

# **D & D Hydrant & Utility Scv L.L.C.**

**P. O. Box 445**

**Sunnyside, GA. 30284**

**770-584-1671**

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## **Submittals For DATV-CR Parts**

1. Description of DATC-CR
2. Testing Results
3. Warranty
4. DATV-CR Kit Parts Illustration Clow Fire Hydrants
5. DATV-CR Installed in Fire Hydrant Cut Away

Prepared by Tom Davidson, D & D Hydrant & Utility Scvs

12-20-21

# **Description of the Davidson Hydrant Anti-tamper Check Valve Corrosion Resistant Refurbishment Parts D-ATV-CR**

The Davidson Hydrant Anti-tamper Check Valve Corrosion Resistant Refurbishment Parts (D-ATV-CR) feature a stealth check valve, which reduces the potential for those with ill intent to contaminate treated drinking water by introducing toxins or other materials into the drinking water via the fire hydrant. The D-ATV-CR consists of four main parts; insert, check valve, stainless steel machined shaft, and stainless steel spring. The insert is made of 11 gauge metal with Epoxy Coating and Powder Coating. The insert slides up into the barrel of the hydrant at the break away. The insert fits just below the lowest outlet. The insert is aerodynamically shaped forming a venturi in the barrel of the hydrant to minimize loss of flow at any operating pressure. A quad ring is inserted into the top of the insert in a machined track. This quad ring provides an impenetrable seal upon check valve closure. The stainless steel machined shaft replaces the hydrant's original cold rolled steel valve shaft. The valve fits around the machined shaft operating vertically when activated by water flow to the shaft via a Viton O-ring providing an impenetrable seal. The stainless steel spring fits around the shaft and attaches to the top of the piston and the bottom of the bonnet of the hydrant insuring valve closure against the seal of the insert prior to any backflow occurring. The D-ATV-CR is equally effective in prevention of contamination under pressure or contamination by siphoning into the water main.

The D-ATV-CR prevents hydrant vandalism, i.e. placement of foreign objects such as rocks, bottles, silt, or tennis balls into the hydrant, which could clog fire engine pumper screens or damage the impeller blades of the pump. Location of the ATV in a hydrant eliminates the need for the fire department personnel to flow the hydrant prior to hooking it to the pumper. This saves valuable minutes at a working fire allowing the fire department to operate more effectively. The D-ATV-CR is passive and requires no action on the part of the fire department other than that normally required to turn on the hydrant.

The D-ATV-CR is a maintenance-free device, which exposes potable water to no new materials other than those currently used in hydrants.

The D-ATV-CR parts have been extensively tested for more than 12 years, in areas of backflow prevention, durability, and salt spray testing for corrosion resistance. The D-ATV-CR parts have been extensively tested by the Army Corps. We would be happy to provide a copy of the report.

**The D-ATV-CR Parts carry a 10 year warranty.**



# DAVIDSON HYDRANT TECHNOLOGIES INC.

Featuring the Davidson DATV-CR Anti-Terrorism Check Valve \* Corrosion Resistant  
Dual Purpose \* Fire Hydrant Refurbishment Parts Providing Backflow Prevention

April 22, 2014



To Whom It May Concern:

Re: Operational Reliability of the Davidson Anti-Terrorism Corrosion Resistant Check Valve (DATV - CR)  
parts for Fire Hydrants

The DATV-CR Parts have been in use by municipalities and water utilities, and extensively tested since its inception in 2002.

The Davidson Hydrant Anti-Terrorism Corrosion Resistant Check Valve (DATV-CR) features a stealth check valve, providing a physical barrier, above ground, in the internal portion of the fire hydrant upper barrel. Seated approximately 1 inch below the steamer port, the valve is designed to compartmentalize, between the bonnet and check valve, any accidental or intentional contamination of the water distribution system thru the fire hydrant. The DATV-CR consists of four main parts; insert, check valve, stainless steel machined shaft/stem, and stainless steel spring.

The DATV-CR has been tested for over 14 years. Please see a selection of the testing listed below:

AWWA C502-94 - Utah State University Oct 2006

AWWA C502-94 - Utah State University City of Houston Sections 5.2.1 and 5.2.1.1

Reliability Test - LSU Mar 2004

AWWA C502-94 - Louisiana State University (LSU) Mar 2004

AWWA Section 1.1, 3.1.1, 4.2.2.1, 5.1 pressure test - LSU Sep 2003

ASTM Salt Spray test B117-09 USACE Oct 2013

USACE Project F09-AR12 Corrosion Prevention and Control Program – USACE Oct 2013-providing the utility owner an ROI of 5.73.

The purpose of the fire hydrant tests, with the DATV-CR installed, confirms the operational reliability of the DATV-CR. The valve and the fire hydrant will function when required.

Thank you,

Diane Davidson, V.P.

Cited documents are available upon request.

Visit our web site: [www.davidsonhydrant.com](http://www.davidsonhydrant.com)

PHONE: 770-227-8644 OR 1-866-84SAFER SHIPPING ADDRESS: 79 SCHOOL RD., HAMPTON GA 30228 FAX: 770-227-6463

P.O. Box 257, Sunnyside, GA 30284 \* U.S. Patent No. 6,868,860 & 7,055,544 \* Patents Pending

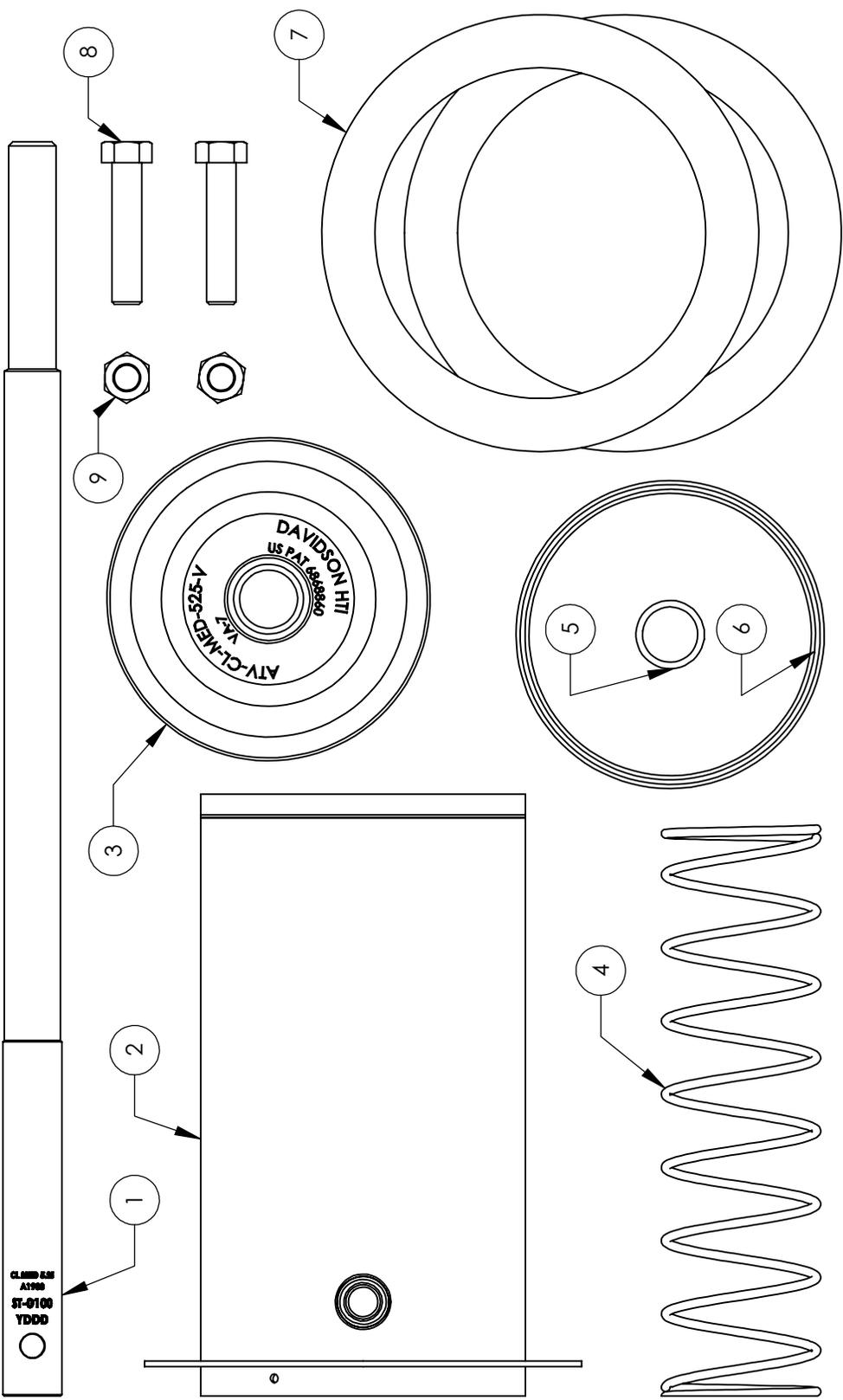


## TEN-YEAR LIMITED WARRANTY

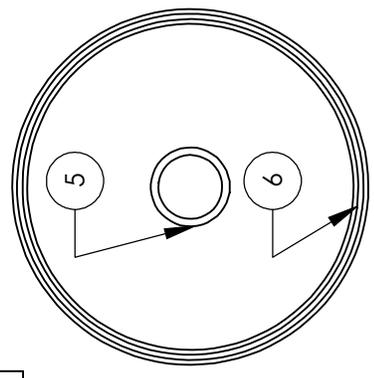
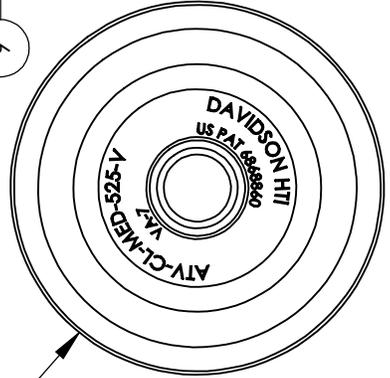
Davidson warrants that the Davidson Anti-Tamper Valve (ATV) will be free from defects in material and workmanship under normal and customary operating conditions and maintenance in accordance with Davidson’s published maintenance program for a period of ten (10) years from the date of purchase. Davidson also warrants that the retrofitting of fire hydrants manufactured by other manufacturers will not cause failure of any fire hydrant parts and will replace any fire hydrant part that fails due to the retrofitting of the fire hydrant with the Davidson ATV. This warranty applies only after definitive analysis of the failure clearly establishes the retrofitting of the hydrant with the Davidson ATV as the sole cause of the failure. Davidson at its sole discretion, may request independent analysis and verification of the cause of failure. The warranty of fire hydrant parts not manufactured by Davidson Hydrant Technologies, Inc. shall apply and is limited to a period determined by the remaining warranty period of the failed fire hydrant part and is contingent on purchaser’s maintenance of the fire hydrant in accordance with the manufacturer’s recommendations.

**WARRANTY IS CONTINGENT ON QUALIFIED INSTALLATION:** All installers are required to attend Davidson Hydrant Technologies, Inc. Training Class. Any expressed applicable warranty will only be honored if Davidson Hydrant Technologies, Inc. has certified the installer. Every Installation of a Davidson Anti-Terrorism Valve hydrant retrofit must be supervised and documented by a certified installer. Each certified installer must have either attended and graduated from a Davidson Hydrant Technologies Inc. (DHT) Training Class or have attended and graduated from an approved training class conducted by a Davidson Hydrant Technologies Certified Trainer. Evidence of said required training shall be a Davidson Hydrant Technologies Certified Installer Certificate and a Registration Number. Failure to comply with the certified installer provision during installation and or the required documentation of the installation shall render the Warranty void. Neither Davidson Hydrant Technologies, Inc., nor Davidson’s Sales and or Distributors can be held liable for installer error.

Visit our web site: [www.davidsonhydrant.com](http://www.davidsonhydrant.com)



CL-MED 5.25-A  
ATV-CL-MED  
ST-0100  
YDDD



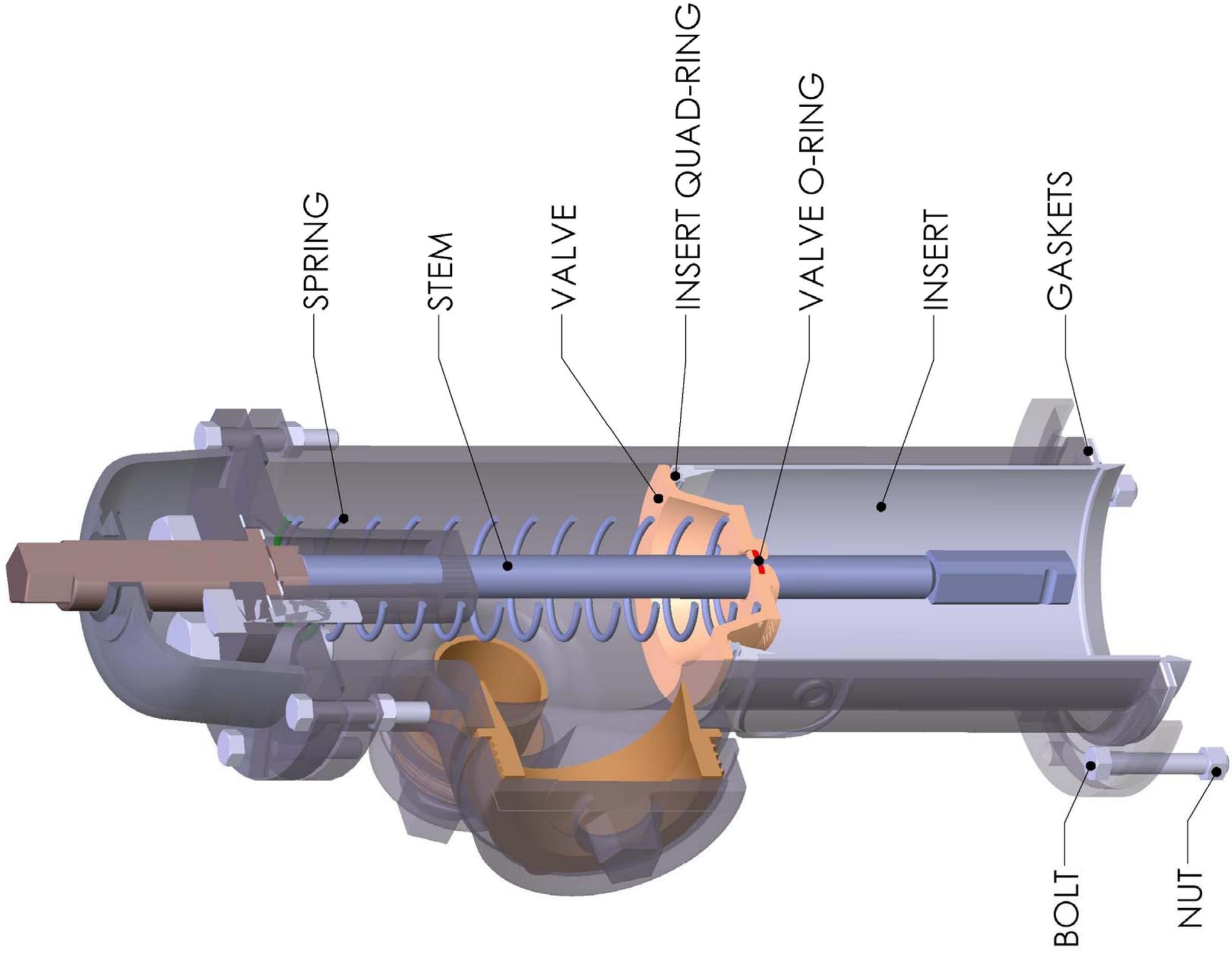
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ST-0100	STEM	1
2	IN-A0025	INSERT W/CHECK VALVE	1
3	VA-0007	VALVE	1
4	SP-0008	SPRING, LIGHT BLUE	1
5	OR-0012	O-RING	1
6	OR-0004	QUAD RING, RED	1
7	OR-0024	GASKET	2
8	CS-0006	BOLT	2
9	NU-0003	NUT	2

**NOTE:** QUAD RING AND VALVE O-RINGS ARE PRE-INSTALLED BEFORE SHIPPING. INSTALLATION MUST BE PERFORMED BY A QUALIFIED INSTALLER.

TYPE  
**PACKING SHEET**  
DRAWN BY  
**CMORENO**  
DATE  
**7/16/2009**  
SCALE: 2:7  
SHEET 1 OF 1

**Davidson Hydrant Technologies, Inc.**

DESCRIPTION:  
CL-MED-5.25-A 1988-OL-SS-ICV-DK  
CLOW MEDALLION 5.25 AFTER 1988 OPEN LEFT  
SOLID STEM INSERT W/CHECK VALVE  
DAVIDSON KIT  
SIZE DWG. NO. **A** DK-A0072-P  
REV. **A**



SPRING

STEM

VALVE

INSERT QUAD-RING

VALVE O-RING

INSERT

GASKETS

BOLT

NUT