



CONVERTIBLE MACHINES

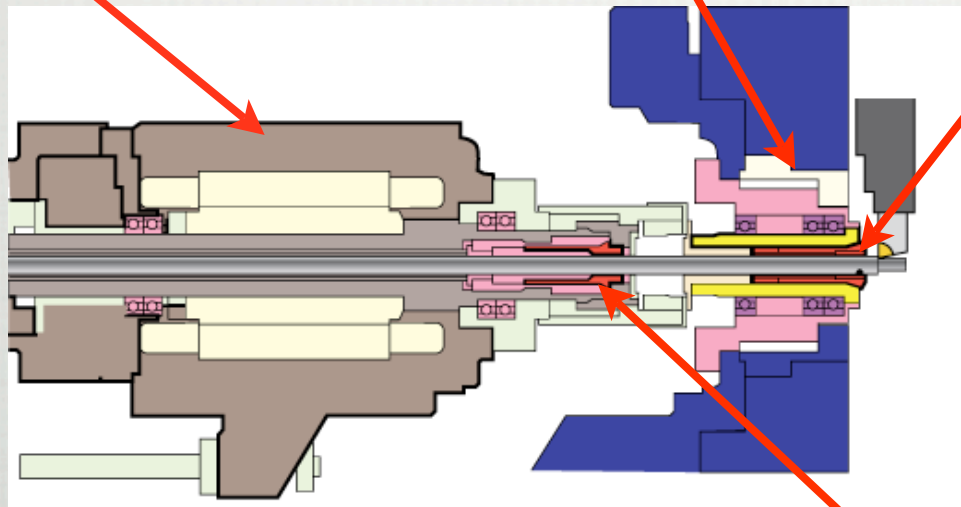
RUNNING SWISS AS A CHUCKER

STANDARD SWISS CONFIGURATION

GUIDE BUSHING ASSEMBLY

GUIDE BUSHING

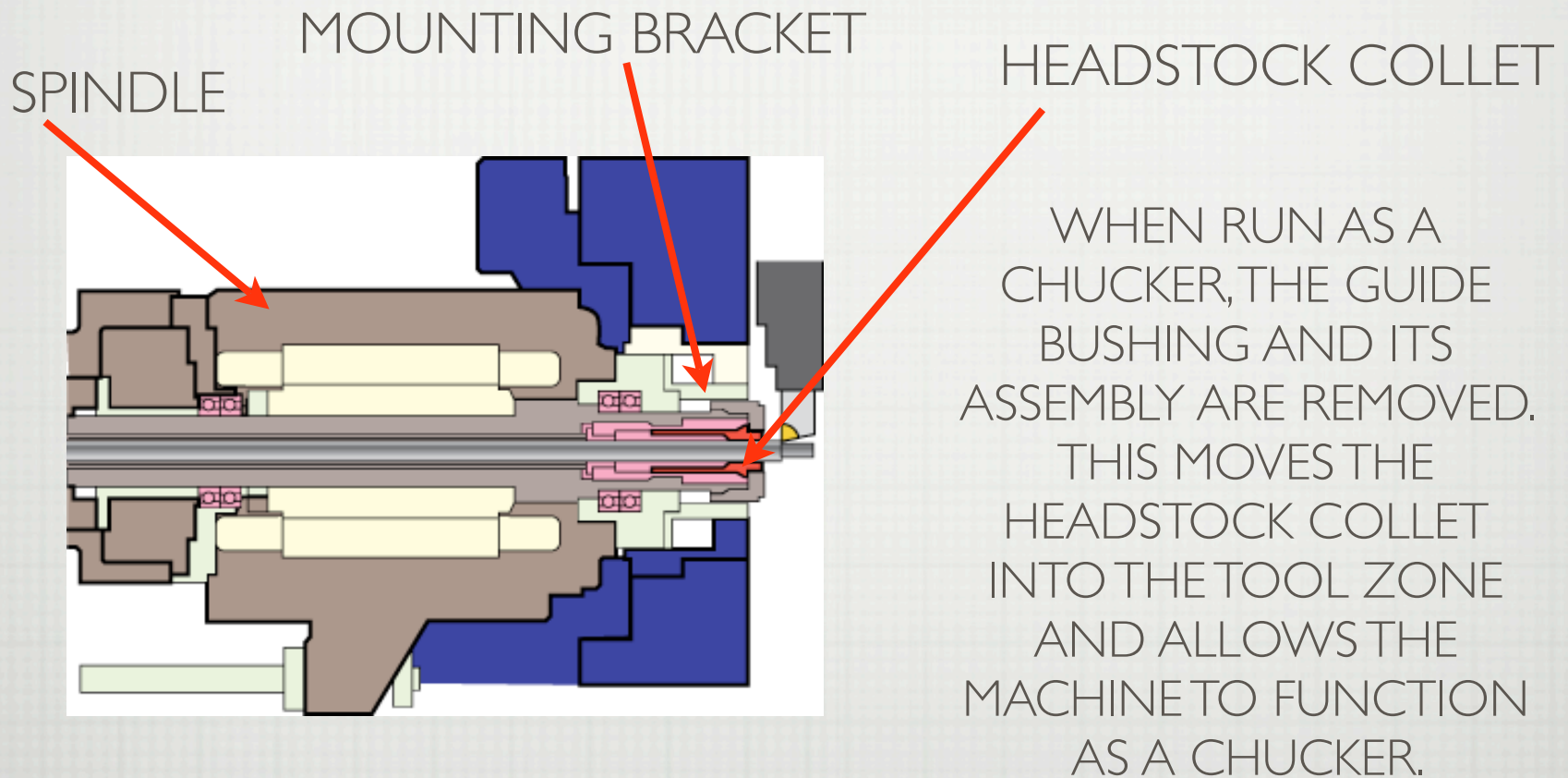
SPINDLE



IN STANDARD SWISS STYLE CONFIGURATION, THE BAR IS SUPPORTED RADIALLY BY THE GUIDE BUSHING, BUT HELD BY THE HEADSTOCK COLLET AND TURNED BY THE SPINDLE. THIS ALLOWS THE BAR TO MOVE IN BOTH DIRECTIONS OF THE Z1 AXIS.

HEADSTOCK COLLET

“GUIDE BUSHING-LESS” SWISS



ADVANTAGE OF RUNNING WITHOUT A GUIDE BUSHING

- TIGHT DIAMETER AND ROUNDNESS TOLERANCES CAN BE HELD WITHOUT THE USE OF CENTERLESS GROUND BAR STOCK.
- REMNANT LENGTH IS SHORTER.
- ROUGH AND FINISH TURNING IS POSSIBLE.
- THE MACHINES STILL HAVE THE VERY LOW IDLE TIMES AND HIGH SPINDLE SPEEDS OF A SWISS.

TOLERANCE W/GUIDE BUSHING

	Chucker Mode	With Guide Bushing
Machined Workpiece	Short usually less than 3x diameter.	Both short and long
Barstock	<ol style="list-style-type: none"> 1. Bar quality does not affect part quality. 2. Tolerance to .0002" or better can be held. 3. Less expensive cold drawn material can be used. 	<ol style="list-style-type: none"> 1. Accuracy of bar affects quality of work. 2. Tolerance to .0003" or better can be held. 3. Ground bar must be used for tight tolerance work.
Machined Roundness	.8 micron	Static guide bushing – 1 micron Driven guide bushing – 2 micron

TSUGAMI MACHINES WITH CHUCKER OPTIONS

- BE 12 & 20
- SS 20
- SS32 CAN BE PURCHASED AS SWISS OR CHUCKER
- BH20
- BN20
- BW12