Bell & Gossett
xylem

Submittal
A-326.7H

Job: **Representative:**

Unit tag: _____ Order number: _____ Date: _____
Engineer: _____ Submitted by: _____ Date: _____
Contractor: _____ Approved by: _____ Date: _____



Rolairtrol®

Air separator

Flanged with strainer air control and elimination

Description

The Rolairtrol air separator is an ASME vessel designed with tangential openings to create a low velocity vortex where air is separated and removed from the circulating water.

- **Maximum working pressure:** 125 PSIG (862 kPa)
- **Temperature adjustment range:** -20°F (-29°C) to +350°F (177°C)

Consult factory for higher working pressures and temperatures.

Materials of construction

- **Designed and constructed per ASME Section VIII, Division 1**
- **Shell:** Carbon steel
- **System strainer:** 304 stainless steel with 3/16” (4.8mm) diameter perforations and 51% open area

Schedule

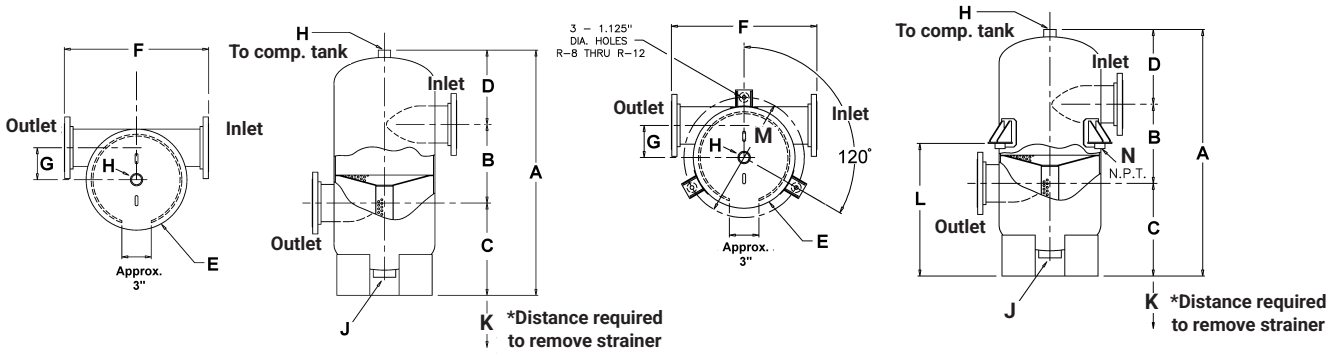
Model number	Part number	Capacity	Flanged tangential opening	Tagging information	Quantity
		GPM (m^3/hr)	in. (mm.)		
5360-03F-12-003	R-3F	190 (43.2)	3 (76.2)		
5360-04F-12-003	R-4F	300 (68.1)	4 (101.6)		
5360-05F-12-003	R-5F	500 (113.6)	5 (127.0)		
5360-06F-12-003	R-6F	700 (159.0)	6 (150.0)		
5360-08F-12-003	R-8F	1,300 (295.2)	8 (203.2)		
5360-10F-12-003	R-10F	2,000 (454.2)	10 (254.0)		
5360-12F-12-003	R-12F	2,750 (624.5)	12 (300.0)		
5360-14F-12-010	R-14F	3840 (872)	14 (355.6)		
5360-16F-12-010	R-16F	5015 (1,140)	16 (406.4)		
5360-03F-12-004	R-3FB	190 (43.2)	3 (76.2)		
5360-04F-12-004	R-4FB	300 (68.1)	4 (101.6)		
5360-05F-12-004	R-5FB	500 (113.6)	5 (127.0)		
5360-06F-12-004	R-6FB	700 (159.0)	6 (150.0)		
5360-08F-12-004	R-8FB	1,300 (295.2)	8 (203.2)		
5360-10F-12-004	R-10FB	2,000 (454.2)	10 (254.0)		
5360-12F-12-004	R-12FB	2,750 (624.5)	12 (300.0)		
5360-14F-12-011	R-14FB	3840 (872)	14 (355.6)		
5360-16F-12-011	R-16FB	5015 (1,140)	16 (406.4)		

Model numbers with a B suffix include bracket supports.

Dimensions and weights

Model number	A	B	C	D	E	F	G	H	J	K	L*	M*	N*	Cv
	in. (mm.)													
R–3F (B)	26-7/8 (683)	8 (203)	10-13/16 (275)	8-1/16 (205)	10-3/4 (273)	22-3/4 (578)	3-5/8 (92)	1-1/4 (32)	3 (76)	12 (305)	13-3/8 (340)	14 (356)	2 (51)	119
R–4F (B)	31-7/16 (799)	10 (254)	11-15/16 (303)	9-1/2 (241)	12-3/4 (324)	20-1/2 (521)	4-1/8 (105)	1-1/2 (38)	3 (76)	14 (356)	15-3/8 (391)	16 (406)	2 (51)	257
R–5F (B)	37 (940)	12 (305)	14-1/16 (357)	10-15/16 (278)	16 (406)	23-3/4 (603)	5-1/4 (133)	1-1/2 (38)	3 (76)	16 (406)	18-1/2 (470)	19-3/8 (492)	2 (51)	398
R–6F (B)	44-1/16 (1119)	14 (356)	16-13/16 (427)	13-1/4 (337)	18 (457)	25-3/4 (654)	5-11/16 (144)	1-1/2 (38)	3 (76)	19 (483)	22-1/8 (562)	21-1/4 (540)	2 (51)	632
R–8F (B)	54 (1372)	18 (457)	19-7/16 (494)	16-9/16 (421)	24 (610)	31-3/4 (806)	7-11/16 (195)	2 (51)	3 (76)	23 (584)	26 (660)	29-1/2 (749)	2 (51)	1,020
R–10F (B)	64-11/16 (1643)	22 (559)	22-5/8 (575)	20-1/16 (510)	30 (762)	37-3/4 (959)	9-5/8 (244)	2 (51)	3 (76)	28 (711)	31-5/8 (803)	35-1/2 (902)	2 (51)	1,789
R–12F (B)	75-3/8 (1915)	27 (686)	25-3/4 (654)	22-5/8 (575)	36 (914)	46-3/4 (1187)	11-5/8 (295)	2 (51)	3 (76)	31 (787)	37-5/8 (965)	41-1/2 (1054)	2 (51)	2,665
R–14F(B)	92-1/8 (2,340)	31-1/2 (800)	34-3/4 (883)	25-7/8 (657)	42 (1067)	54-1/2 (1,384)	14 (356)	2 (51)	3 (76)	32-1/2 (826)	48 (1,219)	48-1/2 (1,232)	3 (76)	3,400
R–16F(B)	104 (3,642)	36 (914)	37-3/4 (959)	30-1/4 (768)	48 (1,219)	62-1/2 (1,588)	16 (406)	2 (51)	3 (76)	40 (1,016)	50 (1,270)	54-1/2 (1,384)	3 (76)	4,200

**Indicates measurements for models that have optional support brackets*



Model number	Strainer free area	Approx. volume	Approx. shpg. wt.	Flood wt. less bracket	Bracket wt.†
	in² (mm²)	gallons (ltrs.)	lbs. (kgs.)		
R–3F (B)	90 (58,064)	7 (26)	130 (59)	188 (85)	9 (4)
R–4F (B)	120 (77,419)	13 (49)	170 (77)	278 (126)	9 (4)
R–5F (B)	165 (106,451)	25 (95)	220 (100)	429 (194)	9 (4)
R–6F (B)	205 (132,258)	34 (129)	295 (134)	579 (262)	9 (4)
R–8F (B)	325 (209,677)	90 (341)	460 (209)	1,211 (549)	30 (14)
R–10F (B)	475 (306,451)	150 (568)	845 (383)	2,097 (951)	30 (14)
R–12F (B)	645 (416,128)	291 (1101)	1160 (526)	3,588 (1627)	30 (14)
R–14F(B)	715 (461,286)	470 (1,779)	1,775 (805)	5,715 (2,592)	56 (25)
R–16F(B)	919 (592,902)	723 (2,737)	2,417 (1,096)	8,450 (3,833)	56 (25)

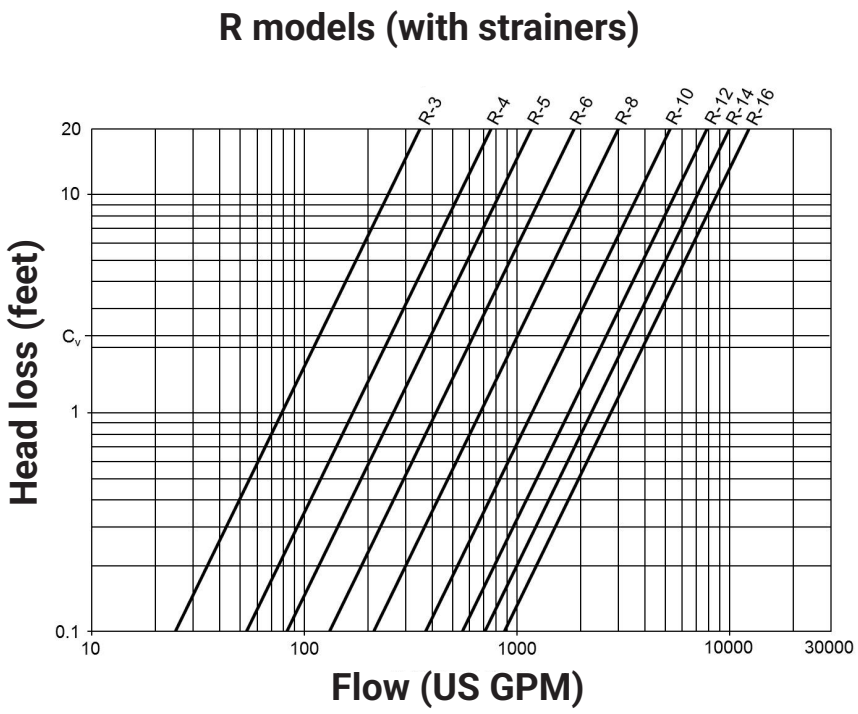
†Bracket weight should be added to flood weight and approximate shipping weight for models that are being supplied with optional support brackets.

Important note: Dimensions are not to be used for construction.

Support notes

1. Consult IOM A85524 for safety and service instructions.
2. Model “R” Rolairtrol air separators have strainers which must be removed and cleaned after 24 hours operation, 30 days operation and as required to maintain proper system air separation. Before installing the model “R” Rolairtrol, refer to (K) in the dimensions and weights table, which notes minimum distances to be maintained between the blowdown connection and the floor or other equipment for strainer removal.
3. Lifting lugs are for the transportation and installation of the empty vessel, and are not to be used for complete or partial support of the flood vessel.
4. The R model skirt can support the flooded weight of the vessel. Strainer Models require adequate floor clearance of skirt for removal of strainer.
5. Welding to the pressure vessel boundary will void the ASME stamp.
6. Standard Rolairtrol design up to 12” can be hung from the nozzles using hangers. Optional, factory welded, support brackets are available for an additional cost.

Performance chart



Note: Pressure drops for a range of flow are indicated on this chart. Users should select Rolairtrol using Bell & Gossett published capacity guidance, and ASHRAE pipe sizing recommendations for optimal performance.

Typical Rolairtrol specifications

Furnish and install, as shown on plans, a centrifugal type air separator. The unit shall have _____" inlet and outlet flanged connections tangential to the vessel shell.

The unit shall have the capability to direct accumulated air to an air vent (air elimination system) via an NPT vent connection at top of unit. The unit shall have an internal type 304 stainless steel strainer with 3/16" (4.8mm) perforations and 51 percent open area.

A blowdown connection shall be provided to facilitate routine cleaning of the strainer and the separator. Specify Bell & Gossett Model MBV- 1 Rolairtrol accessory for manual blowdown.

Refer to submittal A-329 for information on the MBV-1 manual blowdown valve.

Vessel shell diameter to be three times the nominal inlet/outlet pipe diameter, with a minimum vessel volume for sufficient velocity reduction.

The air separator must be designed, constructed and stamped for 125 PSIG @ 350°F (862 kPa @ 177°C) in accordance with Section VIII, Division I of the ASME Boiler and Pressure Vessel Code, and registered with the National Board of Boiler and Pressure Vessel Inspectors. The air separator(s) shall be painted with one shop coat of light gray air dry enamel.

A manufacturer's Data Report for Pressure Vessels, Form U-1 as required by the provisions of the ASME Boiler and Pressure Vessel Code, shall be furnished for each air separator upon request.

Each air separator shall be Xylem Bell & Gossett Model no. _____ Rolairtrol

Air separator for _____ GPM (_____ m^3), shell dia. _____ (_____ mm) and min. vessel volume _____ gal (_____ liters).

Notes

Learn more about Rolairtrol air separators

Xylem Inc. **xylem.com/bellgossett**

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