

# Installation, Operation & Maintenance Manual

## Saf-T-Vise STV-HP2 Insertable Tool Holders

S-CM-IOM-00507-1 3-22


[sentry-equip.com](http://sentry-equip.com)

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 COMPANY WITH  
 QUALITY SYSTEM  
 CERTIFIED BY DNV GL  
 = ISO 9001 =


## Standard Warranty

Sentry Equipment Corp ("Seller") warrants products manufactured by it and supplied hereunder ("Products") to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, in each case for a period as defined in the table below:

Brand	Product Line	Warranty Period
Sentry®	1. Automatic Sampling 2. Corrosion Monitoring 3. Manual Sampling 4. Sample Conditioning 5. Sampling & Analysis Systems 6. Replacement Parts (without expiration dates)	Eighteen months from date of shipment or twelve months from startup, whichever occurs first
Waters Equipment	1. Sampling & Analysis Systems 2. Replacement Parts (without expiration dates)	Twelve months from date of shipment

To view the full warranty, go to [www.sentry-equip.com/warranty](http://www.sentry-equip.com/warranty).



Do not install, maintain, or operate this equipment without reading, understanding, and following the appropriate Sentry Equipment Corp instructions. Otherwise, injury, damage, or both may result.

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## Limit of Liability

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## Note

The information contained in this document is subject to change without notice.

## Safety Information

Please read the entire manual before attempting to unpack, set up, or operate this product. Pay careful attention to all Warnings, Cautions, and Notes. Failure to do so could result in serious personal injury and/or equipment damage.

## Use of Hazard Information

If multiple hazards exist, the signal word corresponding to the greatest hazard shall be used.

## Definitions

### ⚠ DANGER

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### ⚠ WARNING

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### ⚠ CAUTION

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### NOTICE

**NOTICE** is used to address practices not related to personal injury.

### NOTE

Information that requires special emphasis.

### TIP

Alternate techniques or clarifying information.

**SHALL:** This word is understood to be mandatory.

**SHOULD:** This word is understood to be advisory.

## General Safety Precautions

### Product Selection, Installation, and Use

#### ⚠ WARNING

Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of users, through their own analysis and testing, to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to their intended purpose.

Follow proper local, state, and federal regulations for proper installation and operational requirements.

Always use caution and common sense when working with any chemical. Read the product label and Material Safety Data Sheets (MSDS) carefully and follow the instructions exactly.

### Potential Equipment Hazards

#### ⚠ WARNING

**Hot surfaces!** This equipment may have very hot surfaces. If an operator contacts a hot surface, injury may occur. Use protective clothing to prevent injury. If other equipment comes in contact with a hot surface, damage to the equipment may occur. Ensure the area around this equipment is kept clear to prevent this damage from occurring.

**High pressures!** This equipment may contain fluids at very high pressures. Prior to installing, removing, or maintaining this equipment, ensure that the equipment is isolated from all connecting piping, the equipment is depressurized, the contents have been drained, and the equipment is cool.

## Insertion/Retraction Instructions

### Tools required

- permanent marker
- tape measure
- 12" adjustable wrench

#### NOTE

35 ft-lb of torque will hold a 3/8" diameter rod in place against up to 5000 psi of process pressure.

- Determine the insertion length by measuring from the top of the process isolation valve to the desired zone within the pipeline and record the length. (Coupons generally are 1/4" from the bottom of the line, atomizers are usually located in the top 1/3 of the line, and injection quills should be placed in the middle of the process line with the longer point facing upstream).
- Loosen the 5/8" locking collet bolt on the holder and extend the rod/shaft by spinning the actuator wheel counterclockwise.

#### NOTICE

Failure to loosen the collet bolt may result in damage to the unit.

Stop spinning when the extended rod length is equal to the insertion length. Make a mark on the aluminum body of the tool with a permanent marker level with the fluid inlet assembly (for atomizers) or the travel check bolt (for coupon holders).

- Retract the rod back inside the holder and tighten the 5/8" locking collet bolt to secure the rod inside the holder.
- Connect the holder to the CLOSED process isolation valve and securely tighten the holder to the valve.

#### NOTE

Use anti-seize on threaded connection points to eliminate any galling or future seizing.

- Recheck the locking collet to ensure 5/8" locking collet bolt is tight against rod/shaft.
- Slowly open process isolation valve.

#### NOTE

Some leaks may be present around Grafoil packing (if applicable).

- With a firm grip on the actuator wheel, loosen the 5/8" locking collet bolt and turn the hand crank counter clockwise to insert the rod/shaft to the desired depth. Use the permanent mark made in step 2 to properly achieve the correct insertion depth.
- With a firm grip still on the actuator wheel, tighten the 5/8" locking collet bolt.
- THIS STEP APPLIES ONLY FOR HOLDERS WITH A GRAFOIL PACKING. ALL OTHERS PROCEED TO STEP 10: Loosen the 1/4" packing gland bolt and turn the packing gland assembly clockwise until no leak is present. Tighten the 1/4" packing gland bolt.
- Recheck to ensure 5/8" locking collet bolt is tight against rod/shaft.
- (OPTIONAL) Remove the actuator wheel to prevent unauthorized use or tampering.

### Short Cut Method for Coupon Holders Only

- Place an old corrosion coupon (dummy coupon) into the coupon chuck at the bottom of the Saf-T-Vise STV-HP2 coupon holder.
- Retract the rod back inside the holder and tighten the 5/8" locking collet bolt to secure the rod inside the holder.
- Connect the holder to the CLOSED process isolation valve and securely tighten the holder to the valve.

#### NOTE

It is advised to use anti-seize on threaded connection points to eliminate any galling or future seizing.

- Recheck to ensure 5/8" locking collet bolt is tight against rod/shaft.
- Slowly open process isolation valve.

#### NOTE

Some leaks may initially be present around Grafoil packing (if applicable).

- With a firm grip on the actuator wheel, loosen the 5/8" locking collet bolt and turn the hand crank counterclockwise to insert the rod until the coupon gently touches the bottom of the pipe.
- Turn actuator wheel one turn clockwise to move coupon up 1/4", and make a mark with a permanent marker on the aluminum body at the travel check bolt. This will give you an accurate insertion depth for all coupons of the same size.

- Turn the actuator wheel clockwise to raise the rod out of the process stream and lock the 5/8" collet bolt.
- Close the process isolation valve.
- Open the bleeder valve on the holder body to relieve the internal pressure.
- Remove the Saf-T-Vise STV-HP2 coupon holder from the process isolation valve; remove the dummy coupon and replace it with new coupon.
- Follow steps 3-5 to reattach the coupon holder to the process line. Turn the actuator wheel counter clockwise and lower the rod until the travel check bolt is level with the mark on the aluminum body.
- With a firm grip still on the hand crank, tighten the 5/8" locking collet bolt.
- THIS STEP APPLIES ONLY FOR HOLDERS WITH A GRAFOIL PACKING. ALL OTHERS PROCEED TO STEP 15: Loosen the 1/4" packing gland bolt and turn the packing gland assembly clockwise until no leak is present. Tighten the 1/4" packing gland bolt.
- Recheck to ensure 5/8" locking collet bolt is tight against rod/shaft.
- (OPTIONAL) Remove the actuator wheel to prevent unauthorized use or tampering.

### Retraction Procedure

#### Tools required

- 12" adjustable wrench

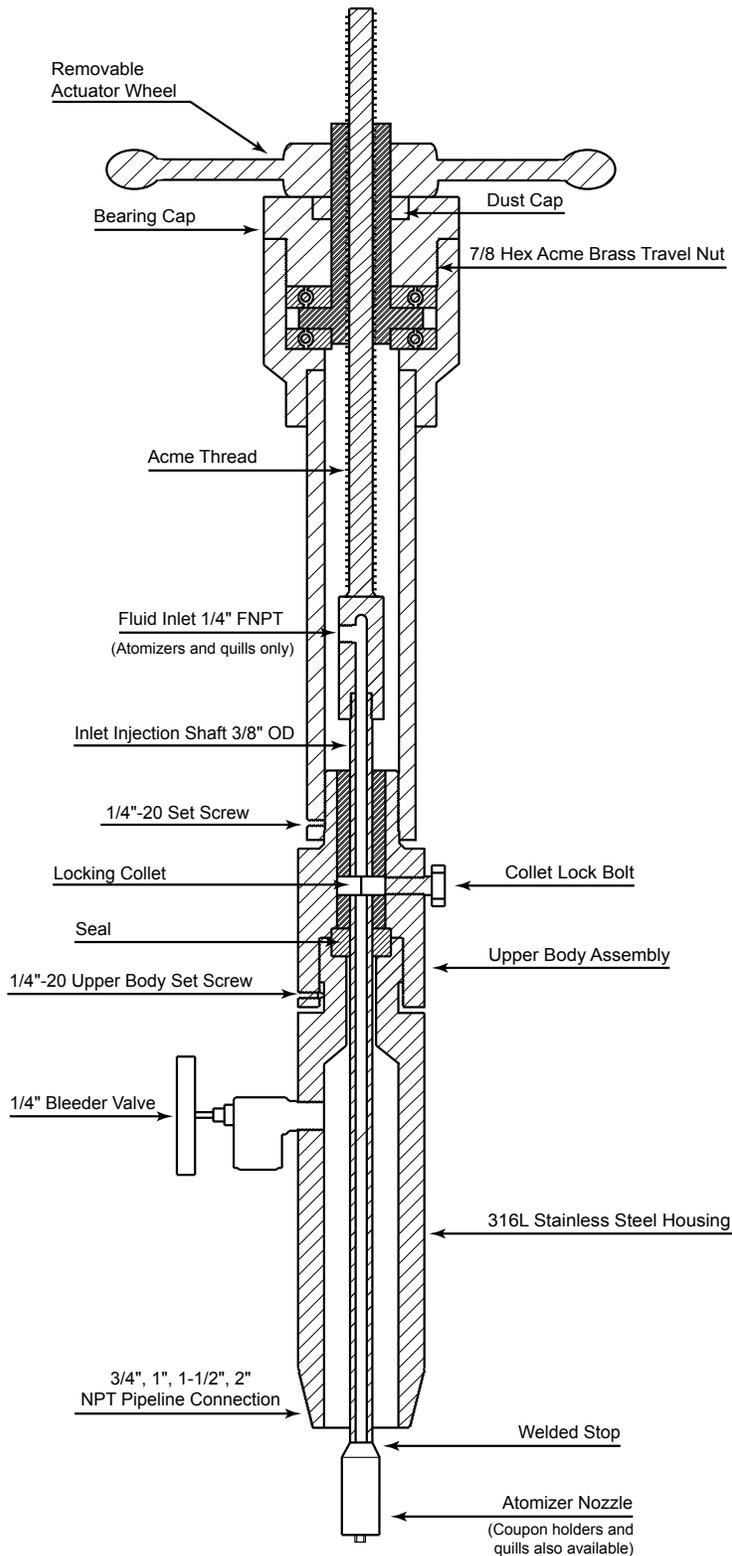
- Ensure 5/8" locking collet bolt is tight before proceeding.
- If necessary, place actuator wheel onto top of Saf-T-Vise STV-HP2 tool and tighten set screw.
- With a firm grip on the actuator wheel loosen the 5/8" locking collet bolt and spin the actuator wheel clockwise to retract the rod/shaft from the line.
- Once the rod is fully retracted tighten the 5/8" locking collet bolt.
- Close the process isolation valve.
- Open the bleeder valve on the holder body to relieve internal pressure.
- Remove the Saf-T-Vise STV-HP2 Holder from the isolation valve.

### Specifications

Available Models	Saf-T-Vise STV-HP2
Maximum Operating Pressure	5000 psi at 100°F 345 bar at 38°C
Maximum Operating Temperature	Grafoil Seal: up to 1000°F (538°C) PTFE: up to 450°F (232°C)
Minimum Operating Temperature	Grafoil Seal: 0°F (-18°C) <sup>5</sup> PTFE: 0°F (-18°C) <sup>5</sup> FIA: 23°F (-5°C) <sup>5</sup>
Method of Operation	Integrated Actuator
Probe Shaft Diameter	Standard 3/8 in OD
Pipeline Connection	3/4 in NPT thru 2 in NPT Optional Flanged Connection
Insertion Lengths	12 in, 18 in and 24 in Insertion
Seal	Teflon Seal Optional Grafoil Seal
Material Construction	316L SS
<b>Complies with NACE standard MR-0175/94. Suitable for H<sub>2</sub>S service. Other alloys available on request.</b>	

<sup>5</sup>Lower temperature ratings possible, consult factory for details.

## Saf-T-Vise STV-HP2 Insertable Tool Holder



## Customer Support

With proven sampling expertise since 1924, Sentry products and services provide business operations the critical insights to optimize process control and product quality. We deliver true representative sampling and analysis techniques to customers around the globe, empowering them to accurately monitor and measure processes for improved production efficiency, output, and safety. Standing behind our commitments, we are determined to tackle any application, anywhere.

We know that running an efficient operation isn't easy. It requires thorough, careful analysis of controlled, real-time data achieved through reliable, accurate, and repeatable process monitoring and measuring. By effectively conditioning, sampling, and measuring gas, liquid, slurry, powder, solids, steam, or water within their production environments, our customers obtain the critical insights they need to control and optimize their processes.

Yet, controlling your processes also means reliable customer support throughout the life cycle of your equipment.

- Customer Service—General information, warranty claims, order management.
- Installation Service—For systems that require specialized expertise upon installation.
- Technical Support—Troubleshooting, training, and technical manuals.
- Field Service & Retrofits—When a problem needs immediate attention.
- Replacements Parts & Consumables—Order your replacement parts and consumables.
- Sentry ProShield Services—Select from four ProShield Guardian service plans providing different levels of support to protect your large system investments with regularly scheduled maintenance.

To learn more, go to [www.sentry-equip.com/support](http://www.sentry-equip.com/support).

