

## ► Features & Benefits

- Miranda Drills are made from M2 grade of HSS. M35 &M42 grades of HSS are also available on request.
- Miranda Drills are manufactured with Ground Flutes upto 1400mm and with milled flutes above 14.00mm
- Miranda Drills are available in Bright / Steam Blue Finish or with coating (TiN, TiCN, TiAIN)
- Miranda Drills point geometry general purpose (118°), 90°,135°, Split point 2.00mm to 14.00mm.

| Manufacturing Standards |               |  |
|-------------------------|---------------|--|
| German                  | DIN 338       |  |
| British                 | BS 328 Part I |  |

| Description   | Standard Drills   | High Helix Drills  | Low Helix Drills  |
|---------------|---|--|---|
| Size Range    | 1.20mm to<br>20.00mm  | 3.00mm to 14.00mm  | 3.00mm to 7.00mm  |
| Helix Angle   | 25° - 30°   | 34° - 40°  | 17° - 23°   |
| Web Thickness | Standard  | Lower than standard  | Lower than standard   |
| Point Angle   | 118°  | 118° - 135°  | 90°- 118°   |
| Relief Angle  | 10° - 20°   | 10° - 20°  | 10° - 20°   |
| Applications  | Most suitable for drilling of steel, cast iron, alloy steel and malleable cast iron and possible to drill stainless steel, brass, shallow hole in aluminium alloy, nickel and almost all kinds of material. | Most suitable for drilling of non-ferrous metals and alloys like aluminium, die cast alloy, zinc, copper etc. Fine result in normal drilling of stainless steel having good machinability. | Most suitable for<br>drilling of<br>Bakelite,<br>moulded<br>Bakelite,<br>moulded plastics,<br>fibre, hard<br>rubber. Also,<br>suitable for<br>drilling of soft<br>type of Brass and<br>magnesium alloy. |

| <b>Packing</b>      |  |
|---------------------|--|
| <b>Bulk Packing</b> |  |
| Plastic pouch       |  |
| Plastic tubes       |  |

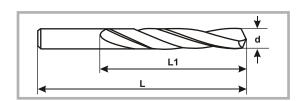
Plastic pouch Plastic tubes As per customer requirement

| Metric | Metric Sizes As Per DIN 338 |         |  |
|--------|-----------------------------|---------|--|
| Drill  | Flute                       | Overall |  |
| Size   | Length                      | Length  |  |
| dmm    | L1mm                        | Lmm     |  |
| 1.20   | 16                          | 38      |  |
| 1.25   | 16                          | 38      |  |
| 1.30   | 16                          | 38      |  |
| 1.35   | 18                          | 40      |  |
| 1.40   | 18                          | 40      |  |
| 1.45   | 18                          | 40      |  |
| 1.50   | 18                          | 40      |  |
| 1.55   | 20                          | 43      |  |
| 1.60   | 20                          | 43      |  |
| 1.65   | 20                          | 43      |  |
| 1.70   | 20                          | 43      |  |
| 1.75   | 22                          | 46      |  |
| 1.80   | 22                          | 46      |  |
| 1.85   | 22                          | 46      |  |
| 1.90   | 22                          | 4       |  |
| 1.95   | 24                          | 49      |  |
| 2.00   | 24                          | 49      |  |
| 2.05   | 24                          | 49      |  |
| 2.10   | 24                          | 49      |  |
| 2.15   | 27                          | 53      |  |
| 2.20   | 27                          | 53      |  |
| 2.25   | 27                          | 53      |  |
| 2.30   | 27                          | 53      |  |
| 2.35   | 27                          | 53      |  |
| 2.40   | 30                          | 57      |  |
| 2.45   | 30                          | 57      |  |
| 2.50   | 30                          | 57      |  |
| 2.55   | 30                          | 57      |  |
| 2.60   | 30                          | 57      |  |
| 2.65   | 30                          | 57      |  |
| 2.70   | 33                          | 61      |  |
| 2.75   | 33                          | 61      |  |
| 2.80   | 33                          | 61      |  |
| 2.85   | 33                          | 61      |  |
| 2.90   | 33                          | 61      |  |
| 2.95   | 33                          | 61      |  |
| 3.00   | 33                          | 61      |  |

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| Manufacturing Standards |               |  |
|-------------------------|---------------|--|
| German                  | DIN 338       |  |
| British                 | BS 328 Part I |  |

| Description   | Standard Drills   | High Helix Drills  | Low Helix Drills  |
|---------------|---|--|---|
| Size Range    | 1.20mm to 20.00mm   | 3.00mm to 14.00mm  | 3.00mm to 7.00mm  |
| Helix Angle   | 25° - 30°   | 34° - 40°  | 17° - 23°   |
| Web Thickness | Standard  | Lower than standard  | Lower than standard   |
| Point Angle   | 118°  | 118° - 135°  | 90°- 118°   |
| Relief Angle  | 10° - 20°   | 10° - 20°  | 10° - 20°   |
| Applications  | Most suitable for drilling of steel, cast iron, alloy steel and malleable cast iron and possible to drill stainless steel, brass, shallow hole in aluminium alloy, nickel and almost all kinds of material. | Most suitable for drilling of non-ferrous metals and alloys like aluminium, die cast alloy, zinc, copper etc. Fine result in normal drilling of stainless steel having good machinability. | Most suitable for<br>drilling of<br>Bakelite,<br>moulded<br>Bakelite,<br>moulded plastics,<br>fibre, hard<br>rubber. Also,<br>suitable for<br>drilling of soft<br>type of Brass and<br>magnesium alloy. |

#### **Packing**

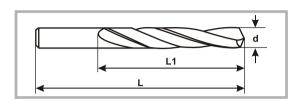
Bulk Packing
Plastic pouch
Plastic tubes
As per customer requirement

| Metric | Sizes As Per D | IN 338  |
|--------|----------------|---------|
| Drill  | Flute          | Overall |
| Size   | Length         | Length  |
| dmm    | L1mm           | Lmm     |
| 3.10   | 36             | 65      |
| 3.20   | 36             | 65      |
| 3.30   | 36             | 65      |
| 3.40   | 39             | 70      |
| 3.50   | 39             | 70      |
| 3.60   | 39             | 70      |
| 3.70   | 39             | 70      |
| 3.80   | 43             | 75      |
| 3.90   | 43             | 75      |
| 4.00   | 43             | 75      |
| 4.10   | 43             | 75      |
| 4.20   | 43             | 75      |
| 4.30   | 47             | 80      |
| 4.40   | 47             | 80      |
| 4.50   | 47             | 80      |
| 4.60   | 47             | 80      |
| 4.70   | 47             | 80      |
| 4.80   | 52             | 86      |
| 4.90   | 52             | 86      |
| 5.00   | 52             | 86      |
| 5.10   | 52             | 86      |
| 5.20   | 52             | 86      |
| 5.30   | 52             | 86      |
| 5.40   | 57             | 93      |
| 5.50   | 57             | 93      |
| 5.60   | 57             | 93      |
| 5.7    | 57             | 93      |
| 5.80   | 57             | 93      |
| 5.90   | 57             | 93      |
| 6.00   | 57             | 93      |
| 6.10   | 63             | 101     |
| 6.20   | 63             | 101     |
| 6.30   | 63             | 101     |
| 6.40   | 63             | 101     |
| 6.50   | 63             | 101     |
| 6.60   | 63             | 101     |
| 6.70   | 63             | 101     |
| 6.80   | 69             | 109     |
| 6.90   | 69             | 109     |
| 7.00   | 69             | 109     |

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| <b>Packi</b> |  |
|--------------|--|
|              |  |
|              |  |

Bulk Packing Plastic pouch Plastic tubes As per customer requirement

| Metri | c Sizes As Per D | IN 338  |
|-------|------------------|---------|
| Drill | Flute            | Overall |
| Size  | Length           | Length  |
| dmm   | L1mm             | Lmm     |
| 7.10  | 69               | 109     |
| 7.20  | 69               | 109     |
| 7.30  | 69               | 109     |
| 7.40  | 69               | 109     |
| 7.50  | 69               | 109     |
| 7.60  | 75               | 117     |
| 7.70  | 75               | 117     |
| 7.80  | 75               | 117     |
| 7.90  | 75               | 117     |
| 8.00  | 75               | 117     |
| 8.10  | 75               | 117     |
| 8.20  | 75               | 117     |
| 8.30  | 75               | 117     |
| 8.40  | 75               | 117     |
| 8.50  | 75               | 117     |
| 8.60  | 81               | 125     |
| 8.70  | 81               | 125     |
| 8.80  | 81               | 125     |
| 8.90  | 81               | 125     |
| 9.00  | 81               | 125     |
| 9.10  | 81               | 125     |
| 9.20  | 81               | 125     |
| 9.30  | 81               | 125     |
| 9.40  | 81               | 125     |
| 9.50  | 81               | 125     |
| 9.60  | 87               | 133     |
| 9.70  | 87               | 133     |
| 9.80  | 87               | 133     |
| 9.90  | 87               | 133     |
| 10.00 | 87               | 133     |
| 10.10 | 87               | 133     |
| 10.20 | 87               | 133     |
| 10.30 | 87               | 133     |
| 10.40 | 87               | 133     |
| 10.50 | 87               | 133     |
| 10.60 | 87               | 133     |
| 10.70 | 94               | 142     |
| 10.80 | 94               | 142     |
| 10.90 | 94               | 142     |
| 11.00 | 94               | 142     |

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# L1 L1

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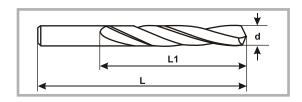
| Pack | cing |
|------|------|
| Dull | Dool |

Bulk Packing Plastic pouch Plastic tubes As per customer requirement

| Metric Sizes As Per DIN 338 |        |         |  |
|-----------------------------|--------|---------|--|
| Drill                       | Flute  | Overall |  |
| Size                        | Length | Length  |  |
| dmm                         | L1mm   | Lmm     |  |
| 11.10                       | 94     | 142     |  |
| 11.20                       | 94     | 142     |  |
| 11.30                       | 94     | 142     |  |
| 11.40                       | 94     | 142     |  |
| 11.50                       | 94     | 142     |  |
| 11.60                       | 94     | 142     |  |
| 11.70                       | 94     | 142     |  |
| 11.80                       | 94     | 142     |  |
| 11.90                       | 101    | 151     |  |
| 12.00                       | 101    | 151     |  |
| 12.10                       | 101    | 151     |  |
| 12.20                       | 101    | 151     |  |
| 12.30                       | 101    | 151     |  |
| 12.40                       | 101    | 151     |  |
| 12.50                       | 101    | 151     |  |
| 12.60                       | 101    | 151     |  |
| 12.70                       | 101    | 151     |  |
| 12.80                       | 101    | 151     |  |
| 12.90                       | 101    | 151     |  |
| 13.00                       | 101    | 151     |  |
| 13.10                       | 101    | 151     |  |
| 13.20                       | 101    | 151     |  |
| 13.30                       | 108    | 160     |  |
| 13.40                       | 108    | 160     |  |
| 13.50                       | 108    | 160     |  |
| 13.60                       | 108    | 160     |  |
| 13.70                       | 108    | 160     |  |
| 13.80                       | 108    | 160     |  |
| 13.90                       | 108    | 160     |  |
| 14.00                       | 108    | 160     |  |
| 14.25                       | 114    | 169     |  |
| 14.75                       | 114    | 169     |  |
| 15.00                       | 114    | 169     |  |
| 15.25                       | 120    | 178     |  |
| 15.50                       | 120    | 178     |  |
| 15.75                       | 120    | 178     |  |
| 16.00                       | 120    | 178     |  |
| 16.25                       | 125    | 184     |  |
| 16.50                       | 125    | 184     |  |
| 17.00                       | 125    | 184     |  |







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| Metric Sizes As Per DIN 338 |                 |                   |
|-----------------------------|-----------------|-------------------|
| Drill<br>Size               | Flute<br>Length | Overall<br>Length |
| dmm                         | L1mm            | Lmm               |
| 17.25                       | 130             | 191               |
| 17.50                       | 130             | 191               |
| 17.75                       | 130             | 191               |
| 18.00                       | 130             | 191               |
| 18.25                       | 135             | 198               |
| 18.50                       | 135             | 198               |
| 18.75                       | 135             | 198               |
| 19.00                       | 135             | 198               |
| 19.25                       | 140             | 205               |
| 19.50                       | 140             | 205               |
| 19.75                       | 140             | 205               |
| 20.00                       | 140             | 205               |

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#### **Packing**

**Bulk Packing** Plastic pouch Plastic tubes

As per customer requirement