

Features

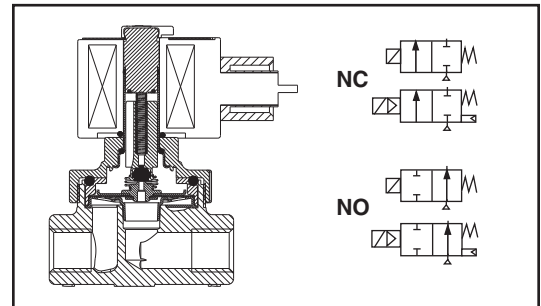
- Hot water service to 210 psi differential @ 210°F; Steam service to 125 psi differential @ 353°F
- Specify these valves for the high-temperature applications found in laundries, molding, steam atomization, sterilizers, autoclaves, and many others
 - Series 8263: direct acting miniature valves
 - Series 8267: direct acting straight-through, self-cleaning design
 - Series 8210/8220: pilot operated diaphragm valves
 - Lead-free versions available on 8210 Hot Water valves for Safe Drinking Water Act compliance
 - Series 8220: pilot operated diaphragm and piston valves; floating PTFE diaphragms or stainless steel pistons with EPDM or PTFE discs, available in both AC & DC voltages
 - Series 8221: slow-closing, anti-water hammer design
 - Series 8222: pilot operated diaphragm and piston valves. Y-body floating piston design

Construction

Valve Parts in Contact with Fluids		
Common Parts		
Body	Brass	Stainless Steel
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
8210HW Series		
Seals, Discs, and Diaphragms	EPDM	
8263 Series		
Seals	EPDM or PTFE	
Disc	EPDM or PTFE	
8220/8221 Series		
Piston/Diaphragm	Stainless Steel/PTFE	
Discs	EPDM or PTFE	
Seals	EPDM, PTFE or TFE/P	
8222 Series		
Seals, Discs, and Diaphragms	TFE/P, EPDM and/or PTFE	
Piston	Brass or PTFE	
8267 Series		
Seals	FKM, PTFE	
Disc	Stainless Steel	
Seat	Glass-Filled PTFE	

Electrical

Standard Coil and Class of Insulation	Const. Ref.	Watt Rating and Power Consumption				Spare Coil Part Number			
		DC Watts	AC			General Purpose		Explosionproof	
			Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	1,2,36,38,39,40,41,42	-	6.1	16	30	238210	-	238214	-
F	4, 8, 33, 50	-	6.1	16	40	238210	-	238214	-
H	4	-	6.1	16	40	238410	-	238414	-
F	32-35	11.6	-	-	-	-	238710	-	238714
F	5,7,10,14,15,28,30,32,34,51,52,53	-	10.1	25	70	238610	-	238614	-
F	16,17,18	-	10.1	25	50	238610	-	238614	-
H	3,31	-	10.1	25	50	238810	-	238814	-
H	9,12,14,51,52,53	-	10.1	25	70	238810	-	238814	-
H	51-52	15.6	-	-	-	-	238910	-	238914
F	21-27,43-49	-	16.1	35	95	272610	-	272614	-
H	21-27	-	16.1	35	95	272810	-	272814	-
H	19-20	-	16.1	35	180	272810	-	272814	-
H	3,31	-	17.1	40	70	238810	-	238814	-
H	6,11,29	-	17.1	40	93	238810	-	238814	-
H	13	-	28.2	55	220	224195	-	224195	-



Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; Red-Hat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

See *Optional Features Section* for other available options.

Nominal Ambient Temp. Ranges

RedHat II AC: 32°F to 125°F (0°C to 52°C)

For 8263 Steam/Hot Water Series

RedHat II AC: 32°F to 131°F (0°C to 55°C)

For 8210 Hot Water Series

RedHat II DC: 32°F to 104°F (0°C to 40°C)

For 8220 Steam/Hot Water Series

RedHat II DC: 32°F to 125°F (0°C to 52°C)

Refer to *Engineering Section* for details.

Approvals

Most are UL listed, CSA certified, and meet applicable CE directives. *Contact ASCO for details.*

Important: Explosionproof Catalog Numbers EF8210HW, EF8220, EF8221HW, and EF8263 (except H300-306) are not UL listed. They are suitable for Types 4 & 7 (A-D), and 9 (E, F, & G for Class F; E for class H coils) only, and have a temperature range code of T3B (Class F) or T3A (Class H).

SPECIAL SERVICE VALVES

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)				Max. Fluid Temp. °F				Brass Body		AC Watt Rating/Class of Coil Insulation	
			Hot Water				Hot Water				Catalog Number	Const. Ref.	AC	DC
			Min.	Max. AC	Max. DC	AC	DC							
HOT WATER SERVICE ONLY - NORMALLY CLOSED (Closed when de-energized), EPDM Diaphragm														
3/8	5/8	3	0 ②	100	40	210	150	8210G093HW	32	10.1/F	11.6/F			
3/8	5/8	3	5	125	100	210	150	8210G001HW	33	6.1/F	11.6/F			
1/2	5/8	4	0 ②	100	40	210	150	8210G094HW ④	32	10.1/F	11.6/F			
1/2	5/8	4	5	125	100	210	150	8210G002HW ④	33	6.1/F	11.6/F			
3/4	3/4	5	0 ②	100	40	210	150	8210G095HW ④	34	10.1/F	11.6/F			
3/4	3/4	5	5	125	100	210	150	8210G009HW ④	35	6.1/F	11.6/F			
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY CLOSED (Closed when de-energized), EPDM Disc														
3/8	9/16	3	5 ①	150	-	210	-	8221G001HW	36	6.1/F	-			
1/2	9/16	3.5	5 ①	150	-	210	-	8221G003HW	36	6.1/F	-			
3/4	3/4	5.5	5 ①	150	-	210	-	8221G005HW	36	6.1/F	-			
1	1	11.5	5 ①	150	-	210	-	8221G007HW	38	6.1/F	-			
1 1/4	1 1/8	13	5 ①	150	-	210	-	8221G009HW	39	6.1/F	-			
1 1/2	1 1/4	24	5 ①	150	-	210	-	8221G011HW	40	6.1/F	-			
2	1 3/4	36	5 ①	150	-	210	-	8221G013HW	41	6.1/F	-			
2 1/2	1 3/4	38	5 ①	150	-	210	-	8221G015HW ④	42	6.1/F	-			
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY OPEN (Open when de-energized), EPDM Disc														
3/8	9/16	3	5 ①	150	-	210	-	8221G021HW	43	16.1/F	-			
1/2	9/16	3.5	5 ①	150	-	210	-	8221G023HW	43	16.1/F	-			
3/4	3/4	5.5	5 ①	150	-	210	-	8221G025HW	44	16.1/F	-			
1	1	11.5	5 ①	150	-	210	-	8221G027HW	45	16.1/F	-			
1 1/4	1 1/8	13	5 ①	150	-	210	-	8221G029HW	46	16.1/F	-			
1 1/2	1 1/4	24	5 ①	150	-	210	-	8221G031HW	47	16.1/F	-			
2	1 3/4	36	5 ①	150	-	210	-	8221G033HW	48	16.1/F	-			
2 1/2	1 3/4	38	5 ①	150	-	210	-	8221G035HW ④	49	16.1/F	-			

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)						Max. Fluid Temp. °F						Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation	
			Max. AC			Max. DC			AC			DC			Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
			Min.	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water							
STEAM/HOT WATER SERVICE - DIRECT ACTING - NORMALLY CLOSED (Closed when de-energized), Stainless Steel Seat, EPDM ③, or PTFE Disc																				
1/4	1/8	0.35	0	50	150	-	-	298	210	-	-	8263H053 ③	1	-	-	-	6.1/H	-		
1/4	1/8	0.35	0	90	150	-	-	331	210	-	-	8263H059	1	-	-	-	6.1/H	-		
1/4	5/32	0.52	0	110	210	-	-	344	210	-	-	8263H300	2	-	-	-	10.1/H	-		
1/4	7/32	0.73	0	70	95	-	-	316	210	-	-	8263H301	2	-	-	-	10.1/H	-		
1/4	9/32	0.88	0	60	60	-	-	307	210	-	-	8263H303	2	-	-	-	17.1/H	-		
3/8	1/8	0.35	0	125	210	-	-	353	210	-	-	8263H304	3	8263H318	3	10.1/H	-			
3/8	5/32	0.52	0	110	200	-	-	344	210	-	-	8263H305	3	8263H319	3	10.1/H	-			
3/8	7/32	0.85	0	70	95	-	-	316	210	-	-	8263H306	3	8263H320	3	10.1/H	-			
3/8	9/32	1.0	0	60	60	-	-	307	210	-	-	8263H308	3	8263H321	3	17.1/H	-			
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																				
1/4	3/8	1.2	1	80	-	-	-	324	-	-	-	8222G068	4	-	-	-	6.1/F	-		
1/4	3/8	1.2	1	125	-	-	-	353	-	-	-	8222G070	4	-	-	-	6.1/H	-		
3/8	3/8	2.5	1	80	-	-	-	324	-	-	-	8222G064	4	-	-	-	6.1/F	-		
3/8	3/8	2.5	1	125	-	-	-	353	-	-	-	8222G074	4	-	-	-	6.1/H	-		
3/8	1/2	4.4	5	50	150	-	-	300	210	-	-	8220G401	50	-	-	-	6.1/F	-		
3/8	1/2	4.4	0	50	150	50	100	300	210	300	210	8220G402	51	-	-	-	10.1/F	15.6/H		
3/8	1/2	4.4	5	125	150	110	150	353	210	344	210	8220G403 ⑥	51	-	-	-	10.1/H	15.6/H		
3/8	5/8	3.0	5	50	150	-	-	300	210	-	-	8222G001	5	-	-	-	10.1/F	-		
1/2	3/8	2.5	1	80	-	-	-	324	-	-	-	8222G066	4	-	-	-	6.1/F	-		
1/2	3/8	2.5	1	125	-	-	-	353	-	-	-	8222G076	4	-	-	-	6.1/H	-		
1/2	1/2	3.6	2	125	-	-	-	353	-	-	-	8222G047	9	-	-	-	10.1/H	-		
1/2	5/8	4.0	0	50	-	-	-	300	-	-	-	8222G094	7	8222G060	28	10.1/F	-			
1/2	5/8	4.0	0	125	-	-	-	353	-	-	-	8222G002	6	-	-	-	17.1/H	-		
1/2	1/2	4.7	5	50	150	-	-	300	210	-	-	8220G404	50	-	-	-	6.1/F	-		
1/2	1/2	4.7	0	50	150	50	100	300	210	300	210	8220G405	51	-	-	-	10.1/F	15.6/H		
1/2	1/2	4.7	5	125	150	110	150	353	210	344	210	8220G406 ⑥	51	-	-	-	10.1/H	15.6/H		

SPECIAL SERVICE VALVES

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m ³ /h)	Operating Pressure Differential (bar)			Max. Fluid Temp. °C				Brass Body		AC Watt Rating/ Class of Coil Insulation	
			Hot Water			Hot Water				Catalog Number	Const. Ref.	AC	DC
			Min.	Max. AC	Max. DC	AC	DC						
HOT WATER SERVICE ONLY - NORMALLY CLOSED (Closed when de-energized), EPDM Diaphragm													
3/8	16	2.57	0 ⊕	6.9	2.8	99	65	8210G093HW	32	10.1/F	11.6/F		
3/8	16	2.57	0.3	8.6	6.9	99	65	8210G001HW	33	6.1/F	11.6/F		
1/2	16	3.43	0 ⊕	6.9	2.8	99	65	8210G094HW ♠	32	10.1/F	11.6/F		
1/2	16	3.43	0.3	8.6	6.9	99	65	8210G002HW ♠	33	6.1/F	11.6/F		
3/4	19	4.29	0 ⊕	6.9	2.8	99	65	8210G095HW ♠	34	10.1/F	11.6/F		
3/4	19	4.29	0.03	8.6	6.9	99	65	8210G009HW ♠	35	6.1/F	11.6/F		
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY CLOSED (Closed when de-energized), EPDM Disc													
3/8	14	2.57	0.3 ⊕	10.3	-	99	-	8221G001HW	36	6.1/F	-		
1/2	14	3.00	0.3 ⊕	10.3	-	99	-	8221G003HW	36	6.1/F	-		
3/4	19	4.71	0.3 ⊕	10.3	-	99	-	8221G005HW	36	6.1/F	-		
1	25	9.86	0.3 ⊕	10.3	-	99	-	8221G007HW	38	6.1/F	-		
1 1/4	29	11.14	0.3 ⊕	10.3	-	99	-	8221G009HW	39	6.1/F	-		
1 1/2	32	20.57	0.3 ⊕	10.3	-	99	-	8221G011HW	40	6.1/F	-		
2	44	30.86	0.3 ⊕	10.3	-	99	-	8221G013HW	41	6.1/F	-		
2 1/2	44	32.57	0.3 ⊕	10.3	-	99	-	8221G015HW ⊕	42	6.1/F	-		
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY OPEN (Open when de-energized), EPDM Disc													
3/8	14	2.57	0.3 ⊕	10.3	-	99	-	8221G021HW	43	16.1/F	-		
1/2	14	3.00	0.3 ⊕	10.3	-	99	-	8221G023HW	43	16.1/F	-		
3/4	19	4.71	0.3 ⊕	10.3	-	99	-	8221G025HW	44	16.1/F	-		
1	25	9.86	0.3 ⊕	10.3	-	99	-	8221G027HW	45	16.1/F	-		
1 1/4	29	11.14	0.3 ⊕	10.3	-	99	-	8221G029HW	46	16.1/F	-		
1 1/2	32	20.57	0.3 ⊕	10.3	-	99	-	8221G031HW	47	16.1/F	-		
2	44	30.86	0.3 ⊕	10.3	-	99	-	8221G033HW	48	16.1/F	-		
2 1/2	44	32.57	0.3 ⊕	10.3	-	99	-	8221G035HW ⊕	49	16.1/F	-		

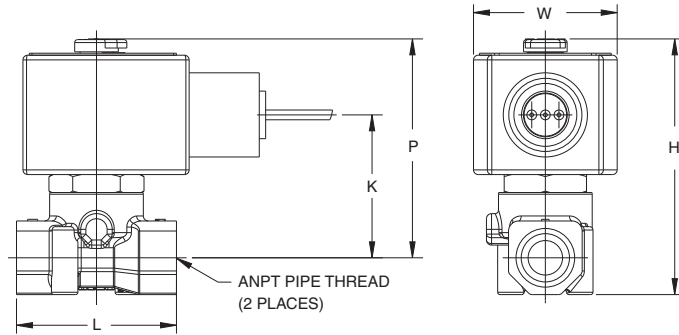
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m ³ /h)	Operating Pressure Differential (bar)				Max. Fluid Temp. °C				Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation		
			Max. AC		Max. DC		AC		DC		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC	
			Min.	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam							Hot Water
STEAM/HOT WATER SERVICE - DIRECT ACTING - NORMALLY CLOSED (Closed when de-energized), Stainless Steel Seat, EPDM ⊕, or PTFE Disc																	
1/4	3	0.30	0	3.4	10.3	-	-	146	99	-	-	8263H053 ⊕	1	-	-	6.1/H	-
1/4	3	0.30	0	6.2	10.3	-	-	164	99	-	-	8263H059	1	-	-	6.1/H	-
1/4	4	0.45	0	7.6	14.5	-	-	172	99	-	-	8263H300	2	-	-	10.1/H	-
1/4	6	0.63	0	4.8	6.6	-	-	156	99	-	-	8263H301	2	-	-	10.1/H	-
1/4	7	0.76	0	4.1	4.1	-	-	151	99	-	-	8263H303	2	-	-	17.1/H	-
3/8	3	0.30	0	8.6	14.5	-	-	177	99	-	-	8263H304	3	8263H318	3	10.1/H	-
3/8	4	0.45	0	7.6	13.8	-	-	172	99	-	-	8263H305	3	8263H319	3	10.1/H	-
3/8	6	0.74	0	4.8	6.6	-	-	156	99	-	-	8263H306	3	8263H320	3	10.1/H	-
3/8	7	0.87	0	4.1	4.1	-	-	151	99	-	-	8263H308	3	8263H321	3	17.1/H	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																	
1/4	10	1.03	0.07	6	-	-	-	161	-	-	-	8222G068	4	-	-	6.1/F	-
1/4	10	1.03	0.07	9	-	-	-	178	-	-	-	8222G070	4	-	-	6.1/H	-
3/8	10	2.14	0.07	6	-	-	-	161	-	-	-	8222G064	4	-	-	6.1/F	-
3/8	10	2.14	0.07	9	-	-	-	178	-	-	-	8222G074	4	-	-	6.1/H	-
3/8	12.7	3.8	0.3	3	10.3	-	-	149	99	-	-	8220G401	50	-	-	6.1/F	-
3/8	12.7	3.8	0	3	10.3	3.4	6.9	149	99	147	99	8220G402	51	-	-	10.1/F	15.6/H
3/8	12.7	3.8	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G403 ⊕	51	-	-	10.1/H	15.6/H
3/8	16	2.57	0	9	-	-	-	178	-	-	-	8222G001	6	-	-	17.1/H	-
1/2	10	2.14	0.07	6	-	-	-	161	-	-	-	8222G066	4	-	-	6.1/F	-
1/2	10	2.14	0.07	9	-	-	-	178	-	-	-	8222G076	4	-	-	6.1/H	-
1/2	13	3.09	0.14	9	-	-	-	178	-	-	-	8222G047	9	-	-	10.1/H	-
1/2	16	3.43	0	3	-	-	-	149	-	-	-	8222G094	7	8222G060	28	10.1/F	-
1/2	16	3.43	0	9	-	-	-	178	-	-	-	8222G002	6	-	-	17.1/H	-
1/2	12.7	4	0.3	3	10.3	-	-	149	99	-	-	8220G404	50	-	-	6.1/F	-
1/2	12.7	4	0	3	10.3	3.4	6.9	149	99	147	99	8220G405	51	-	-	10.1/F	15.6/H
1/2	12.7	4	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G406 ⊕	51	-	-	10.1/H	15.6/H

SPECIAL SERVICE VALVES

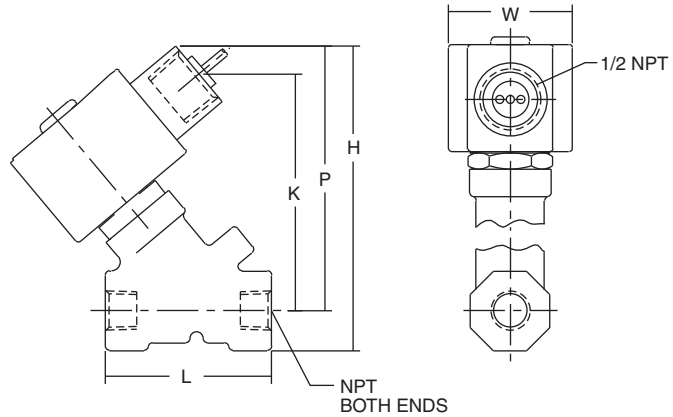
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50
2	in	2.96	1.72	1.56	2.60	1.69
	mm	75	44	40	66	43
3	in	3.01	1.68	1.88	2.57	1.69
	mm	76	43	48	65	43
4	in	4.17	3.25	2.28	3.63	1.69
	mm	106	83	58	92	43
5	in	4.05	2.52	2.75	3.48	2.28
	mm	103	64	70	88	58
7	in	3.84	2.31	2.75	3.28	2.29
	mm	98	59	70	83	58
8	in	4.00	2.45	2.88	3.34	2.83
	mm	102	62	73	85	72
9	in	4.81	3.62	2.75	4.01	1.95
	mm	122	92	70	102	50
10	in	4.14	2.47	2.81	3.44	2.29
	mm	105	63	71	87	58
12	in	4.81	3.63	2.75	4.01	1.95
	mm	122	92	70	102	50
32	in	3.84	2.31	2.75	3.28	2.29
	mm	98	59	70	83	58
33	in	3.36	1.94	2.75	2.80	2.28
	mm	85	49	70	71	58
34	in	4.13	2.47	2.81	3.44	2.29
	mm	105	63	71	87	58
35	in	3.66	2.10	2.81	2.96	2.28
	mm	93	53	71	75	58
50	in	3.94	2.5	2.88	3.4	2.25
	mm	100	63.3	73	86	57
51	in	4.1	2.56	2.88	3.54	2.25
	mm	104	65	73	90	57
52	in	4.2	2.52	2.88	3.5	2.83
	mm	106	64	73	89	72

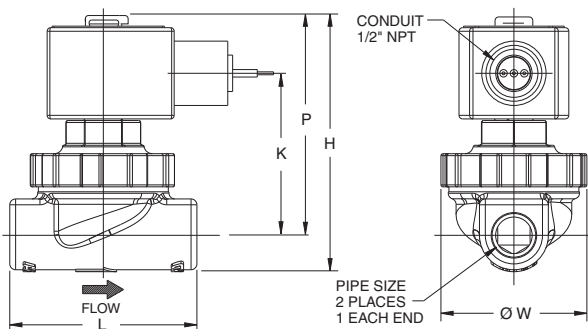
Const. Ref. 1, 2, 3



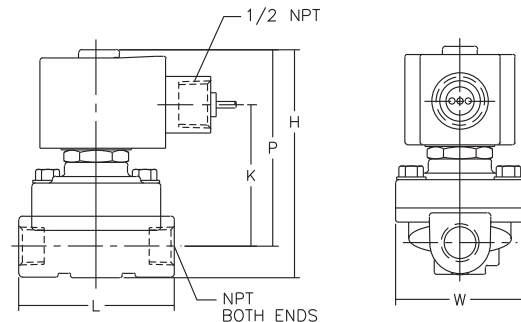
Const. Ref. 4, 9, 12



Const. Ref. 8, 50, 51, 52



Const. Ref. 5, 7, 10, 32-35



SPECIAL SERVICE VALVES