mm/min and pull the drill out of the hole.



※必ず内部給油方式で加工下さい

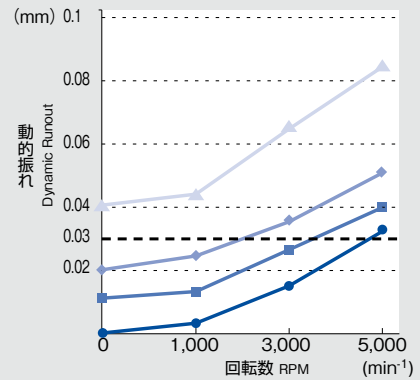
Make sure to use internal coolant supply when drilling.

ロングドリルの安定加工ワンポイント

Key point for stable drilling with long drills

工具の取り付け時の振れは、回転数が増えるにつれてより上昇します。右はその上昇量をグラフ化したものです。OSGでは、より安定した加工を実現する為に、「+0 ~ 0.08mmのパイロット穴を用意すること」と「ロングドリル停止又は低回転で挿入すること」を推奨しています。その理由は、右グラフから分かるように、回転を上げると動的振れが大きくなり、パイロット穴に納まらなくなる危険性が高まるからです。従って、静的振れの抑制のみならず、上記の推奨加工方法が有効であることが分ります。

The runout of a gripped cutting tool increases with the speed. The graph on the right indicates this increase. To ensure a higher level of work stability, OSG recommends "making +0 - 0.08mm pilot holes" and "inserting long drills stopped or at low speed." The reason for this is made evident in the graph on the right: increasing the speed increases the dynamic runout, posing a higher risk of the drill not fitting properly in the pilot hole. Therefore, this is effective not only for inhibiting static runout, but is also the recommended drilling method for long drills.



| 静的振れ Static Runout 回転数 RPM (min ⁻¹) | 0mm | 0.01mm | 0.02mm | 0.04mm |
|---|-------|--------|--------|--------|
| 1,000 | 0.003 | 0.013 | 0.024 | 0.046 |
| 3,000 | 0.014 | 0.026 | 0.036 | 0.066 |
| 5,000 | 0.033 | 0.04 | 0.049 | 0.087 |

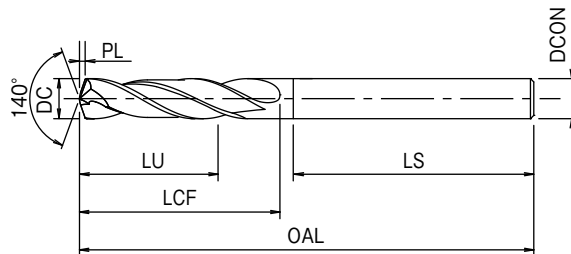
使用工具 Tool : φ6×30D

AD-2D/4D

AD-2D



X形シニング
X thinning
(DC ≤ 4)



AD-4D



R形シニング
R thinning
(4 < DC)



単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8675200 | 2 - 3 | 2D | 10 | 14 | 62 | 3 | 37.9 | 0.4 | B | ● 6,000 |
| 8677200 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8670200 | 2 | 2D | 10 | 14 | 62 | 4 | 36 | 0.4 | B | ● 6,000 |
| 8672200 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8675210 | 2.1 - 3 | 2D | 10 | 14 | 62 | 3 | 37.9 | 0.4 | B | ● 6,000 |
| 8677210 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8670210 | 2.1 | 2D | 10 | 14 | 62 | 4 | 36 | 0.4 | B | ● 6,000 |
| 8672210 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8675220 | 2.2 - 3 | 2D | 10 | 14 | 62 | 3 | 37.9 | 0.4 | B | ● 6,000 |
| 8677220 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8670220 | 2.2 | 2D | 10 | 14 | 62 | 4 | 36 | 0.4 | B | ● 6,000 |
| 8672220 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8675230 | 2.3 - 3 | 2D | 10 | 14 | 62 | 3 | 37.9 | 0.4 | B | ● 6,000 |
| 8677230 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8670230 | 2.3 | 2D | 10 | 14 | 62 | 4 | 36 | 0.4 | B | ● 6,000 |
| 8672230 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8675240 | 2.4 - 3 | 2D | 10 | 14 | 62 | 3 | 37.9 | 0.4 | B | ● 6,000 |
| 8677240 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670240 | 2.4 | 2D | 10 | 14 | 62 | 4 | 36 | 0.4 | B | ● 6,000 |
| 8672240 | | 4D | 16 | 20 | 66 | | | | | ● 7,090 |
| 8675250 | 2.5 - 3 | 2D | 9 | 14 | 62 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677250 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8670250 | 2.5 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672250 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8675260 | 2.6 - 3 | 2D | 9 | 14 | 62 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677260 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8670260 | 2.6 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672260 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8675270 | 2.7 - 3 | 2D | 9 | 14 | 62 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677270 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8670270 | 2.7 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672270 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8670276 | 2.76 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8670278 | 2.78 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8675280 | 2.8 - 3 | 2D | 9 | 14 | 62 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677280 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670280 | 2.8 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672280 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8675290 | 2.9 - 3 | 2D | 9 | 14 | 62 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677290 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8670290 | 2.9 | 2D | 9 | 14 | 62 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672290 | | 4D | 15 | 20 | 66 | | | | | ● 7,090 |
| 8675300 | 3 - 3 | 2D | 14 | 20 | 66 | 3 | 37.9 | 0.5 | B | ● 6,000 |
| 8677300 | | 4D | 22 | 28 | 74 | | | | | ● 7,090 |
| 8670300 | 3 | 2D | 14 | 20 | 66 | 4 | 36 | 0.5 | B | ● 6,000 |
| 8672300 | | 4D | 22 | 28 | 74 | | | | | ● 7,090 |
| 8670310 | 3.1 | 2D | 14 | 20 | 66 | 4 | 36 | 0.6 | B | ● 6,450 |
| 8672310 | | 4D | 22 | 28 | 74 | | | | | ● 7,620 |
| 8670320 | 3.2 | 2D | 14 | 20 | 66 | 4 | 36 | 0.6 | B | ● 6,450 |
| 8672320 | | 4D | 22 | 28 | 74 | | | | | ● 7,620 |
| 8670330 | 3.3 | 2D | 14 | 20 | 66 | 4 | 36 | 0.6 | B | ● 6,450 |
| 8672330 | | 4D | 22 | 28 | 74 | | | | | ● 7,620 |
| 8670340 | 3.4 | 2D | 14 | 20 | 66 | 4 | 36 | 0.6 | B | ● 6,450 |
| 8672340 | | 4D | 22 | 28 | 74 | | | | | ● 7,620 |
| 8670350 | 3.5 | 2D | 13 | 20 | 66 | 4 | 36 | 0.6 | B | ● 6,450 |
| 8672350 | | 4D | 21 | 28 | 74 | | | | | ● 7,620 |
| 8670360 | 3.6 | 2D | 13 | 20 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8672360 | | 4D | 21 | 28 | 74 | | | | | ● 8,000 |
| 8670366 | 3.66 | 2D | 13 | 20 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8670368 | 3.68 | 2D | 13 | 20 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8670370 | 3.7 | 2D | 13 | 20 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8672370 | | 4D | 21 | 28 | 74 | | | | | ● 8,000 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670380 | 3.8 | 2D | 17 | 24 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8672380 | | 4D | 29 | 36 | 74 | | | | | ● 8,000 |
| 8670390 | 3.9 | 2D | 17 | 24 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8672390 | | 4D | 29 | 36 | 74 | | | | | ● 8,000 |
| 8670400 | 4 | 2D | 16 | 24 | 66 | 4 | 36 | 0.7 | B | ● 6,790 |
| 8672400 | | 4D | 28 | 36 | 74 | | | | | ● 8,000 |
| 8675410 | 4.1 - 5 | 2D | 16 | 24 | 66 | 5 | 37.9 | 0.7 | B | ● 7,270 |
| 8677410 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8670410 | 4.1 | 2D | 16 | 24 | 66 | 6 | 36 | 0.7 | B | ● 7,270 |
| 8672410 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8675420 | 4.2 - 5 | 2D | 16 | 24 | 66 | 5 | 37.9 | 0.8 | B | ● 7,270 |
| 8677420 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8670420 | 4.2 | 2D | 16 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,270 |
| 8672420 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8675430 | 4.3 - 5 | 2D | 16 | 24 | 66 | 5 | 37.9 | 0.8 | B | ● 7,270 |
| 8677430 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8670430 | 4.3 | 2D | 16 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,270 |
| 8672430 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8675440 | 4.4 - 5 | 2D | 16 | 24 | 66 | 5 | 37.9 | 0.8 | B | ● 7,270 |
| 8677440 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8670440 | 4.4 | 2D | 16 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,270 |
| 8672440 | | 4D | 28 | 36 | 74 | | | | | ● 8,550 |
| 8675450 | 4.5 - 5 | 2D | 15 | 24 | 66 | 5 | 37.9 | 0.8 | B | ● 7,270 |
| 8677450 | | 4D | 27 | 36 | 74 | | | | | ● 8,550 |
| 8670450 | 4.5 | 2D | 15 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,270 |
| 8672450 | | 4D | 27 | 36 | 74 | | | | | ● 8,550 |

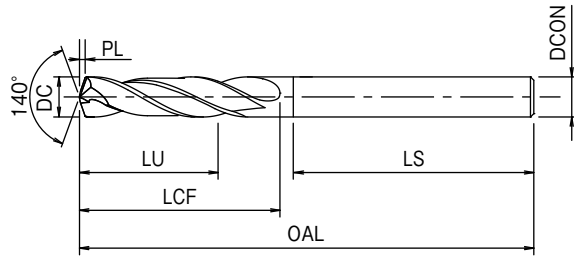
● = 標準在庫品 ● = Standard stock item

NEXT



AD-2D/4D

- DC ≤ 4 X形シンニング X thinning
- 4 < DC R形シンニング R thinning



CARBIDE EgiAs h8 30° SHANK FIT SPEED FEED P56

FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8675460 | 4.6 - 5 | 2D | 15 | 24 | 66 | 5 | 37.9 | 0.8 | ● | 7,780 |
| 8677460 | | 4D | 27 | 36 | 74 | | | | | ● 9,150 |
| 8670460 | 4.6 | 2D | 15 | 24 | 66 | 6 | 36 | 0.8 | B | 7,780 |
| 8672460 | | 4D | 27 | 36 | 74 | | | | | ● 9,150 |
| 8670462 | 4.62 | 2D | 15 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,780 |
| 8670464 | 4.64 | 2D | 15 | 24 | 66 | 6 | 36 | 0.8 | B | ● 7,780 |
| 8675470 | 4.7 - 5 | 2D | 15 | 24 | 66 | 5 | 37.9 | 0.9 | B | 7,780 |
| 8677470 | | 4D | 27 | 36 | 74 | | | | | ● 9,150 |
| 8670470 | 4.7 | 2D | 15 | 24 | 66 | 6 | 36 | 0.9 | B | 7,780 |
| 8672470 | | 4D | 27 | 36 | 74 | | | | | ● 9,150 |
| 8675480 | 4.8 - 5 | 2D | 19 | 28 | 66 | 5 | 37.9 | 0.9 | B | 7,780 |
| 8677480 | | 4D | 35 | 44 | 82 | | | | | ● 9,150 |
| 8670480 | 4.8 | 2D | 19 | 28 | 66 | 6 | 36 | 0.9 | B | 7,780 |
| 8672480 | | 4D | 35 | 44 | 82 | | | | | ● 9,150 |
| 8675490 | 4.9 - 5 | 2D | 19 | 28 | 66 | 5 | 37.9 | 0.9 | B | 7,780 |
| 8677490 | | 4D | 35 | 44 | 82 | | | | | ● 9,150 |
| 8670490 | 4.9 | 2D | 19 | 28 | 66 | 6 | 36 | 0.9 | B | 7,780 |
| 8672490 | | 4D | 35 | 44 | 82 | | | | | ● 9,150 |
| 8675500 | 5 - 5 | 2D | 18 | 28 | 66 | 5 | 37.9 | 0.9 | B | 7,780 |
| 8677500 | | 4D | 34 | 44 | 82 | | | | | ● 9,150 |
| 8670500 | 5 | 2D | 18 | 28 | 66 | 6 | 36 | 0.9 | B | 7,780 |
| 8672500 | | 4D | 34 | 44 | 82 | | | | | ● 9,150 |
| 8670510 | 5.1 | 2D | 18 | 28 | 66 | 6 | 36 | 0.9 | B | 8,210 |
| 8672510 | | 4D | 34 | 44 | 82 | | | | | ● 9,690 |
| 8670520 | 5.2 | 2D | 18 | 28 | 66 | 6 | 36 | 0.9 | B | 8,210 |
| 8672520 | | 4D | 34 | 44 | 82 | | | | | ● 9,690 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670530 | 5.3 | 2D | 18 | 28 | 66 | 6 | 36 | 1 | B | 8,210 |
| 8672530 | | 4D | 34 | 44 | 82 | | | | | ● 9,690 |
| 8670540 | 5.4 | 2D | 18 | 28 | 66 | 6 | 36 | 1 | B | 8,210 |
| 8672540 | | 4D | 34 | 44 | 82 | | | | | ● 9,690 |
| 8670550 | 5.5 | 2D | 17 | 28 | 66 | 6 | 36 | 1 | B | 8,210 |
| 8672550 | | 4D | 33 | 44 | 82 | | | | | ● 9,690 |
| 8670552 | 5.52 | 2D | 17 | 28 | 66 | 6 | 36 | 1 | B | ● 8,610 |
| 8670554 | 5.54 | 2D | 17 | 28 | 66 | 6 | 36 | 1 | B | ● 8,610 |
| 8670560 | 5.6 | 2D | 17 | 28 | 66 | 6 | 36 | 1 | B | 8,610 |
| 8672560 | | 4D | 33 | 44 | 82 | | | | | ● 10,300 |
| 8670570 | 5.7 | 2D | 17 | 28 | 66 | 6 | 36 | 1 | B | 8,610 |
| 8672570 | | 4D | 33 | 44 | 82 | | | | | ● 10,300 |
| 8670580 | 5.8 | 2D | 17 | 28 | 66 | 6 | 36 | 1.1 | B | 8,610 |
| 8672580 | | 4D | 33 | 44 | 82 | | | | | ● 10,300 |
| 8670590 | 5.9 | 2D | 17 | 28 | 66 | 6 | 36 | 1.1 | B | 8,610 |
| 8672590 | | 4D | 33 | 44 | 82 | | | | | ● 10,300 |
| 8670600 | 6 | 2D | 16 | 28 | 66 | 6 | 36 | 1.1 | B | 8,610 |
| 8672600 | | 4D | 32 | 44 | 82 | | | | | ● 10,300 |
| 8675610 | 6.1 - 7 | 2D | 22 | 34 | 79 | 7 | 37.9 | 1.1 | B | 8,610 |
| 8677610 | | 4D | 41 | 53 | 91 | | | | | ● 10,300 |
| 8670610 | 6.1 | 2D | 22 | 34 | 79 | 8 | 36 | 1.1 | B | 8,610 |
| 8672610 | | 4D | 41 | 53 | 91 | | | | | ● 10,300 |
| 8675620 | 6.2 - 7 | 2D | 22 | 34 | 79 | 7 | 37.9 | 1.1 | B | 8,610 |
| 8677620 | | 4D | 41 | 53 | 91 | | | | | ● 10,300 |
| 8670620 | 6.2 | 2D | 22 | 34 | 79 | 8 | 36 | 1.1 | B | 8,610 |
| 8672620 | | 4D | 41 | 53 | 91 | | | | | ● 10,300 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8675630 | 6.3 - 7 | 2D | 22 | 34 | 79 | 7 | 37.9 | 1.1 | ● | 8,610 |
| 8677630 | | 4D | 41 | 53 | 91 | | 37.9 | 1.1 | ● | 10,300 |
| 8670630 | 6.3 | 2D | 22 | 34 | 79 | 8 | 36 | 1.1 | ● | 8,610 |
| 8672630 | | 4D | 41 | 53 | 91 | | 36 | 1.1 | ● | 10,300 |
| 8675640 | 6.4 - 7 | 2D | 22 | 34 | 79 | 7 | 37.9 | 1.2 | ● | 8,610 |
| 8677640 | | 4D | 41 | 53 | 91 | | 37.9 | 1.2 | ● | 10,300 |
| 8670640 | 6.4 | 2D | 22 | 34 | 79 | 8 | 36 | 1.2 | ● | 8,610 |
| 8672640 | | 4D | 41 | 53 | 91 | | 36 | 1.2 | ● | 10,300 |
| 8675650 | 6.5 - 7 | 2D | 21 | 34 | 79 | 7 | 37.9 | 1.2 | ● | 8,610 |
| 8677650 | | 4D | 40 | 53 | 91 | | 37.9 | 1.2 | ● | 10,300 |
| 8670650 | 6.5 | 2D | 21 | 34 | 79 | 8 | 36 | 1.2 | ● | 8,610 |
| 8672650 | | 4D | 40 | 53 | 91 | | 36 | 1.2 | ● | 10,300 |
| 8675660 | 6.6 - 7 | 2D | 21 | 34 | 79 | 7 | 37.9 | 1.2 | ● | 9,150 |
| 8677660 | | 4D | 40 | 53 | 91 | | 37.9 | 1.2 | ● | 11,000 |
| 8670660 | 6.6 | 2D | 21 | 34 | 79 | 8 | 36 | 1.2 | ● | 9,150 |
| 8672660 | | 4D | 40 | 53 | 91 | | 36 | 1.2 | ● | 11,000 |
| 8675670 | 6.7 - 7 | 2D | 21 | 34 | 79 | 7 | 37.9 | 1.2 | ● | 9,150 |
| 8677670 | | 4D | 40 | 53 | 91 | | 37.9 | 1.2 | ● | 11,000 |
| 8670670 | 6.7 | 2D | 21 | 34 | 79 | 8 | 36 | 1.2 | ● | 9,150 |
| 8672670 | | 4D | 40 | 53 | 91 | | 36 | 1.2 | ● | 11,000 |
| 8675680 | 6.8 - 7 | 2D | 21 | 34 | 79 | 7 | 37.9 | 1.2 | ● | 9,150 |
| 8677680 | | 4D | 40 | 53 | 91 | | 37.9 | 1.2 | ● | 11,000 |
| 8670680 | 6.8 | 2D | 21 | 34 | 79 | 8 | 36 | 1.2 | ● | 9,150 |
| 8672680 | | 4D | 40 | 53 | 91 | | 36 | 1.2 | ● | 11,000 |
| 8675690 | 6.9 - 7 | 2D | 21 | 34 | 79 | 7 | 37.9 | 1.3 | ● | 9,150 |
| 8677690 | | 4D | 40 | 53 | 91 | | 37.9 | 1.3 | ● | 11,000 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670690 | 6.9 | 2D | 21 | 34 | 79 | 8 | 36 | 1.3 | ● | 9,150 |
| 8672690 | | 4D | 40 | 53 | 91 | | 36 | 1.3 | ● | 11,000 |
| 8675700 | 7 - 7 | 2D | 20 | 34 | 79 | 7 | 37.9 | 1.3 | ● | 9,150 |
| 8677700 | | 4D | 39 | 53 | 91 | | 37.9 | 1.3 | ● | 11,000 |
| 8670700 | 7 | 2D | 20 | 34 | 79 | 8 | 36 | 1.3 | ● | 9,150 |
| 8672700 | | 4D | 39 | 53 | 91 | | 36 | 1.3 | ● | 11,000 |
| 8670710 | 7.1 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8672710 | | 4D | 39 | 53 | 91 | | 36 | 1.3 | ● | 11,500 |
| 8670720 | 7.2 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8672720 | | 4D | 39 | 53 | 91 | | 36 | 1.3 | ● | 11,500 |
| 8670730 | 7.3 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8672730 | | 4D | 39 | 53 | 91 | | 36 | 1.3 | ● | 11,500 |
| 8670736 | 7.36 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8670738 | 7.38 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8670740 | 7.4 | 2D | 27 | 41 | 79 | 8 | 36 | 1.3 | ● | 9,690 |
| 8672740 | | 4D | 39 | 53 | 91 | | 36 | 1.3 | ● | 11,500 |
| 8670750 | 7.5 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 9,690 |
| 8672750 | | 4D | 38 | 53 | 91 | | 36 | 1.4 | ● | 11,500 |
| 8670752 | 7.52 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8670754 | 7.54 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8670760 | 7.6 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8672760 | | 4D | 38 | 53 | 91 | | 36 | 1.4 | ● | 12,100 |
| 8670770 | 7.7 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8672770 | | 4D | 38 | 53 | 91 | | 36 | 1.4 | ● | 12,100 |
| 8670780 | 7.8 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8672780 | | 4D | 38 | 53 | 91 | | 36 | 1.4 | ● | 12,100 |

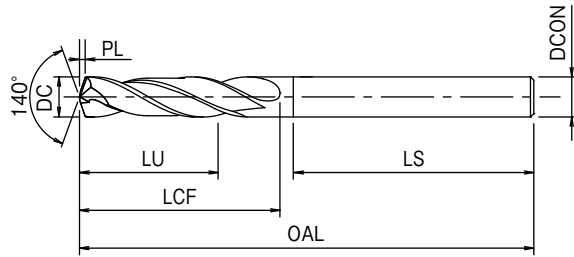
● = 標準在庫品 ● = Standard stock item

NEXT



AD-2D/4D

- DC ≤ 4 X形シンニング X thinning
- 4 < DC R形シンニング R thinning



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670790 | 7.9 | 2D | 26 | 41 | 79 | 8 | 36 | 1.4 | ● | 10,300 |
| 8672790 | | 4D | 38 | 53 | 91 | | | | | |
| 8670800 | 8 | 2D | 25 | 41 | 79 | 8 | 36 | 1.5 | ● | 10,300 |
| 8672800 | | 4D | 37 | 53 | 91 | | | | | |
| 8675810 | 8.1 - 9 | 2D | 31 | 47 | 89 | 9 | 41.9 | 1.5 | ● | 10,900 |
| 8677810 | | 4D | 45 | 61 | 103 | | | | | |
| 8670810 | 8.1 | 2D | 31 | 47 | 89 | 10 | 40 | 1.5 | ● | 10,900 |
| 8672810 | | 4D | 45 | 61 | 103 | | | | | |
| 8675820 | 8.2 - 9 | 2D | 31 | 47 | 89 | 9 | 41.9 | 1.5 | ● | 10,900 |
| 8677820 | | 4D | 45 | 61 | 103 | | | | | |
| 8670820 | 8.2 | 2D | 31 | 47 | 89 | 10 | 40 | 1.5 | ● | 10,900 |
| 8672820 | | 4D | 45 | 61 | 103 | | | | | |
| 8675830 | 8.3 - 9 | 2D | 31 | 47 | 89 | 9 | 41.9 | 1.5 | ● | 10,900 |
| 8677830 | | 4D | 45 | 61 | 103 | | | | | |
| 8670830 | 8.3 | 2D | 31 | 47 | 89 | 10 | 40 | 1.5 | ● | 10,900 |
| 8672830 | | 4D | 45 | 61 | 103 | | | | | |
| 8675840 | 8.4 - 9 | 2D | 31 | 47 | 89 | 9 | 41.9 | 1.5 | ● | 10,900 |
| 8677840 | | 4D | 45 | 61 | 103 | | | | | |
| 8670840 | 8.4 | 2D | 31 | 47 | 89 | 10 | 40 | 1.5 | ● | 10,900 |
| 8672840 | | 4D | 45 | 61 | 103 | | | | | |
| 8675850 | 8.5 - 9 | 2D | 30 | 47 | 89 | 9 | 41.9 | 1.5 | ● | 10,900 |
| 8677850 | | 4D | 44 | 61 | 103 | | | | | |
| 8670850 | 8.5 | 2D | 30 | 47 | 89 | 10 | 40 | 1.5 | ● | 10,900 |
| 8672850 | | 4D | 44 | 61 | 103 | | | | | |
| 8675860 | 8.6 - 9 | 2D | 30 | 47 | 89 | 9 | 41.9 | 1.6 | ● | 11,400 |
| 8677860 | | 4D | 44 | 61 | 103 | | | | | |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) | |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|--------|
| 8670860 | 8.6 | 2D | 30 | 47 | 89 | 10 | 40 | 1.6 | ● | 11,400 | |
| 8672860 | | 4D | 44 | 61 | 103 | | | | | | 40 |
| 8675870 | 8.7 - 9 | 2D | 30 | 47 | 89 | 9 | 41.9 | 1.6 | ● | 11,400 | |
| 8677870 | | 4D | 44 | 61 | 103 | | | | | | 41.9 |
| 8670870 | 8.7 | 2D | 30 | 47 | 89 | 10 | 40 | 1.6 | ● | 11,400 | |
| 8672870 | | 4D | 44 | 61 | 103 | | | | | | 40 |
| 8675880 | 8.8 - 9 | 2D | 30 | 47 | 89 | 9 | 41.9 | 1.6 | ● | 11,400 | |
| 8677880 | | 4D | 44 | 61 | 103 | | | | | | 41.9 |
| 8670880 | 8.8 | 2D | 30 | 47 | 89 | 10 | 40 | 1.6 | ● | 11,400 | |
| 8672880 | | 4D | 44 | 61 | 103 | | | | | | 40 |
| 8675890 | 8.9 - 9 | 2D | 30 | 47 | 89 | 9 | 41.9 | 1.6 | ● | 11,400 | |
| 8677890 | | 4D | 44 | 61 | 103 | | | | | | 41.9 |
| 8670890 | 8.9 | 2D | 30 | 47 | 89 | 10 | 40 | 1.6 | ● | 11,400 | |
| 8672890 | | 4D | 44 | 61 | 103 | | | | | | 40 |
| 8675900 | 9 - 9 | 2D | 29 | 47 | 89 | 9 | 41.9 | 1.6 | ● | 11,400 | |
| 8677900 | | 4D | 43 | 61 | 103 | | | | | | 41.9 |
| 8670900 | 9 | 2D | 29 | 47 | 89 | 10 | 40 | 1.6 | ● | 11,400 | |
| 8672900 | | 4D | 43 | 61 | 103 | | | | | | 40 |
| 8670910 | 9.1 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | ● | 11,900 | |
| 8672910 | | 4D | 43 | 61 | 103 | | | | | | 40 |
| 8670920 | 9.2 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | ● | 11,900 | |
| 8672920 | | 4D | 43 | 61 | 103 | | | | | | 40 |
| 8670924 | 9.24 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | B | ● | 11,900 |
| 8670926 | 9.26 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | B | ● | 11,900 |
| 8670930 | 9.3 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | ● | 11,900 | |
| 8672930 | | 4D | 43 | 61 | 103 | | | | | | 40 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

NEXT



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8670936 | 9.36 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | B ● | 11,900 |
| 8670938 | 9.38 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | B ● | 11,900 |
| 8670940 | 9.4 | 2D | 29 | 47 | 89 | 10 | 40 | 1.7 | B ● | 11,900 |
| 8672940 | | 4D | 43 | 61 | 103 | | 40 | 1.7 | B ● | 14,000 |
| 8670950 | 9.5 | 2D | 28 | 47 | 89 | 10 | 40 | 1.7 | B ● | 11,900 |
| 8672950 | | 4D | 42 | 61 | 103 | | 40 | 1.7 | B ● | 14,000 |
| 8670952 | 9.52 | 2D | 28 | 47 | 89 | 10 | 40 | 1.7 | B ● | 12,500 |
| 8670954 | 9.54 | 2D | 28 | 47 | 89 | 10 | 40 | 1.7 | B ● | 12,500 |
| 8670960 | 9.6 | 2D | 28 | 47 | 89 | 10 | 40 | 1.7 | B ● | 12,500 |
| 8672960 | | 4D | 42 | 61 | 103 | | 40 | 1.7 | B ● | 14,600 |
| 8670970 | 9.7 | 2D | 28 | 47 | 89 | 10 | 40 | 1.8 | B ● | 12,500 |
| 8672970 | | 4D | 42 | 61 | 103 | | 40 | 1.8 | B ● | 14,600 |
| 8670980 | 9.8 | 2D | 28 | 47 | 89 | 10 | 40 | 1.8 | B ● | 12,500 |
| 8672980 | | 4D | 42 | 61 | 103 | | 40 | 1.8 | B ● | 14,600 |
| 8670990 | 9.9 | 2D | 28 | 47 | 89 | 10 | 40 | 1.8 | B ● | 12,500 |
| 8672990 | | 4D | 42 | 61 | 103 | | 40 | 1.8 | B ● | 14,600 |
| 8671000 | 10 | 2D | 27 | 47 | 89 | 10 | 40 | 1.8 | B ● | 12,500 |
| 8673000 | | 4D | 41 | 61 | 103 | | 40 | 1.8 | B ● | 14,600 |
| 8676010 | 10.1 - 11 | 2D | 35 | 55 | 102 | 11 | 46.9 | 1.8 | B ● | 13,000 |
| 8678010 | | 4D | 51 | 71 | 118 | | 46.9 | 1.8 | B ● | 15,100 |
| 8671010 | 10.1 | 2D | 35 | 55 | 102 | 12 | 45 | 1.8 | B ● | 13,000 |
| 8673010 | | 4D | 51 | 71 | 118 | | 45 | 1.8 | B ● | 15,100 |
| 8676020 | 10.2 - 11 | 2D | 35 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,000 |
| 8678020 | | 4D | 51 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,100 |
| 8671020 | 10.2 | 2D | 35 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,000 |
| 8673020 | | 4D | 51 | 71 | 118 | | 45 | 1.9 | B ● | 15,100 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8676030 | 10.3 - 11 | 2D | 35 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,000 |
| 8678030 | | 4D | 51 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,100 |
| 8671030 | 10.3 | 2D | 35 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,000 |
| 8673030 | | 4D | 51 | 71 | 118 | | 45 | 1.9 | B ● | 15,100 |
| 8676040 | 10.4 - 11 | 2D | 35 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,000 |
| 8678040 | | 4D | 51 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,100 |
| 8671040 | 10.4 | 2D | 35 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,000 |
| 8673040 | | 4D | 51 | 71 | 118 | | 45 | 1.9 | B ● | 15,100 |
| 8676050 | 10.5 - 11 | 2D | 34 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,000 |
| 8678050 | | 4D | 50 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,100 |
| 8671050 | 10.5 | 2D | 34 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,000 |
| 8673050 | | 4D | 50 | 71 | 118 | | 45 | 1.9 | B ● | 15,100 |
| 8676060 | 10.6 - 11 | 2D | 34 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,400 |
| 8678060 | | 4D | 50 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,800 |
| 8671060 | 10.6 | 2D | 34 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,400 |
| 8673060 | | 4D | 50 | 71 | 118 | | 45 | 1.9 | B ● | 15,800 |
| 8676070 | 10.7 - 11 | 2D | 34 | 55 | 102 | 11 | 46.9 | 1.9 | B ● | 13,400 |
| 8678070 | | 4D | 50 | 71 | 118 | | 46.9 | 1.9 | B ● | 15,800 |
| 8671070 | 10.7 | 2D | 34 | 55 | 102 | 12 | 45 | 1.9 | B ● | 13,400 |
| 8673070 | | 4D | 50 | 71 | 118 | | 45 | 1.9 | B ● | 15,800 |
| 8676080 | 10.8 - 11 | 2D | 34 | 55 | 102 | 11 | 46.9 | 2 | B ● | 13,400 |
| 8678080 | | 4D | 50 | 71 | 118 | | 46.9 | 2 | B ● | 15,800 |
| 8671080 | 10.8 | 2D | 34 | 55 | 102 | 12 | 45 | 2 | B ● | 13,400 |
| 8673080 | | 4D | 50 | 71 | 118 | | 45 | 2 | B ● | 15,800 |
| 8676090 | 10.9 - 11 | 2D | 34 | 55 | 102 | 11 | 46.9 | 2 | B ● | 13,400 |
| 8678090 | | 4D | 50 | 71 | 118 | | 46.9 | 2 | B ● | 15,800 |

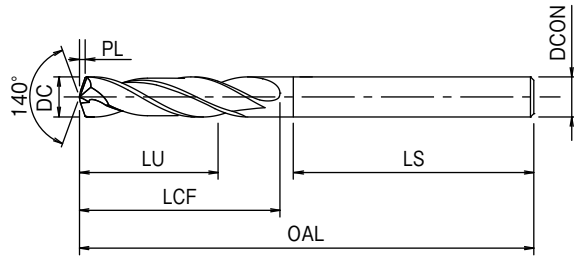
● = 標準在庫品 ● = Standard stock item

NEXT



AD-2D/4D

- DC ≤ 4 X形シンニング X thinning
- 4 < DC R形シンニング R thinning



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8671090 | 10.9 | 2D | 34 | 55 | 102 | 12 | 45 | 2 | B | ● 13,400 |
| 8673090 | | 4D | 50 | 71 | 118 | | | | | ● 15,800 |
| 8676100 | 11 - 11 | 2D | 33 | 55 | 102 | 11 | 46.9 | 2 | B | ● 13,400 |
| 8678100 | | 4D | 49 | 71 | 118 | | | | | ● 15,800 |
| 8671100 | 11 | 2D | 33 | 55 | 102 | 12 | 45 | 2 | B | ● 13,400 |
| 8673100 | | 4D | 49 | 71 | 118 | | | | | ● 15,800 |
| 8671110 | 11.1 | 2D | 33 | 55 | 102 | 12 | 45 | 2 | B | ● 14,100 |
| 8673110 | | 4D | 49 | 71 | 118 | | | | | ● 16,300 |
| 8671120 | 11.2 | 2D | 33 | 55 | 102 | 12 | 45 | 2 | B | ● 14,100 |
| 8673120 | | 4D | 49 | 71 | 118 | | | | | ● 16,300 |
| 8671122 | 11.22 | 2D | 33 | 55 | 102 | 12 | 45 | 2 | B | ● 14,100 |
| 8671124 | 11.24 | 2D | 33 | 55 | 102 | 12 | 45 | 2 | B | ● 14,100 |
| 8671130 | 11.3 | 2D | 33 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,100 |
| 8673130 | | 4D | 49 | 71 | 118 | | | | | ● 16,300 |
| 8671136 | 11.36 | 2D | 33 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,100 |
| 8671138 | 11.38 | 2D | 33 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,100 |
| 8671140 | 11.4 | 2D | 33 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,100 |
| 8673140 | | 4D | 49 | 71 | 118 | | | | | ● 16,300 |
| 8671150 | 11.5 | 2D | 32 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,100 |
| 8673150 | | 4D | 48 | 71 | 118 | | | | | ● 16,300 |
| 8671160 | 11.6 | 2D | 32 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,600 |
| 8673160 | | 4D | 48 | 71 | 118 | | | | | ● 17,000 |
| 8671170 | 11.7 | 2D | 32 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,600 |
| 8673170 | | 4D | 48 | 71 | 118 | | | | | ● 17,000 |
| 8671180 | 11.8 | 2D | 32 | 55 | 102 | 12 | 45 | 2.1 | B | ● 14,600 |
| 8673180 | | 4D | 48 | 71 | 118 | | | | | ● 17,000 |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8671190 | 11.9 | 2D | 32 | 55 | 102 | 12 | 45 | 2.2 | B | ● 14,600 |
| 8673190 | | 4D | 48 | 71 | 118 | | | | | ● 17,000 |
| 8671200 | 12 | 2D | 31 | 55 | 102 | 12 | 45 | 2.2 | B | ● 14,600 |
| 8673200 | | 4D | 47 | 71 | 118 | | | | | ● 17,000 |
| 8678210 | 12.1 - 13 | 4D | 53 | 77 | 124 | 13 | 45 | 2.2 | B | ● 18,100 |
| 8671210 | 12.1 | 2D | 36 | 60 | 107 | 14 | 45 | 2.2 | B | ● 15,700 |
| 8673210 | | 4D | 53 | 77 | 124 | | | | | ● 18,100 |
| 8678220 | 12.2 - 13 | 4D | 53 | 77 | 124 | 13 | 45 | 2.2 | B | ● 18,100 |
| 8671220 | 12.2 | 2D | 36 | 60 | 107 | 14 | 45 | 2.2 | B | ● 15,700 |
| 8673220 | | 4D | 53 | 77 | 124 | | | | | ● 18,100 |
| 8678230 | 12.3 - 13 | 4D | 53 | 77 | 124 | 13 | 45 | 2.2 | B | ● 18,100 |
| 8671230 | 12.3 | 2D | 36 | 60 | 107 | 14 | 45 | 2.2 | B | ● 15,700 |
| 8673230 | | 4D | 53 | 77 | 124 | | | | | ● 18,100 |
| 8678240 | 12.4 - 13 | 4D | 53 | 77 | 124 | 13 | 45 | 2.3 | B | ● 18,100 |
| 8671240 | 12.4 | 2D | 36 | 60 | 107 | 14 | 45 | 2.3 | B | ● 15,700 |
| 8673240 | | 4D | 53 | 77 | 124 | | | | | ● 18,100 |
| 8678250 | 12.5 - 13 | 4D | 52 | 77 | 124 | 13 | 45 | 2.3 | B | ● 18,100 |
| 8671250 | 12.5 | 2D | 35 | 60 | 107 | 14 | 45 | 2.3 | B | ● 15,700 |
| 8673250 | | 4D | 52 | 77 | 124 | | | | | ● 18,100 |
| 8678260 | 12.6 - 13 | 4D | 52 | 77 | 124 | 13 | 45 | 2.3 | B | ● 18,700 |
| 8671260 | 12.6 | 2D | 35 | 60 | 107 | 14 | 45 | 2.3 | B | ● 16,100 |
| 8673260 | | 4D | 52 | 77 | 124 | | | | | ● 18,700 |
| 8678270 | 12.7 - 13 | 4D | 52 | 77 | 124 | 13 | 45 | 2.3 | B | ● 18,700 |
| 8671270 | 12.7 | 2D | 35 | 60 | 107 | 14 | 45 | 2.3 | B | ● 16,100 |
| 8673270 | | 4D | 52 | 77 | 124 | | | | | ● 18,700 |
| 8678280 | 12.8 - 13 | 4D | 52 | 77 | 124 | 13 | 45 | 2.3 | B | ● 18,700 |

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8671280 | 12.8 | 2D | 35 | 60 | 107 | 14 | 45 | 2.3 | ● | 16,100 |
| 8673280 | | 4D | 52 | 77 | 124 | | 45 | 2.3 | ● | 18,700 |
| 8678290 | 12.9 - 13 | 4D | 52 | 77 | 124 | 13 | 45 | 2.3 | B ● | 18,700 |
| 8671290 | 12.9 | 2D | 35 | 60 | 107 | 14 | 45 | 2.3 | ● | 16,100 |
| 8673290 | | 4D | 52 | 77 | 124 | | 45 | 2.3 | ● | 18,700 |
| 8678300 | 13 - 13 | 4D | 51 | 77 | 124 | 13 | 45 | 2.4 | B ● | 18,700 |
| 8671300 | 13 | 2D | 34 | 60 | 107 | 14 | 45 | 2.4 | ● | 16,100 |
| 8673300 | | 4D | 51 | 77 | 124 | | 45 | 2.4 | ● | 18,700 |
| 8671310 | 13.1 | 2D | 34 | 60 | 107 | 14 | 45 | 2.4 | ● | 16,700 |
| 8673310 | | 4D | 51 | 77 | 124 | | 45 | 2.4 | ● | 19,200 |
| 8671320 | 13.2 | 2D | 34 | 60 | 107 | 14 | 45 | 2.4 | ● | 16,700 |
| 8673320 | | 4D | 51 | 77 | 124 | | 45 | 2.4 | ● | 19,200 |
| 8671330 | 13.3 | 2D | 34 | 60 | 107 | 14 | 45 | 2.4 | ● | 16,700 |
| 8673330 | | 4D | 51 | 77 | 124 | | 45 | 2.4 | ● | 19,200 |
| 8671340 | 13.4 | 2D | 34 | 60 | 107 | 14 | 45 | 2.4 | ● | 16,700 |
| 8673340 | | 4D | 51 | 77 | 124 | | 45 | 2.4 | ● | 19,200 |
| 8671350 | 13.5 | 2D | 33 | 60 | 107 | 14 | 45 | 2.5 | ● | 16,700 |
| 8673350 | | 4D | 50 | 77 | 124 | | 45 | 2.5 | ● | 19,200 |
| 8671360 | 13.6 | 2D | 33 | 60 | 107 | 14 | 45 | 2.5 | ● | 17,400 |
| 8673360 | | 4D | 50 | 77 | 124 | | 45 | 2.5 | ● | 19,800 |
| 8671370 | 13.7 | 2D | 33 | 60 | 107 | 14 | 45 | 2.5 | ● | 17,400 |
| 8673370 | | 4D | 50 | 77 | 124 | | 45 | 2.5 | ● | 19,800 |
| 8671380 | 13.8 | 2D | 33 | 60 | 107 | 14 | 45 | 2.5 | ● | 17,400 |
| 8673380 | | 4D | 50 | 77 | 124 | | 45 | 2.5 | ● | 19,800 |
| 8671390 | 13.9 | 2D | 33 | 60 | 107 | 14 | 45 | 2.5 | ● | 17,400 |
| 8673390 | | 4D | 50 | 77 | 124 | | 45 | 2.5 | ● | 19,800 |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8671400 | 14 | 2D | 32 | 60 | 107 | 14 | 45 | 2.5 | ● | 17,400 |
| 8673400 | | 4D | 49 | 77 | 124 | | 45 | 2.5 | ● | 19,800 |
| 8678410 | 14.1 - 15 | 4D | 55 | 83 | 133 | 15 | 48 | 2.6 | B ● | 20,800 |
| 8671410 | 14.1 | 2D | 37 | 65 | 115 | 16 | 48 | 2.6 | ● | 17,900 |
| 8673410 | | 4D | 55 | 83 | 133 | | 48 | 2.6 | ● | 20,800 |
| 8678420 | 14.2 - 15 | 4D | 55 | 83 | 133 | 15 | 48 | 2.6 | B ● | 20,800 |
| 8671420 | 14.2 | 2D | 37 | 65 | 115 | 16 | 48 | 2.6 | ● | 17,900 |
| 8673420 | | 4D | 55 | 83 | 133 | | 48 | 2.6 | ● | 20,800 |
| 8678430 | 14.3 - 15 | 4D | 55 | 83 | 133 | 15 | 48 | 2.6 | B ● | 20,800 |
| 8671430 | 14.3 | 2D | 37 | 65 | 115 | 16 | 48 | 2.6 | ● | 17,900 |
| 8673430 | | 4D | 55 | 83 | 133 | | 48 | 2.6 | ● | 20,800 |
| 8678440 | 14.4 - 15 | 4D | 55 | 83 | 133 | 15 | 48 | 2.6 | B ● | 20,800 |
| 8671440 | 14.4 | 2D | 37 | 65 | 115 | 16 | 48 | 2.6 | ● | 17,900 |
| 8673440 | | 4D | 55 | 83 | 133 | | 48 | 2.6 | ● | 20,800 |
| 8678450 | 14.5 - 15 | 4D | 54 | 83 | 133 | 15 | 48 | 2.6 | B ● | 20,800 |
| 8671450 | 14.5 | 2D | 36 | 65 | 115 | 16 | 48 | 2.6 | ● | 17,900 |
| 8673450 | | 4D | 54 | 83 | 133 | | 48 | 2.6 | ● | 20,800 |
| 8678460 | 14.6 - 15 | 4D | 54 | 83 | 133 | 15 | 48 | 2.7 | B ● | 21,300 |
| 8671460 | 14.6 | 2D | 36 | 65 | 115 | 16 | 48 | 2.7 | ● | 18,500 |
| 8673460 | | 4D | 54 | 83 | 133 | | 48 | 2.7 | ● | 21,300 |
| 8678470 | 14.7 - 15 | 4D | 54 | 83 | 133 | 15 | 48 | 2.7 | B ● | 21,300 |
| 8671470 | 14.7 | 2D | 36 | 65 | 115 | 16 | 48 | 2.7 | ● | 18,500 |
| 8673470 | | 4D | 54 | 83 | 133 | | 48 | 2.7 | ● | 21,300 |
| 8678480 | 14.8 - 15 | 4D | 54 | 83 | 133 | 15 | 48 | 2.7 | B ● | 21,300 |
| 8671480 | 14.8 | 2D | 36 | 65 | 115 | 16 | 48 | 2.7 | ● | 18,500 |
| 8673480 | | 4D | 54 | 83 | 133 | | 48 | 2.7 | ● | 21,300 |

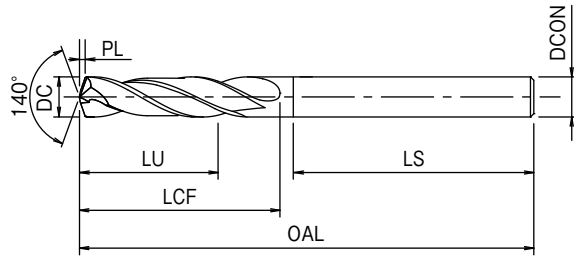
● = 標準在庫品 ● = Standard stock item

NEXT



AD-2D/4D

- DC ≤ 4 X形シンニング X thinning
- 4 < DC R形シンニング R thinning



FROM

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8678490 | 14.9 - 15 | 4D | 54 | 83 | 133 | 15 | 48 | 2.7 | B ● | 21,300 |
| 8671490 | 14.9 | 2D | 36 | 65 | 115 | 16 | 48 | 2.7 | B ● | 18,500 |
| 8673490 | | 4D | 54 | 83 | 133 | | | | | |
| 8678500 | 15 - 15 | 4D | 53 | 83 | 133 | 15 | 48 | 2.7 | B ● | 21,300 |
| 8671500 | 15 | 2D | 35 | 65 | 115 | 16 | 48 | 2.7 | B ● | 18,500 |
| 8673500 | | 4D | 53 | 83 | 133 | | | | | |
| 8671510 | 15.1 | 2D | 35 | 65 | 115 | 16 | 48 | 2.7 | B ● | 19,000 |
| 8673510 | | 4D | 53 | 83 | 133 | | | | | |
| 8671520 | 15.2 | 2D | 35 | 65 | 115 | 16 | 48 | 2.8 | B ● | 19,000 |
| 8673520 | | 4D | 53 | 83 | 133 | | | | | |
| 8671530 | 15.3 | 2D | 35 | 65 | 115 | 16 | 48 | 2.8 | B ● | 19,000 |
| 8673530 | | 4D | 53 | 83 | 133 | | | | | |
| 8671540 | 15.4 | 2D | 35 | 65 | 115 | 16 | 48 | 2.8 | B ● | 19,000 |
| 8673540 | | 4D | 53 | 83 | 133 | | | | | |
| 8671550 | 15.5 | 2D | 34 | 65 | 115 | 16 | 48 | 2.8 | B ● | 19,000 |
| 8673550 | | 4D | 52 | 83 | 133 | | | | | |
| 8671560 | 15.6 | 2D | 34 | 65 | 115 | 16 | 48 | 2.8 | B ● | 19,700 |
| 8673560 | | 4D | 52 | 83 | 133 | | | | | |
| 8671570 | 15.7 | 2D | 34 | 65 | 115 | 16 | 48 | 2.9 | B ● | 19,700 |
| 8673570 | | 4D | 52 | 83 | 133 | | | | | |
| 8671580 | 15.8 | 2D | 34 | 65 | 115 | 16 | 48 | 2.9 | B ● | 19,700 |
| 8673580 | | 4D | 52 | 83 | 133 | | | | | |
| 8671590 | 15.9 | 2D | 34 | 65 | 115 | 16 | 48 | 2.9 | B ● | 19,700 |
| 8673590 | | 4D | 52 | 83 | 133 | | | | | |

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|-------------|---------------|
| 8671600 | 16 | 2D | 33 | 65 | 115 | 16 | 48 | 2.9 | B ● | 19,700 |
| 8673600 | | 4D | 51 | 83 | 133 | | | | | |
| | 16.1 | 2D | 41 | 73 | 123 | 18 | 48 | 2.9 | □ | - |
| | | 4D | 61 | 93 | 143 | | | | | |
| | 16.2 | 2D | 41 | 73 | 123 | 18 | 48 | 2.9 | □ | - |
| | | 4D | 61 | 93 | 143 | | | | | |
| | 16.3 | 2D | 41 | 73 | 123 | 18 | 48 | 3 | □ | - |
| | | 4D | 61 | 93 | 143 | | | | | |
| | 16.4 | 2D | 41 | 73 | 123 | 18 | 48 | 3 | □ | - |
| | | 4D | 61 | 93 | 143 | | | | | |
| 8678650 | 16.5 - 17 | 4D | 60 | 93 | 143 | 17 | 48 | 3 | B ● | 25,400 |
| 8671650 | 16.5 | 2D | 40 | 73 | 123 | 18 | 48 | 3 | B ● | 22,000 |
| 8673650 | | 4D | 60 | 93 | 143 | | | | | |
| | 16.6 | 2D | 40 | 73 | 123 | 18 | 48 | 3 | □ | - |
| | | 4D | 60 | 93 | 143 | | | | | |
| | 16.7 | 2D | 40 | 73 | 123 | 18 | 48 | 3 | □ | - |
| | | 4D | 60 | 93 | 143 | | | | | |
| | 16.8 | 2D | 40 | 73 | 123 | 18 | 48 | 3.1 | □ | - |
| | | 4D | 60 | 93 | 143 | | | | | |
| | 16.9 | 2D | 40 | 73 | 123 | 18 | 48 | 3.1 | □ | - |
| | | 4D | 60 | 93 | 143 | | | | | |
| 8678700 | 17 - 17 | 4D | 59 | 93 | 143 | 17 | 48 | 3.1 | B ● | 27,300 |
| 8671700 | 17 | 2D | 39 | 73 | 123 | 18 | 48 | 3.1 | B ● | 23,600 |
| 8673700 | | 4D | 59 | 93 | 143 | | | | | |

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

- = 標準在庫品 ● = Standard stock item
- = 特定代理店在庫品 □ = Stocked by specific distributors.
- Contact us for price & availability.



FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|---------------|
| | 17.1 | 2D | 39 | 73 | 123 | 18 | 48 | 3.1 | <input type="checkbox"/> | — |
| | | 4D | 59 | 93 | 143 | | 48 | 3.1 | <input type="checkbox"/> | — |
| | 17.2 | 2D | 39 | 73 | 123 | 18 | 48 | 3.1 | <input type="checkbox"/> | — |
| | | 4D | 59 | 93 | 143 | | 48 | 3.1 | <input type="checkbox"/> | — |
| | 17.3 | 2D | 39 | 73 | 123 | 18 | 48 | 3.1 | <input type="checkbox"/> | — |
| | | 4D | 59 | 93 | 143 | | 48 | 3.1 | <input type="checkbox"/> | — |
| | 17.4 | 2D | 39 | 73 | 123 | 18 | 48 | 3.2 | <input type="checkbox"/> | — |
| | | 4D | 59 | 93 | 143 | | 48 | 3.2 | <input type="checkbox"/> | — |
| 8671750 | 17.5 | 2D | 38 | 73 | 123 | 18 | 48 | 3.2 | B ● | 25,900 |
| 8673750 | | 4D | 58 | 93 | 143 | | 48 | 3.2 | ● | 29,900 |
| | 17.6 | 2D | 38 | 73 | 123 | 18 | 48 | 3.2 | <input type="checkbox"/> | — |
| | | 4D | 58 | 93 | 143 | | 48 | 3.2 | <input type="checkbox"/> | — |
| | 17.7 | 2D | 38 | 73 | 123 | 18 | 48 | 3.2 | <input type="checkbox"/> | — |
| | | 4D | 58 | 93 | 143 | | 48 | 3.2 | <input type="checkbox"/> | — |
| | 17.8 | 2D | 38 | 73 | 123 | 18 | 48 | 3.2 | <input type="checkbox"/> | — |
| | | 4D | 58 | 93 | 143 | | 48 | 3.2 | <input type="checkbox"/> | — |
| | 17.9 | 2D | 38 | 73 | 123 | 18 | 48 | 3.3 | <input type="checkbox"/> | — |
| | | 4D | 58 | 93 | 143 | | 48 | 3.3 | <input type="checkbox"/> | — |
| 8671800 | 18 | 2D | 37 | 73 | 123 | 18 | 48 | 3.3 | B ● | 28,100 |
| 8673800 | | 4D | 57 | 93 | 143 | | 48 | 3.3 | ● | 32,600 |
| | 18.1 | 2D | 43 | 79 | 131 | 20 | 50 | 3.3 | <input type="checkbox"/> | — |
| | | 4D | 65 | 101 | 153 | | 50 | 3.3 | <input type="checkbox"/> | — |
| | 18.2 | 2D | 43 | 79 | 131 | 20 | 50 | 3.3 | <input type="checkbox"/> | — |
| | | 4D | 65 | 101 | 153 | | 50 | 3.3 | <input type="checkbox"/> | — |

単位:mm Unit:mm

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|---------------|
| | 18.3 | 2D | 43 | 79 | 131 | 20 | 50 | 3.3 | <input type="checkbox"/> | — |
| | | 4D | 65 | 101 | 153 | | 50 | 3.3 | <input type="checkbox"/> | — |
| | 18.4 | 2D | 43 | 79 | 131 | 20 | 50 | 3.3 | <input type="checkbox"/> | — |
| | | 4D | 65 | 101 | 153 | | 50 | 3.3 | <input type="checkbox"/> | — |
| 8678850 | 18.5 - 19 | 4D | 64 | 101 | 153 | 19 | 50 | 3.4 | B ● | 35,300 |
| 8671850 | 18.5 | 2D | 42 | 79 | 131 | 20 | 50 | 3.4 | B ● | 30,500 |
| 8673850 | | 4D | 64 | 101 | 153 | | 50 | 3.4 | ● | 35,300 |
| | 18.6 | 2D | 42 | 79 | 131 | 20 | 50 | 3.4 | <input type="checkbox"/> | — |
| | | 4D | 64 | 101 | 153 | | 50 | 3.4 | <input type="checkbox"/> | — |
| | 18.7 | 2D | 42 | 79 | 131 | 20 | 50 | 3.4 | <input type="checkbox"/> | — |
| | | 4D | 64 | 101 | 153 | | 50 | 3.4 | <input type="checkbox"/> | — |
| | 18.8 | 2D | 42 | 79 | 131 | 20 | 50 | 3.4 | <input type="checkbox"/> | — |
| | | 4D | 64 | 101 | 153 | | 50 | 3.4 | <input type="checkbox"/> | — |
| | 18.9 | 2D | 42 | 79 | 131 | 20 | 50 | 3.4 | <input type="checkbox"/> | — |
| | | 4D | 64 | 101 | 153 | | 50 | 3.4 | <input type="checkbox"/> | — |
| 8678900 | 19 - 19 | 4D | 63 | 101 | 153 | 19 | 50 | 3.5 | B ● | 36,400 |
| 8671900 | 19 | 2D | 41 | 79 | 131 | 20 | 50 | 3.5 | B ● | 31,600 |
| 8673900 | | 4D | 63 | 101 | 153 | | 50 | 3.5 | ● | 36,400 |
| | 19.1 | 2D | 41 | 79 | 131 | 20 | 50 | 3.5 | <input type="checkbox"/> | — |
| | | 4D | 63 | 101 | 153 | | 50 | 3.5 | <input type="checkbox"/> | — |
| | 19.2 | 2D | 41 | 79 | 131 | 20 | 50 | 3.5 | <input type="checkbox"/> | — |
| | | 4D | 63 | 101 | 153 | | 50 | 3.5 | <input type="checkbox"/> | — |
| | 19.3 | 2D | 41 | 79 | 131 | 20 | 50 | 3.5 | <input type="checkbox"/> | — |
| | | 4D | 63 | 101 | 153 | | 50 | 3.5 | <input type="checkbox"/> | — |

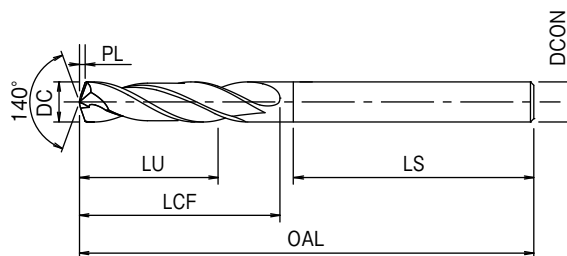
● = 標準在庫品 ● = Standard stock item
 = 特定代理店在庫品 = Stocked by specific distributors.
 Contact us for price & availability.

NEXT



AD-2D/4D

- DC ≤ 4 X形シンニング X thinning
- 4 < DC R形シンニング R thinning



CARBIDE
EgiAs
h8
30°
SHRINK FIT
SPEED FEED P56

FROM

| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|---------------|
| | 19.4 | 2D | 41 | 79 | 131 | 20 | 50 | 3.5 | <input type="checkbox"/> | — |
| | | 4D | 63 | 101 | 153 | | 50 | 3.5 | <input type="checkbox"/> | — |
| 8671950 | 19.5 | 2D | 40 | 79 | 131 | 20 | 50 | 3.5 | ● | 32,700 |
| 8673950 | | 4D | 62 | 101 | 153 | | 50 | 3.5 | ● | 37,400 |
| | 19.6 | 2D | 40 | 79 | 131 | 20 | 50 | 3.6 | <input type="checkbox"/> | — |
| | | 4D | 62 | 101 | 153 | | 50 | 3.6 | <input type="checkbox"/> | — |
| | 19.7 | 2D | 40 | 79 | 131 | 20 | 50 | 3.6 | <input type="checkbox"/> | — |
| | | 4D | 62 | 101 | 153 | | 50 | 3.6 | <input type="checkbox"/> | — |

単位:mm Unit:mm

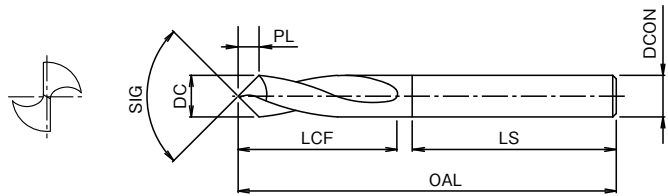
| ツールNo. EDP No. | 直径 - シャンク径 DC - DCON | タイプ Type | 有効溝長 LU | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 在庫 Stock | 標準価格 (Yen) |
|-------------------|-------------------------|-------------|------------|-----------|-----------|---------------|-------------|----------|--------------------------|---------------|
| | 19.8 | 2D | 40 | 79 | 131 | 20 | 50 | 3.6 | <input type="checkbox"/> | — |
| | | 4D | 62 | 101 | 153 | | 50 | 3.6 | <input type="checkbox"/> | — |
| | 19.9 | 2D | 40 | 79 | 131 | 20 | 50 | 3.6 | <input type="checkbox"/> | — |
| | | 4D | 62 | 101 | 153 | | 50 | 3.6 | <input type="checkbox"/> | — |
| 8672000 | 20 | 2D | 39 | 79 | 131 | 20 | 50 | 3.6 | ● | 33,800 |
| 8674000 | | 4D | 61 | 101 | 153 | | 50 | 3.6 | ● | 38,800 |

● = 標準在庫品 ● = Standard stock item
 = 特定代理店在庫品 = Stocked by specific distributors.
 Contact us for price & availability.

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.



AD-LDS



先端角の許容差は $60^\circ \pm 3^\circ$ 、 $90^\circ \pm 1^\circ$ 、 $120^\circ \pm 2^\circ$ 、 $140^\circ \pm 4^\circ_0$ 、となります。
Tolerance of the point angle is $60^\circ \pm 3^\circ$, $90^\circ \pm 1^\circ$, $120^\circ \pm 2^\circ$, $140^\circ \pm 4^\circ_0$.

| | | | | | | |
|---------|-------|------|----------|------|------|----------------|
| CARBIDE | EgiAs | WXL | SHANK h6 | 12° | 約25° | SPEED FEED P57 |
| | 2≤DC | DC<2 | | 3≤DC | DC<3 | |

単位:mm Unit:mm

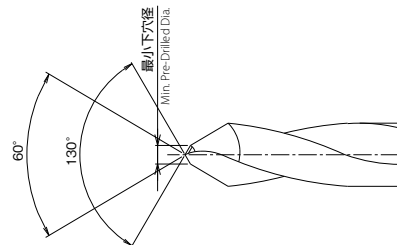
| ツールNo. EDP No. | 直径×先端角 DC×SIG | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 最小下穴径 Min.Pre-Drilled Dia. (注1) | 在庫 Stock | 標準価格 (Yen) |
|-------------------|------------------|-----------|-----------|---------------|-------------|----------|---------------------------------------|-------------|---------------|
| | 0.5 × 60° | 1 | 38 | 3 | 32.2 | 0.4 | 0.25 | — □ | — |
| | 1 × 60° | 2 | 38 | 3 | 32.2 | 0.9 | 0.4 | — □ | — |
| | 2 × 60° | 4 | 38 | 3 | 32 | 1.7 | 1 | — □ | — |
| 8688951 | 3 × 60° | 9 | 48 | 3 | 39 | 1.8 | 1.5 | B ● | 8,030 |
| 8688952 | 4 × 60° | 12 | 54 | 4 | 42 | 2.7 | 1.7 | B ● | 9,140 |
| 8688953 | 6 × 60° | 15 | 72 | 6 | 57 | 4.2 | 2 | B ● | 11,600 |
| 8688954 | 8 × 60° | 20 | 81 | 8 | 61 | 5.9 | 2.1 | B ● | 13,900 |
| 8688955 | 10 × 60° | 24 | 93 | 10 | 69 | 7.4 | 2.5 | B ● | 16,700 |
| 8688956 | 12 × 60° | 28 | 108 | 12 | 80 | 9.1 | 2.5 | B ● | 19,200 |
| 8688930 | 0.5 × 90° | 1 | 38 | 3 | 32.2 | 0.3 | 0.25 | B ● | 6,910 |
| 8688931 | 1 × 90° | 1.8 | 38 | 3 | 32 | 0.5 | 0.4 | B ● | 6,910 |
| 8688932 | 2 × 90° | 2.5 | 38 | 3 | 33 | 1 | 1 | B ● | 6,910 |
| 8688933 | 3 × 90° | 9 | 48 | 3 | 39 | 1.5 | 1.2 | B ● | 8,030 |
| 8688934 | 4 × 90° | 12 | 54 | 4 | 42 | 2 | 1.5 | B ● | 9,140 |
| 8688935 | 6 × 90° | 15 | 72 | 6 | 57 | 3 | 1.9 | B ● | 11,600 |
| 8688936 | 8 × 90° | 20 | 81 | 8 | 61 | 4 | 2.1 | B ● | 13,900 |
| 8688937 | 10 × 90° | 24 | 93 | 10 | 69 | 5 | 2.5 | B ● | 16,700 |
| 8688938 | 12 × 90° | 28 | 108 | 12 | 80 | 6 | 2.5 | B ● | 19,200 |
| | 0.5 × 120° | 1 | 38 | 3 | 32.2 | 0.1 | — | — □ | — |
| | 1 × 120° | 1.8 | 38 | 3 | 32 | 0.3 | — | — □ | — |
| | 2 × 120° | 2.5 | 38 | 3 | 33.1 | 0.6 | — | — □ | — |
| 8688957 | 3 × 120° | 9 | 48 | 3 | 39 | 0.9 | — | B ● | 8,030 |
| 8688958 | 4 × 120° | 12 | 54 | 4 | 42 | 1.2 | — | B ● | 9,140 |

注1) 面取りを行う場合の下穴の最小値を示します。
These minimum pre-drilled hole sizes are required before chamfering operations.

- アイコンの説明はp.2をご覧ください。
- コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

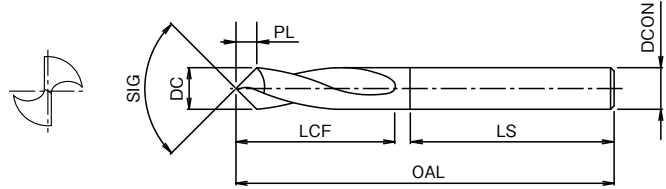
| ツールNo. EDP No. | 直径×先端角 DC×SIG | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 最小下穴径 Min.Pre-Drilled Dia. (注1) | 在庫 Stock | 標準価格 (Yen) |
|-------------------|------------------|-----------|-----------|---------------|-------------|----------|---------------------------------------|-------------|---------------|
| 8688959 | 6 × 120° | 15 | 72 | 6 | 57 | 1.7 | — | B ● | 11,600 |
| 8688960 | 8 × 120° | 20 | 81 | 8 | 61 | 2.3 | — | B ● | 13,900 |
| 8688961 | 10 × 120° | 24 | 93 | 10 | 69 | 2.9 | — | B ● | 16,700 |
| 8688962 | 12 × 120° | 28 | 108 | 12 | 80 | 3.5 | — | B ● | 19,200 |
| | 0.5 × 130° | 1 | 38 | 3 | 32.2 | 0.1 | — | — □ | — |
| | 1 × 130° | 1.8 | 38 | 3 | 32 | 0.2 | — | — □ | — |
| | 2 × 130° | 2.5 | 38 | 3 | 33.1 | 0.5 | — | — □ | — |
| | 3 × 130° | 9 | 48 | 3 | 39 | 0.7 | — | — □ | — |
| | 4 × 130° | 12 | 54 | 4 | 42 | 0.9 | — | — □ | — |
| | 6 × 130° | 15 | 72 | 6 | 57 | 1.4 | — | — □ | — |
| | 8 × 130° | 20 | 81 | 8 | 61 | 1.9 | — | — □ | — |
| | 10 × 130° | 24 | 93 | 10 | 69 | 2.3 | — | — □ | — |
| | 12 × 130° | 28 | 108 | 12 | 80 | 2.8 | — | — □ | — |
| 8688963 | 0.5 × 140° | 1 | 38 | 3 | 32.2 | 0.1 | — | B ● | 6,910 |
| 8688964 | 1 × 140° | 1.8 | 38 | 3 | 32 | 0.2 | — | B ● | 6,910 |
| 8688965 | 2 × 140° | 2.5 | 38 | 3 | 33.1 | 0.4 | — | B ● | 6,910 |
| 8688966 | 3 × 140° | 9 | 48 | 3 | 39 | 0.5 | — | B ● | 8,030 |
| 8688967 | 4 × 140° | 12 | 54 | 4 | 42 | 0.7 | — | B ● | 9,140 |
| 8688968 | 6 × 140° | 15 | 72 | 6 | 57 | 1.1 | — | B ● | 12,100 |
| 8688969 | 8 × 140° | 20 | 81 | 8 | 61 | 1.5 | — | B ● | 14,600 |
| 8688970 | 10 × 140° | 24 | 93 | 10 | 69 | 1.8 | — | B ● | 17,700 |
| 8688971 | 12 × 140° | 28 | 108 | 12 | 80 | 2.2 | — | B ● | 20,300 |

● = 標準在庫品 ● = Standard stock item
□ = 特定代理店在庫品 □ = Stocked by specific distributors.
Contact us for price & availability.



先端角60°の外径φ3～φ12品は、センタリング時のチゼルエッジ潰れを防止するため、最小下穴径より内側の中心部のみ130°になっています。
Items with a point angle of 60° in outer diameter sizes of φ3 to φ12 have a 130° point angle within the minimum drill diameter to prevent the chisel edge from crushing during centering.

AD-LS-LDS



先端角の許容差は $90^\circ \pm 1^\circ$ となります。
Tolerance of the point angle is $90^\circ \pm 1^\circ$



単位:mm Unit:mm

| ツールNo. EDP No. | 直径×先端角 DC×SIG | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 最小下穴径 Min.Pre-Drilled Dia. 注1) | 在庫 Stock | 標準価格 (Yen) |
|-------------------|------------------|-----------|-----------|---------------|-------------|----------|--------------------------------------|-------------|---------------|
| 8688942 | 3×90° | 9 | 75 | 3 | 66 | 1.5 | 1.2 | B ● | 8,830 |
| 8688943 | 4×90° | 12 | 100 | 4 | 88 | 2 | 1.5 | B ● | 10,700 |
| 8688944 | 6×90° | 15 | 150 | 6 | 135 | 3 | 1.9 | B ● | 14,600 |

| ツールNo. EDP No. | 直径×先端角 DC×SIG | 溝長 LCF | 全長 OAL | シャンク径 DCON | シャンク長 LS | 先端 PL | 最小下穴径 Min.Pre-Drilled Dia. 注1) | 在庫 Stock | 標準価格 (Yen) |
|-------------------|------------------|-----------|-----------|---------------|-------------|----------|--------------------------------------|-------------|---------------|
| 8688945 | 8×90° | 20 | 150 | 8 | 130 | 4 | 2.1 | B ● | 17,400 |
| 8688946 | 10×90° | 24 | 200 | 10 | 176 | 5 | 2.5 | B ● | 23,500 |
| 8688947 | 12×90° | 28 | 200 | 12 | 172 | 6 | 2.5 | B ● | 26,300 |

注1) 面取りを行う場合の下穴の最小値を示します。
These minimum pre-drilled hole sizes are required before chamfering operations.

● = 標準在庫品 ● = Standard stock item

- ・アイコンの説明はp.2をご覧ください。
- ・コーティングに色むらが発生する場合がありますが、性能上は全く問題ありません。
- ・ See p.2 for explanation of icons.
- ・ Drills may have some discoloration, but it does not cause any performance problems.

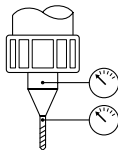


ADO-3D/5D/8D

| 被削材 Work Material | 軟鋼・低炭素鋼 Mild Steel · Low Carbon Steel SS400・S10C ~150HB ~500N/mm ² | | 炭素鋼 Carbon Steel S35C・S50C ~210HB ~710N/mm ² | | 合金鋼 Alloy Steel SCM・Scr・SNCM 16~28HRC 710~900N/mm ² | | 合金鋼 Alloy Steel SCM・Scr・SNCM 28~35HRC 900~1,100N/mm ² | |
|--------------------------|---|------------------------------|--|------------------------------|---|------------------------------|---|------------------------------|
| | 80~120m/min | | 80~160m/min | | 80~120m/min | | 60~90m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 2 | 12,700 | 0.04 ~ 0.08 | 12,700 | 0.04 ~ 0.08 | 12,700 | 0.04 ~ 0.08 | 11,100 | 0.04 ~ 0.08 |
| 3 | 10,600 | 0.06 ~ 0.12 | 10,600 | 0.06 ~ 0.12 | 10,600 | 0.06 ~ 0.12 | 7,400 | 0.06 ~ 0.12 |
| 4 | 8,000 | 0.08 ~ 0.16 | 8,000 | 0.08 ~ 0.16 | 8,000 | 0.08 ~ 0.16 | 5,600 | 0.08 ~ 0.16 |
| 5 | 6,400 | 0.1 ~ 0.2 | 6,400 | 0.1 ~ 0.2 | 6,400 | 0.1 ~ 0.2 | 4,500 | 0.1 ~ 0.2 |
| 6 | 5,300 | 0.12 ~ 0.24 | 5,300 | 0.12 ~ 0.24 | 5,300 | 0.12 ~ 0.24 | 3,700 | 0.12 ~ 0.24 |
| 7 | 4,500 | 0.14 ~ 0.26 | 4,500 | 0.14 ~ 0.26 | 4,500 | 0.14 ~ 0.26 | 3,200 | 0.14 ~ 0.26 |
| 8 | 4,000 | 0.16 ~ 0.28 | 4,000 | 0.16 ~ 0.28 | 4,000 | 0.16 ~ 0.28 | 2,800 | 0.16 ~ 0.28 |
| 9 | 3,500 | 0.18 ~ 0.3 | 3,500 | 0.18 ~ 0.3 | 3,500 | 0.18 ~ 0.3 | 2,500 | 0.18 ~ 0.3 |
| 10 | 3,200 | 0.2 ~ 0.3 | 3,200 | 0.2 ~ 0.3 | 3,200 | 0.2 ~ 0.3 | 2,200 | 0.2 ~ 0.3 |
| 11 | 2,900 | 0.2 ~ 0.3 | 2,900 | 0.2 ~ 0.3 | 2,900 | 0.2 ~ 0.3 | 2,000 | 0.2 ~ 0.3 |
| 12 | 2,700 | 0.21 ~ 0.3 | 2,700 | 0.21 ~ 0.3 | 2,700 | 0.21 ~ 0.3 | 1,900 | 0.21 ~ 0.3 |
| 14 | 2,300 | 0.22 ~ 0.35 | 2,300 | 0.22 ~ 0.35 | 2,300 | 0.22 ~ 0.35 | 1,600 | 0.22 ~ 0.35 |
| 16 | 2,000 | 0.25 ~ 0.36 | 2,000 | 0.25 ~ 0.36 | 2,000 | 0.25 ~ 0.36 | 1,400 | 0.25 ~ 0.36 |
| 18 | 1,800 | 0.28 ~ 0.38 | 1,800 | 0.28 ~ 0.38 | 1,800 | 0.28 ~ 0.38 | 1,200 | 0.28 ~ 0.38 |
| 20 | 1,600 | 0.3 ~ 0.4 | 1,600 | 0.3 ~ 0.4 | 1,600 | 0.3 ~ 0.4 | 1,100 | 0.3 ~ 0.4 |

| 被削材 Work Material | 鋳物 Cast Iron FC250 ~350N/mm ² | | ダクタイル鋳鉄 Ductile Cast Iron FCD450 FCD600 400~600N/mm ² | | ステンレス鋼 Stainless Steel SUS300系 SUS400系 480~800N/mm ² | | 特殊鋼・調質鋼・プリハードン鋼 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非調質) (unquenched) 34 ~ 40HRC 1,060~1,250N/mm ² | |
|--------------------------|--|------------------------------|--|------------------------------|---|------------------------------|--|------------------------------|
| | 80~120m/min | | 60~100m/min | | 40~80m/min | | 30~60m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 2 | 12,700 | 0.04 ~ 0.08 | 12,700 | 0.04 ~ 0.08 | 9,500 | 0.04 ~ 0.08 | 7,200 | 0.04 ~ 0.06 |
| 3 | 10,600 | 0.06 ~ 0.12 | 8,500 | 0.06 ~ 0.12 | 6,400 | 0.06 ~ 0.12 | 4,800 | 0.06 ~ 0.09 |
| 4 | 8,000 | 0.08 ~ 0.16 | 6,400 | 0.08 ~ 0.16 | 4,800 | 0.08 ~ 0.16 | 3,600 | 0.08 ~ 0.12 |
| 5 | 6,400 | 0.1 ~ 0.2 | 5,100 | 0.1 ~ 0.2 | 3,800 | 0.1 ~ 0.2 | 2,900 | 0.1 ~ 0.15 |
| 6 | 5,300 | 0.12 ~ 0.24 | 4,200 | 0.12 ~ 0.24 | 3,200 | 0.12 ~ 0.24 | 2,400 | 0.12 ~ 0.18 |
| 7 | 4,500 | 0.14 ~ 0.26 | 3,600 | 0.14 ~ 0.26 | 2,700 | 0.14 ~ 0.26 | 2,000 | 0.14 ~ 0.21 |
| 8 | 4,000 | 0.16 ~ 0.28 | 3,200 | 0.16 ~ 0.28 | 2,400 | 0.16 ~ 0.28 | 1,800 | 0.16 ~ 0.24 |
| 9 | 3,500 | 0.18 ~ 0.3 | 2,800 | 0.18 ~ 0.3 | 2,100 | 0.18 ~ 0.3 | 1,600 | 0.18 ~ 0.27 |
| 10 | 3,200 | 0.2 ~ 0.3 | 2,500 | 0.2 ~ 0.3 | 1,900 | 0.2 ~ 0.3 | 1,400 | 0.2 ~ 0.3 |
| 11 | 2,900 | 0.2 ~ 0.3 | 2,300 | 0.2 ~ 0.3 | 1,700 | 0.2 ~ 0.3 | 1,300 | 0.2 ~ 0.3 |
| 12 | 2,700 | 0.21 ~ 0.3 | 2,100 | 0.21 ~ 0.3 | 1,600 | 0.21 ~ 0.3 | 1,200 | 0.21 ~ 0.3 |
| 14 | 2,300 | 0.22 ~ 0.35 | 1,800 | 0.22 ~ 0.35 | 1,400 | 0.22 ~ 0.35 | 1,000 | 0.22 ~ 0.35 |
| 16 | 2,000 | 0.25 ~ 0.36 | 1,600 | 0.25 ~ 0.36 | 1,200 | 0.25 ~ 0.36 | 900 | 0.25 ~ 0.36 |
| 18 | 1,800 | 0.28 ~ 0.38 | 1,400 | 0.28 ~ 0.38 | 1,100 | 0.28 ~ 0.38 | 800 | 0.28 ~ 0.38 |
| 20 | 1,600 | 0.3 ~ 0.4 | 1,300 | 0.3 ~ 0.4 | 1,000 | 0.3 ~ 0.4 | 700 | 0.3 ~ 0.4 |

- この切削条件基準表は、**水溶性切削油剤およびMQL**を使用する場合のものです。
- 水溶性切削油剤は、希釈倍率20倍以下の良質のものをご使用下さい。
- 不水溶性切削油剤または20倍を超える水溶性切削油剤の時は、切削速度を30%下げて下さい。
- この切削条件基準表は、**穴深さ8D以下**の場合に適用下さい。
- ドリル装着に際しては、傷や汚れのないコレットを用い、ドリルの振れは**0.02mm以下**に抑えて下さい。
- 被削材の保持はしっかりと行い、変形、たわみ、振動が起こらない状態にして下さい。
- 油穴の詰まりは折損トラブルの原因になります。給油装置のフィルタは必ず装着して下さい。
- 高硬度材及び8D用の場合は、状況に応じて1D~2Dのステップ加工を行って下さい。
- 高速条件は、使用環境によって対応できない場合もございます。
- マグネシウム合金切削において、切削油剤を使用する場合は切削油剤メーカーの推奨するものを必ずご使用下さい。また、切りくずの処理・管理にご注意下さい。発火の恐れがあります。



- The indicated speeds and feeds are for drilling with **water-soluble coolant or MQL**.
- Water-soluble high density coolant (less than 20 times dilution) is recommended.
- When using non-water-soluble or water-soluble coolant (over 20 times dilution), reduce cutting speed by 30%.
- These conditions are for **drilling depth less than 8 times the drill diameter**.
- Equip the drill with a scratch- and dust-free collet and **minimize drill deflection to less than 0.02mm**.
- Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
- A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.
- 1D - 2D step feeding may be required for drilling high hardened steels and mid-range (8D) work.
- Depending on actual operation environment, high speed cutting parameters listed above may not be applicable.
- Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

特長
Feature

加工データ
Cutting Data

3D/5D/8D

油穴付き with Oil Hole
10D/15D/20D/25D/30D

40D/50D
ガイド穴用ドリル
Pilot Drill

油穴無 Non Oil Hole
2D/4D

リーディングドリル Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特許品対応表
Production Table
by Drill Diameter



ADO-10D/15D/20D/25D/30D

| 被削材 Work Material | 軟鋼・低炭素鋼 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ² | | 炭素鋼 Carbon Steel S35C · S50C ~210HB ~710N/mm ² | | 合金鋼 Alloy Steel SCM · SCr · SNCM SCM440 16 ~ 28HRC 710 ~ 900N/mm ² | | 合金鋼・プリハードン鋼 Alloy Steel · Prehardened Steel (C ≥ 0.3%) SCM440 28 ~ 34HRC 900 ~ 1,060N/mm ² | |
|--------------------------|---|------------------------------|---|------------------------------|--|------------------------------|--|------------------------------|
| | 60~125m/min | | 60~125m/min | | 60~125m/min | | 50~70m/min | |
| 切削速度 Cutting Speed | 60~125m/min | | 60~125m/min | | 60~125m/min | | 50~70m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3 | 7,500 | 0.06 ~ 0.12 | 7,500 | 0.06 ~ 0.12 | 7,500 | 0.06 ~ 0.12 | 6,300 | 0.08 ~ 0.11 |
| 4 | 6,400 | 0.08 ~ 0.16 | 6,400 | 0.08 ~ 0.16 | 6,400 | 0.08 ~ 0.16 | 4,700 | 0.1 ~ 0.15 |
| 5 | 5,800 | 0.1 ~ 0.2 | 5,800 | 0.1 ~ 0.2 | 5,800 | 0.1 ~ 0.2 | 3,800 | 0.12 ~ 0.18 |
| 6 | 4,800 | 0.12 ~ 0.24 | 4,800 | 0.12 ~ 0.24 | 4,800 | 0.12 ~ 0.24 | 3,100 | 0.14 ~ 0.2 |
| 8 | 3,600 | 0.16 ~ 0.28 | 3,600 | 0.16 ~ 0.28 | 3,600 | 0.16 ~ 0.28 | 2,300 | 0.16 ~ 0.24 |
| 10 | 2,900 | 0.2 ~ 0.35 | 2,900 | 0.2 ~ 0.35 | 2,900 | 0.2 ~ 0.35 | 1,900 | 0.18 ~ 0.27 |
| 12 | 2,400 | 0.24 ~ 0.42 | 2,400 | 0.24 ~ 0.42 | 2,400 | 0.24 ~ 0.42 | 1,500 | 0.24 ~ 0.3 |

| 被削材 Work Material | 鋳鉄 Cast Iron FC250 ~350N/mm ² | | ダクタイル鋳鉄 Ductile Cast Iron FCD450 FCD600 400~600N/mm ² | | ステンレス鋼 Stainless Steel SUS400系 480~800N/mm ² | | 特殊鋼・調質鋼・プリハードン鋼 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非調質) (unquenched) 34 ~ 40HRC 1,060 ~ 1,250N/mm ² | |
|--------------------------|---|------------------------------|--|------------------------------|--|------------------------------|---|------------------------------|
| | 60 ~ 125m/min | | 50 ~ 80m/min | | 40 ~ 80m/min | | 30 ~ 50m/min | |
| 切削速度 Cutting Speed | 60 ~ 125m/min | | 50 ~ 80m/min | | 40 ~ 80m/min | | 30 ~ 50m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3 | 7,500 | 0.06 ~ 0.12 | 7,500 | 0.06 ~ 0.12 | 5,300 | 0.06 ~ 0.12 | 4,200 | 0.08 ~ 0.11 |
| 4 | 6,400 | 0.08 ~ 0.16 | 5,600 | 0.08 ~ 0.16 | 4,400 | 0.08 ~ 0.16 | 3,100 | 0.1 ~ 0.15 |
| 5 | 5,800 | 0.1 ~ 0.2 | 4,500 | 0.1 ~ 0.2 | 3,800 | 0.1 ~ 0.2 | 2,500 | 0.12 ~ 0.18 |
| 6 | 4,800 | 0.12 ~ 0.24 | 3,800 | 0.12 ~ 0.24 | 3,200 | 0.12 ~ 0.24 | 2,100 | 0.14 ~ 0.2 |
| 8 | 3,600 | 0.16 ~ 0.28 | 2,800 | 0.16 ~ 0.28 | 2,400 | 0.16 ~ 0.28 | 1,500 | 0.16 ~ 0.24 |
| 10 | 2,900 | 0.2 ~ 0.35 | 2,300 | 0.2 ~ 0.35 | 1,900 | 0.2 ~ 0.35 | 1,200 | 0.18 ~ 0.27 |
| 12 | 2,400 | 0.24 ~ 0.42 | 1,900 | 0.24 ~ 0.42 | 1,600 | 0.24 ~ 0.42 | 1,000 | 0.24 ~ 0.3 |

- この切削条件基準表は、水溶性切削油剤およびMQLを使用する場合のものです。(MQL加工の場合、ステンレス鋼は除きます。)
- 水溶性切削油剤は、希釈倍率20倍~30倍程度の良質のものをご使用下さい。
- 不水溶性切削油剤を使用する場合は、切削速度を下側の値とその70%程度の速度域でご使用下さい。
- p.38の資料「推奨加工方法」に沿ってガイド穴加工を行って下さい。
- 油穴の詰まりは折損トラブルの原因になります。給油装置のフィルタは必ず装着して下さい。
- 高硬度材の場合は、1D~2Dのステップ加工を行って下さい。

- The indicated speeds and feeds are for drilling with water-soluble coolant or MQL (mist drilling in stainless steels is not recommended).
- Water-soluble high density coolant (20-30 times dilution) is recommended.
- When using non-water-soluble coolant, set the cutting speed between 70-100% of the lowest limit.
- Make a pilot hole before using in accordance with recommended operation.
- A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.
- Peck drilling of 1D - 2D is strongly recommended.



ADO-40D/50D

| 被削材 Work Material | 軟鋼・低炭素鋼 Mild Steel・Low Carbon Steel SS400・S10C ~150HB ~500N/mm ² | | 炭素鋼 Carbon Steel S35C・S50C ~210HB ~710N/mm ² | | 合金鋼 Alloy Steel SCM・SCR・SNCM 16~28HRC 710~900N/mm ² | | 合金鋼 Alloy Steel (C ≥ 0.3%) SCM440 28~35HRC 900~1,060N/mm ² | |
|--------------------------|---|------------------------------|---|------------------------------|--|------------------------------|--|------------------------------|
| | 60~90m/min | | 60~90m/min | | 50~80m/min | | 40~70m/min | |
| 切削速度 Cutting Speed | 60~90m/min | | 60~90m/min | | 50~80m/min | | 40~70m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3 | 7,500 | 0.06~0.12 | 7,500 | 0.06~0.12 | 6,400 | 0.06~0.12 | 5,300 | 0.06~0.11 |
| 4 | 5,600 | 0.08~0.16 | 5,600 | 0.08~0.16 | 4,800 | 0.08~0.16 | 4,000 | 0.08~0.14 |
| 5 | 4,500 | 0.1~0.2 | 4,500 | 0.1~0.2 | 3,800 | 0.1~0.2 | 3,200 | 0.1~0.17 |
| 6 | 3,700 | 0.12~0.24 | 3,700 | 0.12~0.24 | 3,200 | 0.12~0.24 | 2,700 | 0.12~0.21 |
| 8 | 2,800 | 0.16~0.28 | 2,800 | 0.16~0.28 | 2,400 | 0.16~0.28 | 2,000 | 0.16~0.24 |
| 10 | 2,300 | 0.2~0.35 | 2,300 | 0.2~0.35 | 1,900 | 0.2~0.35 | 1,600 | 0.2~0.3 |

| 被削材 Work Material | 鋳鉄 Cast Iron FC250 ~350N/mm ² | | ダクタイル鋳鉄 Ductile Cast Iron FCD450・FCD600 400~600N/mm ² | | ステンレス鋼 Stainless Steel SUS300/400系 480~800N/mm ² | |
|--------------------------|---|------------------------------|---|------------------------------|--|------------------------------|
| | 60~90m/min | | 50~80m/min | | 40~60m/min | |
| 切削速度 Cutting Speed | 60~90m/min | | 50~80m/min | | 40~60m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3 | 7,500 | 0.06~0.12 | 6,400 | 0.06~0.12 | 5,300 | 0.06~0.12 |
| 4 | 5,600 | 0.08~0.16 | 4,800 | 0.08~0.16 | 4,000 | 0.08~0.16 |
| 5 | 4,500 | 0.1~0.2 | 3,800 | 0.1~0.2 | 3,200 | 0.1~0.2 |
| 6 | 3,700 | 0.12~0.24 | 3,200 | 0.12~0.24 | 2,700 | 0.12~0.24 |
| 8 | 2,800 | 0.16~0.28 | 2,400 | 0.16~0.28 | 2,000 | 0.16~0.28 |
| 10 | 2,300 | 0.2~0.35 | 1,900 | 0.2~0.35 | 1,600 | 0.2~0.35 |

- この切削条件基準表は、水溶性切削油剤およびMQLを使用する場合のものです。(MQL加工の場合、ステンレス鋼は除きます)
- 水溶性切削油剤は、希釈倍率20倍~30倍程度の良質のものをご使用下さい。
- 不水溶性切削油剤を使用する場合は、切削速度を下側の値とその70%程度の速度域でご使用下さい。
- 「推奨加工方法(p.38)」に沿ってガイド穴加工を行って下さい。
- 油穴の詰まりは折損トラブルの原因になります。給油装置のフィルタは必ず装着して下さい。
- 高硬度材の場合は、1D~2Dのステップ加工を行って下さい。

★加工が困難な場合や穴の真直性を改善したい場合、ガイド穴加工後、油穴付き超硬ドリルADO-20D/30Dにて加工した後、ADO-40D/50Dで加工下さい。3本の工具で加工する場合、ADO-40D/50Dは、上記切削条件表よりも高い切削条件で加工が可能な場合もあります。

- The indicated speeds and feeds are for drilling with water-soluble coolant or MQL (mist drilling in stainless steels is not recommended).
- Water-soluble high density coolant (20-30 times dilution) is recommended.
- When using non-water-soluble coolant, set the cutting speed between 70-100% of the lowest limit.
- Make a pilot hole before using in accordance with the recommended operation.
- A clogged oil hole can lead to breakage. Make sure that a filter is attached to the oil feeder.
- Peck drilling of 1D - 2D is strongly recommended.

★If it is difficult to process or if the straightness of the hole needed to be improved, use the coolant-through carbide drill ADO-20/30D after drilling a pilot hole, then process with the ADO-40/50D. When processing with 3 tools, the ADO-40/50D may be used at a more aggressive cutting condition than those listed above.

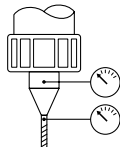


ADO-PLT

| 被削材 Work Material | 軟鋼・低炭素鋼 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ² | | 炭素鋼 Carbon Steel S35C · S50C ~210HB ~710N/mm ² | | 合金鋼 Alloy Steel SCM · SCR · SNCM 16 ~ 28HRC 710 ~ 900N/mm ² | | 合金鋼・プリハードン鋼 Alloy Steel · Prehardened Steel (C ≥ 0.3%) SCM440 28 ~ 34HRC 900 ~ 1,060N/mm ² | |
|-------------------------|--|------------------------------|---|------------------------------|--|------------------------------|--|------------------------------|
| | 60~125m/min | | 60~80m/min | | 60~80m/min | | 40~60m/min | |
| 切削速度 Cutting Speed | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3.03 | 7,400 | 0.06 ~ 0.09 | 7,400 | 0.06 ~ 0.09 | 7,400 | 0.06 ~ 0.09 | 5,200 | 0.06 ~ 0.09 |
| 4.03 | 5,600 | 0.08 ~ 0.12 | 5,600 | 0.08 ~ 0.12 | 5,600 | 0.08 ~ 0.12 | 3,900 | 0.08 ~ 0.12 |
| 5.03 | 4,500 | 0.1 ~ 0.15 | 4,500 | 0.1 ~ 0.15 | 4,500 | 0.1 ~ 0.15 | 3,100 | 0.1 ~ 0.15 |
| 6.03 | 3,700 | 0.12 ~ 0.18 | 3,700 | 0.12 ~ 0.18 | 3,700 | 0.12 ~ 0.18 | 2,600 | 0.12 ~ 0.18 |
| 7.03 | 3,200 | 0.14 ~ 0.2 | 3,200 | 0.14 ~ 0.2 | 3,200 | 0.14 ~ 0.2 | 2,300 | 0.14 ~ 0.2 |
| 8.03 | 2,800 | 0.14 ~ 0.2 | 2,800 | 0.14 ~ 0.2 | 2,800 | 0.14 ~ 0.2 | 2,000 | 0.14 ~ 0.2 |
| 9.03 | 2,500 | 0.14 ~ 0.22 | 2,500 | 0.14 ~ 0.22 | 2,500 | 0.14 ~ 0.22 | 1,800 | 0.14 ~ 0.22 |
| 10.03 | 2,200 | 0.15 ~ 0.24 | 2,200 | 0.15 ~ 0.24 | 2,200 | 0.15 ~ 0.24 | 1,600 | 0.15 ~ 0.24 |
| 11.03 | 2,000 | 0.16 ~ 0.26 | 2,000 | 0.16 ~ 0.26 | 2,000 | 0.16 ~ 0.26 | 1,500 | 0.17 ~ 0.24 |
| 12.03 | 1,800 | 0.18 ~ 0.28 | 1,800 | 0.18 ~ 0.28 | 1,800 | 0.18 ~ 0.28 | 1,350 | 0.18 ~ 0.24 |

| 被削材 Work Material | 鋳鉄 Cast Iron FC250 ~350N/mm ² | | ダクタイル鋳鉄 Ductile Cast Iron FCD450 FCD600 400~600N/mm ² | | ステンレス鋼 Stainless Steel SUS400系 480~800N/mm ² | | 特殊鋼・調質鋼・プリハードン鋼 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非調質) (unquenched) 34 ~ 40HRC 1,060 ~ 1,250N/mm ² | |
|-------------------------|---|------------------------------|--|------------------------------|--|------------------------------|--|------------------------------|
| | 60~80m/min | | 60~80m/min | | 40~60m/min | | 30~50m/min | |
| 切削速度 Cutting Speed | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 3.03 | 7,400 | 0.06 ~ 0.09 | 7,400 | 0.06 ~ 0.09 | 5,200 | 0.06 ~ 0.09 | 4,200 | 0.06 ~ 0.09 |
| 4.03 | 5,600 | 0.08 ~ 0.12 | 5,600 | 0.08 ~ 0.12 | 3,900 | 0.08 ~ 0.12 | 3,100 | 0.08 ~ 0.12 |
| 5.03 | 4,500 | 0.1 ~ 0.15 | 4,500 | 0.1 ~ 0.15 | 3,100 | 0.1 ~ 0.15 | 2,500 | 0.1 ~ 0.15 |
| 6.03 | 3,700 | 0.12 ~ 0.18 | 3,700 | 0.12 ~ 0.18 | 2,600 | 0.12 ~ 0.18 | 2,100 | 0.12 ~ 0.18 |
| 7.03 | 3,200 | 0.14 ~ 0.2 | 3,200 | 0.14 ~ 0.2 | 2,300 | 0.14 ~ 0.2 | 1,800 | 0.14 ~ 0.2 |
| 8.03 | 2,800 | 0.14 ~ 0.2 | 2,800 | 0.14 ~ 0.2 | 2,000 | 0.14 ~ 0.2 | 1,600 | 0.14 ~ 0.2 |
| 9.03 | 2,500 | 0.14 ~ 0.22 | 2,500 | 0.14 ~ 0.22 | 1,800 | 0.14 ~ 0.22 | 1,400 | 0.14 ~ 0.22 |
| 10.03 | 2,200 | 0.15 ~ 0.24 | 2,200 | 0.15 ~ 0.24 | 1,600 | 0.15 ~ 0.24 | 1,300 | 0.15 ~ 0.24 |
| 11.03 | 2,000 | 0.16 ~ 0.26 | 2,000 | 0.16 ~ 0.26 | 1,400 | 0.16 ~ 0.26 | 1,150 | 0.17 ~ 0.24 |
| 12.03 | 1,800 | 0.18 ~ 0.28 | 1,800 | 0.18 ~ 0.28 | 1,300 | 0.18 ~ 0.28 | 1,100 | 0.18 ~ 0.24 |

- この切削条件基準表は、水溶性切削油剤およびMQLを使用する場合のものです。(MQL加工の場合、ステンレス鋼は除きます。)
- 水溶性切削油剤は、希釈倍率20倍以下の良質のものをご使用下さい。
- 20倍を超える水溶性切削油剤は、標準条件では切削速度を30%下げて、高速加工用は適用しないで下さい。
- 不水溶性切削油剤の時は、標準条件では切削速度を下側の値以下で、高速加工用は適用しないで下さい。
- この切削条件基準表は、穴深さ3D以下の場合に適用下さい。
- ドリル装着に際しては、傷や汚れのないコレットを用い、ドリルの振れは0.02mm以下に抑えて下さい。
- 被削材の保持はしっかりと行い、変形、たわみ、振動が起こらない状態にして下さい。
- 油穴の詰まりは折損トラブルの原因になります。給油装置のフィルタは必ず装着して下さい。



- The indicated speeds and feeds are for drilling with water-soluble coolant or MQL (mist drilling in stainless steels is not recommended).
- Water-soluble high density coolant (less than 20 times dilution) is recommended.
- When using water-soluble coolant with over 20 times dilution, reduce cutting speed by 30% below the standard conditions. Do not use the high speed cutting conditions in this case.
- When using non-water-soluble coolant, the lower cutting speed in the table should be selected. Do not use the high speed drilling conditions in this case.
- These conditions are for drilling depth less than 3 times the drill diameter.
- Equip the drill with a scratch- and dust-free collet and minimize drill deflection to less than 0.02mm.
- Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
- A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.

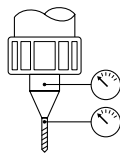


AD-2D/4D

| 被削材 Work Material | 軟鋼・低炭素鋼・合金鋼 Mild Steel · Low Carbon Steel · Alloy Steel (C<0.3%) SS400 · SCM ~710N/mm ² | | 炭素鋼 Carbon Steel S35C · S50C ~210HB ~710N/mm ² | | 合金鋼 Alloy Steel SCM · SCr · SNCM 16 ~ 28HRC 710 ~ 900N/mm ² | |
|--------------------------|--|------------------------------|---|------------------------------|--|------------------------------|
| | 70~120m/min | | 60~120m/min | | 60~120m/min | |
| 切削速度 Cutting Speed | 70~120m/min | | 60~120m/min | | 60~120m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 2 | 12,000 | 0.06 ~ 0.08 | 10,400 | 0.06 ~ 0.08 | 10,400 | 0.06 ~ 0.08 |
| 4 | 8,000 | 0.08 ~ 0.16 | 7,200 | 0.08 ~ 0.16 | 7,200 | 0.08 ~ 0.16 |
| 6 | 5,300 | 0.12 ~ 0.24 | 4,800 | 0.12 ~ 0.24 | 4,800 | 0.12 ~ 0.24 |
| 8 | 4,000 | 0.16 ~ 0.28 | 3,600 | 0.16 ~ 0.28 | 3,600 | 0.16 ~ 0.28 |
| 10 | 3,200 | 0.2 ~ 0.3 | 2,900 | 0.2 ~ 0.3 | 2,900 | 0.2 ~ 0.3 |
| 12 | 2,700 | 0.21 ~ 0.3 | 2,400 | 0.21 ~ 0.3 | 2,400 | 0.21 ~ 0.3 |
| 14 | 2,300 | 0.22 ~ 0.35 | 2,050 | 0.22 ~ 0.35 | 2,050 | 0.22 ~ 0.35 |
| 16 | 2,000 | 0.25 ~ 0.36 | 1,800 | 0.25 ~ 0.36 | 1,800 | 0.25 ~ 0.36 |
| 18 | 1,800 | 0.28 ~ 0.38 | 1,600 | 0.28 ~ 0.38 | 1,600 | 0.28 ~ 0.38 |
| 20 | 1,600 | 0.3 ~ 0.4 | 1,450 | 0.3 ~ 0.4 | 1,450 | 0.3 ~ 0.4 |

| 被削材 Work Material | 合金鋼 Alloy Steel SCM · SCr · SNCM 28 ~ 35HRC 900 ~ 1,100N/mm ² | | 鋳鉄 Cast Iron FC250 ~350N/mm ² | | ダクタイル鋳鉄 Ductile Cast Iron FCD450 FCD600 400 ~ 600N/mm ² | |
|--------------------------|--|------------------------------|---|------------------------------|--|------------------------------|
| | 50~90m/min | | 60~120m/min | | 50~100m/min | |
| 切削速度 Cutting Speed | 50~90m/min | | 60~120m/min | | 50~100m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 2 | 8,800 | 0.06 ~ 0.08 | 10,400 | 0.06 ~ 0.08 | 9,600 | 0.06 ~ 0.08 |
| 4 | 5,600 | 0.08 ~ 0.16 | 7,200 | 0.08 ~ 0.16 | 6,000 | 0.08 ~ 0.16 |
| 6 | 3,700 | 0.12 ~ 0.24 | 4,800 | 0.12 ~ 0.24 | 4,000 | 0.12 ~ 0.24 |
| 8 | 2,800 | 0.16 ~ 0.28 | 3,600 | 0.16 ~ 0.28 | 3,000 | 0.16 ~ 0.28 |
| 10 | 2,200 | 0.2 ~ 0.3 | 2,900 | 0.2 ~ 0.3 | 2,400 | 0.2 ~ 0.3 |
| 12 | 1,900 | 0.21 ~ 0.3 | 2,400 | 0.21 ~ 0.3 | 2,000 | 0.21 ~ 0.3 |
| 14 | 1,400 | 0.22 ~ 0.35 | 2,050 | 0.22 ~ 0.35 | 1,700 | 0.22 ~ 0.35 |
| 16 | 1,200 | 0.25 ~ 0.36 | 1,800 | 0.25 ~ 0.36 | 1,500 | 0.25 ~ 0.36 |
| 18 | 1,050 | 0.28 ~ 0.38 | 1,600 | 0.28 ~ 0.38 | 1,350 | 0.28 ~ 0.38 |
| 20 | 950 | 0.3 ~ 0.4 | 1,450 | 0.3 ~ 0.4 | 1,200 | 0.3 ~ 0.4 |

- この切削条件基準表は、水溶性切削油剤を使用する場合のものです。
- 水溶性切削油剤は、希釈倍率20倍以下の良質のものをご使用下さい。
- 不水溶性切削油剤または20倍を超える水溶性切削油剤の時は、切削速度を30%下げてください。
- この切削条件基準表は、穴深さ3D以下の場合に適用下さい。
- ドリル装着に際しては、傷や汚れの無いコレットを用い、ドリルの振れは0.02mm以下に抑えて下さい。
- 被削材の保持はしっかりと行ない、変形、たわみ、振動が起らない状態にして下さい。
- 機械回転数が上記切削速度を満たさない場合、なるべく高回転でご使用下さい。尚、この場合、耐久が落ちる可能性があります。



- The indicated speeds and feeds are for drilling with water-soluble coolant.
- Water-soluble high density coolant (less than 20 times dilution) is recommended.
- When using non-water-soluble or water-soluble coolant (over 20 times dilution), reduce cutting speed by 30%.
- These conditions are for drilling depth under 3 times the drill diameter.
- Equip the drill with a scratch- and dust-free collet and minimize drill deflection to less than 0.02mm.
- Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
- For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible. Tool life may be decreased.

特長
Feature

加工データ
Cutting Data

3D/5D/8D

with Oil Hole
10D/15D/20D/25D/30D

40D/50D
ガイド穴用ドリル
Pilot Drill

Non Oil Hole
2D/4D

Starter Drill
AD-LDS

切削条件表
Cutting Conditions

特殊品対応表
Production Table
by Drill Diameter



センタリング Centering

AD-LDS・AD-LS-LDS 注1) Note

| 被削材 Work Material | 低炭素鋼・軟鋼 Low Carbon Steel Mild Steel SS400 ~ 500N/mm ² | | 炭素鋼 Carbon Steel S50C 500 ~ 710N/mm ² | | 合金鋼 Alloy Steel SCM 710 ~ 900N/mm ² | | 特殊鋼・調質鋼 Special Alloy Steel Hardened Steel SKD61 ~ 900N/mm ² 28HRC | | |
|-------------------------|---|---------------------------------------|--|---------------------------------------|--|---------------------------------------|---|---------------------------------------|------------------------------|
| | 63~80m/min | | 40 ~ 63m/min | | 32 ~ 50m/min | | 20 ~ 30m/min | | |
| 切削速度 Cutting Speed | 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 0.5 | 20,000 | 0.005 ~ 0.02 | 25,000 | 0.005 ~ 0.02 | 20,000 | 0.005 ~ 0.02 | 16,000 | 0.005 ~ 0.02 | |
| 1 | 10,000 | 0.01 ~ 0.03 | 16,000 | 0.01 ~ 0.03 | 10,000 | 0.01 ~ 0.03 | 8,000 | 0.01 ~ 0.03 | |
| 2 | 5,000 | 0.03 ~ 0.06 | 8,000 | 0.03 ~ 0.06 | 5,000 | 0.03 ~ 0.06 | 4,000 | 0.03 ~ 0.06 | |
| 3 | 7,500 | 0.04 ~ 0.08 | 5,500 | 0.04 ~ 0.08 | 4,500 | 0.04 ~ 0.08 | 2,700 | 0.04 ~ 0.08 | |
| 4 | 5,700 | 0.05 ~ 0.1 | 4,100 | 0.05 ~ 0.1 | 3,300 | 0.05 ~ 0.1 | 2,000 | 0.05 ~ 0.1 | |
| 6 | 3,800 | 0.06 ~ 0.12 | 2,700 | 0.06 ~ 0.12 | 2,300 | 0.06 ~ 0.12 | 1,300 | 0.06 ~ 0.12 | |
| 8 | 2,800 | 0.08 ~ 0.15 | 2,000 | 0.08 ~ 0.15 | 1,700 | 0.08 ~ 0.15 | 1,000 | 0.08 ~ 0.15 | |
| 10 | 2,300 | 0.1 ~ 0.18 | 1,700 | 0.1 ~ 0.18 | 1,400 | 0.1 ~ 0.18 | 800 | 0.1 ~ 0.18 | |
| 12 | 1,900 | 0.12 ~ 0.21 | 1,400 | 0.12 ~ 0.21 | 1,200 | 0.12 ~ 0.21 | 650 | 0.12 ~ 0.21 | |

| 被削材 Work Material | 特殊鋼・調質鋼 Special Alloy Steel Hardened Steel SKD11 ~ 1060N/mm ² 34HRC | | 工具鋼 Tool Steel | | 鋳鉄・ ダクタイル鋳鉄 Cast Iron・Ductile Cast Iron FC250・FCD400 ~ 500N/mm ² | | アルミニウム 合金鋳物 Aluminum Alloy Casting ADC・AC4D | | |
|-------------------------|--|---------------------------------------|------------------------------|---------------------------------------|--|---------------------------------------|--|---------------------------------------|------------------------------|
| | 16 ~ 22m/min | | 16 ~ 22m/min | | 63~100m/min | | 80~160m/min | | |
| 切削速度 Cutting Speed | 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 0.5 | 12,000 | 0.005 ~ 0.02 | 12,000 | 0.005 ~ 0.02 | 注2) Note | 0.005 ~ 0.015 | 注2) Note | 0.02 ~ 0.04 | |
| 1 | 6,000 | 0.01 ~ 0.03 | 6,000 | 0.01 ~ 0.03 | 20,000 | 0.01 ~ 0.03 | 注2) Note | 0.04 ~ 0.07 | |
| 2 | 3,000 | 0.03 ~ 0.06 | 3,000 | 0.03 ~ 0.06 | 12,000 | 0.03 ~ 0.06 | 15,000 | 0.06 ~ 0.14 | |
| 3 | 2,000 | 0.04 ~ 0.08 | 2,000 | 0.04 ~ 0.08 | 8,000 | 0.05 ~ 0.09 | 12,000 | 0.1 ~ 0.22 | |
| 4 | 1,500 | 0.05 ~ 0.1 | 1,500 | 0.05 ~ 0.1 | 6,500 | 0.07 ~ 0.12 | 9,500 | 0.12 ~ 0.25 | |
| 6 | 1,000 | 0.06 ~ 0.12 | 1,000 | 0.06 ~ 0.12 | 4,300 | 0.12 ~ 0.18 | 6,400 | 0.14 ~ 0.28 | |
| 8 | 750 | 0.08 ~ 0.15 | 750 | 0.08 ~ 0.15 | 3,200 | 0.13 ~ 0.2 | 4,800 | 0.18 ~ 0.32 | |
| 10 | 600 | 0.1 ~ 0.18 | 600 | 0.1 ~ 0.18 | 2,600 | 0.17 ~ 0.25 | 3,800 | 0.22 ~ 0.36 | |
| 12 | 500 | 0.12 ~ 0.21 | 500 | 0.12 ~ 0.21 | 2,200 | 0.21 ~ 0.3 | 3,200 | 0.25 ~ 0.4 | |

- AD-LS-LDS(ロングシャンク)を使用する場合は、送り量を低目にご使用下さい。
- 回転数が十分に上がらない場合は、出来る限り高回転でご使用下さい。
- この切削条件基準表は、水溶性切削油剤を使用する場合のもので、
- 不水溶性切削油剤を使用する場合は、切削速度を20%下げてください。
- 曲面・傾斜面等へのセンタリングは、送り量を低目にご使用下さい。
- ステンレス鋼へのセンタリングは推奨しません。
TIN-NC-LDSまたはNC-LDSをご使用下さい。

- When using AD-LS-LDS, reduce the feed rate accordingly.
- For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible.
- The indicated speeds and feeds are for drilling with water-soluble coolant.
- When using non-water-soluble coolant, reduce the drilling speed by 20%.
- When centering on a curved or inclined surface, reduce the feed rate accordingly.
- Centering on Stainless Steels is not recommended. For these procedures, use the TIN-NC-LDS or the NC-LDS.



AD-LDS・AD-LS-LDS 注1) Note

| 被削材 Work Material | 低炭素鋼・軟鋼 Low Carbon Steel Mild Steel SS400 ~500N/mm ² | | 炭素鋼 Carbon Steel S50C 500~710N/mm ² | | 合金鋼 Alloy Steel SCM 710~900N/mm ² | | 特殊鋼・調質鋼 Special Alloy Steel Hardened Steel SKD61 ~900N/mm ² 28HRC | |
|--------------------------|--|------------------------------|--|------------------------------|--|------------------------------|--|------------------------------|
| | 63~80m/min | | 40~63m/min | | 32~50m/min | | 20~30m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 0.5 | 20,000 | 0.005 ~ 0.05 | 25,000 | 0.005 ~ 0.05 | 20,000 | 0.005 ~ 0.05 | 16,000 | 0.005 ~ 0.05 |
| 1 | 10,000 | 0.01 ~ 0.1 | 16,000 | 0.01 ~ 0.1 | 10,000 | 0.01 ~ 0.1 | 8,000 | 0.01 ~ 0.1 |
| 2 | 5,000 | 0.02 ~ 0.18 | 8,000 | 0.02 ~ 0.18 | 5,000 | 0.02 ~ 0.18 | 4,000 | 0.02 ~ 0.18 |
| 3 | 7,500 | 0.04 ~ 0.24 | 5,500 | 0.04 ~ 0.24 | 4,500 | 0.04 ~ 0.24 | 2,700 | 0.04 ~ 0.24 |
| 4 | 5,700 | 0.04 ~ 0.24 | 4,100 | 0.04 ~ 0.24 | 3,300 | 0.04 ~ 0.24 | 2,000 | 0.04 ~ 0.24 |
| 6 | 3,800 | 0.06 ~ 0.36 | 2,700 | 0.06 ~ 0.36 | 2,300 | 0.06 ~ 0.36 | 1,300 | 0.06 ~ 0.36 |
| 8 | 2,800 | 0.08 ~ 0.38 | 2,000 | 0.08 ~ 0.38 | 1,700 | 0.08 ~ 0.38 | 1,000 | 0.08 ~ 0.38 |
| 10 | 2,300 | 0.1 ~ 0.4 | 1,700 | 0.1 ~ 0.4 | 1,400 | 0.1 ~ 0.4 | 800 | 0.1 ~ 0.4 |
| 12 | 1,900 | 0.12 ~ 0.42 | 1,400 | 0.12 ~ 0.42 | 1,200 | 0.12 ~ 0.42 | 650 | 0.12 ~ 0.42 |

| 被削材 Work Material | 特殊鋼・調質鋼 Special Alloy Steel Hardened Steel SKD11 ~1060N/mm ² 34HRC | | 焼入れ鋼 Quenched and Tempered Steel 45~50HRC | | 鑄鉄・ ダクタイル鑄鉄 Cast Iron・Ductile Cast Iron FC250・FCD400 ~500N/mm ² | | アルミニウム 合金鑄物 Aluminum Alloy Casting ADC・AC4D | |
|--------------------------|---|------------------------------|--|------------------------------|---|------------------------------|--|------------------------------|
| | 20~30m/min | | 20~30m/min | | 63~100m/min | | 80~160m/min | |
| 直径 Drill Dia. (mm) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) | 回転速度 Speed (min ⁻¹) | 送り量 Feed Rate (mm/rev) |
| 0.5 | 16,000 | 0.005 ~ 0.05 | 16,000 | 0.005 ~ 0.02 | 注2) Note | 0.005 ~ 0.05 | 注2) Note | 0.005 ~ 0.05 |
| 1 | 8,000 | 0.01 ~ 0.1 | 8,000 | 0.01 ~ 0.03 | 20,000 | 0.01 ~ 0.1 | 注2) Note | 0.01 ~ 0.1 |
| 2 | 4,000 | 0.02 ~ 0.18 | 4,000 | 0.03 ~ 0.06 | 12,000 | 0.02 ~ 0.18 | 15,000 | 0.02 ~ 0.18 |
| 3 | 2,700 | 0.04 ~ 0.24 | 2,700 | 0.04 ~ 0.08 | 8,000 | 0.04 ~ 0.24 | 12,000 | 0.04 ~ 0.24 |
| 4 | 2,000 | 0.04 ~ 0.24 | 2,000 | 0.05 ~ 0.1 | 6,500 | 0.04 ~ 0.24 | 9,500 | 0.04 ~ 0.24 |
| 6 | 1,300 | 0.06 ~ 0.36 | 1,300 | 0.06 ~ 0.12 | 4,300 | 0.06 ~ 0.36 | 6,400 | 0.06 ~ 0.36 |
| 8 | 1,000 | 0.08 ~ 0.38 | 1,000 | 0.08 ~ 0.15 | 3,200 | 0.08 ~ 0.38 | 4,800 | 0.08 ~ 0.38 |
| 10 | 800 | 0.1 ~ 0.4 | 800 | 0.1 ~ 0.18 | 2,600 | 0.1 ~ 0.4 | 3,800 | 0.1 ~ 0.4 |
| 12 | 650 | 0.12 ~ 0.42 | 650 | 0.12 ~ 0.21 | 2,200 | 0.12 ~ 0.42 | 3,200 | 0.12 ~ 0.42 |

- AD-LS-LDS(ロングシャンク)を使用する場合は、送り量を低目にご使用下さい。
- 回転数が十分に上がらない場合は、出来る限り高回転でご使用下さい。
- この切削条件基準表は、**水溶性切削油剤**を使用する場合のものであります。
- 不水溶性切削油剤を使用する場合は、切削速度を20%下げてください。
- 曲面・傾斜面等への面取り時は、送り量を低目にご使用下さい。
- 高速加工をする場合は、上記切削速度の中央値の2倍を上限として下さい。
- ステンレス鋼への穴面取りは、低炭素鋼の数値を参考にして下さい。

- When using AD-LS-LDS, reduce the feed rate accordingly.
- For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible.
- The indicated speeds and feeds are for drilling with **water-soluble coolant**.
- When using non-water-soluble coolant, reduce the drilling speed by 20%.
- When counter sinking on a curved or inclined surface, reduce the feed rate accordingly.
- For high-speed machining, double the median value of the above cutting condition to use as upper limit.
- When countersinking on Stainless Steels, use a condition of Low Carbon Steel.



アプリケーションに応じ、更に充実した幅広いラインナップで 最適加工シーンを提供します

The wide product lineup provides ideal machining conditions for every application.

単位:mm Unit:mm

| L/D 直径 DC | 10D | 15D | 20D | 25D | 30D | 35D | 40D | 45D | 50D | 60D |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | | | | 34 | | | | | |
| 1.1 | | | | | 37 | | | | | |
| 1.2 | | | | | 40 | | | | | |
| 1.3 | | | | | 44 | | | | | |
| 1.4 | | | | | 47 | | | | | |
| 1.5 | | | | | 51 | | | | | |
| 1.6 | | | | | 54 | | | | | |
| 1.7 | | | | | 57 | | | | | |
| 1.8 | | | | | 61 | | | | | |
| 1.9 | | | | | 64 | | | | | |
| 2 | | | | | 68 | | | | | |
| 2.1 | | | | | 69 | | | | | |
| 2.2 | | | | | 73 | | | | | |
| 2.3 | | | | | 76 | | | | | |
| 2.4 | | | | | 79 | | | | | |
| 2.5 | | | | | 83 | | | | | |
| 2.6 | | | | | 86 | | | | | |
| 2.7 | | | | | 89 | | | | | |
| 2.8 | | | | | 93 | | | | | |
| 2.9 | | | | | 96 | | | | | |
| 3 | | | | | | | | | 159 | |
| 3.1 | | | | | | | | | 165 | |
| 3.2 | | | | | | | | | 170 | |
| 3.3 | | | | | | | | | 175 | |
| 3.4 | | | | | | | | | 181 | |
| 3.5 | | | | | | | | | 186 | |
| 3.6 | | | | | | | | | 191 | |
| 3.7 | | | | | | | | | 197 | |
| 3.8 | | | | | | | | | 202 | |
| 3.9 | | | | | | | | | 207 | |
| 4 | | | | | | | | | 212 | |
| 4.1 | | | | | | | | | 218 | |
| 4.2 | | | | | | | | | 223 | |
| 4.3 | | | | | | | | | 228 | |
| 4.4 | | | | | | | | | 234 | |
| 4.5 | | | | | | | | | 239 | |
| 4.6 | | | | | | | | | 244 | |
| 4.7 | | | | | | | | | 250 | |
| 4.8 | | | | | | | | | 255 | |
| 4.9 | | | | | | | | | 260 | |

| L/D 直径 DC | 10D | 15D | 20D | 25D | 30D | 35D | 40D | 45D | 50D | 60D |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 5 | | | | | | | | | 265 | |
| 5.1 | | | | | | | | | 271 | |
| 5.2 | | | | | | | | | 276 | |
| 5.3 | | | | | | | | | 281 | |
| 5.4 | | | | | | | | | 287 | |
| 5.5 | | | | | | | | | 292 | |
| 5.6 | | | | | | | | | 297 | |
| 5.7 | | | | | | | | | 303 | |
| 5.8 | | | | | | | | | 308 | |
| 5.9 | | | | | | | | | 313 | |
| 6 | | | | | | | | | 378 | |
| 6.1 | | | | | | | | | 378 | |
| 6.2 | | | | | | | | | 378 | |
| 6.3 | | | | | | | | | 378 | |
| 6.4 | | | | | | | | | 378 | |
| 6.5 | | | | | | | | | 378 | |
| 6.6 | | | | | | | | | 383 | |
| 6.7 | | | | | | | | | 389 | |
| 6.8 | | | | | | | | | 395 | |
| 6.9 | | | | | | | | | 401 | |
| 7 | | | | | | | | | 406 | |
| 7.1 | | | | | | | | | 406 | |
| 7.2 | | | | | | | | | 406 | |
| 7.3 | | | | | | | | | 411 | |
| 7.4 | | | | | | | | | 417 | |
| 7.5 | | | | | | | | | 422 | |
| 7.6 | | | | | | | | | 428 | |
| 7.7 | | | | | | | | | 434 | |
| 7.8 | | | | | | | | | 439 | |
| 7.9 | | | | | | | | | 445 | |
| 8 | | | | | | | | | 450 | |
| 8.1 | | | | | | | | 450 | | |
| 8.2 | | | | | | | | 450 | | |
| 8.3 | | | | | | | | 450 | | |
| 8.4 | | | | | | | | 450 | | |
| 8.5 | | | | | | | | 450 | | |
| 8.6 | | | | | | | | 450 | | |
| 8.7 | | | | | | | | 450 | | |
| 8.8 | | | | | | | | 450 | | |
| 8.9 | | | | | | | | 450 | | |

表中の値は製作可能最大溝長です。 The values in the table indicate the maximum possible flute lengths.



製作対応範囲 (場合によっては対応出来ないこともあります)
Production table by drill dia. (Under certain circumstances, some drills cannot be produced.)

当社営業にお問合せ下さい (場合によっては対応出来ないこともあります)
Please contact our sales staff for more information.
(Under certain circumstances, some drills cannot be produced.)

単位:mm Unit:mm

| L/D 直径 DC | 10D | 15D | 20D | 25D | 30D | 35D | 40D | 45D | 50D | 60D |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 9 | | | | | | | | 450 | | |
| 9.1 | | | | | | | 450 | | | |
| 9.2 | | | | | | | 450 | | | |
| 9.3 | | | | | | | 450 | | | |
| 9.4 | | | | | | | 450 | | | |
| 9.5 | | | | | | | 450 | | | |
| 9.6 | | | | | | | 450 | | | |
| 9.7 | | | | | | | 450 | | | |
| 9.8 | | | | | | | 450 | | | |
| 9.9 | | | | | | | 450 | | | |
| 10 | | | | | | | 450 | | | |
| 10.1 | | | | | | | 450 | | | |
| 10.2 | | | | | | | 450 | | | |
| 10.3 | | | | | | | 450 | | | |
| 10.4 | | | | | | | 450 | | | |
| 10.5 | | | | | | | 450 | | | |
| 10.6 | | | | | | 450 | | | | |
| 10.7 | | | | | | 450 | | | | |
| 10.8 | | | | | | 450 | | | | |
| 10.9 | | | | | | 450 | | | | |
| 11 | | | | | | 450 | | | | |
| 11.1 | | | | | | 450 | | | | |
| 11.2 | | | | | | 450 | | | | |
| 11.3 | | | | | | 450 | | | | |
| 11.4 | | | | | | 450 | | | | |
| 11.5 | | | | | | 450 | | | | |
| 11.6 | | | | | | 450 | | | | |
| 11.7 | | | | | | 450 | | | | |
| 11.8 | | | | | | 450 | | | | |
| 11.9 | | | | | | 450 | | | | |
| 12 | | | | | | 450 | | | | |
| 12.1 | | | | | 450 | | | | | |
| 12.2 | | | | | 450 | | | | | |
| 12.3 | | | | | 450 | | | | | |
| 12.4 | | | | | 450 | | | | | |
| 12.5 | | | | | 450 | | | | | |
| 12.6 | | | | | 450 | | | | | |
| 12.7 | | | | | 450 | | | | | |
| 12.8 | | | | | 450 | | | | | |
| 12.9 | | | | | 450 | | | | | |

| L/D 直径 DC | 10D | 15D | 20D | 25D | 30D | 35D | 40D | 45D | 50D | 60D |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 13 | | | | | 450 | | | | | |
| 13.1 | | | | | 450 | | | | | |
| 13.2 | | | | | 450 | | | | | |
| 13.3 | | | | | 450 | | | | | |
| 13.4 | | | | | 450 | | | | | |
| 13.5 | | | | | 450 | | | | | |
| 13.6 | | | | | 450 | | | | | |
| 13.7 | | | | | 450 | | | | | |
| 13.8 | | | | | 450 | | | | | |
| 13.9 | | | | | 450 | | | | | |
| 14 | | | | | 450 | | | | | |
| 14.1 | | | | 450 | | | | | | |
| 14.2 | | | | 450 | | | | | | |
| 14.3 | | | | 450 | | | | | | |
| 14.4 | | | | 450 | | | | | | |
| 14.5 | | | | 450 | | | | | | |
| 14.6 | | | | 450 | | | | | | |
| 14.7 | | | | 450 | | | | | | |
| 14.8 | | | | 450 | | | | | | |
| 14.9 | | | | 450 | | | | | | |
| 15 | | | | 450 | | | | | | |
| 15.1 | | | | 450 | | | | | | |
| 15.2 | | | | 450 | | | | | | |
| 15.3 | | | | 450 | | | | | | |
| 15.4 | | | | 450 | | | | | | |
| 15.5 | | | | 450 | | | | | | |
| 15.6 | | | | 450 | | | | | | |
| 15.7 | | | | 450 | | | | | | |
| 15.8 | | | | 450 | | | | | | |
| 15.9 | | | | 450 | | | | | | |
| 16 | | | | 450 | | | | | | |
| 16.5 | | | 450 | | | | | | | |
| 17 | | | 450 | | | | | | | |
| 17.5 | | | 450 | | | | | | | |
| 18 | | | 450 | | | | | | | |
| 18.5 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 19.5 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 20~ | | | | | | | | | | |

表中の値は製作可能最大溝長です。 The values in the table indicate the maximum possible flute lengths.



抜群の切りくず排出性能

Superior chip evacuation capability

高能率・多機能タップ **A**

A-TAP

Highly Efficient Multi-Purpose Tap Series

ダントツの切りくず排出性!

Chip evacuation redefined!

むしれ・かじりのない高品位なめねじ加工

High-grade internal threading without galling

幅広い被削材に対応

Applies to a wide variety of work materials

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Scan for details



φ2以下の小径はこちら

For small diameter under dia. 2 mm

小径油穴付き超硬ドリル

ADO-MICRO **A**

Small Diameter Carbide Drills with Oil Holes

2Dタイプ 2D Type φ0.7 ~ φ2

5Dタイプ 5D Type φ0.7 ~ φ2

12Dタイプ 12D Type φ1 ~ φ2

20Dタイプ 20D Type φ1 ~ φ2

30Dタイプ 30D Type φ1 ~ φ2

■製品の詳細はこちら
Scan for details



小径の穴加工にも対応

Also supports small diameter drilling

超硬フラットドリル **A**

ADF

Carbide Flat Drill

ADF-2D φ0.2 ~ φ20

ADFO-3D φ3 ~ φ20

ADFLS-2D φ3 ~ φ20

ADF-NC φ2 ~ φ12

ADFO-NC φ3 ~ φ10

■製品の詳細はこちら
Scan for details



オーエスジーは環境に優しい取り組みを推進しています

OSG's Environmental Initiatives

再研磨・再コーティング

Tool Reconditioning

使用できなくなった工具を蘇らせ再利用することは、省資源化と地球環境の保護活動への貢献につながります。

Tool reconditioning contributes to resource conservation by bringing worn cutting tools back to life, which is environmentally friendly and sustainable.



超硬リサイクル

Carbide Recycling

再研磨できなくなった超硬工具は日本ハードメタルで「超硬リサイクル」することが可能です。

超硬リサイクルは、希少金属のレアメタルを多く含む超硬材料の使用量を減らすことができ、環境保護に役立ちます。

Carbide tools that can no longer be reground can be recycled through Nihon Hard Metal's carbide recycling program. Cemented carbide materials contain a large amount of rare metals. Carbide recycling reduces material consumption and contributes to environmental preservation.

日本ハードメタル「超硬リサイクル」の特長 Highlights of Nihon Hard Metal's "Carbide Recycling" Program

超硬工具であれば、
エンドミル・ドリル・リーマ・
チップ等の分別は不要

As long as the tool has been hardened, it doesn't have to be separated into categories such as end mills, drills, reamers, and tips.

多少の異材質工具が混入もOK

(サーメット、セラミック、
または鋼材シャンク付きのものは選別)

Tools that contain a small amount of different materials are accepted (tools with cermet, ceramic and steel shanks are separated)

1回あたりの回収量：20kg～

(送料は日本ハードメタルにて負担・
宅配便等着払い)

Amount of material that can be sent for recycling :
20kg and over (shipping costs are paid by Nihon Hard Metal Co., Ltd.)

リサイクル料金：
振り込みにて対応

Recycling payment :
by direct bank deposit





shaping your dreams

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TEL(06)6538-3880

アプリケーション営業部
〒451-0051 愛知県名古屋市中区則武新町3-1-17
BIZrium名古屋 4階 TEL(052)589-8320

〈工具の技術的なご相談は…〉 コミュニケーションダイヤル

よ い 工 具 は 一 番

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⚠ 安全にお使いいただくために

- 工具を使用する時は、破損する危険があるので、必ずカバー・保護眼鏡・安全靴等を使用して下さい。
- 切れ刃は素手で触らないで下さい。
- 切りくずは素手で触らないで下さい。
- 工具の切れ味が悪くなったら使用を中止して下さい。
- 異常音・異常振動が発生したら、直ちに使用を中止して下さい。
- 工具には手を加えないで下さい。
- 加工前に工具の寸法確認を行って下さい。

⚠ Safe use of cutting tools

- Use safety cover, safety glasses and safety shoes during operation.
- Do not touch cutting edges with bare hands.
- Do not touch cutting chips with bare hands. Chips will be hot after cutting.
- Stop cutting when the tool becomes dull.
- Stop cutting operation immediately if you hear any abnormal cutting sounds.
- Do not modify tools.
- Please use appropriate tools for the operation. Check dimensions to ensure proper selection.

OSG代理店

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