



Calibration Certificate

Customer: MAC MACHINE COMPANY INC.	Customer Code: Customer P.O. #: 9256563-00
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Description: 8 inch Quik - Chek ID# MAC2059
Condition of item when received: Good
This item is certified to be In tolerance

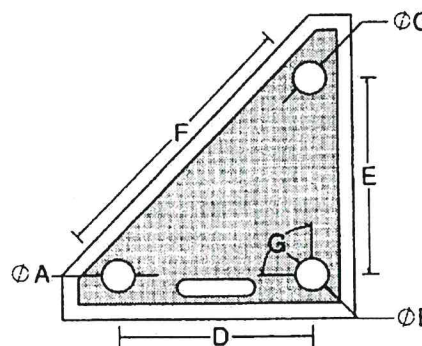
S/N 0346



Inspection Procedure: QDW4.10.1-02 Int. Dia.	NIST Ref.: 683/289434-17	Dated: 4/26/17
Blocks: 6707	Temperature: 68°F +/- 1°F	Humidity: 40% +/- 20%
Inspection Equipment: Federal 136B-3	Applicable Standard: N/A	

All results are deviations from the prescribed and are given in Inches

Dimension	Prescribed Size	Deviation
Diameter A	1.0000	-.000060
Diameter B	1.0000	-.000050 -.000045
Diameter C	1.0000	-.000035
☐ to ☐ D	8.0000	-.000015
☐ to ☐ E	8.0000	-.00057
☐ to ☐ F	11.3137	-.000317
Angle	90° 0' 0"	90° 0' 3.2"
G Squareness error over E Length	0	.000124



Notes: RECALIBRATION DATE DUE 1/17/2023

Note: Measurements taken at center 1/2 of bores only. (Diameter A measured left to right, Diameter B first measurement - left to right, second - top to bottom, Diameter C measured top to bottom. Angle calculated from three hole pattern. All measurements are based on the international inch (1.00 in = 25.4 MM).

This certificate applies only to the item(s) and item(s) dimensions listed.

All dimensions listed are both 'as found' and 'as left' unless otherwise noted.

This certificate may not be reproduced except in full without written permission from GSG.

The calibration system supporting this certificate complies with ISO 17025.

The user's calibration source for NIST traceability is GSG. The user must determine the re-calibration interval for this item.

The Expanded Uncertainty associated with the length measurements is $U = \pm (19+2.1L)$ Microinches using a coverage factor of $K=2$ which provides a confidence level of approximately 95%.

Reported by: Steve Eells
Steve Eells
Calibration Technician

Char # / Zone	Characteristic	Nominal / Tolerance	MIN / MAX	CMM#1	CMM#2	CMM#3
	DIA. A ROUNDNESS 1	0.000000	0.000017			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000040			
	DIA. A ROUNDNESS 1	0.000000	0.000022			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000046			
	DIA. A ROUNDNESS 1	0.000000	0.000012			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000026			
	DIA. A ROUNDNESS 2	0.000000	0.000015			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000041			
	DIA. A ROUNDNESS 2	0.000000	0.000023			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000052			
	DIA. A ROUNDNESS 2	0.000000	0.000011			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000029			
	DIA. A ROUNDNESS 3	0.000000	0.000054			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000246			
	DIA. A ROUNDNESS 3	0.000000	0.000093			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000314			
	DIA. A ROUNDNESS 3	0.000000	0.000082			
	/QUICKCHEK MASTER Z-X G2	-; +0.000000	0.000702			
	DIA. A ROUNDNESS 4	0.000000	0.000053			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000103			
	DIA. A ROUNDNESS 4	0.000000	0.000088			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000304			
	DIA. A ROUNDNESS 4	0.000000	0.000088			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000316			
	DIA. A SIZE 1	0.999940	0.999938			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	0.999971			
	DIA. A SIZE 1	0.999940	0.999962			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999989			
	DIA. A SIZE 1	0.999940	0.999957			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999984			
	DIA. A SIZE 2	0.999940	0.999940			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	0.999972			
	DIA. A SIZE 2	0.999940	0.999964			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999988			
	DIA. A SIZE 2	0.999940	0.999953			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999985			
	DIA. A SIZE 3	0.999940	0.999942			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	0.999973			
	DIA. A SIZE 3	0.999940	0.999981			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999990			
	DIA. A SIZE 3	0.999940	0.999951			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999985			
	DIA. A SIZE 4	0.999940	0.999948			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	0.999975			
	DIA. A SIZE 4	0.999940	0.999982			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999989			
	DIA. A SIZE 4	0.999940	0.999954			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999986			
	DIA. B ROUNDNESS 1	0.000000	0.000009			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000035			
	DIA. B ROUNDNESS 1	0.000000	0.000024			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000062			
	DIA. B ROUNDNESS 1	0.000000	0.000021			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000039			
	DIA. B ROUNDNESS 2	0.000000	0.000010			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000037			
	DIA. B ROUNDNESS 2	0.000000	0.000031			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000080			
	DIA. B ROUNDNESS 2	0.000000	0.000013			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000037			
	DIA. B ROUNDNESS 3	0.000000	0.000050			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000144			

Char # / Zone	Characteristic	Nominal / Tolerance	MIN / MAX	CMM#1	CMM#2	CMM#3
	DIA. B ROUNDNESS 3	0.000000	0.000085			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000356			
	DIA. B ROUNDNESS 3	0.000000	0.000079			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000349			
	DIA. B ROUNDNESS 4	0.000000	0.000056			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000188			
	DIA. B ROUNDNESS 4	0.000000	0.000082			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000341			
	DIA. B ROUNDNESS 4	0.000000	0.000084			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000281			
	DIA. B SIZE 1	0.999953	0.999963			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000006			
	DIA. B SIZE 1	0.999953	0.999981			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999993			
	DIA. B SIZE 1	0.999960	0.999975			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999999			
	DIA. B SIZE 2	0.999953	0.999961			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000008			
	DIA. B SIZE 2	0.999953	0.999974			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999990			
	DIA. B SIZE 2	0.999958	0.999972			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999997			
	DIA. B SIZE 3	0.999953	0.999963			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000003			
	DIA. B SIZE 3	0.999953	0.999982			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999997			
	DIA. B SIZE 3	0.999958	0.999970			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999999			
	DIA. B SIZE 4	0.999953	0.999973			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000005			
	DIA. B SIZE 4	0.999953	0.999986			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	0.999997			
	DIA. B SIZE 4	0.999958	0.999971			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999999			
	DIA. C ROUNDNESS 2	0.000000	0.000017			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000050			
	DIA. C ROUNDNESS 1	0.000000	0.000013			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000038			
	DIA. C ROUNDNESS 1	0.000000	0.000014			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000055			
	DIA. C ROUNDNESS 1	0.000000	0.000008			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000024			
	DIA. C ROUNDNESS 2	0.000000	0.000013			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000039			
	DIA. C ROUNDNESS 2	0.000000	0.000009			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000027			
	DIA. C ROUNDNESS 3	0.000000	0.000052			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000178			
	DIA. C ROUNDNESS 3	0.000000	0.000078			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000305			
	DIA. C ROUNDNESS 3	0.000000	0.000071			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000316			
	DIA. C ROUNDNESS 4	0.000000	0.000050			
	/QUICKCHEK MASTER X-Y G2	-; +0.000100	0.000217			
	DIA. C ROUNDNESS 4	0.000000	0.000085			
	/QUICKCHEK MASTER Y-Z G2	-; +0.000100	0.000519			
	DIA. C ROUNDNESS 4	0.000000	0.000078			
	/QUICKCHEK MASTER Z-X G2	-; +0.000100	0.000325			
	DIA. C SIZE 1	0.999965	0.999969			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000010			
	DIA. C SIZE 1	0.999965	0.999937			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	1.000006			
	DIA. C SIZE 1	0.999965	0.999958			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999995			
	DIA. C SIZE 2	0.999965	0.999968			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000012			

Char # / Zone	Characteristic	Nominal / Tolerance	MIN / MAX	CMM#1	CMM#2	CMM#3
	DIA. C SIZE 2	0.999965	0.999936			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	1.000004			
	DIA. C SIZE 2	0.999965	0.999959			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999994			
	DIA. C SIZE 3	0.999965	0.999974			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000009			
	DIA. C SIZE 3	0.999965	0.999946			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	1.000007			
	DIA. C SIZE 3	0.999965	0.999962			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999997			
	DIA. C SIZE 4	0.999965	0.999979			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	1.000008			
	DIA. C SIZE 4	0.999965	0.999946			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	1.000008			
	DIA. C SIZE 4	0.999965	0.999963			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	0.999997			
	DIM. D 1	7.999985	8.000051			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	8.000130			
	DIM. D 1	7.999985	7.999522			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	8.000066			
	DIM. D 1	7.999985	7.999502			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	8.000084			
	DIM. D 2	7.999985	8.000047			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	8.000126			
	DIM. D 2	7.999985	7.999521			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	8.000069			
	DIM. D 2	7.999985	7.999505			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	8.000081			
	DIM. D 3	7.999985	8.000044			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	8.000122			
	DIM. D 3	7.999985	7.999523			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	8.000069			
	DIM. D 3	7.999985	7.999502			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	8.000077			
	DIM. D 4	7.999985	8.000046			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	8.000120			
	DIM. D 4	7.999985	7.999524			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	8.000070			
	DIM. D 4	7.999985	7.999503			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	8.000080			
	DIM. E 1	7.999430	7.999369			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	7.999527			
	DIM. E 1	7.999430	7.999435			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	7.999974			
	DIM. E 1	7.999430	7.999435			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	7.999988			
	DIM. E 2	7.999430	7.999373			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	7.999521			
	DIM. E 2	7.999430	7.999432			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	7.999976			
	DIM. E 2	7.999430	7.999435			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	7.999988			
	DIM. E 3	7.999430	7.999372			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	7.999523			
	DIM. E 3	7.999430	7.999430			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	7.999976			
	DIM. E 3	7.999430	7.999434			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	7.999986			
	DIM. E 4	7.999430	7.999366			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	7.999511			
	DIM. E 4	7.999430	7.999432			
	/QUICKCHEK MASTER Y-Z G2	± 0.000100	7.999978			
	DIM. E 4	7.999430	7.999434			
	/QUICKCHEK MASTER Z-X G2	± 0.000100	7.999985			
	DIM. F 1	11.313383	11.313446			
	/QUICKCHEK MASTER X-Y G2	± 0.000100	11.313620			

Char # / Zone	Characteristic	Nominal / Tolerance	MIN / MAX	CMM#1	CMM#2	CMM#3
	DIM. F 1	11.313383 ± 0.000100	11.313413 11.313501			
	/QUICKCHEK MASTER Y-Z G2					
	DIM. F 1	11.313383 ± 0.000100	11.313435 11.313543			
	/QUICKCHEK MASTER Z-X G2					
	DIM. F 2	11.313383 ± 0.000100	11.313442 11.313614			
	/QUICKCHEK MASTER X-Y G2					
	DIM. F 2	11.313383 ± 0.000100	11.313405 11.313505			
	/QUICKCHEK MASTER Y-Z G2					
	DIM. F 2	11.313383 ± 0.000100	11.313438 11.313546			
	/QUICKCHEK MASTER Z-X G2					
	DIM. F 3	11.313383 ± 0.000100	11.313438 11.313603			
	/QUICKCHEK MASTER X-Y G2					
	DIM. F 3	11.313383 ± 0.000100	11.313404 11.313505			
	/QUICKCHEK MASTER Y-Z G2					
	DIM. F 3	11.313383 ± 0.000100	11.313440 11.313544			
	/QUICKCHEK MASTER Z-X G2					
	DIM. F 4	11.313383 ± 0.000100	11.313438 11.313596			
	/QUICKCHEK MASTER X-Y G2					
	DIM. F 4	11.313383 ± 0.000100	11.313405 11.313505			
	/QUICKCHEK MASTER Y-Z G2					
	DIM. F 4	11.313383 ± 0.000100	11.313441 11.313542			
	/QUICKCHEK MASTER Z-X G2					