

MODEL D87HT-250 HIGH TEMPERATURE OVERTORQUE PROTECTOR TECHNICAL MANUAL

OPERATING TEMPERATURE: -20 to 400 F

PURPOSE

Model D87HT-250 Valve Overtorque Protectors prevent valve/actuator damage caused by use of excessive operating torque.

OPERATION

Operating torque is applied to the 2-inch square input nut. The operating torque is transmitted through the D87 mechanism and into the valve/actuator. If excessive torque is applied, the D87 drive will disengage and prevent damage. Operation is the same in either direction of rotation. Re-engagement is automatic.

CONSTRUCTION

The mechanism is permanently lubricated and hermetically sealed inside a rugged cast-iron housing that is corrosion protected by high-temperature paint.

MOUNTING

The unit is mounted directly on the 2-inch operating nut, valve/actuator input shaft or actuator handwheel. No special tools or valve/actuator modifications are required. To mount on 2-inch nut: Place D87 on the valve/actuator input shaft and tighten the two stainless steel mounting screws. To mount on handwheel shaft: Remove handwheel and mount The D87 in its place. Remount the handwheel on the D87 shaft.

END CONNECTIONS

Input end: 2-inch square nut or handwheel shaft.
Actuator end: Shaft to match valve/actuator.

OPERATING RANGES

Trip Torque: 25 to 250 lbft
Temperature: -20 F to 400 F

TRIP TORQUE ADJUSTMENT

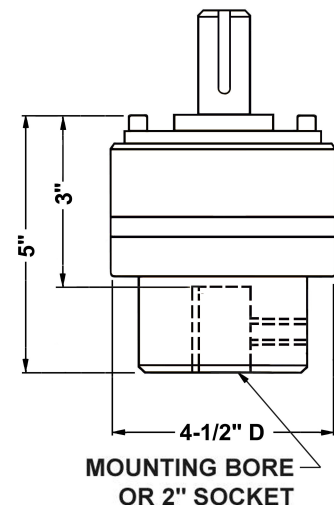
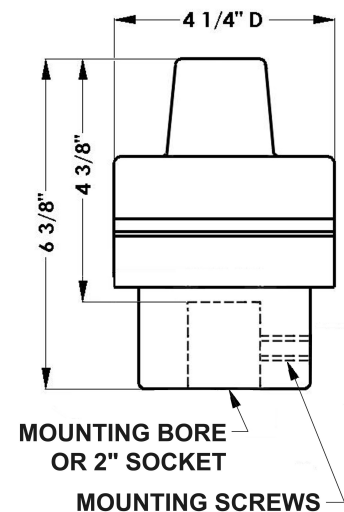
See page 2.

TO ORDER

Specify trip torque and end connections



Aunspach Controls Company, Inc
1897 McKelvey Hill Drive, St Louis, MO 64043
4648C Russell Court, High Ridge, MO 63049
Ph: (636) 376.2395
Fx: (314) 576.7587
sales@aunspachcontrols.com



Model D87HT Handwheel Overtorque Protector

GENERAL INFORMATION

Operating Temperature: -20F to 400F

Trip torque: 25 lbft to 250 lbft as specified

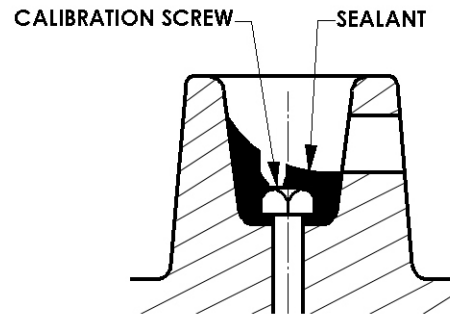
End Connections:

Input End: Shaft to match handwheel bore or 2-inch AWWA Nut

Actuator End: Bore to match actuator or valve shaft

MATERIALS OF CONSTRUCTION

<u>Part</u>	<u>Material</u>
Shaft	Carbon Steel ACC 101 (AISI C1117, 12L14 or equal)
Housing	Cast Iron ASTM A48 Gr 30
Retainer	ACC 101
Detent Hub	AISI A2 Tool Steel
Socket	ACC 101
Roller Drive Plate	AISI 1071 Carbon Steel
Drive Rollers	AISI 41L40
Spacer	ACC 101
Springs	DIN 17222 CrV Alloy Steel
Spring Guide	AISI 41L40
Bearing Balls	SAE 5200 CrMn Alloy Steel
Quad Ring	Viton
Paint	High Temp POR-20 Aluminum
Lubricant	High Temp Loctite Moly Paste RTV
Sealant	Red Silicone Adhesive Sealant ANSI
Cap Screws	B18.3 CrMo Alloy
Mounting Screws	300 Series Stainless Steel



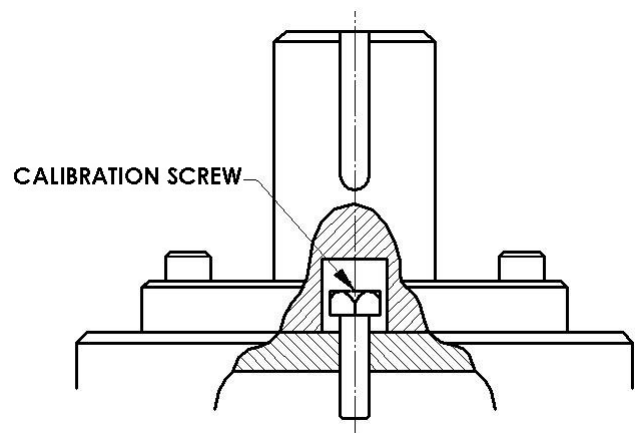
2-Inch Nut Models

TRIP TORQUE ADJUSTMENT

Units are shipped fully calibrated and ready to mount. The trip torque calibration screw is sealed and concealed to prevent tampering. Trip torque can be adjusted as follows:

Nut-Driven Models: 1. Remove the sealant from the nut cavity to expose the calibration screw. 2. Rotate the calibration screw inward (CW) to increase trip torque, or outward (CCW) to decrease. One-sixteenth revolution will change trip torque about 10lbft. 3. Re-fill the nut cavity with Loctite RTV Silicone up to the lower edge of the drain hole in the nut.

Handwheel-driven models: 1. Remove handwheel shaft to expose the calibration screw. 2. Rotate calibration screw as above. 3. Apply Loctite 290 to calibration screw threads.



Handwheel Models