Experience








the Hi-Lite Advantage

10K STEEL FRAME SHORING

INTRODUCTION

Hi-Lite's Steel Shoring Frames are made of high quality steel tubes and accessories which are galvanized or painted. Using Hi-Lite's component and accessories, Steel Frames can be adapted to any geometry, steps and slopes.

Barry & Dave Jackson

JASCO SALES INC. / HI-LITE SYSTEMS

FRAMES

Hi-Lite's **10K Steel Shoring System** is built to safely support loads of up to 4,535 kg (10,000 lb) with *a Factor of Safety* of 2.5:1 per CSA and SSFI.

Frame capacities vary, depending the number of tiers in height, the lengths of extensions, amount of bracing, whether inter-bracing has been used, and if there are any lateral or wind loads imposed.

The normal testing configuration *of the **10K Steel Shoring System** exceeds the requirements of both the CSA and the SSFI of the USA A tower, 3 tiers high, consisting* of 6ft high frames, with Screw Jacks extended 12", top and bottom, is loaded to failure. The load rating of the frames is then determined by dividing the failure load by the required Safety Factor.

Note: Using extension tubes reduces the capacity of the frame. Please consult our engineering department for load capacities.

SCREW JACKS

Hi-Lite's uses two styles of *Screw Jacks with* the 12Kip shoring systems.
The 48mm (1.9in) & the Dywidag Screw Jack.

Our 48mm (1.9in) hollow steel shaft, 813mm (32in) long with 610mm (24in) of adjustment.

All Hi-Lite *Screw Jack* plates can accommodate T-Head bolts, designed for quick and easy locking into the continuous slot on our aluminum stringer beams. When the plate is to rest on mudsills or to be used with timber stringer material, instead of aluminum, it can be secured to the timber by nailing through the holes provided in the plate or a special U-Head can be attached to the Jack Plate.

The adjusting nut handles are "stepped" to allow the Screw Jack to be solidly centered in either an Extension Tube or the frame leg, thus assuring straight alignment and rigidity.

The Dywidag Screw jacks are 605mm (24in) long, with 430mm (17in) of adjustment. It is available in two forms (fixed and swivel base); both styles utilize the nearly indestructible nature of the Dwidag rod whose thread will not get damaged and is also self-cleaning.

The Standard *Fixed Plate Screw Jacks*, is recommended to be used for Post Shores and on level floors or slabs.

The *Swivel Plate Screw Jack* serves for uneven or sloped base conditions, or where it is required for forming inclined surfaces. Used on top or at the bottom, the plates are equipped with 2 T-bolts for positively locking to stringer beams.

Note: Stabilizer caps are used to remove "wobble" in jack shafts when inserted in frames legs or extension tubes, ensuring better load capacities and safety.

Hint to save time always set the adjusting nut higher than finish height before installing it in the frame leg or Extension Tube. It is always easier to lower than to raise for final setting

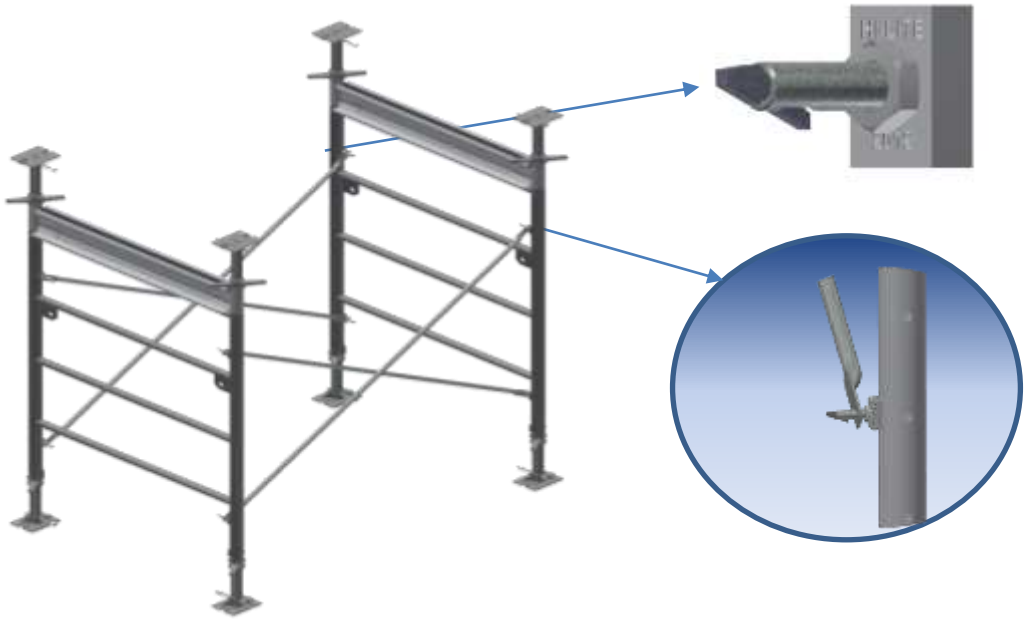
JET LOCKS

Jet Lock Spacing

The spacing of the Jet Locks permits inter-frame bracing, using standard size Cross Braces. This additional brace can add considerable rigidity to a multi-tier tower. The inter-frame brace is often a standard 600mm (2ft) Cross Brace by the length required. Jet Locks can also be spaced on 1.2m (4ft) modules on higher frames, allowing continuous 1.2m (4ft) by any length Cross Brace can also be used continually on a high tower, also giving full capacity when continuously braced.

Jet Lock Assembly

This unique fastener is standard on all Hi-Lite shoring frames. The Jet Lock is installed at appropriate locations to allow Cross Braces to be attached to the frames quickly and securely. Jet Locks are easily replaced in the field (if necessary) as they are held in place by standard hex jam nuts.



To install Cross Braces on the Jet Locks, simply open up the braces to position their holes over the Jet Locks, then push to snap on. The Jet Lock spring is made of stainless steel, for long, rust-free life. Jet Locks can be replaced with special bolts and nuts, if required, for positive solid connections of the Cross Braces to the frames. These special bolts are available, but they are seldom used, because the connection using the Jet Lock is very secure.

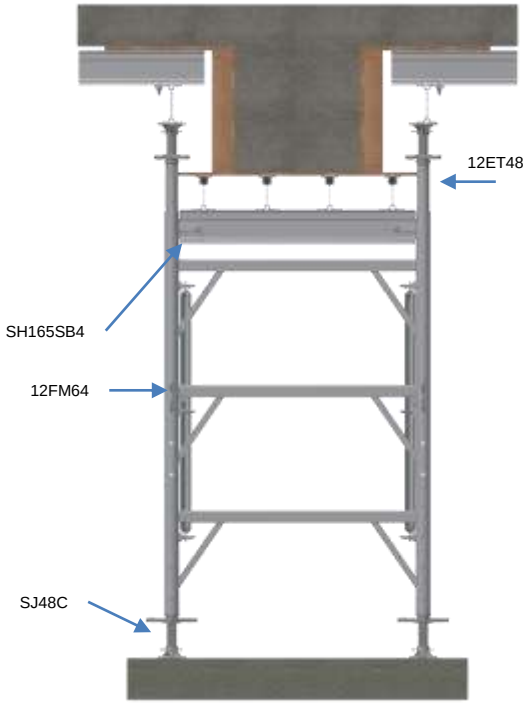
NOTE: On two-tier towers, when the first tier consists of 1.2m (4ft) high frames, the spring action of the Jet Lock enables the Cross Braces to be snapped onto the second tier of frames, from the ground, saving placement of planks and the climb to assemble. So, when a 1.2m (4ft) high frame is used together with a 1.8m (6ft) high frame, we recommend the 1.2m(4ft) frame be located at the bottom and the 1.8m (6ft) high frame on top with Screw Jacks in before placement.

SADDLE BEAMS

Hi-Lite's Saddle Beams allow for Beam and Slab support by a single tower.

Saddle Beams make drop beam or pre-cast beams easy to deal with, enabling stripping the slab without loosening or disturbing the support under the concrete drop beams.

The Saddle Beam facilitates supporting poured-in-place concrete drop beams within the frame, at one level, leaving the legs free to accommodate Extension Tubes and Screw Jacks to support the slab formwork, at another level. It also allows for easy stripping of the slab form without disturbing the concrete drop beam soffit forms.



Saddle Beams are made from lengths of standard 165mm (6-1/2in), high-strength Aluminum Beams, with special brackets at each end to enable them to transfer the load of concrete drop beams to the frame legs.

The Saddle Beam is installed at the top of a tower with Extension Tubes locked into the frame legs and protruding through the Saddle Beam end brackets. If wide poured-in-place concrete beams need to be supported, longer Saddle Beams can be adapted between two frames over the Cross Braces.

SH165SB4
12K Saddle Beam 6.5" – 4'
8.0 kgs / 17.6 lbs

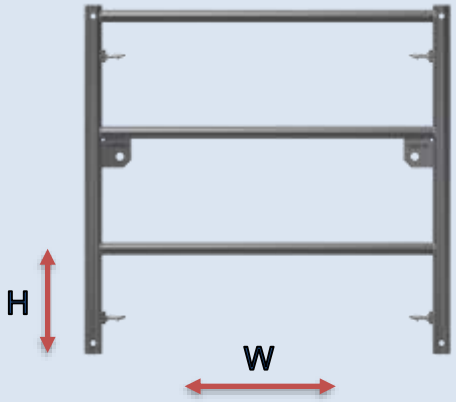
SH165SB6
12K Saddle Beam 6.5" – 6'
11.2 kgs / 24.8 lbs

REFER TO THE LOAD CHARTS FOR DETERMINING THE CAPACITIES OF THE VARIOUS CONFIGURATIONS OF SADDLE BEAMS.

10K STEEL FRAMES

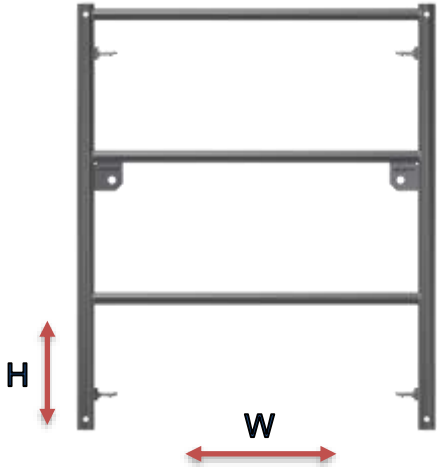
HL10S42
1.20 m x 0.6 m (4'x2') HxW
19.4 kgs / 44.77 lbs

HL10S44
1.2 m x 1.2 m (4'x4') HxW
23.7 kgs / 52.25 lbs



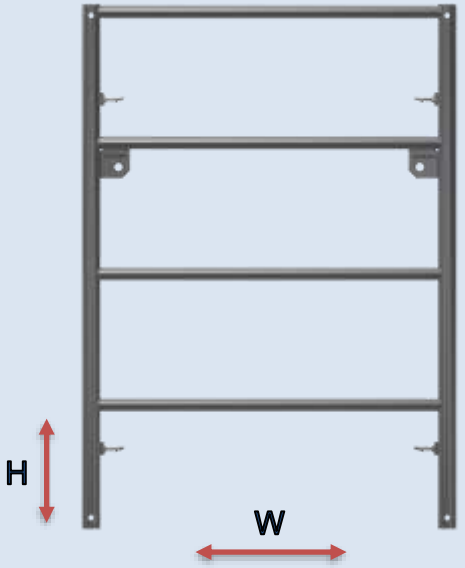
HL10S52
1.5 m x 0.6 m (5'x2') HxW
22.7 kgs / 50.04 lbs

HL10S54
1.5 m x 1.2 m (5'x4') HxW
27.0 kgs / 59.52 lbs



HL10S62
1.8 m x 0.6 m (6'x2') HxW
27.4 kgs / 60.41 lbs

HL10S64
1.8 m x 1.2 m (6'x4') HxW
33.4 kgs / 73.63 lbs



10K ACCESSORIES - PARTS

SJ60TP
60mm SJ Taper Pin
0.39 kgs / 0.88 lbs

HLS10SCP
Coupling Pin
0.7 kgs / 1.5 lbs

HDPH5/8X3
Hitch Pin 5/8x3”
0.4 kgs / 0.8 lbs

HDPR1/8
R Pin 1/8”
0.001 kgs / 0.002 lbs

HDCTP5/16X4
Cotter Pin 5/16x4”
0.1 kgs / 0.22 lbs

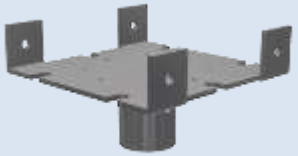
SJ48XHA
48mm (1.9”) Screw Jack
c/w X Head 10”x5”
(127 x 254 mm)
9.9 kgs / 21.82 lbs

SJ48TF
48mm (1.9”) Screw Jack
c/w Taper Pin Base Plate
7.9 kgs / 17.42 lbs

SJ48
48mm (1.9”) Screw Jack
c/w Base Plate
6.7 kgs / 14.77 lbs

SJ48TS
48mm (1.9”) Screw Jack
c/w Taper Pin Swivel BP
6.7 kgs / 14.77 lbs

SJUH5X10
SJ U Head 10”x5”
(127 x 254 mm)
4.3 kgs / 9.48 lbs

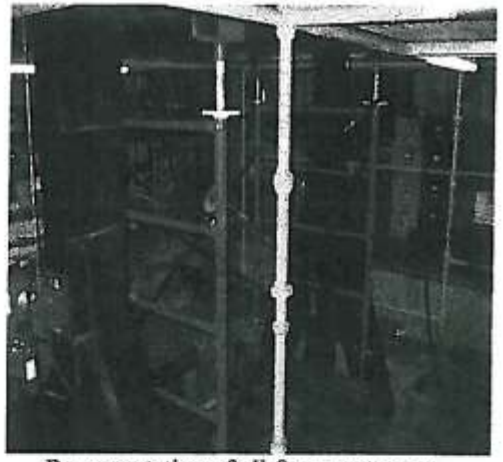


4'x6' 10K STEEL SHORING FRAME – TEST REPORT

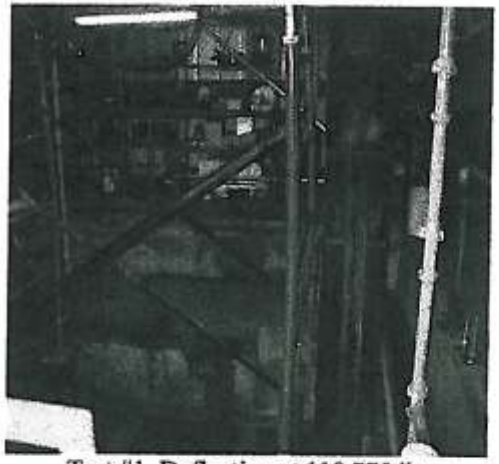
SHORING FRAME COMPRESSION TESTS

Baseplate and U-head screw jacks at 12" extensions

Test #	Maximum Load (lbs.)	Maximum Load Per Leg (lbs.)	Safety Factor 2.5:1 Load (lbs) Per Leg
1	118,775	29,690	11,880
2	110,225	27,560	11,020
3	114,500	28,630	11,450
Avg.	114,500	28,630	11,450



Representative of all frames at setup



Test #1. Deflection at 118,775 lbs.

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Respectfully Submitted

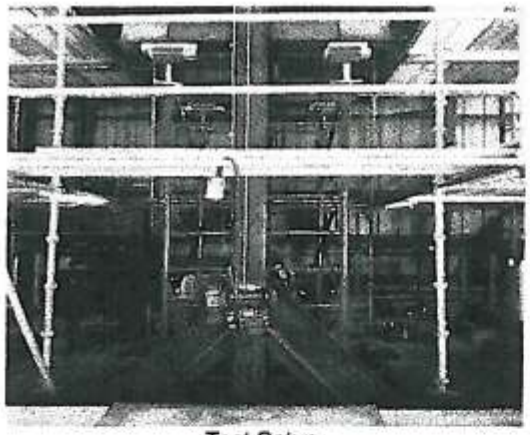
Terry Wilt
Manager, Product Evaluation

4'x4' 10K STEEL SHORING FRAME – TEST REPORT

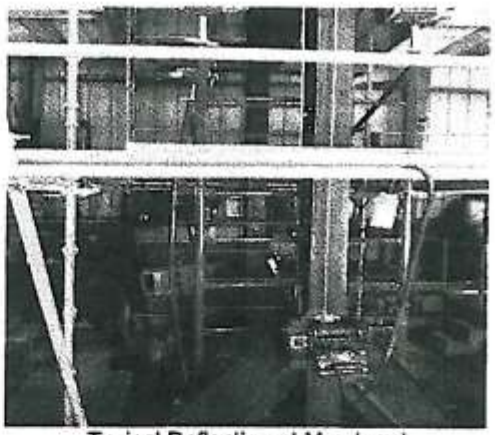
3 TIER SHORING FRAME COMPRESSION TESTS
Test Method: ANSI/SSFI SH300- 2007

Base plate and U-head screw jacks at 12" extensions

Test #	Maximum Load (lbs.)	Maximum Load Per Leg (lbs.)	Safety Factor 2.5:1 Load (lbs) Per Leg	Deviation from Average (%)
1	117,590	29,400	11,760	1
2	119,665	29,915	11,965	1
3	117,590	29,400	11,760	1
Avg.	118,280	29,570	11,830	---



Test Setup



Typical Deflection at Max Load

Respectfully Submitted

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Department Manager, Metals & Product Testing

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