

# Activair™ Differential Engine

The Vapor Activair™ Differential Engine incorporates new features for improved performance, easier, less costly maintenance, greater reliability and enhanced passenger security.

**NEW Features**  
*Improved Performance*



**NEW**

**Optional locking mechanism secures engine, even if air pressure is lost**

- Solid state sensors include visual status indication
- Mechanical release allows rapid emergency egress

**NEW**

**Fixed position DOOR CLOSED sensor**

- Faster, more consistent door system setup and adjustment
- No chance for adjustment drift
- Highly reliable proximity sensor

**NEW**

**Relocated speed and cushioning adjustments – NO TOOLS NEEDED**

- Easier access at end of large end cap
- Faster, more precise adjustment
- End cap available separately for upgrade of existing door engines

**NEW**

**Adjustable cushioning onset**

- Precisely matches cushioning to the door system and permits optimizing door opening speed while preventing slamming
- Eliminates unnecessary wear on door system components
- Potential for dwell time reduction

**NEW**

**Removable teeter lever**

- Simplifies engine rebuilding or replacement
- Reduces parts inventory because engine assembly is no longer specific to bus application.

The BEST keeps getting BETTER

# Activair™ Differential Engine

## FEATURES

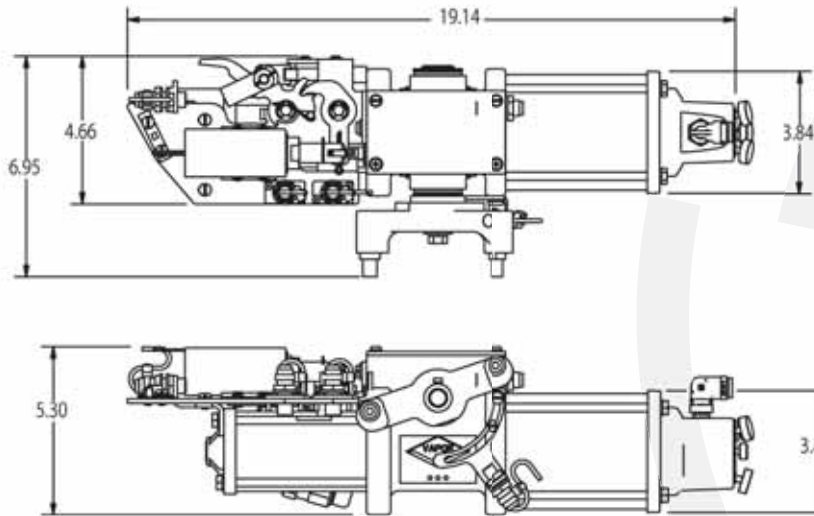
- Adjustable cushioning onset
- Finger screws for door speed adjustments
- Solid-state, non-contact proximity switches
- Door closed signal (inductive type sensor), non-adjustable
- Swivel tube fittings: NTA, DOT approved

## OPTIONAL

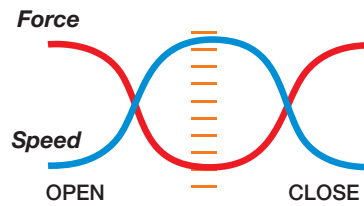
- Integral mechanical lock

## TECHNICAL SPECIFICATIONS

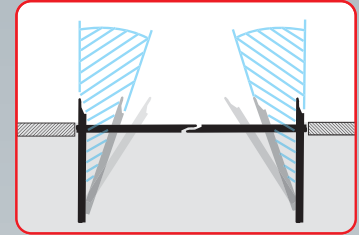
- **Operating pressure:** 90 to 120 psi
- **Output shaft rotation:**  $153 \pm 2^\circ$  of rotation
- **Output torque:** 50 ft. lbs. @ 120 psi
- **Operating voltage:** 12 - 24 VDC Nominal
- **Opening time:** Adjustable 1.5 to 3.5 seconds
- **Closing time:** Adjustable 1.5 to 3.5 seconds
- **Operating temperature:** -40°F to 145°F (-40°C to 63°C)
- **Design life:**
  - 1,000,000 door cycles
  - 500,000 miles
  - 12 years



## Force versus Speed Curves



Vapor's transit-tested pneumatic differential engine provides maximum velocity and minimum force in the mid-point of its range of motion, and maximum force and minimum speed at the extremes of its motion.



**NEW** Adjustable Cushioning Range for precise door open speed adjustment

Upgrade kits and unit exchange program available. Contact your Vapor representative for more information.



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