



YARWAY WELBOND VALVES INSTRUCTION GUIDE

Before installation, these instructions must be carefully read and understood. This document serves as an instruction guide for converting a Yarway Welbond valve from manual operation to electric actuation.

INTRODUCTION

A Yarway Welbond can be converted in the field, from manual operation to electric actuation, through a series of quick and easy steps.

This document is a step-by-step guide for the conversion process, and it provides the list of parts that should be added to or removed from the valve. The list of components required for the conversion may vary, based on the brand and size of the actuator being used. Emerson offers a broad range of conversion kits that include the components required to convert a valve from manual to electric actuation, for various actuator brands.

The key topics covered in this document are listed below.

- Overview of the components that should be removed from the valve
- Overview of the components that should be added to the valve
- Step by step conversion process
- Guide for selecting the appropriate conversion kit
- List of the components in each conversion kit



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OVERVIEW OF THE VALVE COMPONENTS THAT SHOULD BE REMOVED

# Component	Description	Action
8	Yoke Bushing	Remove
10	Handwheel	Remove
11	Locknut	Remove
23	Washer	Remove

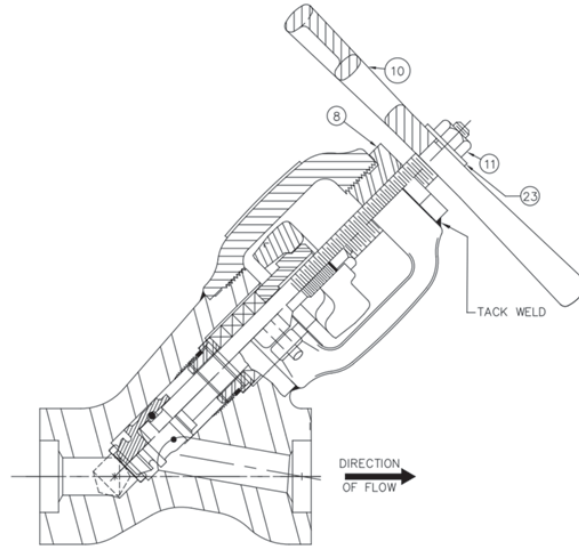
NOTE

Please keep the following recommendations in mind, while removing the components from the valve:

- Hold the valve fixed on a solid structure (e.g. base, bench, piping), while taking all applicable safety precautions.
- Carefully remove "Tack Weld" with an appropriate tool.
- De-pressurize the pipeline before performing any in-line repair.

FIGURE 1

Sectional View of Welbond Valve Assembly (with the components that should be removed)



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OVERVIEW OF THE VALVE COMPONENTS THAT SHOULD BE ADDED

# Component	Description	Action
8	Thread Bushing Insert	Add
23	Washer	Add
25	Set Cone Point Screw	Add
26	Mounting Plate	Add
27	Pin, Groove	Add
28	Hexagonal Nut	Add
29	Spacer Plate*	Add
30	Drive Nut	Add

* Spacer Plate may only be applicable for certain actuators (see the table on page 6 for details).

FIGURE 2
Sectional View of Welbond Valve Assembly (with the components that should be added)

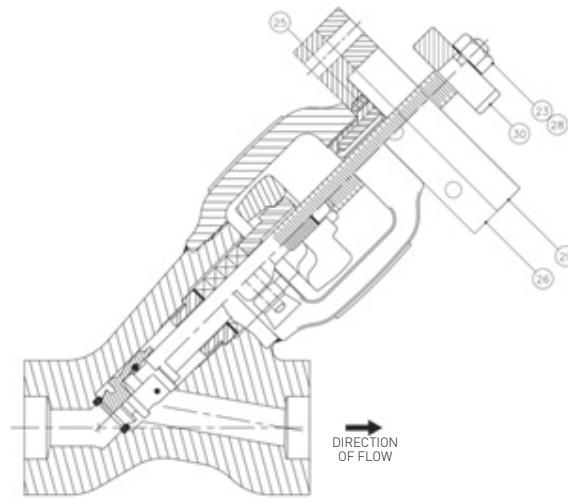
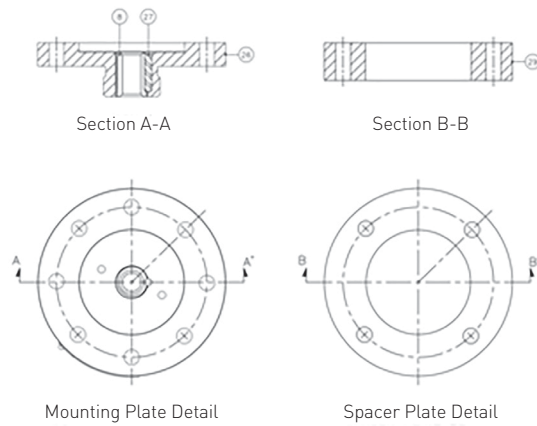


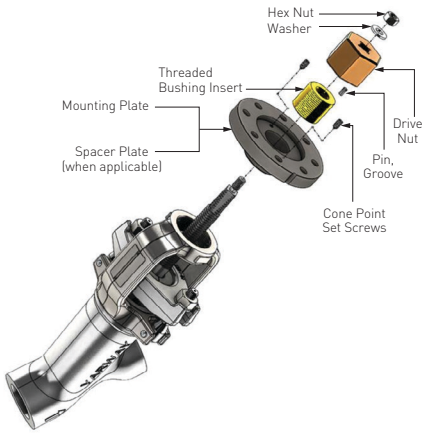
FIGURE 3
Plate Detail



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FIGURE 4
Valve Components Graphic



CONVERSION PROCESS

The steps for converting a Welbond from manual to electric actuation are listed on pages 4 and 5. Ensure that the appropriate conversion kit is on-hand before disassembling the manual valve.

1. Turn the T-Handle / Handwheel counterclockwise to fully open the valve.



4. Apply anti-seize compound and...



2. Loosen the hex nut and remove the T-Handle.



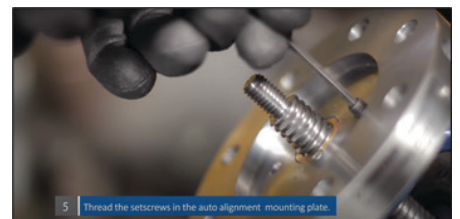
... thread the auto-alignment mounting plate on the yoke.



3. Remove the tack weld on the yoke and...



5. Thread and tighten the setscrews in the auto-alignment mounting plate.



... Unscrew the yoke bushing.



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6. Insert the drive nut over the stem and...



...Thread the hex nut.



7. Install the actuator over the stem until fully engaged.



8. Align the holes and thread the screws.



Once these steps are completed, you are ready to set up the actuator.



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CONVERSION KIT SELECTION

Since there is a wide range of actuators with standard mounting flanges, it is important to select the appropriate conversion kit for each

actuator. The table simplifies the selection process to ensure that the appropriate kit is selected for the actuator being used.

VALVE SIZE	VALVE CLASS	MOUNTING	ACTUATOR	KIT PART NUMBER
1/2" & 3/4"	1700	FA10/F10	BETTIS / XTE - 010	YG113614-01-XTE10
			BIFFI / ICON 010/30	YG113614-01-ICON10
			AUMA A7.5	YG113614-01-AUMA
			LIMITORQUE L120-10	YG113614-01-LMTQ
			ROTORK R-11AB	YG113614-01-RTRK
			BETTIS / XTE - 010	YG113614-02-XTE10
1"	1700 & 2700	FA10/F10	BIFFI / ICON 010/30	YG113614-02-ICON10
			AUMA A7.5	YG113614-02-AUMA
			LIMITORQUE L120-10	YG113614-02-LMTQ
			ROTORK R-11AB	YG113614-02-RTRK
			BETTIS / XTE - 010	YG113614-03-XTE10
			BIFFI / ICON 010/90	YG113614-03-ICON10
1-1/2"	1700	FA10/F10	AUMA A7.5	YG113614-03-AUMA
			LIMITORQUE L120-10	YG113614-03-LMTQ
			ROTORK R-11AB	YG113614-03-RTRK
			BETTIS / XTE - 010	YG113614-04-XTE10
			BIFFI / ICON 010/90	YG113614-04-ICON10
			AUMA A7.5	YG113614-04-AUMA
1-1/2" & 2"	1700	FA10/F10	LIMITORQUE L120-10	YG113614-04-LMTQ
			ROTORK R-11AB	YG113614-04-RTRK
			BETTIS / XTE - 010	YG113614-05-XTE10
			BIFFI / ICON 010/90	YG113614-05-ICON10
			AUMA A-SA10	YG113614-05-AUMA10*
			LIMITORQUE L120-10	YG113614-05-LMTQ10*
2"	1700	FA10/F10	LIMITORQUE L120	YG113614-05-LMTQ*
			ROTORK	YG113614-05-RTRK*
			AUMA A-SA10	YG113614-06-AUMA10*
			LIMITORQUE L120-10	YG113614-06-LMTQ10*
			ROTORK R14A	YG113614-06-RTRK*
			BETTIS / XTE - 020	YG113614-09-XTE20
2-1/2" & 3"	1700	FA14/F14	BIFFI / ICON 020/180	YG113614-09-ICON20
			BETTIS / XTE - 020	YG113614-07-XTE20
			BIFFI / ICON 020/180	YG113614-07-ICON20
			LIMITORQUE L120-10	YG113614-07-LMTQ10
			AUMA A-SA14.1	YG113614-07-AUMA
			ROTORK	YG113614-07-RTRK
2"	1700	FA14/F14	AUMA A-SA14.1	YG113614-08-AUMA
			ROTORK R-14A/16A	YG113614-08-RTRK
			LIMITORQUE L120-20	YG113614-08-LMTQ
			LIMITORQUE SMC03	YG113614-08-LMTQ-SMC03
			BETTIS / XTE - 020	YG113614-08-XTE20
			BIFFI / ICON 020/180	YG113614-08-ICON20
2"	2700	FA14/F14	AUMA A-SA14.1	YG113614-09-AUMA*
			ROTORK R-14A/16A	YG113614-09-RTRK*
			LIMITORQUE L120-20	YG113614-09-LMTQ*
			LIMITORQUE SMC03	YG113614-09-LMTQ-SMC03*
			BETTIS / XTE - 030	YG113614-09-XTE30*
			BIFFI / ICON 030/360	YG113614-09-ICON30*
2-1/2" & 3"	1700	FA14/F14	BETTIS / XTE - 030	YG113614-10-XTE30
			BIFFI / ICON 030/360	YG113614-10-ICON30
			AUMA A-SA14.1	YG113614-10-AUMA*
			LIMITORQUE L120-40	YG113614-10-LMTQ40*
			ROTORK R16-A	YG113614-10-RTRK-R16A*
			ROTORK	YG113614-10-RTRK-SQR*
			ROTORK IQ35	YG113614-10-RTRKIQ35*

*Spacer Plate may be required.

The Biffi Icon kits are also suitable for Bettis XTE actuators.

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