

PREVENT VALVE DAMAGE

Description

The Model D86 Valve Overtorque Clutch™ is permanently mounted on the valve operating nut. No special tools or valve modifications are required. It's easily mounted on direct buried valves without excavation. Operating torque is applied to the 2-inch AWWA nut on the Model D86 then transmitted through the D86 to the valve. The Model D86 will transmit sufficient torque to free up and operate the valve. If excessive torque is applied, the drive will disengage and prevent valve damage. The drive will automatically re-engage at the original setting with further rotation in either direction.

Features

- Operates buried and submerged
- Zero maintenance
- Permanently lubricated hermetically sealed mechanism
- Corrosion protected with fusion-bonded epoxy

Mounting

On Valve or Extension:

Place the Model D86 Valve Overtorque Clutch™ on the 2" AWWA operating nut. Tightening of mounting screws is optional.

Direct-Bury on Valve:

Install Model D86 Valve Overtorque Clutch™ on valve operating nut by hooking through drain hole and lowering onto the valve operating nut. The mounting screws need not be tightened.

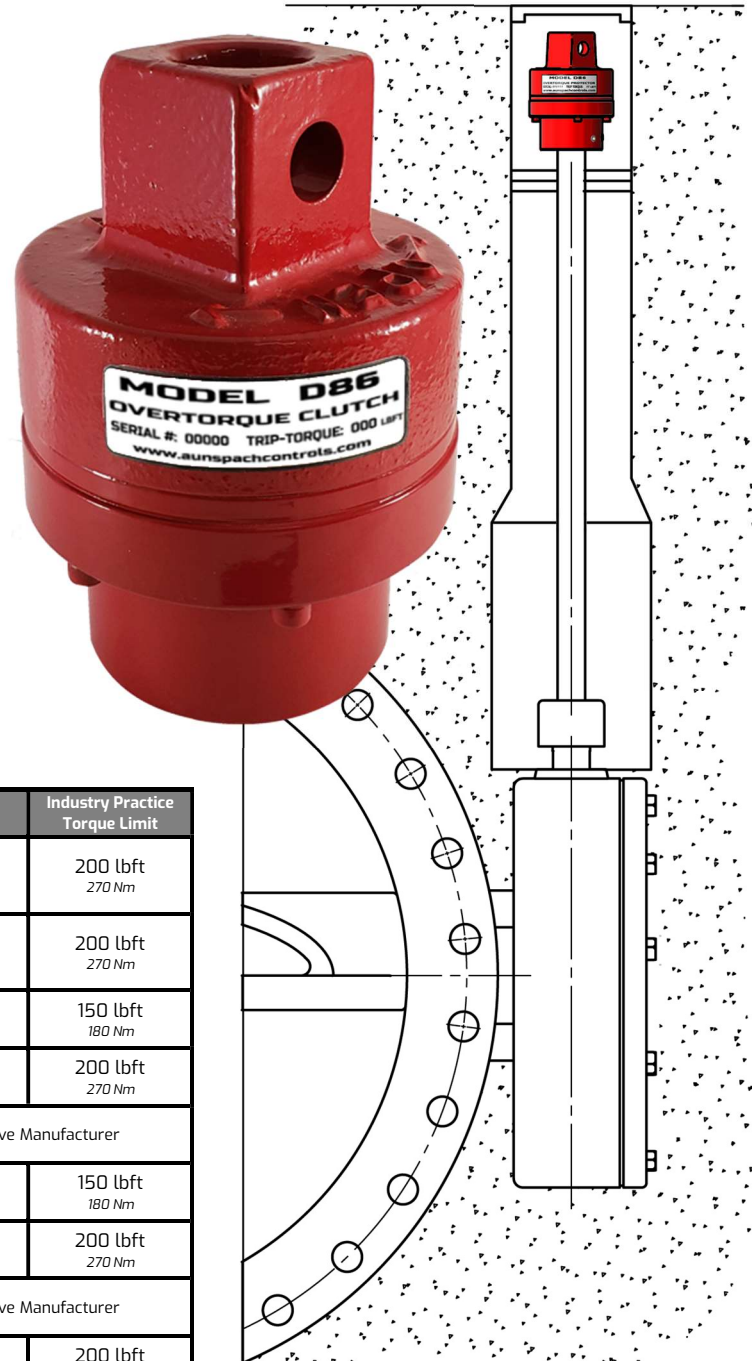
Trip Torques

Model	Standard Trip Torques	Trip Torque Capacities
D86-250	200 lbft	25 to 250 lbft
D86-500	400 lbft	50 to 500 lbft

Other trip-torques are available upon request

AWWA Valve Torque Reference Data

Valve Style	AWWA Reference	Valve Size	Max Allowable Torque	Industry Practice Torque Limit
Butterfly	C504-15 4.2.8.3.2 A.7.2	3 thru 72 inch 75 - 1800 mm	300 lbft 400 Nm	200 lbft 270 Nm
Ball	C507-15 4.3.10.3.3 A.7.2	6 thru 60 inch 150 - 1500 mm	300 lbft 400 Nm	200 lbft 270 Nm
Resilient Seat Gate	C509-15 A.5.7.5	3 thru 4 inch 75 - 100 mm	200 lbft 270 Nm	150 lbft 180 Nm
		6 thru 16 inch 150 - 400 mm	300 lbft 400 Nm	200 lbft 270 Nm
		16 inch and larger 400 mm and larger	Consult Valve Manufacturer	
Metal Seat Gate	C500-09 A.5.7.6	3 thru 4 inch 75 - 100 mm	200 lbft 270 Nm	150 lbft 180 Nm
		6 thru 12 inch 150 - 300 mm	300 lbft 400 Nm	200 lbft 270 Nm
		14 thru 36 inch 350 - 900 mm	Consult Valve Manufacturer	
Eccentric Plug Valves	C517-16 A.8.2	3 thru 72 inch 75 - 1800 mm	300 lbft 400 Nm	200 lbft 270 Nm



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Submerged Operation

The mechanism is permanently lubricated and hermetically sealed to exceed IP 68 water ingress standard IEC 60529 Ed 2.2 2013. Units have been tested water tight under 230 feet (70 meters) water pressure.

Corrosion Protection

All units are coated inside and outside with AWWA C-213 compliant fusion-bonded epoxy and enamel top-coat. All fasteners are austenitic stainless steel.

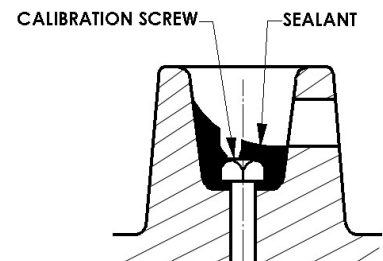
Lubrication

All units are permanently lubricated with molydisulfide-bearing, water-resistant, high-pressure synthetic grease.

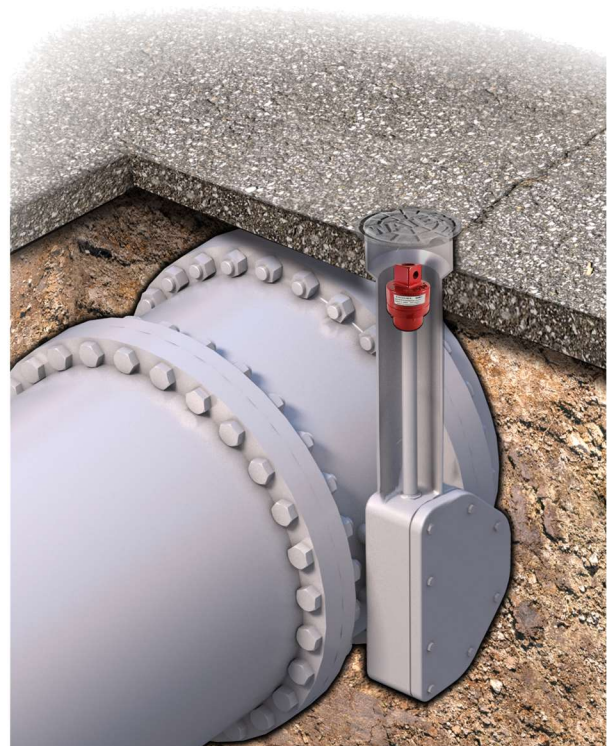
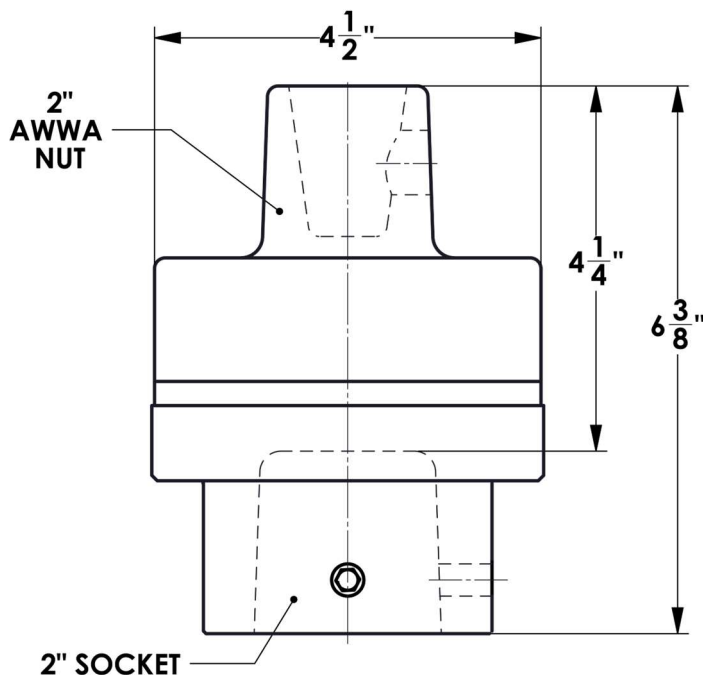
Trip Torque Calibration

Model D86's are shipped pre-calibrated to end-user specification and ready to install. The trip torque calibration screws are sealed and concealed to prevent tampering. They may be re-calibrated by the following procedure:

1. Remove polyurethane sealant from bonnet nut cavity to expose the calibration screw.
2. Rotate the adjusting screw inward (clockwise) to increase trip torque or outward (counterclockwise) to decrease. 1/16 revolution will change the trip torque approximately 12 pounds feet for D86-250, and 24 pounds feet for D86-500. For more precise calibration use a torque wrench to verify setting.
3. After adjustment, fill nut cavity with Devcon Flexane 94 liquid polyurethane up to the lower edge of the drain hole in the side of the D86 nut.



Envelope Dimensions



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