

HANDRAIL COMPONENTS

COPED/DRIVE-ON PIPE WELDING CONNECTORS

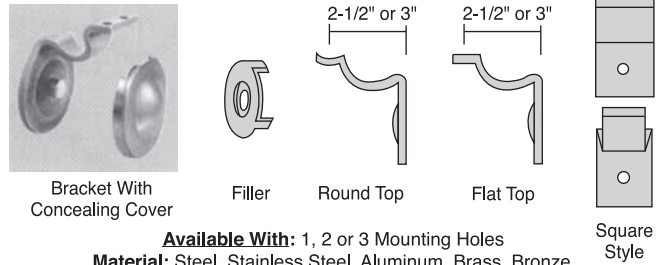


- A** - For Level Railing
- B** - For Level Railing
- C** - For Level Railing
- D & E** - For Bevel Railing
- H** - For Level Railing, Extra Heavy Pipe

Sizes: 1-1/4", 1-1/2" and 2"

Material: Aluminum, Steel, Stainless Steel

1/4" FORMED HANDRAIL BRACKETS



Bracket With Concealing Cover

Filler

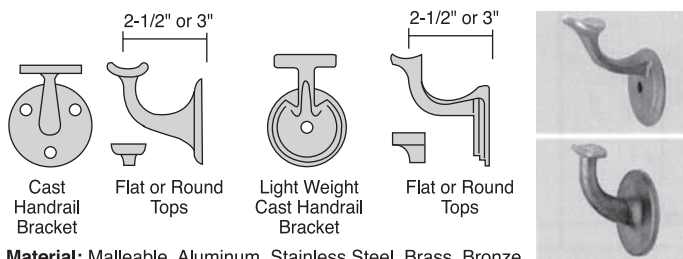
Round Top

Flat Top

Square Style

Available With: 1, 2 or 3 Mounting Holes
Material: Steel, Stainless Steel, Aluminum, Brass, Bronze
Sized to Meet ADA Specifications

CAST HANDRAIL WALL BRACKETS



Cast Handrail Bracket

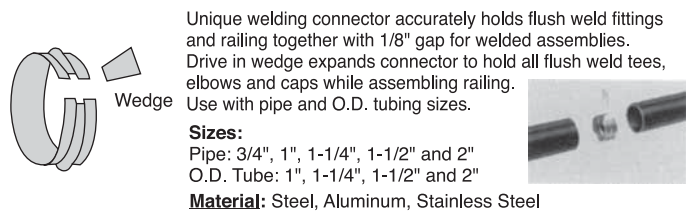
Flat or Round Tops

Light Weight Cast Handrail Bracket

Flat or Round Tops

Material: Malleable, Aluminum, Stainless Steel, Brass, Bronze

WEDGE-LOCK WELDING CONNECTORS

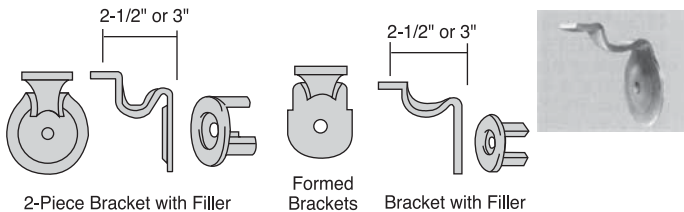


Unique welding connector accurately holds flush weld fittings and railing together with 1/8" gap for welded assemblies. Drive in wedge expands connector to hold all flush weld tees, elbows and caps while assembling railing. Use with pipe and O.D. tubing sizes.

Sizes:
 Pipe: 3/4", 1", 1-1/4", 1-1/2" and 2"
 O.D. Tube: 1", 1-1/4", 1-1/2" and 2"

Material: Steel, Aluminum, Stainless Steel

HANDRAIL & GRAB RAIL WALL BRACKETS AND FILLERS



2-Piece Bracket with Filler

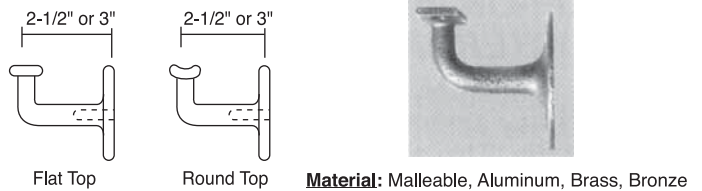
Formed Brackets

Bracket with Filler

Material: Steel, Stainless Steel, Brass, Bronze

Can Be Furnished with 1-1/2" Clear to Wall per ADA Code on Request.

BAR STYLE HANDRAIL BRACKET



Flat Top

Round Top

Material: Malleable, Aluminum, Brass, Bronze

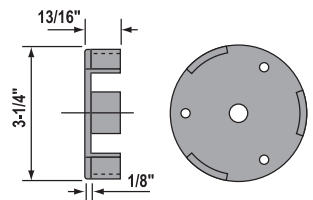
FILLERS

For use with one hole or three hole Style U brackets only.

1721 Filler has 7/16" diameter center hole for use in plaster.

1722 Filler has one 7/16" diameter center hole and three tapped holes with matching 1/4" x 3/8" round head screws. For use with 5/8" drywall.

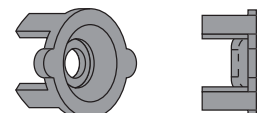
Available in Steel only.



STYLE F FILLER

Use with traditional cast brackets shown above. 1-5/8" diameter x 7/8" deep with one 7/16" hole.

Depth	Steel
5/8"	3545B
7/8"	3545



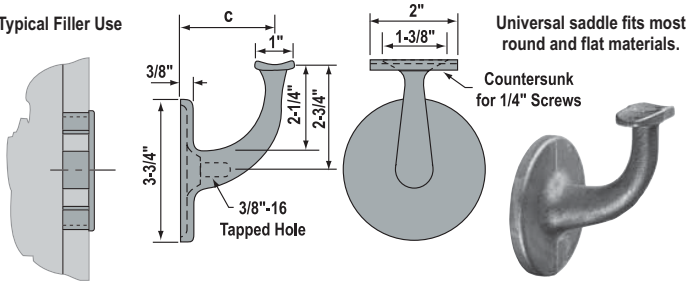
A SMALL SAMPLING OF OUR MANY STOCK ITEMS - ASK YOUR DIRECT METALS SALESPERSON FOR MORE COMPLETE LITERATURE.

HANDRAIL COMPONENTS



CAST BRACKETS

Typical Filler Use



Style U Cast Bracket with one 3/8" tapped hole

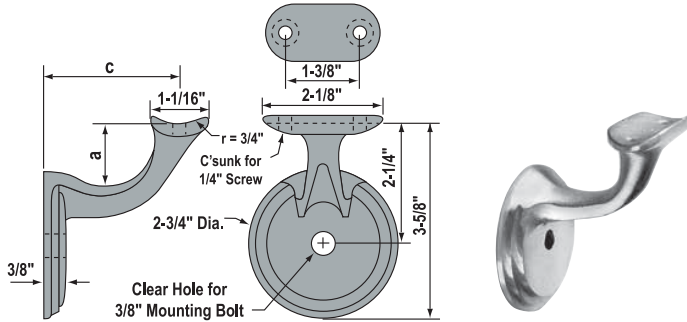
c	Malleable Iron	Satin Aluminum	Satin Anodized Aluminum	Satin Stainless	Satin Bronze
2-1/2"	1701-2	1715-2	1715-2AN	1729-2	1740-2
3"	1701	1715	1715AN	1729	1740

MATERIAL SPECIFICATIONS:

Malleable Iron.....535.2, ASTM A 47
 AluminumAlloy B535.2, ASTM B 26
 Clear AnodizedAA-M32-C22-A 41
 Stainless SteelType 304, ASTM A 351
 BronzeC86500

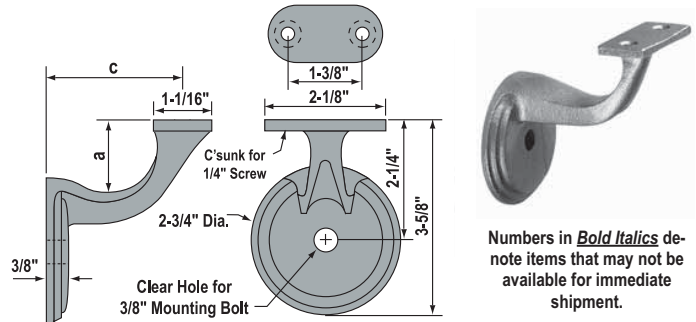
Finish: Cast aluminum, stainless and bronze brackets have a #4 satin finish. Mirror finish, chrome plating and galvanizing are available on special order.

Cast aluminum brackets are inherently weaker than other alloys. Reduce spacing between brackets to maximize load bearing ability.



Cast Bracket Round Saddle with one 7/16" hole

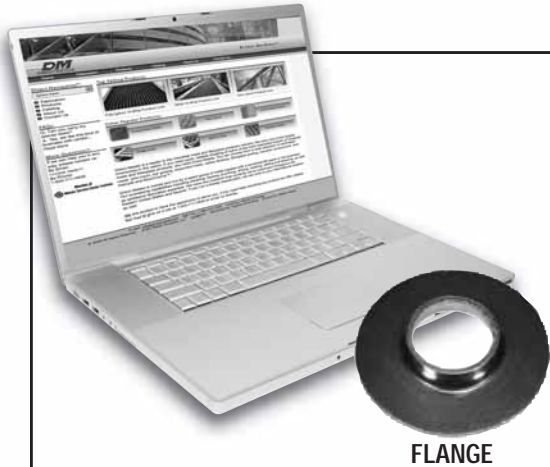
c	a	Malleable Iron	Satin Aluminum	Satin Anodized Aluminum	Satin Stainless	Satin Bronze
2-1/2"	1-1/4"	1765	1767	1767AN	1768	1769
3"	1-1/2"	1770	1772	1772AN	1773	1774



Cast Bracket Flat Saddle with one 7/16" hole

c	a	Malleable Iron	Satin Aluminum	Satin Anodized Aluminum	Satin Stainless	Satin Bronze
2-1/2"	1-3/8"	1785	1787	1787AN	1788	1789
3"	1-1/2"	1790	1792	1792AN	1793	1794

Numbers in ***Bold Italics*** denote items that may not be available for immediate shipment.



FLANGE



CONNECTORS



RINGS



ELBOW



HANDRAIL BRACKET



END CAPS



DISKS

FOR A COMPLETE LISTING OF OR HANDRAIL COMPONENTS, PLEASE VISIT OUR WEBSITE

www.directmetals.com

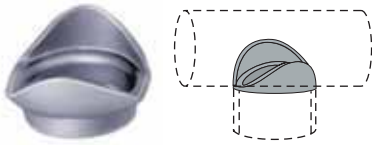
www.directmetals.com

800.711.4939

HANDRAIL COMPONENTS

COPED DRIVE-ON CONNECTORS

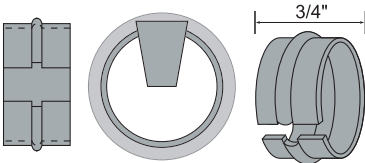
90° TEE CONNECTOR - TYPE A



Unique drive-on and weld design eliminates pipe coping and saves time spent on cutting and alignment. Mill finish.

Pipe Size	Tube OD	Sch. 40 Steel	Sch. 40 Aluminum
1-1/4"	1.660"	1822	1823
1-1/2"	1.900"	1834	1835

WEDGE-LOCK™ WELDING CONNECTORS

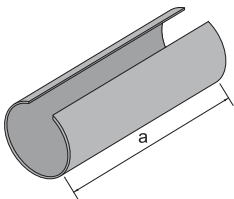


For pipe and round tubing. Wagner's original, patented connector simplifies alignment prior to welding. Wedge-Locks™ will take more than 100# of tension.

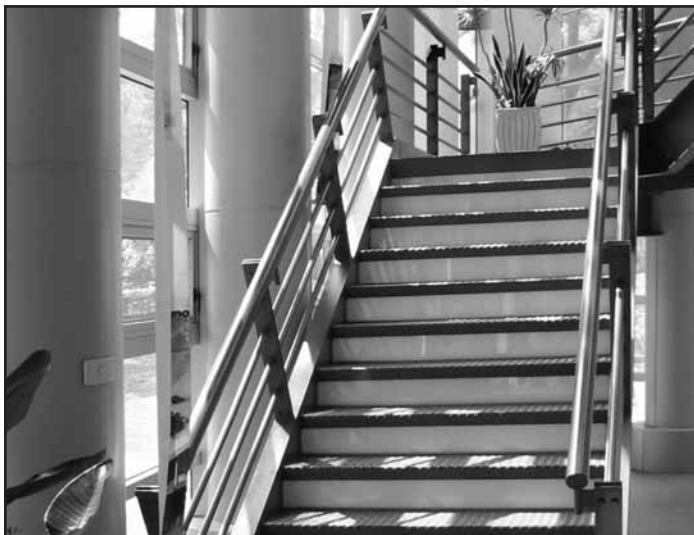
Pipe Size	Schedule	Tube OD	Wall Thickness	Steel	Aluminum	Stainless
1"	40	1.320"	.133"	1013	1014	1015
		1.500"	.065"	1023T*	1024T*	1025T*
		1.500"	.125"	1023T.11*	1024T.11*	1025T.11*
1-1/4"	10	1.660"	.109"	1023-L		
1-1/4"	40	1.660"	.140"	1023	1024	1025
1-1/2"	10	1.900"	.109"	1033-L		
1-1/2"	40	1.900"	.145"	1033	1034	1035
		2.000"	.120"	1033T	1034T	1035T
		2.380"	.109"	1043-L		
2"	10	2.380"	.109"	1043-L		
		2.380"	.154"	1043	1044	1045
		2.500"	.120"	1043T	1044T	1045T

*This connector is only available without the wedge

INSERT COUPLING



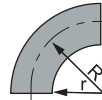
Pipe Size	Tube OD	a	14 Ga. Steel
1-1/4"	1.66"	5"	1220
1-1/2"	1.90"	5"	1222



MISCELLANEOUS RADIUS PIPE & OD TUBE ELBOWS

These handrail bends are mandrel bent and have no visible seam unless noted.

Elbows are supplied with a mill finish. Other finishes available.



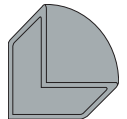
90° ELBOW

*Denotes an elbow with a seam. These elbows are ADA compliant and provide 1-1/2" clearance.

Pipe Size	Tube OD	Wall Thickness	r	R	Steel	Alum.	Stainless
1.500"	.120"	.120"	1.50"	2.25"	7914*	7930*	7946*
			3.75"	5.00"	9610	9613	
2-1/2"	2.880"	.203"	3.56"	5.00"	9600	9603	
			3.50"	5.00"	9620	9623	

SQUARE TUBE CENTER

With no mitering and no sharp corners, this cost-cutting corner simplifies fit-up and shortens fabrication. Simply square cut your tubing. Radius equals the tube size. Not recommended for square corner extruded tube.



Square Tube	Steel	Alloy 304 Stainless
1.25"	9215	9217
1.50"	9220	9222

SINGLE-LOCK SPLICE-LOCK™

Available in steel, aluminum alloy 3003 and stainless steel type 304. Splice-locks are designed for the alignment of handrail sections and as expansion joints. They are most effective as a joint stiffener when used within 12" of a welded post or handrail bracket. For maximum strength, use double-lock splice-locks shown below.

Splice-locks have a similar shear strength as standard pipe but are not to be used in post assemblies. Use as connectors or expansion joints.

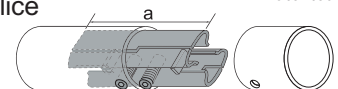
Patented

SINGLE SPLICE-LOCK™ FOR PIPE AND ROUND TUBING

Pipe	Sch.	Tube Diameter	Wall Thick.	a	Steel	Zinc Plated Steel	Galvanized Steel	Set Screw
1-1/4"	40	1.660"	.140"	3-3/4"	3314	PL3314	G3314	3/8" x 1"
1-1/4"	40	1.660"	.140"	6"	3320	PL3320	G3320	3/8" x 1"
1-1/2"	40	1.900"	.145"	3-3/4"	3318	PL3318	G3318	3/8" x 1-3/8"
1-1/2"	40	1.900"	.145"	6"	3324	PL3324	G3324	3/8" x 1-3/8"

DOUBLE-LOCK SPLICE-LOCK™

Proven the best mechanical splice available for pipe and tubular railing field joints.



Patented

DOUBLE SPLICE-LOCK™ FOR PIPE AND ROUND TUBING

Pipe	Sch.	Tube Diameter	Wall Thick.	a	Steel	Zinc Plated Steel	Galvanized Steel	Set Screw
1.500"	.065"	3-3/4"	.065"	3.75"	3366			3/8" x 1"
				6"	3366-6			3/8" x 1"
1-1/4"	40	1.660"	.140"	3-3/4"	3354	PL3354	G3354	3/8" x 1"
1-1/4"	40	1.660"	.140"	6"	3356	PL3356	G3356	3/8" x 1"
1-1/2"	40	1.900"	.145"	3-3/4"	3358	PL3358	G3358	3/8" x 1-3/8"
1-1/2"	40	1.900"	.145"	6"	3368	PL3368	G3368	3/8" x 1-3/8"

HANDRAIL COMPONENTS

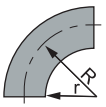


INSIDE RADIUS ELBOWS

These elbows are precision mandrel bent parts without seams or stamped with seams as noted.

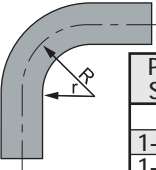
Elbows are supplied with a mill finish. They are also available galvanized, zinc plated, anodized or polished to a satin or mirror finish. All elbows may also be purchased with tangents.

1" INSIDE RADIUS 90° ELBOW - with seam



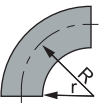
Pipe Size	Sch.	OD	Wall Thick.	Steel	Aluminum
1"	40	1.315"	.133"	218	242
1-1/4"	40	1.660"	.140"	266	290
1-1/2"	40	1.900"	.145"	338	362

1" INSIDE RADIUS 90° ELBOW WITH TWO TANGENTS - without seam



Pipe Size	Sch.	OD	Wall Thick.	Steel	Aluminum
1"	40	1.315"	.133"	218-2	242-2
1-1/4"	40	1.660"	.140"	266-2	290-2
1-1/2"	40	1.900"	.145"	338-2	362-2

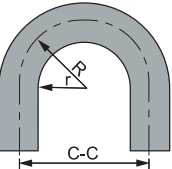
1-5/8" INSIDE RADIUS 90° ELBOW - without seam



Pipe Size	Tube OD	Wall Thick.	Steel	Aluminum	Stainless
1"	1.315"	.133"	4507	4521	4535
	1.500"	.120"	6906	6922	6938
1-1/4"	1.660"	.140"	4434*	4444	4654
1-1/2"	1.900"	.145"	4464*	4474	4684

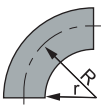
* Denotes an elbow with a seam.

1-5/8" INSIDE RADIUS 180° ELBOW WITH TWO TANGENTS UNTRIMMED - without seam



Pipe Size	Tube OD	Wall Thick.	Steel	Aluminum	Stainless
1-1/4"	1.660"	.140"	4639B	4649B	4661B
1-1/2"	1.900"	.145"	4669B	4679B	4691B

2" INSIDE RADIUS 90° ELBOW - without seam

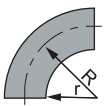


Pipe Size	Tube OD	Wall Thick.	Steel	Aluminum	Stainless
1"	1.315"	.133"	214*	228	271-S
	1.500"	.065"	7906	7938	7938
	1.500"	.120"	7906.120	7922	7938.120
1-1/4"	1.660"	.140	268	292	317
1-1/2"	1.900"	.145"	340*	364	389
	2.000"	.120"	7956	7972	7988
2"	2.375"	.134"	402*	418*	433**

* Denotes an elbow with a seam.

** Denotes Sch. 10

3" INSIDE RADIUS 90° ELBOW - without seam



Pipe Size	Tube OD	Wall Thick.	Steel	Aluminum	Stainless
1"	1.315"	.133"	507	517	527
	1.500"	.120"	6956	6967	6975
1-1/4"	1.660"	.140	270*	294	464
1-1/2"	1.900"	.145"	342*	366	391
2"	2.375"	.154"	421	444	459-3**

* Denotes an elbow with a seam.

** Denotes Sch. 10

FLAT BASE FLANGES

Aluminum flanges on this page are intended for cover flange use only. Set screws are not for structural use.

Other alloys are available on special request. Supplied with a mill finish. Contact Direct Metals regarding polishing, plating, galvanizing, anodizing or special finishes.

Numbers in **Bold Italics** denote items that may not be available for immediate shipment.

PLAIN FLANGE



Pipe Size	Tube OD	Steel 1006-1010	Aluminum 3003
3/4"	1.050"	610	650
1"	1.315"	618	666
1-1/4"	1.660"	626	674

FLANGE WITH TWO HOLES



Pipe Size	Tube OD	Steel 1006-1010	Aluminum 3003
3/4"	1.050"	611	<i>651</i>
1"	1.315"	619	<i>659</i>
1-1/4"	1.660"	627	<i>667</i>

FLANGE WITH THREE HOLES



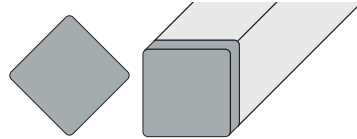
Pipe Size	Tube OD	Steel 1006-1010	Aluminum 3003
3/4"	1.050"	611A	<i>651A</i>
1"	1.315"	619A	<i>659A</i>
1-1/4"	1.660"	627A	<i>667A</i>

FLANGE WITH FOUR HOLES



Pipe Size	Tube OD	Steel 1006-1010	Aluminum 3003
3/4"	1.050"	612	<i>652</i>
1"	1.315"	620	<i>660</i>
1-1/4"	1.660"	628	<i>668</i>

FLUSH SQUARE TUBING WELD-ON CAPS



Contact Direct Metals regarding availability in Stainless Steel and Aluminum. Flush square tubing drive-on caps are also available.

Tube Size	Thickness	Steel
1" x 1"	1/8"	3206-1
1-1/4" x 1-1/4"	1/8"	3207-1
1-1/2" x 1-1/2"	1/8"	3220-D
2" x 2"	1/8"	3221-D

ROUND DISKS



Disks are available in many other diameters, thicknesses and alloys.

Diameter	Thickness	Steel	Aluminum	304 Stainless
3"	1/8"	D135	D136	D137
3"	3/16"	D139	D140	D141
3"	1/4"	D143	D144	D145

www.directmetals.com

800.711.4939