**PANEL INSTALLATION:**

1. Compress exterior torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. See Table on Sheet 1 for max main tee strut spacing.

**BAC CLIP SECURED WITH (4) FOUR #8 X 1/2" HEX HEAD SELF-DRILLING SCREWS, BY OTHERS**

**HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE**

**FIELD CUT PANEL END**

1" WALL ANGLE. USE SAME WALL ANGLE ABOVE AS HOLD DOWN FOR CUT PANEL EDGE.

**ALLOW 1/2" GAP FOR EXPANSION**

**FIELD CUT PANEL SIDE**

1" WALL ANGLE. USE SAME WALL ANGLE ABOVE AS HOLD DOWN FOR CUT PANEL EDGE.

**ALLOW 1/2" GAP FOR EXPANSION**

**PANEL REMOVAL:**

5. Remove access panel (see detail TS-EXT-1.3) to access plenum.
6. Compress exterior torsion springs from above to lower panel.
7. Dismount torsion springs on one side of panel. Panel will hinge down and hang in place or may be completely removed.

**24" X 24" PANEL INSTALLATION**

Scale: 3" = 1'-0"
1. Compress torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. Insert (4) four machine screws through access panel and into cage nut and retainer and tighten.

**Specifications**

Material: See suspension specifications specific to panel size
Finish: Paint | Powder coat | Decorated wood finish
Perforation: Not available

**Access Panel - 24" x 24" Panel**

- **Project:** Exterior torsion spring product specifications
- **Drawing Number:** EXT-TS-1.3
- **Scale:** Not to scale
- **Drawn By:** HD Engineering
- **Date:** 2/13/19
ALLOWABLE DESIGN WIND PRESSURE
TORSION SPRING EXTERIOR CEILING SYSTEM

30" X 30" X .050" ALUMINUM PANEL
HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE SPACING: 30" O.C.
VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-2"

VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-1"

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<tr>
<th>STRUT SPACING ALONG MAIN TEE</th>
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*POUNDS PER SQUARE FOOT

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NOTE:
ATTACHMENT TO STRUCTURE DESIGNED AND PROVIDED BY OTHERS, NOT BY HUNTER DOUGLAS

TYPICAL SUSPENSION SECTIONS
SCALE: 6" = 1'-0"

HEAVY DUTY 1-1/2" X 1-1/2" X 30" MAIN TEE, 30" O.C., TYP.
PART # TSCT2.5

HEAVY DUTY 1-1/2" X 1-1/2" X 30" CROSS TEE, 48" O.C., TYP.
PART # T534170-13

BAC CLIP SECURED WITH (4) FOUR #8 X 1/2" HEX HEAD SELF-DRILLING SCREWS, BY OTHERS TYP.

SUSPENSION SPECIFICATIONS - 30" X 30" PANEL
PROJECT: EXTERIOR TORSION SPRING PRODUCT SPECIFICATIONS
DRAWING NUMBER: EXT-TS-2.1
SCALE: AS SHOWN
DRAWN BY: HD ENGINEERING
DATE: 2/13/19
30" X 30" PANEL INSTALLATION

1. COMPRESS EXTERIOR TORSION SPRINGS.
2. LIFT PANEL AND PUSH TORSION SPRINGS THROUGH PUNCHED MAIN TEE HOLES.
3. RELEASE SPRINGS TO HOLD PANEL IN PLACE.

FIELD CUT PANEL END
1" WALL ANGLE. USE SAME WALL ANGLE ABOVE AS HOLD DOWN FOR CUT PANEL EDGE.
ALLOW 1/8 GAP FOR EXPANSION

HEAVY DUTY 1-1/2" X 1-1/2" CROSS TEE
HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE

EXTERNAL TORSION SPRINGS

EXTENSIBLE TORSION SPRING

FIELD CUT PANEL SIDE
1" WALL ANGLE. USE SAME WALL ANGLE ABOVE AS HOLD DOWN FOR CUT PANEL EDGE.
ALLOW 1/8 GAP FOR EXPANSION

INTERNAL TORSION SPRING

EXTERNAL TORSION SPRING

HEAVY DUTY 1-1/2" X 1-1/2" CROSS TEE
HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE

INSTALLATION

HEAVY DUTY 1-1/2" X 1-1/2" CROSS TEE
HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE

30" X 30" PANEL

30" X 30" PANEL REMOVAL

1. REMOVE ACCESS PANEL (SEE DETAIL TS-EXT-2.3) TO ACCESS PLENUM.
2. COMPRESS EXTERIOR TORSION SPRINGS FROM ABOVE TO LOWER PANEL.
3. DISENGAGE TORSION SPRINGS ON ONE SIDE OF PANEL. PANEL WILL HINGE DOWN AND HANG IN PLACE OR MAY BE COMPLETELY REMOVED.

30" X 30" PANEL INSTALLATION

SCALE: NOT TO SCALE

TYPICAL WALL TERMINATIONS

SCALE: 3" = 1'-0"
1. Compress torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. Insert (4) four machine screws through access panel and into cage nut and retainer and tighten.

**Access Panel - 30" X 30" Panel**

**Specifications**

- **Material:** See suspension specifications specific to panel size
- **Finish Paint:** Powder coat, decorated wood finish
- **Perforation:** Not available

**Project:** Exterior torsion spring product specifications

**Drawing Number:** EXT-TS-2.3

**Scale:** Not to scale

**Drawn by:** HD Engineering

**Date:** 2/13/19

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NOTE: ATTACHMENT TO STRUCTURE DESIGNED AND PROVIDED BY OTHERS, NOT BY HUNTER DOUGLAS

24" MAIN TEE
SPACING, TYP.

24" X 48" X .040" ALUMINUM TORSION SPRING PANEL
PART # 2X4TSTL04-NP

PART # TSCT2
HEAVY DUTY 1-1/2" X 1-1/2" X 24" CROSS TEE, 48" O.C., TYP.

SEE TABLE FOR MAX MAIN TEE STRUT SPACING, TYP.

48" CROSS TEE SPACING, TYP.

48" MAIN TEE OVERHANG, TYP.

6" MAX MAIN TEE OVERHANG, TYP.

VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-1", NOT BY HUNTER DOUGLAS, TYP.

BAC CLIP SECURED WITH (4) FOUR #8 X 1/2" HEX HEAD SELF-DRILLING SCREWS, BY OTHERS TYP.

HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE, 24" O.C., TYP.
PART # TS144MTP

HEAVY DUTY 1-1/2" X 1-1/2" CROSS TEE, 48" O.C.

HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE, 24" O.C.

ALLOWS DESIGN WIND PRESSURE TORSION SPRING EXTERIOR CEILING SYSTEM
24" X 48" X .040" ALUMINUM PANEL

VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-1"

STRAIGHT SPACING ALONG MAIN TEE

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* POUNDS PER SQUARE FOOT

TYPICAL SUSPENSION SECTIONS

SCALE: 6" = 1'-0"
24" X 48" PANEL INSTALLATION

**PANEL INSTALLATION:**

1. Compress exterior torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. Remove access panel (see detail TS-EXT-1.3) to access plenum.
5. Compress exterior torsion springs from above to lower panel.
6. Disengage torsion springs on one side of panel. Panel will hinge down and hang in place or may be completely removed.

**PANEL REMOVAL:**

4. Remove access panel (see detail TS-EXT-1.3) to access plenum.
5. Compress exterior torsion springs from above to lower panel.
6. Disengage torsion springs on one side of panel. Panel will hinge down and hang in place or may be completely removed.

**SPECIFICATIONS**

- **Material:** See suspension specifications specific to panel size
- **Finish Paint:** Powder coat | Decorated wood finish
- **Perforation:** Not available

**TYPICAL WALL TERMINATIONS**

**SCALE:** 3" = 1'-0"
1. Compress torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. Insert (6) six machine screws through access panel and into cage nut and retainer and tighten.

**Vertical support omitted for clarity**

**Specifications**

- **Material:** See suspension specifications specific to panel size
- **Finish Paint:** Powder coat
- **Perforated:** Not available

**Access Panel - 24" x 48" Panel**

**Project:** Exterior torsion spring product specifications

**Drawing Number:** EXT-TS-3.3

**Scale:** Not to scale

**Drawn By:** HD Engineering

**Date:** 2/13/19
NOTE: ATTACHMENT TO STRUCTURE DESIGNED AND PROVIDED BY OTHERS, NOT BY HUNTER DOUGLAS

30" MAIN TEE SPACING, TYP.

SEE TABLE FOR MAX MAIN TEE STRUT SPACING, TYP.

48" CROSS TEE SPACING, TYP.

HEAVY DUTY 1-1/2" X 1-1/2" X 30" CROSS TEE, .48" O.C., TYP. PART # TSCT2.5

EXTERNAL TORSION SPRING PART # TS4170-13

6" MAX MAIN TEE OVERHANG, TYP.

BAC CLIP SECURED WITH (4) FOUR #8 X 1/2" HEX HEAD SELF-DRILLING SCREWS, BY OTHERS TYP.

HEAVY DUTY 1-1/2" X 1-1/2" X .30" MAIN TEE, 30" O.C., TYP. PART # TS144MTP

6" MAX CROSS TEE SPACING, TYP.

30" X 60" X .050" ALUMINUM TORSION SPRING PANEL PART # TS144MTP

6" MAX MAIN TEE SPACING, TYP.

30" X 60" X .050" ALUMINUM TORSION SPRING PANEL PART # TS144MTP

HEAVY DUTY 1-1/2" X 1-1/2" MAIN TEE, 30" O.C., TYP. PART # TS144MTP

ALLOWABLE DESIGN WIND PRESSURE
TORSION SPRING EXTERIOR CEILING SYSTEM

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*POUNDS PER SQUARE FOOT

VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-1" NOT BY HUNTER DOUGLAS

BAC CLIP SECURED WITH (4) FOUR #8 X 1/2" HEX HEAD SELF-DRILLING SCREWS, BY OTHERS

VERTICAL SUPPORT 2-1/2" STE 20 GA GALV. STEEL STUD, MAX LENGTH 7'-1"

HEAVY DUTY 1-1/2" X 1-1/2" X 30" CROSS TEE, 48" O.C.

TYPICAL SUSPENSION SECTIONS

SCALE: 6" = 1'-0"

ALLOWABLE DESIGN WIND PRESSURE TORSION SPRING EXTERIOR CEILING SYSTEM

5015 Oakbrook Parkway, Suite 100
Norcross, GA 30093
O 800.366.4327
F 770.806.0214
CTSpecialtyCeilings.com

SUSPENSION SPECIFICATIONS - 30" X 60" PANEL
PROJECT: EXTERIOR TORSION SPRING PRODUCT SPECIFICATIONS
DRAWING NUMBER: EXT-TS-4.1
SCALE: AS SHOWN
DRAWN BY: HD ENGINEERING
DATE: 2/13/19

NOTE: ATTACHMENT TO STRUCTURE DESIGNED AND PROVIDED BY OTHERS, NOT BY HUNTER DOUGLAS
PANEL INSTALLATION:
1. Compress exterior torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.

PANEL REMOVAL:
1. Remove access panel (see detail TS-EXT-1.3) to access plenum.
2. Compress exterior torsion springs from above to lower panel.
3. Disengage torsion springs on one side of panel. Panel will hinge down and hang in place or may be completely removed.

Installation:
- Heavy duty 1-1/2" x 1-1/2" cross tee
- Vertical support 2-1/2" 20 GA galv. steel stud, not by Hunter Douglas
- Bac clip secured with (4) four #8 x 1/2" hex head self-drilling screws, by others, typ.
- Exterior torsion spring
- Bac clip secured with (4) four #8 x 1/2" hex head self-drilling screws, by others.

Removal:
- Vertical support 2-1/2" 20 GA galv. steel stud, not by Hunter Douglas
- Bac clip by others

Typical Wall Terminations:
- Field cut panel end
- 1" wall angle. Use same wall angle above as hold down for cut panel edge.
- Allow 1/4" gap for expansion.
1. Compress torsion springs.
2. Lift panel and push torsion springs through punched main tee holes.
3. Release springs to hold panel in place.
4. Insert (6) six machine screws through access panel and into cage nut and retainer and tighten.

**Specifications**

- **Material:** See suspension specifications specific to panel size
- **Finish/Paint:** Powder coat | Decorated wood finish
- **Perforation:** Not available

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**Access Panel - 30" x 60" Panel**

**Project:** Exterior Torsion Spring Product Specifications

**Drawing Number:** EXT-TS-4.3

**Scale:** Not to scale

**Drawn By:** HD Engineering

**Date:** 2/13/19