



WBV-H

Wafer Butterfly Valves – Hot Air

- To trim or control ambient or preheated air
- Available with hand lever or with lever and linkage for automatic control
- WBV-H can be used in temperatures of up to 1200 °F for preheated air
- WBV-H can be used in temperatures of up to 400 °F for ambient air

Application

Wafer Butterfly Valves are used to trim or control ambient or preheated air. The valve can be ordered with a hand lever or can be supplied with a lever and linkage for automatic control. When sizing wafer butterfly valves for automatic control, normal practice is to size for a valve differential pressure (Δp) of 10-20 % of total available air pressure. When ordering, specify temperature service desired: ambient air to 400 °F, or preheated air to 1200 °F.

Valves should be selected for maximum flow at no more than 70° open. Full port wafer valves installed in lines of the same size offer increased flow for a fixed pressure drop up to 70° open. At greater openings, flow does not increase appreciably although pressure drop across the valve falls off rapidly. At 90° open, resistance is very low – pressure drop is practically zero.

Capacities

Valve size	70° open valve capacity air (scfm)		
	0.5" WC Δp	1 osi Δp	C_v
6"	520	960	980
8"	900	1,660	1,720
10"	1,410	2,620	2,700
12"	2,020	3,760	3,800
14"	2,470	4,590	4,700
16"	3,280	6,090	6,200
18"	4,190	7,780	7,900
20"	5,210	9,680	9,800
22"	6,360	11,810	12,000

Additional sizes available on request.

Capacity correction at elevated temperature

Temperature °F	Capacity correction factor
60	1.00
200	.887
400	.778
600	.700
800	.642
1000	.597
1200	.559

Pressure correction at elevated temperature

Temperature °F	Pressure correction factor
100	1.000
200	1.179
300	1.357
400	1.536
500	1.714
600	1.893
700	2.071
800	2.250
900	2.429
1000	2.607
1100	2.768
1200	2.964

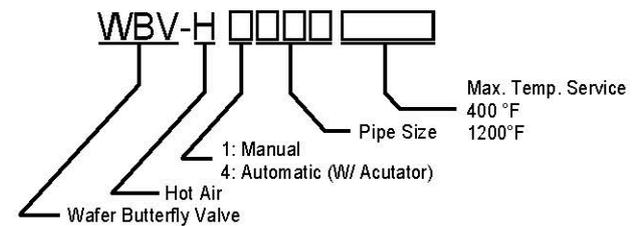
Technical Information

The torque values in this sheet represent the static torque requirements for light duty butterfly valves on normal fluid medium service. In cases of severe conditions such as extremely dirty air service, please consult Honeywell. Since dynamic values are not included, this table should not be used if any of the following conditions exist:

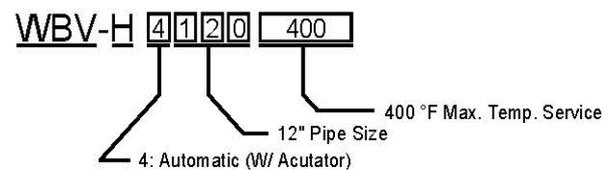
- Vapor or gas is flowing near sonic velocity.
- Discharge piping is less than five (5) pipe diameters in length (this prohibits full recovery of velocity head)
- Reducers/expanders are used and ratio of valve to pipe diameter is significant.

Valve size	Min. Torque (in-lbs)	
	32 osi Δp	64 osi Δp
6"	11	29
8"	11	29
10"	18	44
12"	34	85
14"	42	104
16"	55	137
18"	94	234
20"	112	291
22"	142	355

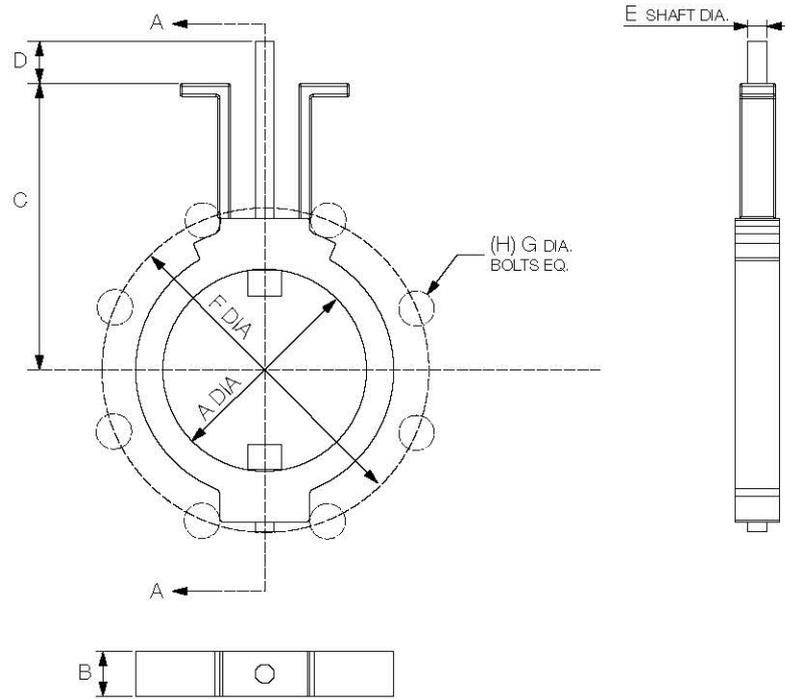
Ordering information



Ordering example



Dimensions



Size	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	H	Wt. [lb.]
6"	6	1.15	7.6	1.2	0.5	9.5	0.75	8	11
8"	8	1.37	8.6	1.2	0.5	11.8	0.75	8	17
10"	10	1.62	10.5	1.5	0.75	14.2	0.88	12	31
12"	12	1.62	11.5	1.5	0.75	17	0.88	12	37
14"	13.2	1.75	12.1	1.5	0.75	18.8	1	12	44
16"	15.2	1.75	13.1	1.5	0.75	21.2	1	16	59
18"	17.2	2	14.6	2	1	22.8	1.12	16	73
20"	19.2	2	16.6	2	1	25	1.12	20	101
22"	21.2	2.25	18	2	1	27.2	1.25	20	114