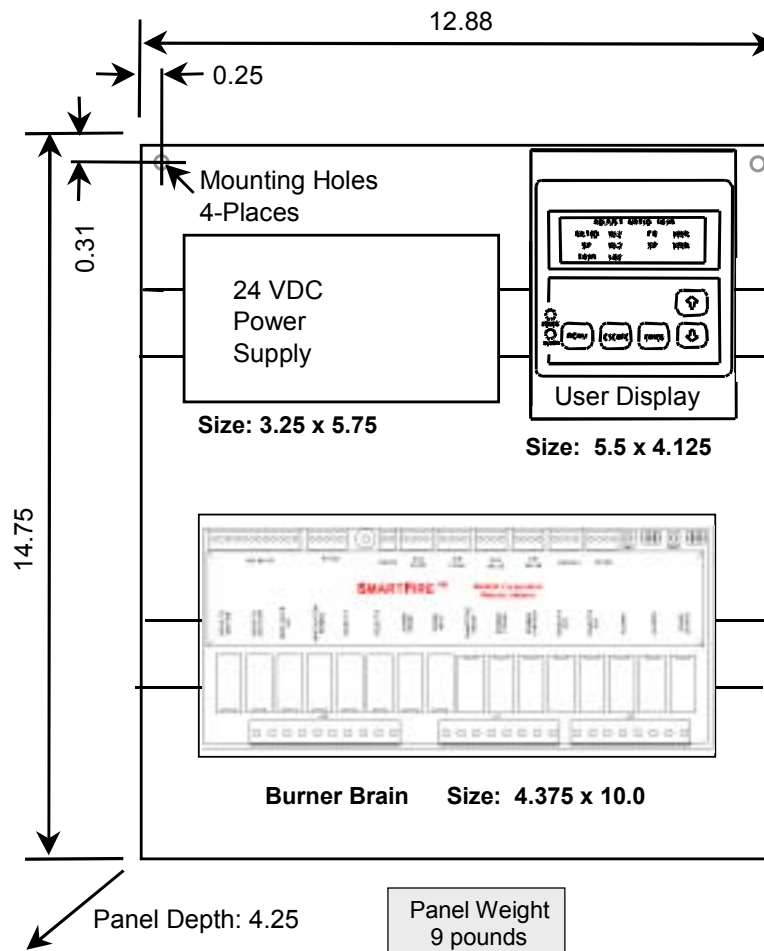


## Electrical Specifications

Valve Position Control	0.1 angular degree resolution
Flow Control	± 1% of flow reading over a turndown of 20:1
Air/Fuel Ratio Control	± 2% with turndown of 20:1
Power Supply Input	100-120 VAC @ 2.5 Amps max, 50-60 Hz 200-240 VAC @ 1.5 Amps max, 50-60 Hz
Approvals	FM & CSA (CE approval pending)
Ambient Temperature	-20°F to 122°F (-29°C to 50°C)
4-20 mA I/O	Output: 350 Ohms max user load resistance
	Input: 20 mA max current, 250 Ohm input resistance
Control Relays	Input Coil: 120 VAC @ 7.5 mA 240 VAC @ 3.8 mA
	Output Contacts: 250 VAC @ 10 Amps, 30 VDC @ 10 Amps

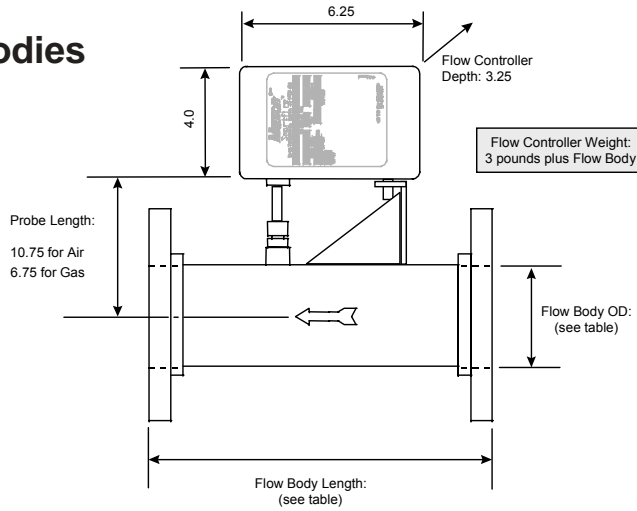
## Dimensions *(inches)*

### Interface Panel



## Dimensions (inches)

### Flow Controllers / Flow Bodies



Air Flow Body Dimensions (Inches)							Low Range		High Range		Max High Range Pressure Drop ("wc)
Size	O.D.	Length	No. of Pcs.	Weight (lbs.)	Flanges		Min Flow	Max Flow	Min Flow	Max Flow	
					Type	Weight	1000's scfh	1000's scfh	1000's scfh	1000's scfh	
8	8.63	34	1	50	Rolled Angle*	12	2.8	50	3.8	75	4.7
12	12.75	50	1	68	Rolled Angle*	16	6.2	111	8.3	167	4.7
16	16.0	64	2	110	Rolled Angle*	20	9.8	176	13.2	263	4.7
20	20.0	80	2	220	Rolled Angle*	25	15.3	276	20.7	414	4.7
24	24.0	96	2	250	Rolled Angle*	28	22.2	399	29.9	599	4.7
28	28.0	96	2	275	Rolled Angle*	31	30.3	546	40.9	818	4.7

\*Chicago Metal Rolled Products (773) 523-5757

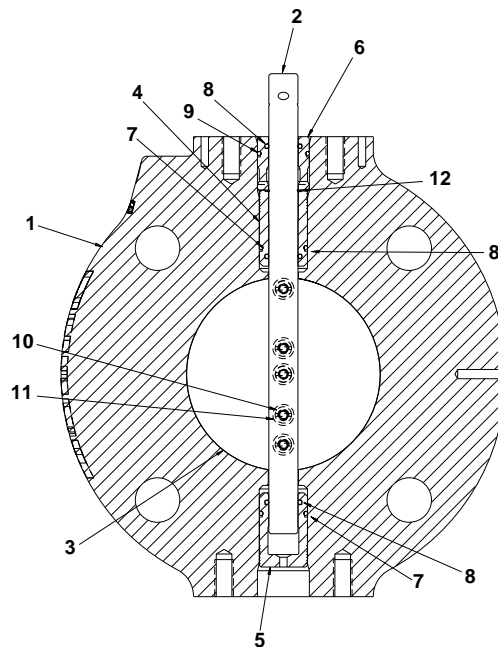
Gas Flow Body Dimensions (Inches)							Low Range		High Range		Max High Range Pressure Drop ("wc)
Size	O.D.	Length	No. of Pcs.	Weight (lbs.)	Flanges		Min Flow	Max Flow	Min Flow	Max Flow	
					Type	Weight	1000's scfh	1000's scfh	1000's scfh	1000's scfh	
2	2.38	8	1	13	ANSI*	15	0.2	2.7	0.3	5.4	4.2
3	3.5	12	1	28	ANSI*	20	0.5	8.1	0.4	8.1	3.6
4	4.5	16	1	45	ANSI*	28	0.6	11.3	0.6	11.3	4.5
6	6.63	24	1	70	ANSI*	32	1.3	22.5	1.1	22.5	3.6
6HC	6.63	24	1	70	ANSI*	32	3.8	67.5	2.3	45.0	14.3

\*150 lb. rating

Oxygen (or Air) Stainless Steel Flow Body Dimensions (Inches)							Low Range		High Range		Max High Range Pressure Drop ("wc)
Size	O.D.	Length	No. of Pcs.	Weight (lbs.)	Flanges		Min Flow	Max Flow	Min Flow	Max Flow	
					Type	Weight	1000's scfh	1000's scfh	1000's scfh	1000's scfh	
2	2.38	8	1	13	ANSI*	15	0.2	2.7	0.3	5.4	8.3
3	3.5	12	1	28	ANSI*	20	0.5	8.1	0.4	8.1	7.1
4	4.5	16	1	45	ANSI*	28	0.6	11.3	0.6	11.3	9.0
6	6.63	24	1	70	ANSI*	32	1.3	22.5	1.1	22.5	7.1

\*150 lb. rating

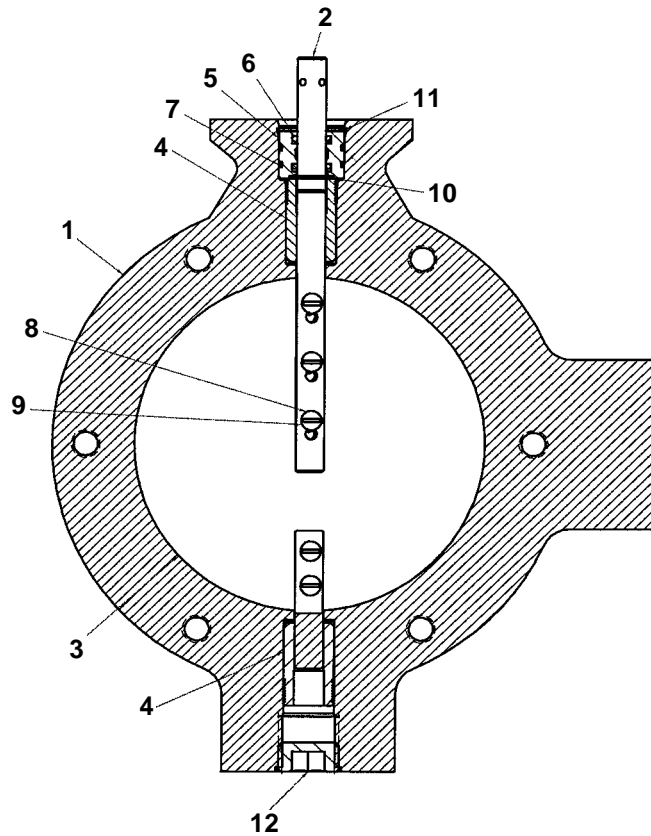
## Valve Body Specifications



### Valve Body Material Specifications - 1" thru 4"

Item No.	Description	Valve Body Assembly		
		GP Flat Faced	GP Raised Faced	Oxy Flat Faced
1	Valve Body	Gray Iron ASTM A157 GR, G3000	Carbon Steel ASTM A216 GR, WCB	Brass ASTM B62 UNS No. C83600
2	Valve Stem	303 Stainless Steel - ASTM A157 GR, G3000		
3	Butterfly Disc	304 Stainless Steel - ASTM A240 Type 304 UNS No. S30400		
4	Top Bushing	Bronze - ASTM B271, B505 and B584 UNS No. C93200		
5	Bottom Bushing			
6	Top Shim Bushing			
7	O-Ring	Buna-N		Viton
8	O-Ring			
9	O-Ring			
10	Screw	18-8 Stainless Steel		
11	Washer	304 Stainless Steel		
12	Retaining Ring	316 Stainless Steel		

## Valve Body Specifications



### Valve Body Material Specifications - 6" thru 16"

Item No.	Description	Valve Size	
		6" & 8"	10" - 16"
1	Valve Body	Gray Iron - ASTM A157 GR, G3000	
2	Valve Stem	316 Stainless Steel - ASTM A276	
3	Butterfly Disc	304 Stainless Steel - ASTM A167 UNS No. S30400	Carbon Steel - ASTM A108 UNS No. G10180
4	Top & Bottom Bushing	Bronze - ASTM B271, B505 and B584 UNS No. C93200	
5	Shim Bushing		
6	O-Ring	Buna-N	
7	O-Ring		
8	Screw	304 Stainless Steel	Zinc Plated Carbon Steel
9	Hex Nut	316 Stainless Steel	Zinc Plated Carbon Steel
10	Retaining Ring	Carbon Steel - SAE 1060-1090 UNS No. G10600-G10900	
11	Retaining Ring		
12	Pipe Plug	Alloy Steel - ASTM A322 UNS G40370	

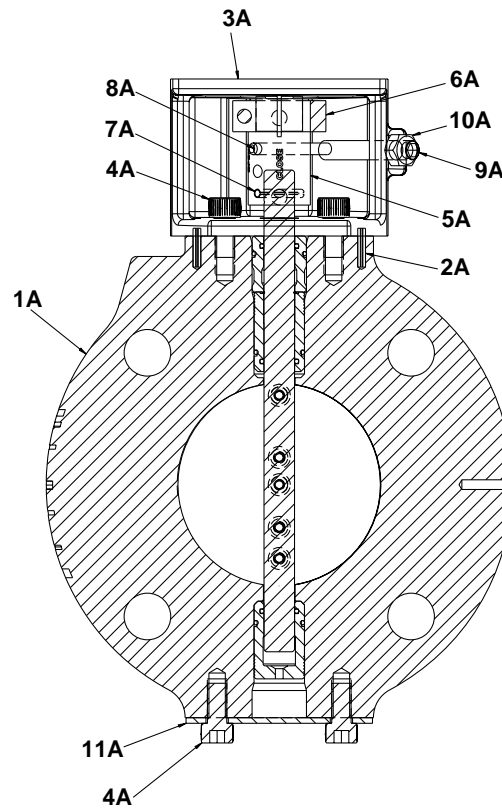


Contact Esys for more information about this product:  
 Esys® The Energy Control Company™  
 4520 Stine Road, Ste 7  
 Bakersfield, CA 93313  
 (661) 833-1902

email: [esys@esys.us](mailto:esys@esys.us)  
 website: <http://www.esys.us>



# Valve Body Specifications



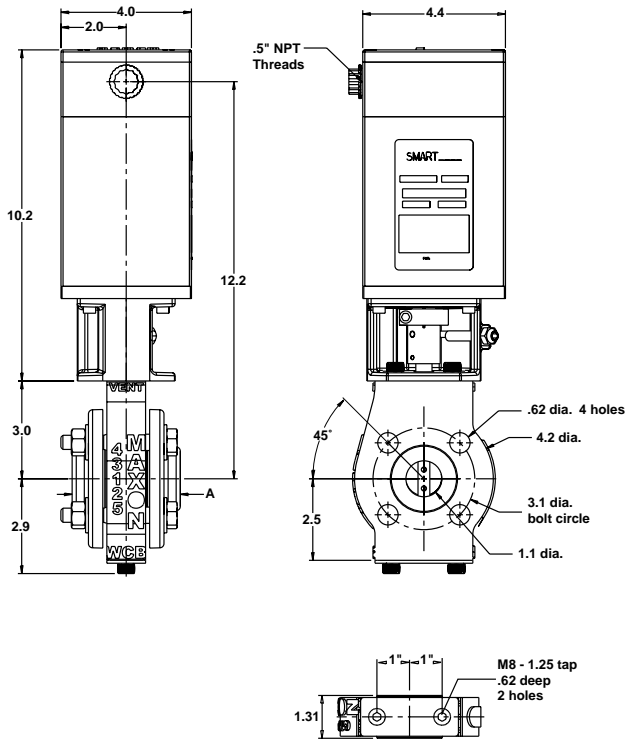
## SMARTFIRE Valve Body Assembly Material Specifications

Item No.	Description	SMARTFIRE Component Material Specifications
1A	Valve Body Sub-assembly	Assembly per pages 7205 & 7206
2A	Locating Spring Pin	Zinc Plated Carbon Steel
3A	Adapter Bracket	ASTM B179 T6 Aluminum
4A †	Socket Head Cap Screw	Zinc Plated Carbon Steel
5A	Coupling	ASTM A582 Type 303 Stainless Steel
6A	Locking Collar	18-8 Type 303 Stainless Steel
7A	Spring Pin	Zinc Plated Carbon Steel
8A	Dowel Pin	303 Stainless Steel
9A	Hard Stop Screw	18-8 Stainless Steel
10A	Hard Stop Nut	Stainless Steel
11A †	Cover Plate	Aluminum

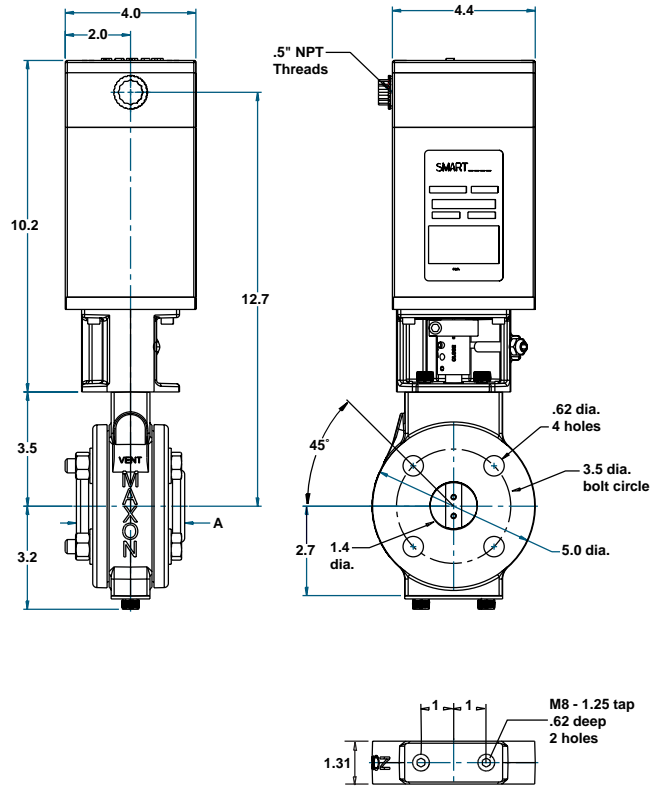
† - These items used only on sizes 1" thru 4"

Dimensions (in inches)

1" SMARTFIRE™ Valve Actuator



1.25" SMARTFIRE™ Valve Actuator



Flange Dimension "A"

Iron	Threaded	2.87
Steel	Threaded	3.15
	Socket Welded	2.84
Brass	Threaded	2.81
	Solder Cup	3.51

Flange Dimension "A"

Iron	Threaded	3.05
Steel	Threaded	3.12
	Socket Welded	3.05
Brass	Threaded	3.05
	Solder Cup	3.63



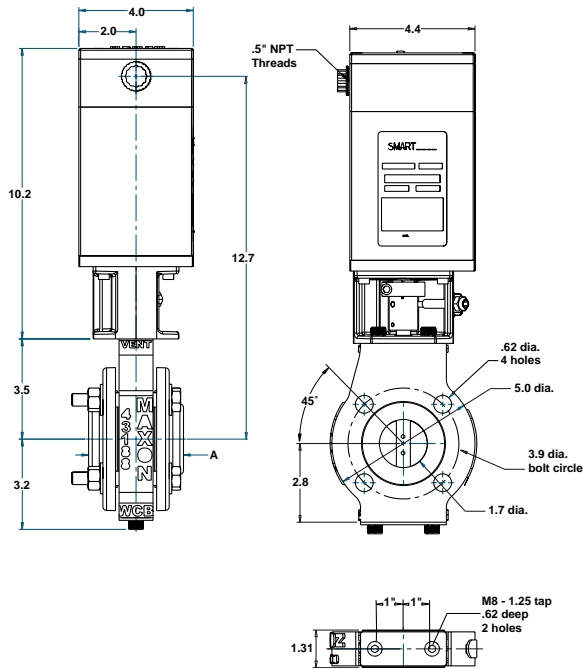
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# Dimensions (inches)

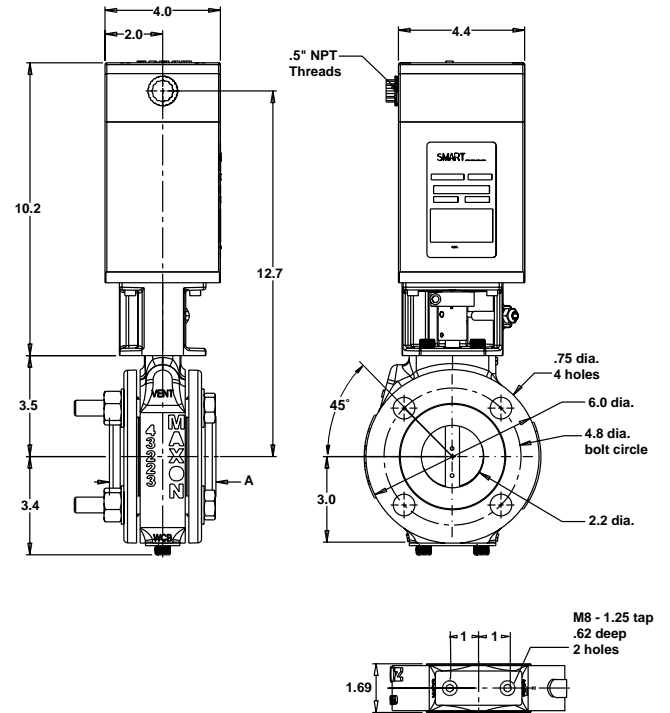
## 1.5" SMARTFIRE™ Valve Actuator



### Flange Dimension "A"

Iron	Threaded	3.27
Steel	Threaded	3.23
	Socket Welded	3.24
Brass	Threaded	3.15
	Solder Cup	3.88

## 2" SMARTFIRE™ Valve Actuator

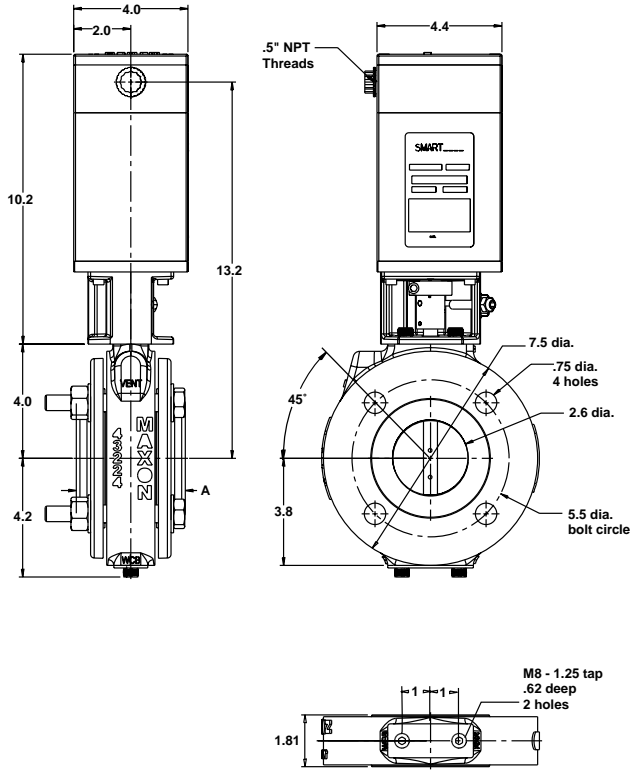


### Flange Dimension "A"

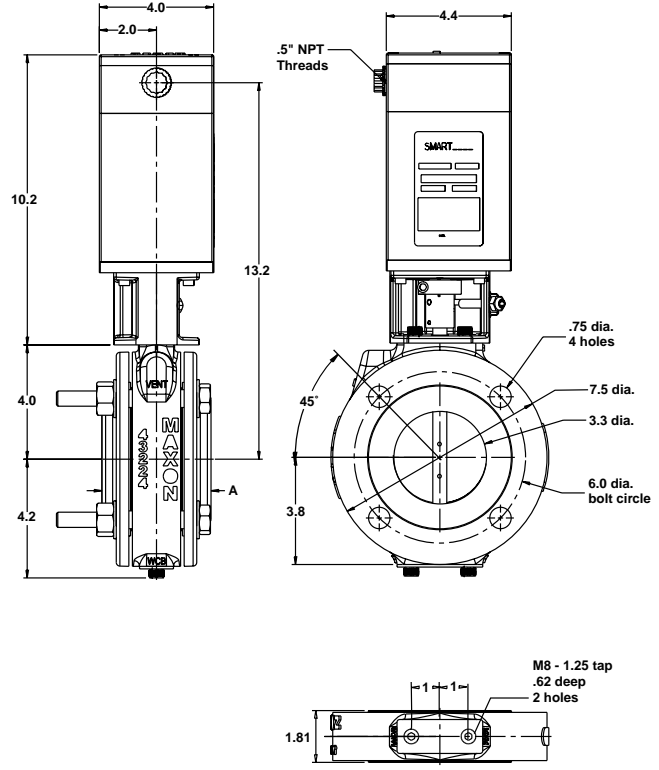
Iron	Threaded	3.43
Steel	Threaded	3.56
	Socket Welded	3.51
Brass	Threaded	3.72
	Solder Cup	4.62

Dimensions (in inches)

2.5" SMARTFIRE™ Valve Actuator



3" SMARTFIRE™ Valve Actuator



Flange Dimension "A"

Iron	Threaded	3.72
Steel	Threaded	3.67
	Socket Welded	3.79
Brass	Threaded	3.80
	Solder Cup	5.27

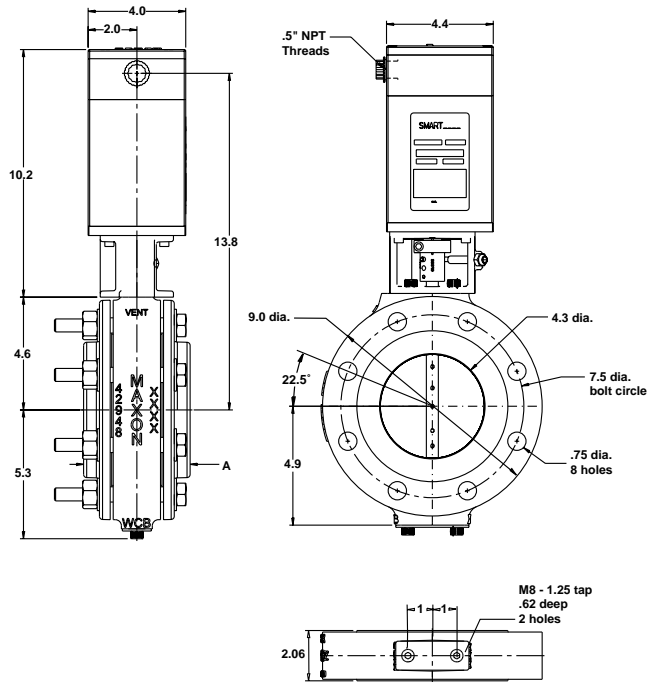
Flange Dimension "A"

Iron	Threaded	3.83
Steel	Threaded	4.13
	Socket Welded	4.03
Brass	Threaded	4.02
	Solder Cup	5.09

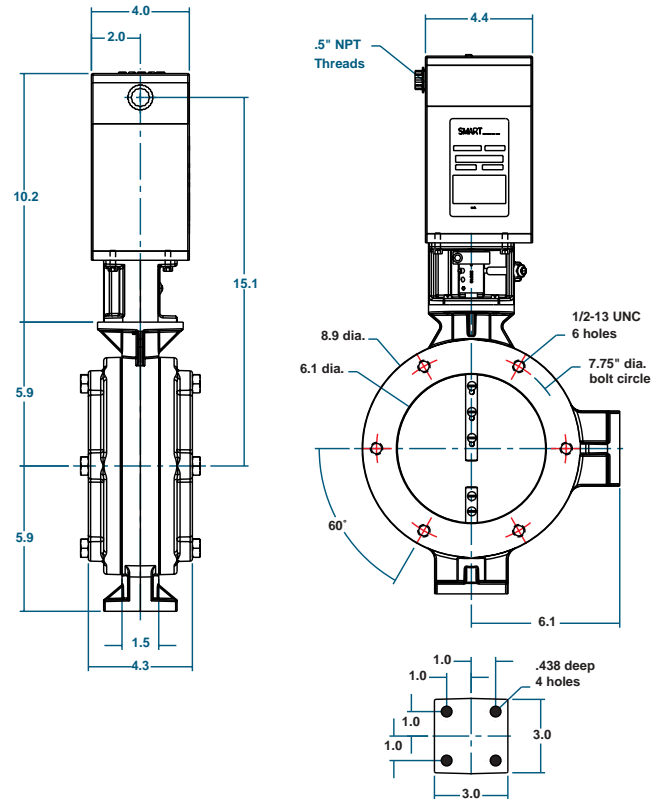


# Dimensions (in inches)

## 4" SMARTFIRE™ Valve Actuator



## 6" SMARTFIRE™ Valve Actuator

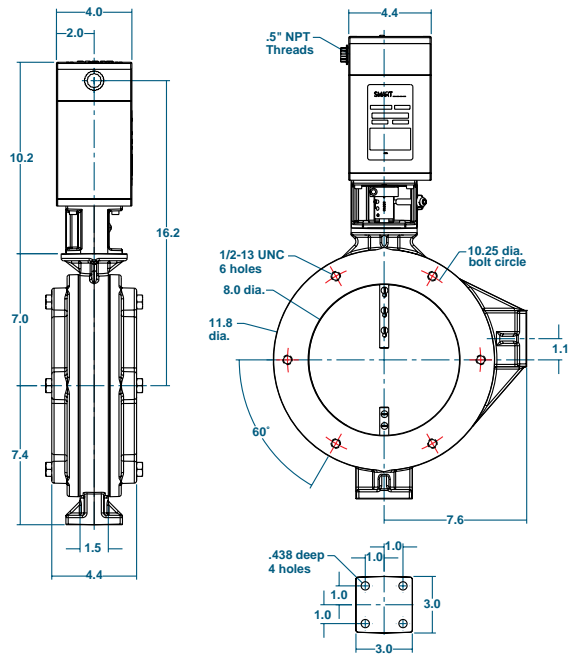


### Flange Dimension "A"

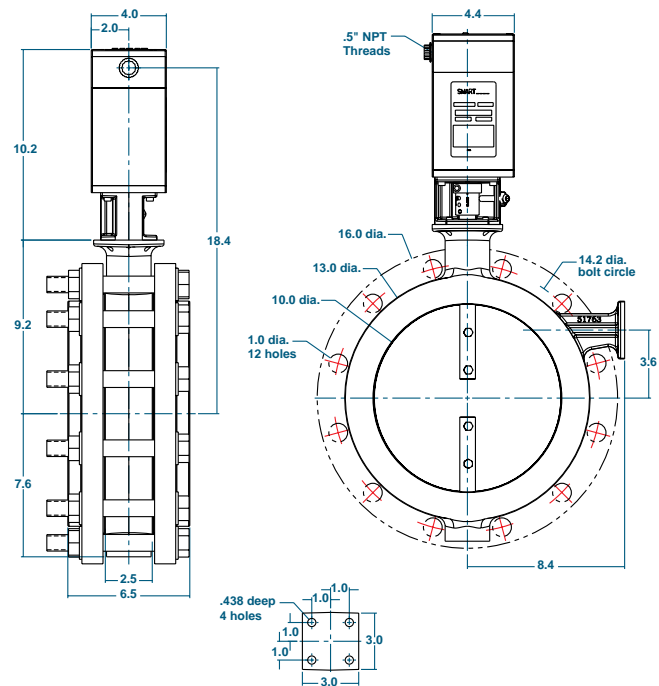
Iron	Threaded	4.13
Steel	Threaded	4.06
	Socket Welded	4.06

Dimensions (in inches)

8" SMARTFIRE™ Valve Actuator



10" SMARTFIRE™ Valve Actuator



Note: Flanges are shipped loose.



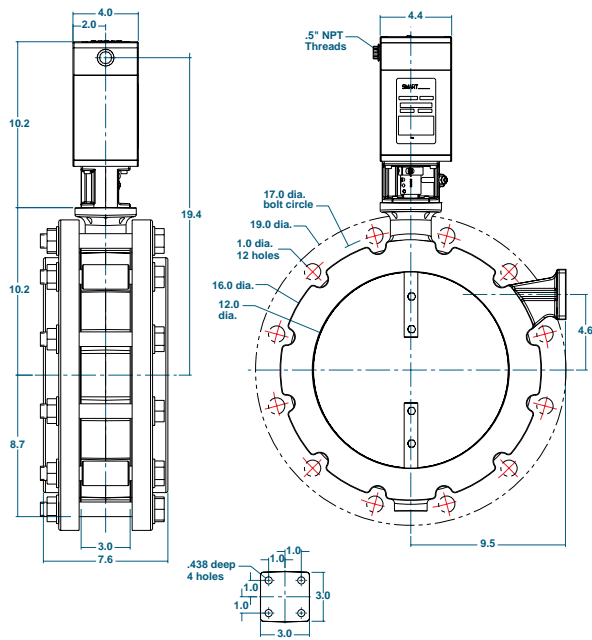
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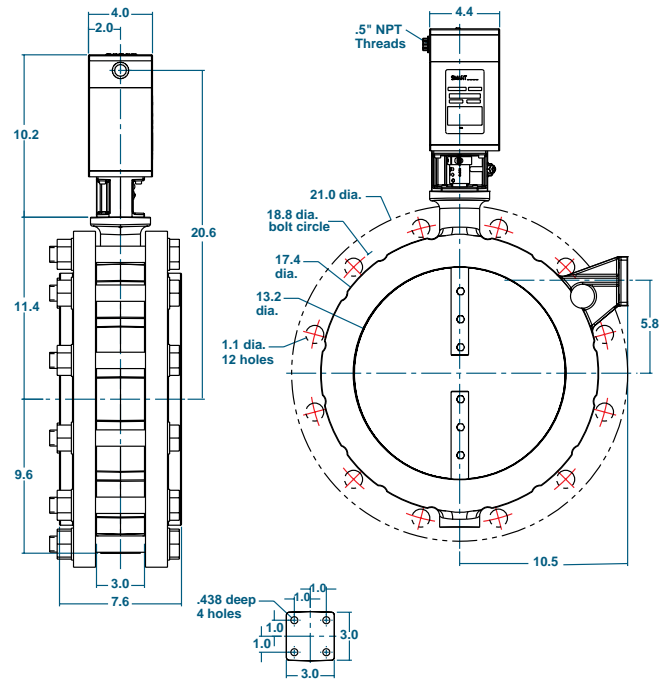
Dimensions (in inches)

12" SMARTFIRE™ Valve Actuator



Note: Flanges are shipped loose.

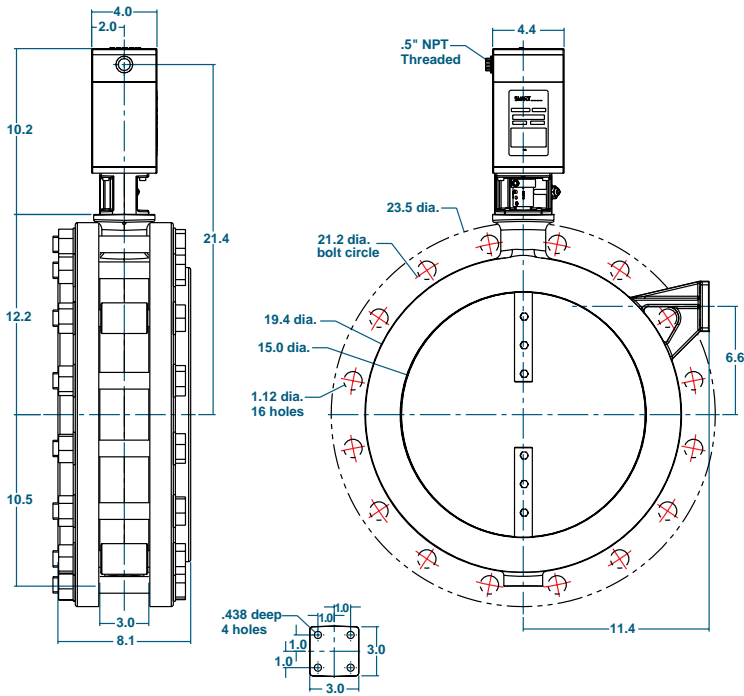
14" SMARTFIRE™ Valve Actuator



Note: Flanges are shipped loose.

# Dimensions (in inches)

## 16" SMARTFIRE™ Valve Actuator



Note: Flanges are shipped loose.

## Control Interface

