

**Climate
Control**

IMI Flow Design

AC, ACR



Automatic Balancing Valves
Flow regulator & union

AC, ACR

AutoFlow combination ball valve, AutoFlow regulator and union with up to five (5) accessory port locations. Unit is factory set to automatically limit the flow rate to within 5% of the specified amount. The flow cartridge is removable from the valve body to provide access for flow rate changes, inspection, and cleaning without breaking the main piping. The ball valve has PTFE packing, brass packing nut and blowout-proof stem, large diameter plated ball and a full size steel handle with vinyl grip. The union has an EPDM "O"-ring and tailpiece available in M, F and S connections. Ball valve end is available only in FPT or SWT. Pressure / Temperature ports are standard.

ACR is the more Compact, Y-shaped combination ball valve, AutoFlow regulator and union with four accessory port locations.



Key features

Flow Limiting

No wasted pumping

Accuracy

+/-5%

Combination Valve

Union, regulator and shut-off in one

Tamper Resistant

Technical description

Application:

Hydronic Balancing

Rating:

400 psig at 250° F (27 bar at 120° C)

Accuracy:

±5%

Functions:

Flow regulator, union and shut-off

Pressure range:

2-32 psi or 5-60 psi

Material:

Body: DZR Brass

Flow cartridge: Series 300 stainless steel wear surfaces with stainless steel spring

Dimensions:

1/2" - 2-1/2"

Connections

AC

Model	Size in./mm	Fixed Conn. (Outlet) in./mm	Union Conn. (Intlet) in./mm
AC050	1/2" (15)	1/2" (15) S, F	1/2 (15) F, M, S
			3/4 (20) F, M, S
AC075	3/4" (20)	3/4" (15) S, F	1/2 (15) F, M, S
			3/4 (20) F, M, S
			1 (25) M, S
AC100	1" (25)	1" (25) S, F	1/2 (15) M, S
			3/4 (20) F, M, S
			1 (25) F, M, S
			1 1/4 (32) F, M, S
AC125	1 1/4" (32)	1 1/4" (32) S, F	1/2 (15) M, S
			3/4 (20) F, M, S
			1 (25) F, M, S
			1 1/4 (32) F, M, S
			1 1/2 (40) M, S
AC150	1 1/2" (40)	1 1/2" (40) S, F	1 1/4 (32) F, M, S
			1 1/2 (40) F, M, S
			2 (50) F, M, S
AC200	2" (50)	2" (50) S, F	1 1/4 (32) F, M, S
			1 1/2 (40) F, M, S
			2 (50) F, M, S
			2 1/2 (65) F, M

ACR

Model	Size in./mm	Fixed Conn. (Outlet) in./mm	Union Conn. (Intlet) in./mm
ACR050	1/2" (15)	1/2" (15) S, F	1/2 (15) F, M, S
			3/4 (20) F, M, S
ACR075	3/4" (20)	3/4" (20) S, F	
ACR100*	1" (25)	1" (25) S, F	1/2 (15) F, M, S
			3/4 (20) F, M, S
			1 (25) M, S
ACR150*	1 1/2" (40)	1 1/2" (40) S, F	1/2 (15) F, M, S
			3/4 (20) F, M, S
			1 (25) F, M, S
			1 1/4 (32) F, M, S
ACR250	2 1/2" (65)	2 1/2" (65) S, F	1 1/2 (40) M, S
			2 (50) F, M
			2 1/2 (65) F, M

S = sweat F = female NPT M = male NPT

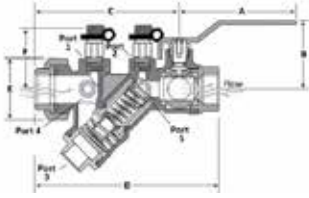
Notes

*) Denotes female thread not available on union end.

Articles

Dimensions / Flow

AC



Model	Size	A	B	C	D	E	F	Maximum Flow gpm (lps)*	
								Control Range psi (kpa)	
	in.	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	2-32 (L)	5-60 (H)
								(14-220)	(35-414)
AC050	1/2	4.1 (104)	2.0 (51)	4.8 (122)	6.7 (170)	2.1 (53)	2.2 (56)	8 (0.5)	12 (0.75)
AC075	3/4	4.1 (104)	2.0 (51)	4.9 (124)	6.7 (170)	2.1 (53)	2.2 (56)	8 (0.5)	12 (0.75)
AC100	1	4.7 (119)	2.7 (69)	6.6 (168)	9.5 (241)	2.8 (71)	2.3 (58)	19 (1.2)	27 (1.7)
AC125	1 1/4	4.7 (119)	2.7 (69)	6.6 (168)	9.6 (244)	2.8 (71)	2.3 (58)	19 (1.2)	27 (1.7)
AC150	1 1/2	5.7 (141)	3.6 (91)	8.4 (213)	11.7 (297)	3.8 (97)	2.4 (61)	50 (3.15)	70 (4.4)
AC200	2	5.7 (141)	3.6 (91)	8.5 (216)	12.0 (305)	3.8 (97)	2.4 (61)	50 (3.15)	70 (4.4)

Notes

Dimensions based on F X F connections and will vary with mixed options/connections.

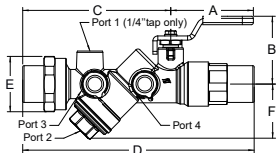
Dimensions are subject to minor changes.

For pump head calculations, add the indicated pressure drop of 4.6 ft or 2 psi for 2-32 psi or 11.6 ft or 5 psi for 5-60 psi to the calculated drop for other components.

Available in ISO7 threads.

Dimensions / Flow

ACR



1/2" - 3/4" ACR

Model	Size	A	B	C	D	E	F	Maximum Flow gpm (lps)*	
								Control Range psi (kpa)	
	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	in./mm	2-32 (L)	5-60 (H)
								(14-220)	(35-414)
ACR050*	1/2	2.3 (58)	1.9 (48)	4.0 (102)	6.0 (152)	1.6 (41)	1.5 (38)	3 (0.19)	5 (0.31)
ACR075*	3/4	2.3 (58)	1.9 (48)	4.1 (104)	6.5 (165)	1.6 (41)	1.5 (38)	3 (0.19)	5 (0.31)
ACR100	1	4.1 (104)	2.0 (51)	5.5 (140)	7.6 (193)	2.1 (53)	1.97 (50)	8 (0.5)	12 (0.75)
ACR150	1 1/2	4.7 (119)	2.7 (69)	7.9 (201)	10.7 (271)	2.8 (71)	2.64 (67)	19 (1.2)	27 (1.7)
ACR250	2 1/2	5.6 (119)	3.6 (91)	9 (228)	12.5 (317)	4.6 (120)	2.4 (61)	50 (3.15)	70 (4.4)

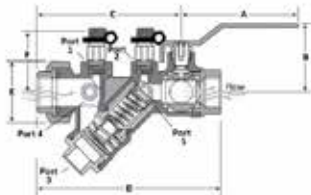
Notes

Dimensions based on S X S connections and will vary with mixed options/connections. For ACR250, dimensions based on FxF connection.

Dimensions are subject to minor changes.

*) Denotes female thread not available on union end.

See IOM for cartridge change instructions.



1" - 2-1/2" ACR

Weight / Cv

AC

Model	Weight lb./(kg)	Cv (Kv)
AC050	2.5 (1.13)	7.9 (6.8)
AC075	2.5 (1.13)	8.8 (7.6)
AC100	6.2 (2.81)	19.7 (17.0)
AC125	6.1 (2.80)	20.4 (17.6)
AC150	15.6 (7.08)	52.7 (45.6)
AC200	15.4 (6.99)	55.1 (47.7)

Notes

Weights based on F X F connections and will vary with mixed options connections

Weights are subject to minor changes

Cv's based on the body only without flow cartridge.

See operation manual for Installation and Maintenance F033

ACR

Model	Weight lb./(kg)	Cv (Kv)
ACR050	1.5 (0.7)	5.7 (4.9)
ACR075	1.5 (0.7)	5.7 (4.9)
ACR100	2.5 (1.13)	8.8 (7.6)
ACR150	6.8 (3.08)	20.4 (17.65)
ACR250	17.5 (7.9)	55.0 (48.0)

Notes

Weights based on S X S connections and will vary with mixed options/connections. For ACR250, weight based on FxF connections.

Weights are subject to minor changes.

Cv's based on the body only without flow cartridge.

See IOM for cartridge change instructions.

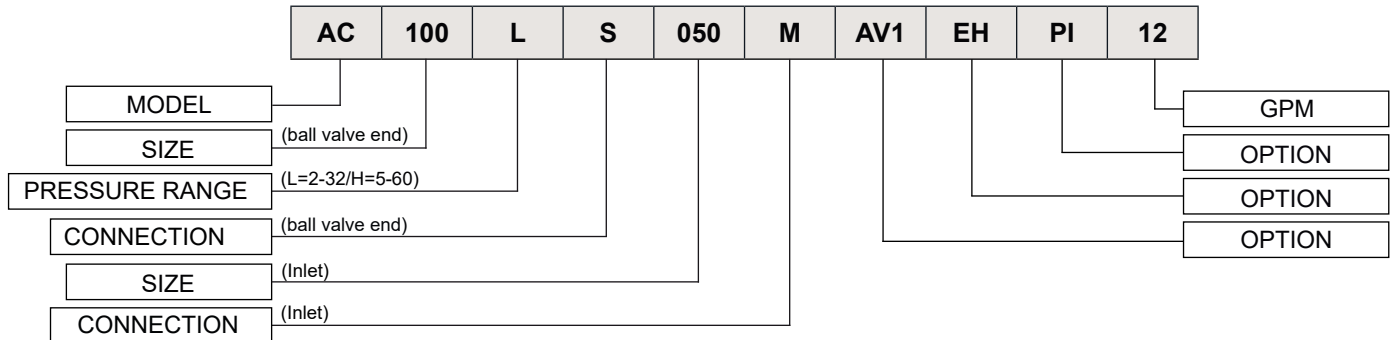
Flow Rate

ACR/AC

Size	psid Range	Flow Rate (gpm)
ACR 1/2" - 3/4"	2 - 32 (L)	0.33, 0.5, 0.67, 0.75, 0.88, 1.0, 1.1, 1.25, 1.5, 1.75, 2.0, 2.25, 2.5, 3.0
	5 - 60 (H)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0
AC 1/2" - 3/4"	2 - 32 (L)	0.33, 0.5, 0.67, 0.75, 0.88, 1.0, 1.1, 1.25, 1.5, 1.75, 2.0, 2.25, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.28, 6.0, 7.0, 8.0
ACR 1"	5 - 60 (H)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10, 11, 12
AC 1" - 1 1/4"	2 - 32 (L)	0.5, 0.67, 0.75, 0.88, 1.0, 1.1, 1.25, 1.5, 1.75, 2.0, 2.25, 2.5, 2.64, 3.0, 3.5, 4.0, 4.5, 5.0, 5.28, 6.0, 7.0, 8.0, 9.0, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
ACR 1 1/2"	5 - 60 (H)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27
AC 1 1/2" - 2"	2 - 32 (L)	5.0, 6.0, 7.0, 8.0, 9.0, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50
ACR 2 1/2"	5 - 60 (H)	8.0, 9.0, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 68, 70

Size	kPa Range	Flow Rate (lps)
ACR 15 - 20 mm	2-32 (L)	0.021, 0.035, 0.042, 0.047, 0.056, 0.063, 0.069, 0.079, 0.095, 0.110, 0.126, 0.142, 0.158, 0.167
	5-60 (H)	0.063, 0.095, 0.126, 0.158, 0.189, 0.252, 0.315
AC 15 - 20 mm	14 - 220 (L)	0.021, 0.032, 0.042, 0.047, 0.056, 0.063, 0.069, 0.079, 0.095, 0.110, 0.126, 0.142, 0.158, 0.167, 0.189, 0.221, 0.252, 0.284, 0.315, 0.333, 0.379, 0.442, 0.505
ACR 25 mm	35 - 414 (H)	0.063, 0.095, 0.126, 0.158, 0.189, 0.252, 0.315, 0.379, 0.442, 0.505, 0.568, 0.631, 0.694, 0.757
AC 25 - 32 mm	14 - 220 (L)	0.032, 0.042, 0.047, 0.056, 0.063, 0.069, 0.079, 0.095, 0.110, 0.126, 0.142, 0.158, 0.167, 0.189, 0.221, 0.252, 0.284, 0.315, 0.333, 0.379, 0.442, 0.505, 0.568, 0.631, 0.694, 0.757, 0.820, 0.883, 0.946, 1.009, 1.073, 1.136, 1.199
ACR 40 mm	35 - 414 (H)	0.063, 0.095, 0.126, 0.158, 0.189, 0.252, 0.315, 0.379, 0.442, 0.505, 0.568, 0.631, 0.694, 0.757, 0.820, 0.883, 0.946, 1.009, 1.073, 1.136, 1.199, 1.262, 1.325, 1.388, 1.451, 1.514, 1.577, 1.640, 1.703
AC 40 - 50 mm	14 - 220 (L)	0.315, 0.379, 0.442, 0.505, 0.568, 0.631, 0.694, 0.757, 0.820, 0.883, 0.946, 1.009, 1.073, 1.136, 1.199, 1.262, 1.388, 1.514, 1.640, 1.767, 1.893, 2.019, 2.145, 2.271, 2.397, 2.524, 2.650, 2.776, 2.902, 3.028, 3.155
ACR 65 mm	35 - 414 (H)	0.505, 0.568, 0.631, 0.694, 0.757, 0.820, 0.883, 0.946, 1.009, 1.073, 1.136, 1.199, 1.262, 1.325, 1.388, 1.451, 1.514, 1.577, 1.640, 1.703, 1.767, 1.893, 2.019, 2.145, 2.271, 2.397, 2.524, 2.650, 2.776, 2.902, 3.028, 3.155, 3.281, 3.407, 3.533, 3.659, 3.785, 3.912, 4.038, 4.290, 4.416

Model Order Designation



S = female sweat **F** = female NPT **M** = male npt

Options Available

- | | |
|---|-------------------------|
| AA Automatic Air Vent | PL Plug |
| AV Manual Air Vent | PP Propress® |
| DX Dual Extended P/T Ports | SE Stem Extender |
| EH Extended Handle | T4 1/4" F Tap |
| HN Hose End Drain Valve with Cap | XL Ext. P/T Port |
| MI Metal ID Tag | |
| PI Plastic ID Tag | |



The products, texts, photographs, graphics and diagrams in this document may be subject to alteration by IMI without prior notice or reasons being given. For the most up to date information about our products and specifications, please visit climatecontrol.imiplc.com.