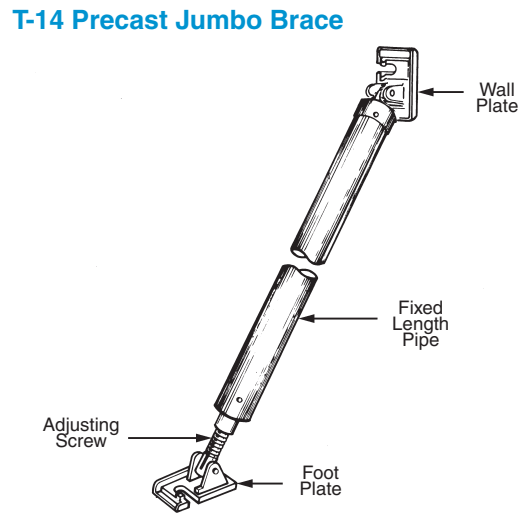
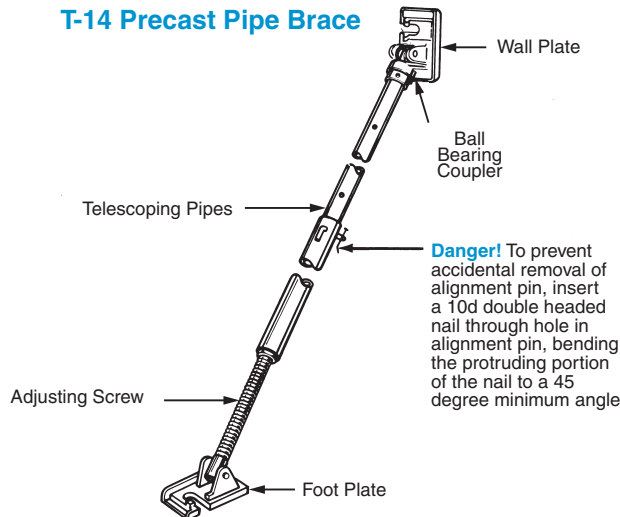


## T-14 Precast Wall Braces

The Dayton Superior T-14 Precast Wall Braces are all steel, heavy duty wall braces designed to quickly and easily align and brace tilt-up wall panels. Rough adjustment of the T-14 braces is easily accomplished by telescoping the pipes to the nearest incremental hole.

Final adjustment is then achieved by simply turning the brace. Dayton Superior wall braces are available in numerous sizes to provide a continuous range of panel heights of fifty feet or more. Refer to the chart below for additional information.



T-14 Precast Pipe Brace Selection Chart

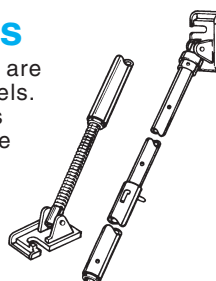
Type	Description	Minimum and Maximum Brace Length
B-1	On-Site Pipe Brace	7'-6" to 8'-10"
B-2	Regular Pipe Brace	13'-0" to 20'-6"
B-4	Heavy Duty Regular Pipe Brace	14'-6" to 23'-6"
B-5	Heavy Duty Long Pipe Brace	22'-6" to 39'-0"
B-6	Short Pipe Brace	10'-0" to 14'-0"
B-7	Short Jumbo Brace	17'-0" Fixed Length
B-8	Jumbo Brace	22'-0" Fixed Length
B-9	Jumbo Brace with 5'-0" Extension	27'-0" Fixed Length
B-10	Jumbo Brace with 10'-0" Extension	32'-0" Fixed Length
B-11	Tru-Ilt Brace	25'-6" to 40'-0"
B-12	Jumbo 5-1/2"	32'-0" Fixed Length
B-14*	B-12 Jumbo Brace, 10'-0" Extension	42'-0" Fixed Length
B-15*	B-12 Jumbo Brace, 20'-0" Extension	52'-0" Fixed Length

**To Order:**  
Specify: (1) quantity, (2) Name, (3) model.  
**Example:**  
200, T-14 Precast Wall Braces. Model B-8.

\* **Note:** Field assembly is required for B-14 and B-15 braces.

## T-15 Pipe Brace Extensions

The Dayton Superior Pipe Brace Extensions are available for the B-8 and B-12 pipe brace models. The T-15 extension for the B-12 model extends the brace ten feet. Extensions for the B-8 brace are available in five feet and ten feet lengths.



**To Order:**  
Specify: (1) quantity, (2) name, (3) model.  
**Example:**  
40, T-15 Pipe Brace Extension, 5' extension for B-8 braces.

Miscellaneous Products

## Brace Loading

Bracing recommendations are for the sole purpose of temporarily bracing fully erected concrete panels during construction - against wind loads only. This temporary bracing design is based on The American Society of Civil Engineers (ASCE) *Minimum Design Loads for Building and other Structures*, as recommended by the Tilt-up Concrete Association's *Guideline for Temporary Wind Bracing of Tilt-up Concrete Panels During Construction*, TCA Guideline 1-05. The ASCE standard and the TCA guideline allow the basic wind speed, which is based on a 50-year mean recurrence interval, to be multiplied by a reduction factor for a 5-year mean recurrence interval which determines the construction wind speed used in the design of bracing systems.

Brace anchors and main, knee, lateral and/or end braces are not designed or intended to sustain impact loads. Precautions must be taken to arrange the panel erection sequence so as to avoid the potential for impacting upright panels or portions of the bracing system. Bracing recommendations for other loads or forces that might be

applied to the bracing system are beyond the scope of Dayton Superior. For bracing recommendations other than wind loads, the user should engage a design agency with capabilities of performing such a service.

### Brace Removal

This bracing system is designed to temporarily support panels against wind loads until the building structure is complete and self supporting. The bracing system should never be disconnected or removed until the panels are secured by the permanent structural connections and all lateral load resisting systems are in place.

If the structural documents do not indicate when the temporary bracing system can be removed, the engineer of record should be consulted.

### Safety Notes:

- Panel should be plumb with braces and knee braces installed before crane releases panel.
- Lateral bracing should be installed immediately upon the crane and crew clearing the braces and before the next panel is erected.
- Lateral bracing must be continuous, connected at each brace, and tied off with end braces at the end of each line.
- Panels require a minimum of two braces per panel.
- End braces to ground and/or cross braces must be installed every 100 ft. to prevent lateral movement of braces and to provide total brace stability.
- All members of the brace system must be in place and secured at the end of each day.
- Knee and lateral bracing must be located at mid-length of pipe brace.
- Knee brace must be firmly fixed at bottom end to prevent possible upward buckling of main brace.
- Do not erect panels or continue working during excessive windy or adverse weather conditions.
- All brace inserts should be a minimum of 12" from any panel edge, opening, control joint or construction joint.
- Panel bracing is designed to withstand specified wind loads until panels are connected to the structural system of the building. Do not remove any members of the bracing system until all structural connections are completed.
- Use only the brace type as noted on the Panel Layout Sheet. No substitute brace hardware shall be used and all braces must be positioned at the specified locations.
- For special bracing conditions that require deviation from the bracing dimensions shown on the Panel Layout Sheet contact Dayton Superior for recommendations.
- See Panel Layout Sheet for type of brace, number of braces per panel, as well as knee and lateral bracing requirements.
- Welding or bolting the tilt-up panels in place might preclude the use of braces.
- After winds of 35 mph or more have been experienced at the job site, the tilt-up contractor must check the tightness of the bolts that secure the wall and foot plates to the concrete. Re-tightening of these bolts to the proper torque will assure that the pipe braces are secure.
- The safe working load of the panel's bracing system may be drastically reduced if other types of brace anchors are used as part of this project's bracing system, other than specified brace anchors.

**Warning!** Failure to install knee, lateral and end braces (when required) will greatly reduce the safe working load of the specified brace and may allow panels to fall causing severe injury or death.

## Bracing to Cylindrical Deadman

Use the chart at the right to select the proper size deadman if your project requires the use of a deadman for brace attachment in lieu of an anchor cast into a floor slab.

### How to select the proper size deadman:

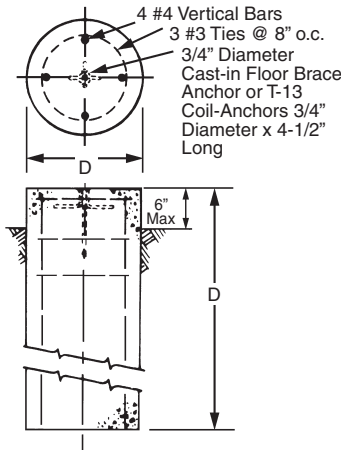
- 1) Determine the maximum applied brace load for the project.
- 2) The proper deadman must weigh at least as much as the maximum individual brace load.
- 3) Find a number on the deadman chart that is equal to or greater than the required deadman weight. Follow the numbers in the top column and the far left column of the chart for the proper diameter and height of the deadman.

### Example:

Maximum Applied brace load = 3,200 lb.

Acceptable deadman sizes are: **Diameter** **Height**

24"	7'-0"
30"	4'-6"
36"	3'-6"
42"	2'-6"



Weights Of Deadman (Kips)					
Height	24" Diameter	30" Diameter	36" Diameter	42" Diameter	48" Diameter
2'-0"	.94	1.47	2.12	2.89	3.77
2'-6"	1.18	1.84	2.65	3.61	4.71
3'-0"	1.41	2.21	3.18	4.33	5.65
3'-6"	1.65	2.58	3.71	5.05	6.60
4'-0"	1.89	2.95	4.24	5.77	7.54
4'-6"	2.12	3.31	4.77	6.49	8.48
5'-0"	2.36	3.68	5.30	7.22	9.42
5'-6"	2.59	4.05	5.83	7.94	10.37
6'-0"	2.83	4.42	6.36	8.66	11.31
6'-6"	3.06	4.79	6.89	9.38	12.25
7'-0"	3.30	5.15	7.42	10.10	13.19
7'-6"	3.54	5.52	7.95	10.82	14.14
8'-0"	3.77	5.89	8.48	11.54	15.08
8'-6"	4.01	6.26	9.01	12.27	16.02
9'-0"	4.24	6.63	9.54	12.99	16.96
9'-6"	4.48	6.99	10.07	13.71	17.91
10'-0"	4.71	7.36	10.60	14.43	18.85

**Note:** Always hand or auger excavate hole for deadman. Minimum allowable soil bearing pressure is to be 1,500 psf. Minimum concrete compressive strength  $f'_c$  shall be = 2,500 psi at use. 1 Kip = 1,000 lbs.

## Brace Maintenance

During the construction process braces may be exposed to adverse conditions that could damage or render them unusable. Braces should be inspected for proper operation, damage and wear after each use.

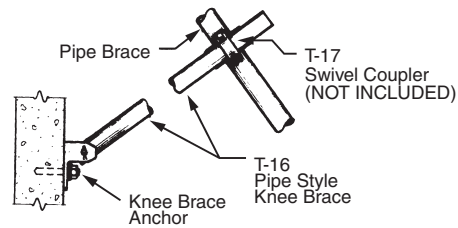
This inspection is typically performed by a Dayton Superior Certified Precast Dealer when the braces are returned. However, when braces are transferred from one job to another without being returned to Dayton Superior or its dealer for maintenance, the user must inspect all braces prior to their being reused.

This inspection should check for missing parts, parts, wear, dings, kinks, straightness, indication of any application of heat and/or other damage.

Any brace that shows signs of wear, has missing parts, damage, or is questionable should be set aside and not used.

## T-16 Pipe Knee Brace

The Dayton Superior T-16 Pipe Knee Brace is an all steel, 1-1/2" diameter knee brace available in 10'-6" and 14'-6" lengths. The T-16 knee brace is used in conjunction with the T-17 Swivel Coupler to add strength and stability to standard wall braces.



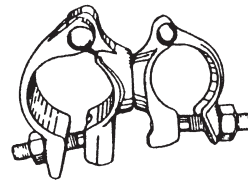
T-16 Pipe Knee Brace

**To Order:**  
Specify: (1) quantity, (2) name, (3) length.

**Example:**  
120, T-16 Pipe Knee Braces, 10'-6" long.

## T-17 Swivel Coupler

The Dayton Superior T-17 Swivel Coupler is designed to attach standard 1-1/2" diameter knee braces to 2" or 2-1/2" diameter wall braces.



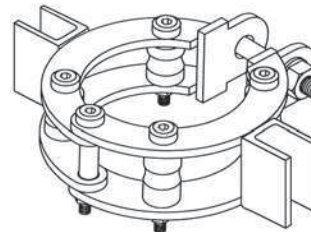
T-17 Swivel Coupler

**To Order:**  
Specify: (1) quantity, (2) name, (3) wall brace diameter.

**Example:**  
120, T-17 Swivel Couplers for 2" wall braces.

## T-17-HD Knee Brace Bracket\*

The Dayton Superior T-17-HD Knee Brace Bracket stiffens and increases the safe working load of T-14, B-9, B-10 and special length jumbo braces. The T-17-HD Bracket eliminates the need for lateral and end bracing.



T-17-HD Knee Brace Bracket

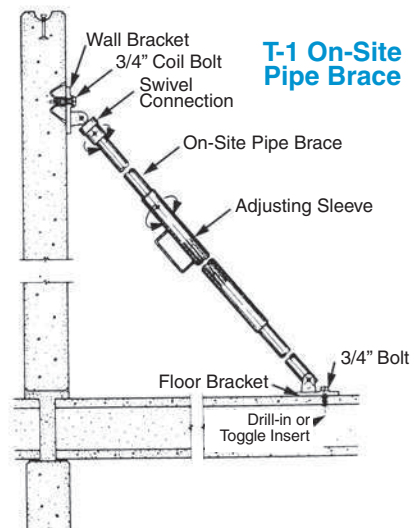
\*U.S. Patent No. 5,943,830

**To Order:**  
Specify: (1) quantity, (2) name.

**Example:**  
44, T-17-HD Knee Brace Brackets.

## T-1 On-Site Pipe Brace

The Dayton Superior T-1 On-Site Pipe Brace is a short, all steel brace with an adjustment range of 7'-6" to 8'-10" that is handy to have on-site to brace small panels.



T-1 On-Site Pipe Brace

**To Order:**  
Specify: (1) quantity, (2) name.

**Example:**  
440, T-1 On-Site Pipe Braces.