

Tube Honing - Selection Guide

APPENDIX B: RPM - Reciprocation - Feed Rate

Increasing RPM

1. Will make stones act harder ...
2. Will give finer surface finishes
3. Will cause a stone to stop cutting if increase is too great
4. Will increase noise level
5. will decrease crosshatch angle
6. Will decrease torque on part
7. Will decrease geometric accuracies if increase is too great

Increasing Reciprocation Speed

1. Will make stones act softer
2. Will give rougher surface finishes
3. Will increase a stone's ability to stay sharp and not glaze
4. Will decrease noise level
5. Will increase crosshatch angle
6. Will remove stock slower if speed is too excessive

Increasing Feed Pressure

1. Will cause stones to act softer
2. Will increase a stone's ability to stay sharp and not glaze
3. Will remove stock faster
4. Will increase torque on the part
5. Will contribute to geometric inaccuracies if too excessive
6. Will increase wear on machine and tooling
7. Will generate more heat
8. Will generate more noise
9. Will give rougher surface finishes
10. Will waste abrasive if too excessive

Decreasing RPM

1. will make stones act softer
2. Will give rougher surface finishes
3. Will increase a stone's ability to stay sharp and not glaze
4. Will decrease noise level
5. Will increase crosshatch angle
6. Will increase torque on part
7. Will allow bore to take greater possession of the tool, thereby contributing to greater geometric accuracies

Decreasing Reciprocation Speed

1. Will make stones act harder
2. Will give finer surface finishes
3. Will decrease a stone's ability to stay sharp and not glaze if too slow
4. Will increase noise level
5. Will decrease crosshatch angle
6. Will remove stock slower if speed is too slow

Decreasing Feed Pressure

1. Will cause stones to act harder
2. Will decrease a stone's ability to stay sharp and not glaze if reduced too much
3. Will remove stock more slowly
4. Will decrease torque on the part
5. Will contribute to better geometric accuracies
6. Will decrease wear on machine and tooling
7. Will generate less heat
8. Will generate less noise
9. Will give finer surface finishes
10. Will produce too long a time cycle if too light

