

# TSM

Since 1966

## Tubular Specialties Manufacturing, Inc.

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# Series

# 400

Stainless Steel Bright Finish

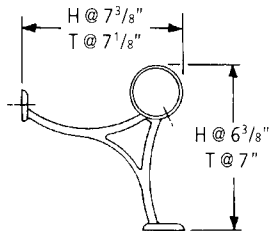
## Stainless Steel Component Railing System

### Technical Data

Revised April 2005

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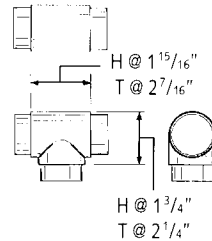
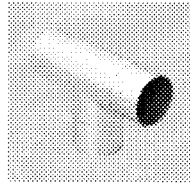
#### Bar Wall/Floor Bracket



- H-402 - 1 1/2"
- T-402 - 2"

Fastens to wall with two surface mounted screw holes; the other leg rests on the floor but is not screwed into it. Tubing fits inside circular sleeve.

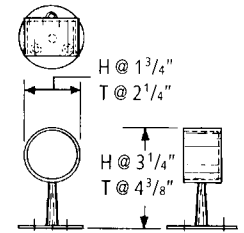
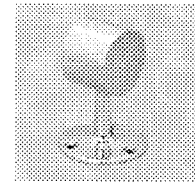
#### Flush Tee



- H-415F - 1 1/2"
- T-415F - 2"

Tee ends fit inside tubing.

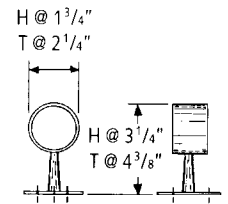
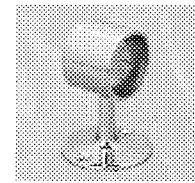
#### End Post



- H-423 - 1 1/2"
- T-423 - 2"

Tubing fits inside end post. Companion to 424.

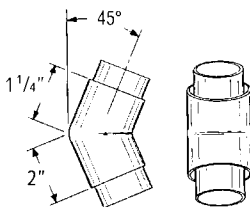
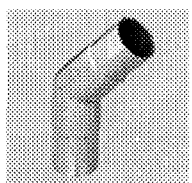
#### Center Post



- H-424 - 1 1/2"
- T-424 - 2"

Has two surface mounted screw holes. Tubing fits inside circular sleeve.

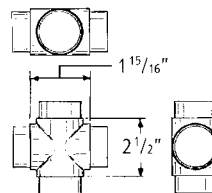
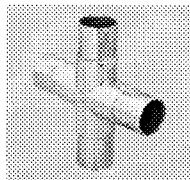
#### Flush Angle @ 135°



- H-409 - 1 1/2"
- T-409 - 2"

Angle ends fit inside tubing.

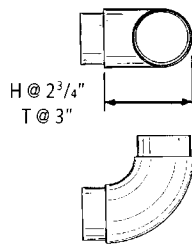
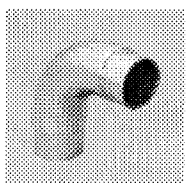
#### Flush Cross



- H-416F - 1 1/2"
- T-416F - 2"

Cross ends fit inside tubing.

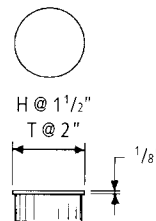
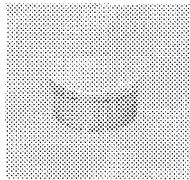
#### Flush Elbow, Rounded



- H-410 - 1 1/2"
- T-410 - 2"

Elbow ends fit inside tubing.

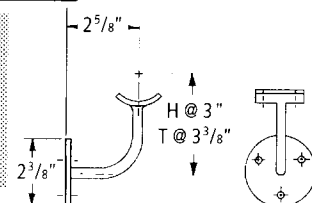
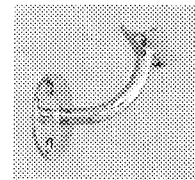
#### Flat End Cap



- H-422 - 1 1/2"
- T-422 - 2"

End cap fits inside tubing.

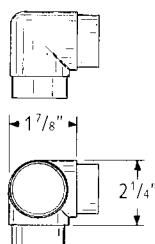
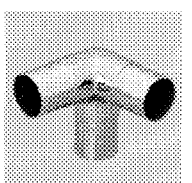
#### Wall Saddle Bracket



- H-425 - 1 1/2"
- T-425 - 2"

Fastens to wall with three surface mounted screw holes. Tubing attaches to bracket with set screws provided by TSM.

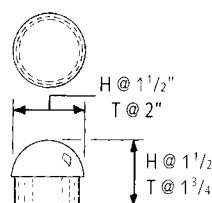
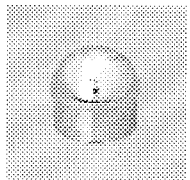
#### Flush Elbow Side Outlet



- H-412 - 1 1/2"
- T-412 - 2"

Elbow ends fit inside tubing.

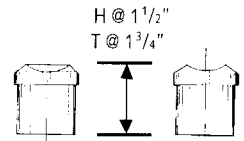
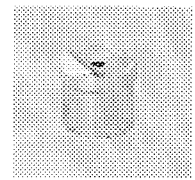
#### Dome End Cap, Flush



- H-422R - 1 1/2"
- T-422R - 2"

End cap fits inside tubing.

#### 90° Tee Former



- H-427 - 1 1/2"
- T-427 - 2"

Used to create proper angle on stair railing. Position adapter at angle required on ball fitting (can be used from 90° to 180°) and attach with machine screws provided by TSM.

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

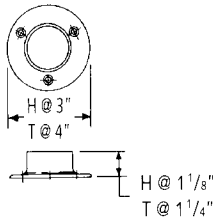
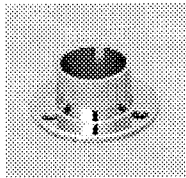
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## Guarantee

TSM Series 400 Stainless Steel Component Railing System is guaranteed against defects in workmanship and material for one year from shipping date.

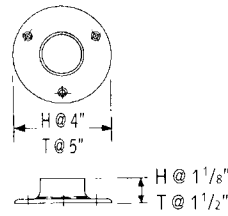
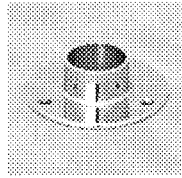
**Wall Flange**



- H-428 - 1 1/2"
- T-428 - 2"

Tube fits inside flange. To secure connection, apply adhesive to inside flange sleeve and insert tubing.

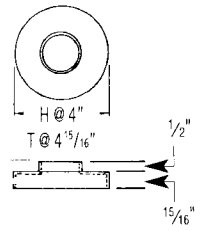
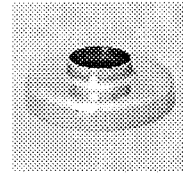
**Floor Flange**



- H-429 - 1 1/2"
- T-429 - 2"

Tube fits inside flange. To secure connection, apply adhesive to inside flange sleeve and insert tubing.

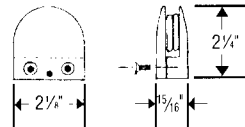
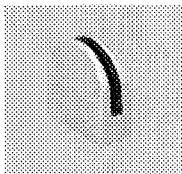
**Floor Cover Plate**



- H-429C - 1 1/2"
- T-429C - 2"

Decorative flange.

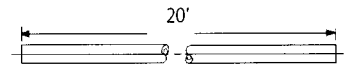
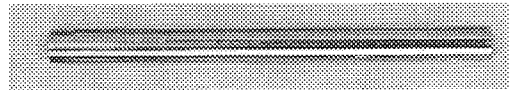
**Glass Grip**



- H-446 - 1 1/2"
- T-446 - 2"

Attaches to tubing and removable panel tightens against glass. Accommodates glass 1/4" x 3/8" thick. Secure to tubing using four 1/4" x 8/32 pan head machine screws provided by TSM. Remove side panel of clip, insert glass and tighten panel to hold glass securely.

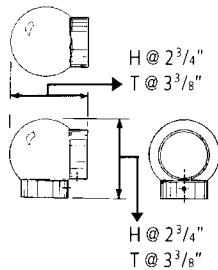
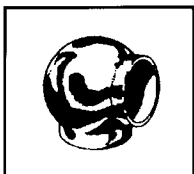
**Tube**



- H-106(49)/600G - 1 1/2"
- T-106(49)/600G - 2"

Type 304 600 grit stainless steel, 1 1/2" or 2" O.D. x 18 gauge (1.2mm) tubing. Maximum length 20'; can be custom cut.

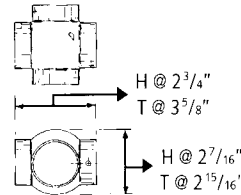
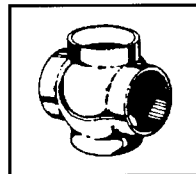
**Ball Elbow**



- H-414 - 1 1/2"
- T-414 - 2"

Elbow ends slip over tubing.

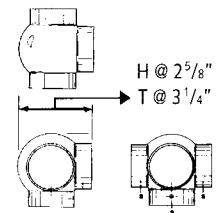
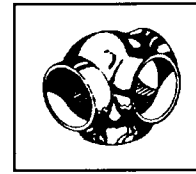
**Ball Cross**



- H-416 - 1 1/2"
- T-416 - 2"

Tubing fits through ball ends with two 90° side connections.

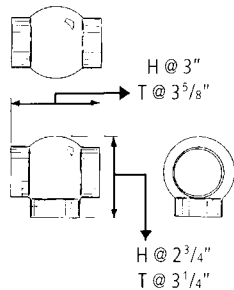
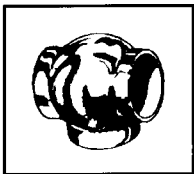
**Ball Tee Side Outlet**



- H-418 - 1 1/2"
- T-418 - 2"

Tubing fits through ball ends with two 90° side connections.

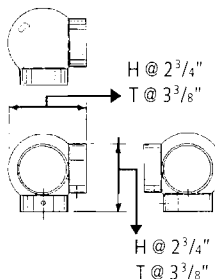
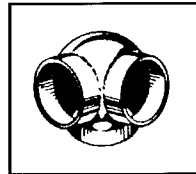
**Ball Tee**



- H-415 - 1 1/2"
- T-415 - 2"

Tee ends slip over tubing.

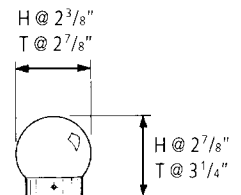
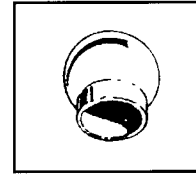
**Ball Elbow Side Outlet**



- H-417 - 1 1/2"
- T-417 - 2"

Elbow ends slip over tubing.

**Ball End**



- H-422L - 1 1/2"
- T-422L - 2"

Ball ends slip over tubing.



## Specification

Railing Components \_\_\_\_\_ [fill in model names and numbers] shall be type 304 stainless steel 600 grit. Cast construction shall fit \_\_\_\_\_ [1½" or 2"] O.D. tubing (38 or 51mm). Tubing shall be \_\_\_\_\_ [1½" or 2"] O.D. (38 or 51mm) x 18 gauge (1.2mm) type 304 stainless steel, 600 grit.

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



## Materials/Workmanship

|                   |   |
|-------------------|---|
| <b>Components</b> | Stainless steel type 304 (18-8) 600 grit finish. Cast construction. Fit 1½" and 2" (38 & 51mm) O.D. tubing. |
| <b>Tubing</b>     | Stainless steel type 304 (18-8) 600 grit finish, 1½" and 2" (38 & 51mm) O.D. x 18 gauge (1.2mm) tubing.     |



## 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 400, 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 set screw connections:** Drill through component and tubing with bit and thread tubing or component (whichever is closest) with tap.
- For adhesive connections:** Apply bead inside female component openings and insert dowels to form a hairline joint. Adhesive can be used in conjunction with set screws for extra strength.

