



EXT120, Spirovent, Spirotop, backflow preventer, and pressure regulator/relief valve shown

### Features

#### Spirotop and Spirovent

- Automatic air bleed
- Simplifies bleeding of circulated water system
- Spirovent removes entrapped air carried in water
- Bronze and stainless construction

#### Fill Components

- Backflow preventer protects the fresh water system from contamination
- Pressure regulator/relief valve allows automatic, safe filling of system
- Bronze and stainless construction

#### Seawater Strainer

- Sizes from 1/2" to 3" available
- Bronze and stainless construction

#### Expansion Tanks

- Flexible internal diaphragm maintains safe circulated water loop pressures
- Capacities up to 60 tons

#### Spirotop and Spirovent

The Spirotop is an automatic air bleed valve which can be installed at the highest point in the circulated water system, on individual air handlers where the manual bleed is difficult to access, or any local high point which makes bleeding the system difficult. Spirotops help simplify initial bleeding of the circulated water system, and also prevent air traps forming anywhere they are installed. The unique separate float chamber design helps prevent leaks due to valve contamination. Connection size is 1/2" FPT.

The Spirovent is a device that removes entrapped air from the circulated water loop. A specially designed wire mesh will remove "micro-bubbles" of air that are carried with the moving water.

When properly sized and installed, the Spirovent will actually bleed the entire system in a short period of time. This works because the water that exits the Spirovent is so devoid of air that it will pick up air from other parts of the loop and carry it back to the Spirovent to be removed.

Spirovents work best when installed at low pressure points in the system, where the water flow rate is near or below the design rate of the Spirovent. Typical locations are the inlet of the circulation pump, or in the return line of the highest group of air handlers, where it also doubles as a main system bleed. Two different capacities of Spirovents are available; 15 gpm (60,000 Btu/hr) and 30 gpm (120,000 Btu/hr). Spirovents can be used in parallel for larger capacity systems.

#### Fill Components

A back-flow preventer and a pressure regulator/relief valve are recommended for the fill connection of the circulated water loop.

The back-flow preventer protects the fresh water system from contamination by the loop water through the fill valve.

The pressure regulator reduces the fresh water system high pressure to the lower circulated water system pressure. The regulator is set at 15 psi and is adjustable from 10 to 25 psi. The integrated pressure relief valve protects the loop water system from damage due to an over pressure situation.

#### Seawater Strainer

All Cruisair systems must have a suitable seawater strainer. Sizes are available from 1/2" to 3" female NPT, with flow rates as large as 12,000 gph. Strainers are bronze and stainless steel with glass filter bowls.

#### Expansion Tank

The flexible bladder expansion tank is required to maintain circulated water loop design pressure over a wide range of water temperatures. Tank is preset at 12 psi, and has an air valve to adjust pressure as needed.

Tank may be installed horizontally or vertically. It should be piped into the suction side of the circulation pump, typically at the same location as the fill assembly. Tank connection is 1/2" male NPT.

Required expansion tank size is based on the total air handler capacity. Sizes of 120,000 to 720,000 Btu/hr are available.

**TECHNICAL SPECIFICATIONS FOR EXPANSION TANKS**

Model Number	Description	Capacity (Btu/hr)	Height (in/cm)	Diameter (in/cm)	Connection Size	Weight (lbs/kg)
EXT120	Expansion Tank	120,000	11.5/29.2	8.0/20.3	1/2" MPT	5/2.3
EXT240	Expansion Tank	240,000	14.0/35.6	11.0/27.9	1/2" MPT	9/4.1
EXT360	Expansion Tank	360,000	23.0/58.4	11.0/27.9	1/2" MPT	14/6.4
EXT720	Expansion Tank	720,000	23.0/58.4	16.0/40.6	1/2" MPT	18/8.2

**TECHNICAL SPECIFICATIONS FOR SEAWATER STRAINERS**

Model Number	Description	Capacity (gph)	Height (in/cm)	Width (in/cm)	Connection Size	Weight (lbs/kg)
ST1N	Seawater Strainer	1,200	8.5/21.6	6.7/17.0	1" FPT	6/2.7
ST1-1/4N	Seawater Strainer	2,000	10.5/26.7	6.7/17.0	1-1/4" FPT	6/2.7
ST1-1/2N	Seawater Strainer	3,600	10.8/27.4	7.9/20.1	1-1/2" FPT	10/4.5
ST2N	Seawater Strainer	4,800	13/33.0	7.9/20.1	2" FPT	12/5.5
ST2-1/2N	Seawater Strainer	7,800	15.6/39.6	7.9/20.1	2-1/2" FPT	14/6.4
ST3N	Seawater Strainer	12,000	18.6/47.2	7.9/20.1	3" FPT	17/7.7

**TECHNICAL SPECIFICATIONS FOR SPIROTOP & SPIROVENT**

Part Number	Description	Capacity (Btu/hr)	Height (in/cm)	Width (in/cm)	Connection Size	Weight (lbs/kg)
1060901	Spirotop	-	4.5/11.4	2.5/6.3	1/2" FPT	2/9
1060912	Spirovent, 15 gpm	60,000	7.8/19.7	3.5/8.9	1-1/4" FPT	4/1.8
1060915	Spirovent, 30 gpm	120,000	9.0/22.9	3.5/8.9	1-1/2" FPT	4/1.8
DSV1.5/180	Dual Spirovent Assembly	180,000	9.8/24.8	16.0/40.1	1-1/2" FPT	12/5.5
DSV2/240	Dual Spirovent Assembly	240,000	9.8/24.8	17.0/43.2	2" FPT	12/5.5

**TECHNICAL SPECIFICATIONS FOR FILL COMPONENTS**

Part Number	Description	Height (in/cm)	Width (in/cm)	Connection Size	Weight (lbs/kg)
1070200	Backflow Preventer	4.5/11.4	2.3/5.7	1/2" FPT	2/9
1070201	Pressure Regulator/Relief Valve	7.0/17.8	3.8/9.5	1/2" FPT	4/1.8
1070030	Pressure Gauge 0-30 psi	3.5/8.9	2.8/7.0	1/4" MPT	1/5
BV1/2	Ball Valve, Bronze	2.3/5.7	1.5/3.8	1/2" FPT	2/9
1053505	Brass Nipple Close			1/2" MPT	.5/2

**Dometic Corporation**  
Environmental Systems

P.O. Box 15299 • Richmond, VA 23227-0699 USA • Phone: 804-746-1313 • Facsimile: 804-746-7248  
 2000 N. Andrews Ave. Ext. • Pompano Beach, FL 33069-1497 USA • Phone: 954-973-2477 • Facsimile: 954-979-4414  
 Fleets Industrial Estate • 26 Willis Way • Poole, Dorset BH15 3SU, England • Phone: +44(0)870 3306101 • Facsimile: +44(0)870 3306102  
 Email: sales@cruisair.com • Website: www.cruisair.com

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