

# Sealing Boots for Toggle-Actuated Circuit Breakers

HEXSEAL® and E-SEEL® sealing boots for toggle-actuated style circuit breakers are molded from a high tear-strength silicone rubber bonded to a built-in mounting nut. Each encloses the base of the protruding circuit breaker bushing and forms a watertight and dust-tight seal against the front panel surface.

## SPECIFICATIONS

**Material:** HEXSEALS: Silicone rubber conforms to ZZ-R-765 Class III, GR 50 (unless otherwise specified)  
E-SEELS — Silicone rubber polymer type ASTM D 1418

**Mounting Nut:** HEXSEALS: Brass, nickel-plated  
E-SEELS: Brass, black-oxide

**Temperature Range:** HEXSEALS: -94°F to +400°F  
E-SEELS: -80°F to +400°F

**Pressure Range:** Exceeds 15 psi internal and 1500 psi external.

**Operational Life:** 50,000 actuations (minimum).

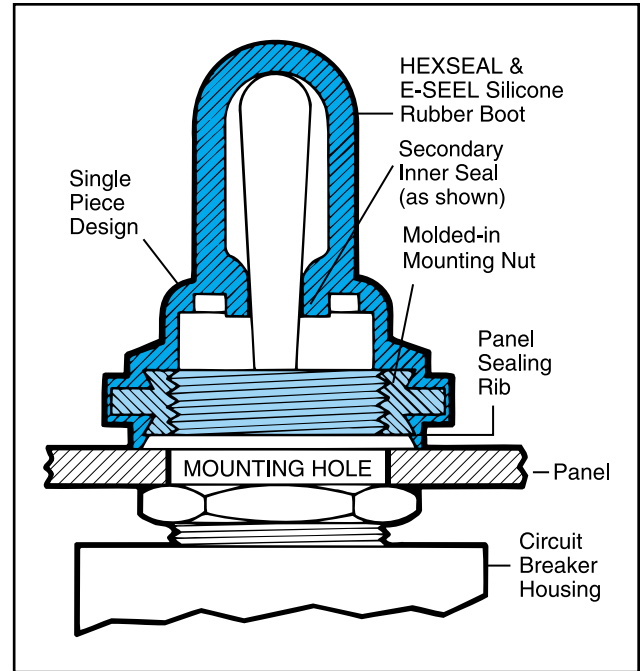
**Shelf Life:** Excess of 25 years.

**Resistant to:** Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils

**Military Approvals:** Most HEXSEALS are QPL-approved to MIL-B-5423. (See QPL listing on page 5.)

**Agency Recognition:** E-SEELS and HEXSEALS are UL-listed to UL Std. 50 types 1-13, and meet CSA standards.

**Installation:** Please see installation instructions on page 11.

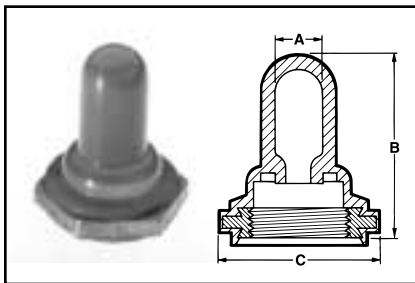


## HOW TO ORDER

Specify APM boot part number and, if necessary, the appropriate bushing adaptor part number (please see page 11).

FIGURE 4 Full-Toggle Boot with Integral Secondary Inner Seal

Figure 4

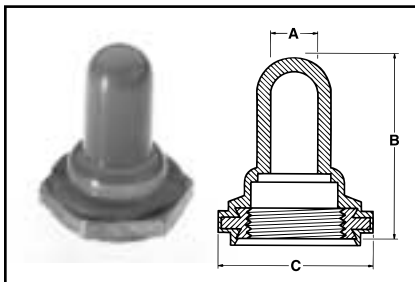


Thread Size	Max. Toggle Height Above Bushing (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	M5423/01-01	N-1030	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	N-1030 1/2-32	Gray	•	
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.71	.219	5.55	.937	23.81	.625	15.88	—	C1131/27	Black		•

\*Other colors available. Please consult factory.

FIGURE 5 Full-Toggle Boots (with constant I.D.)

Figure 5

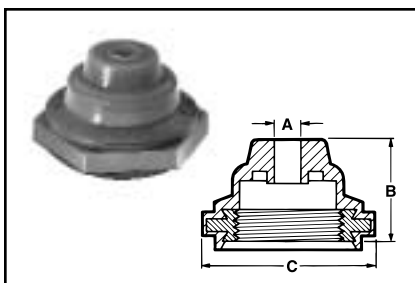


Thread Size	Max. Toggle Height Above Bushing (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030	Gray	•	
1/2-32NS-2B	.66	.219	5.55	.844	21.44	.625	15.88	—	IN-1030 1/2-32	Gray	•	
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.71	.219	5.55	.937	23.81	.625	15.88	—	C1131/28	Black		•

\*Other colors available. Please consult factory. Mounting nut material: Aluminum

FIGURE 6 Half-Toggle Boots (toggle actuator protrudes)

Figure 6



Thread Size	Toggle Diameter Accommodated (in.)	A Throat or I.D.		B Height		C Flat		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
		in.	mm	in.	mm	in.	mm					
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.155-.240	.078	1.98	.437	11.10	.625	15.88	M5423/02-01	N-1030B	Gray	•	
1/2-32NS-2B	.155-.240	.078	1.98	.437	11.10	.625	15.88	—	N-1030B 1/2-32	Gray	•	
1 <sup>5</sup> / <sub>32</sub> -32NS-2B	.155-.240	.078	1.98	.437	11.10	.625	15.88	—	C1132/20	Black		•

\*Other colors available. Please consult factory.

DIMENSIONS FOR REFERENCE ONLY.

# Sealing Boots for Pushbutton-Actuated Circuit Breakers

HEXSEAL® and E-SEEL® sealing boots for pushbutton actuated style circuit breakers are molded from a high tear-strength silicone rubber bonded to a built-in mounting nut. Each encloses the base of the protruding circuit breaker bushing and forms a watertight and dust-tight seal against the front panel surface.

## SPECIFICATIONS

**Material:** HEXSEALS: Silicone rubber conforms to ZZ-R-765 Class III, Gr. 60 unless otherwise specified.  
E-SEELS: Silicone rubber polymer type ASTM D1418.

**Mounting Nut:** HEXSEALS: Brass, nickel-plated  
E-SEELS: Brass, black-oxide

**Temperature Range:** HEXSEALS: -94°F to +400°F  
E-SEELS: -80°F to +400°F

**Pressure Range:** Exceeds 15 psi internal and 1500 psi external.

**Operational Life:** 50,000 actuations (minimum)

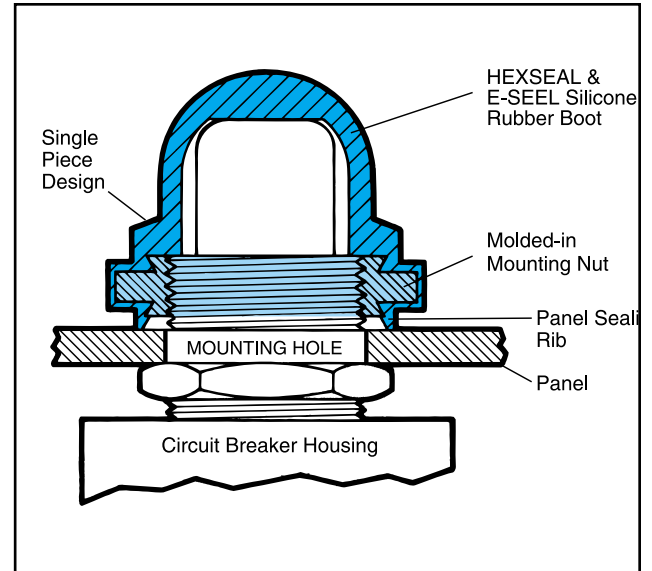
**Shelf Life:** In excess of 25 years

**Resistant to:** Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils

**Military Approvals:** Most HEXSEALS are QPL-approved to MIL-B-5423. (See QPL listing on page 5.)

**Agency Recognition:** E-SEELS and HEXSEALS are UL-listed to UL Std. 50 types 1-13, and meet CSA standards.

**Installation:** Please see installation instructions on page 11.



## HOW TO ORDER

Specify APM boot part number and, if necessary, the appropriate bushing adaptor part number (please see page 11).

FIGURE 7 Full Pushbutton Boots

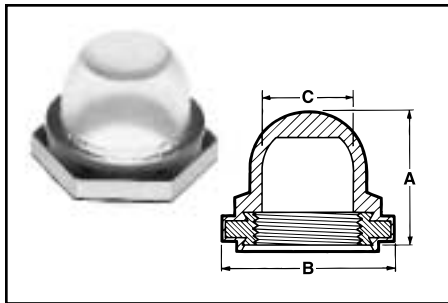


FIGURE 8

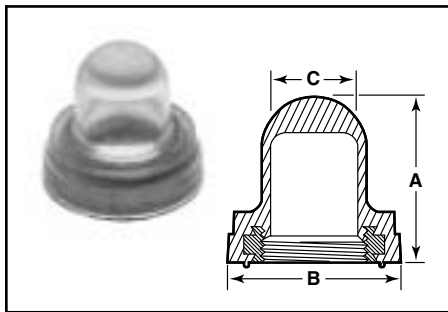
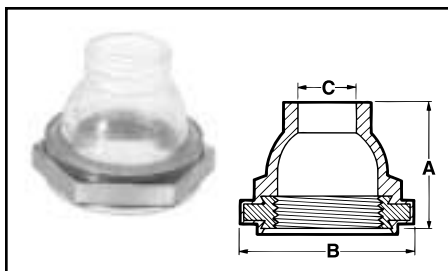


FIGURE 9 Half Pushbutton Boots (Pushbutton Actuator Protrudes)



Thread Size	Max. Plunger Height		A		B Flat		C I.D.		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
	inch	mm	inch	mm	inch	mm	inch	mm					
3/8-27NS-2B	.545	13.80	.653	16.60	.500	12.70	.300	7.60	—	1231/8	Clear	•	•
3/8-32NEF-2B	.545	13.80	.653	16.60	.500	12.70	.300	7.60	—	1231/35	Clear	•	•
7/16-28NEF-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	—	NC3030 7/16-28	Clear	•	•
7/16-32UN-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	—	NC3030 7/16-32	Gray	•	•
15/32-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-01	N3030	Gray	•	•
15/32-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-11	N3030-2513	Clear	•	•
15/32-32NS-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	M5423/07-02	NC3030	Gray	•	•
15/32-32NS-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	M5423/07-12	NC3030-2513	Clear	•	•
1/2-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	M5423/07-03	NH3030	Gray	•	•
1/2-32NS-2B	.188	4.76	.547	13.89	.625	15.88	.422	10.72	M5423/07-05	NH3030S	Gray	•	•
1/2-32NS-2B	.469	11.91	.734	18.65	.625	15.88	.422	10.72	—	NC3030H	Gray	•	•
15/32-32NS-2B	.281	7.14	.547	13.89	.625	15.88	.422	10.72	—	C1231/41	Black	•	•
15/32-32NS-2B	.438	11.11	.719	18.26	.625	15.88	.422	10.72	—	C1231/42	Black	•	•

\*Other colors available. Please consult factory.

Full Pushbutton Boots

Thread Size	Max. Plunger Height		A		B		C I.D.		Military Part Number	APM Boot Part Number	Color*	HEXSEAL	E-SEEL
	inch	mm	inch	mm	inch	mm	inch	mm					
3/8-27NS-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	1221/12	Gray	•	•
15/32-32NS-2B	.400	10.14	.719	18.26	.766	19.45	.375	9.53	—	1221/15	Gray	•	•
3/8-32NEF-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	C1221/20	Clear	•	•
3/8-24NF-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	C1221/22	Clear	•	•
3/8-27NS-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	C1221/21	Black	•	•
3/8-27NS-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	C1221/21 4	Clear	•	•
3/8-32NEF-2B	.330	8.38	.609	15.48	.641	16.27	.320	8.11	—	C1221/23	Clear	•	•

\*Other colors available. Please consult factory.

Thread Size	A Height		B Flat		C Throat		Military Part Number	APM Boot Part Number	Color	HEXSEAL	E-SEEL
	inch	mm	inch	mm	inch	mm					
7/16-28NS-2B	.547	13.89	.625	15.88	.250	6.35	—	N3030B 7/16-28	Clear	•	•
7/16-32NS-2B	.547	13.89	.625	15.88	.250	6.35	—	N3030B 7/16-32	Clear	•	•
15/32-32NS-2B	.547	13.89	.625	15.88	.250	6.35	—	N3030B**	Clear	•	•
1/2-32NS-2B	.547	13.89	.625	15.88	.250	6.35	—	NH3030B	Clear	•	•

\*\*N3030B may be used with MS 25244(ASG); MS 24510 (USAF) and model MP-1500 manufactured by Mechanical Products, Inc.

# Sealing Boots for Rocker-Style Circuit Breakers

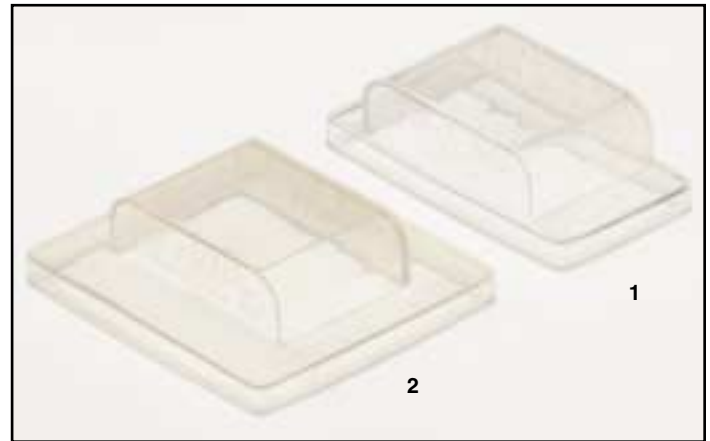
E-SEEL® (Rock-R-Seel™) boots for rocker-style circuit breakers are made of RUBRGLAS™, APM's proprietary high tear-strength, transparent silicone rubber. These durable and flexible boots lock out dust, dirt, and moisture ... without compromising circuit breaker operability, position status viewing or legend visibility. Each is designed to fully enclose the breaker bezel, while our unique molded-in "panel sealing rib" forms a watertight and dust-tight seal against the front panel surface.

## SPECIFICATIONS

**Material:** APM RUBRGLAS™ (transparent silicone rubber), polymer type, ASTM D1418  
**Temperature Range:** -80°F to +400°F  
**Operational Life:** 50,000 actuations (minimum)  
**Resistant to:** Salt spray, sunlight, ozone, weather, fungus, and most acids and lubricating oils  
**Agency Recognition:** Rock-R-Seels™ are UL-listed to UL Std. 50, types 1, 2, 4R, 5, 12, 12K, 13, and meet CSA standards  
**Shelf Life:** Excess of 25 years

## HOW TO ORDER

Specify APM boot part number.

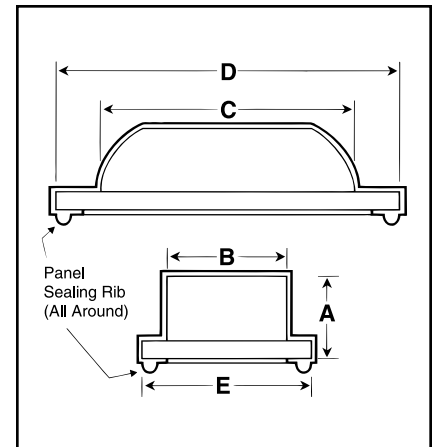


PHOTOS 1 AND 2

Photo #	E-SEEL Part #	Dimensions										Compatible with These Manufacturers (Partial List)
		A		B		C		D		E		
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
1	C1113/71	.413	10.49	.687	17.46	1.046	26.59	1.327	36.51	.703	17.86	Carlingswitch M Series Airpax R11 Eaton/Heinemann LC-1
2	C1113/75	.413	10.49	.687	17.46	1.046	26.59	1.437	36.51	1.390	35.32	Carlingswitch M Series Airpax R21 Eaton/Heinemann LC-2

NOTE: Other rocker-style switch and circuit breaker boots are available. Please consult factory.

DIMENSIONS FOR REFERENCE ONLY



# Custom Circuit Breaker Boots

Should you not find the circuit breaker boot you need in this catalog, please call. APM would be pleased to consider modifying a standard boot, or design a custom unit which satisfies your breaker's mounting characteristics. We have even designed boots for DIN-rail mounted circuit breakers installed to protrude through a panel opening.

