

Features

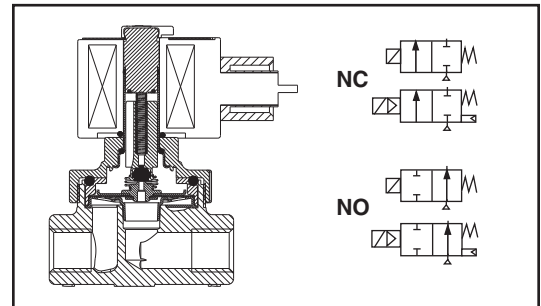
- Hot water service to 210 psi differential @ 210°F; Steam service to 125 psi differential @ 353°F
- Specify these valves for the high-temperature applications found in laundries, molding, steam atomization, sterilizers, autoclaves, and many others
 - Series 8263: direct acting miniature valves
 - Series 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 continued)

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	
			Min.	Max. AC		Max. DC		AC		DC		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC	
				Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water							
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																		
3/4	5/8	4.5	0	50	-	-	-	300	-	-	-	-	-	8222G062	28	10.1/F	-	-
3/4	5/8	4.5	0	125	-	-	-	353	-	-	-	-	-	8222G088	29	17.1/H	-	-
3/4	3/4	5.0	0	50	-	-	-	300	-	-	-	8222G095	10	-	-	10.1/F	-	-
3/4	3/4	8.8	5	50	150	-	-	300	210	-	-	8220G407	8	-	-	6.1/F	-	-
3/4	3/4	8.8	0	50	150	50	100	300	210	300	210	8220G408	52	-	-	10.1/F	15.6/H	-
3/4	3/4	8.8	5	125	150	110	150	353	210	344	210	8220G409	52	-	-	10.1/H	15.6/H	-
3/4	3/4	5.0	0	125	-	-	-	353	-	-	-	8222G003	11	-	-	17.1/H	-	-
3/4	1/2	4.6	2	125	-	-	-	353	-	-	-	8222G049	9	-	-	10.1/H	-	-
3/4	1/2	4.6	5	200	-	-	-	388	-	-	-	8222G005	12	-	-	10.1/H	-	-
1	1	11.2	5	125	-	-	-	353	-	-	-	-	-	8222G089	30	10.1/F	-	-
1	1	13.5	5	50	150	-	-	300	210	-	-	8220G007	14	-	-	10.1/F	-	-
1	1	13.5	5	125	150	-	-	353	210	-	-	8220G025	14	-	-	10.1/H	-	-
1	1	11.5	5	50	150	-	-	300	210	-	-	8220G410	53	-	-	10.1/F	-	-
1	1	11.5	5	125	150	-	-	353	210	-	-	8220G411	53	-	-	10.1/H	-	-
1	1	13.0	0	200	-	-	-	388	-	-	-	8222 099	13	-	-	28.2/H	-	-
1 1/4	1 1/8	15	5	50	150	-	-	300	210	-	-	8220G009	15	-	-	10.1/F	-	-
1 1/4	1 1/8	15	5	125	150	-	-	353	210	-	-	8220G027	15	-	-	10.1/H	-	-
1 1/2	1 1/4	22.5	5	50	150	-	-	300	210	-	-	8220G011	16	-	-	10.1/F	-	-
1 1/2	1 1/4	22.5	5	125	150	-	-	353	210	-	-	8220G029	16	-	-	10.1/H	-	-
2	1 3/4	43	5	50	150	-	-	300	210	-	-	8220G013	17	-	-	10.1/F	-	-
2	1 3/4	43	5	125	150	-	-	353	210	-	-	8220G031	17	-	-	10.1/H	-	-
2 1/2	1 3/4	45	5	50	150	-	-	300	210	-	-	8220G015	18	-	-	10.1/F	-	-
2 1/2	1 3/4	45	5	125	150	-	-	353	210	-	-	8220G033	18	-	-	10.1/H	-	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY CLOSED (Closed when de-energized)																		
3/8	1/4	1.5	0	75	-	-	-	320	-	-	-	8267G001	19	-	-	16.1/H	-	-
3/8	3/8	5.1	0	30	-	-	-	280	-	-	-	8267G003	19	-	-	16.1/H	-	-
1/2	1/4	1.4	0	75	-	-	-	320	-	-	-	8267G005	19	-	-	16.1/H	-	-
1/2	3/8	4.5	0	15	-	-	-	250	-	-	-	8267G007	19	-	-	16.1/H	-	-
3/4	3/8	5.4	0	30	-	-	-	280	-	-	-	8267G017	20	-	-	16.1/H	-	-
3/4	1/2	9.7	0	15	-	-	-	250	-	-	-	8267G019	20	-	-	16.1/H	-	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY OPEN (Open when de-energized)																		
3/8	1/4	1.5	0	75	-	-	-	320	-	-	-	8267G009	19	-	-	16.1/H	-	-
3/8	3/8	5.1	0	30	-	-	-	280	-	-	-	8267G011	19	-	-	16.1/H	-	-
1/2	1/4	1.4	0	75	-	-	-	320	-	-	-	8267G013	19	-	-	16.1/H	-	-
1/2	3/8	4.5	0	15	-	-	-	250	-	-	-	8267G015	19	-	-	16.1/H	-	-
3/4	3/8	5.4	0	25	-	-	-	267	-	-	-	8267G021	20	-	-	16.1/H	-	-
3/4	1/2	9.7	0	15	-	-	-	250	-	-	-	8267G023	20	-	-	16.1/H	-	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY OPEN (Open when de-energized)																		
3/8	9/16	3	5	125	150	-	-	353	210	-	-	8220G091	21	-	-	16.1/H	-	-
1/2	9/16	4	5	125	150	-	-	353	210	-	-	8220G093	21	-	-	16.1/H	-	-
3/4	3/4	5	5	125	150	-	-	353	210	-	-	8220G095	22	-	-	16.1/H	-	-
1	1	13.5	5	125	150	-	-	353	210	-	-	8220G097	23	-	-	16.1/H	-	-
1 1/4	1 1/8	15	5	125	150	-	-	353	210	-	-	8220G099	24	-	-	16.1/H	-	-
1 1/2	1 1/4	22.5	5	125	150	-	-	353	210	-	-	8220G101	25	-	-	16.1/H	-	-
2	1 3/4	43	5	125	150	-	-	353	210	-	-	8220G103	26	-	-	16.1/H	-	-
2 1/2	1 3/4	45	5	125	150	-	-	353	210	-	-	8220G105	27	-	-	16.1/F	-	-

① Once opened at higher pressure, valve will remain open to 3 psi at inlet.
 ② 0 psi on AC construction, 1/4 psi on DC construction.
 ③ EPDM disc.
 ④ Not CSA certified.
 ⑤ Not CSA certified for water.
 ⑥ Ambient temperature range 32°F - 140°F; ⑦ Ambient temperature range 32°F - 77°F
 ♣ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

SPECIAL SERVICE VALVES

Specifications (Metric units continued)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m³/h)	Operating Pressure Differential (bar)						Max. Fluid Temp. °C				Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation	
			Min.	Max. AC		Max. DC		AC		DC		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC	
				Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water							
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																		
3/4	16	3.86	0	3	-	-	-	149	-	-	-	-	-	8222G062	28	10.1/F	-	
3/4	16	3.86	0	9	-	-	-	178	-	-	-	-	-	8222G088	29	17.1/H	-	
3/4	19	4.29	0	3	-	-	-	149	-	-	-	8222G095 ④	10	-	-	10.1/F	-	
3/4	19	7.5	0.3	3	10.3	-	-	149	99	-	-	8220G407	8	-	-	6.1/F	-	
3/4	19	7.5	0	3	10.3	3.4	6.9	149	99	147	99	8220G408	52	-	-	10.1/F	15.6/H	
3/4	19	7.5	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G409 ⑥	52	-	-	10.1/H	15.6/H	
3/4	19	4.29	0	9	-	-	-	178	-	-	-	8222G003	11	-	-	17.1/H	-	
3/4	13	3.94	0.14	9	-	-	-	178	-	-	-	8222G049	9	-	-	10.1/H	-	
3/4	13	3.94	0.3	14	-	-	-	198	-	-	-	8222G005	12	-	-	10.1/H	-	
1	25	9.60	0.3	9	-	-	-	178	-	-	-	-	-	8222G089	30	10.1/F	-	
1	25	11.57	0.3①	3	10.3	-	-	149	99	-	-	8220G007	14	-	-	10.1/F	-	
1	25	11.57	0.3①	9	10.3	-	-	178	99	-	-	8220G025	14	-	-	10.1/H	-	
1	25	10	0.3	3	10.3	-	-	149	99	-	-	8220G410	53	-	-	10.1/F	-	
1	25	10	0.3	9	10.3	-	-	178	99	-	-	8220G411⑥	53	-	-	10.1/H	-	
1	25	11.57	0.3	9	-	-	-	198	-	-	-	8222 099 ⑦	13	-	-	28.2/H	-	
1 1/4	25	11.14	0	3	10.3	-	-	149	-	-	-	8220G009 ③	15	-	-	10.1/F	-	
1 1/4	29	12.86	0.3①	3	10.3	-	-	178	99	-	-	8220G027	15	-	-	10.1/H	-	
1 1/2	29	12.86	0.3①	9	10.3	-	-	149	99	-	-	8220G011 ③	16	-	-	10.1/F	-	
1 1/2	32	19.29	0.3①	3	10.3	-	-	178	99	-	-	8220G029	16	-	-	10.1/H	-	
2	32	19.29	0.3①	9	10.3	-	-	149	99	-	-	8220G013 ③	17	-	-	10.1/F	-	
2	44	36.86	0.3①	3	10.3	-	-	178	99	-	-	8220G031	17	-	-	10.1/H	-	
2 1/2	44	36.86	0.3①	9	10.3	-	-	149	99	-	-	8220G015 ③ ⑤	18	-	-	10.1/F	-	
2 1/2	44	38.57	0.3①	3	10.3	-	-	178	99	-	-	8220G033 ⑤	18	-	-	10.1/H	-	
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY CLOSED (Closed when de-energized)																		
3/8	6	1.29	0	5	-	-	-	158	-	-	-	8267G001	19	-	-	16.1/H	-	
3/8	10	4.37	0	2	-	-	-	136	-	-	-	8267G003	19	-	-	16.1/H	-	
1/2	6	1.20	0	5	-	-	-	158	-	-	-	8267G005	19	-	-	16.1/H	-	
1/2	10	3.86	0	1	-	-	-	120	-	-	-	8267G007	19	-	-	16.1/H	-	
3/4	10	4.63	0	2	-	-	-	136	-	-	-	8267G017	20	-	-	16.1/H	-	
3/4	13	8.31	0	1	-	-	-	120	-	-	-	8267G019	20	-	-	16.1/H	-	
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY OPEN (Open when de-energized)																		
3/8	6	1.29	0	5	-	-	-	158	-	-	-	8267G009	19	-	-	16.1/H	-	
3/8	10	4.37	0	2	-	-	-	136	-	-	-	8267G011	19	-	-	16.1/H	-	
1/2	6	1.20	0	5	-	-	-	158	-	-	-	8267G013	19	-	-	16.1/H	-	
1/2	10	3.86	0	1	-	-	-	120	-	-	-	8267G015	19	-	-	16.1/H	-	
3/4	10	4.63	0	2	-	-	-	129	-	-	-	8267G021	20	-	-	16.1/H	-	
3/4	13	8.31	0	1	-	-	-	120	-	-	-	8267G023	20	-	-	16.1/H	-	
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY OPEN (Open when de-energized)																		
3/8	14	2.57	0.3	9	10.3	-	-	178	99	-	-	8220G091	21	-	-	16.1/H	-	
1/2	14	3.43	0.3	9	10.3	-	-	178	99	-	-	8220G093	21	-	-	16.1/H	-	
3/4	19	4.29	0.3	9	10.3	-	-	178	99	-	-	8220G095	22	-	-	16.1/H	-	
1	25	11.57	0.3	9	10.3	-	-	178	99	-	-	8220G097	23	-	-	16.1/H	-	
1 1/4	29	12.86	0.3	9	10.3	-	-	178	99	-	-	8220G099	24	-	-	16.1/H	-	
1 1/2	32	19.29	0.3	9	10.3	-	-	178	99	-	-	8220G101	25	-	-	16.1/H	-	
2	44	36.86	0.3	9	10.3	-	-	178	99	-	-	8220G103	26	-	-	16.1/H	-	
2 1/2	44	38.57	0.3	9	10.3	-	-	178	99	-	-	8220G105 ⑤	27	-	-	16.1/F	-	

① Once opened at higher pressure, valve will remain open to 0.2 bar at inlet.
 ② 0 bar on AC construction, 0.02 bar on DC construction.
 ③ EPDM disc.
 ④ Not CSA certified.
 ⑤ Not CSA certified for water.
 ⑥ Ambient temperature range 0°C - 60°C; ⑦ Ambient temperature range 0°C - 25°C
 ♣ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

SPECIAL SERVICE VALVES

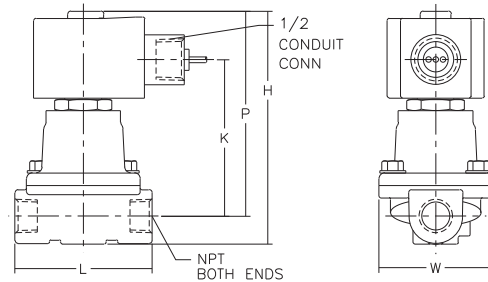
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
6	in	4.68	3.15	2.75	4.12	2.28
	mm	119	80	70	105	58
11	in	4.97	3.45	2.81	4.28	2.28
	mm	126	88	71	109	58
13	in	5.82	3.22	3.75	4.19	3.31
	mm	148	82	95	106	84
14	in	5.81	3.22	3.75	4.19	3.14
	mm	148	82	95	106	80
15	in	5.81	3.22	3.66	4.19	3.56
	mm	148	82	93	106	90
16	in	6.29	3.37	4.38	4.34	4.10
	mm	160	86	111	110	104
17	in	7.51	3.78	5.06	4.75	4.71
	mm	191	96	129	121	120
18	in	7.51	3.78	5.50	4.75	5.18
	mm	191	96	140	121	132
23	in	6.46	3.36	3.75	4.86	3.14
	mm	164	85	95	123	80
24	in	6.39	3.36	3.66	4.86	3.56
	mm	162	85	93	123	90
25	in	6.97	3.51	4.38	5.01	4.10
	mm	177	89	111	127	104
26	in	8.18	3.92	5.06	5.42	4.71
	mm	208	100	129	138	120
27	in	8.18	3.92	5.50	5.42	5.18
	mm	208	100	140	138	132
29	in	5.04	3.34	2.81	4.31	2.28
	mm	128	85	71	109	58
38	in	5.64	3.15	3.75	4.01	3.14
	mm	143	80	95	102	80
39	in	5.64	3.15	3.66	4.01	3.56
	mm	143	80	93	102	90
40	in	6.11	3.30	4.38	4.16	4.10
	mm	155	84	111	106	104
41	in	7.35	3.63	5.06	4.58	4.71
	mm	187	92	129	116	120
42	in	7.35	3.63	5.50	4.58	5.18
	mm	187	92	140	116	132
45	in	6.53	3.36	3.75	4.91	3.14
	mm	166	85	95	125	80
46	in	6.46	3.36	3.66	4.91	3.56
	mm	164	85	93	25	90
47	in	7.03	3.51	4.38	5.06	4.10
	mm	179	89	111	129	104
48	in	8.22	3.97	5.06	5.47	4.71
	mm	209	101	129	139	120
49	in	8.22	3.97	5.50	5.47	5.18
	mm	209	101	140	139	132
53	in	5.82	3.21	3.75	4.2	3.27
	mm	148	82	95	106	83

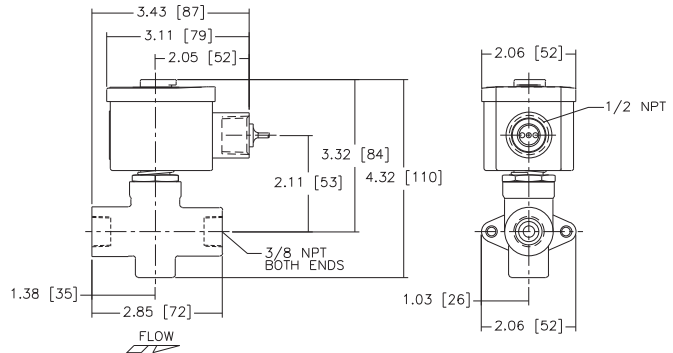
* Valves must be mounted with solenoid vertical and upright.

Const. Ref. 6, 11, 13, 29

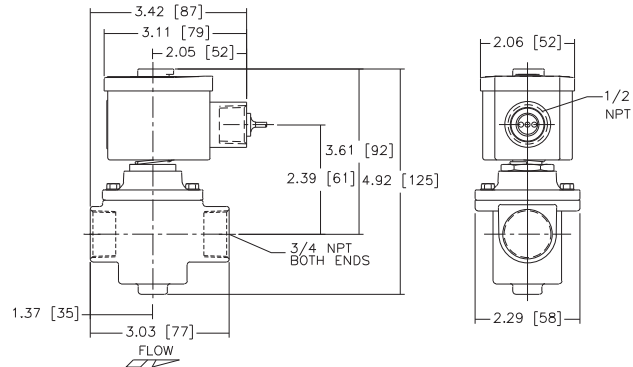
1/2 NPT OR 7/8 DIA HOLE FOR



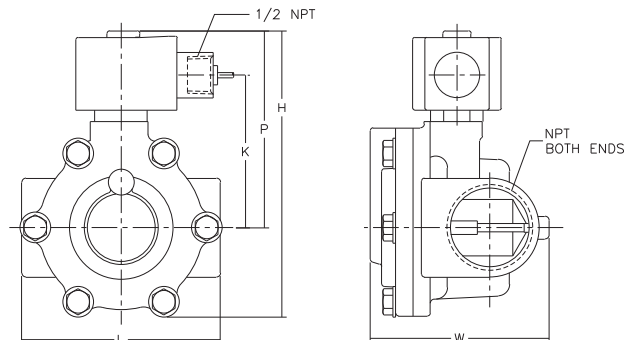
Const. Ref. 19*



Const. Ref. 20*



Const. Ref. 14-16, 23-25, 45-49, 53



(BOLT PATTERN MAY VARY)

SPECIAL
SERVICE VALVES