

Variable Control Chart

Cell:		Part Number:		Part Name:		Date Calculated:	
Characteristic:				Specification:			Gauge Id.

Averages (X Bar Chart)										$\bar{X} = \text{average of } \bar{X}$					$UCL = \bar{X} + A_2\bar{R}$		$LCL = \bar{X} - A_2\bar{R}$	

Ranges (R Chart)										$\bar{R} = \text{average of } R$					$UCL = D_4\bar{R}$		$LCL = 0 \text{ (Sample size } < 7 \text{)}$	

Date/Time																			
Readings	1																		
	2																		
	3																		
	4																		
	5																		
Sum																			
$\bar{X} = \text{Sum}/\text{No. Of Readings}$																			
$R = \text{Highest} - \text{Lowest Reading}$																			

Action on Special Causes <ul style="list-style-type: none"> Any point outside the Control Limits A run of 7 points above, or below the center line A run of 7 points in an up, or down, direction Any other obvious non-random pattern 	Action Instructions: <ol style="list-style-type: none"> 1. Point outside the control limits: <ol style="list-style-type: none"> a. Check equipment & parts for damage b. Measure another sample, if still out of control, notify cell and quality supervisors. 2. For any other Special Causes, notify quality supervisor. 	Subgroup <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Size</td> <td style="text-align: center;">A2</td> <td style="text-align: center;">D4</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1.88</td> <td style="text-align: center;">3.27</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1.02</td> <td style="text-align: center;">2.57</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">.73</td> <td style="text-align: center;">2.28</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">.58</td> <td style="text-align: center;">2.11</td> </tr> </table>	Size	A2	D4	2	1.88	3.27	3	1.02	2.57	4	.73	2.28	5	.58	2.11
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