

Application

The Heavy-Duty (HD) Aerolock™ is engineered for heavy duty industrial service and high volumetric efficiency at up to 1.0 bar(g) [15 psi(g)] pressure differential and temperatures up to 107.2°C [225°F]. When used in a conveying system, the pressure differential limit is 0.8 bar(g) [12 psi(g)].

Design

The HD has an eight-blade rotor that maintains a minimum two-blade labyrinth seal to minimize air leakage. The eight-blade rotor is available with flat or relieved tips in several rotor choices. The HD utilizes a single radial ball bearing on the drive side and two tapered roller bearings on the thrust side.



Technical Data

Standard Mechanical Specifications

- Round or square inlet/outlet flange patterns
- Cast iron or stainless steel housing; stainless steel for round models only
- Cast iron or stainless steel end plates
- Carbon steel or stainless steel rotors
- Outboard bearings

Drive

- Right angle
- 460 volt , 3 - phase, inverter ready
- TEFC enclosure
- OSHA protective guarding

Model Size	76	98	1110	1312	1514	1716
Basic Valve Size mm [in]	152 [6]	203 [8]	254 [10]	305 [12]	356 [14]	406 [16]
Rotor End Configuration	Open	Open	Open	Open	Open	Open
Displ. dm³/Rev. [ft³/Rev.]	2.8 [0.10]	6.8 [0.24]	13 [0.46]	22 [0.79]	35 [1.23]	52 [1.85]
Maximum Allowable Torque in Nm [lbf.in]	118 [1045]	118 [1045]	249 [2200]	441 [3900]	441 [3900]	441 [3900]
Unit Weight in kg [lb] without drive	35 [77]	59 [129]	97 [214]	144 [318]	213 [469]	268 [590]
Unit Weight in kg [lb] with drive	75 [165]	96 [213]	140 [309]	180 [397]	249 [549]	346 [763]
Inverter Ready Drive kW [HP]	0.37 [0.5]	0.37 [0.5]	0.55 [0.75]	0.75 [1]	0.75 [1]	1.1 [1.5]

Options

Shaft Seals

- T3: Two quad ring Buna-N seals on a PTFE insert
- Lip: Double spring loaded seal
- Air Purge: Compressed air defuser followed by a standard seal

Rotor (eight-blade)

- Standard flat or relieved tips
- Open-ended
- Hubbed (closed)
- Reduced Displacement
- Staggered Pocket
- Flexible tip (six blade)

Coating

- Chrome
- Tungsten carbide
- Nedox (FDA approved)
- Nickel (electroless)
- Other coatings available

Flanges

- ANSI
- DIN
- Custom

High Temperature

- Standard unit max. 107.2°C [225°F]
- High temperature option for max. 121°C [250°F]

Drives

- Right angle or parallel
- Direct or indirect transmission (chain or belt)
- CE compliant

Electrical

- Consult factory for NEC or ATEX classifications available

Tool Kits

Required for field installation of seals and bearings. The tool kit can improve the Aerolock performance by reducing premature wear caused by improper seal and bearing installation.

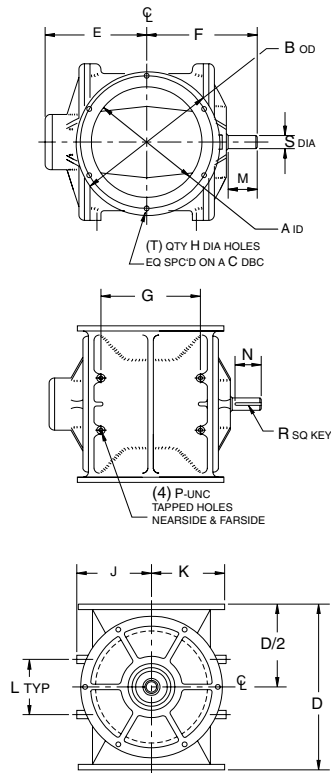
HD tool kit includes:

- (1) seal driver tool for installing T3 seals, T3 inserts and lip seals
- (1) expansion tool to assist the installation of the T3 inserts
- (1) bearing driver tool for installing drive and bearings
- (1) bearing driver tool for installing thrust end bearings

Accessories

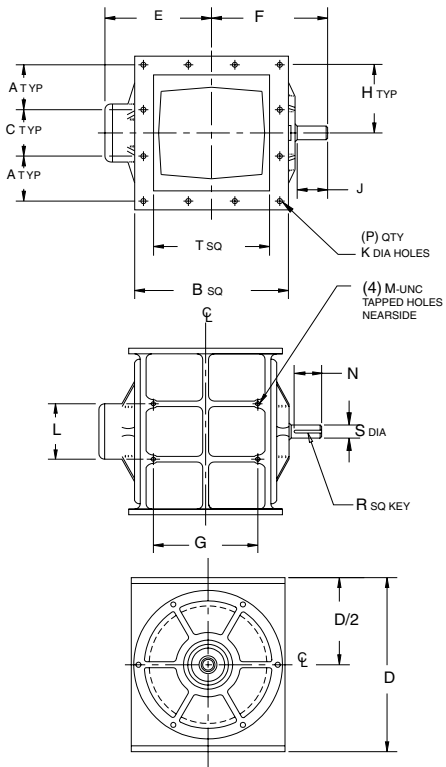
A complete line of accessories is available for Coperion K-Tron Aerolock rotary valves: variable frequency drive controller, disconnect panel, outlet adapters, shear protectors, maintenance slide gates, sight glasses, outlet guards, surge hoppers, floor support stands, flanged transitions and custom transitions allowing an easy fit into an existing facility.

Dimensions of HD Round AeroLock™ mm [in]



Size	76	98	1110	1312	1514	1716
A	152 [6]	203 [8]	254 [10]	305 [12]	356 [14]	406 [16]
B	216 [8.5]	267 [10.5]	330 [13]	394 [15.5]	445 [17.5]	508 [20]
C	191 [7.5]	241 [9.5]	305 [12]	362 [14.25]	413 [16.25]	470 [18.5]
D	267 [10.5]	305 [12]	381 [15]	457 [18]	533 [21]	610 [24]
E	186 [7.313]	210 [8.25]	233 [9.188]	268 [10.563]	295 [11.625]	321 [12.625]
F	184 [7.25]	210 [8.25]	260 [10.25]	286 [11.25]	308 [12.125]	340 [13.375]
G	127 [5]	178 [7]	229 [9]	279 [11]	330 [13]	381 [15]
H	11 [0.438]	11 [0.438]	11 [0.438]	14 [0.563]	14 [0.563]	14 [0.563]
J	111 [4.375]	143 [5.625]	172 [6.75]	203 [8]	238 [9.375]	267 [10.5]
K	108 [4.25]	133 [5.25]	165 [6.5]	197 [7.75]	222 [8.75]	254 [10]
L	76 [3]	102 [4]	127 [5]	152 [6]	178 [7]	203 [8]
M	46 [1.813]	41 [1.625]	67 [2.625]	67 [2.625]	76 [3]	76 [3]
N	38 [1.5]	38 [1.5]	60 [2.375]	64 [2.5]	64 [2.5]	64 [2.5]
P	[0.375]	[0.375]	[0.375]	[0.375]	[0.375]	[0.375]
R	6 [0.25] SQ Key	6 [0.25] SQ Key	6 [0.25] SQ Key	10 [0.375] SQ Key	10 [0.375] SQ Key	10 [0.375] SQ Key
S	24 [0.938]	24 [0.938]	30 [1.188]	37 [1.438]	37 [1.438]	37 [1.438]
T	6	6	6	6	12	12

Dimensions of HD Square AeroLock™ mm [in]



Size	76	98	1110	1312	1514	1716
A	67 [2.625]	83 [3.25]	98 [3.875]	121 [4.75]	130 [5.125]	152 [6]
B	229 [9]	279 [11]	330 [13]	406 [16]	457 [18]	508 [20]
C	64 [2.5]	83 [3.25]	102 [4]	121 [4.75]	152 [6]	159 [6.25]
D	254 [10]	318 [12.5]	381 [15]	457 [18]	533 [21]	610 [24]
E	194 [7.625]	210 [8.25]	233 [9.188]	268 [10.563]	295 [11.625]	321 [12.625]
F	184 [7.25]	210 [8.25]	260 [10.25]	286 [11.25]	308 [12.125]	340 [13.375]
G	127 [5]	178 [7]	229 [9]	279 [11]	330 [13]	381 [15]
H	98 [3.875]	124 [4.875]	149 [5.875]	181 [7.125]	206 [8.125]	232 [9.125]
J	46 [1.813]	41 [1.625]	67 [2.625]	65 [2.563]	76 [3]	76 [3]
K	11 [0.438]	11 [0.438]	11 [0.438]	14 [0.563]	14 [0.563]	14 [0.563]
L	76 [3]	102 [4]	127 [5]	152 [6]	178 [7]	203 [8]
M	[0.375]	[0.375]	[0.375]	[0.375]	[0.375]	[0.375]
N	38 [1.5]	38 [1.5]	60 [2.375]	64 [2.5]	64 [2.5]	64 [2.5]
P	12	12	12	12	12	12
R	6 [0.25] SQ Key	6 [0.25] SQ Key	6 [0.25] SQ Key	10 [0.375] SQ Key	10 [0.375] SQ Key	10 [0.375] SQ Key
S	24 [0.938]	24 [0.938]	30 [1.188]	37 [1.438]	37 [1.438]	37 [1.438]
T	152 [6]	203 [8]	254 [10]	305 [12]	356 [14]	406 [16]

Caution: Measurements are for general reference only. Please consult dimensional drawing for exact measurements.