

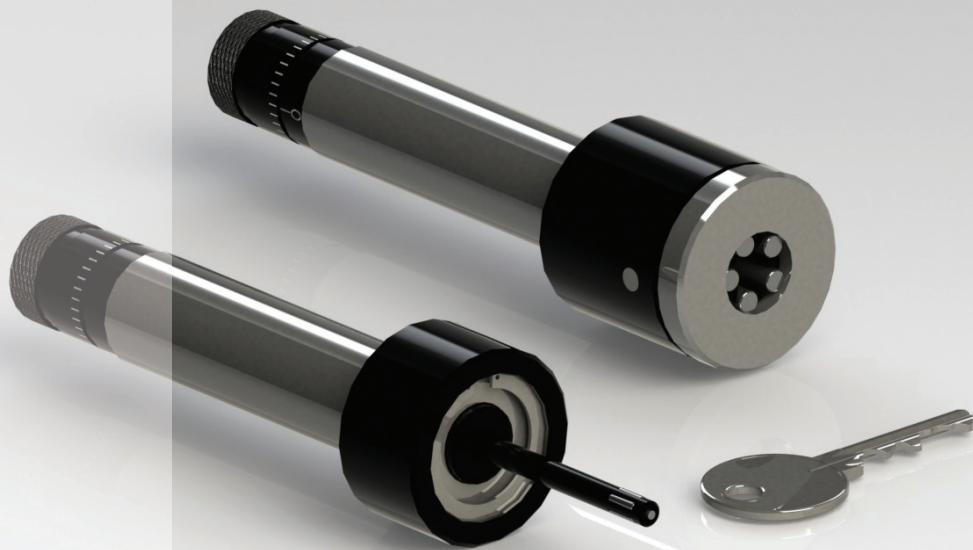


**COGSDILL TOOL PRODUCTS, INC.**

# MRBT

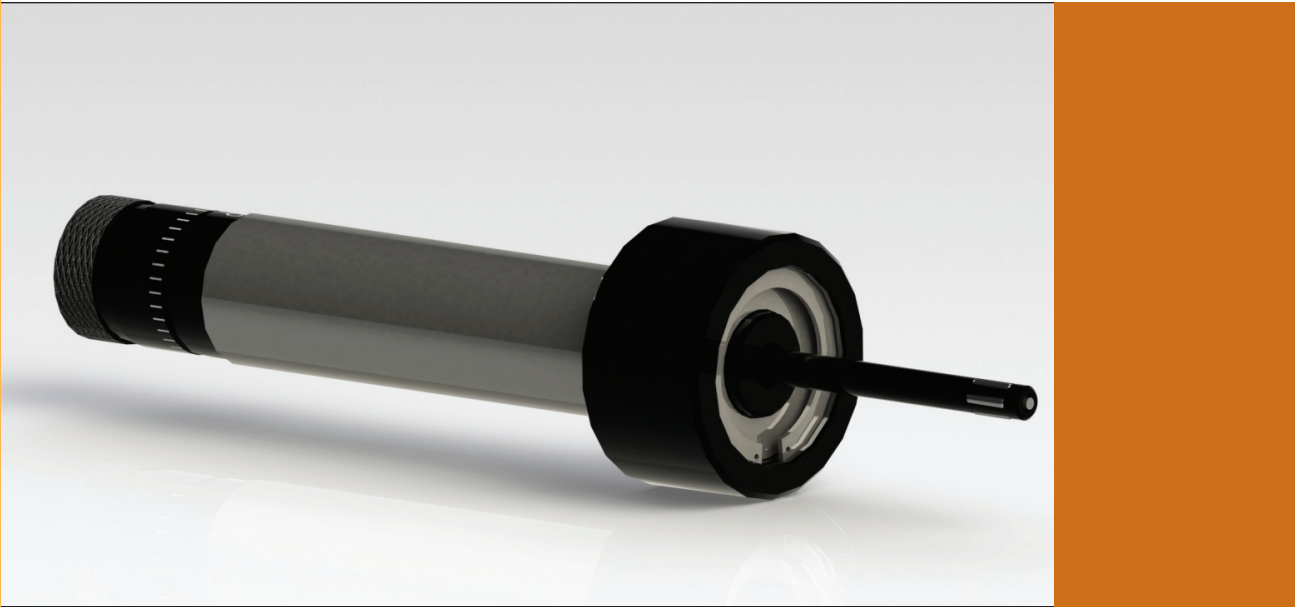
■ **Micro Roller  
Burnishing TOOLS**

## Micro Roller Burnishing



- ▶ Compact design for use where limited space is available on multi-spindle automatic and screw type machines.
- ▶ Internal tools from 0.187–0.501 inch (4.75–12.73mm) in thru style, and bottoming style larger than 0.246 inch (6.25mm).
- ▶ External tools from 0.054–0.254 inch (1.37–6.45mm) in bottoming style.
- ▶ Unique rear adjustment mechanism.

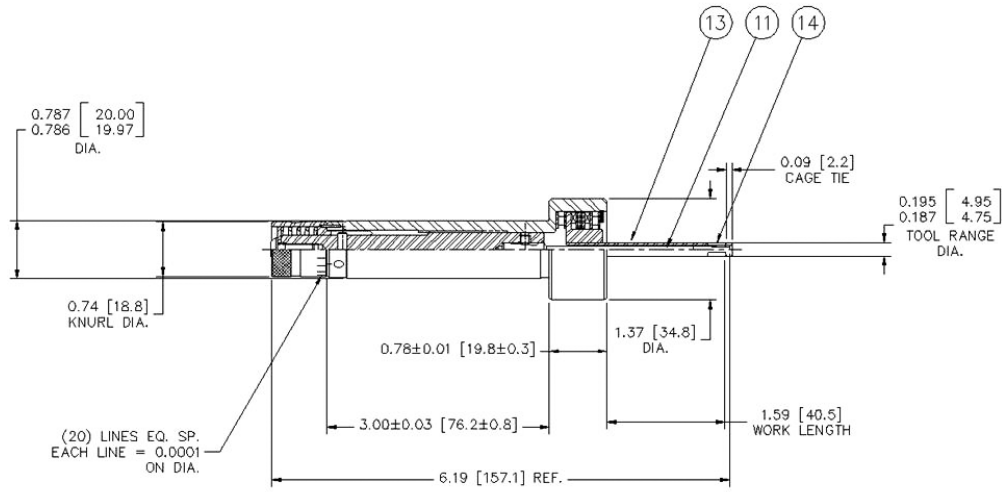
# Internal Micro Roller Burnishing Tool



	NOMINAL SIZE	DIAMETER RANGE				THRU ( NO HELIX)	BOTTOMING ( NO HELIX)
		INCHES		MM			
	0.188	0.187	0.195	4.75	4.95	MR-188	—
	0.195	0.194	0.202	4.93	5.13	MR-195	—
	0.203	0.202	0.210	5.13	5.33	MR-203	—
	0.211	0.210	0.218	5.33	5.54	MR-211	—
	0.219	0.218	0.226	5.54	5.74	MR-219	—
	0.226	0.225	0.233	5.72	5.92	MR-226	—
	0.234	0.233	0.241	5.92	6.12	MR-234	—
	0.242	0.241	0.249	6.12	6.32	MR-242	—
	0.250	0.246	0.267	6.25	6.78	MR-250	MRB-250
	0.266	0.262	0.283	6.65	7.19	MR-266	MRB-266
	0.281	0.277	0.298	7.04	7.57	MR-281	MRB-281
	0.297	0.293	0.314	7.44	7.98	MR-297	MRB-297
	0.312	0.308	0.329	7.82	8.36	MR-312	MRB-312
	0.328	0.324	0.345	8.23	8.76	MR-328	MRB-328
	0.344	0.340	0.361	8.64	9.17	MR-344	MRB-344
	0.359	0.355	0.376	9.02	9.55	MR-359	MRB-359
	0.375	0.371	0.392	9.42	9.96	MR-375	MRB-375
	0.391	0.387	0.408	9.83	10.36	MR-391	MRB-391
	0.406	0.402	0.423	10.21	10.74	MR-406	MRB-406
	0.422	0.418	0.439	10.62	11.15	MR-422	MRB-422
	0.438	0.434	0.455	11.02	11.56	MR-438	MRB-438
	0.453	0.449	0.470	11.40	11.94	MR-453	MRB-453
	0.469	0.465	0.486	11.81	12.34	MR-469	MRB-469
	0.484	0.480	0.501	12.19	12.73	MR-484	MRB-484

# Internal Micro Roller Burnishing Tool

NOTE: 0.750 INCH DIAMETER SHANK OPTIONAL

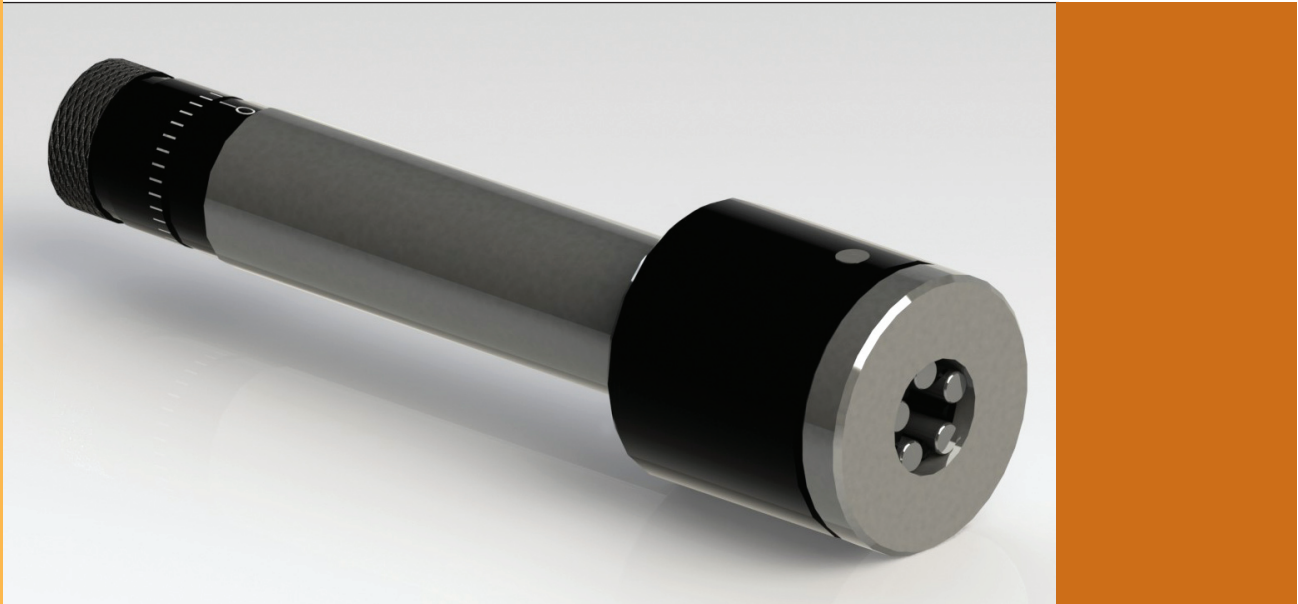


TOOL # MR-188 SHOWN

	SIZE	DETAIL NO. 11 MANDREL	DETAIL NO. 13 CAGE	DETAIL NO. 14 ROLLS	QUANTITY REQUIRED
	MR-188	MR-188-D11	MR-188-D13	SR-187	3
	MR-195	MR-195-D11	MR-195-D13	"	"
	MR-203	MR-203-D11	MR-203-D13	"	"
	MR-211	MR-211-D11	MR-211-D13	"	"
	MR-219	MR-219-D11	MR-219-D13	"	"
	MR-226	MR-226-D11	MR-226-D13	"	"
	MR-234	MR-234-D11	MR-234-D13	"	"
	MR-242	MR-242-D11	MR-242-D13	"	"
	MR-250	MR-250-D11	MR-250-D13	SR-250	5
	MR-266	MR-266-D11	MR-266-D13	"	"
	MR-281	MR-281-D11	MR-281-D13	"	"
	MR-297	MR-297-D11	MR-297-D13	"	"
	MR-312	MR-312-D11	MR-312-D13	SR-312	"
	MR-328	MR-328-D11	MR-328-D13	"	"
	MR-344	MR-344-D11	MR-344-D13	"	"
	MR-359	MR-359-D11	MR-359-D13	"	"
	MR-375	MR-375-D11	MR-375-D13	SR-375	"
	MR-391	MR-391-D11	MR-391-D13	"	"
	MR-406	MR-406-D11	MR-406-D13	SR-438	"
	MR-422	MR-422-D11	MR-422-D13	"	"
	MR-438	MR-438-D11	MR-438-D13	"	"
	MR-453	MR-453-D11	MR-453-D13	"	"
	MR-469	MR-469-D11	MR-469-D13	"	"
	MR-484	MR-484-D11	MR-484-D13	"	"

- Notes:
- For bottoming cage, use prefix MRB. Only for tools larger than 0.246 inch (6.25mm).
  - For bottoming rolls, use prefix SRB. Only for tools larger than 0.246 inch (6.25mm).

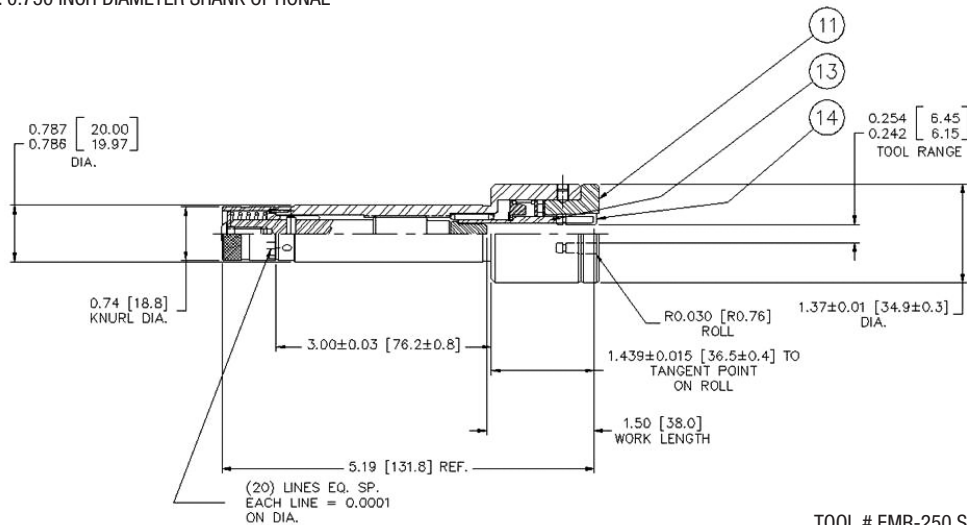
# External Micro Roller Burnishing Tool



	NOMINAL SIZE	DIAMETER RANGE				BOTTOMING ( NO HELIX)
		INCHES		MM		
	0.062	0.054	0.066	1.37	1.68	EMR-062
	0.070	0.062	0.074	1.57	1.88	EMR-070
	0.078	0.070	0.082	1.78	2.08	EMR-078
	0.086	0.078	0.090	1.98	2.29	EMR-086
	0.094	0.086	0.098	2.18	2.49	EMR-094
	0.102	0.094	0.106	2.39	2.69	EMR-102
	0.111	0.103	0.115	2.62	2.92	EMR-111
	0.117	0.109	0.121	2.77	3.07	EMR-117
	0.125	0.117	0.129	2.97	3.28	EMR-125
	0.133	0.125	0.137	3.18	3.48	EMR-133
	0.141	0.133	0.145	3.38	3.68	EMR-141
	0.149	0.141	0.153	3.58	3.89	EMR-149
	0.156	0.148	0.160	3.76	4.06	EMR-156
	0.164	0.156	0.168	3.96	4.27	EMR-164
	0.171	0.163	0.175	4.14	4.45	EMR-171
	0.180	0.172	0.184	4.37	4.67	EMR-180
	0.187	0.179	0.191	4.55	4.85	EMR-187
	0.195	0.187	0.199	4.75	5.05	EMR-195
	0.203	0.195	0.207	4.95	5.26	EMR-203
	0.211	0.203	0.215	5.16	5.46	EMR-211
	0.219	0.211	0.223	5.36	5.66	EMR-219
	0.227	0.219	0.231	5.56	5.87	EMR-227
	0.234	0.226	0.238	5.74	6.05	EMR-234
	0.242	0.234	0.246	5.94	6.25	EMR-242
	0.250	0.242	0.254	6.15	6.45	EMR-250

# External Micro Roller Burnishing Tool

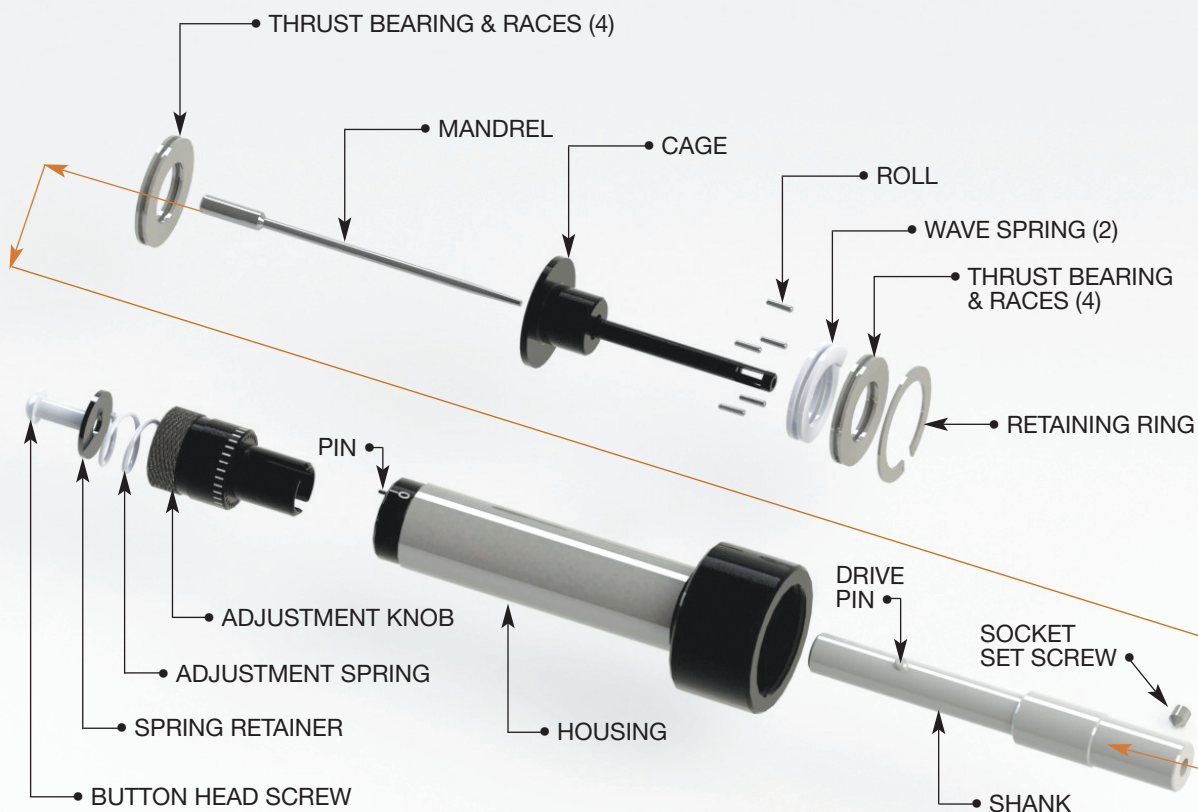
NOTE: 0.750 INCH DIAMETER SHANK OPTIONAL



TOOL # EMR-250 SHOWN

	SIZE	DETAIL NO. 11 RACE	DETAIL NO. 13 CAGE	DETAIL NO. 14 ROLLS	QUANTITY REQUIRED
	EMR-062	EMR-062-D11	EMR-062-D13	B-500	3
	EMR-070	EMR-070-D11	EMR-070-D13	"	3
	EMR-078	EMR-078-D11	EMR-078-D13	"	3
	EMR-086	EMR-086-D11	EMR-086-D13	"	3
	EMR-094	EMR-094-D11	EMR-094-D13	"	3
	EMR-102	EMR-102-D11	EMR-102-D13	"	3
	EMR-111	EMR-111-D11	EMR-111-D13	"	3
	EMR-117	EMR-117-D11	EMR-117-D13	"	3
	EMR-125	EMR-125-D11	EMR-125-D13	"	3
	EMR-133	EMR-133-D11	EMR-133-D13	"	3
	EMR-141	EMR-141-D11	EMR-141-D13	"	3
	EMR-149	EMR-149-D11	EMR-149-D13	"	3
	EMR-156	EMR-156-D11	EMR-156-D13	"	3
	EMR-164	EMR-164-D11	EMR-164-D13	"	3
	EMR-171	EMR-171-D11	EMR-171-D13	"	3
	EMR-180	EMR-180-D11	EMR-180-D13	"	3
	EMR-187	EMR-187-D11	EMR-187-D13	"	3
	EMR-195	EMR-195-D11	EMR-195-D13	"	3
	EMR-203	EMR-203-D11	EMR-203-D13	"	3
	EMR-211	EMR-211-D11	EMR-211-D13	"	3
	EMR-219	EMR-219-D11	EMR-219-D13	"	3
	EMR-227	EMR-227-D11	EMR-227-D13	"	3
	EMR-234	EMR-234-D11	EMR-234-D13	"	3
	EMR-242	EMR-242-D11	EMR-242-D13	"	3
	EMR-250	EMR-250-D11	EMR-250-D13	"	5

# Internal Micro Roller Burnishing Tool



## ASSEMBLY/DISASSEMBLY FOR CHANGING ROLLS, MANDREL & CAGE

- **To replace Cage and/or Rolls**, remove carefully the Retaining Ring at the front of the Housing. Note that this area is under spring pressure. Remove all of the components from over the Mandrel.
- Inspect all components.
- Clean and lubricate all components.
- Replace Rolls and Cage if required. Note that Rolls should be replaced as a complete set.
- Re-assemble and check tool adjustment.

- **To replace Mandrel and/or Rolls**, pull Adjustment Knob away from the Housing and unscrew the Adjustment Knob to remove the Shank and Mandrel from the Housing. Loosen the Socket Set Screw in the Shank to remove the Mandrel.

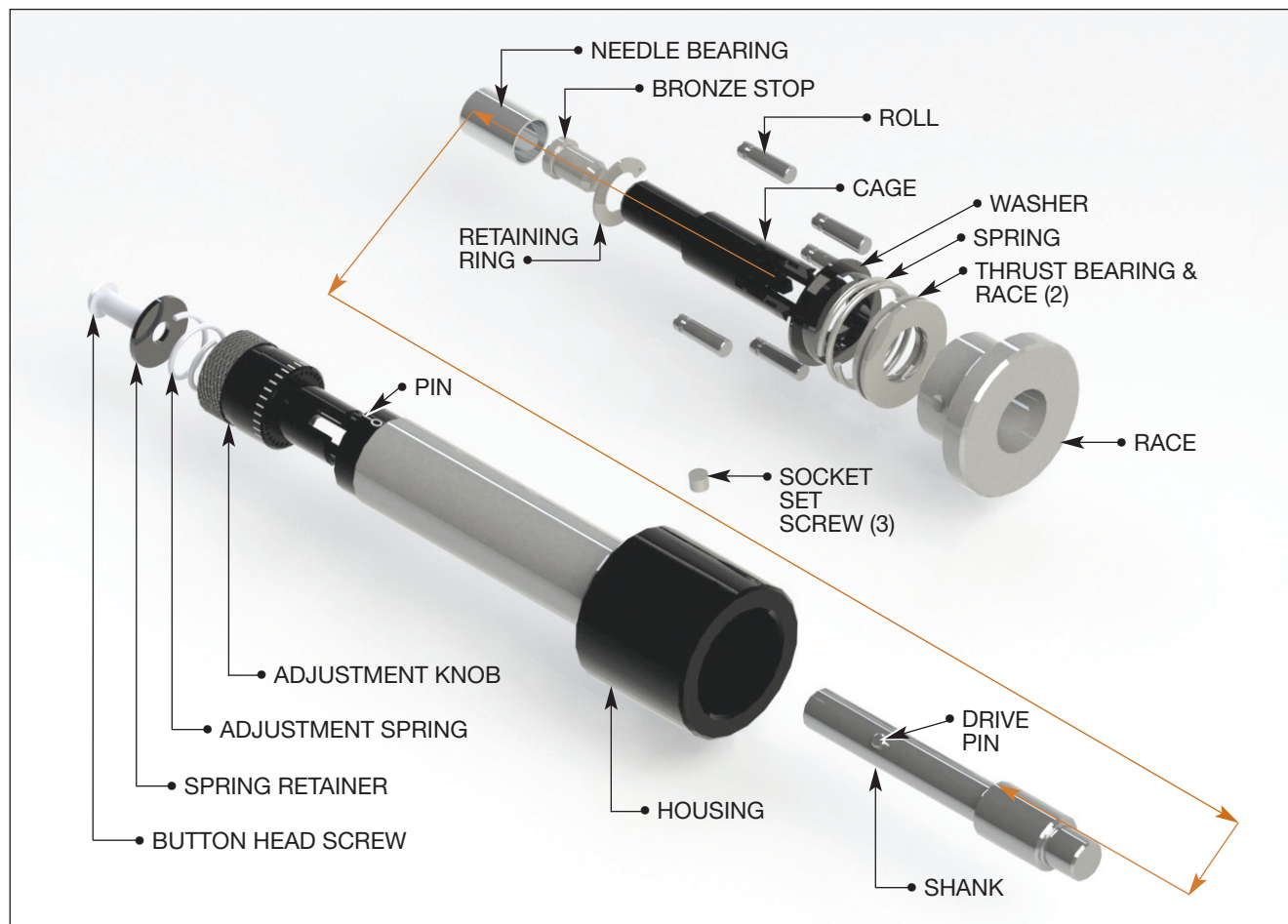
▶ **ASSEMBLY/DISASSEMBLY TIP:** As the Rolls are small and easy to lose, it is suggested to wrap a clear plastic tape around the roll pocket area of the cage. This will retain the Rolls in the Cage and can also be used as an aid when assembling Rolls back into the Cage.

- The Rolls will be free to be removed from the Cage at this time.
- Inspect all components.
- Replace Rolls and Mandrel if required. Note that Rolls should be replaced as a set.
- Re-assemble and check tool adjustment.

**Refer to the Burnishing Tools & Machines catalog for part preparation and operating parameters, including speed and feed recommendations and coolant requirements.**



# External Micro Roller Burnishing Tool



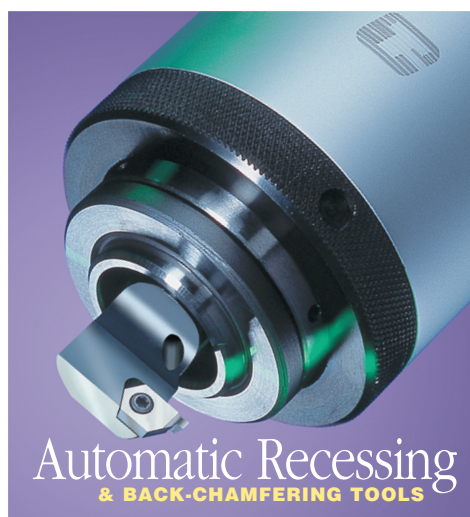
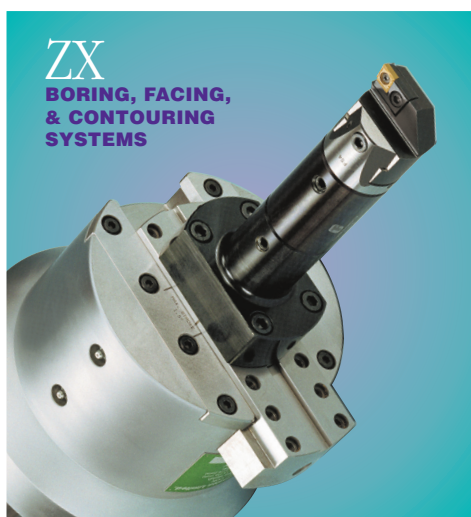
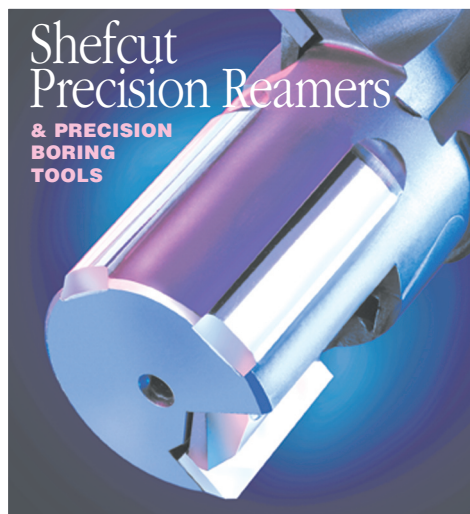
## ASSEMBLY/DISASSEMBLY FOR CHANGING ROLLS, RACE & CAGE

- Loosen the three Socket Set Screws in the Housing to allow removal of the complete Race Assembly.
- Inspect all components.
- Clean and lubricate all components.
- Replace Rolls, Race and Cage if required. Note that Rolls should be replaced as a complete set.
- Re-assemble and check tool adjustment.

## TOOL ADJUSTMENT – INTERNAL & EXTERNAL



- Adjustment is made from the back end of the tool.
- Adjustment Knob has 20 equally spaced lines that represent an adjustment of 0.0001 inch (0.0025mm) on the diameter.
- Pull Adjustment Knob away from the Housing to disengage the Pin in the Housing from the Adjustment Knob.
- Turn Adjustment Knob as required to adjust the Burnishing tool diameter.
- Release the spring loaded Adjustment Knob to engage the Pin in the Housing.
- Check and make further adjustments as required.



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