

Valvcon™

V-series

180 degree & 270 degree
pot/camshaft gear kits,
part numbers
VC099180, VC099270

Installation, maintenance and
operating instructions

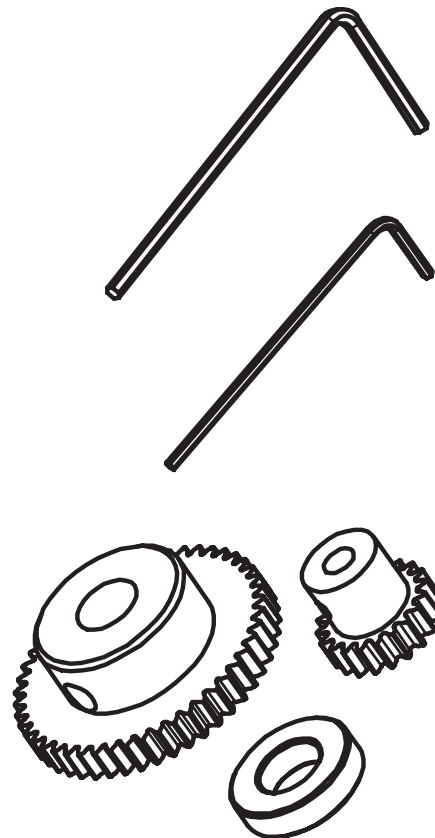


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READ THESE INSTRUCTIONS FIRST!

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

SAVE THESE INSTRUCTIONS!

Addresses and phone numbers are printed on the back cover.

1. GENERAL

This instruction manual contains important information regarding the installation, operation, and troubleshooting of the Valvcon™ 180 & 270 Degree Pot/Camshaft Gear Kits. Please read these instructions carefully and save them for future reference

1.1 DESCRIPTION

The Pot/Camshaft Gear Kits enable the actuator to operate beyond the standard 90-degree rotation, using the existing potentiometer in the actuator. P/N VC099180 allows up to 180 degrees of final output rotation. P/N VC099270 allows up to 270 degrees of final output rotation.

1.2 SAFETY PRECAUTIONS

WARNING

DO NOT EXCEED THE ACTUATOR PERFORMANCE LIMITATIONS!

EXCEEDING THE TORQUE LIMITATIONS MARKED ON THE ACTUATOR IDENTIFICATION NAMEPLATE LABEL MAY CAUSE DAMAGE TO THE ACTUATOR AND/OR FINAL DRIVE ELEMENT.

WARNING

DO NOT EXCEED THE ACTUATOR ELECTRICAL LIMITATIONS!

EXCEEDING THE ELECTRICAL LIMITATIONS MARKED ON THE ACTUATOR IDENTIFICATION NAMEPLATE LABEL MAY CAUSE DAMAGE TO THE ACTUATOR AND/OR PERSONAL INJURY.

WARNING

BEWARE OF MOVEMENT OF THE FINAL DRIVE ELEMENT AND ANY LINKAGE BETWEEN IT AND THE ACTUATOR!

KEEP HANDS, OTHER PARTS OF THE BODY, TOOLS AND OTHER OBJECTS OUT OF THE WAY OF MOVING PARTS. FAILURE TO DO THIS MAY RESULT IN DAMAGE OR PERSONAL INJURY!

WARNING

ACTUATORS SHOULD BE PROPERLY GROUNDED AND WIRED IN ACCORDANCE WITH LOCAL ELECTRICAL CODE; SEE IDENTIFICATION NAMEPLATE LABEL FOR MAXIMUM CURRENT DRAW

This option will fit all actuators with the letter "N" preceding the voltage designator in the part number on the product identification nameplate label.

2. INSTALLATION

2.1 TOOLS REQUIRED

- Hex Wrench – 5mm (Small Enclosure)
- Hex Wrench – 6mm (Large Enclosure)
- Hex Wrench – 1/16" (supplied with kit)

2.2 PARTS VERIFICATION

Verify that the kit contains all parts listed in the appropriate Table below:

Table 1	
Parts List for P/N VC099180 180 Degrees	
Part Description	Qty
Wrench 1/16"	1
Gear, Pot, 32 tooth, (180 degree rotation)	1
Gear, Camshaft, 48 tooth, (180 degree rotation)	1
Spacer; Pot Gear	1
Instruction Manual for Pot/Camshaft Gear Kit	1

Table 2	
Parts List for P/N VC099270 270 Degrees	
Part Description	Qty
Wrench 1/16"	1
Gear, Camshaft, 40 tooth, (270 degree rotation)	1
Gear, Pot, 40 tooth, (270 degree rotation)	1
Spacer; Pot Gear	1
Instruction Manual for Pot/Camshaft Gear Kit	1

2.3 INSTALLATION INSTRUCTIONS

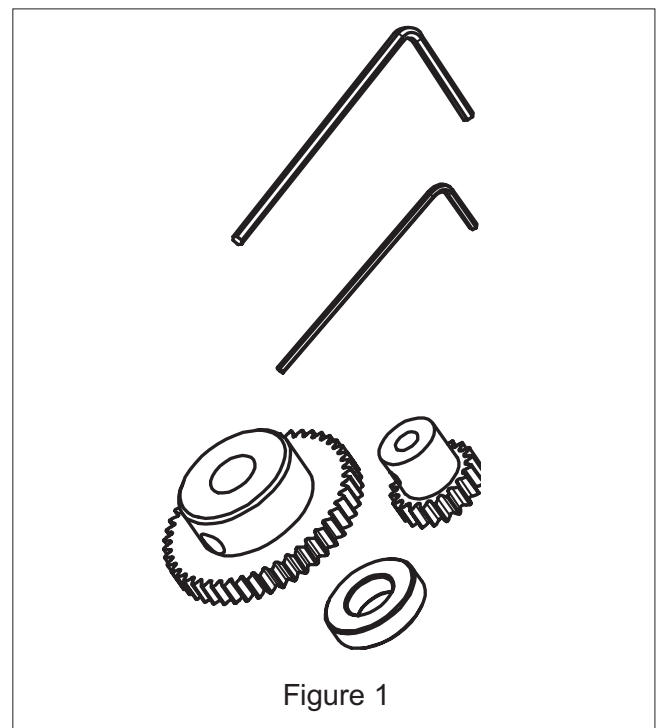


Figure 1

WARNING

WHENEVER WORKING INSIDE THE ACTUATOR BE SURE TO FOLLOW ALL GUIDELINES, AND HEED ALL WARNINGS IN THIS OPTION KIT INSTALLATION MANUAL. BE SURE TO READ AND FOLLOW THE INSTRUCTIONS SUPPLIED WITH THE ACTUATOR CAREFULLY, AND HEED ANY ADDITIONAL WARNINGS.

WARNING

DANGEROUS VOLTAGES ARE PRESENT INSIDE THE ACTUATOR COVER UNLESS THE POWER SUPPLY TO THE ACTUATOR HAS BEEN SHUT OFF OR DISCONNECTED. USE EXTREME CAUTION WHENEVER WORKING ON THE ACTUATOR WITH THE COVER REMOVED.

WARNING

WHENEVER WORKING INSIDE THE ACTUATOR, CARE MUST BE TAKEN TO AVOID DAMAGE TO THE MACHINED FLANGE SURFACES ON THE COVER AND THE BASE CASTINGS. FAILURE TO DO SO CAN VOID THE ACTUATOR'S ENVIRONMENTAL CERTIFICATION

WARNING

USE CARE WHENEVER WORKING WITH THE ACTUATOR COVER REMOVED, DAMAGE, SCRATCHES, OR DENTS ON THE MACHINED FLANGE SURFACES OF THE ENCLOSURE MAY VOID COMPLIANCE WITH NEMA, CSA, UL, AND/OR IEC SPECIFICATIONS.

POTENTIOMETER CALIBRATION

If Control Board Option is installed, calibrate the potentiometer as follows:

1. Move the actuator to the full clockwise position.
2. Use the Mode Selector Dial to select **CAL**.
3. Press **ENTER** for 2 seconds **CAL** LED will flash.
4. Loosen setscrew (1/16 hex wrench) in large gear.
5. Rotate gear until LED is on constant. Tighten setscrew.
6. Press ENTER to confirm calibration setting.
7. Then set ZERO and SPAN positions.
8. If no Control Board Option is installed, proceed as follows:
9. Connect Ohm Meter to the potentiometer leads to synchronize desired potentiometer position to the desired actuator position.
10. Tighten camshaft gear set screw.

INSTALLATION

1. Remove cover.
2. Loosen the setscrew (1/16") in the cam shaft gear and remove the gear from the cam shaft. Loosen the setscrew in the potentiometer gear and remove the gear from the potentiometer shaft.
3. Using spacers under gears to attain proper alignment, replace the cam shaft gear with the appropriate new cam shaft gear. Replace the potentiometer gear with the appropriate new potentiometer gear. When properly positioned, the gears should mesh evenly. The cam shaft must extend 1/8" min. above gear in order to engage position indicator.

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