

Bulletin  
V5013-12  
January 2016

# NOR'EAST™

## CONTROLS



## GLOBE VALVES MIXING & DIVERTING V5013 Series



Previously manufactured by  
Dezurik® and Honeywell®

## Description:

The Nor' East Series 8600 (mixing) and Series 8900 (diverting) cage valves are designed for light industrial applications. The spring-type pneumatic diaphragm actuation is available as either direct or reverse acting as specified.

## Accessories:

- Side mounted positions, pneumatic and electro pneumatic
- Limit switches
- Top mounted Handwheel
- Air Filter regulator
- Transducer
- Solenoid

## SPECIFICATIONS

### Actuator

|  |   |
|--|---|
| <b>Type 05<br/>(For 2-1/2 and 3-inch)</b>      | Pneumatic diaphragm-actuated. Direct or reverse acting  |
| <b>Construction</b>                            | Anodized aluminum diaphragm cases and yokes   |
| <b>Diaphragm Material</b>                      | Molded of flexible Neoprene and convoluted to retain a constant effective area through the total stroke. Ambient temperature range of -29° to 71°C (-20° to 160°F). |
| <b>Effective Diaphragm Area</b>                | Direct acting: 40 in <sup>2</sup> (258 cm <sup>2</sup> )<br>Reverse acting: 38 in <sup>2</sup> (245 cm <sup>2</sup> )   |
| <b>Actuator Stem</b>                           | Zinc-plated steel.  |
| <b>Spring</b>                                  | Total enclosed and corrosion resistant. Range: 3 to 15 psig standard. (For other ranges, see Table 2).  |
| <b>Air Pressure<br/>(Air-to-diaphragm)</b>     | Normal:<br>18 or 25 psig (124 or 172 kPa)<br>Maximum Operating:<br>35 psig (241 kPa)  |
| <b>Air Connections</b>                         | 1/4" NPT.   |
| <b>Type 01<br/>(For 4, 5, 6, &amp; 8-inch)</b> | Pneumatic, diaphragm-actuated. Direct or reverse acting.  |
| <b>Construction</b>                            | Pressed steel diaphragm case plates and heavy duty, cast iron yoke. Finished in blue corrosion-resistant enamel.  |
| <b>Diaphragm Material</b>                      | Molded of Buna N with nylon insert. Ambient temperature of -29° to 82°C (-20° to 180°F). Other materials are available for high or lower temperatures.              |
| <b>Spring</b>                                  | Totally enclosed. Range: 3 to 15 psig standard. (For other ranges, see Table 2).  |
| <b>Air Pressure<br/>(Air-to-diaphragm)</b>     | Normal: 18 or 25 psig (124 or 172 kPa).<br>Maximum: 50 psig (344 kPa).  |
| <b>Air Connections</b>                         | 1/4" NPT.   |

## Body

|                 |   |
|-----------------|---|
| <b>Type</b>     | Three-way, mixing or diverting with single piece body and cage type inner valve construction. |
| <b>Material</b> | Cast iron.  |
| <b>Sizes</b>    | Model 8605 and 8905: 2-1/2 and 3 inch.<br>Model 8601 and 8901: 4, 5, 6 and 8 inch.            |
| <b>Ratings</b>  | Flanged ends: 125 lb or ANSI in all sizes.  |

## Bonnet

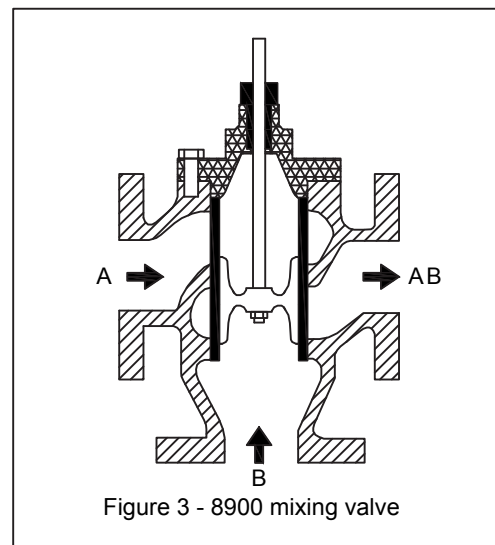
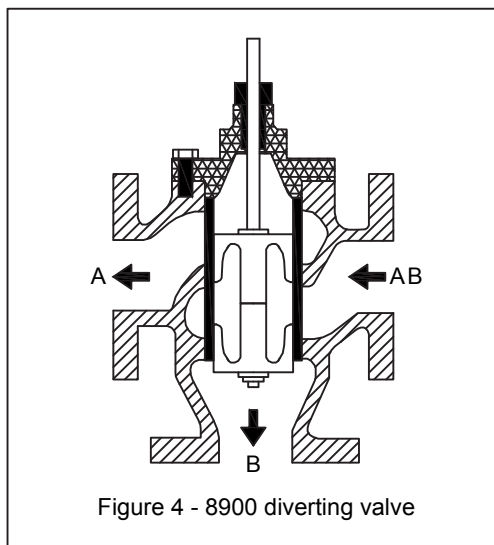
|                |   |
|----------------|---|
| <b>Packing</b> | Screwed Box:<br>Valve sizes: 2-1/2, 3, 4, 5 and 6 inch. Spring-loaded Teflon V-rings.<br>Bolted Box:<br>8-inch valve. Spring-loaded Teflon V-rings. |
|----------------|---|

## Trim

|                     |   |
|---------------------|---|
| <b>Seats</b>        | Replaceable bronze. Both seats held in place by bronze cage and sealed in body by rubber o-rings. |
| <b>Plug</b>         | Bronze; linear characteristic.  |
| <b>Valve Travel</b> | (See Table 2).  |

## Sizing Data

| Table 1 - FLOW COEFFICIENT Cv |                     |     |     |     |     |     |
|-------------------------------|---------------------|-----|-----|-----|-----|-----|
| Plug Type                     | Valve Size (Inches) |     |     |     |     |     |
|                               | 2-1/2               | 3   | 4   | 5   | 6   | 8   |
| Linear                        | 63                  | 100 | 160 | 250 | 360 | 600 |



## ORDERING DATA

### Please Specify:

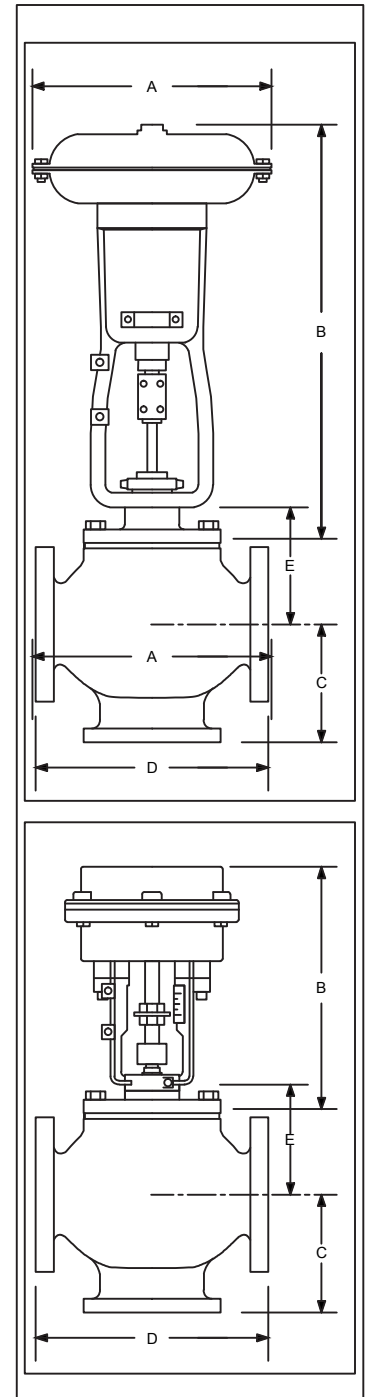
- Valve Model 8601 or 8605 (mixing service)
- Valve Model 8901 or 8905 (diverting service)
- Size
- Body Rating
- Packing
- Spring Range
- Actuator Size
- Action (refer to Table 3)
- Accessories

| TABLE 2 - MAXIMUM PRESSURE DIFFERENTIALS IN CLOSED POSITION |                 |                   |                     |    |    |    |    |    |
|---|-----------------|-------------------|---------------------|----|----|----|----|----|
| Actuator Type, Size & Travel ( )                            | Air Supply Psig | Spring Range Psig | Valve Size (inches) |    |    |    |    |    |
|   |                 |                   | 2-1/2               | 3  | 4  | 5  | 6  | 8  |
| 05<br>(3/4)   | 18              | 3-15              | 15                  | 10 | -  |    |    |    |
|   |                 | 6-12              | 40                  | 25 | -  |    |    |    |
|   | 25              | 9-15              | 50                  | 45 | -  |    |    |    |
| 01-13<br>(1-1/2)  | 18              | 3-15              | -                   | -  | 15 | 9  | 6  |    |
|   | 25              | 7-15              | -                   | -  | 50 | 35 | 24 |    |
| 01-15<br>(2)  | 18              | 3-15              | -                   | -  | -  | -  | -  | 6  |
|   |                 | 3-9               | -                   | -  | -  | -  | -  | 10 |
|   | 40              | 6-30              | -                   | -  | -  | -  | -  | 23 |
| 01-18S<br>(2)   | 18              | 3-15              | -                   | -  | -  | -  | -  | 10 |
|   |                 | 4.5-10            | -                   | -  | -- | -  | -  | 19 |
|   | 25              | 6-16.5            | -                   | -  | -  | -  | -  | 25 |
|   | 40              | 8-29              | -                   | -  | -- | -  | -  | 40 |

| TABLE 3 - VALVE ACTION |  |   |
|------------------------|--|---|
| Type                   | Direct Actuator (increased air signal) | Reverse Actuator (increased air signal) |
| 8600 Mixing            | Closes bottom port                     | Closes top port                         |
| 8900 Diverting         | Closes top port                        | Closes bottom port                      |

**TABLE 4 - MODELS 8601 AND 8901**

| <b>DIRECT ACTUATOR</b>  |               |             |               |                  |                  |                  |                  |             |
|-------------------------|---------------|-------------|---------------|------------------|------------------|------------------|------------------|-------------|
| Valve Size              | Actuator Size | A           | B             | C<br>125<br>Iron | C<br>250<br>Iron | D<br>125<br>Iron | D<br>250<br>Iron | E           |
| 4                       | 13            | 15.0<br>381 | 27.63<br>702  | 8.69<br>221      | 9.5<br>241       | 10.0<br>330      | 14.5<br>368      | 7.5<br>191  |
| 5                       | 13            | 15.0<br>381 | 28.13<br>715  | 9.63<br>245      | 10.18<br>259     | 15.0<br>381      | 16.75<br>425     | 8.0<br>203  |
| 6                       | 13            | 15.0<br>381 | 28.94<br>735  | 10.69<br>272     | 11.18<br>284     | 16.5<br>419      | 18.62<br>473     | 8.8<br>224  |
| 8                       | 15            | 17.5<br>445 | 34.63<br>880  | 14.0<br>356      | 14.62<br>371     | 21.38<br>543     | 22.38<br>568     | 9.25<br>235 |
|                         | 18S           | 20.5<br>521 | 38.13<br>969  | 14.0<br>356      | 14.62<br>371     | 21.38<br>543     | 22.38<br>568     | 9.25<br>235 |
| <b>REVERSE ACTUATOR</b> |               |             |               |                  |                  |                  |                  |             |
| 4                       | 13            | 15.0<br>381 | 30.38<br>772  | 8.69<br>221      | 9.5<br>241       | 13.0<br>330      | 14.5<br>368      | 7.5<br>191  |
| 5                       | 13            | 15.0<br>381 | 30.88<br>784  | 9.63<br>245      | 10.18<br>259     | 15.0<br>381      | 16.75<br>425     | 8.0<br>203  |
| 6                       | 13            | 15.0<br>381 | 31.69<br>805  | 10.69<br>272     | 11.18<br>284     | 16.5<br>419      | 18.62<br>473     | 8.8<br>224  |
| 8                       | 15            | 17.5<br>445 | 38.38<br>975  | 14.0<br>356      | 14.62<br>371     | 21.38<br>543     | 22.38<br>568     | 9.25<br>235 |
|                         | 18S           | 20.5<br>521 | 41.63<br>1057 | 14.0<br>356      | 14.62<br>371     | 21.38<br>543     | 22.38<br>568     | 9.25<br>235 |



**TABLE 5 - MODELS 8605 and 8905**

| Valve Size | Actuator Size | A           | B            | C<br>125<br>Iron | C<br>250<br>Iron | D<br>125<br>Iron | D<br>250<br>Iron | E           |
|------------|---------------|-------------|--------------|------------------|------------------|------------------|------------------|-------------|
| 2-1/2      | 05            | 9.25<br>235 | 15.94<br>405 | 6.44<br>164      | 7.0<br>178       | 9.5<br>241       | 11.5<br>292      | 4.63<br>118 |
| 3          | 05            | 9.25<br>235 | 16.56<br>421 | 6.63<br>168      | 7.5<br>191       | 11.0<br>279      | 12.5<br>318      | 5.25<br>133 |

## REPAIR PARTS LIST

| <b>2 1/2" V5013-B1003 (Mixing)</b> |                    |                 |
|------------------------------------|--------------------|-----------------|
| <b>Description</b>                 | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                             | 30067859 859       | 1               |
| Packing                            | 30041035 854       | 5               |
| O-Ring                             | 30684011 001       | 2               |
| Seat Ring                          | 30067842 905       | 2               |
| Packing Nut                        | 30067857 107       | 1               |
| Spring flange                      | 30041086 107       | 1               |
| Spring                             | 30041084 218       | 1               |
| Stem head                          | 30041088 107       | 1               |
| Stem                               | 30067837 316       | 1               |
| Plug                               | 30067832 760       | 1               |

| <b>3" V5013-C1019 (Diverting)</b> |                    |                 |
|-----------------------------------|--------------------|-----------------|
| <b>Description</b>                | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                            | 30067860 859       | 1               |
| Packing                           | 30041035 854       | 5               |
| O-Ring                            | 30067531 891       | 2               |
| Seat Ring                         | 30067843 905       | 2               |
| Packing Nut                       | 30067857 107       | 1               |
| Spring flange                     | 30041086 107       | 1               |
| Spring                            | 30041084 218       | 1               |
| Stem head                         | 30041088 107       | 1               |
| Stem                              | 30067872 316       | 1               |
| Plug                              | 30067867 760       | 2               |

| <b>2 1/2" V5013-C1001 (Diverting)</b> |                    |                 |
|---------------------------------------|--------------------|-----------------|
| <b>Description</b>                    | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                                | 30067859 859       | 1               |
| Packing                               | 30041035 854       | 5               |
| O-Ring                                | 30684011 001       | 2               |
| Seat Ring                             | 30067842 905       | 2               |
| Packing Nut                           | 30067857 107       | 1               |
| Spring flange                         | 30041086 107       | 1               |
| Spring                                | 30041084 218       | 1               |
| Stem head                             | 30041088 107       | 1               |
| Stem                                  | 30067871 316       | 1               |
| Plug                                  | 30067866 760       | 2               |

| <b>4" V5013-B1029 (Mixing)</b> |                    |                 |
|--------------------------------|--------------------|-----------------|
| <b>Description</b>             | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                         | 30067861 859       | 1               |
| Packing                        | 30041036 854       | 6               |
| O-Ring                         | 30067533 891       | 2               |
| Seat Ring                      | 30067844 905       | 2               |
| Packing Nut                    | 30067858 001       | 1               |
| Spring flange                  | 30041087 107       | 1               |
| Spring                         | 30041085 218       | 1               |
| Stem head                      | 30041089 235       | 1               |
| Stem                           | 30067839 316       | 1               |
| Plug                           | 30067834 760       | 1               |

| <b>3" V5013-B1011 (Mixing)</b> |                    |                 |
|--------------------------------|--------------------|-----------------|
| <b>Description</b>             | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                         | 30067860 859       | 1               |
| Packing                        | 30041035 854       | 5               |
| O-Ring                         | 30067531 891       | 2               |
| Seat Ring                      | 30067843 905       | 2               |
| Packing Nut                    | 30067857 107       | 1               |
| Spring flange                  | 30041086 107       | 1               |
| Spring                         | 30041084 218       | 1               |
| Stem head                      | 30041088 107       | 1               |
| Stem                           | 30067838 316       | 1               |
| Plug                           | 30067833 760       | 1               |

| <b>4" V5013-C1027 (Diverting)</b> |                    |                 |
|-----------------------------------|--------------------|-----------------|
| <b>Description</b>                | <b>Part Number</b> | <b>Qty Req.</b> |
| Gasket                            | 30067861 859       | 1               |
| Packing                           | 30041036 854       | 6               |
| O-Ring                            | 30067533 891       | 2               |
| Seat Ring                         | 30067844 905       | 2               |
| Packing Nut                       | 30067858 001       | 1               |
| Spring flange                     | 30041087 107       | 1               |
| Spring                            | 30041085 218       | 1               |
| Stem head                         | 30041089 235       | 1               |
| Stem                              | 30067873 316       | 1               |
| Plug                              | 30067868 760       | 2               |

## REPAIR PARTS LIST

| 5" V5013-B1037 (Mixing) |              |          |
|-------------------------|--------------|----------|
| Description             | Part Number  | Qty Req. |
| Gasket                  | 30067862 859 | 1        |
| Packing                 | 30041036 854 | 6        |
| O-Ring                  | 30067535 891 | 2        |
| Seat Ring               | 30685316 001 | 2        |
| Packing Nut             | 30067858 001 | 1        |
| Spring flange           | 30041087 107 | 2        |
| Spring                  | 30041085 218 | 1        |
| Stem head               | 30041089 235 | 1        |
| Stem                    | 30067840 316 | 1        |
| Plug                    | 30067835 100 | 1        |

| 6" V5013-C1043 (Diverting) |              |          |
|----------------------------|--------------|----------|
| Description                | Part Number  | Qty Req. |
| Gasket                     | 30067863 859 | 1        |
| Packing                    | 30041036 854 | 6        |
| O-Ring                     | 30067856 891 | 2        |
| Seat Ring                  | 30067849 100 | 2        |
| Packing Nut                | 30067858 001 | 1        |
| Spring flange              | 30041087 107 | 2        |
| Spring                     | 30041085 218 | 1        |
| Stem head                  | 30041089 235 | 1        |
| Stem                       | 30067875 316 | 1        |
| Plug                       | 30067870 100 | 2        |

| 5" V5013-C1035 (Diverting) |              |          |
|----------------------------|--------------|----------|
| Description                | Part Number  | Qty Req. |
| Gasket                     | 30067862 859 | 1        |
| Packing                    | 30041036 854 | 6        |
| O-Ring                     | 30067535 891 | 2        |
| Seat Ring                  | 30685316 001 | 2        |
| Packing Nut                | 30067858 001 | 1        |
| Spring flange              | 30041087 107 | 2        |
| Spring                     | 30041085 218 | 1        |
| Stem head                  | 30041089 235 | 1        |
| Stem                       | 30067874 316 | 1        |
| Plug                       | 30067835 100 | 2        |

| 6" V5013-B1045 (Mixing) |              |          |
|-------------------------|--------------|----------|
| Description             | Part Number  | Qty Req. |
| Gasket                  | 30067863 859 | 1        |
| Packing                 | 30041036 854 | 6        |
| O-Ring                  | 30067856 891 | 2        |
| Seat Ring               | 30067849 100 | 2        |
| Packing Nut             | 30067858 001 | 1        |
| Spring flange           | 30041087 107 | 2        |
| Spring                  | 30041085 218 | 1        |
| Stem head               | 30041089 235 | 1        |
| Stem                    | 30067841 316 | 1        |
| Plug                    | 30067836 100 | 1        |

## Guarantee

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