



## 24VDC FAIL SAFE EXPLOSION PROOF ELECTRIC ACTUATOR

### Features:

- Quarter turn operation (See specs below for models capable of 360 degree rotation)
- Heavy duty motor with thermal overload protection
- Rugged IP68/NEMA 4X aluminum alloy housing
- C3 level corrosion resistance with powder coated, 1000 hours salt spray
- CSA CLS 1 DIV 1 GRP C and D, T5
- Self-locking high strength gear train to keep last known position. High Speed are not self-locking
- Standard ISO5211 direct installation
- Manual override with handwheel
- Installation at any angle
- Heater for eliminating condensation
- Failsafe via Supercapacitor on VZT-1770 and smaller or Lithium Battery on larger sizes
- Over torque protection switch



### Description

VZT series actuators are supercapacitor or battery backup failsafe electric actuators. When power is lost to the actuator, the supercapacitor or battery will drive the actuator to preset fail safe position such as full open or full close. Fail position is field selectable. Actuators are field selectable as on/off control or 4-20ma control except on the VZT-442-20. On/off control requires a negative 24VDC signal to open or close actuator and will move to the failsafe position on loss of 24VDC power. If using 4-20ma control, the actuator will move to the failsafe position on loss of 4-20ma and/or on loss of 24VDC power.

### Specifications

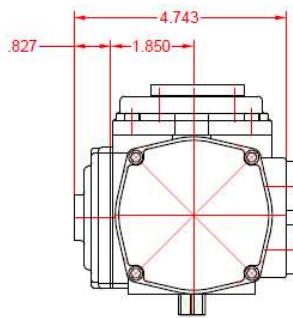
| Standard Speed Type             | VZT-442-20                                                             | VZT-885-15 | VZT-1770-15 | VZT-3540-30 |
|---------------------------------|------------------------------------------------------------------------|------------|-------------|-------------|
| Output Torque in-lbs.           | 442                                                                    | 885        | 1,770       | 3,540       |
| No Load Stroke Time sec         | 20                                                                     | 15         | 15          | 22          |
| Full load Stroke Time sec       | 30                                                                     | 30         | 30          | 30          |
| Rotation Angle                  | 0-110° or 0-360°                                                       | 0-110°     | 0-110°      | 0-110°      |
| Motor Watts                     | 10                                                                     | 40         | 40          | 90          |
| Power                           | 24DC Standard (12VDC and 120VAC Conversion Kits are available)         |            |             |             |
| Rated Current - amps            | 1.5                                                                    | 2.2        | 3.1         | 7.8         |
| Total Weight                    | 6.6 lbs.                                                               | 11 lbs.    | 12.1 lbs.   | 20.9 lbs.   |
| Control Type                    | On/Off or 4-20 Modulating/Modbus                                       |            |             |             |
| Output Singal                   | On/Off has Dry Contacts, Modulating has Dry Contacts and 4-20ma/Modbus |            |             |             |
| Basic Error/Reciprocating Error | not more than $\pm 1\%$ (Modulating Unit)                              |            |             |             |
| Dead Space                      | 0.5%-5.0% adjustable (Modulating Unit)                                 |            |             |             |
| Repeating Error in Actuator     | $\leq 1\%$ (Modulating Unit)                                           |            |             |             |
| Insulating Resistance           | 100M $\Omega$ /500VDC (Modulating Unit)                                |            |             |             |
| Withstand Voltage Class         | 1500VAC 1 minute (Modulating Unit)                                     |            |             |             |
| Electric Interface              | 2-M20*1.5 explosion-proof plug,                                        |            |             |             |
| Ambient Temperature             | -25°C~+55°C                                                            |            |             |             |

| <b>Standard Speed Type</b>      | <b>VZT-5310-45</b>                                                     | <b>VZT-8850-50</b> | <b>VZT-13276-60</b> | <b>VZT-26550-140</b> |
|---------------------------------|------------------------------------------------------------------------|--------------------|---------------------|----------------------|
| Output Torque in-lbs.           | 5,310                                                                  | 8,850              | 13,276              | 26,550               |
| No Load Stroke Time sec DC      | 26                                                                     | 39                 | 48                  | 136                  |
| Full load Stroke Time sec DC    | 45                                                                     | 50                 | 60                  | 170                  |
| Rotation Angle                  | 0-110°                                                                 | 0-110° or 0-360°   | 0-110°              | 0-110° or 0-360°     |
| Motor Watts DC                  | 90                                                                     | 113                | 113                 | 113                  |
| Power                           | 24DC Standard (12VDC and 120VAC Conversion Kits are available)         |                    |                     |                      |
| Rated Current - amps            | 8.0                                                                    | 2.2                | 6.1                 | 7.5                  |
| Total Weight                    | 22 lbs.                                                                | 32 lbs.            | 46 lbs.             | 47 lbs.              |
| Control Type                    | On/Off or 4-20 Modulating/Modbus                                       |                    |                     |                      |
| Output Singal                   | On/Off has Dry Contacts, Modulating has Dry Contacts and 4-20ma/Modbus |                    |                     |                      |
| Basic Error/Reciprocating Error | not more than $\pm 1\%$ (Modulating Unit)                              |                    |                     |                      |
| Dead Space                      | 0.5%-5.0% adjustable (Modulating Unit)                                 |                    |                     |                      |
| Repeating Error in Actuator     | $\leq 1\%$ (Modulating Unit)                                           |                    |                     |                      |
| Insulating Resistance           | 100M $\Omega$ /500VDC (Modulating Unit)                                |                    |                     |                      |
| Withstand Voltage Class         | 1500VAC 1minute (Modulating Unit)                                      |                    |                     |                      |
| Electric Interface              | 2-M20*1.5 explosion-proof plug,                                        |                    |                     |                      |
| Ambient Temperature             | -25°C~+55°C                                                            |                    |                     |                      |

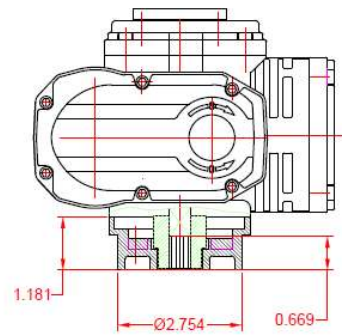
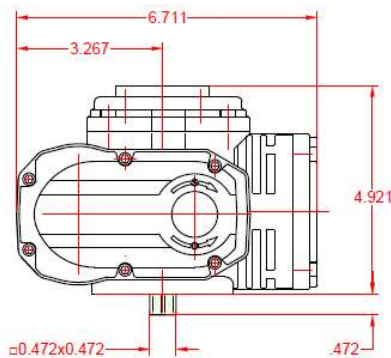
| <b>FAST SPEED Type</b>          | <b>VZT-442-5</b>                                                       | <b>VZT-1770-5</b> | <b>VZT-2655-10</b> | <b>VZT-5310-13</b> |
|---------------------------------|------------------------------------------------------------------------|-------------------|--------------------|--------------------|
| Output Torque in-lbs.           | 442                                                                    | 1,770             | 2,655              | 5,310              |
| No Load Stroke Time sec DC/AC   | 2.2@90 deg                                                             | 4.7 @90 deg       | 9@90 deg           | 13@90 deg          |
| Full load Stroke Time sec DC/AC | 4 @90 deg                                                              | 5 @90 deg         | 10 @90 deg         | 15@90 deg          |
| Rotation Angle                  | 0-110°                                                                 | 0-110°            | 0-110°             | 0-110° or 0-360°   |
| Motor Watts DC/AC               |                                                                        |                   |                    |                    |
| Power                           | 24DC Standard (12VDC and 120VAC Conversion Kits are available)         |                   |                    |                    |
| Rated Current - amps            | 4/0.8/.44                                                              |                   |                    |                    |
| Total Weight                    | 12                                                                     | 22                | 30                 |                    |
| Control Type                    | On/Off or 4-20 Modulating/Modbus                                       |                   |                    |                    |
| Output Singal                   | On/Off has Dry Contacts, Modulating has Dry Contacts and 4-20ma/Modbus |                   |                    |                    |
| Insulating Resistance           | 100M $\Omega$ /500VDC (Modulating Unit)                                |                   |                    |                    |
| Withstand Voltage Class         | 1500VAC 1minute (Modulating Unit)                                      |                   |                    |                    |
| Electric Interface              | 2-M20*1.5 explosion-proof plug,                                        |                   |                    |                    |
| Ambient Temperature             | -25°C~+55°C                                                            |                   |                    |                    |

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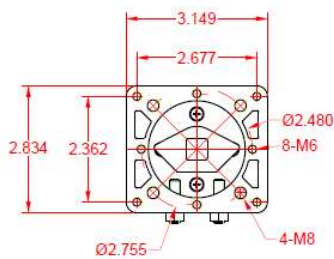
**VZT-442 STANDARD SPEED - Dimensions are inches**



Standard Type

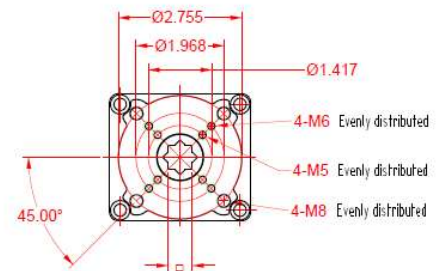


Direct Installation Type

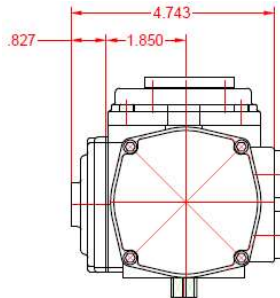


| Parameters for direct installation |                                      |
|------------------------------------|--------------------------------------|
| Square                             | ±0.354x0.354±0.433x0.433±0.551x0.551 |
| Flange                             | F03 F05 F07                          |
| Valve stem                         | Height≤0.669                         |

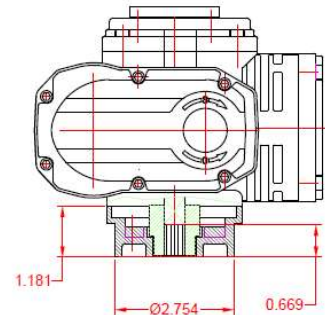
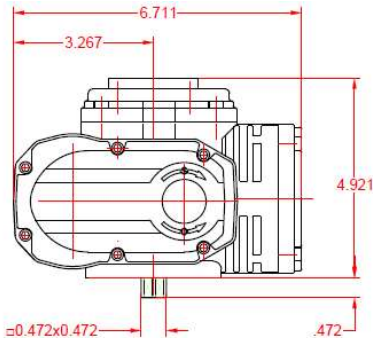
| Bolt Conversion |          |         |
|-----------------|----------|---------|
| Metric          | Imperial |         |
|                 | UNF      | UNC     |
| M5              | 10-32    | 10-24   |
| M6              | 1/4-28   | 1/4-20  |
| M8              | 5/16-24  | 5/16-18 |



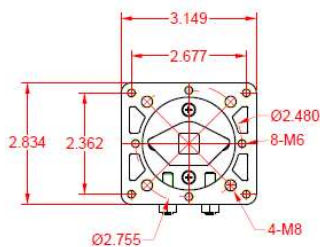
**VT-885 AND VZT-1770 STANDARD - Dimensions are inches**



Standard Type

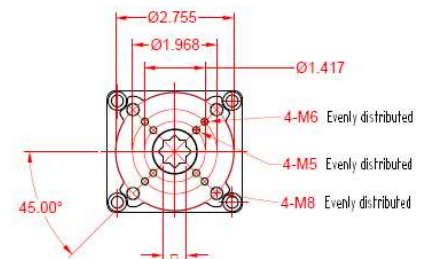


Direct Installation Type

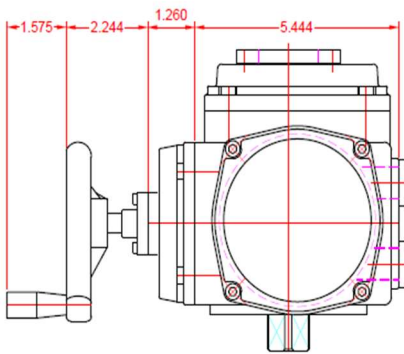


| Parameters for direct installation |                                      |
|------------------------------------|--------------------------------------|
| Square                             | ±0.354x0.354±0.433x0.433±0.551x0.551 |
| Flange                             | F03 F05 F07                          |
| Valve stem                         | Height≤0.669                         |

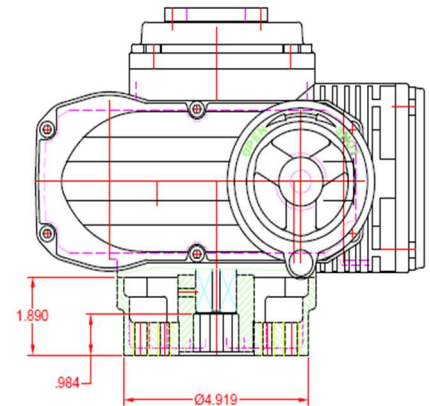
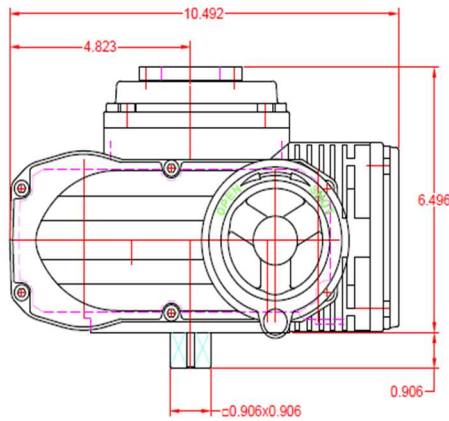
| Bolt Conversion |          |         |
|-----------------|----------|---------|
| Metric          | Imperial |         |
|                 | UNF      | UNC     |
| M5              | 10-32    | 10-24   |
| M6              | 1/4-28   | 1/4-20  |
| M8              | 5/16-24  | 5/16-18 |



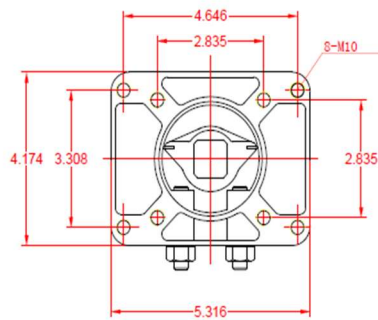
## VT-3540 AND VZT-5310 STANDARD SPEED & VZT-1770 FAST SPEED - Dimensions are inches



Standard Type

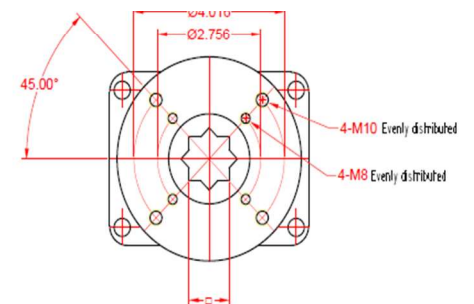


Direct Installation Type



| Parameters for direct installation |                                                         |
|------------------------------------|---------------------------------------------------------|
| Square                             | $\square 0.669 \times 0.669 \square 0.866 \times 0.866$ |
| Flange                             | F07 F10                                                 |
| Valve stem                         | Height $\leq 0.984$                                     |

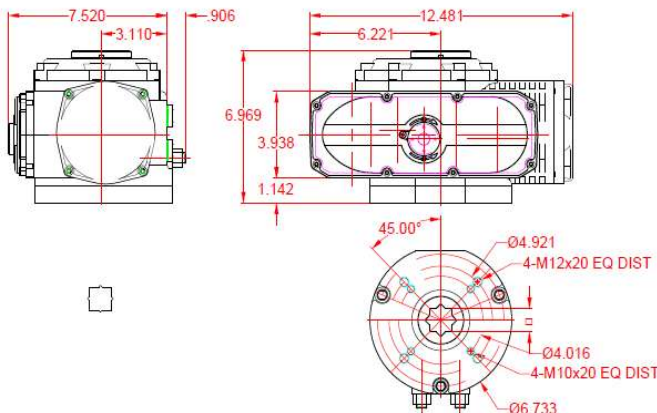
| Bolt Conversion |          |         |
|-----------------|----------|---------|
| Metric          | Imperial |         |
|                 | UNF      | UNC     |
| M8              | 5/16-24  | 5/16-18 |
| M10             | 3/8-24   | 3/8-16  |



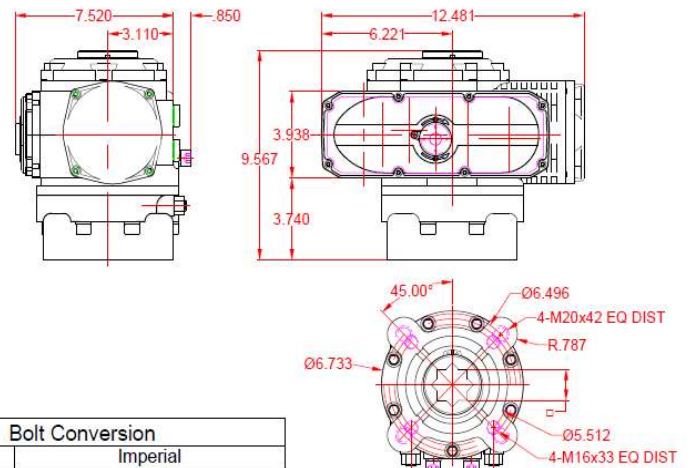
## VT-8850 VZT-13276 VZT-26550 STANDARD SPEED AND FAST SPEED VZT-2655 VZT-5310 - Dimensions are inches

VZT-8850

VZT-13275, VZT-26550, & FAST SPEED VZT-5310



|            | VZT-8850                                                     | VZT-13275/26550                                              |
|------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Square     | $\square 0.866 \times 0.866$<br>$\square 1.063 \times 1.063$ | $\square 1.063 \times 1.063$<br>$\square 1.417 \times 1.417$ |
| Flange     | F10 F12                                                      | F14 F16                                                      |
| Valve Stem | Length $\leq 2.598$                                          | Length $\leq 2.598$                                          |



| Bolt Conversion |          |         |
|-----------------|----------|---------|
| Metric          | Imperial |         |
|                 | UNF      | UNC     |
| M10             | 3/8-24   | 3/8-16  |
| M12             | 7/16-20  | 7/16-14 |
| M16             | 5/8-18   | 5/8-11  |
| M20             | 3/4-16   | 3/4-10  |

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**FOR INQUIRES EMAIL VanZandt Controls.**

[RFQCanyon@vzcontrols.com](mailto:RFQCanyon@vzcontrols.com)

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[RFQTulsa@vzcontrols.com](mailto:RFQTulsa@vzcontrols.com)

[RFQFortWorth@vzcontrols.com](mailto:RFQFortWorth@vzcontrols.com)

[RFQOdessa@vzcontrols.com](mailto:RFQOdessa@vzcontrols.com)

[RFQSanAntonio@vzcontrols.com](mailto:RFQSanAntonio@vzcontrols.com)

[RFQRifle@vzcontrols.com](mailto:RFQRifle@vzcontrols.com)

[RFQHouston@vzcontrols.com](mailto:RFQHouston@vzcontrols.com)

[RFQCarlsbad@vzcontrols.com](mailto:RFQCarlsbad@vzcontrols.com)

[RFQLongview@vzcontrols.com](mailto:RFQLongview@vzcontrols.com)

[RFQHobbs@vzcontrols.com](mailto:RFQHobbs@vzcontrols.com)

[RFQGreeley@vzcontrols.com](mailto:RFQGreeley@vzcontrols.com)

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