

INTRODUCING ISO h5 TOLERANCE Exceeding Industry Standards with Hyperion's Advanced Rotary Tool Blank Specification Technology

Hyperion rotary tool blanks bring to the metal cutting market an exclusive combination of superior grades and dimensional precision that provides to our customers the features and benefits required for demanding machining. Hyperion is proud to introduce to our standard offering end mill blanks manufactured to ISO h5 tolerance for shafts.



Reliability and Consistency

Hyperion is proud of its unique position in which we maintain full control and complete traceability of our products from the mining of raw materials to delivering finished rotary tool blanks. During this fully integrated process, we maintain strict and robust statistical process controls (SPC) with the objective of targeting a process capability index (Cpk) ≥ 1.3 . The Cpk can be defined as the ability of a process to produce output within specification limits. As an example, a Cpk of 0.67 indicates the statistical probability of a batch containing 30.9% of parts that do not meet specification. Hyperion's target is a Cpk of 1.3, which indicates a 0.62% probability of delivering parts out of specification.

Advantages of Hyperion as Your Rotary Tool Blank Supplier

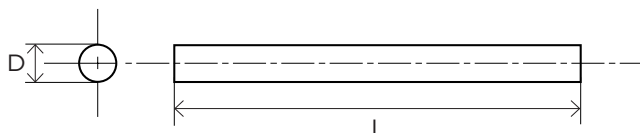
- Best tolerances in the market
- Batch-to-batch consistency
- Long tool life
- Reliable premium substrates
- Ability to predict tool life
- Ability to absorb process variances and work piece imperfections
- Cpk > 1.3
- From 3 to 6 Sigma
- Minimum standard deviation
- Robust process SPC.

Tolerances

| Reference Diameters (mm) | | ISO h6 Tolerances (μm) | | ISO h5 Tolerances (μm) | |
|--------------------------|----|-------------------------------------|-----|-------------------------------------|-----|
| From | To | | | | |
| 3 | 6 | -0 | -8 | -0 | -5 |
| 6 | 10 | -0 | -9 | -0 | -6 |
| 10 | 18 | -0 | -11 | -0 | -8 |
| 18 | 30 | -0 | -13 | -0 | -9 |
| 30 | 40 | -0 | -16 | -0 | -11 |

RU DM Hyperion Code Example

20 mm (D) x 105 mm (L) rod:
RU DM 2000 1050 5LH10F



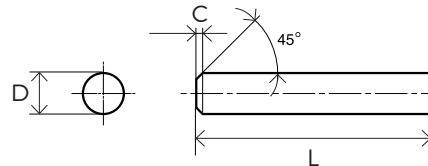
| Tolerances | Tolerance Range (μm) | Minimum \leftarrow \emptyset RANGE \rightarrow Maximum |
|------------|-----------------------------------|--|
| h6 | 13 | |
| h5 | 9 | |

INTRODUCING ISO h5 TOLERANCE

Hyperion End Mill Blanks with Chamfer, Ground to ISO h5 Tolerance with a Polished Finish

RU DM

| DIMENSIONS | | | HYPERION CODE |
|------------|--------|-------------------|--------------------|
| D (mm) | L (mm) | Chamfer Size (mm) | |
| 3.00 | 39 | 0.30 | RU DM 0300 0390 5L |
| 4.00 | 51 | 0.40 | RU DM 0400 0510 5L |
| 5.00 | 51 | 0.40 | RU DM 0500 0510 5L |
| 6.00 | 50 | 0.40 | RU DM 0600 0500 5L |
| 6.00 | 51 | 0.40 | RU DM 0600 0510 5L |
| 6.00 | 55 | 0.40 | RU DM 0600 0550 5L |
| 6.00 | 58 | 0.40 | RU DM 0600 0580 5L |
| 7.00 | 61 | 0.60 | RU DM 0700 0610 5L |
| 8.00 | 59 | 0.60 | RU DM 0800 0590 5L |
| 8.00 | 64 | 0.60 | RU DM 0800 0640 5L |
| 8.00 | 80 | 0.60 | RU DM 0800 0800 5L |
| 10.00 | 67 | 0.60 | RU DM 1000 0670 5L |
| 10.00 | 70 | 0.60 | RU DM 1000 0700 5L |
| 10.00 | 73 | 0.60 | RU DM 1000 0730 5L |
| 10.00 | 89 | 0.60 | RU DM 1000 0890 5L |
| 11.00 | 84 | 0.80 | RU DM 1100 0840 5L |
| 12.00 | 74 | 0.80 | RU DM 1200 0740 5L |
| 12.00 | 80 | 0.80 | RU DM 1200 0800 5L |
| 12.00 | 84 | 0.80 | RU DM 1200 0840 5L |
| 12.00 | 94 | 0.80 | RU DM 1200 0940 5L |
| 12.00 | 100 | 0.80 | RU DM 1200 1000 5L |
| 12.00 | 150 | 0.80 | RU DM 1200 1500 5L |
| 14.00 | 76 | 0.80 | RU DM 1400 0760 5L |
| 14.00 | 84 | 0.80 | RU DM 1400 0840 5L |
| 14.00 | 89 | 0.80 | RU DM 1400 0890 5L |
| 16.00 | 83 | 0.80 | RU DM 1600 0830 5L |
| 16.00 | 90 | 0.80 | RU DM 1600 0900 5L |
| 16.00 | 93 | 0.80 | RU DM 1600 0930 5L |
| 16.00 | 100 | 0.80 | RU DM 1600 1000 5L |
| 16.00 | 109 | 0.80 | RU DM 1600 1090 5L |
| 16.00 | 115 | 0.80 | RU DM 1600 1150 5L |
| 16.00 | 125 | 0.80 | RU DM 1600 1250 5L |
| 16.00 | 150 | 0.80 | RU DM 1600 1500 5L |
| 18.00 | 85 | 1.00 | RU DM 1800 0850 5L |
| 18.00 | 93 | 1.00 | RU DM 1800 0930 5L |
| 20.00 | 93 | 1.00 | RU DM 2000 0930 5L |
| 20.00 | 105 | 1.00 | RU DM 2000 1050 5L |
| 20.00 | 125 | 1.00 | RU DM 2000 1250 5L |
| 20.00 | 127 | 1.00 | RU DM 2000 1270 5L |
| 20.00 | 150 | 1.00 | RU DM 2000 1500 5L |
| 25.00 | 189.2 | 1.00 | RU DM 2500 1892 5L |



DIAMETER:
All

LENGTH:
All

TOLERANCE:
ISO h5

TOLERANCE:
-0 / +1%

All sizes are in mm
unless otherwise stated.

SURFACE FINISH:
< 10 mm 0.05 Ra
≥ 10 mm 0.10 Ra

Standard in Grade H10F.
Additional grades are available upon request.

ORDERING EXAMPLE:

To order a 6 mm (D) x 58 mm (L) blank in Grade H10F
RU DM 0600 0580 5LH10F

To order a 6 mm (D) x 58 mm (L) blank in Grade AM70
RU DM 0600 0580 5LAM70

All product supply is subject to local minimum order criteria.