



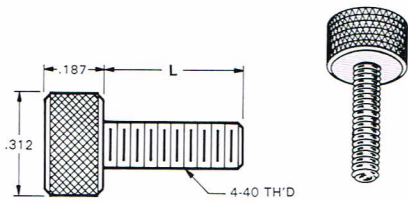
Designers' Choice

PANEL HARDWARE

MATERIAL: Stainless Steel per ASTM-A581/A582

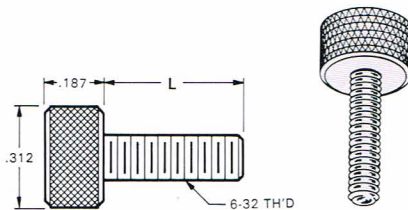
THUMB SCREWS

4-40



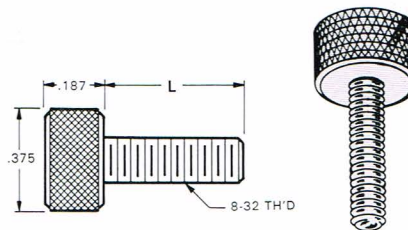
CAT. NO.	LENGTH
2400	.312
2401	.375
2402	.437
2403	.500

6-32



CAT. NO.	LENGTH
2404	.312
2405	.375
2406	.437
2407	.500

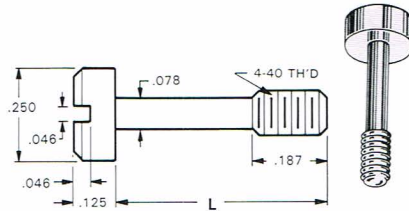
8-32



CAT. NO.	LENGTH
2408	.375
2409	.437
2410	.500
2411	.562
2412	.625

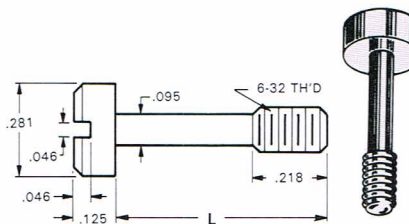
CAPTIVE SCREWS

4-40



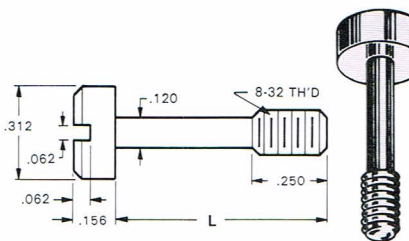
CAT. NO.	LENGTH
2413	.469
2414	.531

6-32



CAT. NO.	LENGTH
2415	.531
2416	.593
2417	.656

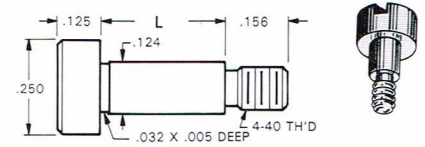
8-32



CAT. NO.	LENGTH
2418	.656
2419	.718
2420	.781

SHOULDER SCREWS

4-40

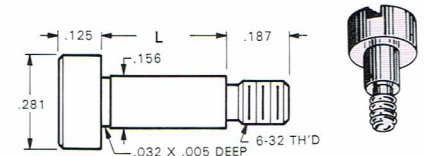


SLOTTED

SOCKET

CAT. NO.	LENGTH	CAT. NO.
2421	.125	2441
2422	.250	2442
2423	.375	2443
2424	.500	2444

6-32

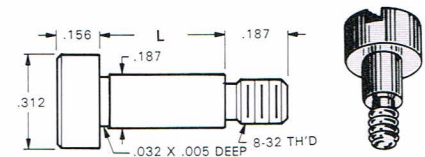


SLOTTED

SOCKET

CAT. NO.	LENGTH	CAT. NO.
2425	.125	2445
2426	.250	2446
2427	.375	2447
2428	.500	2448
2429	.625	2449
2430	.750	2450

8-32



SLOTTED

SOCKET

CAT. NO.	LENGTH	CAT. NO.
2431	.125	2451
2432	.250	2452
2433	.375	2453
2434	.500	2454
2435	.625	2455
2436	.750	2456
2437	1.000	2457

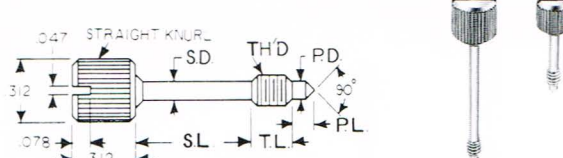
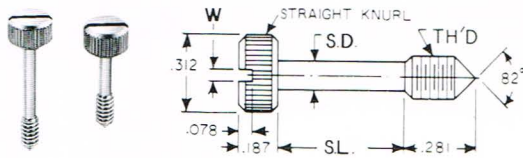
PANEL HARDWARE

Designers' Choice



STAINLESS STEEL CAPTIVE PANEL SCREWS

MATERIAL: Stainless Steel per ASTM-A581/A-582

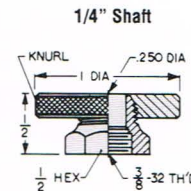
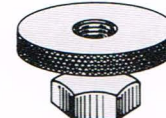
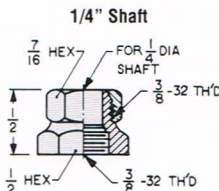
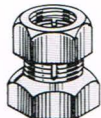
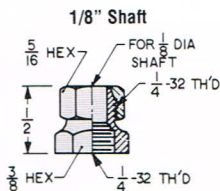


CAT. NO.	TH'D	S.D. ±.005	S.L. ±.010	W +.005 -.000
8700	4-40	.078	.375	.036
8701	4-40	.078	.500	.036
8702	4-40	.078	.625	.036
8703	6-32	.095	.375	.045
8704	6-32	.095	.500	.045
8705	6-32	.095	.625	.045

CAT. NO.	TH'D	T.L. +.000 -.015	S.D +.005	S.L. ±.010	P.D. +.000 -.010	P.L. ±.015
8706	4-40	.125	.078	.171	.078	.078
8707	4-40	.125	.078	.296	.078	.078
8708	4-40	.125	.078	.421	.078	.078
8709	6-32	.218	.095	.187	.095	.093
8710	6-32	.218	.095	.312	.095	.093
8711	6-32	.218	.095	.437	.095	.093

SHAFT LOCKS (1/8" & 1/4")

MATERIAL: Brass, ASTM-B16, Nickel Plate per QQ-N-290



CAT. NO. 1700

CAT. NO. 1701

CAT. NO. 1702

PANEL BEARINGS

STANDARD AND MINIATURE

MATERIAL: Brass, Nickel Plated (QQ-N-290). Supplied unassembled.



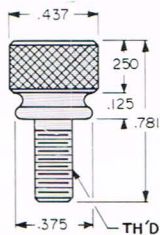
CAT. NO.	A	B	C	D	E
1705	.253	.437	.500	.437	3/8-32 Standard
1706	.128	.343	.437	.375	1/4-32 Miniature

THUMB SCREWS

For quick removal of panel from chassis.

Other variations available see page 46.

MATERIAL: Brass, Nickel Plated (QQ-N-290)

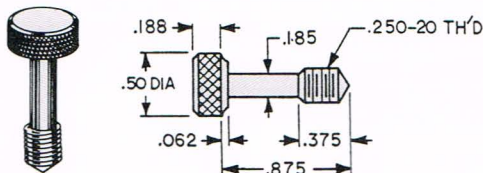


CAT. NO.	THREAD
1708	6-32
1709	8-32
1710	10-32

STAINLESS STEEL CAPTIVE SCREW

For quick removal of panel from chassis. Other variations available see page 46

MATERIAL: Stainless Steel per ASTM-A581/A582

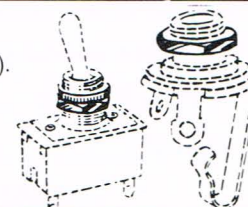


CAT. NO. 1704

PRECISION PANEL NUTS

For Volume Controls, Switches, Capacitors, Tip Jacks, etc.

MATERIAL: Brass, Nickel Plated (QQ-N-290).



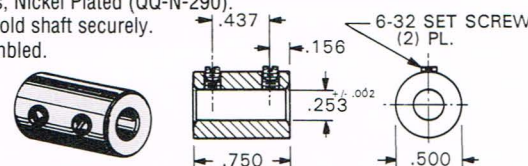
CAT. NO.	FOR	THREAD	DIAMETER	THICKNESS
1448	Mounting	1/4-32	3/8 Hex	3/32"
1449	Mini. Control	1/4-32	5/16 Hex	5/64"
1456	Vol. Control	3/8-32	1/2 Hex	3/32"
1458	Switch	15/32-32	9/16 Hex	5/64"
1459	Switch Ring	19/32-32	5/8 Knurled	1/16"
1472	Filter	5/16-32	3/8 Hex	3/32"

1/4" - 1/4" SHAFT COUPLING

MATERIAL: Brass, Nickel Plated (QQ-N-290).

Two set screws hold shaft securely.

Supplied unassembled.



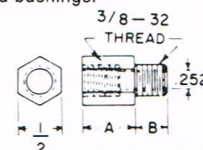
CAT. NO. 1453

VOLUME CONTROL EXTENDERS

For 1/4" volume control shafts having 3/8-32 threaded bushings.

MATERIAL: Brass, Nickel Plated (QQ-N-290).

CAT. NO.	A	B
1464	.625	.250
1465	.625	.375
1466	.687	.500
1467	.750	.250



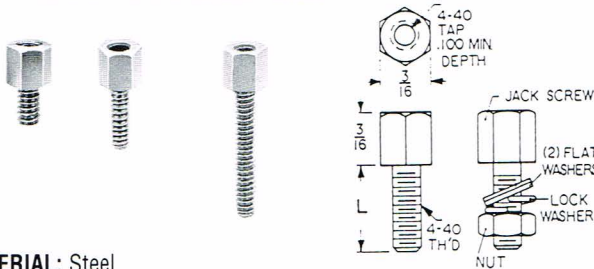


Designers Choice

COMPUTER & CONNECTOR HARDWARE

JACK SCREWS

"D" Subminiature Connector Mounting Screw. Equivalent to AMP, CANNON & TRW Jack Screws. Other sizes upon request.



MATERIAL: Steel

JACK (Only)		JACK & HARDWARE (Supplied Unassembled in Bulk)		
ZINC PLATE & GOLD IRIDITE	ZINC PLATE & CLEAR CHROMATE	"L" DIM	ZINC PLATE & GOLD IRIDITE	ZINC PLATE & CLEAR CHROMATE
7228	7228-5	.250	7229	7229-5
7230	7230-5	.312	7231	7231-5
7232	7232-5	.625	7233	7233-5

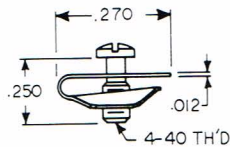
MOUNTING HARDWARE

Our assortment of standard clips and washers offer the needed flexibility to secure your connectors in the manner best suited to your instrumentation and design.

"U" CLIP



Supplied Un-assembled



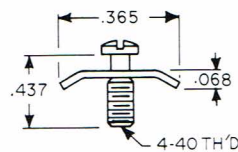
MATERIAL
Clip and Screw:
Steel, Zinc Plate & Gold Iridite

CAT. NO. 2062

SADDLE WASHER



Supplied Un-assembled



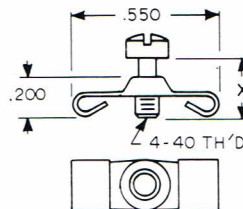
MATERIAL
Clip and Screw:
Steel, Zinc Plate & Gold Iridite

CAT. NO. 2063

"BOW TIE" RETAINING CLIP



Supplied Un-assembled



MATERIAL
Clip and Screw:
Steel, Zinc Plate & Gold Iridite

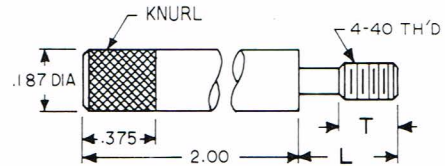
CAT. NO.	"X"
2060	4-40 x 1/4
2061	4-40 x 9/32

TURNABLE JACK SCREWS

Turnable jack screws, available with or without screwdriver slot make mating and disconnecting computer connectors quick and easy.

DIRECT ACCESS

AVAILABLE WITH OR WITHOUT SCREWDRIVER SLOT.

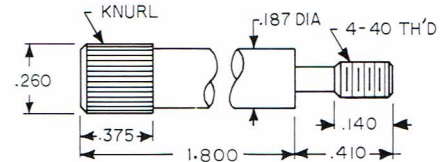


MATERIAL: Steel, Black Zinc Plate

"T" DIM	"L" DIM	CAT. NO. WITHOUT SLOT	CAT. NO. WITH SLOT
.125	.250	2064	2065
.250	.437	2066	2067

STRAIGHT KNURL

AVAILABLE WITH OR WITHOUT SCREWDRIVER SLOT.

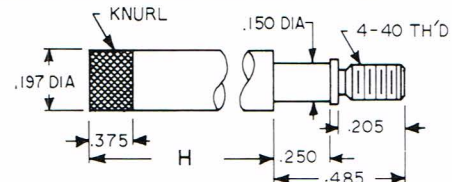


MATERIAL: Steel, Clear Zinc Plate

CAT. NO. WITHOUT SLOT	CAT. NO. WITH SLOT
2072	2073

DIAMOND KNURL

AVAILABLE WITH OR WITHOUT SCREWDRIVER SLOT.

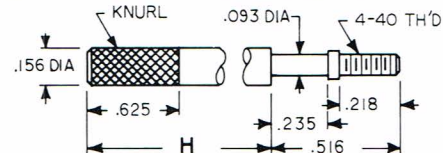


MATERIAL: Steel, Zinc Plate & Gold Iridite

"H" DIM	CAT. NO. WITHOUT SLOT	CAT. NO. WITH SLOT
1.390	2074	2076
1.890	2075	2077

SLIM LINE

AVAILABLE WITH OR WITHOUT SCREWDRIVER SLOT.



MATERIAL: Steel, Nickel Plate

"H" DIM	CAT. NO. WITHOUT SLOT	CAT. NO. WITH SLOT
1.250	2068	2069
1.750	2070	2071

HEX MALE/FEMALE STANDOFFS

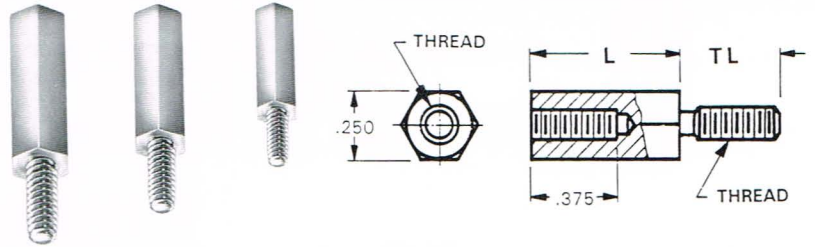
Designers' Choice



MALE/FEMALE .250 HEX THREADED STANDOFFS

CHOICE OF:

- Brass: Nickel Plate (QQ-N-290)
- Aluminum: Iridite (MIL-C-5541)
- Stainless Steel: ASTM A581/A582



EXTERNAL THREAD	TL
4-40	3/16 (.187)
6-32	1/4 (.250)
8-32	3/8 (.375)

4-40 THREAD

6-32 THREAD

8-32 THREAD

LENGTH INCHES "L"	STAINLESS STEEL CAT. NO.	BRASS CAT. NO.	ALUMINUM CAT. NO.
1/4 (.250)***	8712	8713	8714
3/8 (.375)**	2087	7200	8400
1/2 (.500)	2088	1944	8401
5/8 (.625)	2089	1945	8402
3/4 (.750)	2090	1946	8403
7/8 (.875)	2091	7201	8404
1 (1.000)	2092	1947	8405
1-1/8 (1.125)	2093	7202	8406
1-1/4 (1.250)	2094	1948	8407
1-3/8 (1.375)	2095	1949	8408
1-1/2 (1.500)	2096	1950	8409
1-5/8 (1.625)	2097	7203	8410
1-3/4 (1.750)	2098	7205	8411
2 (2.000)	2099	1951	8412

LENGTH INCHES "L"	STAINLESS STEEL CAT. NO.	BRASS CAT. NO.	ALUMINUM CAT. NO.
1/4 (.250)***	8715	8716	8717
3/8 (.375)**	2119	7210	8413
1/2 (.500)	2120	1952	8414
5/8 (.625)	2121	1953	8415
3/4 (.750)	2122	1954	8416
7/8 (.875)	2123	7211	8417
1 (1.000)	2124	1644	8418
1-1/8 (1.125)	2125	7212	8419
1-1/4 (1.250)	2126	1955	8420
1-3/8 (1.375)	2127	1956	8421
1-1/2 (1.500)	2128	1645	8422
1-5/8 (1.625)	2129	7214	8423
1-3/4 (1.750)	2130	7215	8424
2 (2.000)	2131	1646	8425

LENGTH INCHES "L"	STAINLESS STEEL CAT. NO.	BRASS CAT. NO.	ALUMINUM CAT. NO.
3/8 (.375)**	2149	7220	8426
1/2 (.500)	2150	1957	8427
5/8 (.625)	2151	1958	8428
3/4 (.750)	2152	1959	8429
7/8 (.875)	2153	7221	8430
1 (1.000)	2154	1960	8431
1-1/8 (1.125)	2155	7222	8432
1-1/4 (1.250)	2156	1961	8433
1-3/8 (1.375)	2157	1962	8434
1-1/2 (1.500)	2158	1963	8435
1-5/8 (1.625)	2159	7224	8436
1-3/4 (1.750)	2160	7225	8437
2 (2.000)	2161	1964	8438

*Internal Thread .250 Deep

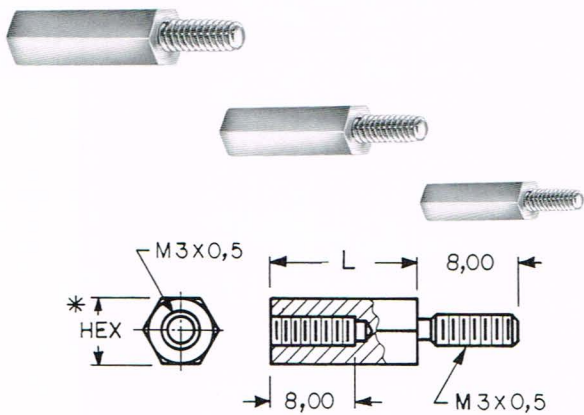
***Internal Thread .130/.150 Deep

METRIC MALE/FEMALE

HEX THREADED STANDOFFS (5mm & 5.5mm)

A comprehensive range of precision made metric male/female spacers.

MATERIAL: Brass, Nickel Plate.



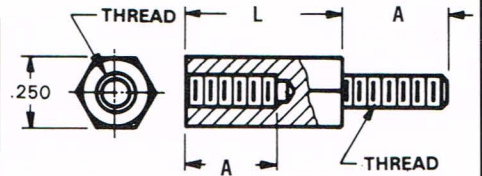
5mm HEX*	
CAT. NO.	"L"
4313	10mm
4314	12mm
4315	15mm
4316	18mm
4317	20mm
4318	25mm

5.5mm HEX*	
CAT. NO.	"L"
4319	10mm
4320	12mm
4321	15mm
4322	18mm
4323	20mm
4324	25mm

NYLON MALE/FEMALE .250 HEX

MATERIAL: Nylon 6/6

THREAD SIZE	A
4-40	3/16 (.187)
6-32	1/4 (.250)
8-32	3/8 (.375)



LENGTH INCHES "L"	4-40 THREAD CAT. NO.	6-32 THREAD CAT. NO.	8-32 THREAD CAT. NO.
1/4 (.250)	4800	4814*	4828*
3/8 (.375)	4801	4815	4829**
1/2 (.500)	4802	4816	4830
5/8 (.625)	4803	4817	4831
3/4 (.750)	4804	4818	4832
7/8 (.875)	4805	4819	4833
1 (1.000)	4806	4820	4834
1-1/8 (1.125)	4807	4821	4835
1-1/4 (1.250)	4808	4822	4836
1-3/8 (1.375)	4809	4823	4837
1-1/2 (1.500)	4810	4824	4838
1-5/8 (1.625)	4811	4825	4839
1-3/4 (1.750)	4812	4826	4840
2 (2.000)	4813	4827	4841

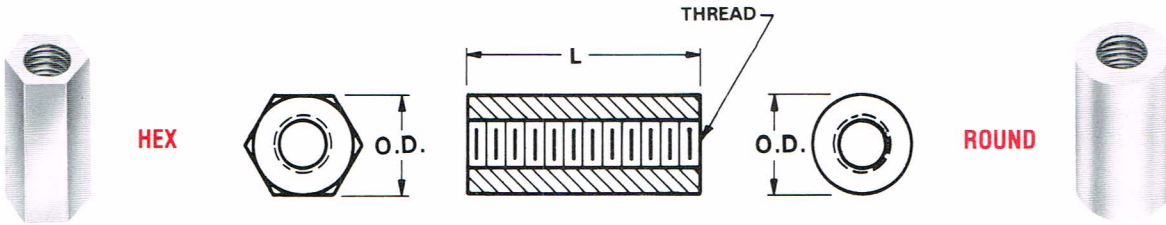
* Internal Thread .130/.150 Deep ** Internal Thread .250 Deep





Designers' Choice

THREADED STANDOFFS



MATERIAL

Brass: per ASTM-B16

Aluminum: QQ-A-225/3, Alloy 2011-T3

PLATING

Zinc: ASTM B633

Iridite Finish: MIL-C-5541

THREAD	O.D.	LENGTH	ALUMINUM IRIDITE FINISH		BRASS ZINC PLATE	
			HEX	ROUND	HEX	ROUND
			CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.
2-56	.156 (5/32)	3/16 (.187)	1797A	1801A	1798A	1802A
		1/4 (.250)	1797B	1801B	1798B	1802B
		5/16 (.312)	1797C	1801C	1798C	1802C
		3/8 (.375)	1797D	1801D	1798D	1802D
4-40	.187 (3/16)	1/4 (.250)	1891	2025	1450	1547
		3/8 (.375)	1892	2026	1803	1864
		1/2 (.500)	1893	2027	1656	1657
		5/8 (.625)	1894	2028	1804	1865
		3/4 (.750)	1895	2029	1656A	1657A
		7/8 (.875)	1896	2030	1805	1866
		1 (1.000)	1897	2031	1656B	1657B
4-40	.250 (1/4)	1/4 (.250)	2201	3478	1450A	1547A
		3/8 (.375)	2202	3479	1450B	1547B
		1/2 (.500)	2203	3480	1450C	1547C
		5/8 (.625)	1808	1839	1829	1867
		3/4 (.750)	2204	3481	1450D	1547D
		7/8 (.875)	1809	1846	1830	1876
		1 (1.000)	2205	3482	1450E	1547E
		1-1/2 (1.500)	2206	3483	1831	1877
		2 (2.000)	2207	3484	1832	1878
		6-32	.250 (1/4)	1/4 (.250)	2208	3485
3/8 (.375)	2209			3486	1451B	1548B
1/2 (.500)	2210			3487	1451C	1548C
5/8 (.625)	1813			1847	1451D	1548D
3/4 (.750)	2211			3488	1451E	1548E
7/8 (.875)	1816			1848	1833	1879
1 (1.000)	2212			3489	1635	1548F
1-1/4 (1.250)	1818			1853	1636	1881
1-1/2 (1.500)	2213			3490	1637	1882
1-3/4 (1.750)	1819			1855	1638	1883
2 (2.000)	2214			3491	1639	1884
2-1/4 (2.250)	1820			1856	1642	1885
2-1/2 (2.500)	1825			1857	1643	1886
8-32	.250 (1/4)	1/4 (.250)	2215	3492	1474A	1692A
		3/8 (.375)	2216	3493	1474B	1692B
		1/2 (.500)	2217	3494	1474C	1692C
		5/8 (.625)	1827	1858	1834	1887
		3/4 (.750)	2218	3495	1474D	1692D
		7/8 (.875)	1828	1859	1836	1888
		1 (1.000)	2219	3496	1474E	1692E
		1-1/2 (1.500)	2220	3497	1837	1889
		2 (2.000)	2221	3498	1838	1899
		8-32	.375 (3/8)	3/8 (.375)	1926A	2315A
1/2 (.500)	1926B			2315B	1452B	1549B
5/8 (.625)	1926C			2315C	1452C	1549C
3/4 (.750)	1926D			2315D	1452D	1549D
1 (1.000)	1926E			2315E	1452E	1549E

NOTE: Spacers over 1.000 long are tapped .375 deep each end.

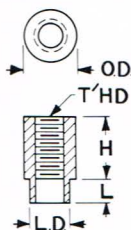
SWAGE/FORCE FIT STANDOFFS

Designers' Choice

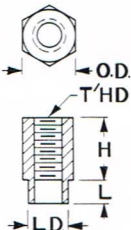


SWAGE THREADED STANDOFFS

ROUND



HEX



SPECIFICATIONS:

Brass: per ASTM-B16

Nickel Plate: QQ-N-290

ROUND CAT. NO.	H Height Above Panel	L Shank Length	For Panel Thickness	LD Shank Diameter	HEX CAT. NO.
2-56 THREAD × .156 O.D. (5/32")					
1589-2	.125	.109	1/16	.125	1731-2
1589-3	.125	.140	3/32	.125	1731-3
1590-2	.187	.109	1/16	.125	1734-2
1590-3	.187	.140	3/32	.125	1734-3
1591-2	.250	.109	1/16	.125	1740-2
1591-3	.250	.140	3/32	.125	1740-3
1596-2	.375	.109	1/16	.125	1743-2
1596-3	.375	.140	3/32	.125	1743-3
4-40 THREAD × .250 O.D. (1/4")					
1560 A	.125	.109	1/16	.187	1653-2
1560 F	.125	.140	3/32	.187	1653-3
1790-2	.187	.109	1/16	.187	1746-2
1790-3	.187	.140	3/32	.187	1746-3
1650-2	.250	.109	1/16	.187	1627-2
1650-3	.250	.140	3/32	.187	1627-3
1651-2	.375	.109	1/16	.187	1628-2
1651-3	.375	.140	3/32	.187	1628-3
1623-2	.500	.109	1/16	.187	1629-2
1623-3	.500	.140	3/32	.187	1629-3
1624-2	.625	.109	1/16	.187	1654-2
1624-3	.625	.140	3/32	.187	1654-3
1625-2	.750	.109	1/16	.187	1655-2
1625-3	.750	.140	3/32	.187	1655-3
1792-2	.875	.109	1/16	.187	1749-2
1792-3	.875	.140	3/32	.187	1749-3
1652-2	1.000	.109	1/16	.187	1630-2
1652-3	1.000	.140	3/32	.187	1630-3
6-32 THREAD × .250 O.D. (1/4")					
1560 B	.125	.109	1/16	.187	1620-2
1560 C	.125	.140	3/32	.187	1620-3
1612-2	.187	.109	1/16	.187	1752-2
1612-3	.187	.140	3/32	.187	1752-3
1546	.250	.109	1/16	.187	1621-2
1546 B	.250	.140	1/32	.187	1621-3
1546 D	.250	.171	1/8	.187	1621-4
1561 B	.375	.109	1/16	.187	1622-2
1561 C	.375	.140	3/32	.187	1622-3
1561 D	.375	.171	1/8	.187	1622-4
1604-2	.500	.109	1/16	.187	1758-2
1604-3	.500	.140	3/32	.187	1758-3
1604-4	.500	.171	1/8	.187	1758-4
1605-2	.625	.109	1/16	.187	1759-2
1605-3	.625	.140	3/32	.187	1759-3
1608-2	.750	.109	1/16	.187	1761-2
1608-3	.750	.140	3/32	.187	1761-3
1796-2	.875	.109	1/16	.187	1775-2
1796-3	.875	.140	3/32	.187	1775-3
1609-2	1.000	.109	1/16	.187	1784-2
1609-3	1.000	.140	3/32	.187	1784-3

STAKING TOOLS FOR SWAGE STANDOFFS

Precision made tools-heat treated and plated. Will give your job the professional appearance. Set of tools consists of: Top Staking Tool and Anvil.



CAT. NO. TL-19 For Bushing 5/32 OD with 2-56 Thd.

CAT. NO. TL-20 For Bushing 1/4 OD with 4-40 Thd.

CAT. NO. TL-21 For Bushing 1/4 OD with 6-32 Thd.

FORCE-FIT STANDOFFS

A broaching-type fastener/standoff for installation in panels and circuit boards .060 inch and thicker made of plastic and other non-ductile materials. Available threaded or with clearance holes. Easy to install, presses into punched or drilled holes.

MATERIAL: Stainless Steel
per ASTM-A581/A582

Mounting Holes:

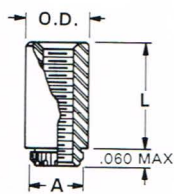
.147 hole for 2-56.

.166 hole for 4-40.

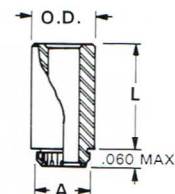
.213 hole for 6-32.

Tolerance on Mounting Holes:

+ .003/- .000.



Threaded



Clear Hole

THREADED

CAT. NO.	THREAD	"L" LENGTH	O.D.	"A"
4860	2-56	.065	.219	.165
4861	4-40	.065	.219	.184
4862	4-40	.125	.219	.184
4863	4-40	.250	.219	.184
4864	4-40	.375	.219	.184
*4865	4-40	.500	.219	.184
4866	6-32	.065	.281	.231
4867	6-32	.125	.281	.231
4868	6-32	.250	.281	.231
4869	6-32	.375	.281	.231
*4870	6-32	.500	.281	.231

*Thread depth .375

CLEAR HOLE

CAT. NO.	I.D.	LENGTH	O.D.	"A"
4850	#4 (.116)	.065	.219	.184
4851	#4 (.116)	.125	.219	.184
4852	#4 (.116)	.250	.219	.184
4853	#4 (.116)	.375	.219	.184
4854	#4 (.116)	.500	.219	.184
4855	#6 (.143)	.065	.281	.231
4856	#6 (.143)	.125	.281	.231
4857	#6 (.143)	.250	.281	.231
4858	#6 (.143)	.375	.281	.231
4859	#6 (.143)	.500	.281	.231

SPECIAL REQUIREMENTS?

Use our Engineering and Production Facilities to design and develop new products or modify existing components to meet your specific needs.



Designers' Choice

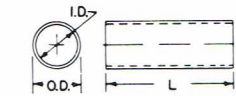
SPACERS & STANDOFFS

ALUMINUM ECONOMY SPACERS

- PRECISION FORMED • NO BURRS

Made of flat strip aluminum and rolled on precision equipment. Assures maximum bearing surface, square ends.

Aluminum: Per 5052-H34 per QQ-A-250/8b



Description and Tol.

SPACER FOR	I.D. ±.005	O.D. ±.007
#4	.125	.167
#6	.151	.193
#8	.178	.232

L Length	#4 Screw CAT. NO.	#6 Screw CAT. NO.	#8 Screw CAT. NO.
.187	397	—	—
.250	398	405	412
.312	399	406	413
.375	400	407	414
.437	401	408	415
.500	402	409	416
.625	403	410	417
.750	418	425	432
.875	419	426	433
1.000	420	427	434
1.250	421	428	435
1.500	422	429	436
1.750	—	430	437
2.000	—	—	438

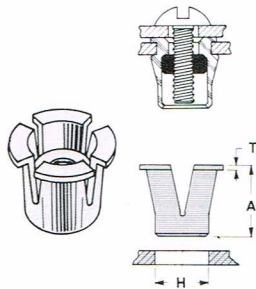
BLIND CAPTIVE NUTS — PRESS FIT

MOUNT CHASSIS, PANELS, HEAT SINKS, SOCKETS

MATERIAL: Molded Nylon with Brass threaded insert.

- EASY ASSEMBLY
- DAMPENS VIBRATION
- ELIMINATES INSULATING WASHER
- HI-DIELECTRIC STRENGTH

A unique reusable fastener made of NYLON which contains a threaded brass nut. Finger pressure or light tap seals it in a pre-drilled hole. The nut is drawn up causing a Nylon bulge behind the workpiece. Screw may be removed or replaced.

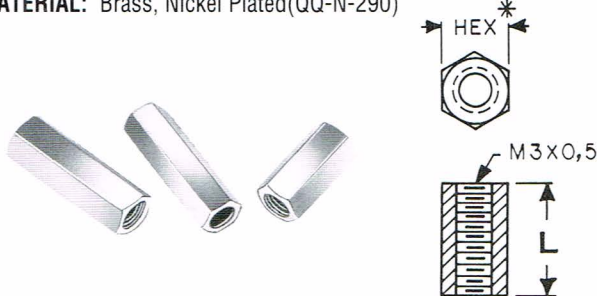


CAT. NO.	THREAD	"H" HOLE SIZE REQ'D.	IDEAL SHEET THICKNESS	A	T
4341	4-40	.250	.047	.312	.030
4342	6-32	.312	.078	.375	.030
4343	8-32	.406	.093	.500	.030

METRIC HEX THREADED STANDOFFS

A comprehensive range of precision made metric hex spacers.

MATERIAL: Brass, Nickel Plated(QQ-N-290)



5mm HEX*	
CAT. NO.	"L"
4390	5mm
4391	10mm
4392	15mm
4393	20mm
4394	25mm

5.5mm HEX*	
CAT. NO.	"L"
4395	5mm
4396	10mm
4397	15mm
4398	20mm
4399	25mm

ROUND CLEAR SPACERS

BRASS OR ALUMINUM

MATERIALS:

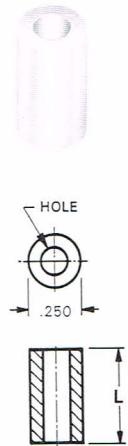
Brass: Nickel plate (QQ-N-290)

Aluminum: Iridite Finish (MIL-C-5541)

L LENGTH	C HOLE	BRASS	ALUMINUM
		CAT. NO.	CAT. NO.
.125	.120	1909	2036
.250	.120	1454A	3457
.375	.120	1454B	3458
.500	.120	1454C	3459
.625	.120	1919	2314
.750	.120	1454D	3460
.875	.120	1920	3402
1.000	.120	1454E	3461
1.500	.120	1924	3462
2.000	.120	1925	3463
.125	.140	1934	3403
.250	.140	1457A	3464
.375	.140	1457B	3465
.500	.140	1457C	3466
.625	.140	1935	3429
.750	.140	1457D	3467
.875	.140	1936	3438
1.000	.140	1457E	3468
1.500	.140	1937	3469
2.000	.140	1938	3470
.125	.171	1942	4258
.250	.171	1480	3471
.375	.171	1481	3472
.500	.171	1482	3473
.625	.171	2032	4259
.750	.171	1483	3474
.875	.171	2033	4260
1.000	.171	1484	3475
1.500	.171	2034	3476
2.000	.171	2035	3477

CLEARANCE HOLE:

- .120 for #4 screw
- .140 for #6 screw
- .171 for #8 screw



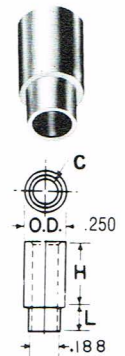
ROUND SWAGE CLEAR SPACERS

MATERIAL: Brass, Nickel Plate (QQ-N-290)

CLEARANCE HOLE:

- .120 for #4 screw
- .140 for #6 screw

CAT. NO.	H HEIGHT	FOR PANEL THICKNESS	C HOLE	L
5060-2	250	1/16	.120	.109
5060-3	250	3/32	.120	.141
5061-2	375	1/16	.120	.109
5061-3	375	3/32	.120	.141
5062-2	500	1/16	.120	.109
5062-3	500	3/32	.120	.141
5063-2	250	1/16	.140	.109
5063-3	250	3/32	.140	.141
5064-2	375	1/16	.140	.109
5064-3	375	3/32	.140	.141
5065-2	500	1/16	.140	.109
5065-3	500	3/32	.140	.141



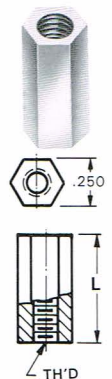
HEX STAINLESS THREADED STANDOFFS

MATERIAL: Stainless Steel per ASTM-A581/A582, Class 303

- Corrosion Resistant

L Length Inches	4-40 Thread CAT. NO.	6-32 Thread CAT. NO.	8-32 Thread CAT. NO.
1/4 (.250)	1921	1922	1923
3/8 (.375)	1921A	1922A	1923A
1/2 (.500)	1921B	1922B	1923B
3/4 (.750)	1921C	1922C	1923C
1 (1.000)	1921D	1922D	1923D
1 1/2 (1.500)	1921E	1922E	1923E
2 (2.000)	1921F	1922F	1923F

- 4-40 thread on 1/2" and over tapped 1/4" each end
- 6-32 & 8-32 thread on 1" and over tapped 3/8" each end



HINGED STANDOFFS & KITS

Designers' Choice



HINGED STANDOFFS

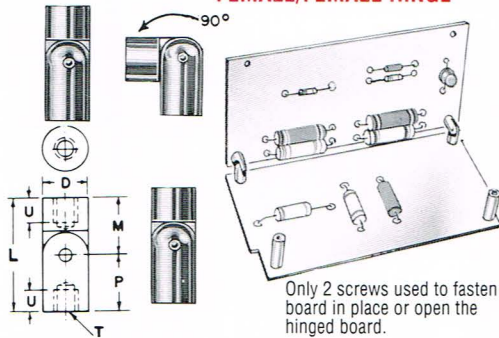
- APPLICATIONS UNLIMITED • TIME SAVING • SPACE SAVING
 • INTERCONNECT CIRCUITS OR SERVICES WITHOUT DANGER OF SHORTING
 • WIRING EXPOSED FOR EASY TEST

MATERIAL:

Brass: per ASTM-B16

Finish: Zinc plate and Gold Iridite

FEMALE/FEMALE HINGE



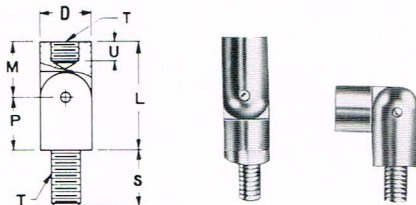
These standoffs mount at front of the board.

Only 2 screws used to fasten board in place or open the hinged board.

STANDOFF ONLY
For Front of Board

CAT. NO.	T THREAD	D DIA.	L LENGTH	U	M	P	CAT. NO.	LENGTH
351	4-40	.187	.750	.172	.375	.375	1657A	.750
352	4-40	.187	1.000	.250	.375	.625	1657B	1.000
330	4-40	.187	1.250	.250	.625	.625	1881	1.250
353	6-32	.250	.750	.172	.375	.375	1548E	.750
354	6-32	.250	1.000	.250	.375	.625	1548F	1.000
331	6-32	.250	1.250	.250	.625	.625	1881	1.250
355	8-32	.250	.750	.172	.375	.375	1692D	.750
356	8-32	.250	1.000	.250	.375	.625	1692E	1.000
332	8-32	.250	1.250	.250	.625	.625	1881	1.250

MALE/FEMALE HINGE

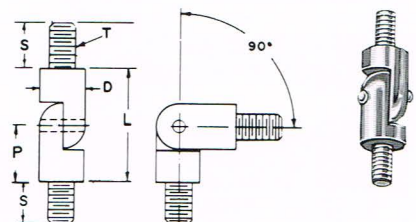


These standoffs mount at front of the board.

STANDOFF ONLY
For Front of Board

CAT. NO.	T THREAD	L LENGTH	D DIA.	S	U	P	M	CAT. NO.	LENGTH
333	4-40	.625	.187	.250	.172	.250	.375	1865	.625
334	4-40	.875	.187	.250	.250	.250	.625	1866	.875
335	6-32	.625	.250	.312	.172	.250	.375	1548D	.625
336	6-32	.875	.250	.312	.250	.250	.625	1879	.875
337	8-32	.625	.250	.312	.172	.250	.375	1887	.625
338	8-32	.875	.250	.312	.250	.250	.625	1888	.875

MALE/MALE HINGE

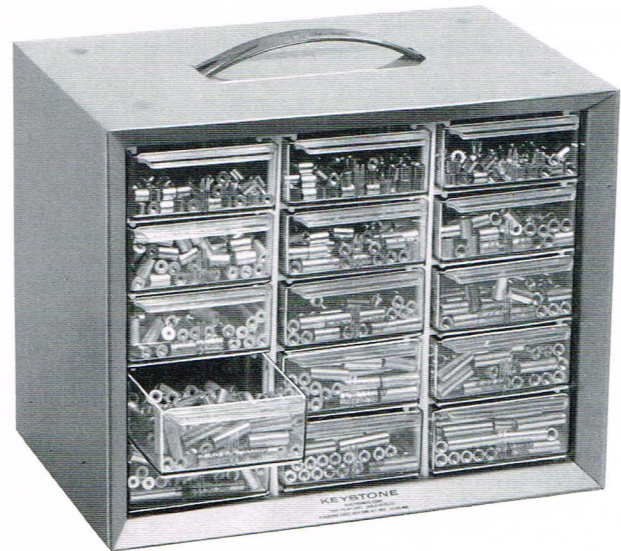


These standoffs mount at front of the board.

STANDOFF ONLY
For Front of Board

CAT. NO.	T THREAD	L LENGTH	D DIA.	S	P	CAT. NO.	LENGTH
357	4-40	.500	.187	.250	.250	1657	.500
358	6-32	.500	.250	.312	.250	1548C	.500
359	8-32	.500	.250	.312	.250	1692C	.500

SPACER/STANDOFF ORGANIZER



Maintain a neat complete inventory of the most frequently used spacers and standoffs in day-to-day operations. Choice of "8" different kits of the most popular spacers and standoffs. An assortment of various sizes and styles in Brass, Aluminum and Nylon with tapped or thru-hole. Metal cabinet designed to be stacked on one another or wall mounted. Clear plastic drawers labeled for easy identification.

THE FOLLOWING ORGANIZER KITS ARE AVAILABLE FROM STOCK !

1/4" ROUND THREADED

Brass Zinc Plated

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

KIT. NO. STR-15

Aluminum Iridite Finish

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

KIT. NO. STR-35

1/4" HEX THREADED

Brass Zinc Plated

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

KIT. NO. STH-14

Aluminum Iridite Finish

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

KIT. NO. STH-22

1/4" ROUND CLEAR

Brass Nickel Plated

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With clearance holes for #4, #6 and #8. 100 pcs. of each size complete with cabinet.

KIT. NO. SPR-13

Aluminum Iridite

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With clearance holes for #4, #6 and #8. 100 pcs. of each size complete with cabinet.

KIT. NO. SPR-34

1/4" ROUND CLEAR

Nylon 6/6

Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4" and 1" lengths. With clearance holes for #4, #6 and #8. 100 pcs. of each size complete with cabinet.

KIT. NO. SPR-8

1/4" HEX MALE/FEMALE

Brass Nickel Plated

Assortment of 750 pcs. in 1/2", 3/4", 1", 1 1/4" and 1 1/2" lengths. With thread sizes of 4-40, 6-32 and 8-32. 50 pcs. of each size complete with cabinet.

KIT. NO. STH-19



Designers' Choice

INSULATED SPACERS/STANDOFFS

CERAMIC STANDOFFS

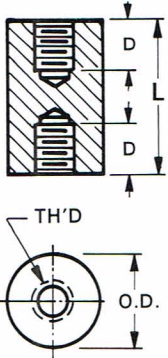
- Ideal for very high temperature conditions
- Commercial and military types available
- Special sizes available upon request
- Exceptional strength in compression and tension
- Withstands very high voltage without flashover.
- Military types meet MIL-1-010, NL# clearly marked

MILITARY

CAT. NO.	LENGTH	O.D.	T THREAD	D(2) DEPTH	NL #
7661	.500	.375	6-32	.156	NL523W01-004
7662	.625	.375	6-32	.250	NL523W01-005
7663	.625	.500	8-32	.187	NL523W02-005
7664	.750	.375	6-32	.250	NL523W01-006
7665	.750	.500	8-32	.250	NL523W02-006
7666	1.000	.375	6-32	.375	NL523W01-008
7667	1.000	.500	8-32	.375	NL523W02-008
7668	1.000	.750	10-32	.375	NL523W03-008
7669	1.250	.375	6-32	.375	NL523W01-010
7670	1.250	.500	8-32	.375	NL523W02-010
7671	1.250	1.000	1/4-20	.437	NL523W04-010
7672	1.500	.375	6-32	.375	NL523W01-012
7673	1.500	.500	8-32	.375	NL523W02-012
7674	1.500	.750	10-32	.375	NL523W03-012
7675	1.500	1.000	1/4-20	.500	NL523W04-012
7676	2.000	.375	6-32	.375	NL523W01-016
7677	2.000	.500	8-32	.375	NL523W02-016
7678	2.000	.750	10-32	.375	NL523W03-016

COMMERCIAL

CAT. NO.	LENGTH	O.D.	T THREAD	D(2) DEPTH
7710	.250	.250	6-32	THRU
7711	.500	.250	6-32	.156
7712	.375	.375	6-32	.156
7713	.500	.375	6-32	.187
7714	.500	.500	6-32	.140
7715	.750	.500	6-32	.250
7716	1.000	.500	6-32	.375
7717	1.500	.500	6-32	.562
7718	2.500	.500	6-32	.500
7719	2.500	.750	1/4-20	.750
7720	4.000	.750	1/4-20	.750



MATERIAL: Grade L5 Ceramic

PHENOLIC SPACERS/STANDOFFS

- RESISTS ABRASIONS & CHEMICALS • EXCELLENT DIELECTRIC STRENGTH
- LOW MOISTURE ABSORPTION • GOOD MECHANICAL STRENGTH

MATERIAL: PBE Grade Natural Color Phenolic

CLEAR HOLE SPACERS

"L" Length Inches	.250 O.D. (1/4)			.312 O.D.
	#4 Screw .120 Hole CAT. NO.	#6 Screw .140 Hole CAT. NO.	#8 Screw .171 Hole CAT. NO.	#10 Screw .200 Hole CAT. NO.
1/4 (.250)	360	367	1490	453
3/8 (.375)	361	368	1491	454
1/2 (.500)	362	369	1492	455
3/4 (.750)	363	370	1493	456
1 (1.000)	364	371	1494	457
1 1/2 (1.500)	365	372	374	458
2 (2.000)	366	373	375	459

THREADED STANDOFFS

"L" Length Inches	.250 O.D. (1/4)			.312 O.D.	
	4-40 Th'd CAT. NO.	6-32 Th'd CAT. NO.	8-32 Th'd CAT. NO.	8-32 CAT. NO.	10-32 CAT. NO.
1/4 (.250)	376	383	390	460	467
3/8 (.375)	377	384	391	461	468
1/2 (.500)	378	385	392	462	469
3/4 (.750)	379	386	393	463	470
1 (1.000)	380	387	394	464	471
1 1/2 (1.500)	381	388	395	465	472
2 (2.000)	382	389	396	466	473

NOTE: 1 1/2" and 2" spacers are tapped 3/8" deep each end.

NYLON SPACERS/STANDOFFS

Economical for terminal or printed circuit board supports.

ROUND THRU-HOLE SPACERS

"L" Length Inches	#4 Screw .120 Hole CAT. NO.	#6 Screw .140 Hole CAT. NO.	#8 Screw .171 Hole CAT. NO.
1/8 (.125)	875	883	891
1/4 (.250)	876	884	892
3/8 (.375)	877	885	893
1/2 (.500)	878	886	894
5/8 (.625)	879	887	895
3/4 (.750)	880	888	896
7/8 (.875)	881	889	897
1 (1.000)	882	890	898

MATERIAL: Nylon 6/6

HEX THREADED STANDOFFS

"L" Length Inches	4-40 Thread CAT. NO.	6-32 Thread CAT. NO.	8-32 Thread CAT. NO.
1/4 (.250)	1902A	1903A	1904A
3/8 (.375)	1902B	1903B	1904B
1/2 (.500)	1902C	1903C	1904C
5/8 (.625)	1902F	1903F	1904F
3/4 (.750)	1902D	1903D	1904D
7/8 (.875)	1902G	1903G	1904G
1 (1.000)	1902E	1903E	1904E

MATERIAL: Nylon 6/6

FLAME RETARDANT HEX THREADED STANDOFFS

"L" Length Inches	4-40 Thread CAT. NO.	6-32 Thread CAT. NO.	8-32 Thread CAT. NO.
1/4 (.250)	8440A	8441A	8442A
3/8 (.375)	8440B	8441B	8442B
1/2 (.500)	8440C	8441C	8442C
5/8 (.625)	8440D	8441D	8442D
3/4 (.750)	8440E	8441E	8442E
7/8 (.875)	8440F	8441F	8442F
1 (1.000)	8440G	8441G	8442G

MATERIAL: Nylon 6/6

INSULATED PC SPACERS/SUPPORTS

Designers' Choice

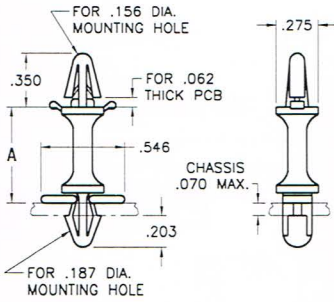


- Easy snap-in assembly
- Designed for .062 thick PC boards and chassis
- Releasable for repairs

- Strong dependable grip
- No tools required for installation
- **MATERIAL:** Nylon, UL rated 94V-0

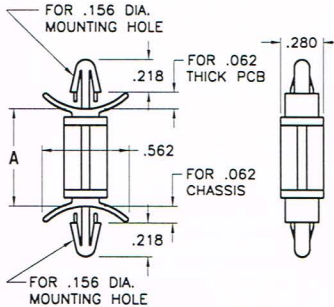
PC LOCK-IN SUPPORTS

One end locks into chassis, the other end locks into the PC board



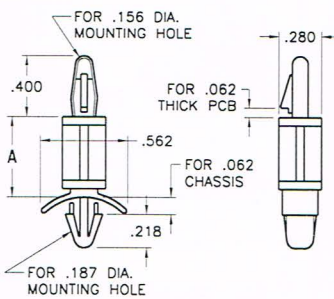
CAT. NO.	"A" DIM
1927B	.250
1928B	.375
1929B	.500
1930B	.625
1931B	.750
1932B	.875
1933B	1.000

One end locks into chassis, the other end locks into the PC board



CAT. NO.	"A" DIM
8815	.187
8816	.250
8817	.375
8818	.500
8819	.625
8820	.750
8821	.875

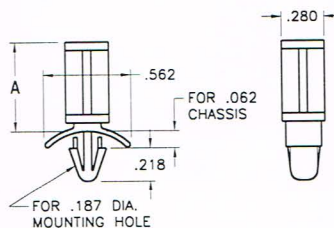
One end locks into chassis, the other end locks into the PC board with easy release lever



CAT. NO.	"A" DIM
8807	.187
8808	.250
8809	.375
8810	.500
8811	.625
8812	.750
8813	.875
8814	1.000

PC SPACER SUPPORTS

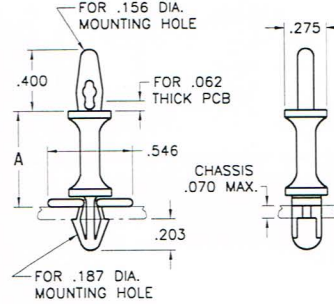
One end locks into chassis, other end supports the PC board



CAT. NO.	"A" DIM
8822	.187
8823	.250
8824	.375
8825	.500
8826	.625
8827	.750
8828	.875

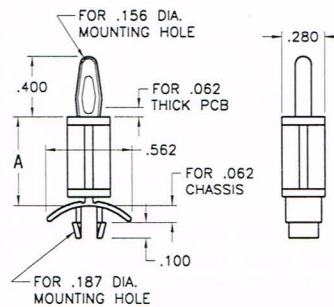
PC TENSION-FIT SUPPORTS

One end locks into chassis, the other end tension-fits into the PC board



CAT. NO.	"A" DIM
1927A	.250
1928A	.375
1929A	.500
1930A	.625
1931A	.750
1932A	.875
1933A	1.000

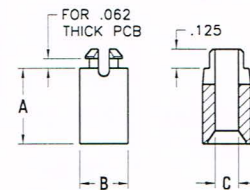
One end locks into chassis, the other end tension-fits into the PC board



CAT. NO.	"A" DIM
8800	.187
8801	.250
8802	.375
8803	.500
8804	.625
8805	.750
8806	.875

STACKING SPACERS

Self-aligning and self retaining. Designed for stacking multiple levels of PC boards. Available for use with #4, #6 & #8 size screws.



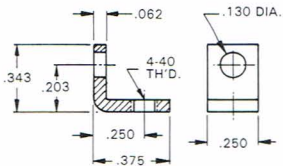
CAT. NO.	"A" DIM	"B" DIM	"C" DIM	MTG HOLE	SCREW SIZE
8829	.125	.260	.125	.187	#4
8830	.187	.260	.125	.187	
8831	.250	.260	.125	.187	
8832	.375	.260	.125	.187	
8833	.500	.260	.125	.187	
8834	.625	.260	.125	.187	#6
8835	.250	.312	.153	.234	
8836	.375	.312	.153	.234	
8837	.500	.312	.153	.234	
8838	.625	.312	.153	.234	#8
8839	.250	.312	.169	.234	
8840	.375	.312	.169	.234	
8841	.500	.312	.169	.234	
8842	.625	.312	.169	.234	



Designers' Choice

THREADED MOUNTING BRACKETS

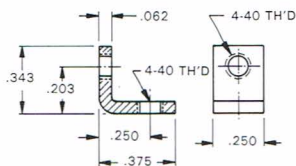
4-40 THREAD



CAT. NO. 612

.062 Steel
Zinc Plate

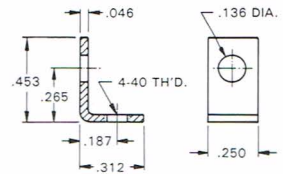
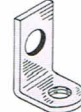
4-40 THREAD



CAT. NO. 621

.062 Steel
Zinc Plate

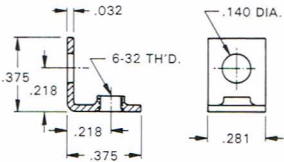
4-40 THREAD



CAT. NO. 616

.047 Brass
Tin Plate

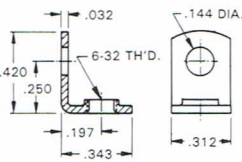
6-32 THREAD



CAT. NO. 634

.032 Brass
Nickel Plate

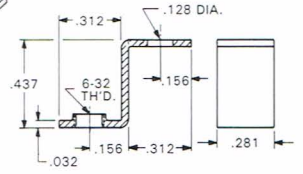
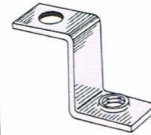
6-32 THREAD



CAT. NO. 614

.032 Brass
Tin Plate

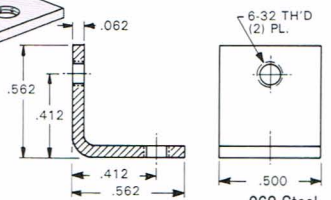
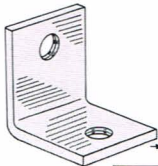
6-32 THREAD



CAT. NO. 630

.032 Brass
Tin Plate

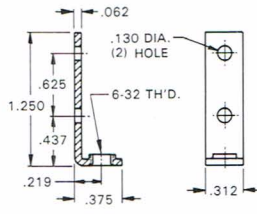
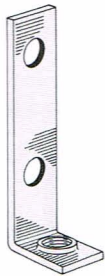
6-32 THREAD



CAT. NO. 4334

.062 Steel
Nickel Plate

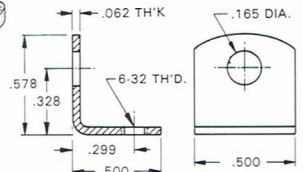
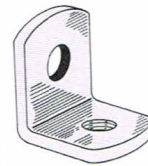
6-32 THREAD



CAT. NO. 708

.062 Steel
Nickel Plate

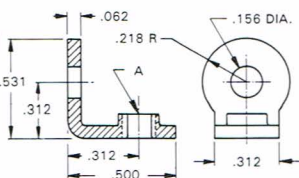
6-32 THREAD



CAT. NO. 617

.062 Steel
Tin Plate

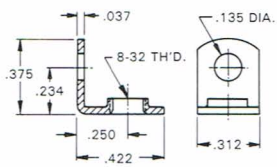
6-32 OR 8-32 THREAD



CAT. NO. 4332 #6-32
CAT. NO. 4333 #8-32

.062 Brass
Nickel Plate

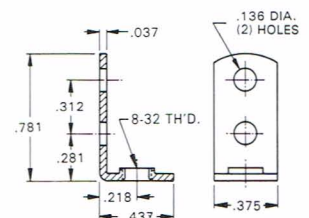
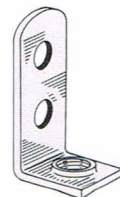
8-32 THREAD



CAT. NO. 611

.037 Brass
Tin Plate

8-32 THREAD



CAT. NO. 631

.037 Steel
Tin Plate

CLEAR HOLE MOUNTING BRACKETS

Designers' Choice



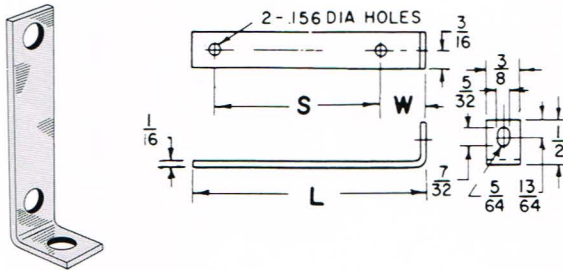
BOARD BRACKETS

Originally designed for our line of standardized terminal boards; these brackets can also be used in other applications.

Choice of Steel or Aluminum

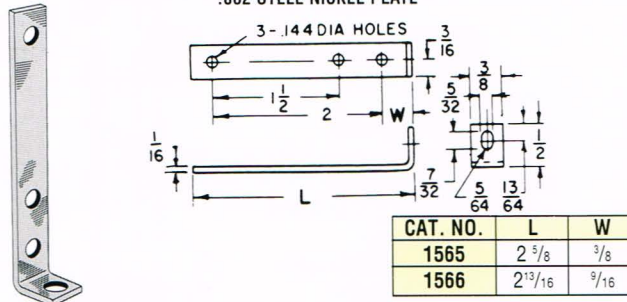
MATERIAL:

- .062 Steel, Nickel Plate
- .062 Aluminum



CAT. NO.	Steel	Alum.	W	L	S	For Use With Board No's (see page 78)		
1556	622		3/8	1 5/8	1	15032	15072	15092
1567	623		3/8	2 1/8	1 1/2	15033	15073	15093
1568	624		3/8	2 3/8	2	15034	15074	15094
1569	625		3/8	3 1/8	2 1/2	15035	15075	15095
1570	626		9/32	1 9/16	3/4	15022	15024	15030
1571	627		9/32	1 3/8	1 1/16	15036	15076	15096

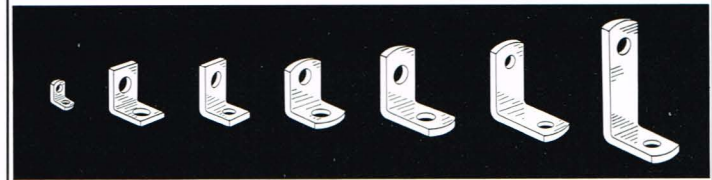
.062 STEEL NICKEL PLATE



CAT. NO.	L	W
1565	2 5/8	3/8
1566	2 13/16	9/16

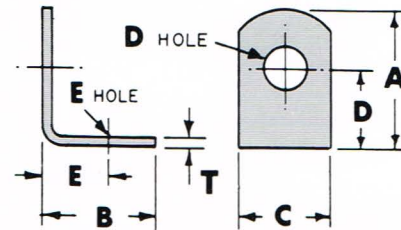
UNIVERSAL BRACKETS

A wide range of brackets for various mounting applications.



610 633 613 615 618 4335 4336 619 620 4326

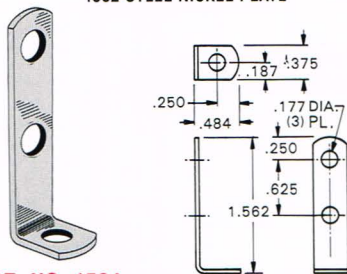
STANDARD BRACKETS
(Brass and Steel)



Selection of Brackets with Clear Holes

CAT. NO.	A	B	C	D	D Hole Dia.	E	E Hole Dia.	T	Material	Finish
610	.171	.171	.125	.109	.067	.109	.067	.018	Brass	Tin
633	.375	.375	.281	.218	.140	.218	.140	.032	Brass	Nickel
613	.390	.453	.375	.234	.147	.299	.128	.032	Brass	Nickel
615	.420	.343	.281	.281	.144	.203	.125	.062	Brass	Tin
4335	.562	.562	.500	.412	.120	.411	.120	.062	Steel	Nickel
4336	.562	.562	.500	.412	.144	.412	.144	.062	Steel	Nickel
618	.628	.628	.375	.378	.169	.378	.169	.050	Brass	Nickel
619	.687	.687	.375	.500	.144	.500	.144	.032	Steel	Tin
4326	1.013	.487	.312	.816	.140	.332	.140	.050	Steel	Nickel
620	1.156	.656	.375	.906	.169	.406	.169	.032	Steel	Tin

.062 STEEL NICKEL PLATE

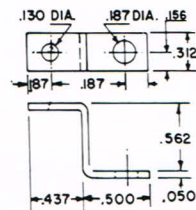


CAT. NO. 1564

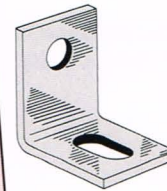
.050 STEEL NICKEL PLATE



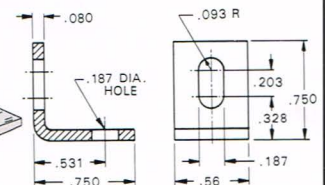
CAT. NO. 4325



.080 ALUMINUM



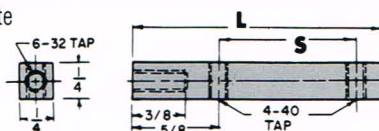
CAT. NO. 4337



BOARD SUPPORT BRACKETS

MATERIAL: Brass, Zinc Plate

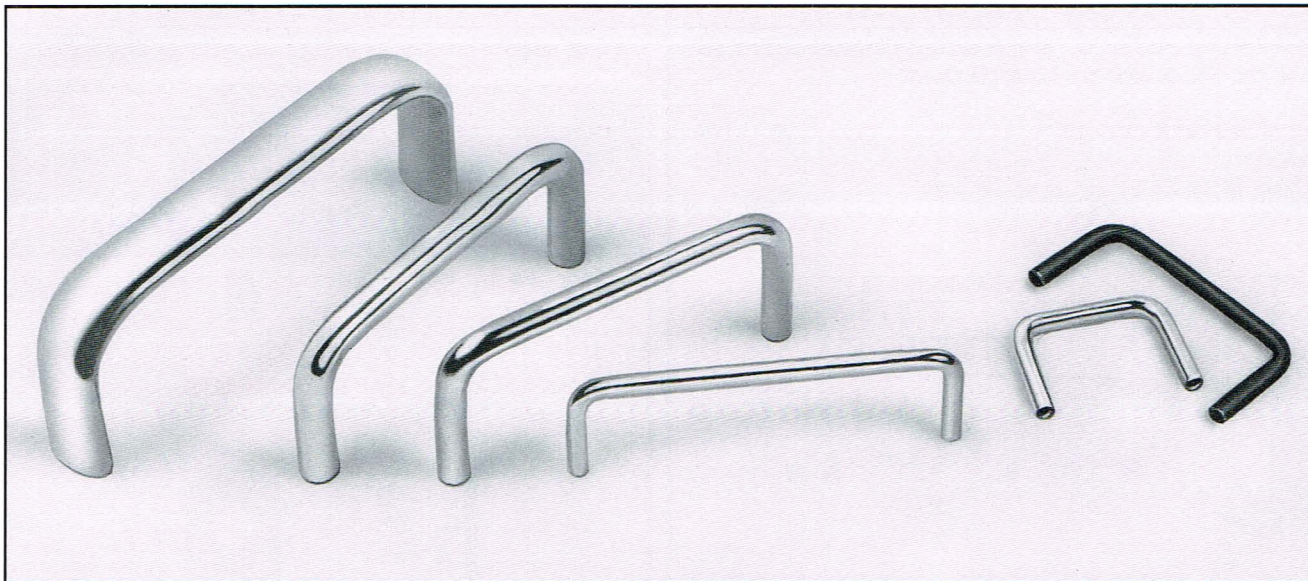
A sturdy support for mounting of standardized terminal boards.



CAT. NO.	Overall Length "L"	Spacing "S"
1647	2 3/8	1 1/2
1648	2 7/8	2
1649	3 3/8	2 1/2

CUSTOM STAMPING AND ASSEMBLIES

Complete facilities available to meet your metal stamping and sub-assembly requirements. Quotations on special stampings and assemblies furnished promptly upon receipt of sample, sketch or print.



Choice of: Brass or Aluminum — Round or Oval

These instrumentation handles are manufactured in a wide variety of diameters, lengths, platings and internal thread sizes. They will enhance the look of quality products and equipment and provide the sturdy support needed for contemporary equipment.

ROUND

- .156, .187, .250, .312 and .375 diameters
- Mounting centers from 1.250 to 6.437
- Internal threads 4-40, 6-32, 8-32 and 10-32
- Heights from .625 to 1.750

MATERIAL SPECIFICATIONS

Brass: per ASTM-B16

Aluminum: QQ-A-325, alloy 6061-T6

PLATING

Brass: Nickel plated per QQ-N-290

Aluminum: Black anodize per MIL-A-8625

OVAL

- .625 x .281 diameter
- Mounting centers from 4.000 to 6.437
- Internal threads 10-32
- Heights form 1.375 to 2.000

MATERIAL SPECIFICATIONS

Brass: per ASTM-B16

Aluminum: QQ-A-325, alloy 6061-T6

PLATINGS

Brass: Nickel plated per QQ-N-290

Aluminum: Black anodized per MIL-A-8625

CARRYING HANDLES

Also available from Keystone is our Designers' Choice series of handles in leather-like material and high impact plastic. The "leather" handles are available with a spring glide mechanism or with a retracto-link design. Both types lie flat on the case when not in use. The plastic handles are available in molded polypropylene with a leather-grain look or in high impact styrene. Both types fold flat on the case when not in use.

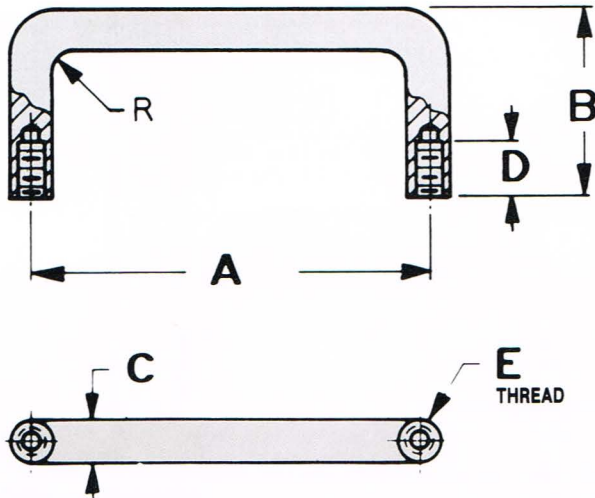
Rounding out this "Designer's Choice" selection is a group of contemporary styled handles made of zinc with a satin brushed, chrome plated finish.

INSTRUMENTATION HANDLES

Designers' Choice

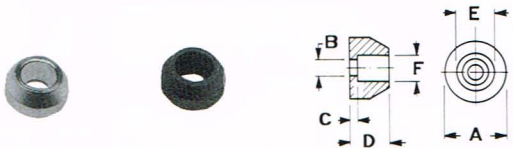


ROUND INSTRUMENTATION HANDLES



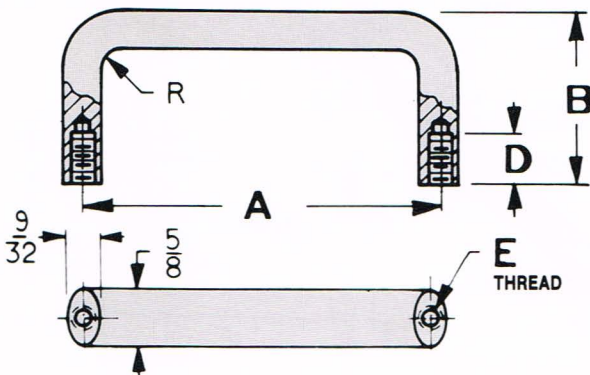
BRASS CAT. NO.	ALUMINUM CAT. NO.	A Mtg. Ctrs.	B Height	E Thread	D Depth	R Radius	C Diameter
7140	7170	1.250	1.000	4-40	.375	.156	.156
7141	7171	2.000	1.000	4-40	.375	.156	
7142	7172	3.000	1.000	4-40	.375	.156	
9100	9110	1.250	.625	4-40	.250	.187	.187
9101	9111	1.500	.625	4-40	.250	.187	
9104	9114	1.500	.750	4-40	.250	.187	
9102	9112	1.750	.625	4-40	.250	.187	
9105	9115	1.750	.750	4-40	.250	.187	
9103	9113	2.000	.625	4-40	.250	.187	
9106	9116	1.250	1.000	6-32	.250	.187	
9107	9117	1.500	1.000	6-32	.250	.187	
9108	9118	2.000	1.000	6-32	.250	.187	
9109	9119	3.000	1.000	6-32	.250	.187	
7143	7173	3.000	1.500	8-32	.562	.250	.250
485	515	3.000	1.750	8-32	.562	.250	
480	510	3.500	1.500	8-32	.562	.250	
7144	7174	4.000	1.500	8-32	.562	.250	
486	516	4.000	1.750	8-32	.562	.250	
481	511	4.500	1.500	8-32	.562	.250	
487	517	4.500	1.750	8-32	.562	.250	
482	512	5.000	1.500	8-32	.562	.250	
488	518	5.000	1.750	8-32	.562	.250	
483	513	5.500	1.500	8-32	.562	.250	
484	514	6.000	1.500	8-32	.562	.250	
489	519	6.000	1.750	8-32	.562	.250	
7145	7175	3.000	1.500	10-32	.562	.312	.312
7146	7176	4.000	1.500	10-32	.562	.312	
493	523	4.000	1.750	10-32	.562	.312	
490	520	4.500	1.500	10-32	.562	.312	
494	524	4.500	1.750	10-32	.562	.312	
7147	7177	4.562	1.500	10-32	.562	.312	
491	521	5.000	1.500	10-32	.562	.312	
495	525	5.000	1.750	10-32	.562	.312	
492	522	5.500	1.500	10-32	.562	.312	
7148	7178	6.000	1.500	10-32	.562	.312	
496	526	6.000	1.750	10-32	.562	.312	
7149	7179	6.437	1.750	10-32	.562	.312	
7150	7180	4.000	1.375	10-32	.375	.375	.375
7151	7181	6.000	1.375	10-32	.375	.375	

FERRULES FOR ROUND HANDLES



BRASS CAT. NO.	ALUMINUM CAT. NO.	FOR DIA./THREAD	A	B	C	D	E	F
7162	7192	.156/4-40	.250	.120	.047	.125	.200	.161
9120	9122	.187/4-40	.312	.120	.062	.125	.265	.203
9121	9123	.187/6-32	.312	.144	.062	.125	.265	.203
7163	7193	.250/8-32	.375	.170	.062	.187	.320	.260
7164	7194	.312/10-32	.562	.196	.062	.250	.406	.320

OVAL INSTRUMENTATION HANDLES (.625 × .281)



BRASS CAT. NO.	ALUMINUM CAT. NO.	A Mtg. Ctrs.	B Height	E Thread	D Depth	R Radius
7156	7186	4.000	1.750	10-32	.500	.500
534	544	4.000	2.000	10-32	.500	.500
530	540	4.500	1.750	10-32	.500	.500
535	545	4.500	2.000	10-32	.500	.500
531	541	5.000	1.750	10-32	.500	.500
536	546	5.000	2.000	10-32	.500	.500
532	542	5.500	1.750	10-32	.500	.500
537	547	5.500	2.000	10-32	.500	.500
7157	7187	6.000	1.375	10-32	.375	.500
533	543	6.000	1.750	10-32	.500	.500
538	548	6.000	2.000	10-32	.500	.500
7158	7188	6.437	1.750	10-32	.500	.500

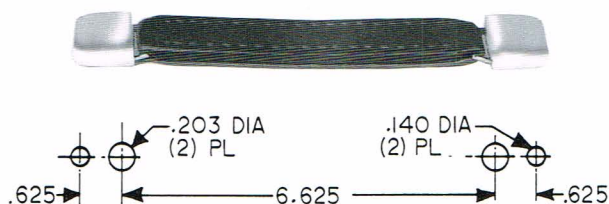


Designers' Choice

HANDLES

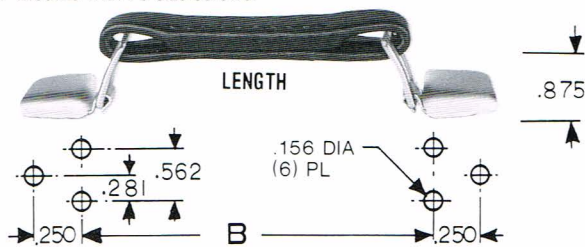
CARRYING HANDLES

Spring glide handle, manufactured of black leather like material with chrome plated steel hardware. Handle lies flat on case when not in use. Will not rattle under vibration. Maximum extended height at center line, 1 1/4 inches. Mounts with #10-32 screws (not supplied).



CAT. NO. 8350

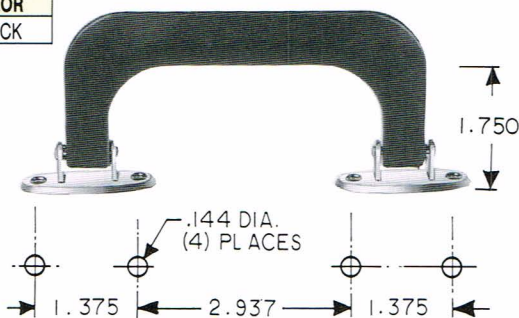
The retracto link handle manufactured of black leather like material with nickel plated steel hardware. It is internally constructed of rubber impregnated cellulose wound over a spring steel core. Handle folds flat on case when not in use. Mounts with #6 size screws.



CAT. N.O.	LENGTH	"B"
8351	4-1/2	5-3/4
8352	5-1/2	6-5/8
8353	6-3/4	7-7/8

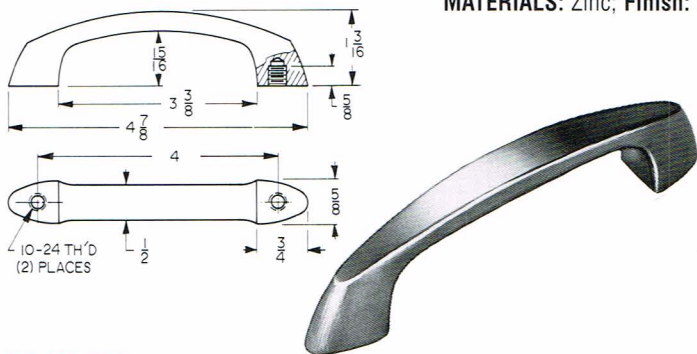
Molded of polypropylene with a leather grain look. Folds flat on case when not in use. Mounts with rivets of #6 screws (not supplied).

CAT. NO.	COLOR
8356	BLACK

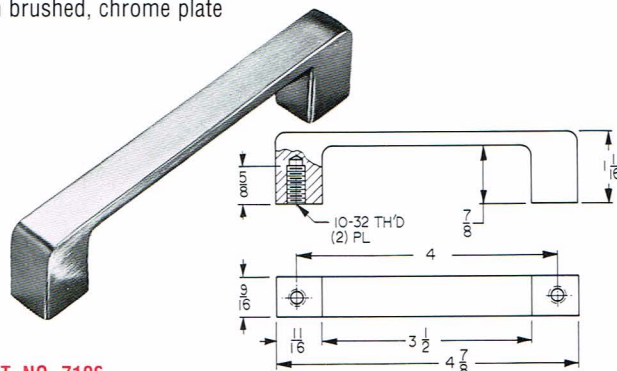


CONTEMPORARY HANDLES

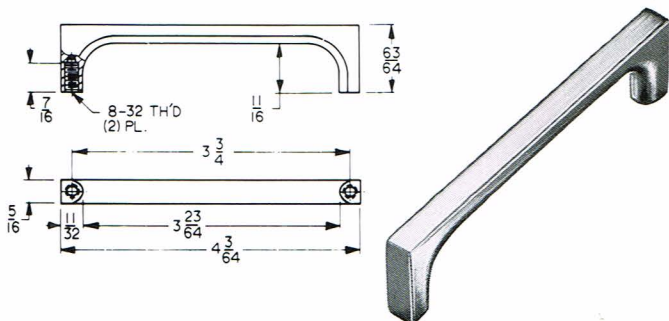
MATERIALS: Zinc; Finish: Satin brushed, chrome plate



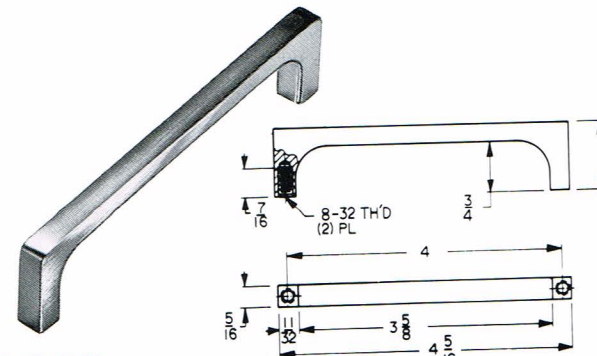
CAT. NO. 7197



CAT. NO. 7196



CAT. NO. 7199



CAT. NO. 7198

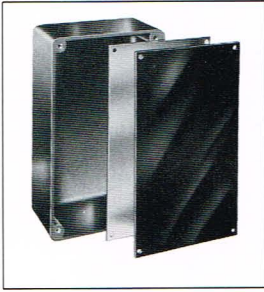
INSTRUMENTATION CASES & KNOBS

Designers' Choice

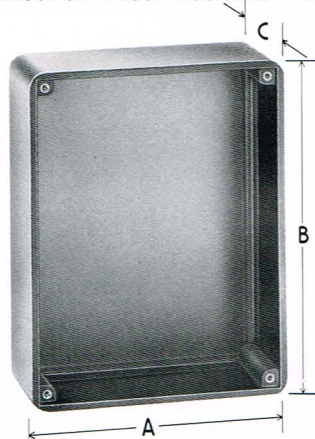


PHENOLIC INSTRUMENT CASES

CHOICE OF 8 SIZES • STURDY CONSTRUCTION • FLUSH MOUNTING PANELS



Aluminum or Phenolic Panels Available



SPECIFICATIONS

Phenolic Cases: .125 Wall Thickness, Molded Glossy Black Phenolic, MIL-M-14, CFG

Phenolic Panels: .062 Thick Glossy Black Phenolic, MIL-P-3115C

Aluminum Panels: .062 Thick, #5052-H34 per QQ 318 C; Bright finished surface with pressure sensitive protective covering tape.

Screw Length: .312 for 4-40 screw; .375 for 6-32 screw.

PHENOLIC CASE CAT. NO.	A DIM	B DIM	C DIM	THREAD SIZE AND TYPE	PHENOLIC PANEL CAT. NO.	ALUMINUM PANEL CAT. NO.
715	2.500	3.500	1.250	4-40 TAPPED	2050	2051
703	2.875	4.000	1.562	4-40 TAPPED	2042	2044
705	2.875	4.000	1.562	USE#4 SELF TAPPING SCREW	2042	2044
704	3.125	5.875	2.250	4-40 TAPPED	2043	2045
700	3.750	6.250	2.000	6-32 BRASS INSERT	*2037	2046
716	4.250	5.000	1.750	6-32 BRASS INSERT	*2052	2053
701	5.250	6.812	2.312	6-32 BRASS INSERT	*2038	2047
702	7.375	8.375	3.000	6-32 BRASS INSERT	*2039	2048

*.093 Thick

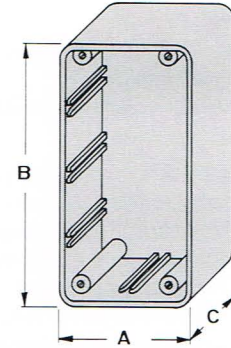
PLASTIC INSTRUMENT CASES

LOW COST • CHOICE OF 7 SIZES • STURDY CONSTRUCTION
Economical cases molded of high impact material. Mating cover has interlocking flange on lid, countersunk holes for flush mounting. Internal grooved guides to hold PC boards and circuit cards from .062 to .093 thick.

IDEAL FOR PROTOTYPE OR PRODUCTION USAGE



Cases supplied with cover and mounting screws



CASE & COVER CAT. NO.	A DIM	B DIM	C DIM	MATERIAL
760	2.000	4.000	.812	Blue Styrene
761	2.437	4.375	1.062	Blue Styrene
762	2.500	4.750	1.400	Blue Styrene
706	2.875	4.000	1.562	Black ABS
763	3.150	6.000	1.840	Blue Styrene
707	3.750	6.250	2.000	Black ABS
764	4.330	7.500	2.220	Blue Styrene

INSTRUMENTATION KNOBS

SKIRTED ROUND

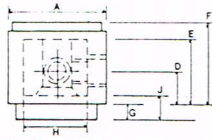


FIG NO. 1

ROUND WITH DIAL

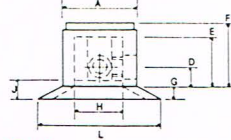


FIG NO. 2

DOUBLE BAR

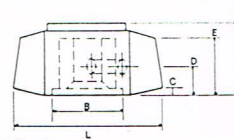


FIG NO. 3

SINGLE BAR

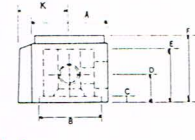


FIG NO. 4

CAT. NO. WITH INDICATOR	FIG NO.	KNOB DIA.	SHAFT DIA.	TWO (2) SET SCREWS	ROUND TYPE NUT CLEARANCE		C MIN	D MAX	HOLE DEPTH E MIN	F +/- .030	G +/- .030	SKIRTED & DIAL NUT CLEARANCE		K +/- .025/- .005	L MAX
					A +.025/- .005	B MIN						H MIN	J MIN		
8554	1	.500	.125	4-40	.505	-	-	.158	.405	.510	.150	.360	.177	-	-
8555	1	.700	.250	4-40	.700	-	-	.187	.405	.610	.170	.485	.188	-	-
8556	1	.900	.250	8-32	.905	-	-	.260	.520	.790	.220	.640	.320	-	-
8557	1	1.250	.250	8-32	1.250	-	-	.250	.455	.700	.150	.750	.250	-	-
8558	2	.500	.125	4-40	.505	-	-	.158	.405	.510	.150	.360	.177	-	.900
8559	2	.700	.250	4-40	.700	-	-	.187	.405	.610	.170	.485	.188	-	1.150
8560	2	.900	.250	8-32	.905	-	-	.260	.520	.790	.220	.640	.320	-	1.525
8561	2	1.250	.250	8-32	1.250	-	-	.250	.455	.700	.150	.750	.250	-	1.837
8565	3	.700	.250	4-40	-	.485	.026	.187	.405	.610	-	-	-	-	1.150
8566	3	.900	.250	8-32	-	.640	.114	.260	.520	.790	-	-	-	-	1.525
8567	4	.500	.125	4-40	.505	.435	.026	.158	.405	.510	-	-	-	.350	-
8568	4	.700	.250	4-40	.700	.485	.026	.187	.405	.610	-	-	-	.460	-
8569	4	.900	.250	8-32	.905	.640	.114	.260	.520	.790	-	-	-	.590	-

MATERIAL: ABS with Aluminum Inlay



Designers' Choice

PLASTIC FAN FILTER ASSEMBLY

Meets UL .250 Plug Gauge Test

A unique package consisting of guard, filter media and retainer. The guard and retainer are manufactured with UL rated 94V-0 material. The filter media is made of polyurethane foam (30PPI) and allows free passage of air with minimum air resistance and pressure drop. A major feature of this assembly is that when the filter media requires maintenance you simply remove the snap-fit retainer to clean or replace the filter, leaving the guard attached to the fan. This assures protection to the fan blade and eliminates damage to the fan during cleaning.

RETAINER

- Material: ABS, UL rated 94V-0
- Snap-fit construction
- Designed for minimum air restriction

MEDIA

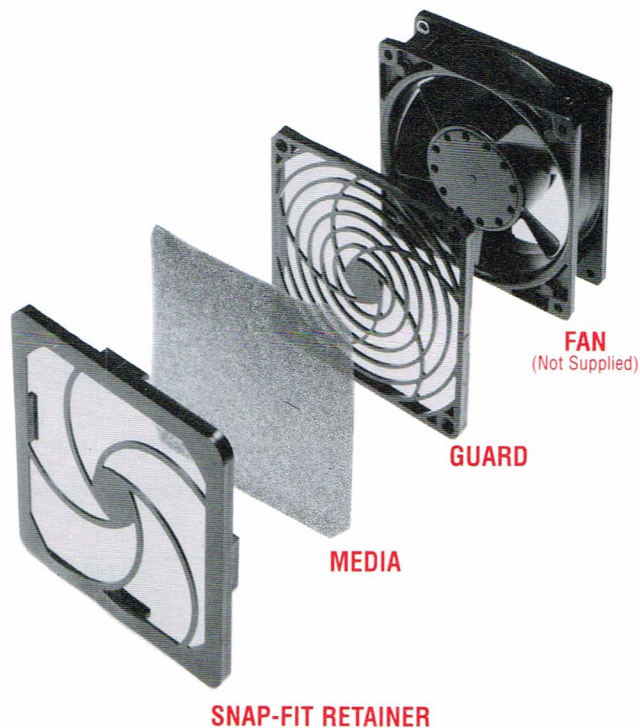
- Polyurethane foam material is constructed to allow free passage of air with minimum resistance and pressure drop
- Has a high surface-area contact for impingement of dust particles
- 30PPI material gives a wide range of particle filtration (PPI denotes pores per inch)
- Helps reduce external fan noise
- Easily cleaned by vacuuming or washing with mild soap, detergent or cleaning solvent

GUARD

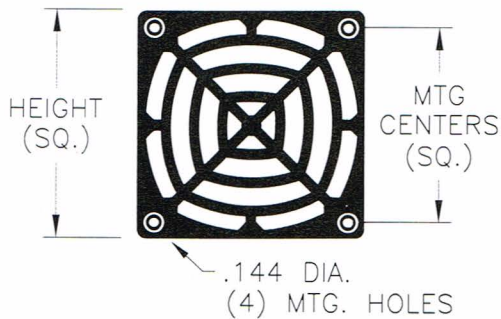
- Material: ABS, UL rated 94V-0
- .250" maximum ring spacing
- Decreased noise level due to design
- Countersunk mounting holes (4)
- Withstands high impact

FAN

- Customer supplied



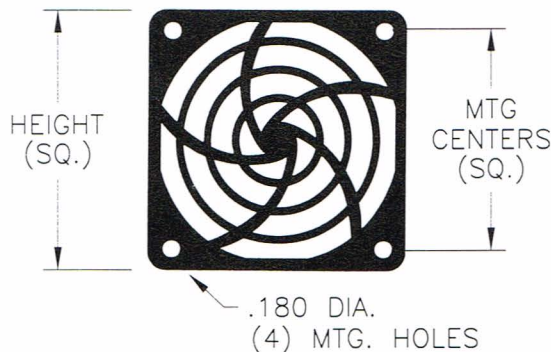
MINI - FAN GUARD ASSEMBLIES



COMPLETE ASSEMBLY Includes: Guard, Media and Retainer				
CAT. NO.	For Fan Size	Height	Thickness	Mounting Centers
8464	1 1/2" (40mm)	1.570	.240	1.260
8465	2 1/2" (60mm)	2.360	.260	1.970

FAN GUARD (Only)				
CAT. NO.	For Fan Size	Height	Thickness	Mounting Centers
8466	1 1/2" (40mm)	1.570	.240	1.260
8467	2 1/2" (60mm)	2.360	.260	1.970

STANDARD FAN GUARD ASSEMBLIES



COMPLETE ASSEMBLY Includes: Guard, Media and Retainer				
CAT. NO.	For Fan Size	Height	Thickness	Mounting Centers
8458	3 1/8" (80mm)	3.290	.393	2.810
8459	3 3/8" (92mm)	3.800	.393	3.245
8460	4 1/2" (120mm)	4.870	.420	4.125

FAN GUARD (Only)				
CAT. NO.	For Fan Size	Height	Thickness	Mounting Centers
8461	3 1/8" (80mm)	3.150	.257	2.810
8462	3 3/8" (92mm)	3.620	.250	3.245
8463	4 1/2" (120mm)	4.650	.279	4.125

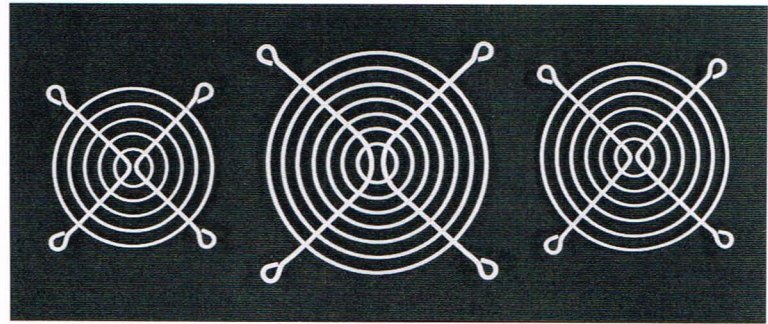
FAN/FINGER GUARDS

Designers' Choice



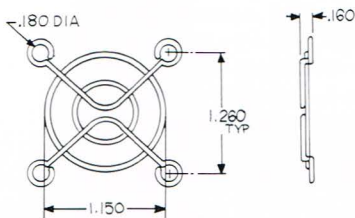
METAL GUARDS

Made of high quality C-1010 carbon steel wire which combines strength with superior forming. The units offer clean, strong butt welds with minimum flash and have consistent guard diameters to enhance maximum air-flow and venting. Guards are nickel chrome plated.



FITS 1 1/2" FANS

40mm

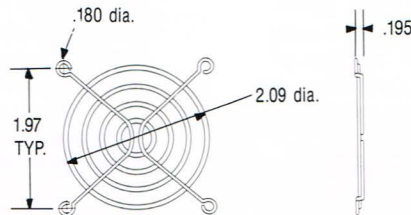


CONSTRUCTION
Rings: .055 wire dia.
Ribs: .055 wire dia.

CAT. NO. 8447

FITS 2 1/2" FANS

60mm

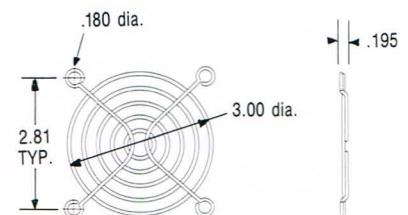


CONSTRUCTION
Rings: .063 wire dia.
Ribs: .063 wire dia.

CAT. NO. 8449

FITS 3 1/8" FANS

80mm

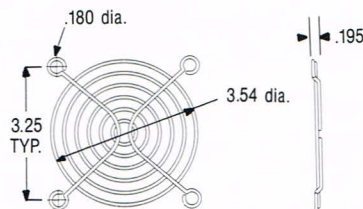


CONSTRUCTION
Rings: .063 wire dia.
Ribs: .071 wire dia.

CAT. NO. 8450

FITS 3 5/8" FANS

92mm

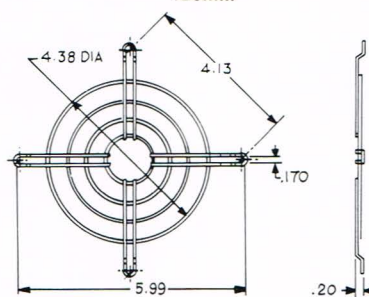


CONSTRUCTION
Rings: .063 wire dia.
Ribs: .071 wire dia.

CAT. NO. 8451

FITS 4 1/2" FANS

120mm

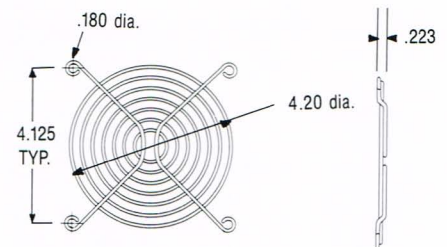


CONSTRUCTION
Rings: .063 wire dia.
Ribs: .063 wire dia.

CAT. NO. 8448

FITS 4 1/2" FANS

120mm

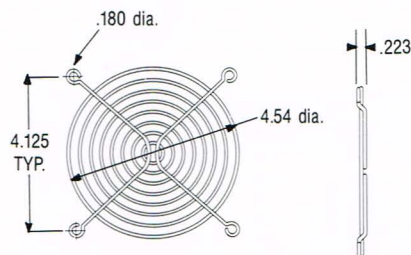


CONSTRUCTION
Rings: .071 wire dia.
Ribs: .091 wire dia.

CAT. NO. 8452

FITS 4 1/2" FANS

120mm

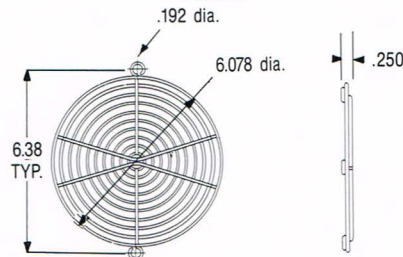


CONSTRUCTION
Rings: .071 wire dia.
Ribs: .071 wire dia.

CAT. NO. 8453

FITS 6" FANS

150mm

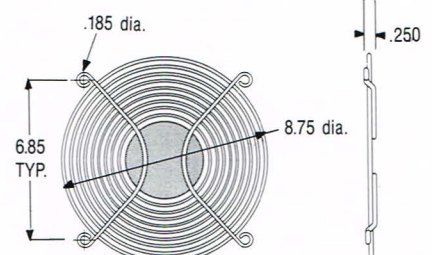


CONSTRUCTION
Rings: .071 wire dia.
Ribs: .091 wire dia.

CAT. NO. 8455

FITS 10" FANS

254mm



CONSTRUCTION
Rings: .091 wire dia.
Ribs: .091 wire dia.

CAT. NO. 8457

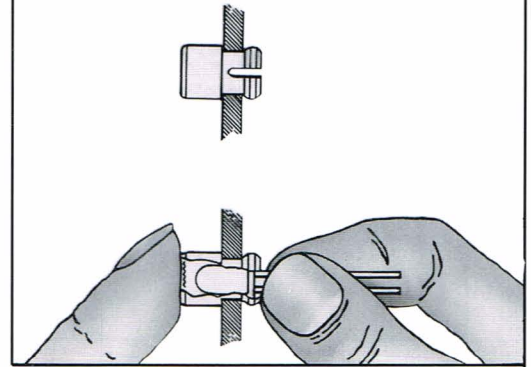


Designers Choice

LED LENS CAPS



FOR T-1 AND T-1 3/4 LEDS



Designed for use with T-1 or T-1 3/4 LEDs, these Lens Caps are available in round or square configurations. They snap-mount through the front panel for easy, light-finger pressure, installation. The LED is inserted into the cap from behind the panel and held securely in place.

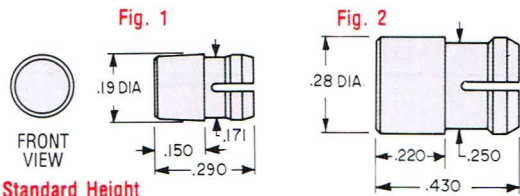
The Lens Cap protects the LED from physical damage while guarding the components from

electrostatic discharge (ESD), up to 16KV. More economical than indicator light assemblies, the caps feature striated lines and fresnel rings which permit up to 180° degree viewing angles with either diffused or non-diffused LED's. They provide exceptionally high contrast and visibility.

Material: Polycarbonate.

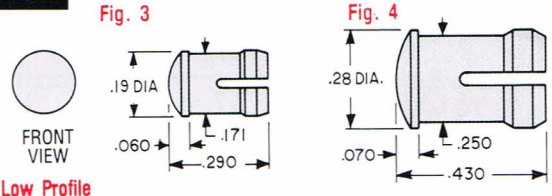
Available in Red, Green, Yellow and Clear.

ROUND CAPS



Standard Height

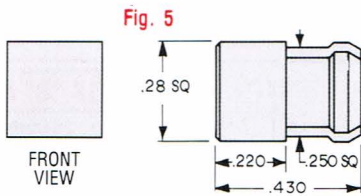
CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8650	1	T1	RED	.171	.250	.031/.062
8651	1	T1	GREEN	.171	.250	.031/.062
8652	1	T1	YELLOW	.171	.250	.031/.062
8653	1	T1	CLEAR	.171	.250	.031/.062
8662	2	T1 3/4	RED	.250	.375	.062/.125
8663	2	T1 3/4	GREEN	.250	.375	.062/.125
8664	2	T1 3/4	YELLOW	.250	.375	.062/.125
8665	2	T1 3/4	CLEAR	.250	.375	.062/.125



Low Profile

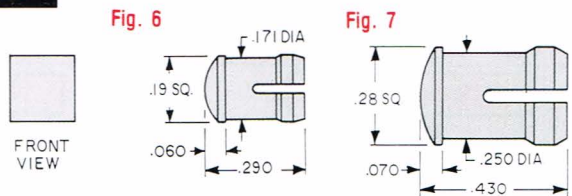
CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8656	3	T1	RED	.171	.250	.062/.125
8657	3	T1	GREEN	.171	.250	.062/.125
8658	3	T1	YELLOW	.171	.250	.062/.125
8659	3	T1	CLEAR	.171	.250	.062/.125
8668	4	T1 3/4	RED	.250	.375	.031/.250*
8669	4	T1 3/4	GREEN	.250	.375	.031/.250*
8670	4	T1 3/4	YELLOW	.250	.375	.031/.250*
8671	4	T1 3/4	CLEAR	.250	.375	.031/.250*

SQUARE CAPS



Standard Height

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8680	5	T1 3/4	RED	.250 Sq.	.375	.062/.125
8681	5	T1 3/4	GREEN	.250 Sq.	.375	.062/.125
8682	5	T1 3/4	YELLOW	.250 Sq.	.375	.062/.125
8683	5	T1 3/4	CLEAR	.250 Sq.	.375	.062/.125



Low Profile

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8674	6	T1	RED	.171	.250	.062/.125
8675	6	T1	GREEN	.171	.250	.062/.125
8676	6	T1	YELLOW	.171	.250	.062/.125
8677	6	T1	CLEAR	.171	.250	.062/.125
8686	7	T1 3/4	RED	.250	.375	.031/.250*
8687	7	T1 3/4	GREEN	.250	.375	.031/.250*
8688	7	T1 3/4	YELLOW	.250	.375	.031/.250*
8689	7	T1 3/4	CLEAR	.250	.375	.031/.250*

* When mounting T-1 3/4 Low Profile Caps (Fig. 4 or Fig. 7) in panels .125 thick or less a spacer must be used. Spacer CAT. NO. 8692 MATERIAL: White Nylon 3/8 O.D. x 1/4 I.D. x 1/8 Lg.