



PRODUCT DATA SHEET

DTC Pro - DOUBLE-TEE CONNECTION

PRODUCT DESCRIPTION

The – DTC Pro – double-tee connection is an innovative structural shear connection for new and existing precast double-tee garages. Commonly used flat erection bars (jumper plates) at deck shear connections have poor weld geometry and are prone to overload and fatigue failure from vehicular loading. The DTF Pro provides improved weld geometry that increases out of plane bending strength and reduces tension on the root of the weld. This simple reconfiguration provides fatigue resistance and dramatically increases strength against vehicular loading. The DTC Pro replaces the flat erection bar (jumper plate) used with all modern shear connection embedments.

USES

- Designed for use in new garages or for the replacement of existing erection bars at double-tee flange shear connections.
- Works with all modern double-tee shear connection embedments.
- Increases fatigue resistance, improving the long-term durability of the structure.
- Easily inspectable for Controlled Inspections.
- Does not require larger or longer welds.
- Excellent for problematic connections, such as bottom of ramp connections, that fail due to excessive impact or overload.
- Stops reoccurring connection failures.

CHARACTERISTICS / ADVANTAGES

- More than **twice as strong** as existing connections for out of plane loading!
- Increases elastic section modulus of weld to increase fatigue resistance to out of plane loading.
- Increases plastic section modulus of weld to increase strength for out of plane loading.
- Stainless steel construction; corrosion resistant.
- Work with existing embedments; does not alter the existing installation process
- Easily installed; supplied precut in varying widths.
- Located beneath the sealant joint so it does not intrude on sealant.
- Markings indicate welds zones.

PRODUCT INFORMATION

DTC Plates	ASTM A167, Type 304
Tensile Strength (Min)	70 KSI
Yield Strength (Min)	30 KSI
Modulus of Elasticity (Min)	28,000 KSI
Recommended Welds	E70XX E308L to Stainless-Steel E70XX E309L to Carbon-Steel

STANDARD EXISTING CONNECTION

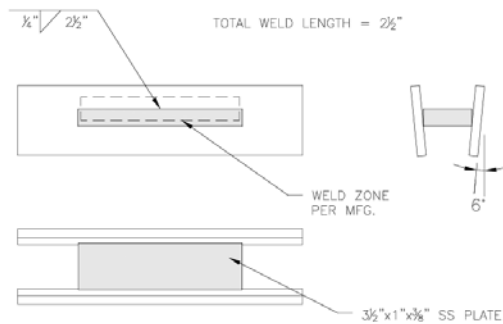


PLATE PROPERTIES*

$S_x = 0.082 \text{ in}^3$
 $Z_x = 0.123 \text{ in}^3$

WELD PROPERTIES*

$S_x = 0.013 \text{ in}^3$
 $Z_x = 0.020 \text{ in}^3$

*OUT OF PLANE LOADING

DTC - Pro

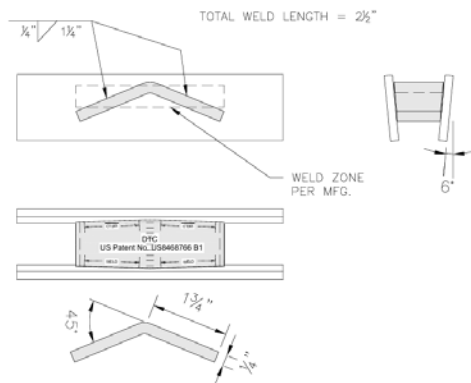


PLATE PROPERTIES*

$S_x = 0.081 \text{ in}^3$
 $Z_x = 0.152 \text{ in}^3$

WELD PROPERTIES*

$S_x = 0.029 \text{ in}^3$ (223%)
 $Z_x = 0.055 \text{ in}^3$ (275%)

*OUT OF PLANE LOADING

US Patent No. US8468766 B1

INSTALLATION INSTRUCTIONS

- For full installation information see NSC Guide Specification
- Select appropriately sized DTC Pro for width for joint opening. Locate DTC Pro at elevation required such that welds are within weld zone required by embedment manufacturer.
- Weld in conformance with AWS D1.6 and governing Code requirements.

LIMITATIONS

- Connection is subject to Special/Controlled Inspections per local Code requirements.
- NSC assumes no delegated design responsibility.

LEGAL DISCLAIMER

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NORTHFORD STRUCTURAL CONNECTIONS LLC
105 Barclay Street
New Haven CT 06519
203/777-0751