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<b>Centerless grinding machine</b>	Make: Giustina - Model: R114/500 - wheel speed m/s: 45 (8856 fpm) - rpm: 1400		
<b>Grinding wheel</b>	Specification: <b>ZB</b>	Dimensions mm. 610 x 508 x 304,8 ( inches 24x20x12 )	
<b>Regulating wheel</b>	Specification: <b>AZ80VRR</b>	Dimensions mm. 355 x 508 x 127 ( inches 14x20x5 )	
<b>Dressing tool</b>	Diamond tool bit		
<b>Work piece</b>	Needle rollers		
<b>Material</b>	UNI 100Cr6	DIN 100Cr6	AISI/SAE 52.100
<b>Hardness</b>	64 Hrc		
<b>Initial dimensions of work piece</b>	Ø mm. 2,65 ( .104" )	Lenght mm. 12,50 ( .492" )	
<b>Final dimensions of work piece</b>	Ø mm. 2,50 ( .098" )	Lenght mm. 12,50 ( .492" )	
<b>Stock removal</b>	Total mm. 0,15 ( .006" )	Roughing/finishing removal mm. 0,15 ( .006" ) one pass	
<b>Feed rate</b>	Roughing/finishing	mt/min' 5 ( 197 ipm )	
<b>Dimensional tolerances</b>	Straightness	mm. 0,001 ( .0000393" )	
	Parallelism	mm. 0,001 ( .0000393" )	
	Roundness	mm. 0,001 ( .0000393" )	
<b>Finish required</b>	Ra 0,12	Rt 1,05	Rz 0,60
<b>Dressing cycle</b>	Dressing depth	mm. 0,03/0,04 ( .0011"/.0015" )	
	Dressing speed	mm. 350/min' ( 13,78"/min )	
	Dressing frequency	every 4 hours	
	Reason for dressing	restore surface and reduce Ra	
<b>Coolant</b>	Water soluble coolant with 4,5% semi-synthetic oil Ph 9		
<b>Notes</b>	<i>The life of this grinding <b>ZB</b> grinding wheel has been one year, working 16 hours a day.</i>		