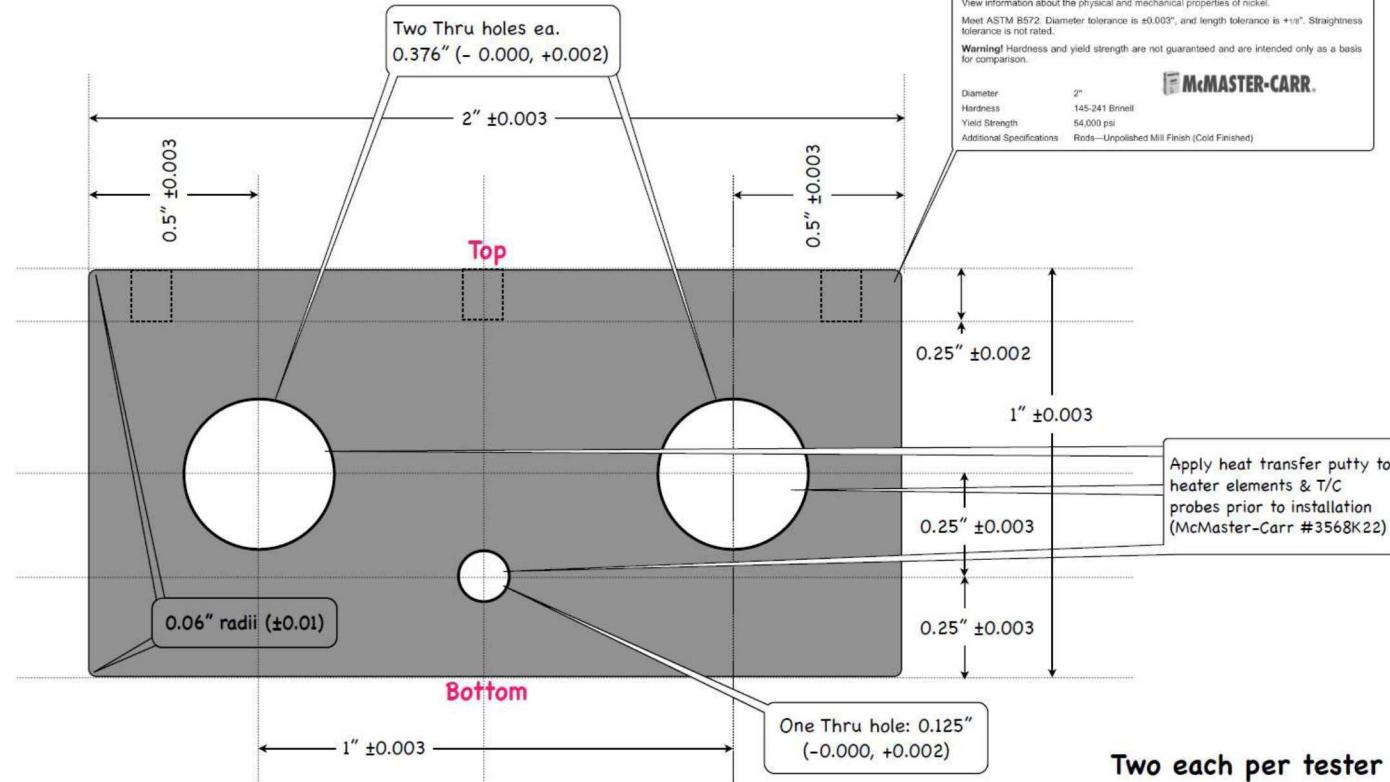


**Cell Tester: Heated Platens**  
**Material: Inconel HX or Hastelloy X**



**Edge View**

Friday, January 24, 2014

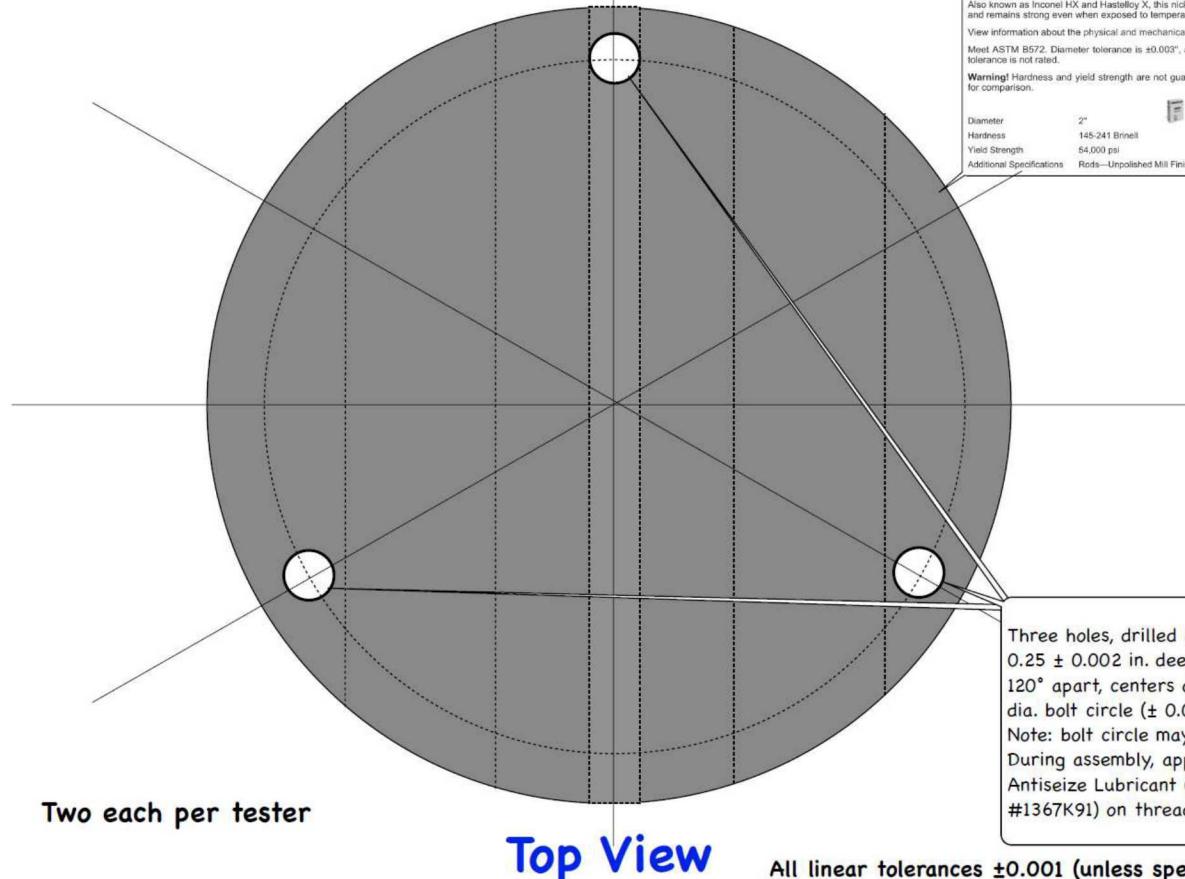
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## Cell Tester: Heated Platens

Material: Inconel HX or Hastelloy X (continued)



### High-Temperature Nickel (Alloy HX) 2" Diameter



Length  
3"  
6"  
12"  
36"

6513K27

Also known as Inconel HX and Hastelloy X, this nickel alloy has excellent oxidation resistance and remains strong even when exposed to temperatures up to 2000° F.

View information about the physical and mechanical properties of nickel.

Meets ASTM B572. Diameter tolerance is  $\pm 0.003"$ , and length tolerance is  $+\text{.03"}, -\text{.015}"$ . Straightness tolerance is not rated.

Warning: Hardness and yield strength are not guaranteed and are intended only as a basis for comparison.

Diameter: 2"  
Hardness: 145-241 Brinell  
Yield Strength: 54,000 psi  
Additional Specifications: Rods—Unpolished Mill Finish (Cold Finished)

**McMASTER-CARR.**

Three holes, drilled & tapped #10-24,  $0.25 \pm 0.002$  in. deep, 120° apart, centers on centered 1.5" dia. bolt circle ( $\pm 0.001$ )  
Note: bolt circle may be scored on part  
During assembly, apply Standard Antiseize Lubricant (McMaster-Carr #1367K91) on threads.

All linear tolerances  $\pm 0.001$  (unless specified otherwise)  
(Unless otherwise specified, all degree tolerances are  $\pm 0.05$ )

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**NNSA**  
National Nuclear Security Administration

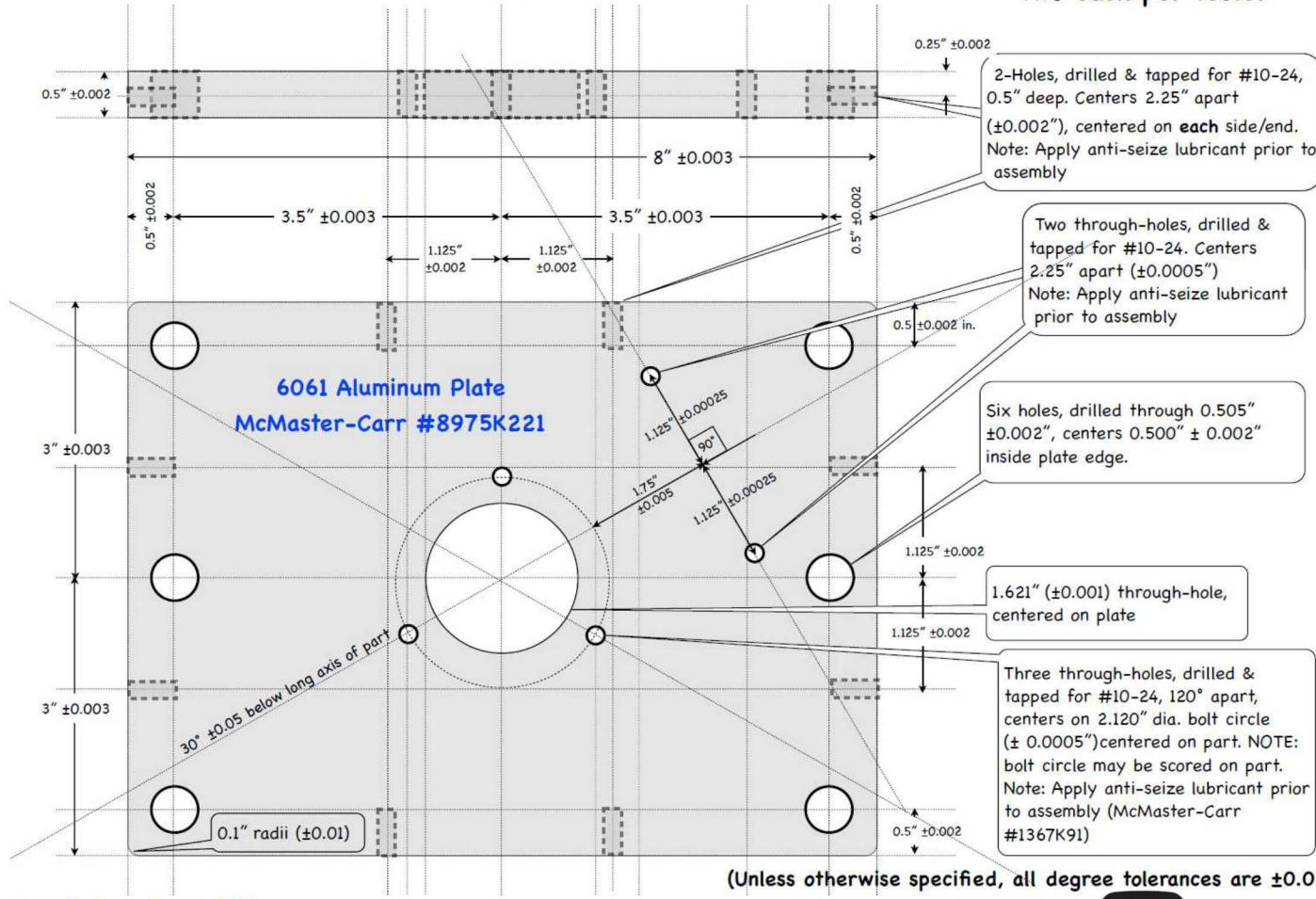
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## Cell Tester: Header and Footer Plate (0.5" Aluminum Plate)

Two each per tester



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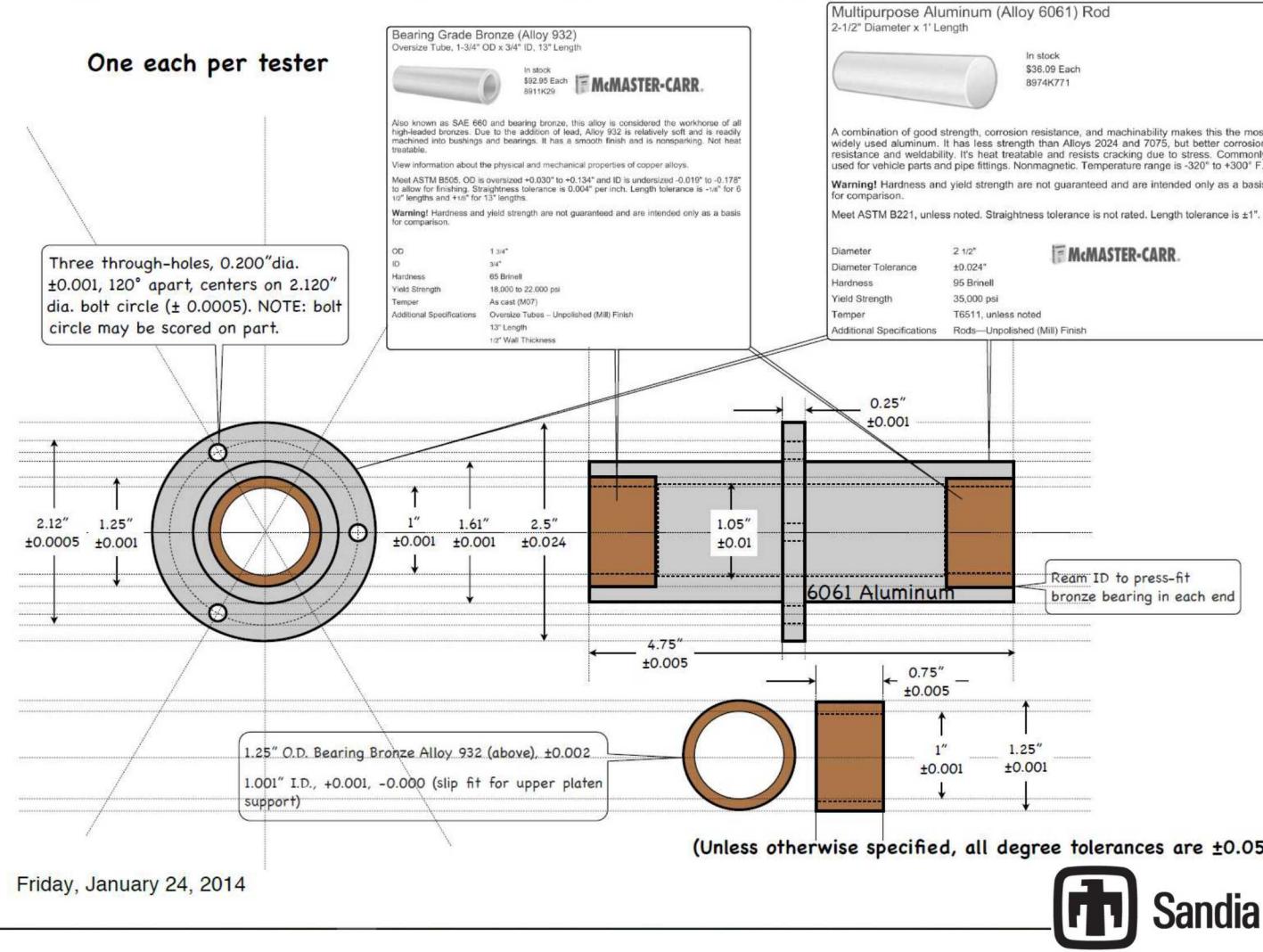


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## Cell Tester: Upper Platen Support Bearing



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**NNSA**  
National Nuclear Security Administration

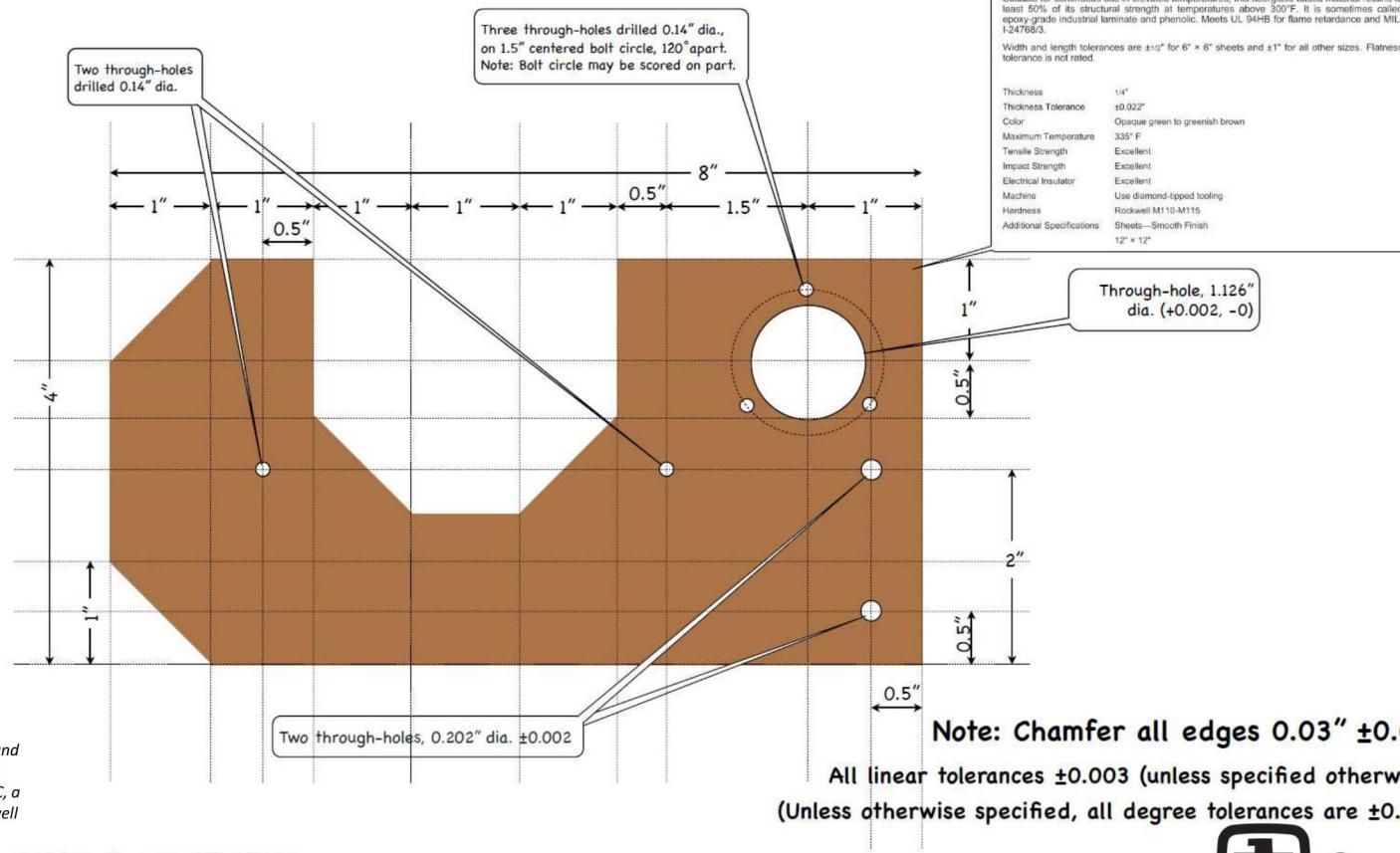
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**Sandia National Laboratories**

## Cell Tester: Sample Holder (0.25" Phenolic Sheet)

One each per tester



High-Temperature Garolite (G-11)  
1/4" Thick, 12" x 12"

**McMASTER-CARR.**

In stock  
\$48.49 Each  
8710K124

Suitable for continuous use in elevated temperatures, this fiberglass-based material retains at least 50% of its structural strength at temperatures above 300°F. It is sometimes called epoxy-grade industrial laminate and phenolic. Meets UL 94HB for flame retardance and MIL-I-24768/3.

Width and length tolerances are ±1/2" for 6" x 6" sheets and ±1" for all other sizes. Flatness tolerance is not rated.

Thickness	1/4"
Thickness Tolerance	±0.02"
Color	Opaque green to greenish brown
Maximum Temperature	335° F
Tensile Strength	Excellent
Impact Strength	Excellent
Electrical Insulator	Excellent
Machine	Use diamond-tipped tooling
Hardness	Rockwell MT10-M115
Additional Specifications	Sheets—Smooth Finish 12" x 12"

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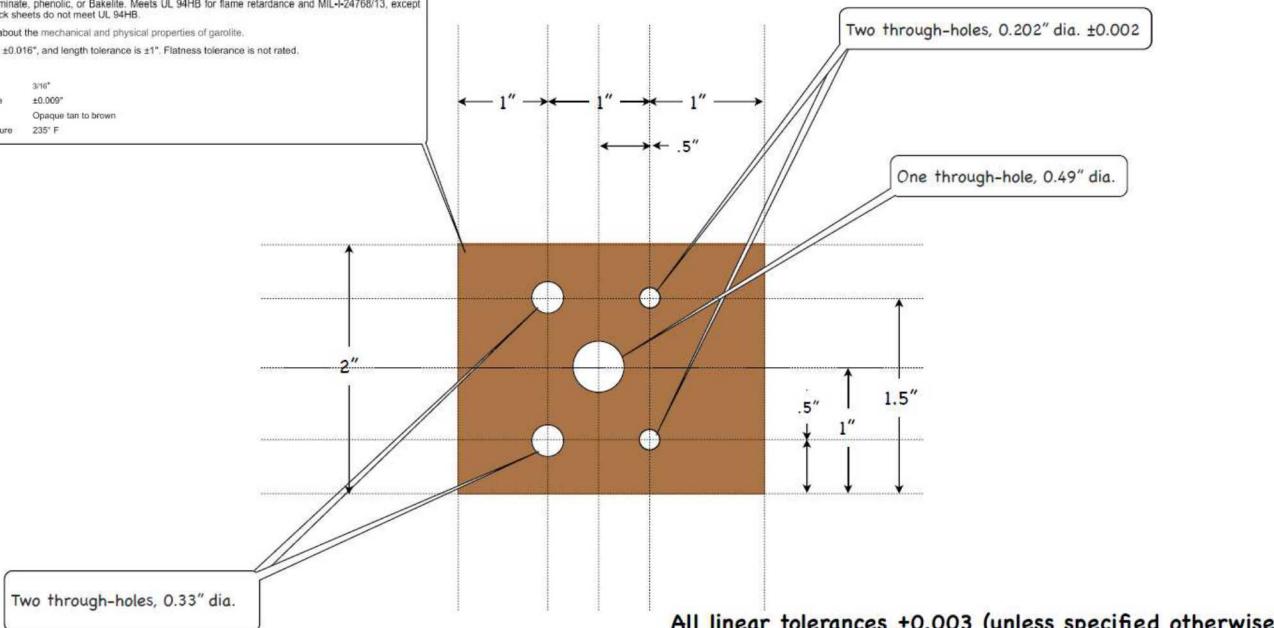
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## Cell Tester: Test Lead Connector Clip (0.25" Phenolic Sheet)

One each per tester



Note: Chamfer all edges 0.03"  $\pm 0.01$



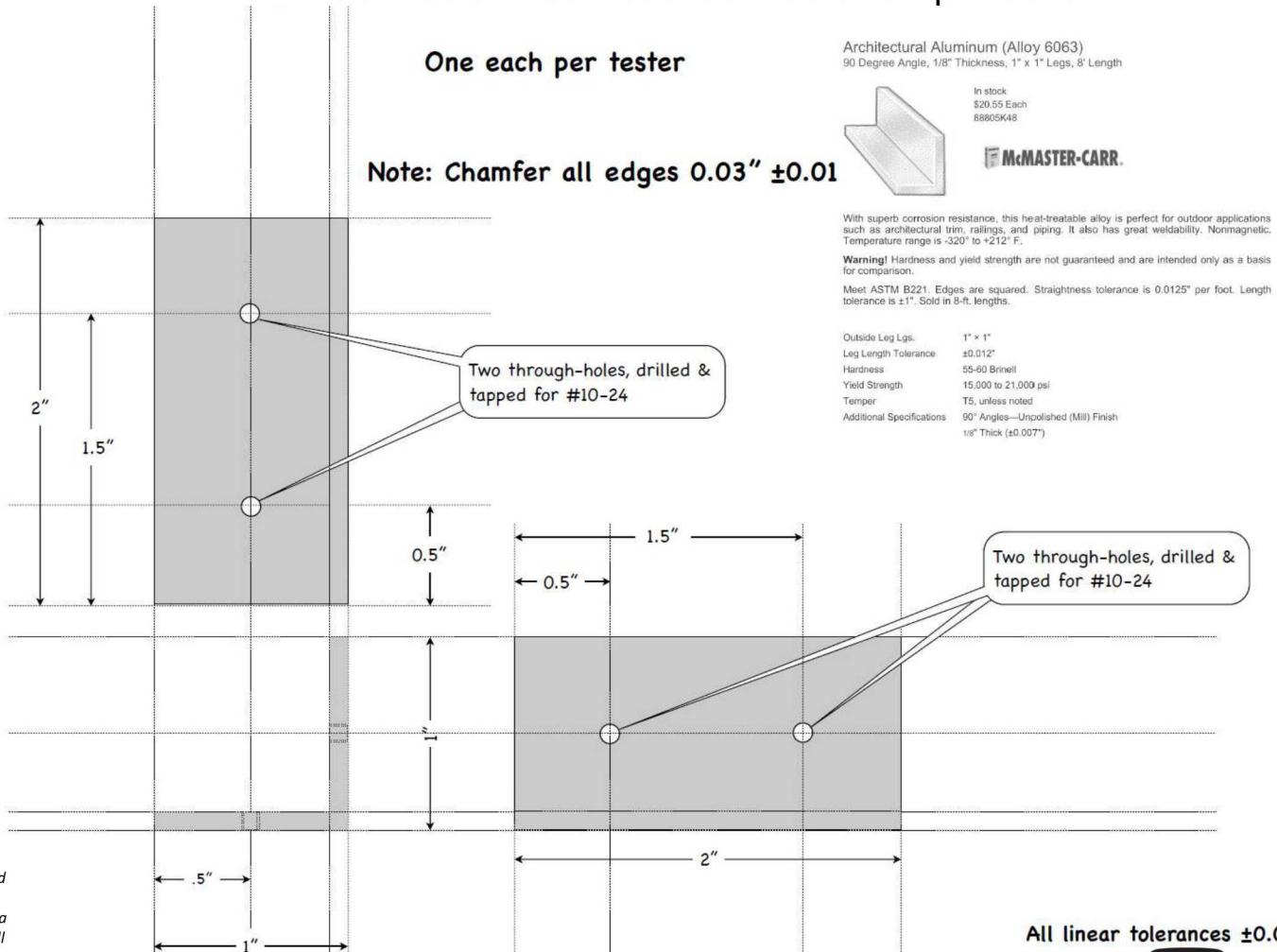
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## Cell Tester: Test Lead Connector Strip Bracket



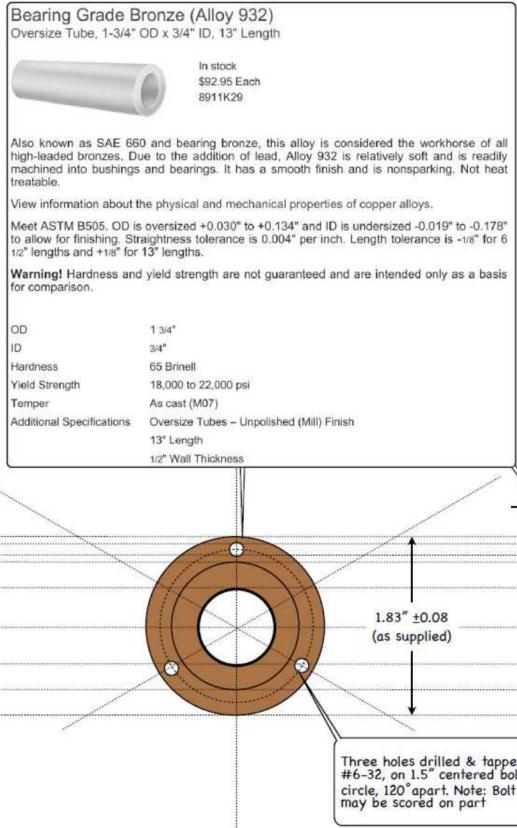
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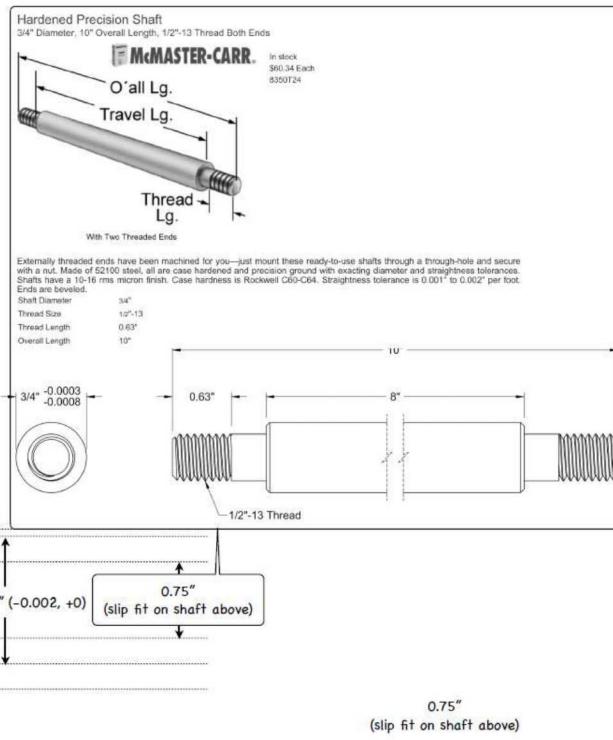
**Sandia National Laboratories**

### McMaster-Carr Part:



One each per tester

### Cell Tester: Sample Holder Bearing



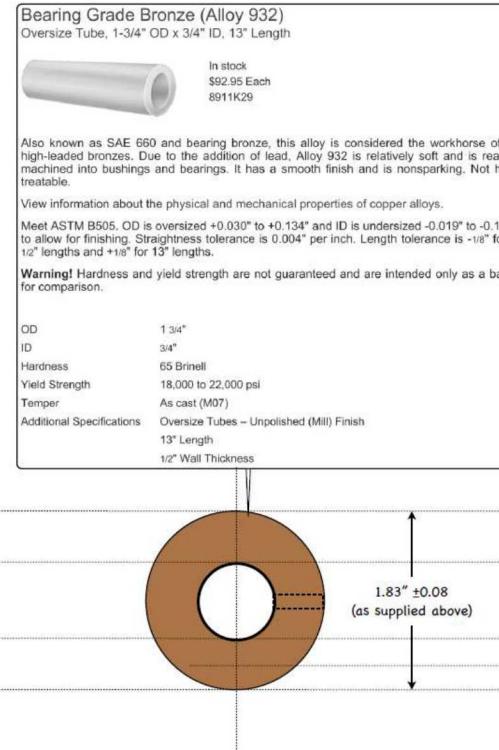
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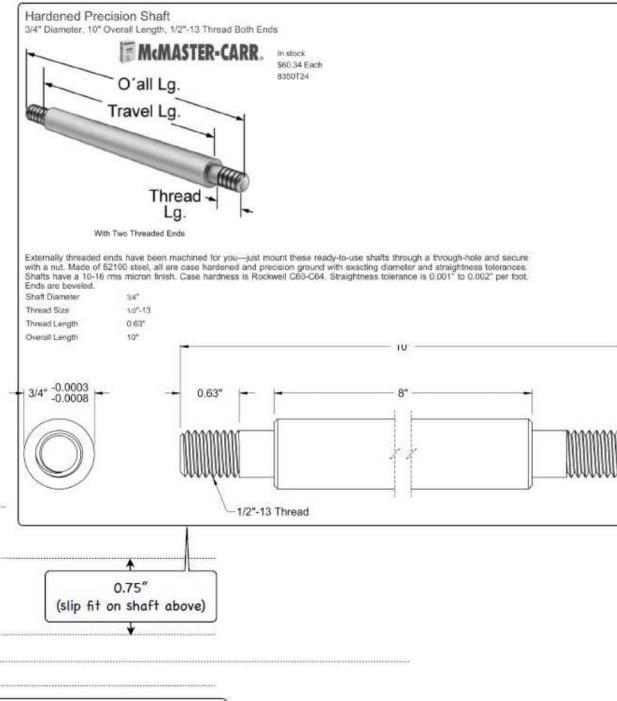
Unless specified otherwise:  
Linear tolerances  $\pm 0.001$ , Degree tolerances are  $\pm 0.05$



McMaster-Carr Part:



## Cell Tester: Sample Holder Bearing Stop



One each per tester

All tolerances  $\pm 0.001$  (unless specified otherwise)

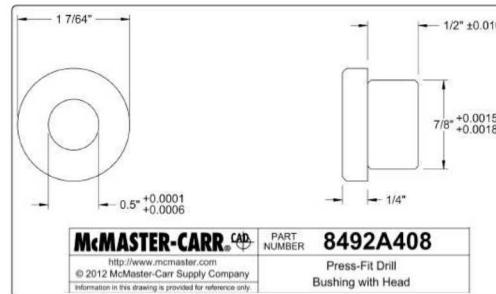
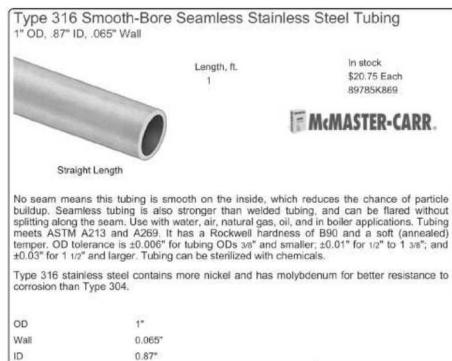
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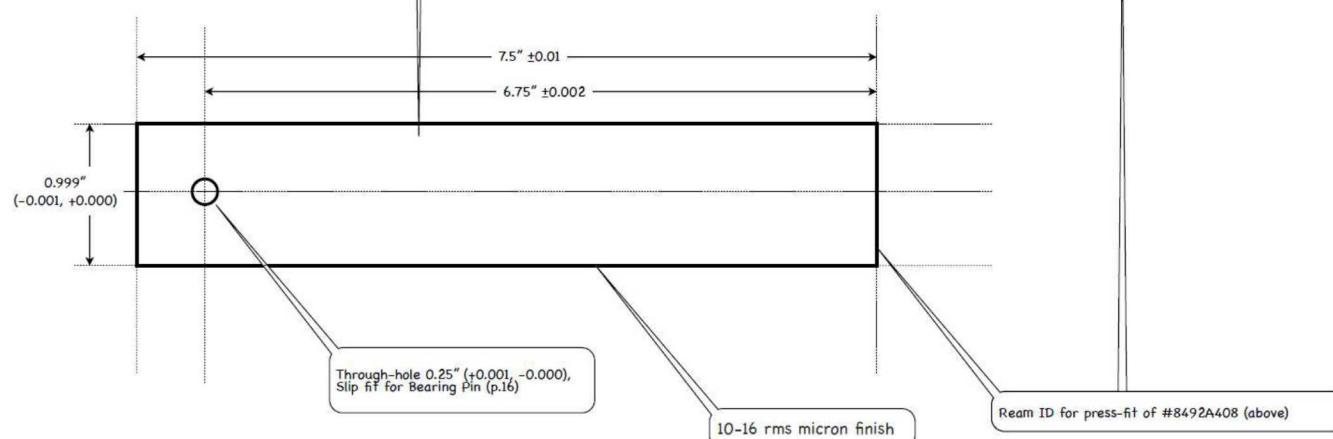


## Cell Tester: Upper Platen Support

McMaster-Carr Part:



One each per tester



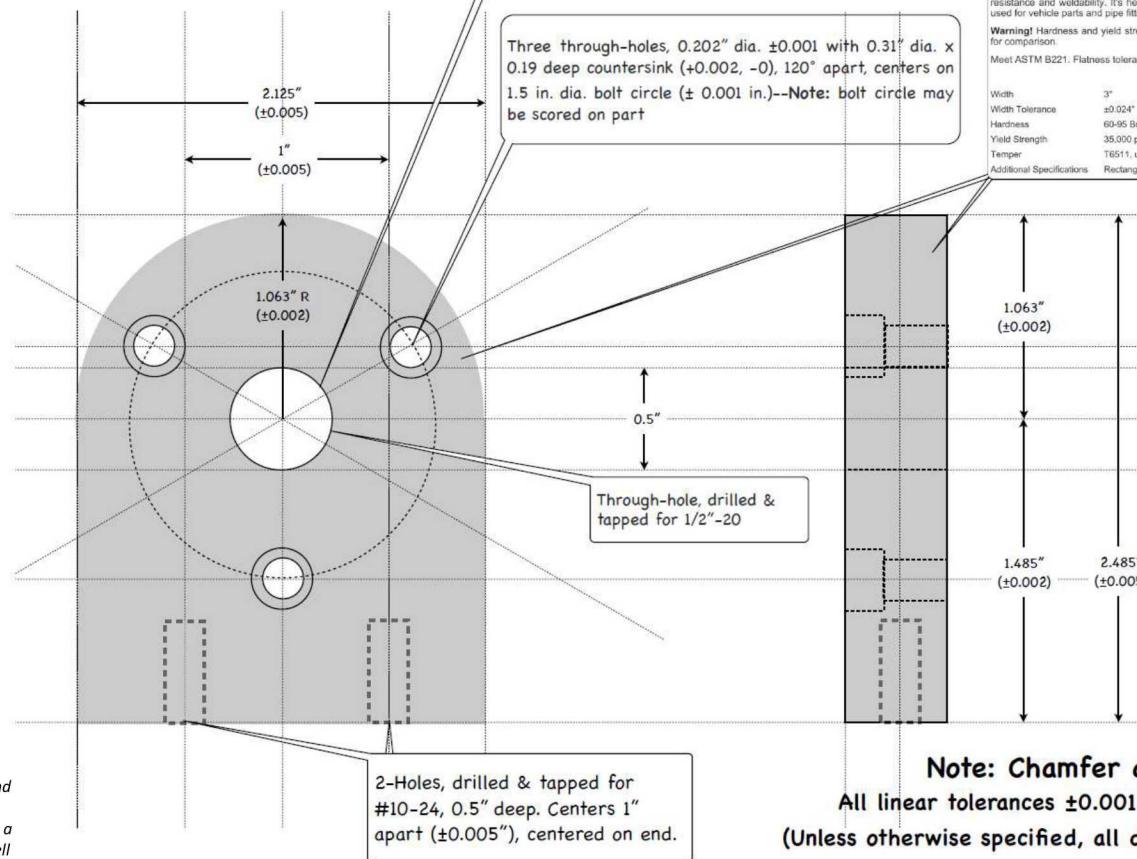
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## Cell Tester: Platen Mounting Plate

Two each per tester



Multipurpose Aluminum (Alloy 6061)  
1/2" Thick, 3" Width, 3' Length

**McMASTER-CARR.**



In stock  
\$37.00 Each  
8975K414

A combination of good strength, corrosion resistance, and machinability makes this the most widely used aluminum. It has less strength than Alloys 2024 and 7075, but better corrosion resistance and weldability. It's heat treatable and resists cracking due to stress. Commonly used for vehicle parts and pipe fittings. Nonmagnetic. Temperature range is -320° to +300° F.

Warning! Hardness and yield strength are not guaranteed and are intended only as a basis for comparison.

Meet ASTM B221. Flatness tolerance is not rated. Length tolerance is  $\pm 1$ .

Width 3"  
Width Tolerance  $\pm 0.024$ "  
Hardness 60-95 Brinell  
Yield Strength 35,000 psi  
Temper T6511, unless noted  
Additional Specifications Rectangular Bars—Unpolished (Mill) Finish

**Note: Chamfer all edges 0.03"  $\pm 0.01$**   
All linear tolerances  $\pm 0.001$  (unless specified otherwise)  
(Unless otherwise specified, all degree tolerances are  $\pm 0.05$ )

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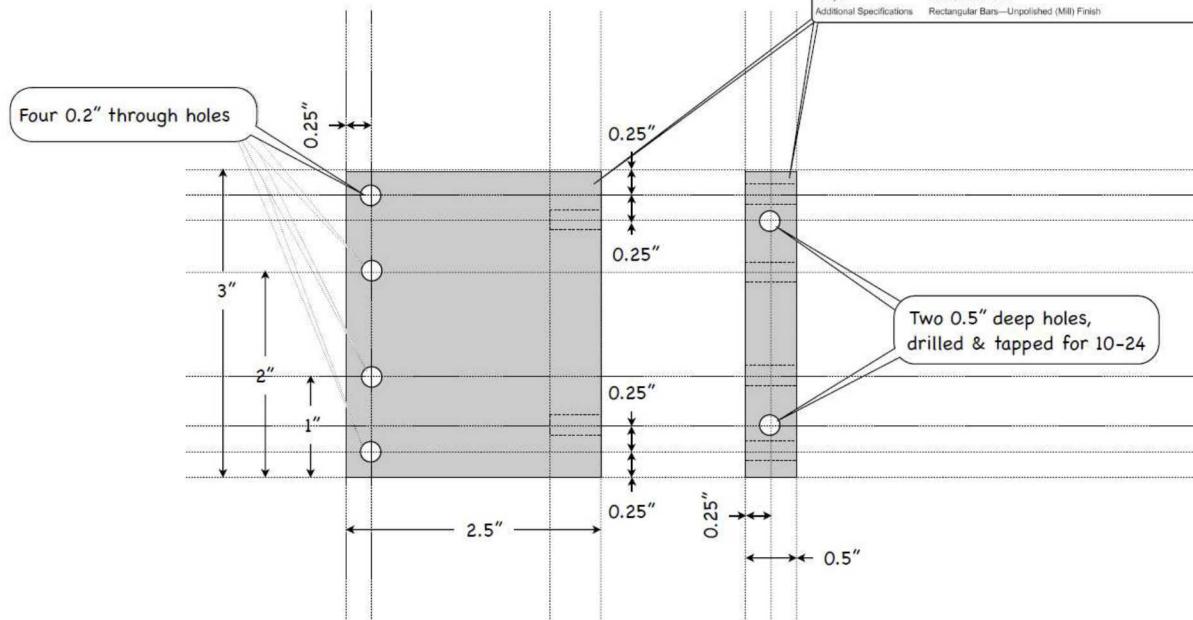
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## Cell Tester: Heater and Thermocouple Cable Support

Two each per tester

Note: Chamfer all edges 0.03"  $\pm 0.01$



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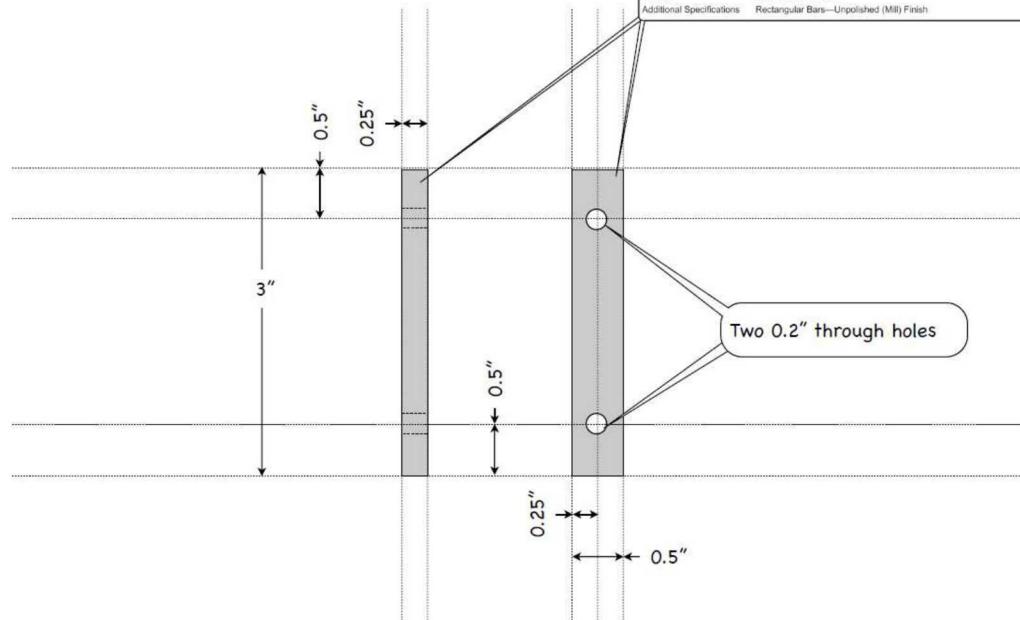
All linear tolerances  $\pm 0.003$



## Cell Tester: Heater and Thermocouple Cable Support Cap

Two each per tester

Note: Chamfer all edges  $0.06" \pm 0.005$



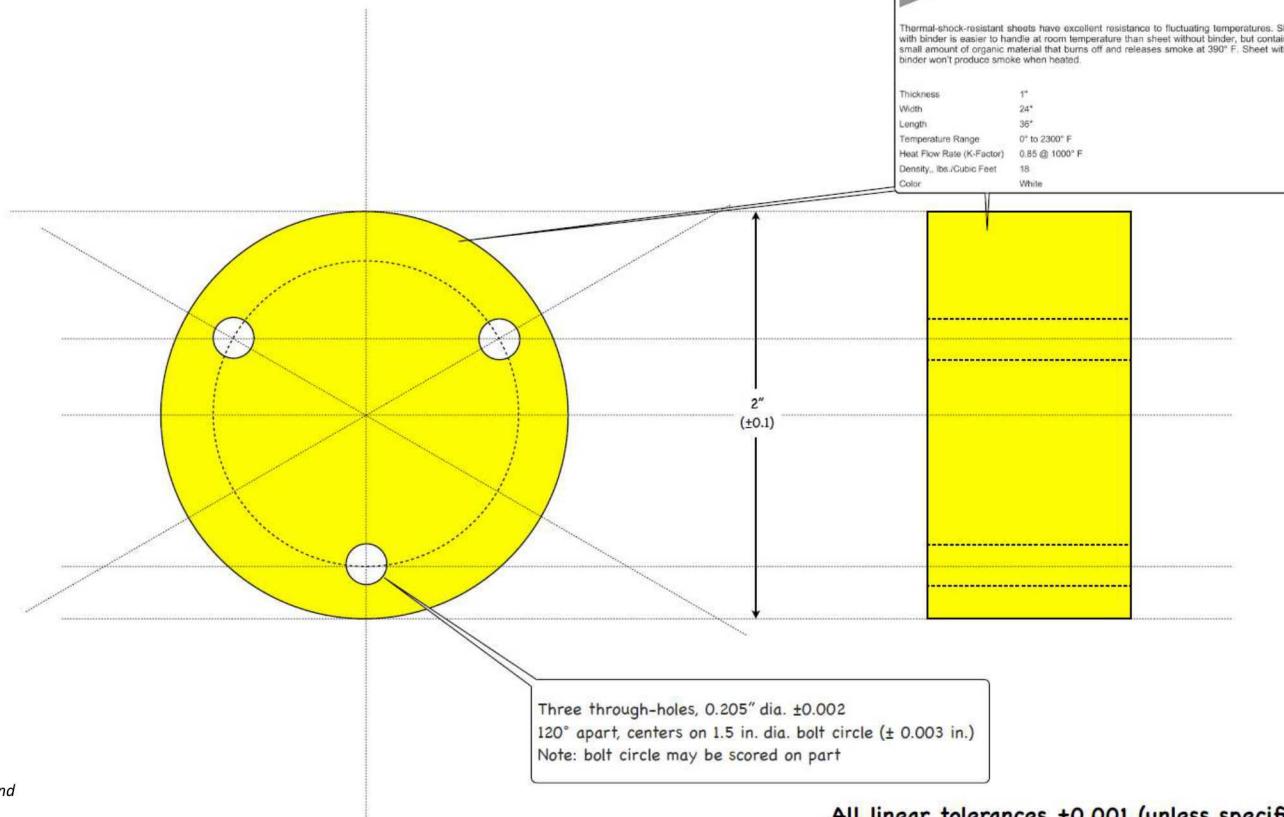
All linear tolerances  $\pm 0.003$



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## Cell Tester: Platen Insulation

Two each per tester



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All linear tolerances ±0.001 (unless specified otherwise)  
(Unless otherwise specified, all degree tolerances are ±0.05)

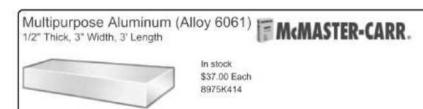
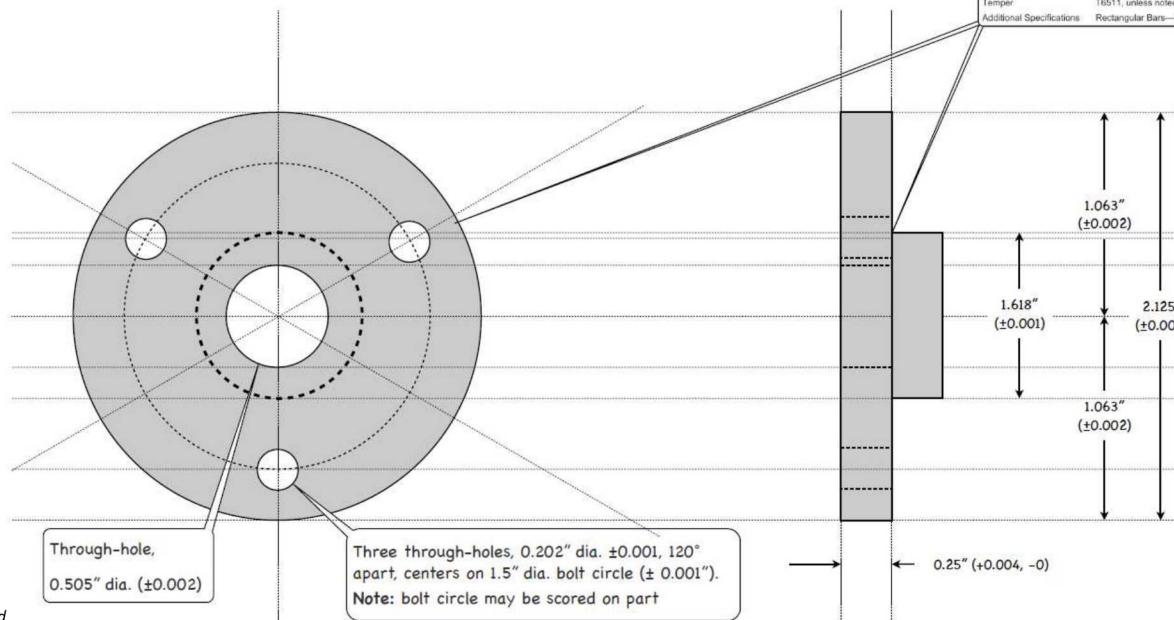


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## Cell Tester: Lower Platen Support

One each per tester

Note: Chamfer all edges  $0.03" \pm 0.01$



A combination of good strength, corrosion resistance, and machinability makes this the most widely used aluminum. It has less strength than Alloys 2024 and 7075, but better corrosion resistance and weldability. It's heat treatable and resists cracking due to stress. Commonly used for vehicle parts and pipe fittings. Nonmagnetic. Temperature range is -320° to +300° F.

Warning! Hardness and yield strength are not guaranteed and are intended only as a basis for comparison.

Meet ASTM B221. Flatness tolerance is not rated. Length tolerance is  $\pm 1"$ .

Width: 3"  
Width Tolerance:  $\pm 0.024"$   
Hardness: 60-65 Brinell  
Yield Strength: 35,000 psi  
Temper: T6511, unless noted  
Additional Specifications: Rectangular Bars—Unpolished (Mill) Finish

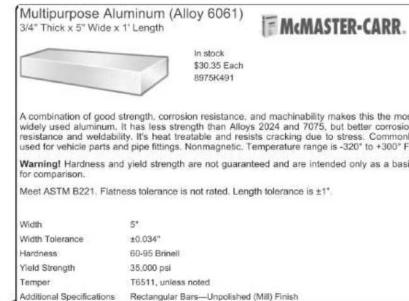
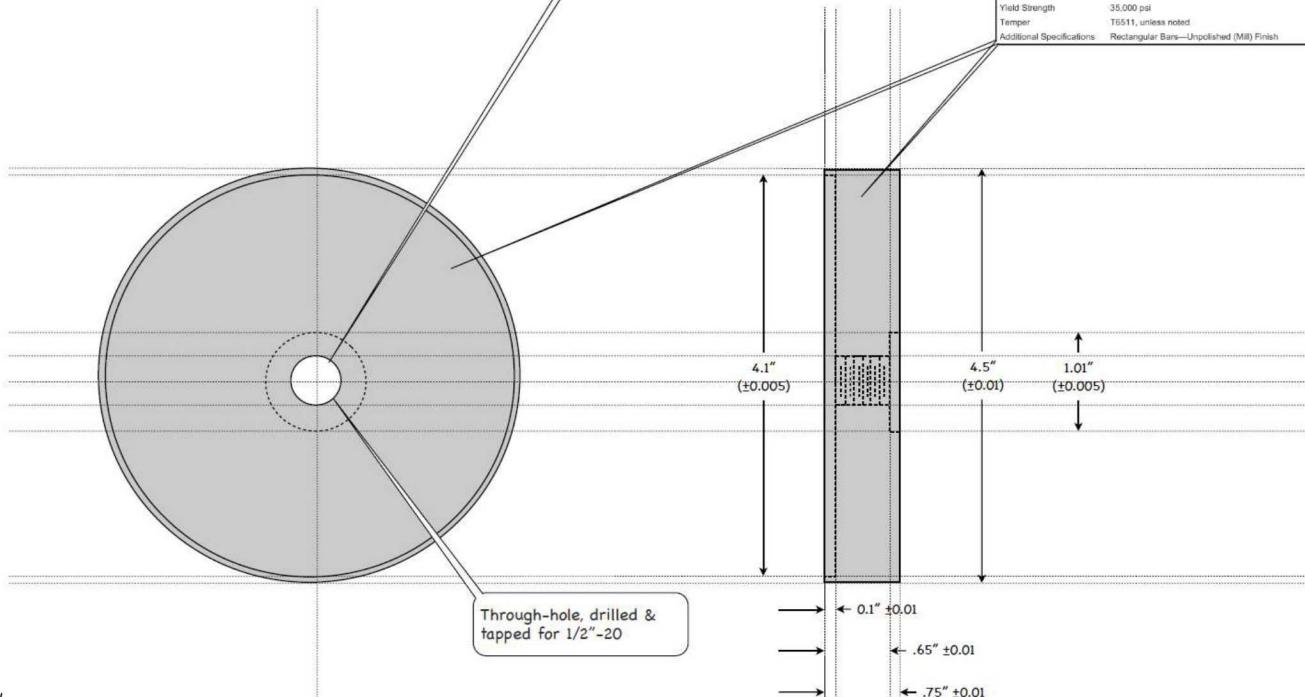


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## Cell Tester: Weight Platform

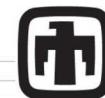
One each per tester

Note: Chamfer all edges  $0.06" \pm 0.01$



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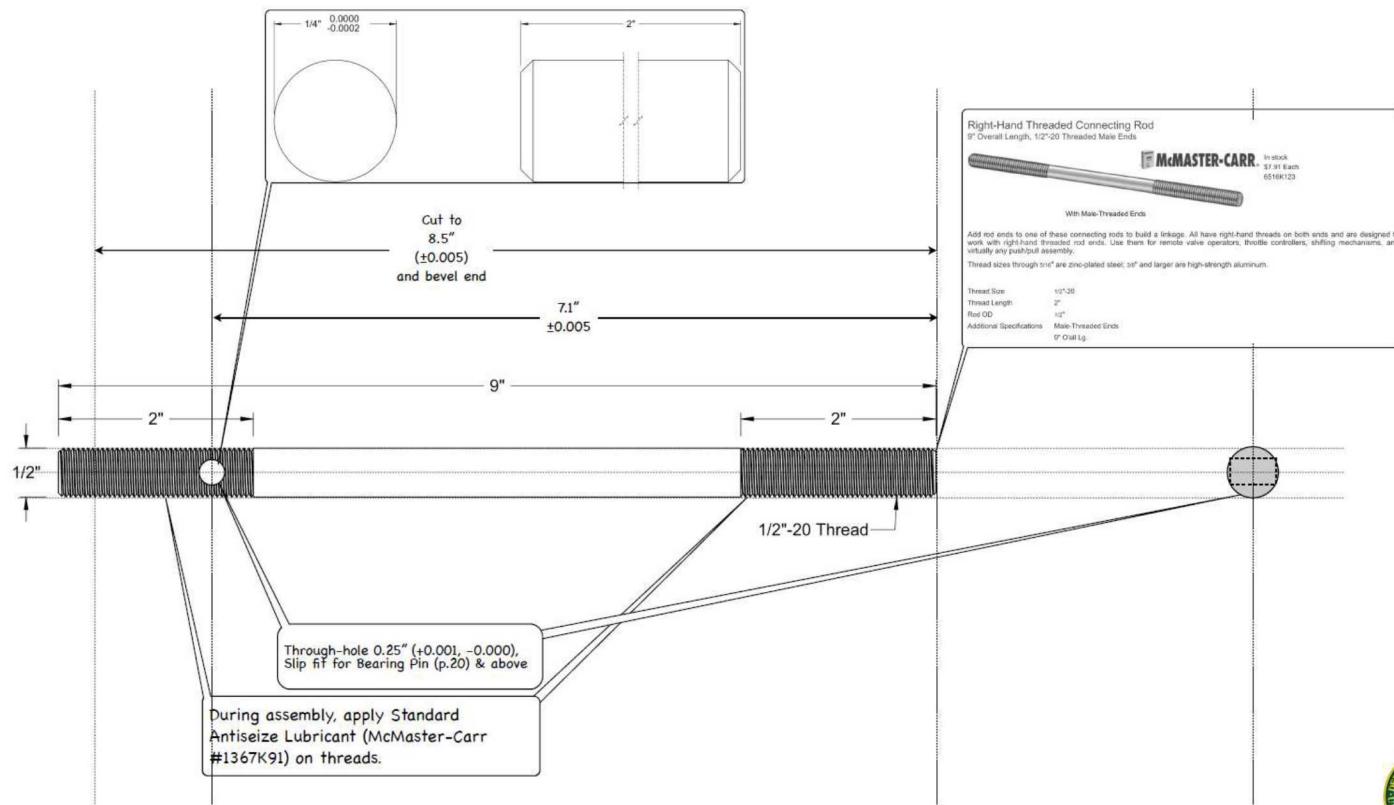
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## Cell Tester: Weight Platform & Upper Platen Connector

One each per tester



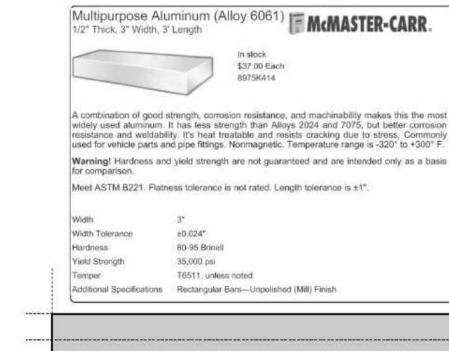
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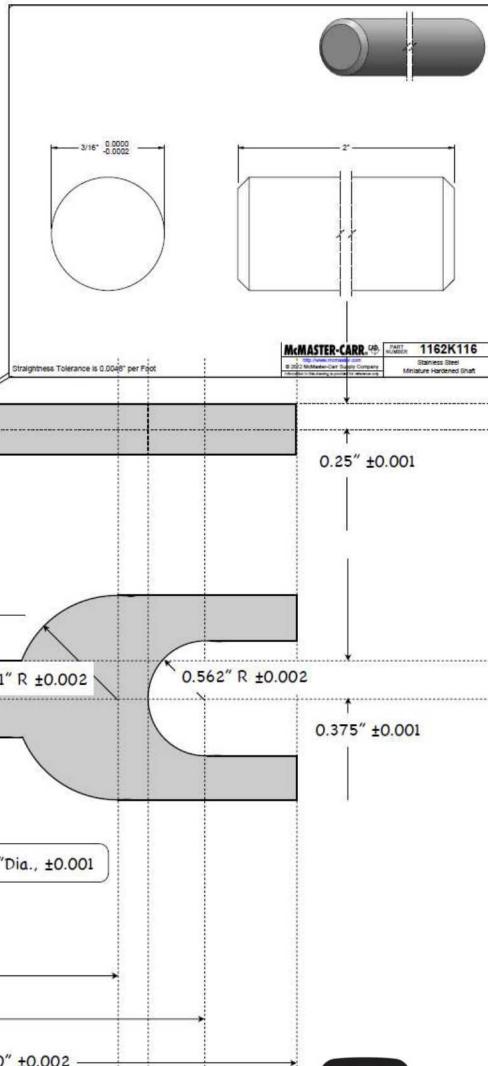


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## Cell Tester: Upper Platen Support Lift Lever



One each per tester



Note: Chamfer all edges 0.06"  $\pm 0.01$

6.625"  $\pm$ 0.002

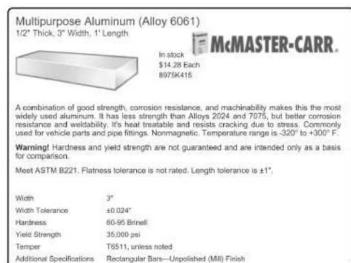
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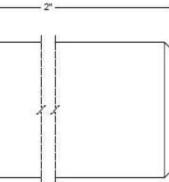
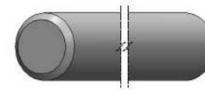
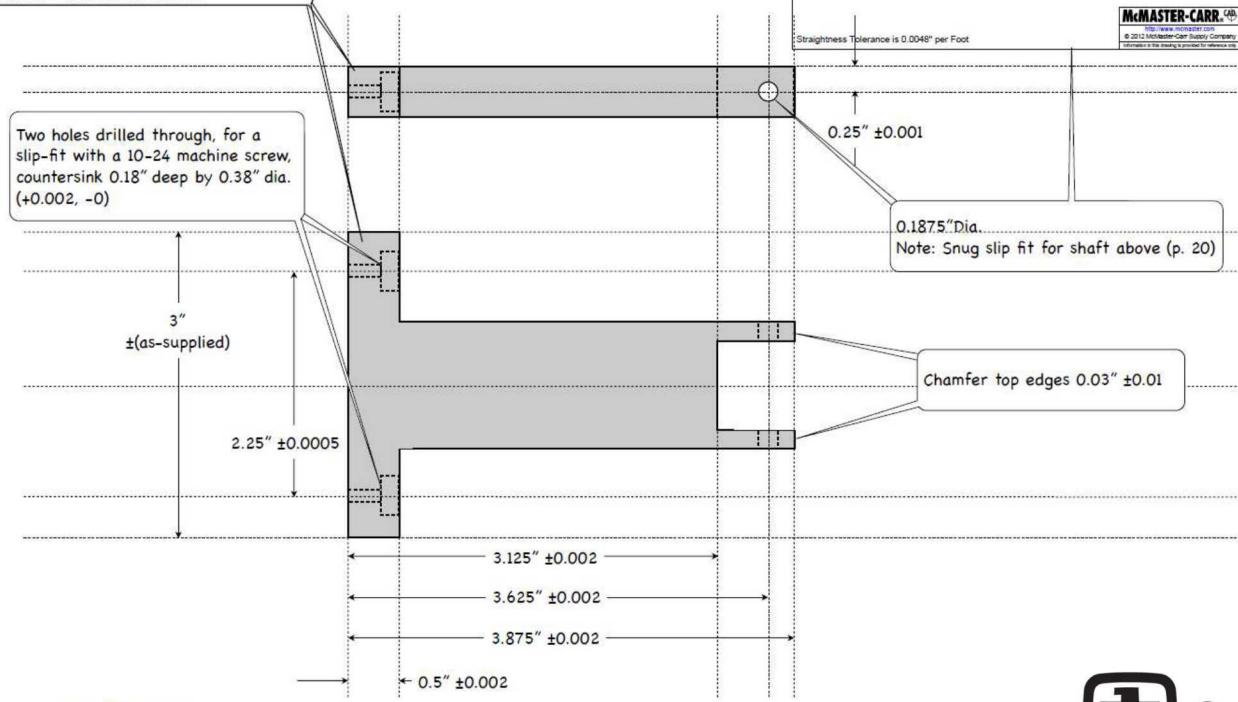


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## Cell Tester: Upper Platen Support Lift Lever Pedestal



One each per tester



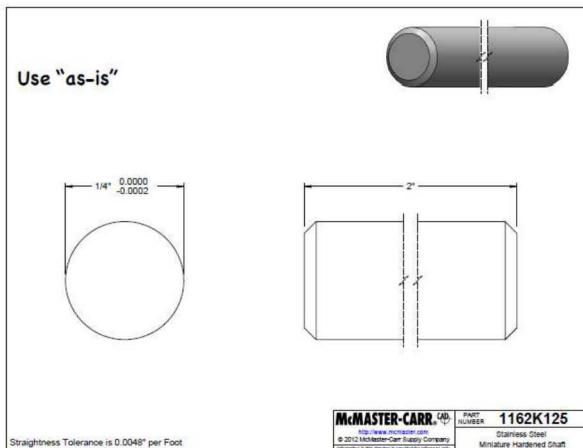
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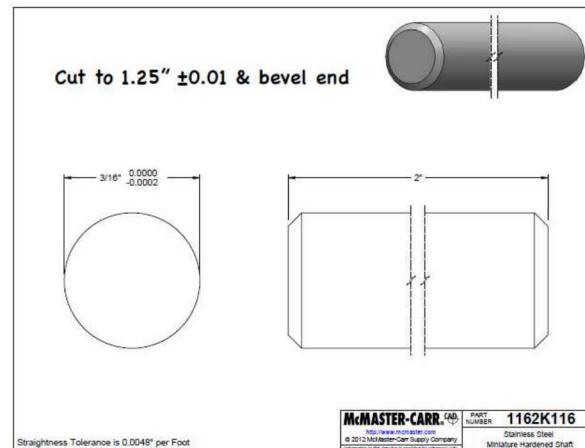


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## Cell Tester: Lift Lever Fulcrum and Bearing Pins



**Bearing Pin:**  
One each per tester



**Lever Fulcrum Pin:**  
One each per tester

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## Cell Tester: Parts List

McMaster-Carr #	Part Description	# needed per tester	\$
1162K116	Hardened Precision 17-4 Stainless Steel Shaft 3/16" Diameter, 2" Length	1	14.00
1162K125	Hardened Precision 17-4 Stainless Steel Shaft 1/4" Diameter, 2" Length	1	15.23
8350T24	Hardened Precision Shaft 3/4" Diameter, 8" Long--10" Overall Length, 1/2"-13 Thread Both Ends	4	241.36
88805K48	Architectural Aluminum (Alloy 6063) 90 Degree Angle, 1/8" Thickness, 1" x 1" Legs	1	20.55
6513K27	High-Temperature Nickel (Alloy HX) 2" Diameter	1	142.03
8974K771	Multipurpose Aluminum (Alloy 6061) Rod 2-1/2" Diameter x 1' Length	1	36.09
8975K414	Multipurpose Aluminum (Alloy 6061) 1/2" Thick, 3" Width, 3' Length	1	37.00
8975K221	Multipurpose Aluminum (Alloy 6061) 1/2" Thick, 6" Width, 3' Length	1	68.31
8975K491	Multipurpose Aluminum (Alloy 6061) 3/4" Thick x 5" Wide x 1' Length	1	62.19
6516K123	Aluminum Threaded Connecting Rod, 9" Overall Length, 1/2"-20 Threaded Male Ends	1	7.91
8710K124	High-Temperature Garolite (G-II), 1/4" Thick, 12" x 12"	1	48.49
96006A649	Socket Head Cap Screw 10-24 Thread, 3/4" Length--Black Oxide 18-8 Stainless Steel	1 pk. (25)	6.47
96006A646	Socket Head Cap Screw 10-24 Thread, 1/2" Length--Black Oxide 18-8 Stainless Steel	1 pk. (50)	10.36
92185A251	Socket Head Cap Screw 10-24 Thread, 1-1/2" Length--Type 316 Stainless Steel	1 pk. (10)	5.83
97763A142	Button Head Socket Cap Screw, 6-32 Thread, 3/8" Length--Black-Oxide Stainless Steel	1 Pk (100)	6.89
97763A143	Button Head Socket Cap Screw, 6-32 Thread, 1/2" Length--Black-Oxide Stainless Steel	1 pk. (50)	4.15
92949A150	Button Head Socket Cap Screw, 6-32 Thread, 5/8" Length--18-8 Stainless Steel	1 pk. (100)	4.56
91355A100	Flange Button Head Socket Cap Screw, Alloy Steel, 10-24 Thread, 3/8" Length	1 pk. (50)	13.81
91034A120	Coupling Nut, 1/2"-13 Thread Size, 1-1/4" Length, 7/8" Width--Black-Oxide Steel	4	20.40
92316A714	Hex Flange Cap Screw 1/2"-13 Thread, 1-1/4" Length, Fully Threaded	1 pk. (25)	16.04
92316A750	Hex Flange Cap Screw 1/2"-20 Thread, 1-1/4" Length, Fully Threaded	1 pk. (10)	6.52
94758A033	Flange Hex Nut, 1/2"-13 Thread Size, 7/8" Width, 11/16" Overall Height--18-8 Stainless Steel	5	39.40
8911K29	Bearing Grade Bronze (Alloy 932) Oversize Tube, 1-3/4" OD x 3/4" ID, 13" Length	1	92.95
89785K869	Tubing 1" OD, .87" ID, .065" Wall--Type 316 Smooth-Bore Seamless Stainless Steel	1	20.75
8492A408	Press-Fit Drill Bushing with Head 0.5" (1/2") ID, 7/8" OD, 1/2" Length	1	13.21
99604A125	Silicone Sealing Washer, 1/2" Screw Size, 1-1/16" OD, .093" Thick	1 pk. (25)	11.41
3568K22	Heat-Transfer Putty, Quart Container, 1250 Degree F Max	1	32.73
1367K91	Standard Antiseize Lubricant, 4-Ounce Brush-Top Can	1	10.52
9322K64	Garolite Strip - 3/16" Thick, 3" x 48", Grade LE	1	25.80
		Total =	1034.96

Note: Items with this background color need be ordered only once for 3 or more testers

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