

Ballbar diagnostics (%)



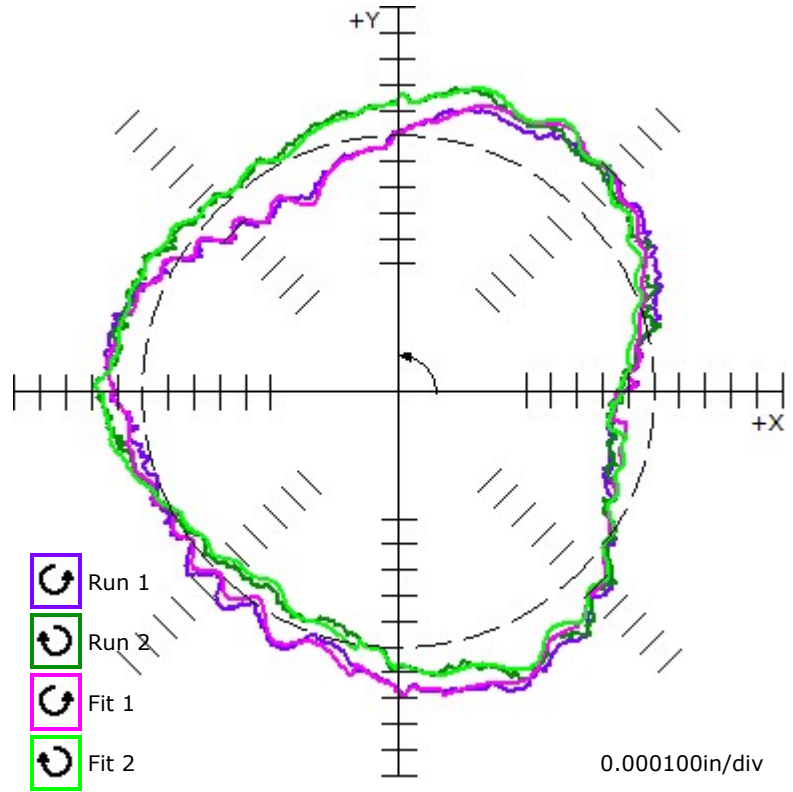
XY 360deg 4in Calibrated 20230228-152619

Operator: Employee
Date: 2023-Feb-28 15:26:19

Machine: 450
QC20: 52AT52, Last calibrated: 2023-01-17

30%	Straightness Y	0.000456in
11%	Cyclic error Y	↑0.000046in ↓0.000087in
11%	Servo mismatch	0.05ms
9%	Backlash X	▶0.000022in ◀-0.000069in
9%	Straightness X	0.000137in

Positional tolerance	0.001070in
Best fit radius	3.937075in
Circularity	0.000523in



Ballbar diagnostics table**XY 360deg 4in Calibrated 20230228-152619**

Operator: Employee

Machine: 450

Date: 2023-Feb-28 15:26:19

QC20: 52AT52, Last calibrated: 2023-01-17

Error	Magnitude		Independent circularity		Ranking
Backlash X	▶ 0.000022	◀ -0.000069in	0.000069in	(9%)	(4)
Backlash Y	▲ -0.000021	▼ 0.000033in	0.000033in	(4%)	(9)
Reversal spikes X	▶ -0.000037	◀ 0.000021in	0.000037in	(5%)	(7)
Reversal spikes Y	▲ 0.000011	▼ 0.000003in	0.000011in	(1%)	(13)
Lateral play X	▶ 0.000016	◀ -0.000037in	0.000021in	(3%)	(12)
Lateral play Y	▲ 0.000036	▼ 0.000023in	0.000030in	(4%)	(10)
Cyclic error X	↑ 0.000046	↓ 0.000040in	0.000041in	(5%)	(6)
Cyclic error Y	↑ 0.000046	↓ 0.000087in	0.000083in	(11%)	(2)
Servo mismatch	0.05ms		0.000082in	(11%)	(3)
Squareness	-0.0086thou/in		0.000034in	(4%)	(8)
Straightness X	0.000137in		0.000069in	(9%)	(5)
Straightness Y	0.000456in		0.000228in	(30%)	(1)
Scaling mismatch	0.000050in		0.000025in	(3%)	(11)
Scaling error X	20.1µin/in				
Scaling error Y	13.8µin/in				
Cyclic pitch X	1.250000in				
Cyclic pitch Y	0.472441in				
Calculated feedrate	99.78in/min				
Centre offset X	0.029313in				
Centre offset Y	-0.001332in				
Positional tolerance	0.001070in				
Best fit radius	3.937075in				
Circularity	0.000523in				

Test parameters

Radius	3.937008in
Feedrate	39.37in/min
Start/End/Overshoot	0.00°/360.00°/180.00°
Run sequence	CCW CW
Test position	
Sample rate	40.000Hz