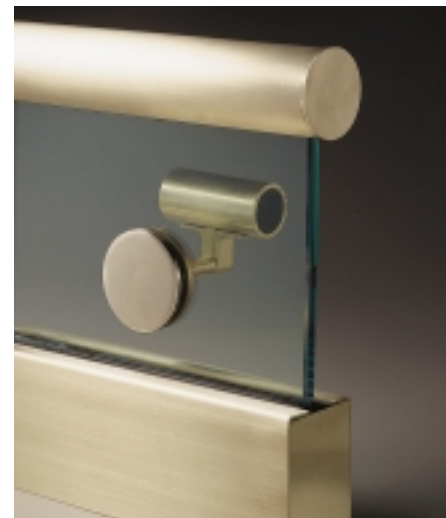




The Fannin Library at Phoenix College, Phoenix, AZ  
 Architect: Durrant Architects  
 Fabricator: Bernie's Brass, Inc., Phoenix, AZ



Aluminum Carlstadt® Post Brackets (center bracket with extension)



Glass Mounted Handrail Adapter Kit with bronze Carlstadt® bracket

For convenience and ease of reference, all of the handrail brackets which appear in various sections of our catalog are brought together in this section. Included are brackets for wall, post, center rail and vertical mounting; for use with moulding or flat bars; for pipe railings; and for specific applications.

● **Aluminum:** Cast brackets are made of high-strength alloy Almag 35—suitable for clear anodizing. Extruded and machined brackets are of alloy 6063—suitable for anodizing, including most of the hard coat anodic processes (black anodizing may result in consistent matches; consult your anodizer before specifying). All, except as noted, are satin finished. Pipe rail brackets are stocked with a clear anodized finish—AA-M32-C22-A31 (204R1)—as well as plain. Aluminum brackets cover a wide range of applications, including wall and post mounted brackets, brackets for center rails and brackets for vertical mounting of rails or panels.

● **Bronze:** Cast brackets are made of alloy C86500 for close color match with extruded architectural bronze C38500 and red brass

C23000. Extruded and machined brackets are of C38500. All, except as noted, are satin finished and lacquered.

● **Nickel-Silver:** Cast brackets closely match extruded nickel-silver handrails. Extruded and machined brackets are of alloy C79800. All, except as noted, are satin finished and lacquered.

● **Stainless Steel:** Brackets are made of 18-8 chrome-nickel alloy, stainless type 304, for high corrosion resistance. All, except as noted, are satin finished.

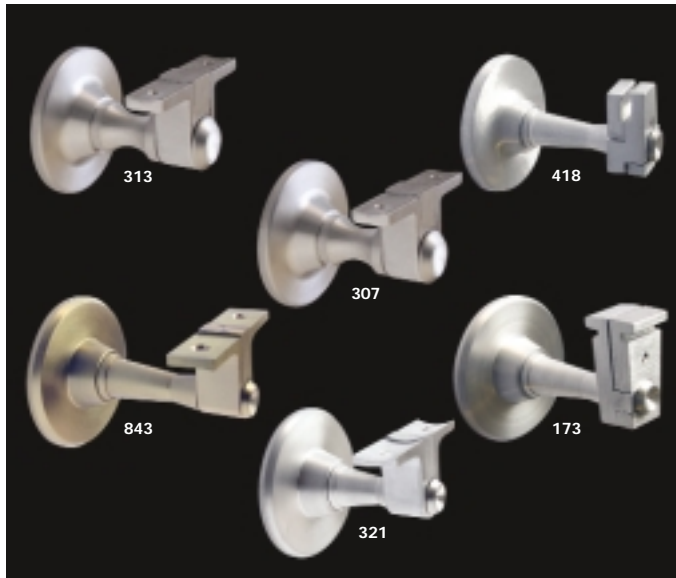
● **Malleable Iron and Stamped Steel:** All types are stocked with flat top member for mouldings and with curved top member for pipe rails. They may be welded or mechanically fastened to the rail. Pipe rail brackets are supplied galvanized as well as plain.

Julius Blum & Co., Inc.'s handrail brackets have been designed to meet or exceed accepted safety standards and have been laboratory tested. Test results are available upon request.

Fasteners, except as noted, are not included. All items are carried in stock in substantial quantities and are available for prompt shipment.

## HANDRAIL BRACKETS

### WALL, BUSHING AND POST BRACKETS



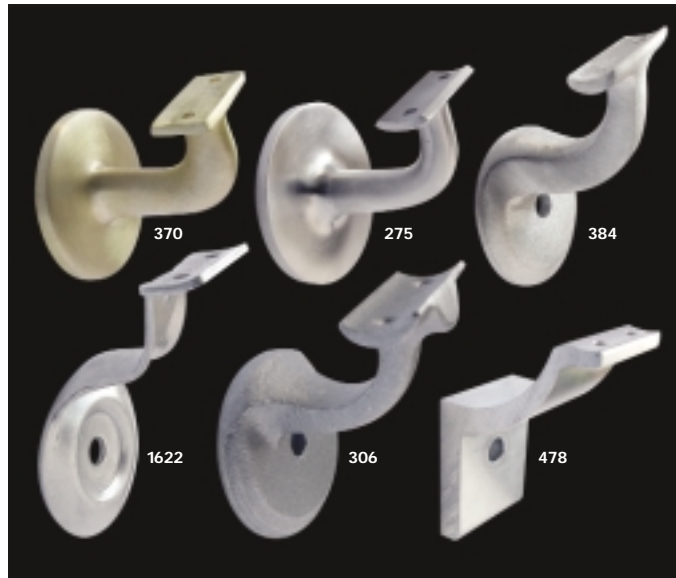
#### CARLSTADT® SELF-ALIGNING WALL BRACKETS

These wall brackets, available in aluminum, bronze, nickel-silver, and stainless steel, are self-aligning. Once the concealed wall attachment is made, the bracket yoke—which attaches to the handrail—rotates freely until the chosen handrail is properly aligned. Various styles are available to coordinate with different handrail styles and with pipe railings.



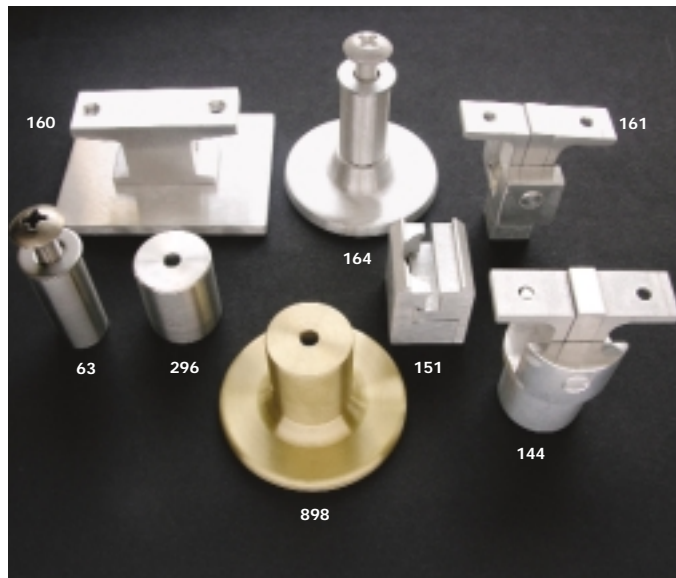
#### CARLSTADT® SELF-ALIGNING POST BRACKETS

Post brackets, available in aluminum, bronze, nickel-silver, and stainless steel, are post-mounted variations of the **Carlstadt® wall brackets**. A solid post is prepared by drilling and tapping to provide a match to the 1/2" stainless stud included as part of the bracket. The stainless stud may be replaced with a post bracket hanger bolt for attachment to a wood post. Hollow posts require a clear hole to be drilled with a tapped post cap or anchor plug inserted to accept the stud.



#### CAST, STAMPED, AND EXTRUDED WALL BRACKETS

These wall brackets are more traditional in style and may be used in a multitude of applications. The various styles allow for concealed fastening or by attachment with a single 3/8" mounting bolt through the wall flange center.

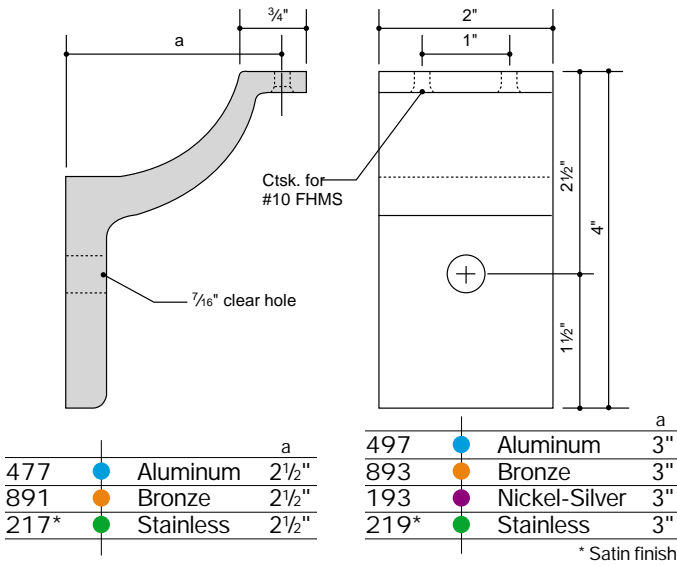


#### VERTICAL MOUNTING BRACKETS

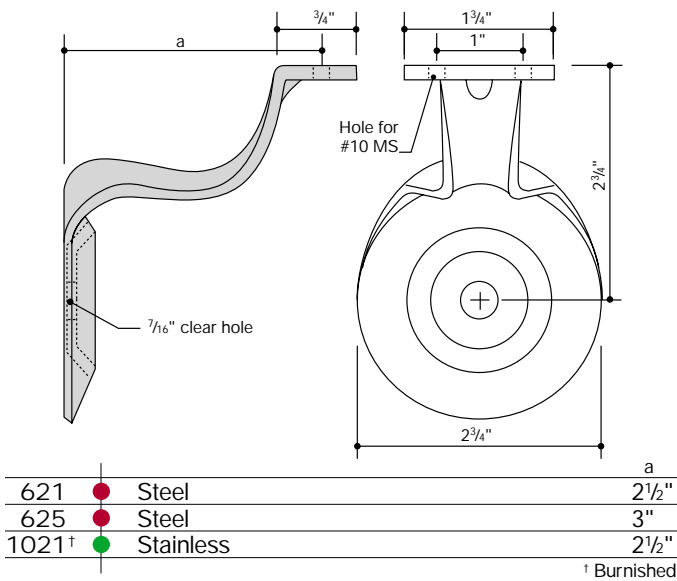
The mounting brackets are useful for mounting handrails vertically as in an elevator cab or hospital corridor. These brackets are often used with wood handrails, vertically mounted. They are also suitable for mounting handrails on top of a parapet or knee wall. Adapters are available to permit attachment to pipe or round tube.

● ● ● ● ● WALL BRACKETS

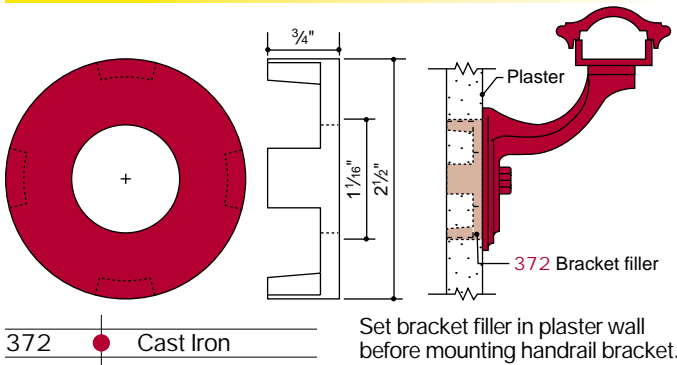
**EXTRUDED - UNPOLISHED**



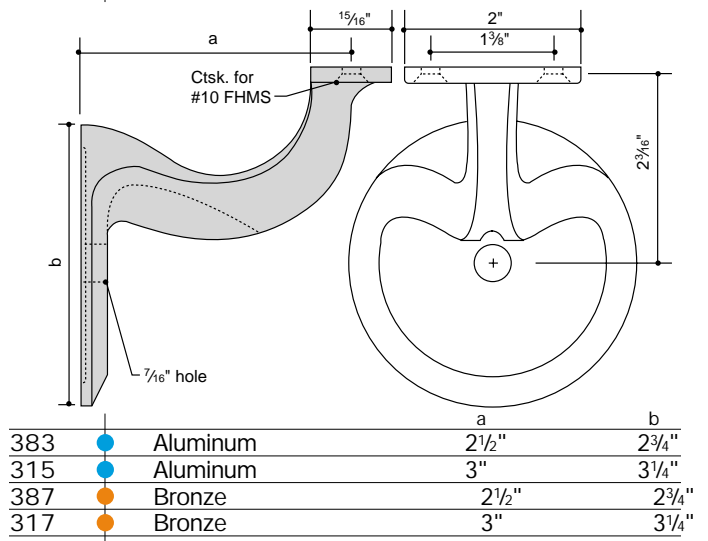
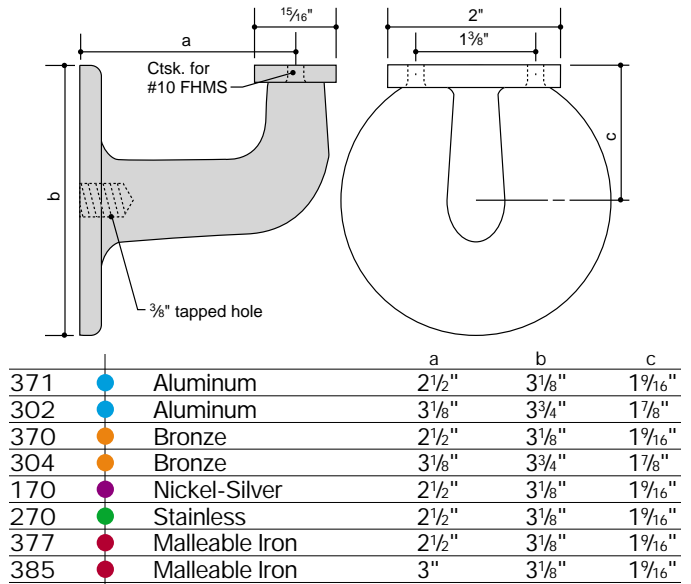
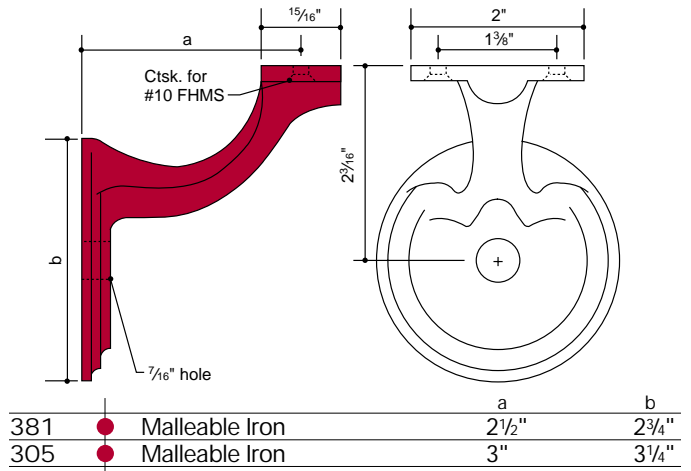
**STAMPED**



**WALL BRACKET FILLER**

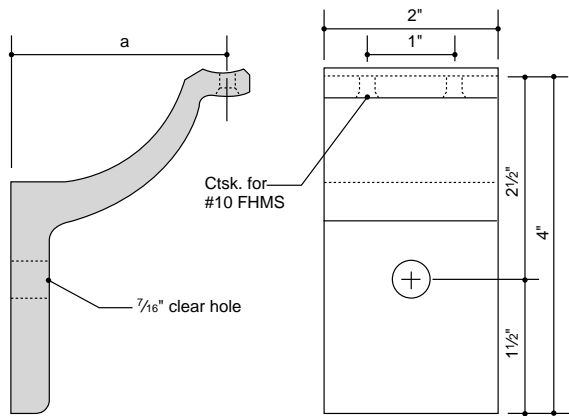


**CAST**



● ● ● ● ● WALL BRACKETS FOR PIPE RAILINGS

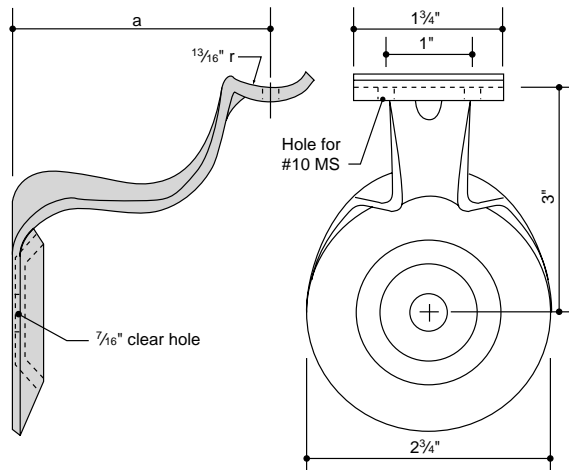
**EXTRUDED - UNPOLISHED**



Part No.	Material	a	b
478•	Aluminum	2 1/2"	2 3/4"
892	Bronze	2 1/2"	2 3/4"
192	Nickel-Silver	2 1/2"	2 3/4"
218*	Stainless	2 1/2"	2 3/4"
498•	Aluminum	3"	3 1/4"
894	Bronze	3"	3 1/4"
220*	Stainless	3"	3 1/4"

\* Satin finish

**STAMPED**



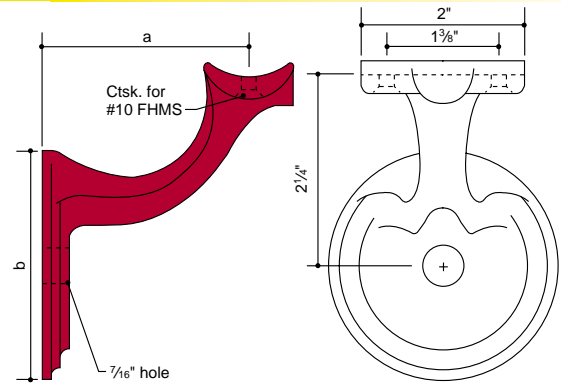
Part No.	Material	a	b
622	Steel	2 1/2"	2 3/4"
1622*	Steel (Galvanized)	2 1/2"	2 3/4"
1022†	Stainless	2 1/2"	2 3/4"
626	Steel	3"	3 1/4"
1626*	Steel (Galvanized)	3"	3 1/4"
1026†	Stainless	3"	3 1/4"

• Clear anodized, AA-M10-C22-A31 (204R1) finish.

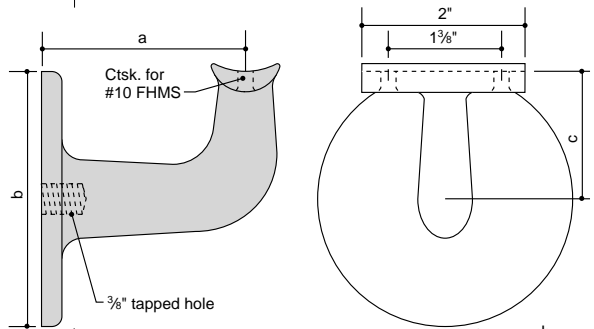
\* Galvanized brackets may require re-drilling and tapping of holes fouled by zinc.

† Burnished.

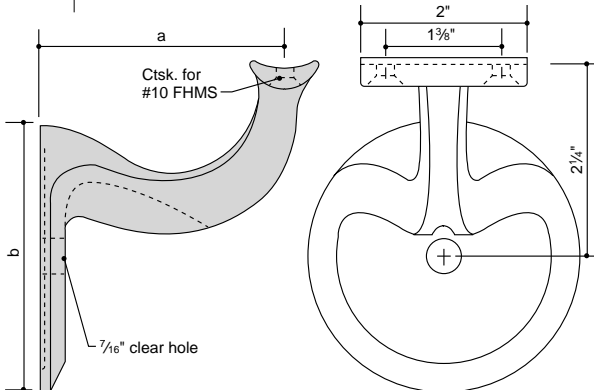
**CAST**



Part No.	Material	a	b
382	Malleable Iron	2 1/2"	2 3/4"
1382*	Malleable Iron (Galvanized)	2 1/2"	2 3/4"
306	Malleable Iron	3"	3 1/4"
1306*	Malleable Iron (Galvanized)	3"	3 1/4"



Part No.	Material	a	b	c
376•	Aluminum	2 1/2"	3 1/8"	1 7/16"
389•	Aluminum	3 1/8"	3 3/4"	1 7/8"
375	Bronze	2 1/2"	3 1/8"	1 9/16"
319	Bronze	3 1/8"	3 3/4"	1 7/8"
176	Nickel-Silver	2 1/2"	3 1/8"	1 9/16"
275	Stainless	2 1/2"	3 1/8"	1 9/16"
378	Malleable Iron	2 1/2"	3 1/8"	1 9/16"
1378*	Malleable Iron (Galvanized)	2 1/2"	3 1/8"	1 9/16"
386	Malleable Iron	3"	3 1/8"	1 9/16"
1386*	Malleable Iron (Galvanized)	3"	3 1/8"	1 9/16"



Part No.	Material	a	b
384•	Aluminum	2 1/2"	2 3/4"
316•	Aluminum	3"	3 1/4"
388	Bronze	2 1/2"	2 3/4"
318	Bronze	3"	3 1/4"

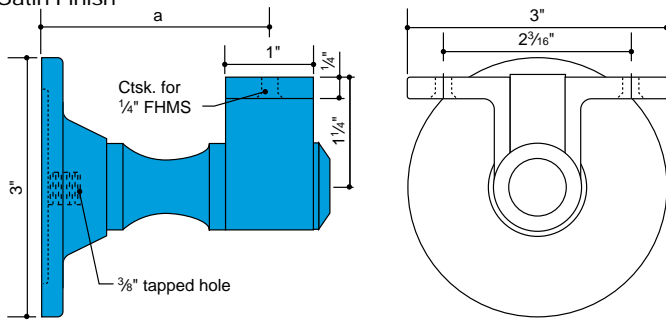


CARLSTADT® SELF-ALIGNING WALL BRACKETS

- ALUMINUM
- NICKEL-SILVER
- BRONZE
- STAINLESS

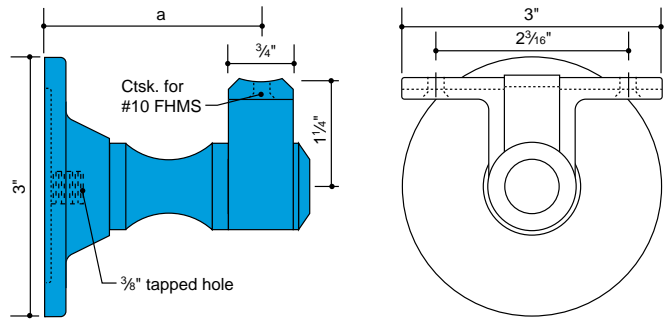
**SELF-ALIGNING**

Satin Finish



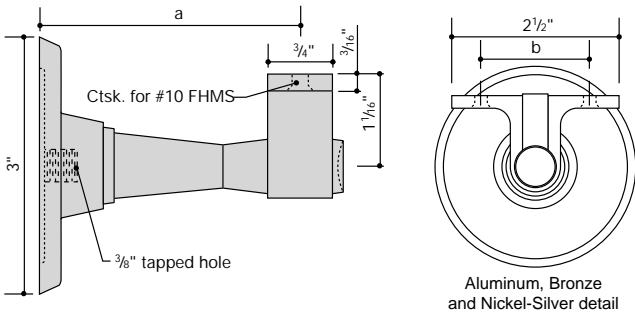
For use with **Carlstadt®** handrail moulding

		a
313	● Aluminum	2 5/8"
314	● Aluminum	3 1/8"



For use with pipe railings

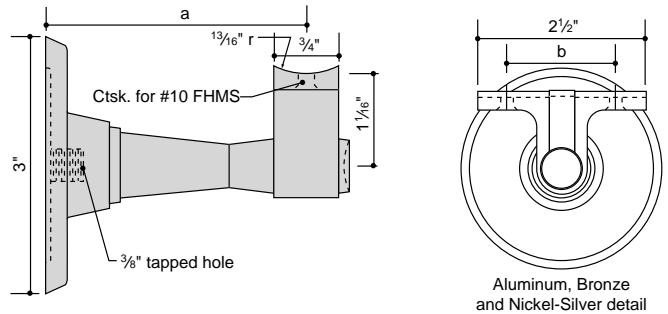
		a
307*	● Aluminum	2 1/2"
308*	● Aluminum	3"



Aluminum, Bronze and Nickel-Silver detail

		a	b
443	● Aluminum	3"	1 5/8"
444	● Aluminum	3 1/2"	1 5/8"
844	● Bronze	2 1/2"	1 5/8"
843	● Bronze	3"	1 5/8"
1343	● Nickel-Silver	3"	1 5/8"
271	● Stainless	2 1/4"	1 13/16"
243	● Stainless	3"	1 13/16"

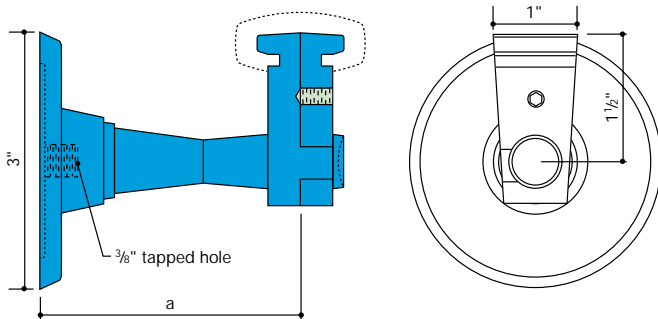
Stainless detail



Aluminum, Bronze and Nickel-Silver detail

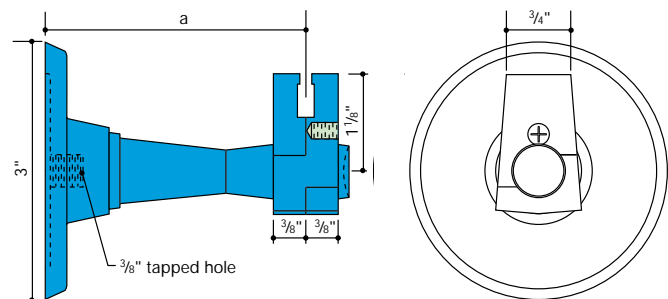
		a	b
321*	● Aluminum	2 1/4"	1 5/8"
403*	● Aluminum	3"	1 5/8"
405*	● Aluminum	3 1/2"	1 5/8"
801	● Bronze	2 1/2"	1 5/8"
803	● Bronze	3"	1 5/8"
1303	● Nickel-Silver	3"	1 5/8"
242	● Stainless	2 1/4"	1 13/16"
221	● Stainless	2 1/2"	1 13/16"
223	● Stainless	3"	1 13/16"

Stainless detail



For use with **Carlsrail®** handrail moulding

		a
175	● Aluminum	2 1/4"
173	● Aluminum	3"
174	● Aluminum	3 1/2"



For use with **Carlstadt®** T-handrail moulding

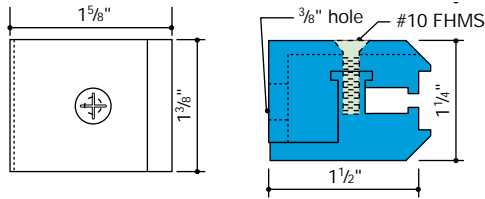
		a
418	● Aluminum	3"
419	● Aluminum	3 1/2"

\*Also available in clear anodized AA-M32-C22-A31 (204R1)

- ALUMINUM
- BRONZE
- NICKEL-SILVER
- STAINLESS
- STEEL

● ● ● ● ● VERTICAL MOUNTING BRACKETS

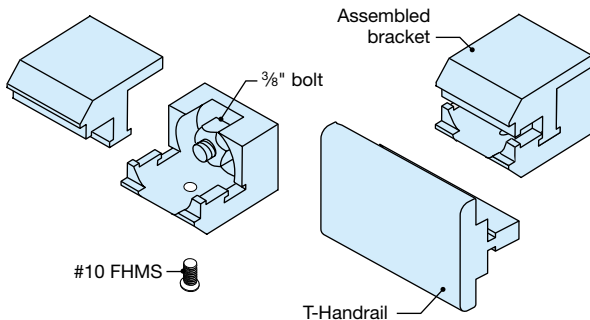
**VERTICAL MOUNTING BRACKET**



151 ● Aluminum

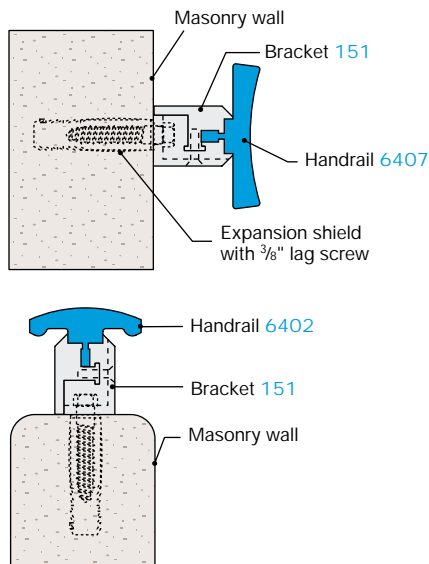
Vertical mounting bracket **151** is designed for mounting handrail on edge to provide a wall guard or bumper. T-handrail mouldings **6402**, **6405** or **6407** can be mounted without drilling and tapping. Bracket is also suitable for mounting handrail on top of a parapet or wall.

**Assembly Detail**



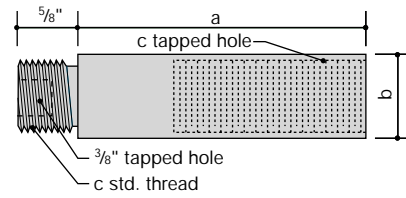
Use  $\frac{3}{8}$ " machine screw, stud or hex head bolt for fastening to wall.

**Installation Details**



**WALL BRACKET EXTENSIONS**

Satin Finish



For use with **307, 308, 313** and **314** wall brackets

		a	b	c
414*	<span style="color: blue;">●</span> Aluminum	1 3/4"	1 1/8"	7/8"
415*	<span style="color: blue;">●</span> Aluminum	3"	1 1/8"	7/8"

For use with **Carlstadt®** wall brackets

464	<span style="color: blue;">●</span> Aluminum	1 3/4"	1"	3/4"
465	<span style="color: blue;">●</span> Aluminum	3"	1"	3/4"
864	<span style="color: orange;">●</span> Bronze	1 3/4"	1"	3/4"
865	<span style="color: orange;">●</span> Bronze	3"	1"	3/4"
247	<span style="color: green;">●</span> Stainless	1 3/4"	1"	3/4"
248	<span style="color: green;">●</span> Stainless	3"	1"	3/4"
1364	<span style="color: purple;">●</span> Nickel-Silver	1 3/4"	1"	3/4"
1365	<span style="color: purple;">●</span> Nickel-Silver	3"	1"	3/4"

\* Clear anodized AA-M32-C22-A31 (204R1)

Extensions may be cut to length to suit individual conditions but not shorter than  $1\frac{5}{8}$ ".

**Note:** Extending the reach of a handrail bracket reduces its load-bearing capacity. To compensate for the reduced strength, the number of brackets may be increased and their spacing reduced.

**BOLTS AND ANCHORS** for handrail wall brackets



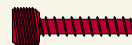
**Threaded Stud**  
● Steel  $\frac{3}{8}$ " - 16 x 1 1/2"



**Hanger Bolt**  
● Steel  $\frac{3}{8}$ " x 3"



**Hex Head Lag Screw**  
● Aluminum  $\frac{3}{8}$ " x 2"  
● Brass  $\frac{3}{8}$ " x 2"  
 (Available Plain or Finished)  
● Nickel-Silver  $\frac{3}{8}$ " x 2" (Finished)  
● Stainless  $\frac{3}{8}$ " x 2"



**Post Bracket Hanger Bolt**  
● Steel  $\frac{5}{16}$ " x 1 1/2" / 1/2" - 13 x 3/8"

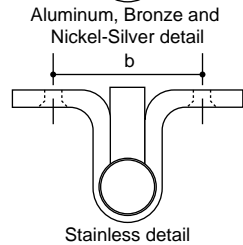
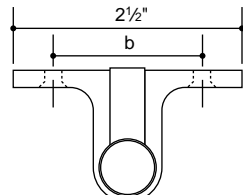
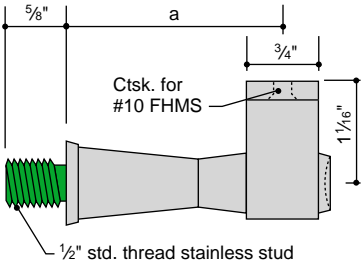
**EXPANSION SHIELDS** (Lead) For setting  $\frac{3}{8}$ " lag screws and hanger bolts in concrete, brick or stone. Drill hole size of  $\frac{3}{8}$ " diameter by 2 1/2" deep.

**HEAVY-DUTY DOUBLE MACHINE BOLT ANCHOR**

(Zinc Alloy) Non-calking machine bolt anchor for use in masonry materials of questionable strength or where heavy shear loads are encountered. Thread accommodates  $\frac{3}{8}$ " - 16 stud or machine bolt (supplied by others). Drill hole size of  $\frac{3}{4}$ " diameter by 2 1/4" deep.

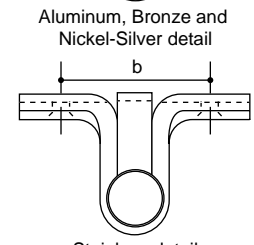
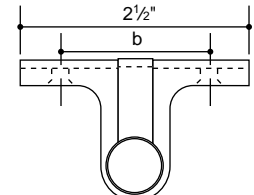
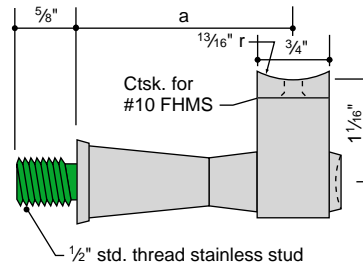
### SELF-ALIGNING

Carlstadt® Post Brackets are supplied with 1/2" stainless steel studs for attachment to metal posts. To mount Carlstadt® Post Brackets onto wood, use the Post Bracket Hanger Bolt shown on page 91.

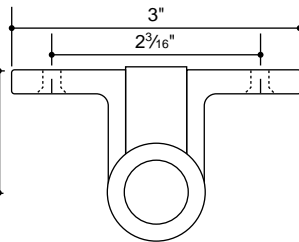
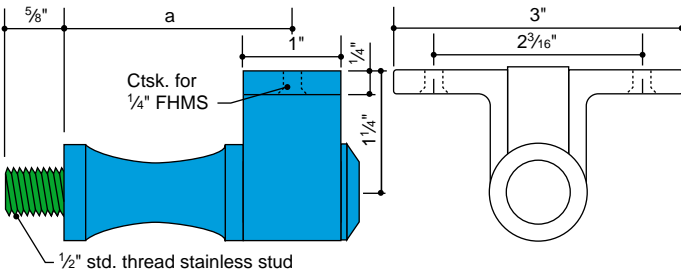


		a	b
441	Aluminum	2 1/4"	1 5/8"
442	Aluminum	2 3/4"	1 5/8"
841	Bronze	2 1/4"	1 5/8"
1341	Nickel-Silver	2 1/4"	1 5/8"
241	Stainless	2 1/4"	1 13/16"

For use with pipe railings

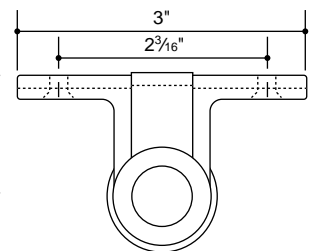
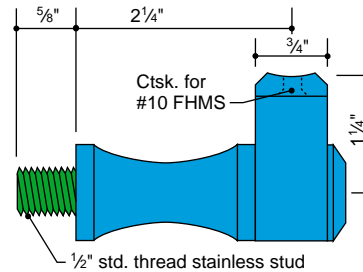


		a	b
402*	Aluminum	2 1/2"	1 5/8"
404*	Aluminum	2 3/4"	1 5/8"
802	Bronze	2 1/4"	1 5/8"
1302	Nickel-Silver	2 1/4"	1 5/8"
222	Stainless	2 1/4"	1 13/16"

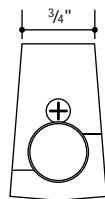
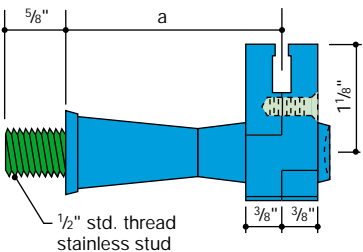


For use with Carlstadt® handrail moulding

		a
309	Aluminum	3 1/4"
312	Aluminum	2 3/8"

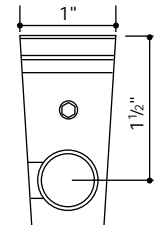
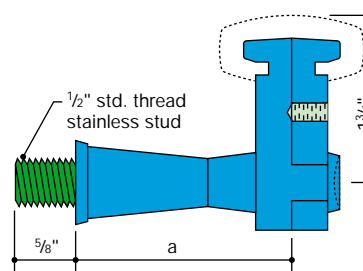


322*	Aluminum
------	----------



For use with Carlstadt® T-handrail moulding

		a
439	Aluminum	2 1/4"
440	Aluminum	2 3/4"



For use with Carlsrail® handrail moulding.

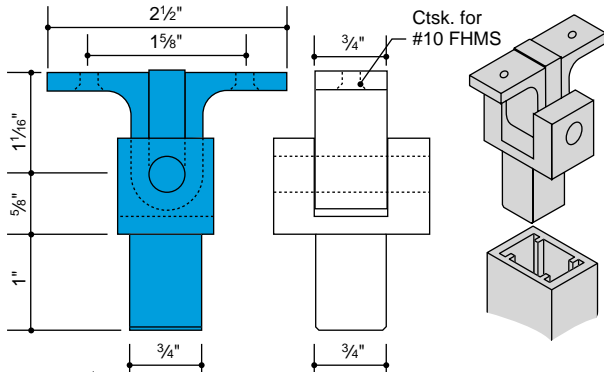
		a
171	Aluminum	2 1/4"
172	Aluminum	2 3/4"

\* Also available in clear anodized AA-M10-C22-A31 (204R1)

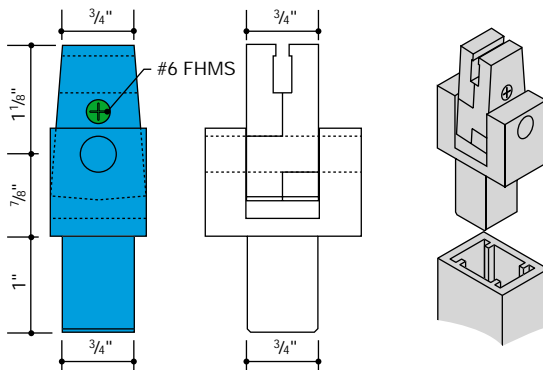
● ● ● ● CARLSTADT® CENTER POST BRACKETS

### CENTER POST BRACKETS

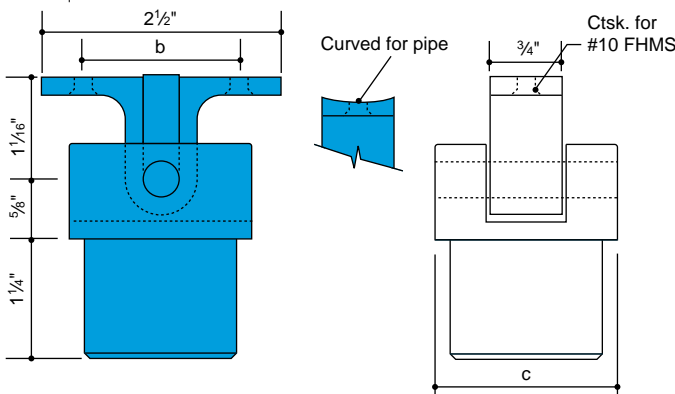
Center post brackets permit handrail to be centered directly over post, yet allow it to tilt to conform to stair incline. Bracket is secured to post with pin or screw.



161	<span style="color: blue;">●</span> Aluminum	Curved for pipe, Fits posts 430 and 6430
162	<span style="color: blue;">●</span> Aluminum	Flat for moulding, Fits posts 430 and 6430



152	<span style="color: blue;">●</span> Aluminum	Fits posts 430, 6430 and Carlstadt® T-handrail moulding.
-----	--	--



For center mounting of flat-bottomed handrail onto aluminum Connectorail® posts or stainless steel pipe posts.

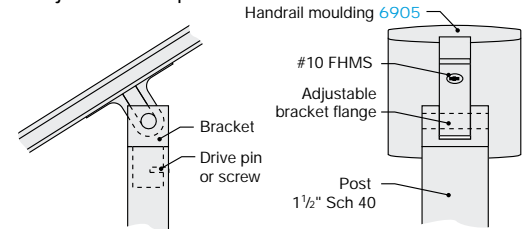
Flat		Pipe	Sched.	c	b
144	<span style="color: blue;">●</span> Aluminum	1 1/4"	40	1.660"	1 5/8"
145	<span style="color: blue;">●</span> Aluminum	1 1/2"	40	1.900"	1 5/8"

For center mounting of pipe or rounded handrail onto aluminum Connectorail® posts.

Curved		Pipe	Sched.	c	b
142	<span style="color: blue;">●</span> Aluminum	1 1/4"	40	1.660"	1 5/8"
143	<span style="color: blue;">●</span> Aluminum	1 1/2"	40	1.900"	1 5/8"

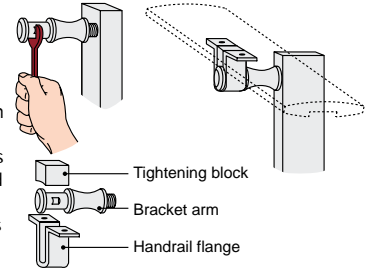
### Post Bracket Assembly Details

Angle may be adjusted as required.



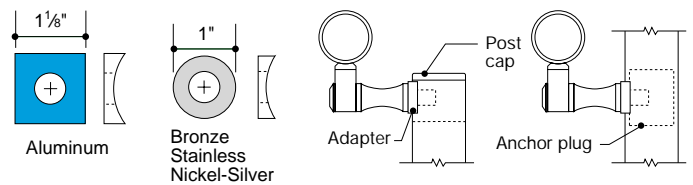
### Adjustable Bracket Detail

Post and upper post cap must be drilled and tapped to accept bracket arm. Recess of bracket arm has flat sides to accommodate wrench, which permits tightening without marring exposed surfaces. Handrail flange tilts to adjust to stair angle and is attached to handrail with machine screws. Pressure on tightening block prevents looseness and rattling.



### POST BRACKET ADAPTER

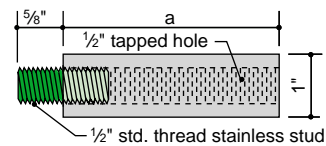
Satin Finish



		Pipe Size	Schedule	Clear Hole
7161*	<span style="color: blue;">●</span> Aluminum	1 1/4"	all	1/2"
7261*	<span style="color: blue;">●</span> Aluminum	1 1/2"	all	1/2"
8661	<span style="color: orange;">●</span> Bronze	1 1/4"	all	1/2"
8861	<span style="color: orange;">●</span> Bronze	1 1/2"	all	1/2"
1361	<span style="color: purple;">●</span> Nickel-Silver	1 1/2"	all	1/2"
9161	<span style="color: green;">●</span> Stainless	1 1/4"	all	1/2"
9361	<span style="color: green;">●</span> Stainless	1 1/2"	all	1/2"

\* Also available clear anodized AA-M10-C22-A31 (204R1)

### POST BRACKET EXTENSIONS



		a
462*	<span style="color: blue;">●</span> Aluminum	1 3/4"
463*	<span style="color: blue;">●</span> Aluminum	3"
862	<span style="color: orange;">●</span> Bronze	1 3/4"
863	<span style="color: orange;">●</span> Bronze	3"
245	<span style="color: green;">●</span> Stainless	1 3/4"
246	<span style="color: green;">●</span> Stainless	3"
1362	<span style="color: purple;">●</span> Nickel-Silver	1 3/4"
1366	<span style="color: purple;">●</span> Nickel-Silver	3"

Extensions may be cut to length to suit individual conditions.  
\* Also available in clear anodized AA-M10-C22-A31 (204R1)

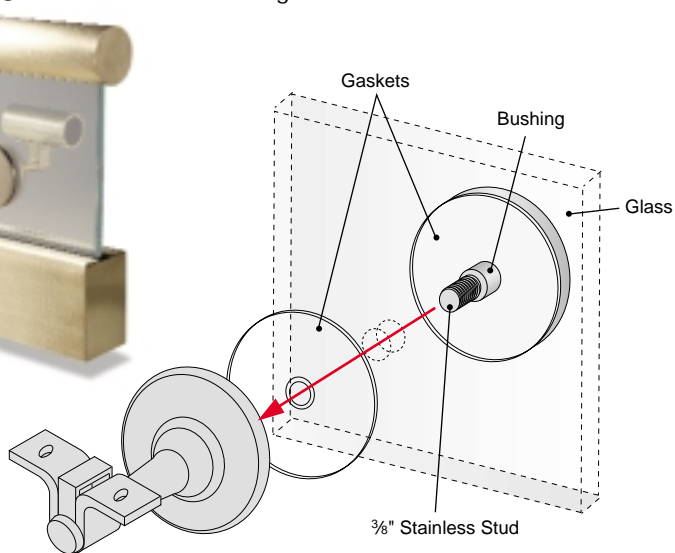
Designers should note that extending a bracket increases stress at its base and reduces its allowable load.

### GLASS-MOUNTED HANDRAIL

Handrail may be mounted to the face of the tempered glass balustrade using a combination of **Carlstadt®** wall brackets and our glass mounting adapter kit. The kit contains a disc with a  $\frac{3}{8}$ " stud weld, a bushing, and two gaskets.

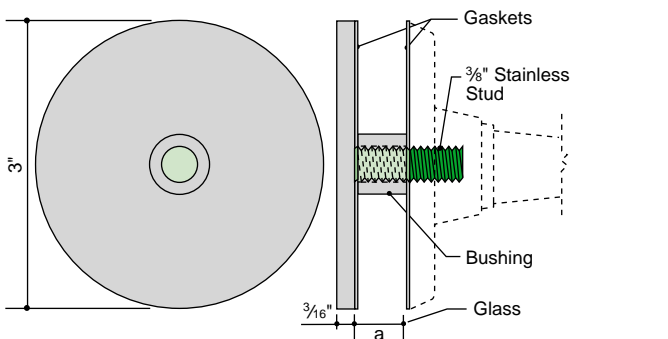
#### TO ASSEMBLE:

- ① Prior to tempering, for  $\frac{1}{2}$ " glass drill a  $\frac{5}{8}$ " clear hole; for  $\frac{3}{4}$ " glass drill a  $\frac{7}{8}$ " clear hole  
**(Do not attempt to drill a hole in tempered glass—it will most likely break)**
- ② Insert the bushing in the hole
- ③ Insert the stud welded disc with gasket through the bushing; place the gasket on the other side
- ④ Thread on bracket and tighten.



### GLASS-MOUNTED HANDRAIL ADAPTER KIT

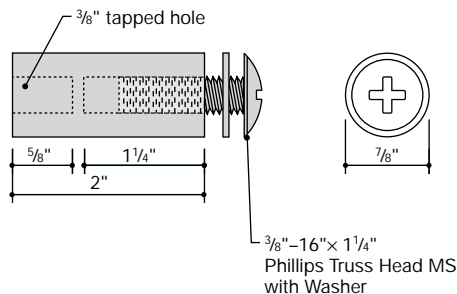
For  $\frac{1}{2}$ " and  $\frac{3}{4}$ " Glass, Satin Finish



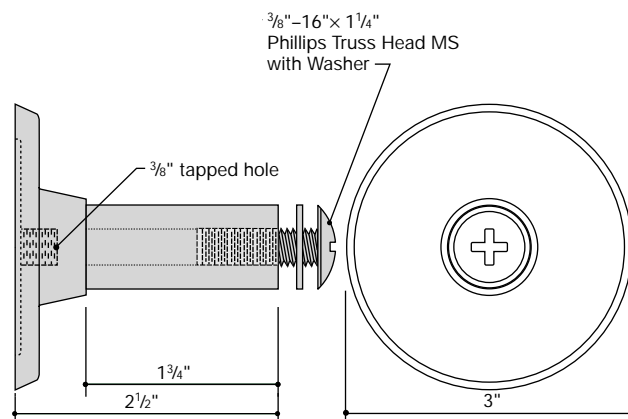
			Glass Size	a	Bushing Diameter
824	●	Bronze	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "
840	●	Bronze	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "
224*	●	Stainless	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "
240*	●	Stainless	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "

\* For use with aluminum and stainless brackets.

### THREADED BUSHING BRACKETS

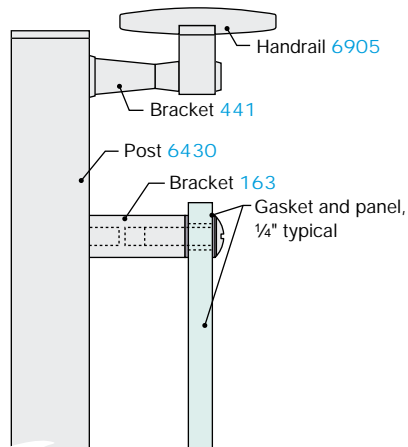


163	●	Aluminum
63	●	Stainless



164	●	Aluminum
64	●	Stainless

### Installation Details

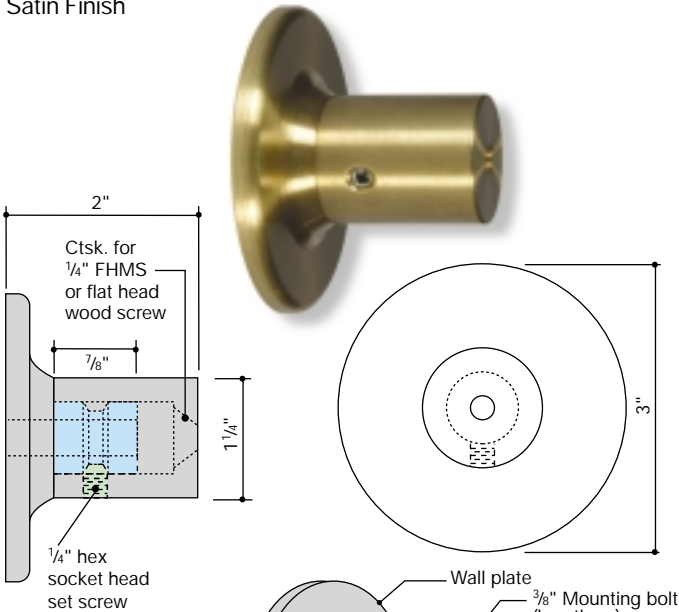


**Threaded Bushing Brackets** are used with threaded studs, machine screws or bolts to install handrails or panels. Brackets may be cut to length as required. Brackets are furnished with aluminum Phillips Truss Head machine screws and washers.

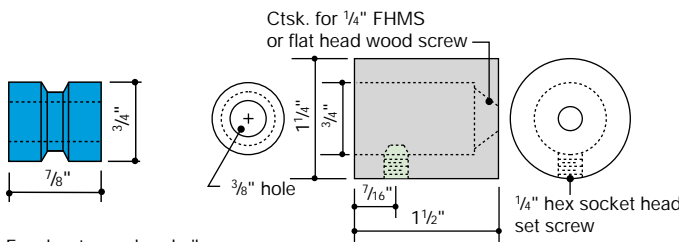
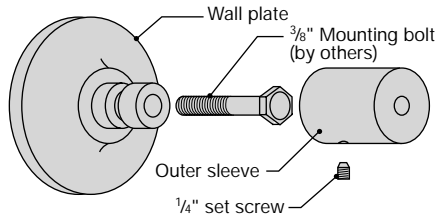
● ● ● ● TWO PIECE MOUNTING BRACKETS

**TWO-PIECE MOUNTING BRACKETS**

Satin Finish

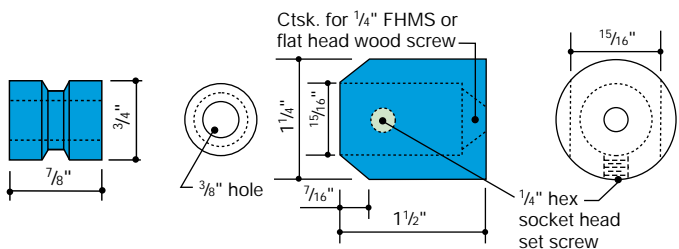


- 168\* ● Aluminum
- 898 ● Bronze
- 298 ● Stainless



For elevator car handrails

- 166\* ● Aluminum
- 296 ● Stainless
- 196 ● Nickel-Silver
- 896 ● Bronze



- 167 ● Aluminum
- For mounting to Acrylic/Wood posts

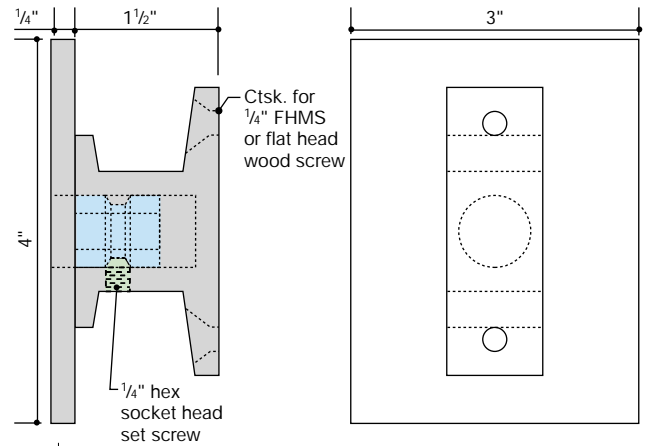
Versatile two-piece mounting brackets with concealed fasteners are suitable for mounting wall handrails and elevator car rails. 167 is tapered for mounting on a post of 1" or greater width.

\* Also available in clear anodized AA-M32-C22-A31 (204R1)

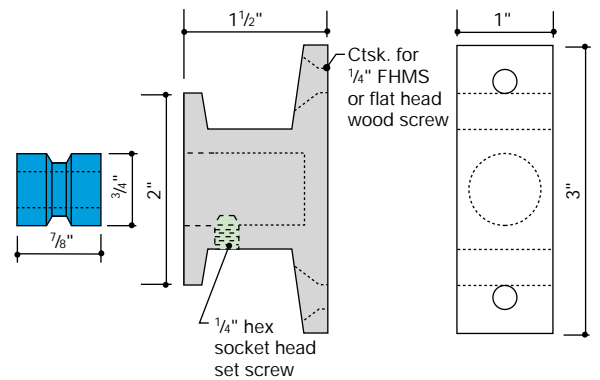
**TWO-PIECE MOUNTING BRACKETS**

Satin Finish

For wide wood handrail

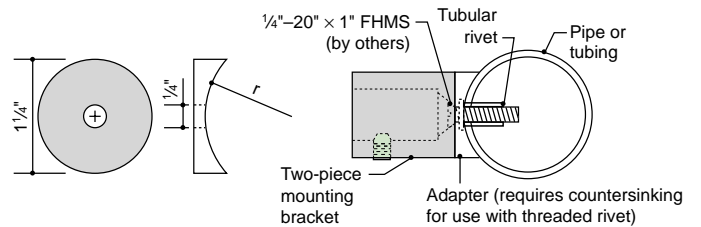


- 160\* ● Aluminum
- 890 ● Bronze
- 290 ● Stainless



- 169\* ● Aluminum
- 899 ● Bronze
- 299 ● Stainless

**ADAPTER**



	r	Use With
7164* <span style="color: blue;">●</span> Aluminum	.830"	1.660" OD
7264* <span style="color: blue;">●</span> Aluminum	.950"	1.900" OD
8864 <span style="color: orange;">●</span> Bronze	.950"	1.900" OD
8964 <span style="color: orange;">●</span> Bronze	.750"	1.500" OD
5264 <span style="color: purple;">●</span> Nickel-Silver	.750"	1.500" OD
5364 <span style="color: purple;">●</span> Nickel-Silver	.950"	1.900" OD
9164 <span style="color: green;">●</span> Stainless	.830"	1.660" OD
9364 <span style="color: green;">●</span> Stainless	.950"	1.900" OD

\* Also available in clear anodized AA-M32-C22-A31 (204R1)