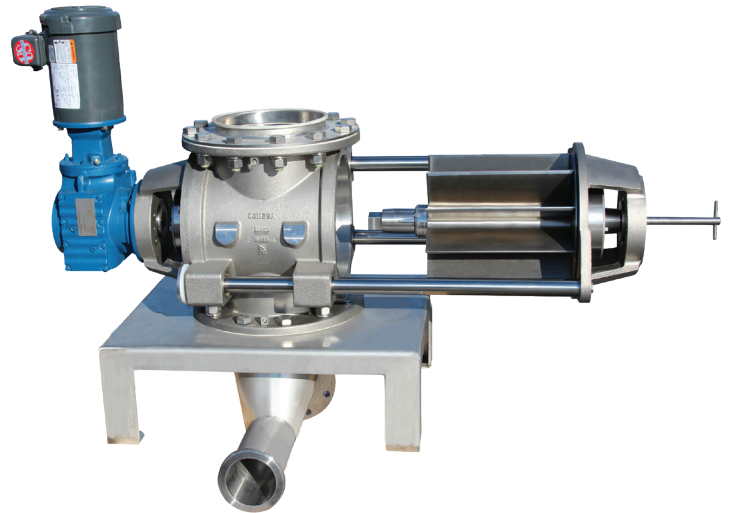


# Global Cleanable Airlock (GCA)

- Oversized rotor shaft creates a naturally radiused rotor pocket for more complete product release
- Differential pressure up to 1.5 barg is possible without manipulating standard design or clearances
- Available design for NFPA 69 blocking valve requirements
- FDA materials of construction in product contact areas
- Available with integral rail system for endplate and rotor



## Application

The GCA and GCA-D (dismountable) airlocks are ideal for applications where dry raw or finished products are being handled in the process and where inspection or system clean-out are required. Because the GCA is designed for high process rates and possesses a number of features suited for sanitary processes the airlock is perfect for food and pet food applications. Processes requiring frequent color change-outs that are found in plastics and pigment production are another fit for the GCA.

## Equipment

### GCA

The standard GCA is a round inlet, round outlet rotary valve which incorporates seals and product contact surfaces which meet food safety requirements. Endplates and rotor can be disassembled and removed from the valve housing for cleaning. The endplates have specifically been designed for access to the seal area for cleaning or seal replacement. Upon reassembly, the rotor end clearances can be adjusted and set through by use of the integral adjustment screws included in each

endplate. Though thorough cleaning is possible, the standard GCA is intended for applications where frequent access to the valve components is not required.

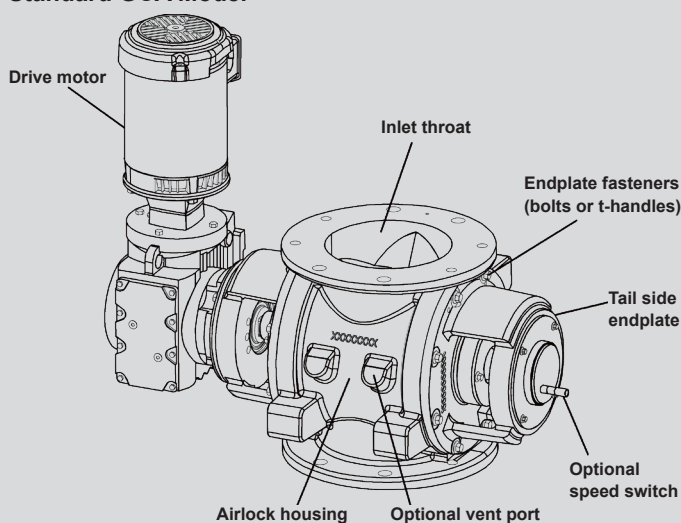
### GCA-D

For applications which require frequent access to the valve Schenck Process offers the demountable model GCA-D. The GCA-D is designed with a rail system consisting of externally mounted precision shafts which are fixed to the tail side endplate on one end and are supported by special composite linear bearings pressed into the valve housing on the other. The endplate/rotor assembly can be unbolted from the housing and the assembly can be pulled from the housing and drive coupling while still remaining rigid to the housing via the rail system. These features simplify removal and provide access to the internal valve cavity, rotor pockets and all other product contact areas for quick and easy cleaning. Once the cleaning process is complete, the endplate/rotor assembly simply slides back into place through use of the rail system and is secured with the supplied fasteners. The GCA-D includes all the same functionality as the GCA.

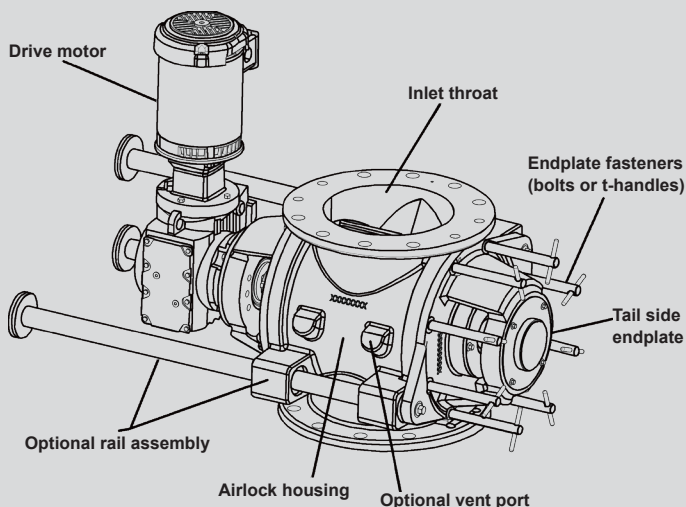
### Features and benefits

- Rugged construction with rotor design providing adequate resistance to deformation at any pressure within the intended use
- Easy access to seals with rotor removed from the endplate
- All stainless steel construction (endplate bearings are an exception)
- Housing and endplates designed for 10 Bar explosion shock resistance (requires additional testing prior to shipment)
- Inner endplate bearings can be replaced without full disassembly of the endplate from the valve
- The valve's ability to resist deflection in the rotor during operation makes it suited for applications where convey pressure or vacuum could vary
- Close clearance design reduces overall leakage through the valve and minimizes pneumatic system losses

### Standard GCA Model



### GCA-D Demountable Model



### Options

- 1/16" fixed relieved tip rotor blades
- Closed end rotor
- Seal air purge kit with flow meter for each endplate
- Cavity air purge kit with flow meter for each endplate (closed end only)
- Housing vent ports drilled and tapped for customer connection
- Reduced volume open end rotor pockets (25% and 50% volume reduction only)
- Reduced volume closed end rotor pockets (15%, 30%, 40%, 50%, 60%, 75% volume reduction)
- NEMA and IEC motors provided by US
- Variety of internal finishes from CG120 rotor weld finish to a full polish on all wetted parts
- Shear protector, less vent, with upper and lower ANSI flanges and integral cone which extends inside the GCA housing to within 1/8" of the rotor O.D. (Lower flange I.D. to fit cone intersection so that there are no internal cavities)
- Round ANSI flange style blow through adapter
- Table style airlock support skid with integrated blow through adapter with ANSI flanges (welded to table)
- Safety switch for use on GCA-D configurations to indicate when tail endplate has been disengaged
- Speed sensor in tail end cover

## Options

- Rotor Assist Device (RAD), two-hand controlled pneumatic system including filter/regulator
  - Available for GCA16-D, GCA14-D, and GCA12-D demountable models
  - Fabricated from 304 SS
  - Square ACME threads

## Actuator Specifications:

- 22 In/Min Linear Speed
- No lubrication

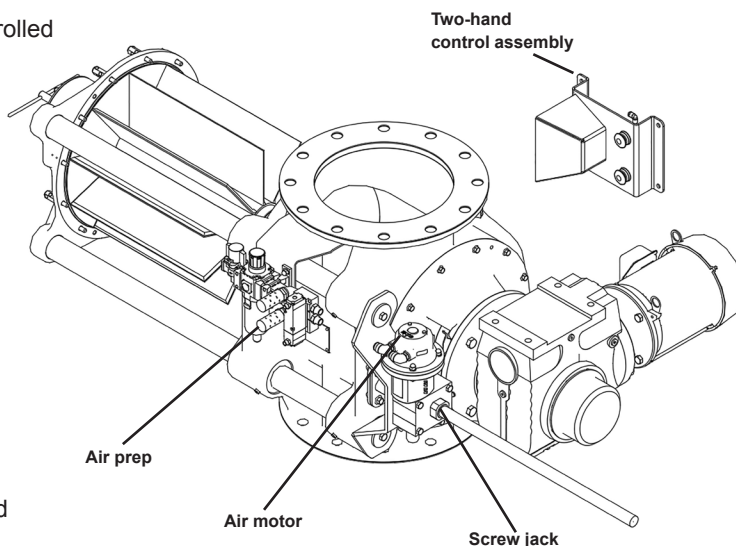
## Pneumatic Specifications:

- 60 PSIG recommended pressure
- 100 PSIG maximum pressure
- 64 SCFM maximum consumption

## Two-hand control assembly:

- Required for RAD Actuation

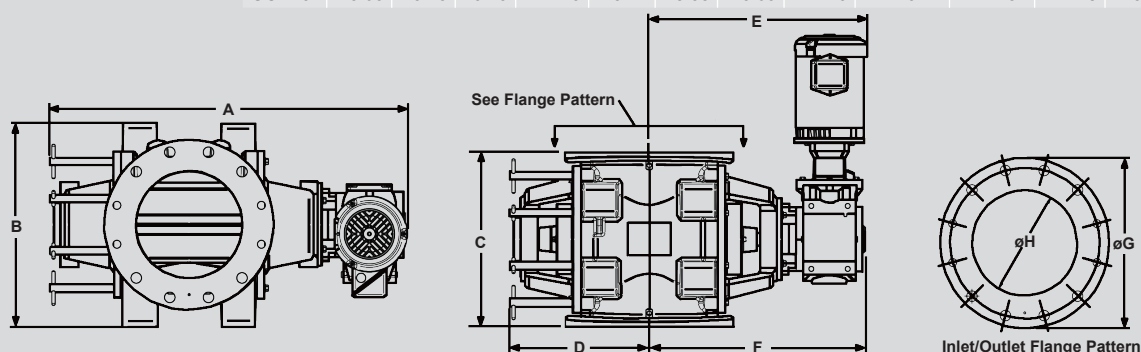
Available as both a new accessory and a field retrofit for GCA16/14/12-D model airlocks.



# Dimensions (inches)

## Standard GCA Model with Drive and No Rails – Global Cleanable Airlock (ANSI Flange)

Model	Dimensions (inches)										Motor (HP)	Weight (lbs.)
	A	B	C	D	E	F	G	H	CFR OE	CFR CE		
GCA6	28.63	13.38	12	11.25	17.38	16.81	11.25	6	0.213	0.167	0.75	350
GCA8	30.56	15.5	13.88	11.75	18.88	18.63	13.5	8	0.352	0.320	0.75	625
GCA10	34.13	19.25	16.5	13.31	20.81	20.56	16.13	10	0.66	0.610	1	697
GCA12	37.38	26.5	21.5	14.5	23.06	23.69	19.13	12	1.42	1.30	2	1463
GCA14	44.38	28.38	26.75	16.88	27.81	27.69	21.13	14	2.35	2.16	3	2051
GCA16	45.63	32.5	29.13	17.5	28.44	28.38	23.63	16	3.22	2.87	5	3244



## Standard specifications

### 1. Airlock Specifications:

- Cast 316 SS housing and endplates
- Food grade rotary lip seals
- Deep groove, sealed, ball bearings

### 2. Rotor Specifications:

- Fabricated from 304 SS
- Straight blade

### 3. Reducer Specifications:

- Manufacturer: Eurodrive
- Style: Helical worm gear, with right angle c-face adapter

### 4. Motor Specifications:

- NEMA motor design

### 5. Accessories:

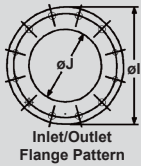
- Zero speed sensor
- Air purge kit
- Shear protection (inlet)
- Blow through (outlet)

### 6. Weights in table:

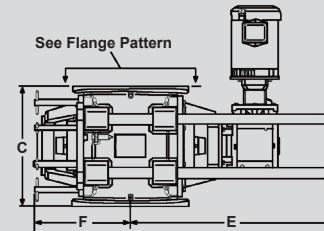
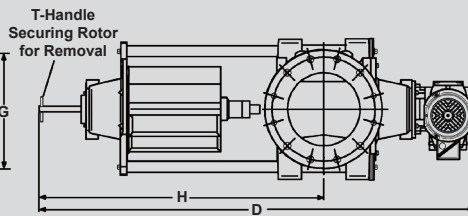
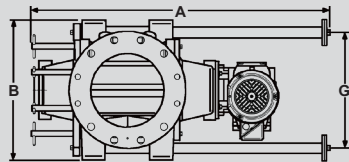
- Calculated with closed end rotor (not shown)

# Dimensions (inches)

## Standard GCA Model with Drive and Rails – Global Cleanable Airlock (ANSI Flange)



Model	Dimensions (inches)												Motor (HP)	Weight (lbs.)
	A	B	C	D	E	F	G	H	I	J	CFR OE	CFR CE		
GCA6	37.25	13.38	12	54.38	25.5	11.25	11.38	37	11.25	6	0.213	0.167	0.75	371
GCA8	37.25	15.5	13.88	55.19	25.5	11.75	13.25	36.38	13.5	8	0.352	0.320	0.75	652
GCA10	41.25	19.25	16.5	60.19	27.94	13.31	15.94	39.38	16.13	10	0.66	0.610	1	714
GCA12	46.44	26.5	21.5	66.81	32	14.5	21.19	43.75	19.13	12	1.42	1.30	2	1579
GCA14	54.56	28.38	26.75	77.69	37.75	16.88	23.88	49.94	21.13	14	2.35	2.16	3	2277
GCA16	58.38	32.5	29.13	81.19	40.94	17.5	27.25	52.75	23.63	16	3.22	2.87	5	3610



### Standard specifications

#### 1. Airlock Specifications:

- Cast 316 SS housing and endplates
- Food grade rotary lip seals
- Deep groove, sealed, ball bearings

#### 2. Rotor Specifications:

- Fabricated from 304 SS
- Straight blade
- Open or closed end

#### construction

- Fixed relieved 1/8" or 1/16" land
- Counter clockwise rotation (drive end)

#### 3. Rail specifications:

- Plain linear bearings (press fit)
- Stainless steel rails

#### 4. Reducer Specifications:

- Manufacturer: Eurodrive
- Style: Helical worm gear, with

#### right angle c-face adapter

#### 5. Motor Specifications:

- NEMA motor design

#### 6. Accessories:

- Zero speed sensor
- Air purge kit
- Shear protection (inlet)
- Blow through (outlet)

#### 7. Weights in table:

- Calculated with closed end rotor (not shown)