

# *Eclipse Hot-Air Wafer Butterfly Valves*

## **APPLICATION**

This butterfly valve is recommended for use in hot air ductwork systems as applied to direct fired furnaces with metallic or ceramic recuperators. It may also be applied to other type air systems having similar functions. The valve may be supplied with an adjustable hand lever, or with electric or pneumatic power actuators, depending upon application.

The valves shown in this bulletin are hand operated. However, linkage can be provided for motor driven operation as shown in Figure 2.

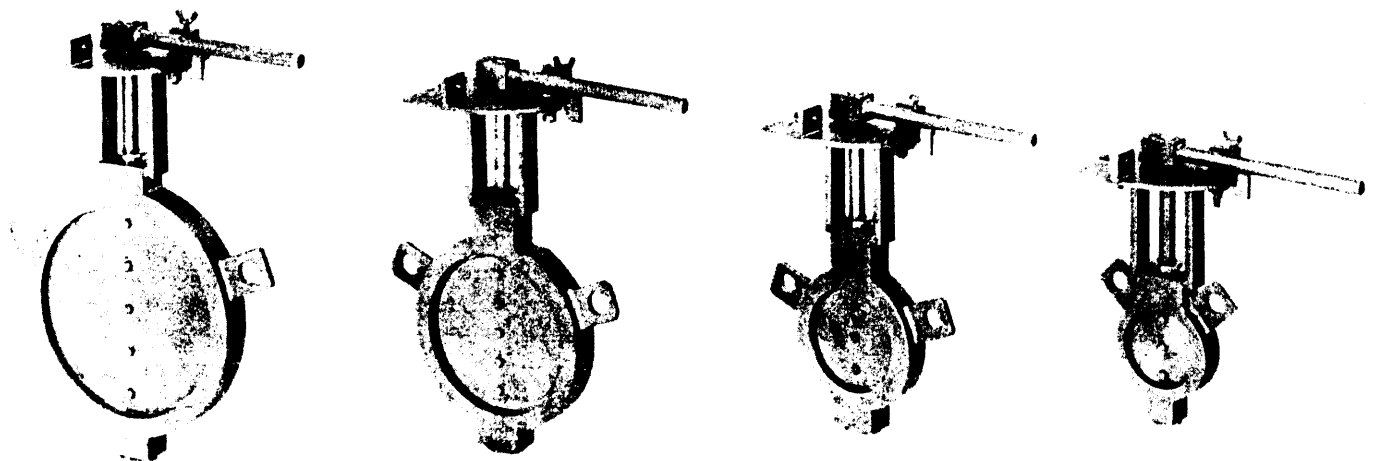
## **PRESSURE**

Although normal operating pressure is approximately 2 psi, the Combustion Tec valve design and packing are suitable for operating pressures up to 5 psi.

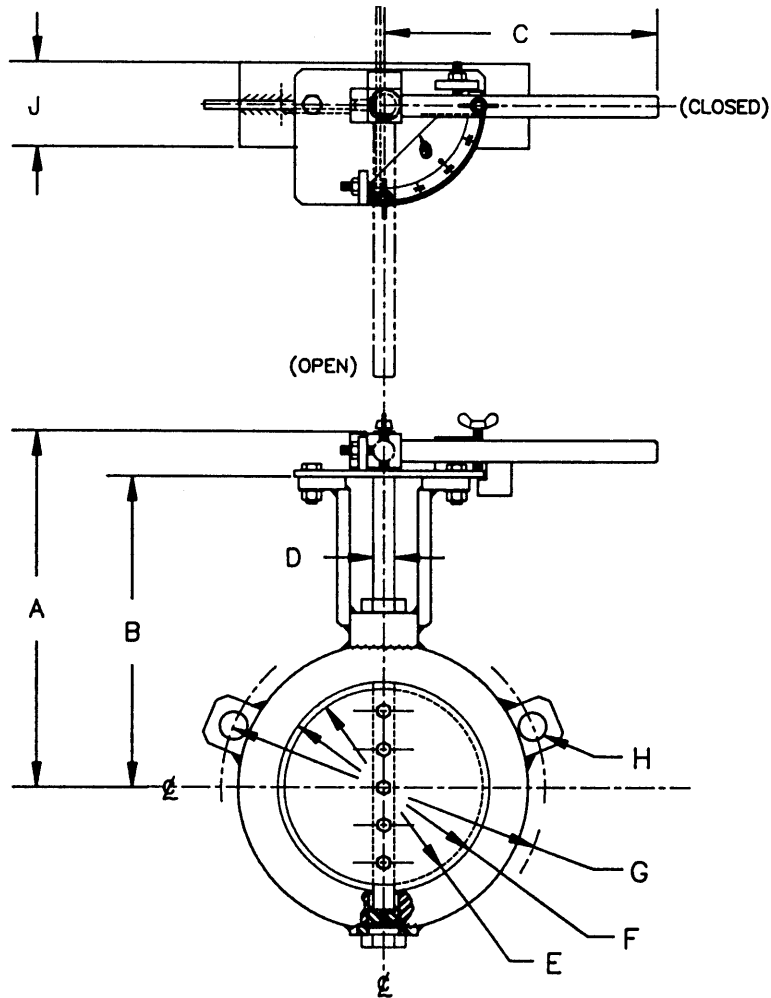
## **CONSTRUCTION**

The Combustion Tec butterfly valve is designed to fit ANSI 150# Standard flanges. Other standards are available upon request; most of them can be supplied at no additional charge.

Standard valve construction is type 304 stainless steel for temperatures ranging to 1450°F (788°C). Premium valves, for operating in temperatures up to 1750°F (954°C), are constructed with a type 309 or 310 stainless steel blade, valve body, and shaft. The remaining assembly in both types is made with type 304 stainless steel. Valve construction, designed to be non-binding, utilizes grafoil packing for free movement even after years of fixed position service. This swing-thru type valve is primarily for use where tight shut-off is not required, and a maximum of 5% leakage is acceptable.



**FIG. 1 – 8", 6", 4" & 3" HOT AIR BUTTERFLY VALVES**



**TABLE 1 -- PHYSICAL DIMENSIONS -- STANDARD (INCHES)**

SIZE	A	B	C	D	E	F	G	G	H	H	J
2	7 $\frac{3}{4}$	6 $\frac{3}{8}$	8	$\frac{3}{8}$	2	2.050	4 $\frac{3}{8}$	-	11/16	-	1 $\frac{1}{4}$
2 $\frac{1}{2}$	8.00	6 $\frac{3}{8}$	8	$\frac{3}{8}$	2-5/16	2.460	5 $\frac{1}{2}$	-	11/16	-	1 $\frac{1}{4}$
3	8 $\frac{1}{4}$	6 $\frac{3}{8}$	8	$\frac{3}{8}$	3	3.062	6	-	11/16	-	1 $\frac{1}{4}$
4	9-9/16	8-3/16	8	$\frac{3}{8}$	3-15/16	4.000	7 $\frac{1}{2}$	-	11/16	-	1 $\frac{1}{4}$
5	10-3/16	8-13/16	8	$\frac{3}{8}$	5	5.032	8 $\frac{1}{2}$	-	13/16	-	1 $\frac{1}{4}$
6	10 $\frac{1}{2}$	9 $\frac{1}{4}$	8	$\frac{3}{8}$	6	6.062	9 $\frac{1}{2}$	-	13/16	-	1 $\frac{1}{4}$
7	11-1/6	9 $\frac{3}{8}$	8	$\frac{3}{8}$	7	7.032	11	-	5/8	-	2 $\frac{1}{4}$
8	10-29/32	9-17/32	8	$\frac{3}{8}$	7-15/16	8.000	11 $\frac{1}{4}$	-	13/16	-	1 $\frac{1}{4}$
10	12-15/16	11-9/16	8	$\frac{3}{8}$	9-15/16	10.000	14 $\frac{1}{4}$	-	15/16	-	1 $\frac{1}{4}$
12	13 $\frac{3}{4}$	12 $\frac{1}{4}$	11	$\frac{3}{4}$	11-15/16	12.000	17	-	15/16	-	1 $\frac{1}{2}$
14	14 $\frac{1}{2}$	12 $\frac{3}{4}$	11	$\frac{3}{4}$	13	13-1/16	18 $\frac{1}{4}$	-	11/16	-	1 $\frac{1}{2}$
16	15-13/16	14-3/16	11	$\frac{3}{4}$	15	15-1/16	21 $\frac{1}{4}$	19 $\frac{1}{4}$	11/16	11/16	1 $\frac{1}{2}$
18	17 $\frac{3}{4}$	15-15/16	18	1"	17	17-1/16	22 $\frac{3}{4}$	21 $\frac{1}{4}$	13/16	11/16	2

**ANSI - American National Standards Institute**

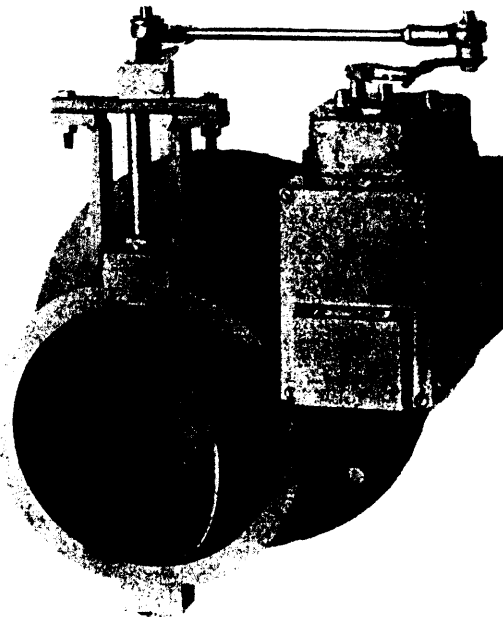
**RPM - Rivet Pipe Manufacturers**

**TABLE 2 – PHYSICAL DIMENSIONS – METRIC (MM)**

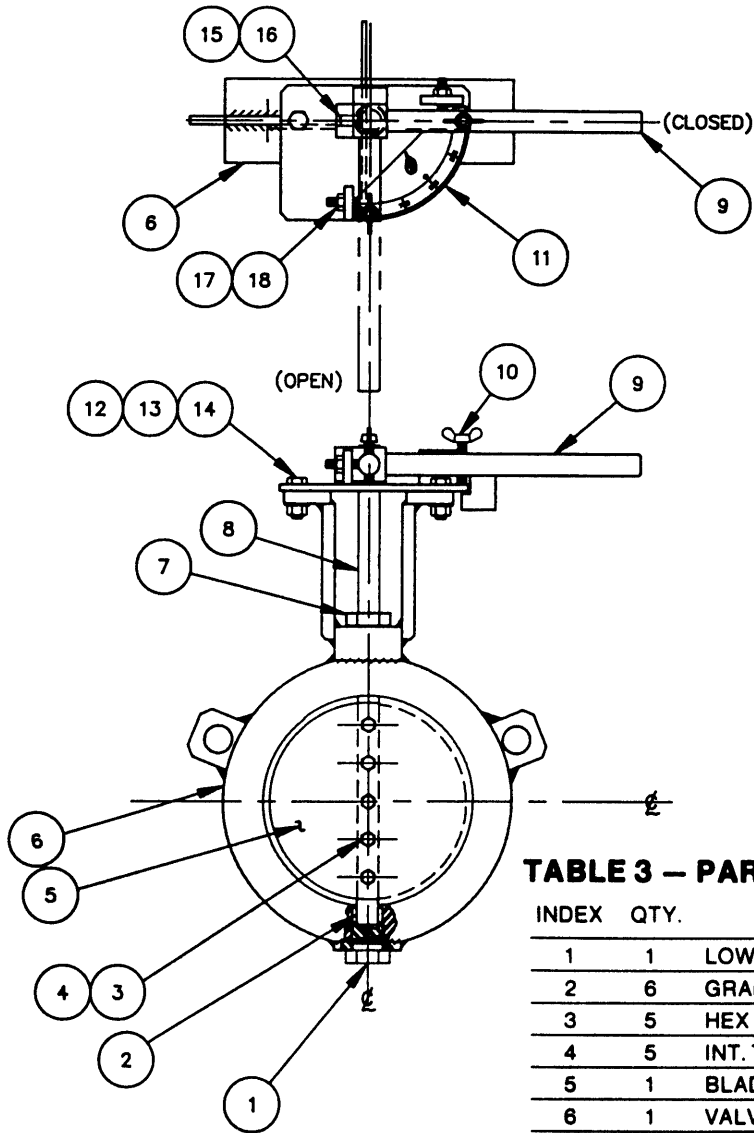
SIZE	A	B	C	D	E	F	B.C. ANSI (ASA) G	B.C. RPM G	DIA. ANSI (ASA) H	DIA. RPM H	J
2	177	162	203	16	51	52	121	—	17	—	32
2½	203	168	203	16	59	62	140	—	17	—	32
3	210	175	203	16	76	78	152	—	17	—	32
4	229	208	203	16	98	102	191	—	17	—	32
5	259	224	203	16	124	128	216	—	21	—	32
6	267	232	203	16	149	154	241	—	21	—	32
8	277	242	203	16	198	203	298	—	21	—	32
10	329	294	203	16	249	254	362	—	24	—	32
12	349	308	279	19	298	305	432	—	24	—	38
14	368	327	279	19	330	337	476	—	27	—	38
16	402	360	279	19	381	387	540	489	27	17	38
18	454	405	457	25	432	438	578	540	30	17	51

**ANSI – American National Standards Institute**

**RPM – Rivet Pipe Manufacturers**



**FIG. 2 – 8" HOT AIR BUTTERFLY VALVE  
WITH DRIVE MOTOR  
(TYPICAL)**



**TABLE 3 – PARTS IDENTIFICATION**

INDEX	QTY.	IDENTIFICATION
1	1	LOWER PACKING GLAND
2	6	GRAFOIL PACKING
3	5	HEX HD. CAP SCREW
4	5	INT. TOOTH LOCKWASHER
5	1	BLADE
6	1	VALVE BODY ASSEMBLY
7	1	UPPER PACKING GLAND
8	1	SHAFT
9	1	ADJUSTING ARM ASSEMBLY
10	1	THUMB SCREW ASSEMBLY
11	1	INDICATOR PLATE ASSEMBLY
12	2	HEX HD. CAP SCREW
13	2	LOCK WASHER
14	2	HEX NUT
15	1	HALF DOG SET SCREW
16	1	CUP POINT SET SCREW
17	2	SOCKET HD. SET SCREW
18	2	HEX NUT

NOTE: Valve thicknesses, as shown, are standard.  
For special thicknesses, consult your  
CTI sales engineer for price add-ons.