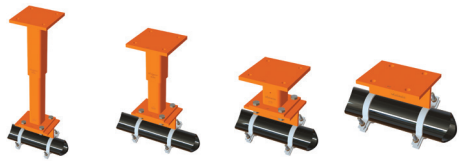
Nos. A81, A82, A83, A84 Pipe Clamp Anchors



⚠ WARNING

- **Read and understand all instructions before attempting to install any Victaulic piping products.**
- **Always depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.**
- **Wear safety glasses, hardhat, and foot protection.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

IMPORTANT INFORMATION

Nos. A81, A82, A83, and A84 Pipe Clamp Anchors may be specified for use on an existing concrete and/or steel structure to direct piping movement and distribute load from the piping system to the supporting structure. These anchors should be specified for use with 2–12-inch/DN50–DN300 carbon steel or stainless steel pipe with a wall thickness of Schedule 40 or greater.

Nos. A81, A82, A83, and A84 pipe clamp anchors may be either anchored to concrete ceiling slabs or welded/bolted to the steel frames from the base plate (refer to Figures 1.1 and 1.2). Pipe clamp anchors shall be installed directly on the pipe, not on top of the pipe insulation. Where pipe must be insulated, the vapor barrier or seal may be placed around the anchor after product installation.

NOTICE

- **Because the pipe clamp anchor is attached directly to the pipe, the potential for galvanic corrosion must be considered when installing product on stainless steel pipe.**

Failure to account for galvanic corrosion may compromise the integrity of the piping system, resulting in leakage and property damage.

Anchor products do NOT substitute for piping gravity hanger supports, seismic bracing, or wind bracing. Contact Victaulic for specific capacity evaluation when the products are installed under loading conditions other than piping thermal movement and hydraulic testing. Refer to Victaulic publication 26.01 for hanger spacing specifications, which can be downloaded at victaulic.com.

⚠ WARNING

- **ALWAYS VERIFY THAT PIPING OF THE CORRECT SIZE AND MATERIAL IS BEING USED WITH THE ANCHOR.**
- **ALWAYS VERIFY THAT SUPPORTING STRUCTURES ARE CAPABLE OF ACCOMMODATING THE LOADS TRANSFERRED ACROSS THIS PRODUCT.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

Before installing Nos. A81, A82, A83, or A84 Pipe Clamp Anchors, the supporting structure capacity and the attachment method must be reviewed and approved by a structural engineer and/or the engineer of record. Follow all instructions provided by the manufacturer of the mounting hardware.

INSTALLATION

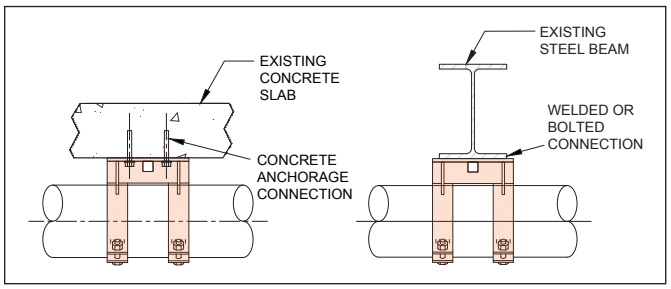


FIGURE 1.1 TYPICAL INSTALLATION OF PRODUCT A84 TO CONCRETE AND STEEL STRUCTURE

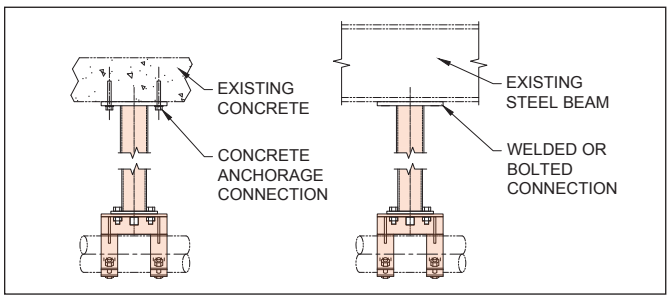


FIGURE 1.2 TYPICAL INSTALLATION OF PRODUCT A81/A82/A83 TO CONCRETE AND STEEL STRUCTURE

Pipe clamp anchor base plate shall sit flush with the structure surface.

Install bolts/hardware or weld. Install pipe clamp anchor using the attachment method and procedure approved by the structural engineer and/or the engineer of record.

- If using concrete anchors, fasteners, or hardware provided by other manufacturers, contractors shall follow their instructions during installation.
- Ensure that pipe clamp anchor is installed level and plumb. Pipe misalignment shall be corrected through pipe adjustment, rather than manipulation of the pipe clamp anchor. Do not strike, push, or distort the pipe clamp anchor in any way.

CLAMP BOLT INSTALLATION TORQUE ON SCHEDULE 40 AND GREATER

Pipe Diameter inches DN	Clamp Bolt Size inches mm	Minimum Torque Value ft-lbs N·m	Maximum Torque Value ft-lbs N·m
2–4 DN50–DN100	½ M14	35 47.5	46 62.4
5	⅝ M16	65 88.1	100 135.6
6–8 DN150–DN200	¾ M20	85 115.2	150 203.4
10–12 DN250–DN300	⅞ M22	100 135.6	190 257.6

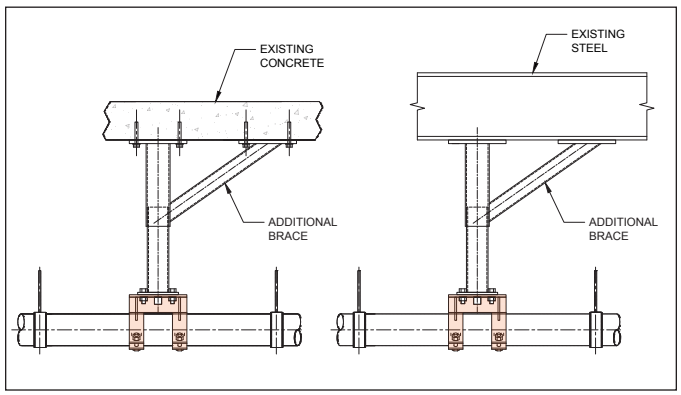


FIGURE 2. TYPICAL INTERMEDIATE STEEL FRAME CONNECTING PRODUCT A84 TO SUPPORTING STRUCTURE

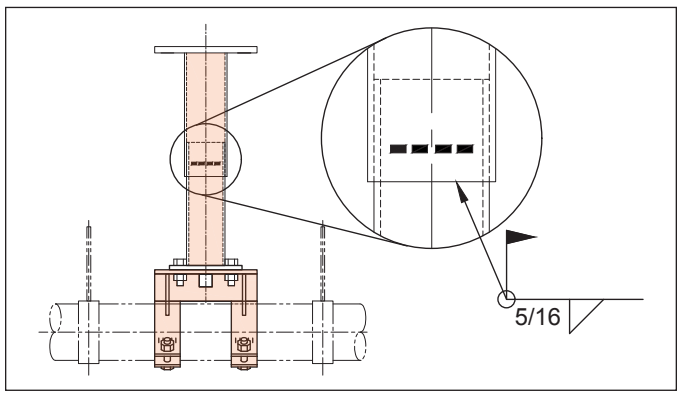


FIGURE 3. A81 AND A82 ADJUSTABLE STRUT INSTALLATION

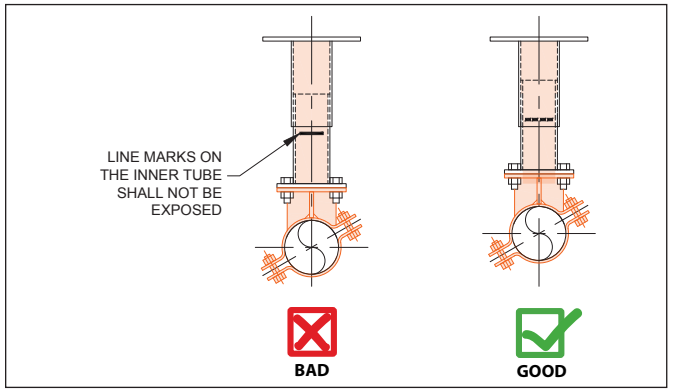


FIGURE 4. A81 AND A82 INSTALLATION EXAMPLES

PRODUCT INSTALLATION TORQUE

The system designer must review the submittal to ensure compatibility between the pipe clamp anchor and the supporting structure. Notify the system designer and/or the engineer of record if the as-installed conditions do not match the submittal, specifications, or design.

When fastening the pipe clamp anchor to the pipe, note the minimum torque for clamp bolts, referenced in the table that follows.

When installing product on thin wall pipe (below Schedule 40), contact Victaulic for the reduced torque values and anchor capacity.

REINFORCING METHODS FOR WEAK STRUCTURE SUPPORT

A supplemental steel frame (typical frame shown in Figure 2) is required when the distance from the top of the pipe to the supporting structure is beyond the 36-inch working range of the product.

Additional braces (shown in Figure 2) are recommended to distribute the anchor reaction forces to weak supporting structures based on the evaluation from structural engineers.

For higher capacities than specified in the applicable submittal, contact Victaulic. Insufficient supporting structure or fastening methods may require customized alteration.

ONSITE ADJUSTMENT OF A81 AND A82

The strut of A81 and A82 can be adjusted onsite, based on the distance from the piping to the supporting structure. The contractor shall verify this distance to be within the allowed adjustable range of the A81 and A82 product before installation.

As shown in Figure 3, the adjustable struts of A81 and A82 products must be assembled with minimum all-around 3⁄16-inch fillet weld on site. The fillet weld size shall be increased up to 5⁄16-inch when the gap is over 1⁄16 inch at the sleeve joint.

The line marks on the inner strut component shall not be exposed, to maintain a required sleeve length between the two strut components (shown in Figure 4).

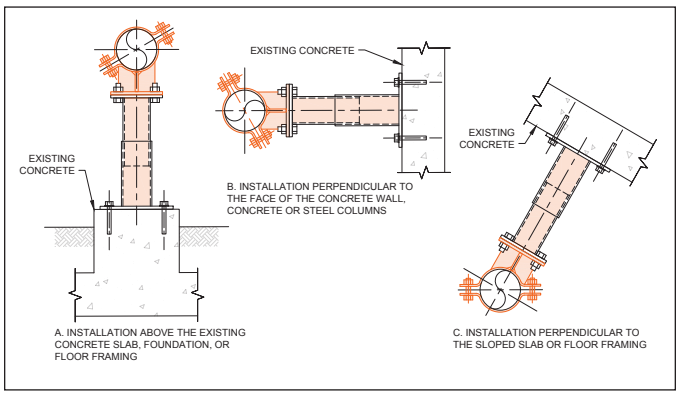


FIGURE 5. ALTERNATE INSTALLATION ORIENTATIONS FOR A81, A82, AND A83 PRODUCTS

ALTERNATIVE INSTALLATION POSITION

In Figure 5, The horizontal anchor product may be installed perpendicular to a sloped existing steel or concrete structure surface, or supported above the slab or foundation. These alternative installation positions shall be reviewed and approved by the structural engineer of record to ensure the existing structure capacity and the product connection method.

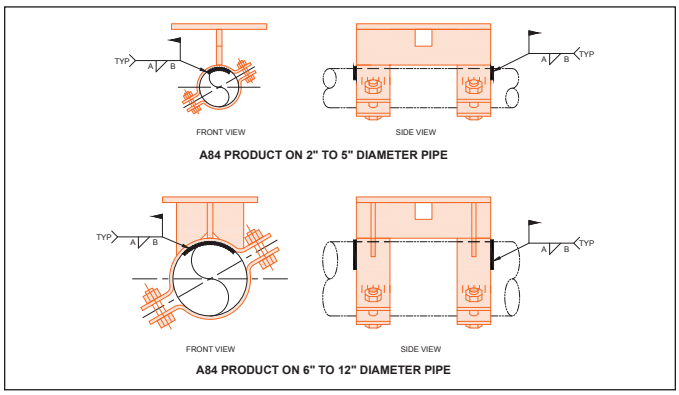


FIGURE 6. WELDING DETAILS FOR ENHANCED A84 CAPACITY

REINFORCING METHODS FOR ENHANCED A84 ANCHOR LOAD CAPACITIES REQUIREMENT

In Figure 6, to increase the A84 anchor load capacity to resist axial and lateral load simultaneously, additional fillet welds are required to connect the product to the piping. The enhanced anchor capacities are shown in the table below.

NOTICE

- **Weld reinforcing methods are for use with product A84 only. The connection design from A84 to the supporting structure must be approved by a structural engineer and/or the engineer of record.**

ENHANCED A84 ANCHOR CAPACITY

A84 Diameter inches DN	Fillet Weld Size A inches mm	Fillet Weld Length B inches mm	Axial Anchor Capacity lbs KN	Lateral Anchor Capacity lbs KN
2 DN50	⅛ 3	2 50	800 3.56	120 0.53
2.5	⅛ 3	2 50	1200 5.34	180 0.80
3 DN80	⅛ 3	2 50	1700 7.56	255 1.00
4 DN100	⅛ 3	3 75	3000 13.34	450 2.00
5	⅛ 3	3 75	5000 22.24	750 3.34
6 DN150	¼ 6	4 100	7000 31.14	1050 4.67
8 DN200	¼ 6	4 100	12000 53.38	1800 8.00
10 DN250	5⁄16 8	6 150	20000 88.96	3000 13.34
12 DN300	5⁄16 8	6 150	28000 124.55	4200 18.68

Nos. A81, A82, A83, A84 Pipe Clamp Anchors