2017 Master Catalog

WIDIA™

WIDIA TRM

Primary Application

- Achieve solid carbide metal removal rates.
- Five sizes of standard straight shank bodies available to couple reaming heads from .787–1.653" (20–42mm).

Features and Benefits

- High-speed and high-performance ready.
- Unique proprietary coupling system enables same runout accuracy as monoblock systems (<3 microns).
- Comfortable radial clamping for quick exchanging even in narrow situations in the machine.
- No fixture for clamping or dismounting necessary.

Customization

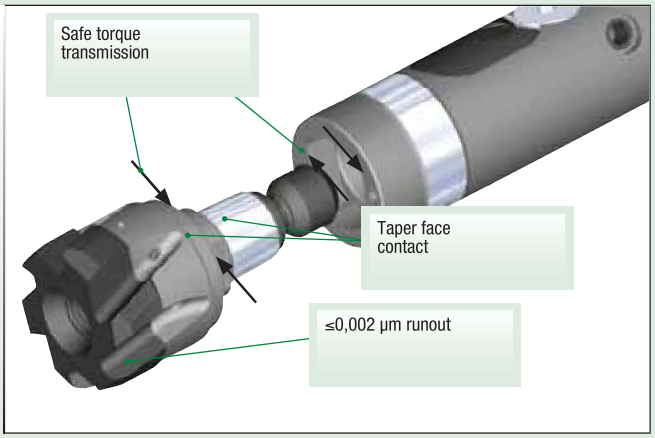
- Heads fully customizable as simple specials with different lead geometries, grades, coatings, and edge hones.
- Semi-finished heads on stock for shorter lead times.

Ordering Process

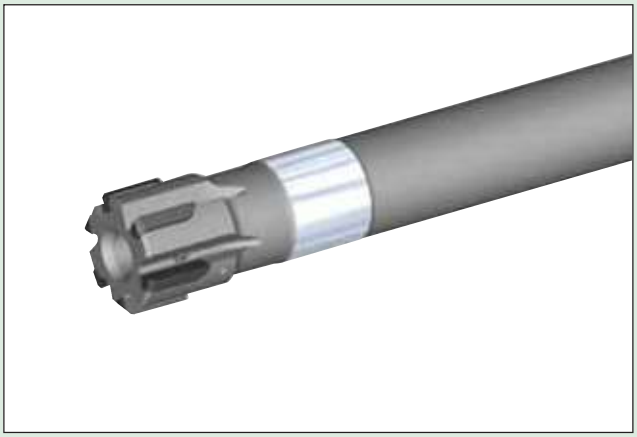
- Please contact your local Authorized Distributor for a quote.

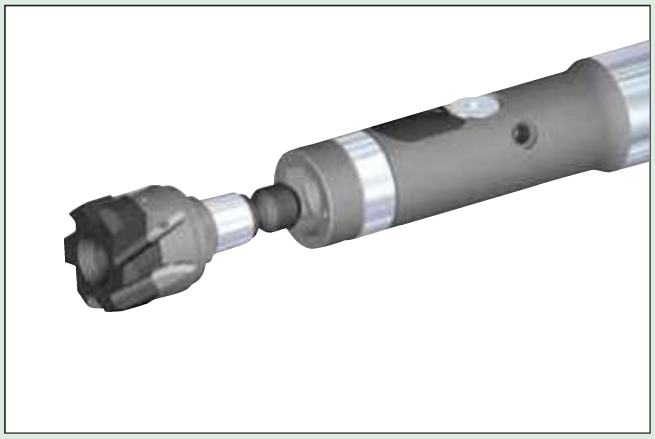
WST™ — WIDIA™ Short Taper

- Easy to handle.
- Fewer vibrations due to safe torque transmission.
- No head-to-body orientation adjustment necessary.
- Higher hole quality due to minimal runout and taper face contact.
- Easy to disassemble due to push out effect of head.



Special Design — Top Ream Tipped Tools





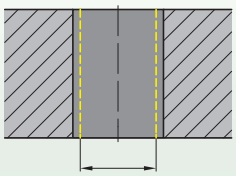
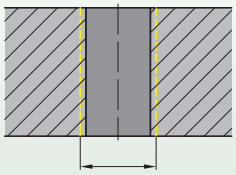
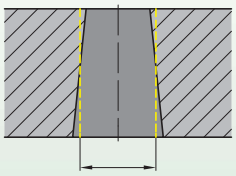
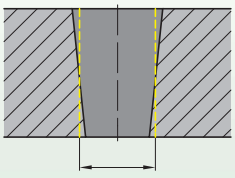
Regular Tipped

- 4–8 brazing joints depending on diameter (number of teeth).
- Less stiffness.
- More vibrations.
- Higher runout after thermal influence (e.g., coating, reconditioning, etc.).

WIDIA Top Ream

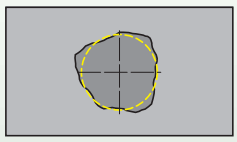
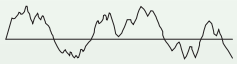
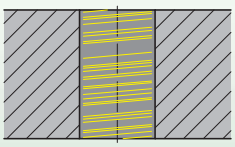
- Min 4x reconditionable.
- New reaming grade WU05PR™ holds bore surface finish more than 2x longer.
- Stronger brazing joint than conventional tipped reamers.
- Less influence of coating process on runout.

Reamer Troubleshooting

Problem	Cause	Possible Remedy
Hole diameter too large  	1. Reaming tool running out of center. 2. Concentricity of pilot hole and ream machining unsatisfactory. 3. Built-up edge. 4. Unsuitable cooling lubricant. 5. Reaming tool diameter too large.	• Use equalizing adapter. • Re-align, use floating head. • Change cooling lubricant. • Change cutting speed. • Measure reamers and send for repairs.
Hole diameter too small  	1. Reamer worn. 2. Unsuitable cooling lubricant. 3. Reaming allowance too small.	• Replace and refit tool. • Change cooling lubricant. • Increase reaming allowance.
Conical hole profile wider towards drill runout  	1. Concentricity of pilot hole and reaming unsatisfactory. 2. Positioning accuracy of pilot hole to reaming.	• Re-align, use equalizing adapter. • Correct positioning accuracy.
Conical hole profile wider at drill entry point  	1. Concentricity of pilot hole and reaming unsatisfactory. 2. Reaming tool skim cutting with ledger.	• Re-align, use floating head. • Securely clamp reaming tool axially.

(continued)

Reamer Troubleshooting *(continued)*

Problem	Cause	Possible Remedy
Conical hole profile wider at drill entry point 	1. Reaming tool running out of center. 2. Slanted cutting surface/ asymmetrical cutting. 3. Workpiece twisted.	• Use equalizing adapter. • Spot face as drilling preparation. • Take the direction of impact into account when clamping the workpiece.
Surface quality does not meet specification 	1. Tool cutters worn. 2. Reaming tool running out of center. 3. Incorrect technology data (cutting parameters). 4. Inadequate chip evacuation.	• Use equalizing adapter. • Re-align, use floating head. • Change cooling lubricant. • Change cutting speed. • Measure reamers and send for repairs.
Feed grooves 	1. Built-up edge.	• Change cooling lubricant. • Change cutting speed.