

 **DORMER** U.K.

SIMPLY RELIABLE

## INFORMASI MATA BOR DAN INSERT



Mata bor, Reamers, Countersink, End Mill  
Cutters, Dies Saw, Insert, Tapers, Hand & Machine Tap



**STEEL**

|     |  |         |     |  |       |
|-----|--|---------|-----|--|-------|
| 1.1 | Magnetic Soft Steel                      | <120 HB | 1.5 | Alloy Steel/ Hardened and Tempered Steel | <24   |
| 1.2 | Structural Steel/ Case Carburising Steel | <200 HB | 1.6 | Alloy Steel/ Hardened and Tempered Steel | >38   |
| 1.3 | Plain Carbon Steel                       | <24     | 1.7 | Alloy Steel Hardened                     | 49-55 |
| 1.4 | Alloy Steel                              | <24     | 1.8 | Alloy Steel Hardened                     | 55-63 |

**STAINLESS STEEL**

|     |                                    |     |
|-----|------------------------------------|-----|
| 2.1 | Free Machining Stainless Steel     | <24 |
| 2.2 | Austenitic                         | <24 |
| 2.3 | Ferritic + Austenitic, Martensitic | <32 |
| 2.4 | Precipitation Hardened             | <32 |

**CAST IRON**

|     |                                       |            |
|-----|---------------------------------------|------------|
| 3.1 | Lamellar Graphite                     | <150 HB    |
| 3.2 | Lamellar Graphite                     | <150 HB<32 |
| 3.3 | Nodular Graphite/ Malleable Cast Iron | <200 HB    |
| 3.4 | Nodular Graphite/ Malleable Cast Iron | <200 HB<32 |

**TITANIUM**

|     |                     |         |
|-----|---------------------|---------|
| 4.1 | Titanium, unalloyed | <200 HB |
| 4.2 | Titanium, alloyed   | <28     |
| 4.3 | Titanium, alloyed   | >28<38  |

**NICKEL**

|     |                   |         |
|-----|-------------------|---------|
| 5.1 | Nickel, unalloyed | <150 HB |
| 5.2 | Nickel, alloyed   | <28     |
| 5.3 | Nickel, alloyed   | >28<38  |

**COPPER**

|     |                      |         |
|-----|----------------------|---------|
| 6.1 | Cooper               | <100 HB |
| 6.2 | β-Brass, Bronze      | <200 HB |
| 6.3 | α-Brass              | <200 HB |
| 6.4 | High Strength Bronze | <49     |

**ALUMINIUM MAGNESIUM**

|     |                              |         |
|-----|------------------------------|---------|
| 7.1 | Al, Mg, Unalloyed            | <100 HB |
| 7.2 | Al Alloyed, Si<0.5%          | <150 HB |
| 7.3 | Al Alloyed, Si<0.5%<10%      | <120 HB |
| 7.4 | Al Alloyed, Si>10% Mg Alloys | <120 HB |

**SYNTHETIC MATERIALS**

|     |                              |
|-----|------------------------------|
| 8.1 | Thermoplastics               |
| 8.2 | Thermosetting Plastics       |
| 8.3 | Reinforced Plastic Materials |

**HARD MATERIALS**

|     |                          |     |
|-----|--------------------------|-----|
| 9.1 | Cermets (Metal-ceramics) | <54 |
|-----|--------------------------|-----|

**GRAPHITE**

|      |                   |
|------|-------------------|
| 10.1 | Standard Graphite |
|------|-------------------|

\* Angka di kanan menunjukan tingkat kekerasan HRC, HB

**Rating/Klasifikasi**

Rating untuk produk Dormer :

- ▶ Kotak hitam berarti mata bor memiliki rating 'Luar Biasa' terhadap jenis material yang akan dibor
- ▶ Lingkaran merah berarti mata bor memiliki rating 'Baik' terhadap jenis material yang akan dibor

  
Luar Biasa

  
Baik

### Material

Jenis dari logam yang digunakan sebagai material utama

**HSS**

High Speed Steel

**HSS-E**

High Speed Cobalt

**HSS-E  
PM**

High Speed Cobalt  
Metallurgy Steel

### Coating / Finishing

Lapisan tipis material untuk melapisi mata bor



Bright



Steam Tempered



Bronze



TiN

Bright/ Titanium  
Nitride

### Standard

NAS : National Aerospace Standards

DIN : German Institute for Standardisation

ISO : The International Organization for Standardization

**NAS  
907**

**DIN  
345**

**DIN  
338**

**DIN  
844K**

**ISO  
529**

### Kedalaman

Kedalaman mata bor dapat diukur berdasarkan diameter dari mata bor tersebut dikali **angka merah** yang ada di kiri

**1XD**

**1.5XD**

**2XD**

**3XD**

**4XD**

**5XD**

### Sudut Ujung

Sudut ujung adalah sudut yang tercipta pada ujung mata bor, ditentukan oleh jenis material yang akan dibor



**90°**



**118°**



**120°**



**130°**



**135°**



**140°**

### Keterangan Lain



Finishing

**N**

For Steels  
with low to high resistance

**Z  
4-8**

Teeth



Medium Cut Length



Rake Angle

**k10**

Diameter  
Tolerance



Slotting, Ramping,  
Diving

**N**

Form



Right Hand  
Direction



Left Hand  
Direction



Straight Shank



**DIN  
1835B**

Shank



**6H**

Tolerance



Countersink  
Centre 60°



Hole Type:  
Through or Blind Hole



Flute Geometry  
Straight Flute

**C  
2-3**

Chamfer

**B  
3.5-5**

Chamfer



Through Hole



Blind Hole



Thread Form  
Metric Coarse

### A002 A002S (with pouch)



( HSS + TIN - TIP JOBBER DRILL )

- ▶ Self-centering split point untuk akurasi dan kualitas lubang yang sangat baik
- ▶ Lapisan TiN pada ujung mata bor memper-awet dan meningkatkan performa (untuk ukuran 2.0 mm keatas)
- ▶ Pahatan yang tipis dengan sudut pahat yang rendah, didukung dengan teknologi self-centering

Ukuran : | 1.0 - 16.0 mm |  
| 3/64 - 5/8 Inch |

|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ■ | 1.1 | 1.2 | 1.3 | 1.4 | 3.1 | 3.2 | 7.1 | 7.2 | 8.1 | 8.2 |     |     |     |     |     |     |     |     |
| ● | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.3 |
|   | 7.4 | 8.3 | 9.1 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

HSS
DIN 338
4XD
118°
TiN

N

PS

### A100

( HSS JOBBER DRILL STRAIGHT )



- ▶ Ideal digunakan untuk aplikasi permesinan pada semua jenis bahan material
- ▶ Blue finish bright untuk ukuran dibawah 1 mm/ 3/64"

Ukuran : | 0.2 - 20.0 mm |  
| 1/64 - 11/16 Inch |

|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ■ | 1.1 | 1.2 | 1.3 | 1.4 | 3.1 | 3.2 |     |     |     |     |     |     |     |     |     |     |     |     |
| ● | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 |
|   | 7.2 | 7.3 | 8.1 | 8.2 | 8.3 | 9.1 |     |     |     |     |     |     |     |     |     |     |     |     |

HSS
DIN 338
4XD
118°
ST

N

### A777

( HSS-E JOBBER DRILL BRONZE COBALT )



- ▶ 135° split point mengurangi gaya axial sehingga memastikan mata bor langsung memotong secara instan
- ▶ Konstruksi ulir heavy duty pada mata bor memberikan tenaga yang memadai untuk mengebor material yang alot & keras (>49 HRC)
- ▶ Dibuat dengan material premium HSS-E (High Speed Cobalt) dengan kadar cobalt 8%

Ukuran : 0.3 - 16.0 mm  
1/16 - 1/2 Inch

|         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ■       | 1.5 | 1.6 | 3.4 | 4.1 | 4.2 | 4.3 | 5.2 |     |     |     |     |     |     |     |     |     |     |     |
| A777: ● | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 5.1 | 5.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 | 7.2 |
|         | 7.3 | 7.4 | 9.1 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |



### A130

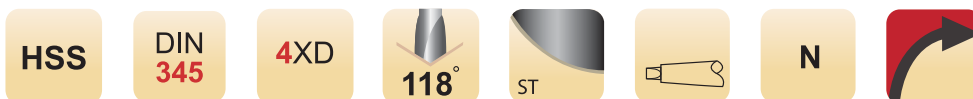
( TAPER SHANK DRILL )



- ▶ Dengan ujung bersudut 118°, menipis di atas diameter 14 mm sehingga memudahkan menembus material kerja
- ▶ Konstruksi ulir yang kuat memberikan tenaga cross sectional saat mengebor pada kondisi yang tidak selalu ideal
- ▶ Morse taper shank memungkinkan mata bor dipasang langsung ke mesin

Ukuran : 2.0 - 100 mm  
1/8 - 3.0 Inch

|         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ■       | 1.1 | 1.2 | 1.3 | 1.4 | 3.1 | 3.2 | 7.1 | 7.2 | 8.1 | 8.2 |     |     |     |     |     |     |     |     |
| A130: ● | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.3 |
|         | 7.4 | 8.3 | 9.1 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |



### A200

#### ( HSS CENTRE DRILL )



- ▶ Untuk mengebor komponen yang memerlukan pengerjaan pada titik pusat
- ▶ 60° sudut countersink  
118° sudut ujung, bright finish

Ukuran : | 0.5 - 12.5 mm |  
| 1/64 - 31/64 Inch |

|         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ■       | 1.1 | 1.2 | 1.3 | 1.4 | 3.1 | 3.2 |     |     |     |     |     |     |     |     |     |     |     |     |
| A200: ● | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 6.1 | 6.2 | 6.3 | 6.4 | 7.1 |
|         | 7.2 | 7.3 | 7.4 | 8.1 | 8.2 | 8.3 | 9.1 |     |     |     |     |     |     |     |     |     |     |     |

HSS
DIN 333A
1XD
118
60°

### C247

#### ( END MILL 4 FLUTES )



- ▶ Dibuat dengan teknologi powdered steel cobalt material
- ▶ Mengurangi kemungkinan chipping (sisa hasil bor tersendat)
- ▶ Kemampuan pemotongan pusat, mampu membentuk, menekan dan mengikis ke dalam
- ▶ Performa yang baik dan awet dibandingkan end-mill biasa

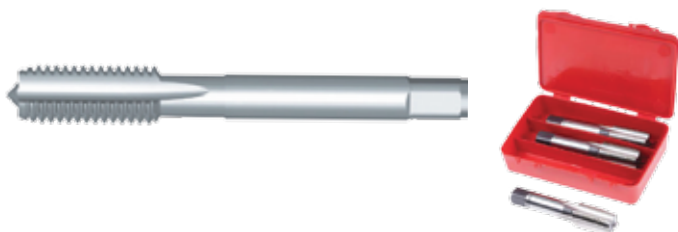
Ukuran : 2.00 - 50.00

|         |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |  |  |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| ■       | 1.1 | 1.2 | 1.3 | 4.1 | 5.1 | 6.1 | 6.2 | 6.3 |     |     |     |     |  |  |  |  |  |  |
| C247: ● | 1.4 | 2.1 | 3.1 | 3.2 | 3.3 | 3.4 | 4.2 | 5.2 | 7.1 | 7.2 | 7.3 | 8.1 |  |  |  |  |  |  |

HSS-E PM
N
Z 4-8
30° / 12°
k10
DIN 844K
DIN 1835B

### E100

(available in set of three)



Ukuran : M3 - M20

( M HAND TAP STRAIGHT FLUTE )

- ▶ Cocok untuk hand tapping lubang terbuka dan lubang tertutup
- ▶ Tersedia dalam satuan atau set (terdiri dari taper, no 1, 2 dan 3)

E100 : ● 1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 6.1 6.2 6.3 6.4 7.2 7.3 7.4 8.2 8.3



### E500

( M MACHINE/HAND TAP STRAIGHT FLUTE )



Ukuran : M1 - M56

- ▶ Cocok untuk banyak jenis material
- ▶ Digunakan untuk hand tapping & machine tapping
- ▶ Threading lubang tertutup dan lubang terbuka
- ▶ Kualitas superior dibanding tap biasa

E500: ● 1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 3.4 6.1 6.2 6.3 6.4 7.2 7.3 7.4 8.2 8.3



### EP006H

( M MACHINE TAP SPIRAL POINT )



Ukuran : M3 - M30

- ▶ Cocok untuk banyak jenis material
- ▶ High Speed Cobalt steel (HSS-E) substrat meningkatkan kekuatan sudut dan daya tahan terhadap aus
- ▶ Torsi yang rendah dan sisa material hasil bor lebih mudah terbuang karena panjang thread yang pendek
- ▶ Tersedia dalam dua jenis, spiral flute dan spiral point untuk threading lubang tertutup dan lubang terbuka

|          |   |     |     |     |     |     |     |     |     |     |     |     |
|----------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EP006H : | ■ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 6.1 | 6.3 | 7.1 | 7.2 | 7.3 | 7.4 |
|          | ● | 1.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 5.1 | 5.2 | 6.2 | 8.1 |



### EX006H

( M MACHINE TAP SPIRAL FLUTE 45° )



Ukuran : M2 - M64

- ▶ Cocok untuk banyak jenis material
- ▶ High Speed Cobalt steel (HSS-E) substrat meningkatkan kekuatan sudut dan daya tahan terhadap aus
- ▶ Torsi yang rendah dan sisa material hasil bor lebih mudah terbuang karena panjang thread yang pendek
- ▶ Tersedia dalam dua jenis, spiral flute dan spiral point untuk threading lubang tertutup dan lubang terbuka

|          |   |     |     |     |     |     |     |     |     |     |
|----------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EX006H : | ■ | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 7.1 | 7.2 | 7.3 | 7.4 |
|          | ● | 4.1 | 4.2 | 5.1 | 5.2 |     |     |     |     |     |





## Box set


**PIECE SET A100 DRILLS**

| PROD#   | Ukuran                                | Isi / Set    |
|---------|---------------------------------------|--------------|
| a190201 | 1.0 - 10.5 x 0.5                      | 19-Piece Set |
| a190202 | 1.0 - 6.0 x 0.5                       | 51-Piece Set |
| a190203 | 6.0 - 10.0 x 0.1                      | 41-Piece Set |
| a190204 | 1.0 - 13.0 x 0.5                      | 25-Piece Set |
| a190206 | 1.0 -13.0 x 0.5 + 3.3, 4.2, 6.8, 10.2 | 29-Piece Set |
| a190209 | 1.0 - 10.0 x 0.1                      | 91-Piece Set |


**PIECE SET A002 DRILLS**

| PROD#   | Ukuran                                 | Isi / Set    |
|---------|--|--------------|
| a095200 | 1.0 - 10.5 x 0.5 + 3.3,4.2,6.8,10.2    | 24-Piece Set |
| a095201 | 1.0 - 10.0 x 0.5                       | 19-Piece Set |
| a095202 | 1.0 - 6.0 x 0.1                        | 51-Piece Set |
| a095203 | 6.0 - 10.0 x 0.1                       | 41-Piece Set |
| a095204 | 1.0 - 13.0 x 0.5                       | 25-Piece Set |
| a095205 | 1.0 - 13.0 x 0.5 + 3.3, 4.2, 6.8, 10.3 | 29-Piece Set |
| a095206 | 1.0 - 10.0 x 0.1                       | 91-Piece Set |

## Tabel ukuran metric Hand Tap

| M   |      |      |      |
|-----|------|------|------|
| ∅   | P mm | ∅ mm | ∅ mm |
| 1.0 | 0.25 | 0.75 | 0.90 |
| 1.6 | 0.35 | 1.25 | 1.40 |
| 1.8 | 0.35 | 1.45 | 1.65 |
| 2.0 | 0.40 | 1.60 | 1.80 |
| 2.2 | 0.45 | 1.75 | 2.00 |
| 2.5 | 0.45 | 2.05 | 2.30 |
| 3.0 | 0.50 | 2.50 | 2.80 |
| 3.5 | 0.60 | 2.90 | 3.20 |
| 4.0 | 0.70 | 3.30 | 3.70 |
| 4.5 | 0.75 | 3.80 | 4.15 |
| 5.0 | 0.80 | 4.20 | 4.60 |
| 6.0 | 1.00 | 5.00 | 5.50 |

| M    |      |       |       |
|------|------|-------|-------|
| ∅    | P mm | ∅ mm  | ∅ mm  |
| 7.0  | 1.00 | 6.00  | 6.50  |
| 8.0  | 1.25 | 6.80  | 7.40  |
| 9.0  | 1.25 | 7.80  | 8.40  |
| 10.0 | 1.50 | 8.50  | 9.30  |
| 11.0 | 1.50 | 9.50  | 10.30 |
| 12.0 | 1.75 | 10.30 | 11.20 |
| 14.0 | 2.00 | 12.00 | 13.00 |
| 16.0 | 2.00 | 14.00 | 15.00 |
| 18.0 | 2.50 | 15.50 | 16.80 |
| 20.0 | 2.50 | 17.50 | 18.90 |
| 22.0 | 2.50 | 19.50 | 20.80 |
| 24.0 | 3.00 | 21.00 | 22.70 |

| M    |      |       |      |
|------|------|-------|------|
| ∅    | P mm | ∅ mm  | ∅ mm |
| 27.0 | 3.00 | 24.00 |      |
| 30.0 | 3.50 | 26.50 |      |
| 33.0 | 3.50 | 29.50 |      |
| 36.0 | 4.00 | 32.00 |      |
| 39.0 | 4.00 | 35.00 |      |
| 42.0 | 4.50 | 37.50 |      |
| 45.0 | 4.50 | 40.50 |      |
| 48.0 | 5.00 | 43.00 |      |
| 52.0 | 5.00 | 47.00 |      |
| 56.0 | 5.50 | 50.50 |      |
| 64.0 | 6.00 | 58.00 |      |



SIMPLY RELIABLE



Untuk informasi produk kami yang lain, silahkan kunjungi

**DORMERPRAMET.COM**

**DORMER.ID**





**INFORMASI MATA BOR DAN INSERT**



Mata bor, Reamers, Countersink, End Mill Cutters, Dies Saw, Insert, Tapers, Hand & Machine Tap



**U.K.**

**ICON DESCRIPTION**

| STEEL                                      |         | CAST IRON                                  |             |
|--|---------|--|-------------|
| 11 Magnetic Soft Steel                     | <120 HB | 54 Alloy Steel Hardened and Tempered Steel | >24         |
| 12 Structural Steel Case Carburizing Steel | <200 HB | 55 Lamellar Graphite                       | <150 HB-120 |
| 13 Plain Carbon Steel                      | <24     | 57 Nodular Graphite Multi-Grade Cast Iron  | <200 HB     |
| 14 Alloy Steel                             | <24     | 58 Nodular Graphite Multi-Grade Cast Iron  | <200 HB-120 |
| 15 Alloy Steel                             | <24     | 59 Alloy Steel Hardened                    | 48-55       |
| 16 Alloy Steel                             | <24     | 60 Alloy Steel Hardened                    | 55-63       |

| STAINLESS STEEL                       |     | NICKEL               |         |
|---------------------------------------|-----|----------------------|---------|
| 21 Free Machining Stainless Steel     | <24 | 61 Nickel, unalloyed | <150 HB |
| 22 Austenitic                         | <24 | 62 Nickel, alloyed   | <28     |
| 23 Ferritic + Austenitic, Martensitic | <32 | 63 Nickel, alloyed   | >28-38  |
| 24 Precipitation Hardened             | <32 |                      |         |

| TITANIUM               |         | ALUMINIUM MANGANESE             |         |
|------------------------|---------|---------------------------------|---------|
| 31 Titanium, unalloyed | <200 HB | 64 Al Mg, unalloyed             | <150 HB |
| 32 Titanium, alloyed   | <28     | 65 Al40%Si, 60%Si               | <150 HB |
| 33 Titanium, alloyed   | >28-38  | 66 Al40%Si, 60%Si+10%           | <120 HB |
|                        |         | 67 Al40%Si, 60%Si+10% Mg/Alloys | <120 HB |

| SYNTHETIC MATERIALS             |  | HARD MATERIALS              |     |
|---------------------------------|--|-----------------------------|-----|
| 71 Thermoplastics               |  | 68 Cermet (AlTiN/Cermetics) | <54 |
| 72 Thermosetting Plastics       |  | 69 GRAPHITE                 |     |
| 73 Reinforced Plastic Materials |  | 70 Standard Graphite        |     |

\* Angka di kanan menunjukkan tingkat kekerasan HRC, HB

**Rating Kesulitan**

- Rating untuk produk Dormer:
- Kotak hitam berarti mata bor memiliki rating Luar Biasa terhadap jenis material yang akan dibor
- Lingkar merah berarti mata bor memiliki rating Baik terhadap jenis material yang akan dibor



**ICON DESCRIPTION**

**Material**

Jenis dan logam yang digunakan sebagai material utama

HSS High Speed Steel  
HSS-E High Speed Cobalt  
HSS-E PM High Speed Cobalt Multi-Phase Steel

**Coating / Finishing**

Lapisan tipis material untuk melapisi mata bor

Black  
TiN  
TiAlN  
TiN+CrN  
TiN+AlN

**Standard**

NAS: National Aerospace Standards  
DIN: German Institute for Standardization  
ISO: The International Organization for Standardization

**Kedalaman**

Kedalaman mata bor dapat dikur berdasarkan diameter dari mata bor tersebut di atas angka merah yang ada di kiri

1XD 1,5XD 2XD 3XD 4XD 5XD

**Sudut Ujung**

Sudut ujung adalah sudut yang tertera pada gambar mata bor, digunakan sebagai referensi untuk mata bor yang akan dibuat

90° 118° 120° 130° 135° 140°

**Keterangan Lain**

Fluting  
N  
Z-40  
Teeth  
Metric Cut Length  
Rake Angle  
Dormer  
Milling, Boring, Turn  
Form

High Speed Steel  
Lubrication  
Straight Shank  
Shank  
HSS-E  
Coating  
High Speed Steel  
High Speed Steel

C 2-3  
B 3.5-5  
M

**DRILL INFORMATION**

**A002 A002S (with pouch)**

(HSS + TiN - TIP JOBBER DRILL)



- Self-centering split point untuk akurasi dan kualitas lubang yang sangat baik
- Lapisan TiN pada ujung mata bor mengempes-awet dan meningkatkan performa untuk ukuran 2.0 mm keatas
- Pahatan yang tipis dengan sudut pahat yang rendah, didukung dengan teknologi self-centering

Ukuran: 1.0 - 16.0 mm / 3/64 - 5/8 Inch

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| A002 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.2 | 2.5 | 2.8 | 3.2 | 3.6 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|



**A100**

(HSS JOBBER DRILL STRAIGHT)



- Ideal digunakan untuk aplikasi permesinan pada semua jenis bahan material
- Blue finish bright untuk ukuran dibawah 1 mm / 3/64"

Ukuran: 0.2 - 20.0 mm / 1/64 - 13/16 Inch

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| A100 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.8 | 1.0 | 1.2 | 1.5 | 1.8 | 2.0 | 2.5 | 3.0 | 3.6 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 | 20.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|



Untuk detail spesifikasi, silakan kunjungi [www.dormerpramet.com](http://www.dormerpramet.com)

**DRILL INFORMATION**

**A777**

(HSS-E JOBBER DRILL, BRONZE COBALT)



- 135° split point mengurangi gaya axial sehingga memastikan mata bor langsung memotong secara instan
- Konstruksi ulir heavy duty pada mata bor memberikan tenaga yang memadai untuk mengorek material yang alot & keras (>49 HRC)
- Dibuat dengan material premium HSS-E (High Speed Cobalt) dengan kadar cobalt 8%

Ukuran: 1.3 - 16.0 mm / 1/16 - 5/8 Inch

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| A777 | 1.3 | 1.5 | 1.6 | 1.8 | 2.0 | 2.2 | 2.5 | 2.8 | 3.2 | 3.6 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|



**A130**

(TAPER SHANK DRILL)



- Dengan ujung berwujud 118°, memiliki di atas diameter 14 mm sehingga memudahkan menembus material kerja
- Konstruksi ulir yang kuat memberikan tenaga cross sectional saat mengorek pada kondisi yang tidak selalu ideal
- Morse taper shank memungkinkan mata bor dipasang langsung ke mesin

Ukuran: 2.0 - 100 mm / 1/8 - 3.9 Inch

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| A130 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 | 20.0 | 22.0 | 25.0 | 28.0 | 32.0 | 36.0 | 40.0 | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 | 90.0 | 95.0 | 100.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|



Untuk detail spesifikasi, silakan kunjungi [www.dormerpramet.com](http://www.dormerpramet.com)

**DRILL INFORMATION**

**A200**

(HSS CENTRE DRILL)



- Untuk mengorek komponen yang memerlukan penangan pada titik pusat
- 60° sudut countersink
- 118° sudut ujung, bright finish

Ukuran: 0.5 - 12.0 mm / 1/64 - 3/16 Inch

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| A200 | 0.5 | 0.6 | 0.8 | 1.0 | 1.2 | 1.5 | 1.8 | 2.0 | 2.5 | 3.0 | 3.6 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|



**C247**

(END MILL 4 FLUTES)



- Dibuat dengan teknologi powdered steel cobalt material
- Mengurangi kemungkinan chipping (jika hasil bor teresdud)
- Kemampuan penanganan pusat, mampu menembus, menaikan dan mengkilap ke dalam
- Performa yang baik dan awet dibandikan end-mill biasa

Ukuran: 2.00 - 50.00

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| C247 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 | 20.0 | 22.0 | 25.0 | 28.0 | 32.0 | 36.0 | 40.0 | 45.0 | 50.0 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|



Untuk detail spesifikasi, silakan kunjungi [www.dormerpramet.com](http://www.dormerpramet.com)

**TAPS INFORMATION**

**E100**

(available in set of three)



(M HAND TAP STRAIGHT FLUTE)

- Cocok untuk hand tapping lubang terbuka dan lubang tertutup
- Tersedia dalam satuan satu set (terdiri dari taper, no 1, 2 dan 3)

Ukuran: M3 - M20

|      |    |    |    |    |    |     |     |     |     |     |     |
|------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| E100 | M3 | M4 | M5 | M6 | M8 | M10 | M12 | M14 | M16 | M18 | M20 |
|------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|



**E500**

(M MACHINE/HAND TAP STRAIGHT FLUTE)



- Cocok untuk banyak jenis material
- Digunakan untuk hand tapping & machine tapping
- Threading lubang tertutup dan lubang terbuka
- Kualitas superior dibanding tap biasa

Ukuran: M1 - M56

|      |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E500 | M1 | M2 | M3 | M4 | M5 | M6 | M8 | M10 | M12 | M14 | M16 | M18 | M20 | M22 | M24 | M27 | M30 | M33 | M36 | M40 | M45 | M50 | M55 |
|------|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



Untuk detail spesifikasi, silakan kunjungi [www.dormerpramet.com](http://www.dormerpramet.com)

**TAPS INFORMATION**

**EP006H**

(M MACHINE TAP SPIRAL POINT)



- Cocok untuk banyak jenis material
- High Speed Cobalt steel (HSS-E) substrat meningkatkan kekuatan sudut dan daya tahan terhadap aus
- Torsi yang rendah dan sisa material hasil bor lebih mudah terbuang karena parang thread yang pendek
- Tersedia dalam dua jenis, spiral flute dan spiral point untuk threading lubang tertutup dan lubang terbuka

Ukuran: M3 - M30

|        |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
|--------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EP006H | M3 | M4 | M5 | M6 | M8 | M10 | M12 | M14 | M16 | M18 | M20 | M22 | M24 | M27 | M30 |
|--------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



**EX006H**

(M MACHINE TAP SPIRAL FLUTE 45°)



- Cocok untuk banyak jenis material
- High Speed Cobalt steel (HSS-E) substrat meningkatkan kekuatan sudut dan daya tahan terhadap aus
- Torsi yang rendah dan sisa material hasil bor lebih mudah terbuang karena parang thread yang pendek
- Tersedia dalam dua jenis, spiral flute dan spiral point untuk threading lubang tertutup dan lubang terbuka

Ukuran: M2 - M64

|        |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EX006H | M2 | M3 | M4 | M5 | M6 | M8 | M10 | M12 | M14 | M16 | M18 | M20 | M22 | M24 | M27 | M30 | M33 | M36 | M40 | M45 | M50 | M55 | M60 | M64 |
|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|



Untuk detail spesifikasi, silakan kunjungi [www.dormerpramet.com](http://www.dormerpramet.com)

**BOX SET INFORMATION**

**Box set**



**PIECE SET A100 DRILLS**

| ITEM NO | Ukuran        | Set         |
|---------|---------------|-------------|
| A100001 | 1.0 - 16.0 mm | 3-Piece Set |
| A100002 | 1.2 - 6.0 mm  | 3-Piece Set |
| A100003 | 0.5 - 10.0 mm | 3-Piece Set |
| A100004 | 1.2 - 18.0 mm | 3-Piece Set |
| A100005 | 1.2 - 10.0 mm | 3-Piece Set |
| A100006 | 1.2 - 10.0 mm | 3-Piece Set |

**PIECE SET A002 DRILLS**

| ITEM NO | Ukuran        | Set         |
|---------|---------------|-------------|
| A002001 | 1.0 - 10.0 mm | 3-Piece Set |
| A002002 | 1.2 - 10.0 mm | 3-Piece Set |
| A002003 | 1.2 - 10.0 mm | 3-Piece Set |
| A002004 | 1.2 - 10.0 mm | 3-Piece Set |
| A002005 | 1.2 - 10.0 mm | 3-Piece Set |
| A002006 | 1.2 - 10.0 mm | 3-Piece Set |

**Tabel ukuran metric Hand Tap**

| M   | F    | mm   | mm   | mm   | M    | F     | mm    | mm    | mm    | M    | F    | mm    | mm    | mm    |
|-----|------|------|------|------|------|-------|-------|-------|-------|------|------|-------|-------|-------|
| 2.0 | 0.25 | 0.75 | 0.98 | 7.0  | 1.0  | 0.20  | 6.00  | 6.00  | 6.00  | 27.0 | 1.50 | 24.00 | 24.00 | 24.00 |
| 1.6 | 0.20 | 1.25 | 1.40 | 6.0  | 1.25 | 6.80  | 6.80  | 6.80  | 6.80  | 25.0 | 1.50 | 20.00 | 20.00 | 20.00 |
| 1.8 | 0.35 | 1.45 | 1.65 | 9.0  | 1.25 | 7.80  | 8.40  | 8.40  | 8.40  | 33.0 | 1.50 | 25.00 | 25.00 | 25.00 |
| 2.5 | 0.40 | 1.60 | 1.80 | 10.0 | 1.50 | 8.50  | 9.50  | 9.50  | 9.50  | 36.0 | 1.50 | 28.00 | 28.00 | 28.00 |
| 2.2 | 0.45 | 1.75 | 2.00 | 11.0 | 1.50 | 9.50  | 10.50 | 10.50 | 10.50 | 39.0 | 1.50 | 30.00 | 30.00 | 30.00 |
| 2.5 | 0.40 | 2.00 | 2.30 | 12.0 | 1.75 | 10.00 | 11.20 | 11.20 | 11.20 | 42.0 | 1.50 | 32.00 | 32.00 | 32.00 |
| 3.0 | 0.50 | 2.30 | 2.80 | 14.0 | 2.00 | 12.00 | 13.50 | 13.50 | 13.50 | 45.0 | 1.50 | 35.00 | 35.00 | 35.00 |
| 3.5 | 0.60 | 2.60 | 3.20 | 16.0 | 2.00 | 14.00 | 16.00 | 16.00 | 16.00 | 48.0 | 1.50 | 38.00 | 38.00 | 38.00 |
| 4.0 | 0.70 | 3.00 | 3.70 | 18.0 | 2.50 | 15.50 | 18.00 | 18.00 | 18.00 | 52.0 | 1.50 |       |       |       |