



2-Way • Normally Closed & Normally Open • 3/8" to 2" NPT
S20, S21 & S27 Series Solenoid Valves
 Zero-Differential & Piloted Diaphragm • Stainless Steel, Brass & Nylon-6

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Construction

Wetted Components			
Body	316 SS	Brass	Nylon-6 + 30% Glass Fill (S20 & S21 only)
Operator Tube	304 Stainless Steel		
Plunger & Tube Head	430FR Stainless Steel		
Springs	302 Stainless Steel		
Shading Ring	Silver	Copper	Copper
Seals	Nitrile (Std.), EPDM, FKM, GFLT, PTFE		



Coil Enclosures

- G Coil - 1/2" NPT Conduit Hub with 24" Lead Wires (NEMA 4/4X, IP65)
- Y Coil – DIN Form A – 18mm (NEMA 4, IP65)
- See Engineering Guide for additional coil enclosures

Electrical

Series/ Mode	Wattage		Inrush (VA)		Holding (VA)	
	DC	AC	50 Hz	60 Hz	50 Hz	60 Hz
S201	10	10	46	46	23	18
S202	10	11	46	46	25	22
S211	9	8	36	36	14	13
S212	10	11	46	46	25	22
S271	22.5	17.5	130	130	28	22
S272	22.5	18.5	130	130	28	22

- All Coils Rated for 100% Duty Cycle
- Voltage Tolerance: ±10% from nominal

Ambient Temperature (Nominal)

- 32°F to 140°F (0°C to 60°C)

Fluid Temperature by Seal Material*

- Nitrile: -40°F to 180°F (-40°C to 82°C)
 - EPDM: -70°F to 295°F (-57°C to 146°C)
 - FKM: -20°F to 230°F (-29°C to 110°C)
 - GFLT: -40°F to 366°F (-40°C to 186°C)
 - PTFE: -320°F to 366°F (-196°C to 186°C)
- *Nylon body valves limited to 180°F (82°C) max.**

Approvals**

- UL Listed (MH17608)
- UL Recognized (MH17997)
- UL Safety Shut Off (MH17608)
 - 3/8"-3/4" (S201xxxxG5xxxS & S201xxxxL7xxxS)
 - 1"-2" (S271xxxxV5xxxS & S271xxxxL7xxxS)
- CRN Registered (0C22902) - [Link](#)
- CSA Certified (069111_0_000)
 - 3/8"-3/4" (Brass or SS, S20 & S21 series with "E" suffix)
 - 1"-2" (Brass or SS, S21 & S27 series with "E" suffix)
- CE Certified

**Not available for all variations



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Normally Closed Valve Specifications (Closed when de-energized)

Pipe Size (NPT)	Orifice Size (in)	Flow Factor (Cv)	Operating Pressure Differential (PSI)								Part Number ^② (Shown with 120 VAC Lead Wire Coil and Nitrile Seals)			
			Min.	Maximum								Stainless Steel	Brass	Nylon-6 + 30% Glass Fill ^③
				Air/Gas		Liquid		Light Oil		Steam ^①				
				AC	DC	AC	DC	AC	DC	AC & DC				
3/8"	5/8	4.3	0	140	90	140	90	90	70	50	S201GH02J7CG4	S201GH02N5CG4	S201GH02NPCG4	
	5/8	4.3	4	200	150	150	100	150	100	50	S211GH02J7CG4	S211GH02N5CG4	S211GH02NPCG4	
1/2"	5/8	4.3	0	140	90	140	90	90	70	50	S201GH02J7DG4	S201GH02N5DG4	S201GH02NPDG4	
	5/8	4.3	4	200	150	150	100	150	100	50	S211GH02J7DG4	S211GH02N5DG4	S211GH02NPDG4	
3/4"	3/4	6.7	0	140	90	140	90	90	70	50	S201GH02J7EG5	S201GH02N5EG5	S201GH02NPEG5	
	3/4	6.7	4	200	150	150	100	150	100	50	S211GH02J7EG5	S211GH02N5EG5	S211GH02NPEG5	
1"	1	11	0	100	100	100	100	100	100	50	S201GH02J7FG9	S201GH02N5FG9	S201GH02NPF9	
	1	13	0	125	125	100	100	70	70	50	S271GH02J7FG9	S271GH02N5FG9	-	
	1	13	5	200	150	150	150	100	100	50	S211GH02J7FG9	S211GH02N5FG9	S211GH02NPF9	
1-1/4"	1-1/4	18	0	100	100	100	100	-	-	50	S201GH02J7GJ2	S201GH02N5GJ2	-	
	1-1/4	19	0	125	125	50	50	70	70	50	S271GH02J7GJ2	S271GH02N5GJ2	-	
	1-1/4	19	5	200	150	150	150	100	100	50	S211GH02J7GJ2	S211GH02N5GJ2	-	
1-1/2"	1-1/4	25	0	100	100	100	100	-	-	50	S201GH02J7HJ2	S201GH02N5HJ2	-	
	1-1/4	25	0	125	125	50	50	70	70	50	S271GH02J7HJ2	S271GH02N5HJ2	-	
	1-1/4	25	5	200	150	150	150	85	85	50	S211GH02J7HJ2	S211GH02N5HJ2	-	
2"	1-1/4	28	0	100	100	100	100	-	-	50	S201GH02J7JJ2	S201GH02N5JJ2	-	
	1-1/4	28	0	125	125	50	50	70	70	50	S271GH02J7JJ2	S271GH02N5JJ2	-	
	1-1/4	28	5	200	150	150	150	85	85	50	S211GH02J7JJ2	S211GH02N5JJ2	-	

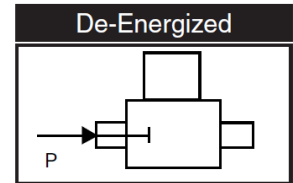
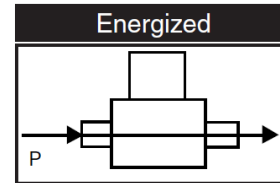
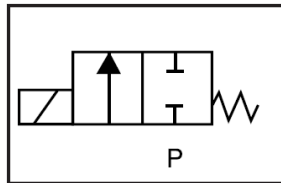
① EPDM or EPDM/PTFE seals required for steam.

Not compatible with Nylon valves.

② See part number selection guide for additional voltages and variations

③ Not compatible with steam.
 Nylon valves limited to 180°F (82°C) maximum fluid temperature.

4. MRP = 5X MOPD





2-Way • Normally Closed & Normally Open • 3/8" to 2" NPT
S20, S21 & S27 Series Solenoid Valves
 Zero-Differential & Piloted Diaphragm • Stainless Steel, Brass & Nylon-6

Normally Open Valve Specifications (Open when de-energized)

Pipe Size (NPT)	Orifice Size (in)	Flow Factor (Cv)	Operating Pressure Differential (PSI)								Part Number ^② (Shown with 120 VAC Lead Wire Coil and Nitrile Seals)			
			Min.	Maximum								Stainless Steel	Brass	Nylon-6 + 30% Glass Fill ^③
				Air/Gas		Liquid		Light Oil		Steam ^①				
				AC	DC	AC	DC	AC	DC	AC & DC				
3/8"	5/8	4.3	0	200	125	200	125	200	125	50	S202GH02J7CG4	S202GH02N5CG4	S202GH02NPCG4	
	5/8	4.3	4	200	140	200	125	200	125	50	S212GH02J7CG4	S212GH02N5CG4	S212GH02NPCG4	
1/2"	5/8	4.3	0	200	125	200	125	200	125	50	S202GH02J7DG4	S202GH02N5DG4	S202GH02NPDG4	
	5/8	4.3	4	200	140	200	125	200	125	50	S212GH02J7DG4	S212GH02N5DG4	S212GH02NPDG4	
3/4"	3/4	6.7	0	200	125	200	125	200	125	50	S202GH02J7EG5	S202GH02N5EG5	S202GH02NPEG5	
	3/4	6.7	4	200	140	200	125	200	125	50	S212GH02J7EG5	S212GH02N5EG5	S212GH02NPEG5	
1"	1	13	0	125	125	125	125	70	70	50	S272GH02J7FG9	S272GH02N5FG9	-	
	1	13	0	200	140	150	140	100	100	50	S212GH02J7FG9	S212GH02N5FG9	S212GH02NPF9	
1-1/4"	1-1/4	23	0	125	125	125	125	70	70	50	S272GH02J7GJ2	S272GH02N5GJ2	-	
	1-1/4	19	5	200	140	140	140	85	85	50	S212GH02J7GJ2	S212GH02N5GJ2	-	
1-1/2"	1-1/4	23	0	125	125	125	125	70	70	50	S272GH02J7HJ2	S272GH02N5HJ2	-	
	1-1/4	25	5	200	140	140	140	85	85	50	S212GH02J7HJ2	S212GH02N5HJ2	-	
2"	1-1/4	27	0	125	125	125	125	70	70	50	S272GH02J7JJ2	S272GH02N5JJ2	-	
	1-1/4	28	5	200	140	140	140	85	85	50	S212GH02J7JJ2	S212GH02N5JJ2	-	

① EPDM or EPDM/PTFE seals required for steam.

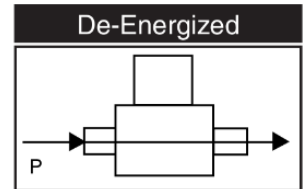
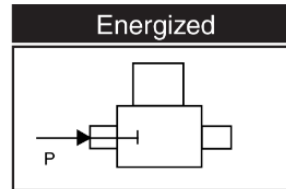
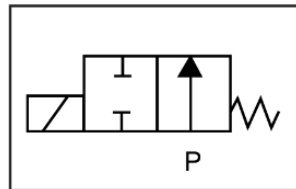
Not compatible with Nylon valves.

② See part number selection guide for additional voltages and variations

③ Not compatible with steam.

Nylon valves limited to 180°F (82°C) maximum fluid temperature.

4. MRP = 5X MOPD





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Stainless Steel Part Number Selection - S20, S21 & S27 Series

Valve Series	Operating Mode	Coil Housing	Coil Class	Voltage	Seal Material	Body Material/ Pipe Size
①	②	③	④	⑤	⑥	⑦
S20	1	G	H	02	J	7CG4

① **Valve Series**

S20	*Zero-Differential Piloted Diaphragm
S21	Piloted Diaphragm
S27	**Zero-Differential Piloted Diaphragm

② **Operating Mode**

1	2-Way Normally Closed (NC)
2	2-Way Normally Open (NO)

③ **Coil Type**

G	1/2" NPT Conduit with 24" Lead Wires
Y	DIN (Form A – 18mm)

④ **Coil Class**

H	H Class Coil
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⑤ **Voltage**

02	120 VAC, 60 Hz; 110 VAC, 50 Hz
03	208 VAC, 60 Hz
04	240 VAC, 60 Hz; 220 VAC, 50 Hz
24	24 VAC, 50/60 Hz
15	12 VDC
16	24 VDC

*Not available in 1" and above as normally open
 **Only available in 1" and above
 ***Not available for all variations

⑥ **Seal Material (with Silver Shading Ring)**

E	EPDM
G	GFLT
B	EPDM/PTFE (NC, 3/8" - 3/4" Only)
J	Nitrile
L	FKM

⑦ **Body Material/Pipe Size**

7CG4	316 Stainless Steel, 3/8" NPT
7DG4	316 Stainless Steel, 1/2" NPT
7EG5	316 Stainless Steel, 3/4" NPT
7FG9	316 Stainless Steel, 1" NPT
7GJ2	316 Stainless Steel, 1-1/4" NPT
7HJ2	316 Stainless Steel, 1-1/2" NPT
7JJ2	316 Stainless Steel, 2" NPT

⑧ **Optional Suffix**

(blank)	No Option
C	CE Declaration
E	CSA Certification
K	Mounting Bracket (3/8"-3/4" Only)
M	Manual Override (NC Valves Only)
N	Cleaned for Oxygen Service
P	Nickel Plated Plunger & Tube
S	***UL Safety Rated (S201 & S271 Only)

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Brass Part Number Selection - S20, S21 & S27 Series

Valve Series	Operating Mode	Coil Housing	Coil Class	Voltage	Seal Material	Body Material/ Pipe Size
①	②	③	④	⑤	⑥	⑦
S20	1	G	H	02	N	5CG4

① **Valve Series**

S20	*Zero-Differential Piloted Diaphragm
S21	Piloted Diaphragm
S27	**Zero-Differential Piloted Diaphragm

② **Operating Mode**

1	2-Way Normally Closed (NC)
2	2-Way Normally Open (NO)

③ **Coil Type**

G	1/2" NPT Conduit with 24" Lead Wires
Y	DIN (Form A – 18mm)

④ **Coil Class**

H	H Class Coil
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⑤ **Voltage**

02	120 VAC, 60 Hz; 110 VAC, 50 Hz
03	208 VAC, 60 Hz
04	240 VAC, 60 Hz; 220 VAC, 50 Hz
24	24 VAC, 50/60 Hz
15	12 VDC
16	24 VDC

*Not available in 1" and above as normally open
 **Only available in 1" and above
 ***Not available for all variations

⑥ **Seal Material (with Copper Shading Ring)**

C	EPDM
G	GFLT
H	EPDM/PTFE (NC, 3/8" - 3/4" Only)
N	Nitrile
V	FKM

⑦ **Body Material/Pipe Size**

5CG4	Brass, 3/8" NPT
5DG4	Brass, 1/2" NPT
5EG5	Brass, 3/4" NPT
5FG9	Brass, 1" NPT
5GJ2	Brass, 1-1/4" NPT
5HJ2	Brass, 1-1/2" NPT
5JJ2	Brass, 2" NPT

⑧ **Optional Suffix**

(blank)	No Option
C	CE Declaration
E	CSA Certification
K	Mounting Bracket (3/8"-3/4" Only)
M	Manual Override (NC Valves Only)
N	Cleaned for Oxygen Service
P	Nickel Plated Plunger & Tube
S	***UL Safety Rated (S201 & S271 Only)



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Nylon-6 Part Number Selection - S20 & S21 Series

Valve Series	Operating Mode	Coil Housing	Coil Class	Voltage	Seal Material	Body Material/ Pipe Size
①	②	③	④	⑤	⑥	⑦
S20	1	G	H	02	N	PCG4

① **Valve Series**

S20	Zero-Differential Piloted Diaphragm
S21	Piloted Diaphragm

② **Operating Mode**

1	2-Way Normally Closed (NC)
2	2-Way Normally Open (NO)

③ **Coil Type**

G	1/2" NPT Conduit with 24" Lead Wires
Y	DIN (Form A – 18mm)

④ **Coil Class**

H	H Class Coil
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⑤ **Voltage**

02	120 VAC, 60 Hz; 110 VAC, 50 Hz
03	208 VAC, 60 Hz
04	240 VAC, 60 Hz; 220 VAC, 50 Hz
24	24 VAC, 50/60 Hz
15	12 VDC
16	24 VDC

*Not available in S20 normally open variations

⑥ **Seal Material (with Copper Shading Ring)**

C	EPDM
G	GFLT
H	EPDM/PTFE (NC, 3/8" - 3/4" Only)
N	Nitrile
V	FKM

⑦ **Body Material/Pipe Size**

PCG4	Nylon-6, 3/8" NPT
PDG4	Nylon-6, 1/2" NPT
PEG5	Nylon-6, 3/4" NPT
PFG9	*Nylon-6, 1" NPT

⑧ **Optional Suffix**

(blank)	No Option
C	CE Declaration
E	CSA Certification
K	Mounting Bracket (3/8"-3/4" Only)
M	Manual Override (NC Valves Only)
N	Cleaned for Oxygen Service
P	Nickel Plated Plunger & Tube

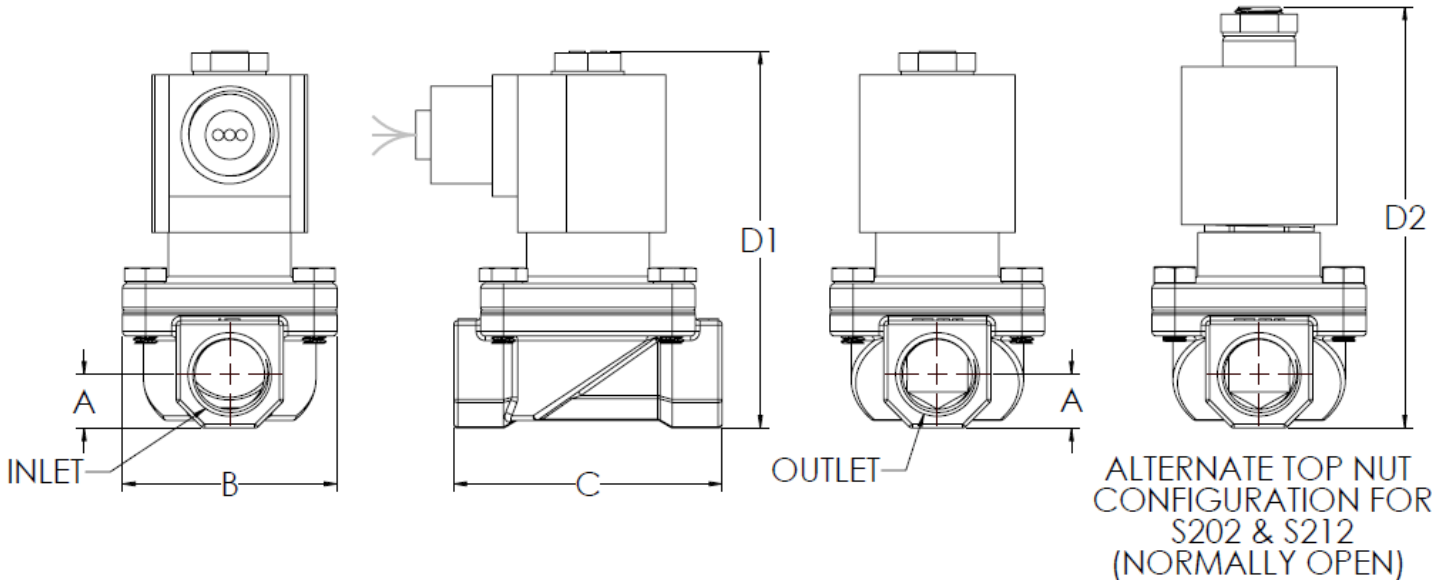
Note: Nylon valves limited to 180°F (82°F) maximum fluid temperature.



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Drawing 1

S20 & S21 Series – 3/8" to 3/4" - Stainless Steel & Brass



Pipe Size	Series/Mode	A	B	C	D1		D2	Weight
3/8" NPT	S201	0.56	2.23	2.76	3.91		n/a	2.0 lb
	S202	0.56	2.23	2.76	n/a		4.39	2.0 lb
	S211	0.56	2.23	2.76	3.64 (AC)	4.06 (DC)	n/a	2.5 lb
	S212	0.56	2.23	2.76	n/a		4.39	2.5 lb
1/2" NPT	S201	0.56	2.23	2.76	3.91		n/a	2.0 lb
	S202	0.56	2.23	2.76	n/a		4.39	2.0 lb
	S211	0.56	2.23	2.76	3.64 (AC)	4.06 (DC)	n/a	2.5 lb
	S212	0.56	2.23	2.76	n/a		4.39	2.5 lb
3/4" NPT	S201	0.65	2.23	2.76	4.12		n/a	2.2 lb
	S202	0.65	2.23	2.76	n/a		4.6	2.2 lb
	S211	0.65	2.23	2.76	3.85 (AC)	4.27 (DC)	n/a	3.3 lb
	S212	0.65	2.23	2.76	n/a		4.6	3.3 lb

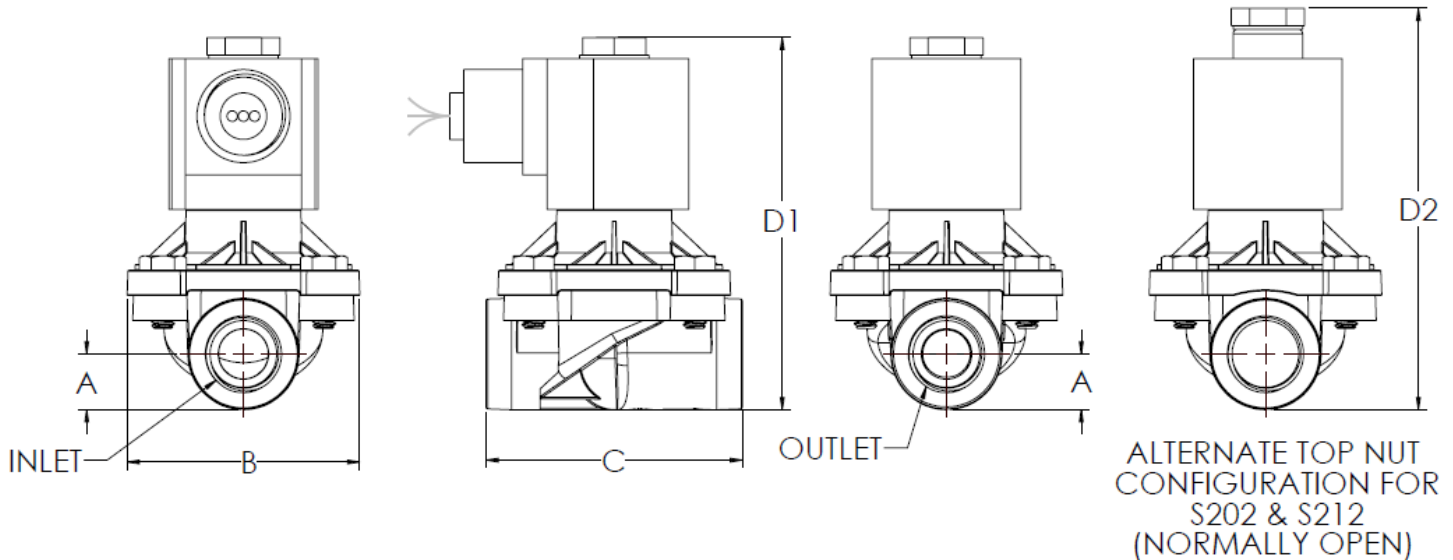
- S20 & S21 series 3/8" to 3/4" valves can be mounted in any position.
- Dimensions shown in inches.
- Drawing not to scale.



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Drawing 2

S20 & S21 Series – 3/8" to 3/4" – Nylon-6

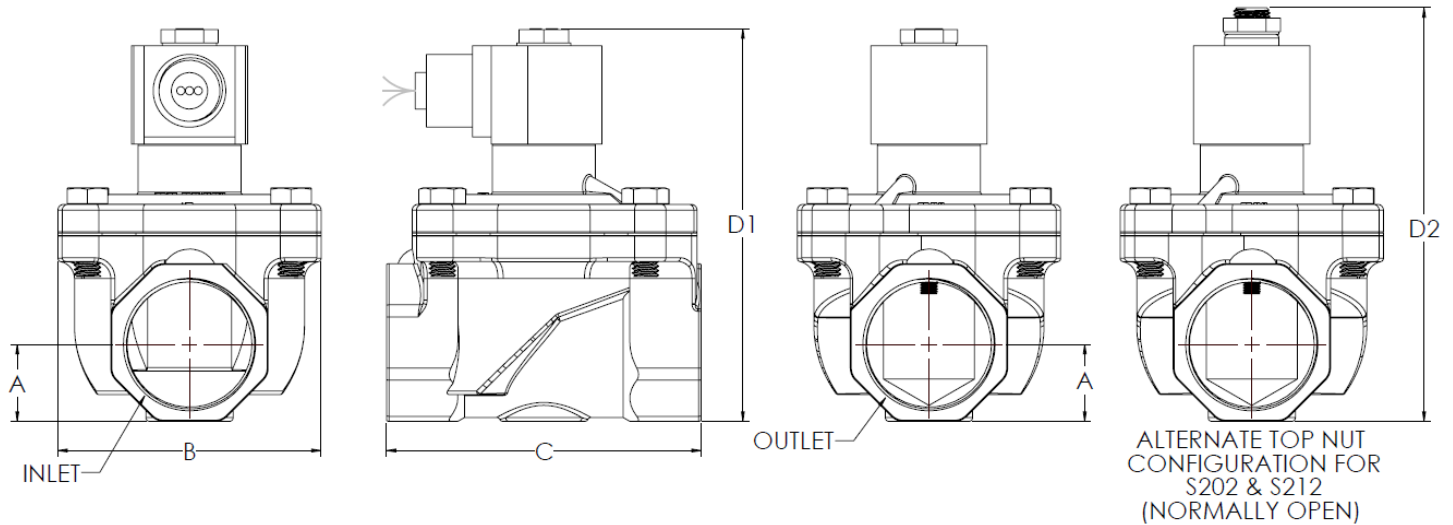


Pipe Size	Series/Mode	A	B	C	D1		D2	Weight
3/8" NPT	S201	0.56	2.35	2.76	4.06		n/a	1.0 lb
	S202	0.56	2.35	2.76	n/a		4.39	1.0 lb
	S211	0.56	2.35	2.76	3.64 (AC)	4.06 (DC)	n/a	1.0 lb
	S212	0.56	2.35	2.76	n/a		4.39	1.0 lb
1/2" NPT	S201	0.60	2.50	2.76	4.00		n/a	1.0 lb
	S202	0.60	2.50	2.76	n/a		4.47	1.0 lb
	S211	0.60	2.50	2.76	3.73 (AC)	4.00 (DC)	n/a	1.0 lb
	S212	0.60	2.50	2.76	n/a		4.47	1.0 lb
3/4" NPT	S201	0.60	2.50	2.76	4.00		n/a	1.0 lb
	S202	0.60	2.50	2.76	n/a		4.47	1.0 lb
	S211	0.60	2.50	2.76	3.73 (AC)	4.00 (DC)	n/a	1.0 lb
	S212	0.60	2.50	2.76	n/a		4.47	1.0 lb

- S20 & S21 series 3/8" to 3/4" valves can be mounted in any position.
- 3/8" valve appearance may vary from drawing shown above.
- Dimensions shown in inches.
- Drawing not to scale.

Drawing 3

S20 & S21 Series – 1" to 2" – Stainless Steel & Brass, 1" Nylon-6



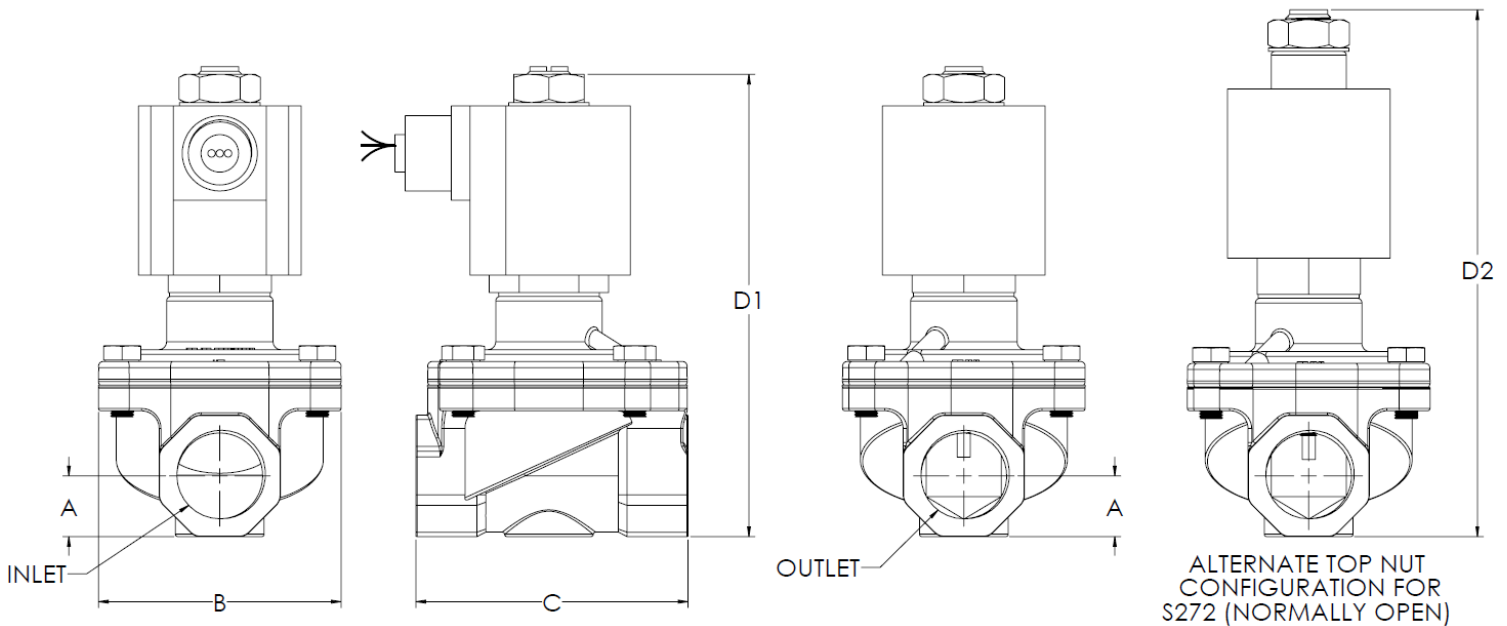
Pipe Size	Series/Mode	A	B	C	D1	D2	Weight
1" NPT	S201	0.84	3.22	3.70	5.07	n/a	6.4 lb
	S211	0.84	3.22	3.70	4.74	n/a	6.4 lb
	S212	0.84	3.22	3.70	n/a	5.08	6.4 lb
1-1/4" NPT	S201	1.08	3.70	4.35	5.76	n/a	10.5 lb
	S211	1.10	3.70	4.35	5.43	n/a	10.5 lb
	S212	1.10	3.70	4.35	n/a	5.71	10.5 lb
1-1/2" NPT	S201	1.10	3.70	4.35	5.76	n/a	10.5 lb
	S211	1.10	3.70	4.35	5.43	n/a	10.5 lb
	S212	1.10	3.70	4.35	n/a	5.71	10.5 lb
2" NPT	S211	1.47	3.68	5.58	6.03	n/a	13.5 lb
	S212	1.47	3.68	5.58	n/a	6.31	13.5 lb

Pipe Size	Series/Mode	A	B	C	D1	D2	Weight
1" NPT Nylon-6 Version Only	S201	0.90	3.34	3.58	5.09	n/a	1.7 lb
	S211	0.90	3.34	3.58	4.81	n/a	1.7 lb
	S212	0.90	3.34	3.58	n/a	5.05	1.7 lb

- S20 & S21 series 1" to 2" valves should be mounted upright (tube pointing up).
- Nylon-6 version offered in 1" only, appearance may vary from drawing shown above.
- Dimensions shown in inches.
- Drawing not to scale.

Drawing 4

S27 Series – 1" to 2" – Stainless Steel & Brass



Pipe Size	Series/Mode	A	B	C	D1	D2	Weight
1" NPT	S271	0.84	3.22	3.70	6.25	n/a	5.1 lb
	S272	0.84	3.22	3.70	n/a	7.00	5.1 lb
1-1/4" NPT	S271	1.08	3.70	4.35	6.94	n/a	6.7 lb
	S272	1.08	3.70	4.35	n/a	7.69	6.7 lb
1-1/2" NPT	S271	1.08	3.70	4.35	6.94	n/a	6.7 lb
	S272	1.08	3.70	4.35	n/a	7.69	6.7 lb
2" NPT	S271	1.47	3.68	5.58	7.54	n/a	9.1 lb
	S272	1.47	3.68	5.58	n/a	8.29	9.1 lb

- S27 series 1" to 2" valves should be mounted upright (tube pointing up).
- Dimensions shown in inches.
- Drawing not to scale.