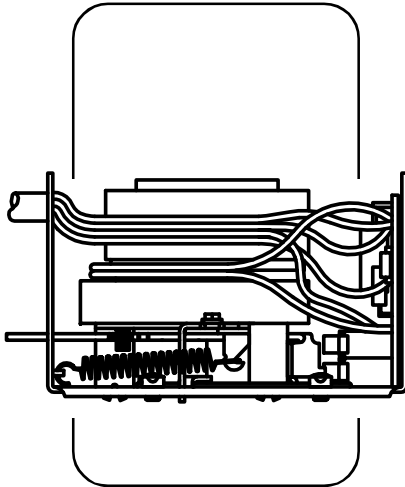


## ☆STAR DAMPERS CORVUS ACTUATOR (DC SERIES)

A Mid-position Damper Actuator.

☆Star dampers are designed primarily for use on cool or warm air ducted systems. ☆Star actuators are compatible and interchangeable with all ☆Star series linkages, dampers and accessories.



Corvus Actuator



### BENEFITS & SPECIAL FEATURES

- Actuator is removable without removing or dismantling the damper housing or vane.
- Actuator is interchangeable with all ☆Star series actuators
- Actuator fits all ☆Star series dampers and may be linked to virtually any other damper.
- Motor is replaceable without removing the actuator
- Convertible Spring Return™ can be set to open or close on power failure
- 0 - 90 degree travel with an electronic stop at 45° with Autostop™ feature
- Very high temperature ratings using optional "F" coil motors
- Digital 4 wire control signal
- 11 second complete cycle time
- Delrin bearing for long life
- Position Indicator
- Auxilliary switch available

### Description

A spring return, 3-position (on, off and mid-position) motorized actuator. Controlled by (two) two-wire thermostats.

### Application

The Corvus ☆Star damper is used where on-off control is required in addition to a half-open position. Applications include but are not limited to the control of duct mounted zone dampers for heating and cooling, humidity control, and industrial and process control. Other applications include fresh air inlets on fan coils, air control for burners, make-up air units and damper dampers.

### Installation Notes

Dampers may be installed without regard to direction. Damper rods may be mounted at any angle but care should be taken to avoid placement of actuator in an inaccessible location, directly above a heating duct if maximum exhaust temperature may be exceeded or where condensation or leaking water could enter the actuator. Several mounting systems and linkages are available.

### Operation

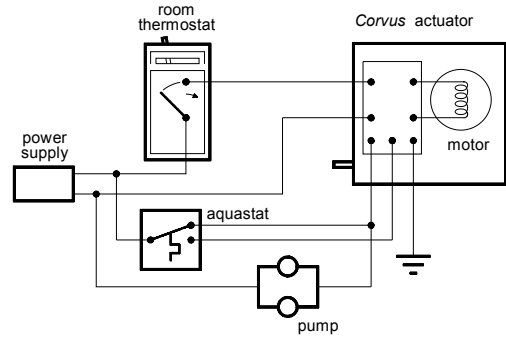
The *Corvus* ☆Star actuator utilizes a synchronous hysteresis motor which drives a shaft in one direction while powered until it reaches a stop. The stop is electronically controlled at the mid-position or physically controlled at either extreme. The motor can remain stalled under power indefinitely in any position. Upon discontinuing power the spring return overcomes the motor and returns the actuator to its "normal" position. An optional auxiliary switch can trigger an external device. The actuator may be replaced or upgraded (and reused elsewhere) to another ☆Star series actuator without disabling the system.

### Warranty

All ☆Star dampers and actuators are warranted against defects in materials and workmanship for a period of 30 months. Some restrictions apply. See complete warranty for details.

## SPECIFICATIONS

POWER REQUIREMENTS .....	either 24 or 240 VAC.	
MINIMUM WIRING REQUIREMENTS .....	18 gauge 90° C.	
<b>ACTUATOR MOTOR</b>		
Power draw requirements .....	6 watts when closed or closing	
Torque (running) .....	62.6 in./oz. (.44 N/M) minimum at 90% of rated power.	
Timing .....	motor cycles in 3 seconds (0.05 min.), spring cycles in 8 seconds (0.1333 min.).	
Characteristics .....	one port is powered open, one port is spring open. Port sharing is controlled electronically under power.	
Type .....	synchronous, hysteresis.	
AUXILIARY SWITCHES .....	snap acting micro switch, 5 amps resistive at 125/250 VAC., N/O contacts. The second switch is used for the mid-position feature.	
WIRE TYPE .....	BX, cable, leads, plenum cable, modular plug-in cable.	
WIRE LENGTH .....	4 - 96", 10 - 244cm.	
TEMPERATURE RATINGS (ambient) .....	class A motor	- 221° F / 105° C
	auxiliary switch	- 185° F / 85° C
GROSS WEIGHT (average)		
Individually packed, actuator only .....	12 ozs. (340g)	

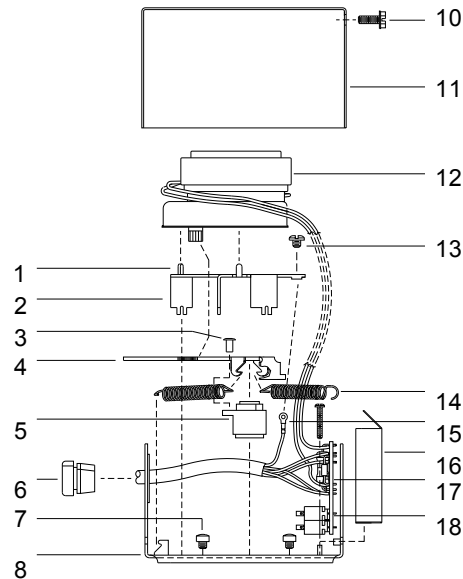


**Wiring Diagram**  
Typical application using (2) two-wire thermostats

## MATERIALS

- |  |                                 |
|--|---------------------------------|
| 1. Motor retainer tab                      | 10. Cover (aluminum)            |
| 2. Motor mounting plate (galvanized steel) | 11. Motor (class B/F)           |
| 3. Eyelet (steel)                          | 12. <i>Ground screw</i>         |
| 4. Sector gear/lever (brass)               | 13. Extension spring            |
| 5. Bushing (Delrin)                        | 14. Ground lug                  |
| 6. <i>Strain relief</i>                    | 15. Insulator shield            |
| 7. Mounting screw                          | 16. PC board                    |
| 8. Frame (galvanized steel)                | 17. Position/auxiliary switches |
| 9. Cover screw                             |                                 |

Items in *italic* type are optional. Other options not shown.



Exploded View

## OPTIONS

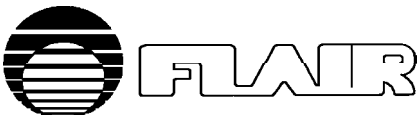
- See power, auxiliary switch, wire type and wire length in "specifications".
- Packaging:** Actuators may be ordered assembled with a damper, individually packed. Actuators may also be ordered separately and bulk packed with like actuators or in mixed lots of 24.
- Deluxe:** All actuators are available in a deluxe model suitable for harsh and high humidity environments. Upgrade includes: stainless steel: springs and screws, sealed auxiliary switch, and heavy duty condensate protected motor.

## REFERENCE

For more information on:  
compatible dampers  
other ☆Star damper actuators  
mounting and linkage accessories  
other Flair products  
reference material  
weight & shipping information  
suggested pricing

See:  
damper pages  
actuator pages (this section)  
actuator pages (this section)  
other sections  
appendix  
appendix  
pricing section

Flair pursues a policy of constant improvement. For this reason, all specifications are subject to change without notice.



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