



Since 1966

Tubular Specialties Manufacturing, Inc.

13011 South Spring Street, Los Angeles, CA 90061-1685

Phone 800/Grab Bar (800/472-2227) or 310/515-4801

www.GrabBar.com • Fax 310/217-0653

Series 300

Technical Data

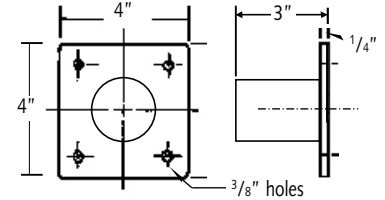
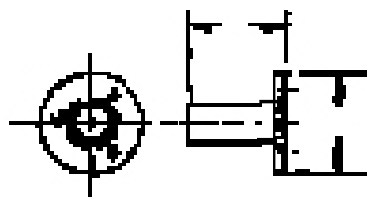
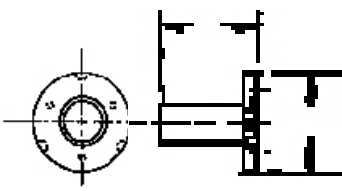
Revised April 2005

Stainless Steel Component Wall Railing System

End Wall Bracket Terminates rail into side wall.



Shown with CS-1



Model # O.D. Flange

H-301/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

H-301/R-3 1 1/2" 8 ga. Exposed Screw

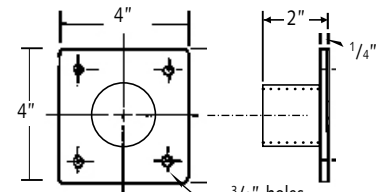
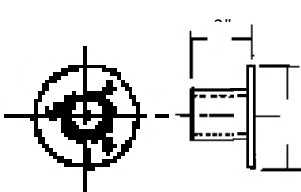
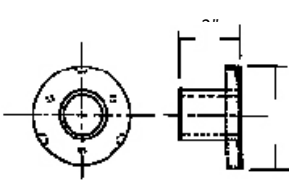
Model # O.D. Flange

T-301/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

SLEV End Wall Bracket, Sleeved Terminates rail into side wall.



Shown with CS-1



Model # O.D. Flange

H-301/SLEV/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

H-301/SLEV/R-3 1 1/2" 8 ga. Exposed Screw

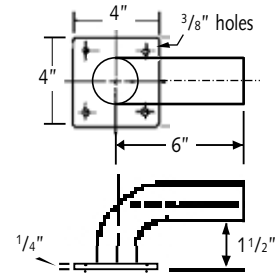
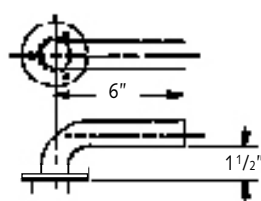
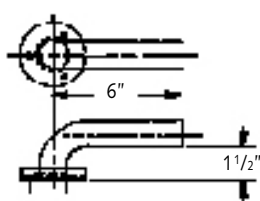
Model # O.D. Flange

T-301/SLEV/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

Return Wall Bracket Terminates rail with a sidewall return. Complies with 1 1/2" wall clearance.



Shown with CS-1



Model # O.D. Flange

H-302/CS-1 1 1/2" 14 ga. Concealed Screw

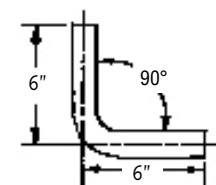
Model # O.D. Flange

H-302/R-3 1 1/2" 8 ga. Exposed Screw

Model # O.D. Flange

T-302/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

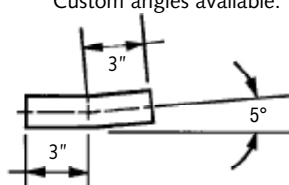
90° Elbow Forms inside or outside corner.



Model # O.D.

H-303 1 1/2"

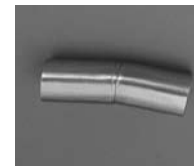
5° Elbow Allows adjustment for a 1:12 slope. Custom angles available.



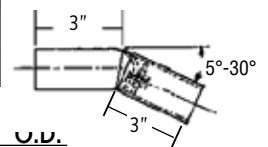
Model # O.D.

H-322 1 1/2"

Adjustable Slope Elbow



Patent pending design allows adjustment at the jobsite from 5° to 30°.



Patent Pending

Model # O.D.

H-310 1 1/2"

Manufacturer reserves the right to alter design or dimensions without formal notice and without incurring obligation.

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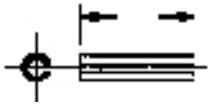


Guarantee

TSM Series 300 Stainless Steel Component Railing System is guaranteed against defects in workmanship and material for one year from shipping date.

Internal Dowel

Used to connect component pieces together; one required for every hairline joint. Adhesive sealant supplied.

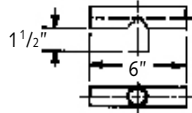


Model # O.D.

- H-306 1 1/2"
- T-306 1.9"

Tee Connector

Connects three component pieces, one perpendicular, two horizontal.

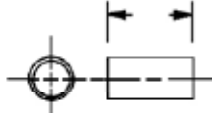


Model # O.D.

- H-307 1 1/2"
- T-307 1.9"

Outside Sleeve

Provides attractive covering for connecting seams as well as supplying added strength to connection.



Model # O.D.

- H-308 1 1/2"
- T-308 1.9"

End Cap, St. Steel

Spring action insert. Press fits into ends of tubing. T-309 fits only straight tubing; no curved ends.



Model # O.D.

- H-309 1 1/2"
- T-309 1.9"

End Cap, Black Plastic

Heavy duty black Butyrate. Press fits into ends of tubing.

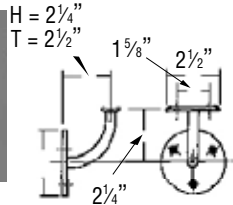


Model # O.D.

- H-309P 1 1/2"
- T-309P 1.9"

Underslung Support with Saddle

Complies with 1 1/2" wall clearance. Support is 1/2" rod. Attaches to tubing with set screws provided by manufacturer. Recommended spacing maximum 60" on center.

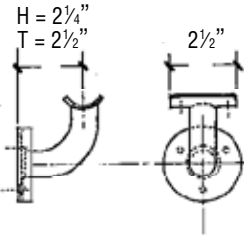


Model # O.D.

- H-304A/R-3 1 1/2"
- T-304A/R-3 1.9"

Underslung Support with Saddle

Complies with 1 1/2" wall clearance. Support is 1" tubing. Attaches to tubing with set screws provided by manufacturer. Recommended spacing maximum 60" on center.

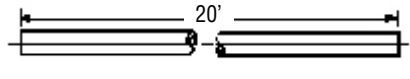


Model #

- H-304T/R-3 1 1/2"
- T-304T/R-3 1.9"

Straight Tubing

Standard length is 20'. Smaller sizes can be custom cut.

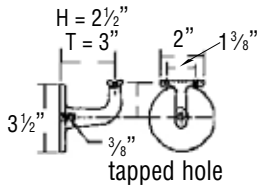


Model # O.D.

- H-106(49) 1 1/2" x 18 ga.
- T-106(65) 1.9" X 16 ga.

Cast Wall Bracket

Universal bracket with 2 1/2" wall clearance. Installed with one 3/8" - 16 hanger bolt through the round wall flange.

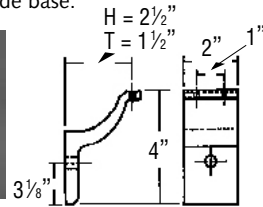


Model # O.D.

- H-304C 1 1/2"
- T-304C 1.9"

Extruded Wall Bracket

Universal bracket with 2 1/2" wall clearance. Installed with one 3/8" hex lag screw through the 2" wide base.

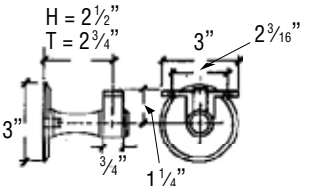


Model # O.D.

- H-304E 1 1/2"
- T-304E 1.9"

Self-Aligning Bracket

Universal bracket with 2 1/2" wall clearance. Installed with one 3/8" - 16 hanger bolt through the round wall flange.

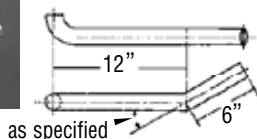


Model # O.D.

- H-304R 1 1/2"
- T-304R 1.9"

Wall Return Without Support, LH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance.

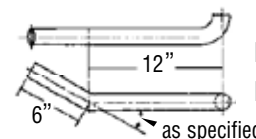


Model # O.D.

- H-305TL 1 1/2"
- T-305TL 1.9"

Wall Return Without Support, RH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance.



Model # O.D.

- H-305TR 1 1/2"
- T-305TR 1.9"

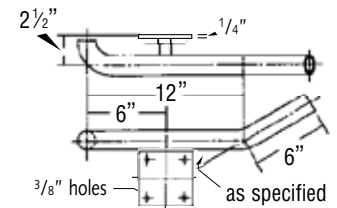
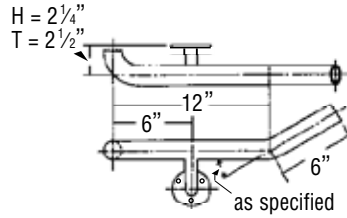
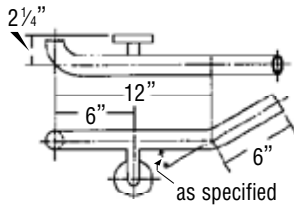


Wall Return with Support, LH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



Shown with CS-1



Model # O.D. Flange

- H-305T1L/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

- H-305T1L/R-3 1 1/2" 8 ga. Exp. Screw
- T-305T1L/R-3 1.9" 8 ga. Exp. Screw

Model # O.D. Flange

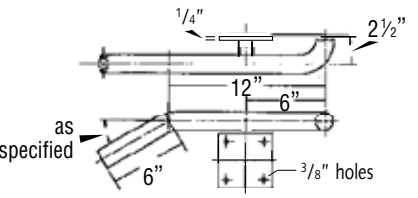
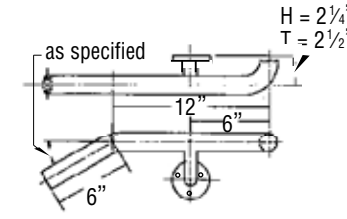
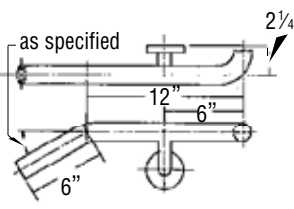
- T-305T1L/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

Wall Return with Support, LH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



Shown with CS-1



Model # O.D. Flange

- H-305T2L/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

- H-305T2L/R-3 1 1/2" 8 ga. Exp. Screw
- T-305T2L/R-3 1.9" 8 ga. Exp. Screw

Model # O.D. Flange

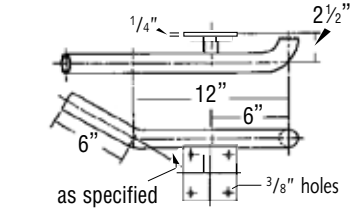
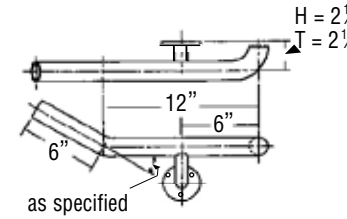
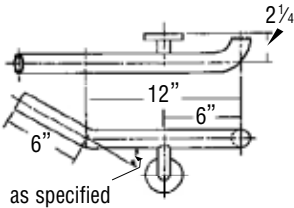
- T-305T2L/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

Wall Return with Support, RH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



Shown with CS-1



Model # O.D. Flange

- H-305T1R/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

- H-305T1R/R-3 1 1/2" 8 ga. Exp. Screw
- T-305T1R/R-3 1.9" 8 ga. Exp. Screw

Model # O.D. Flange

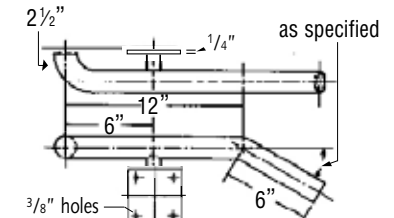
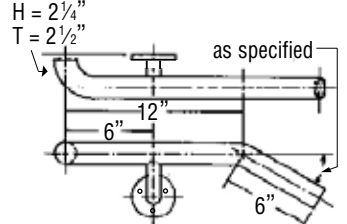
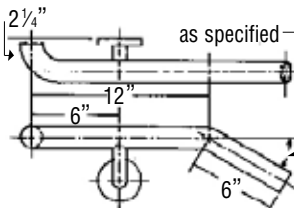
- T-305T1R/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

Wall Return with Support, RH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



Shown with CS-1



Model # O.D. Flange

- H-305T2R/CS-1 1 1/2" 14 ga. Concealed Screw

Model # O.D. Flange

- H-305T2R/R-3 1 1/2" 8 ga. Exp. Screw
- T-305T2R/R-3 1.9" 8 ga. Exp. Screw

Model # O.D. Flange

- T-305T2R/SF-6 1.9" 1/4" Thick 4" Sq. Exp. Screw

Manufacturer reserves the right to alter design or dimensions without formal notice and without incurring obligation.

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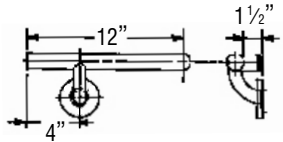
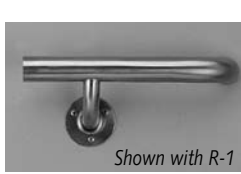


Guarantee

TSM Series 300 Stainless Steel Component Railing System is guaranteed against defects in workmanship and material for one year from shipping date.

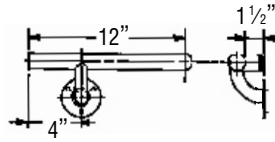
Underslung Support Return Wall Bracket, RH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



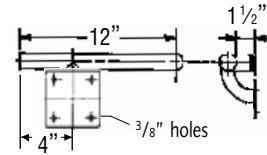
Model # _____ O.D.

H-305U/CS-1,RH 1 1/2"



Model # _____ O.D.

H-305U/R-3,RH 1 1/2"
 T-305U/R-3,RH 1.9"

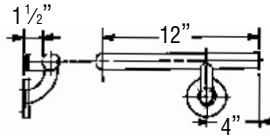


Model # _____ O.D. Flange

T-305U/SF-6,RH 1.9" 1/4" Thick 4" Sq. Exp. Screw

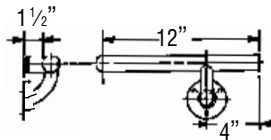
Underslung Support Return Wall Bracket, LH

Returns terminate end of rail to within 1/4" of side wall with 309P press fit into railing to enhance appearance. Complies with 1 1/2" wall clearance.



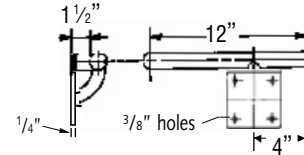
Model # _____ O.D.

H-305U/CS-1,LH 1 1/2"



Model # _____ O.D.

H-305U/R-3,LH 1 1/2"
 T-305U/R-3,LH 1.9"



Model # _____ O.D. Flange

T-305U/SF-6,LH 1.9" 1/4" Thick 4" Sq. Exp. Screw



Architectural Specification

Railing Components _____ [fill in model names and numbers] shall be type 304 satin finish stainless steel with ends turned 90° by mandrel bending. Flanges shall be heliarc welded to tubing to form a single structural unit. Tubing shall be _____ [1 1/2" O.D. x 18 gauge] [1.9" O.D. x 16 gauge] type 304 satin finish stainless steel.

Stainless Steel Components shall be Series 300 Models _____ as manufactured by Tubular Specialties Manufacturing, 13011 South Spring Street, Los Angeles, California 90061, tel (800)Grab Bar.



Materials/Workmanship

Tubing Stainless steel satin finish type 304 (18-8). 1 1/2" O.D. x 18 gauge (38 x 1.2mm) and 1.9" O.D. x 16 gauge (48 x 1.7mm). Ends turned 90° by mandrel bending and heliarc welded to flanges to form a single structural unit.

Support Components Stainless steel satin finish type 304 (18-8). Fit 1 1/2" and 1.9" (38 & 48mm) O.D. tubing.

CS-1 Concealed Screw Flanges Stainless steel satin finish type 304 (18-8), 3" x 14 gauge (76 x 9mm) base and 20 gauge cover (0.9mm), snap-lock design. Three 1/4" (6mm) mounting holes per flange. Fit 1 1/2" O.D. tubing (38mm). Wall clearance is 1 1/2" to meet building codes.

R-3 Exposed Screw Flanges Stainless steel satin finish type 304 (18-8), 3" x 8 gauge (76 x 4.2mm). Three 1/4" (6mm) mounting holes per flange. Fit 1 1/2" and 1.9" (38 & 48mm) O.D. tubing. Wall clearance is 1 1/2" to meet building codes.

SF-6 Exposed Screw Flanges Stainless steel satin finish type 304 (18-8), 4" square x 1/4" thick (102 x 6mm). Four 3/8" (9.5mm) mounting holes per flange. Fit 1.9" O.D. tubing. Wall clearance is 1 1/2" to meet building codes.

304C Cast Wall Bracket Stainless steel satin finish type 304 (18-8). Installed with one 3/8" hex lag screw through the 2" wide base (51mm). Universal bracket with 2 1/2" wall clearance.

304E Extruded Wall Bracket Stainless steel satin finish type 304 (18-8). Installed with one 3/8" - 16 hanger bolt through the 3" round wall flange. Universal bracket with 2 1/2" wall clearance.

304R Self-Aligning Bracket Stainless steel satin finish type 304 (18-8). Installed with one 3/8" - 16 hanger bolt through the 3" round wall flange. Universal bracket with 2 1/2" wall clearance.



Installation

- In-wall backing is required. TSM recommends supports every 48" for upright rails and every 36" for footrails (1219 and 914mm).
- It is important to comply with local codes in mounting railings, for the national codes vary widely in their recommendations [from 30"-38" (762-973mm)] above floor level.
- Align brackets with tubing, then use flanges as a template to pinpoint mounting hole placement. Pre-drill pilot holes and lubricate screws provided by TSM with soap. Attach tubing to brackets using set screws or adhesive provided by TSM.
- While TSM provides 2" stainless steel wood screws with Series

300, it is the installer's responsibility to select fasteners that are appropriate for the wall condition and application. Mounting holes in flanges are countersunk for R-3 and SF-6 flanges.

- Assembly of components at jobsite is with internal dowels (available from TSM; order one model H-306 or T-306 for each connection) and adhesive (provided by TSM) or welding. For adhesive connections, apply bead inside female component openings and insert dowels to form a hairline joint.
- All railing systems should be inspected periodically to make sure their attachment to the wall is not loosening.

Manufacturer reserves the right to alter design or dimensions without formal notice and without incurring obligation.



Guarantee

TSM Series 300 Stainless Steel Component Railing System is guaranteed against defects in workmanship and material for one year from shipping date.