

ORIFICE FLOW METERS

MODEL: 5720 - POP

Revision: 1

BULLETIN
5720

DESCRIPTION

Model 5720 Calibrated Orifice Flow Meters are designed for measuring flows of air or gases at pressures up to 5 psig and temperatures to 500 °F. Orifice ports are accurately machined for precision measurements. Each orifice plate has model number and orifice diameter stamped on tab for easy identification and selection.

Flange tap pressure drop readings determine flow on chart on page 3. Thin, square edge, bored orifice plates are installed between Pyronics "ADAPTO" flanges. Gaskets are provided to seal both sides of the plate. Meters should have at least 10 pipe diameters of smooth, clean, straight pipe upstream and downstream for accurate readings.

Orifice flow meters are ideal for measuring air and gas flows in combustion systems. Air-fuel ratio adjustment of burners is simplified when true air and gas rates are known.

Available accessories to be used with the orifice flow meters are the Model 5721 – 12" W.C. Manometer or the Model 5714 – Low Pressure Gauges for measuring pressure differential at the orifice plate.

In applications where corrosive gases are used or high humidity conditions are common, it is suggested that stainless steel plates be used. Petcocks and hose bars are sold separately.



FLOW FACTORS

Flow versus Pressure Drop Curves on page 3 are based on air flows (specific gravity = 1.0) at zero line pressure and 60 °F temperature. For accurate measurement of flows at higher pressures, temperatures or other specific gravities, use correction tables on page 3.



FEATURES

- Inexpensive flow metering device
- Simple four bolt construction
- Plates available in mild steel or stainless
- 5% maximum flow error
- Two bolt quick-change plate removal



CAUTION: Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



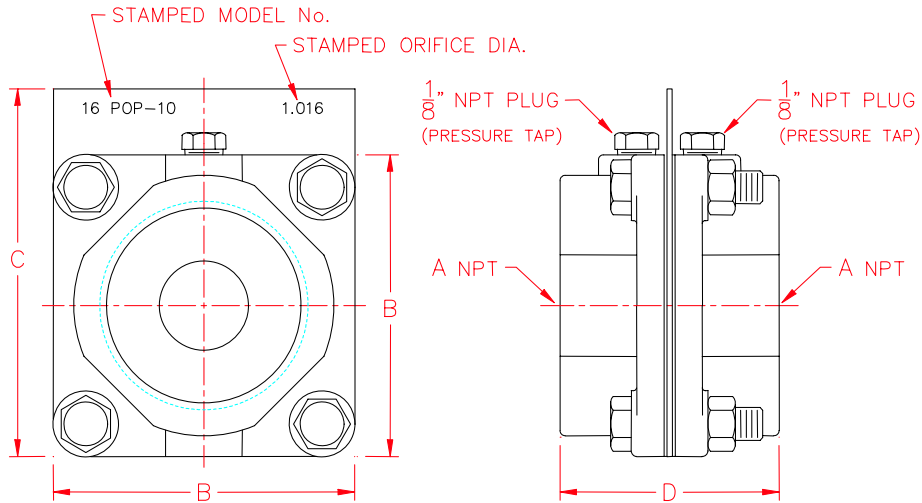
ORDAN THERMAL PRODUCTS LTD
Combustion Equipment & Controls for Industry
21 Amber St # 9, Markham Ontario Canada L3R 4Z3
Tel: (905) 475-9292 Fax: (905) 475-3286
www.ordanthermal.com

NOTICE: Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

ORIFICE FLOW METERS

BULLETIN 5720
PAGE NO. 2

DIMENSIONS



MODEL NUMBER ORIFICE FLOW METER		MODEL NUMBER ORIFICE PLATE ONLY		A	B	C	D	WEIGHT	
STEEL	STAINLESS	STEEL	STAINLESS					LBS.	KGS.
6 POP- <u>X</u> <u>X</u>	6 POP-SS- <u>X</u> <u>X</u>	6 OP- <u>X</u> <u>X</u>	6 OP-SS- <u>X</u> <u>X</u>	3/4	2-5/16	3-1/16	1-5/8	1.4	0.6
8 POP- <u>X</u> <u>X</u>	8 POP-SS- <u>X</u> <u>X</u>	8 OP- <u>X</u> <u>X</u>	8 OP-SS- <u>X</u> <u>X</u>	1	2-5/16	3-1/16	1-5/8	1.2	0.5
10 POP- <u>X</u> <u>X</u>	10 POP-SS- <u>X</u> <u>X</u>	10 OP- <u>X</u> <u>X</u>	10 OP-SS- <u>X</u> <u>X</u>	1-1/4	3	3-3/4	2-1/2	2.7	1.2
12 POP- <u>X</u> <u>X</u>	12 POP-SS- <u>X</u> <u>X</u>	12 OP- <u>X</u> <u>X</u>	12 OP-SS- <u>X</u> <u>X</u>	1-1/2	3	3-3/4	2-1/2	2.5	1.1
16 POP- <u>X</u> <u>X</u>	16 POP-SS- <u>X</u> <u>X</u>	16 OP- <u>X</u> <u>X</u>	16 OP-SS- <u>X</u> <u>X</u>	2	3-7/16	4-3/16	2-1/2	3.2	1.4
20 POP- <u>X</u> <u>X</u>	20 POP-SS- <u>X</u> <u>X</u>	20 OP- <u>X</u> <u>X</u>	20 OP-SS- <u>X</u> <u>X</u>	2-1/2	4-3/8	5-1/8	3-1/8	7.6	3.5
24 POP- <u>X</u> <u>X</u>	24 POP-SS- <u>X</u> <u>X</u>	24 OP- <u>X</u> <u>X</u>	24 OP-SS- <u>X</u> <u>X</u>	3	4-3/8	5-1/8	3-1/8	5.4	2.4
32 POP- <u>X</u> <u>X</u>	32 POP-SS- <u>X</u> <u>X</u>	32 OP- <u>X</u> <u>X</u>	32 OP-SS- <u>X</u> <u>X</u>	4	6	6-3/4	3-3/8	11.6	5.3
48 POP- <u>X</u> <u>X</u>	48 POP-SS- <u>X</u> <u>X</u>	48 OP- <u>X</u> <u>X</u>	48 OP-SS- <u>X</u> <u>X</u>	6	8	8-3/4	3-3/4	22.3	10.1

NOTE: All dimensions are in inches.

ORIFICE PLATE TABLE

MODEL NUMBER		PIPE SIZE	Orifice Plates listed are the minimum to maximum diameters recommended per indicated pipe size.																		
STEEL	STAINLESS		- 01	- 02	- 03	- 04	- 05	- 06	- 07	- 08	- 09	- 10	- 11	- 12	- 13	- 14	- 15	- 16	- 17	- 18	- 19
6 OP- <u>X</u> <u>X</u>	6 OP-SS- <u>X</u> <u>X</u>	3/4	█																		
8 OP- <u>X</u> <u>X</u>	8 OP-SS- <u>X</u> <u>X</u>	1	█																		
10 OP- <u>X</u> <u>X</u>	10 OP-SS- <u>X</u> <u>X</u>	1-1/4	█																		
12 OP- <u>X</u> <u>X</u>	12 OP-SS- <u>X</u> <u>X</u>	1-1/2	█																		
16 OP- <u>X</u> <u>X</u>	16 OP-SS- <u>X</u> <u>X</u>	2	█																		
20 OP- <u>X</u> <u>X</u>	20 OP-SS- <u>X</u> <u>X</u>	2-1/2	█																		
24 OP- <u>X</u> <u>X</u>	24 OP-SS- <u>X</u> <u>X</u>	3	█																		
32 OP- <u>X</u> <u>X</u>	32 OP-SS- <u>X</u> <u>X</u>	4	█																		
48 OP- <u>X</u> <u>X</u>	48 OP-SS- <u>X</u> <u>X</u>	6	█																		

ORDERING INFORMATION

1. Select orifice plate number based on flow required and desired pressure drop.
2. Use specific gravity, pressure and temperature correction tables when required.
3. Specify complete model number and quantity.
4. Shipping instructions.

CAUTION: Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



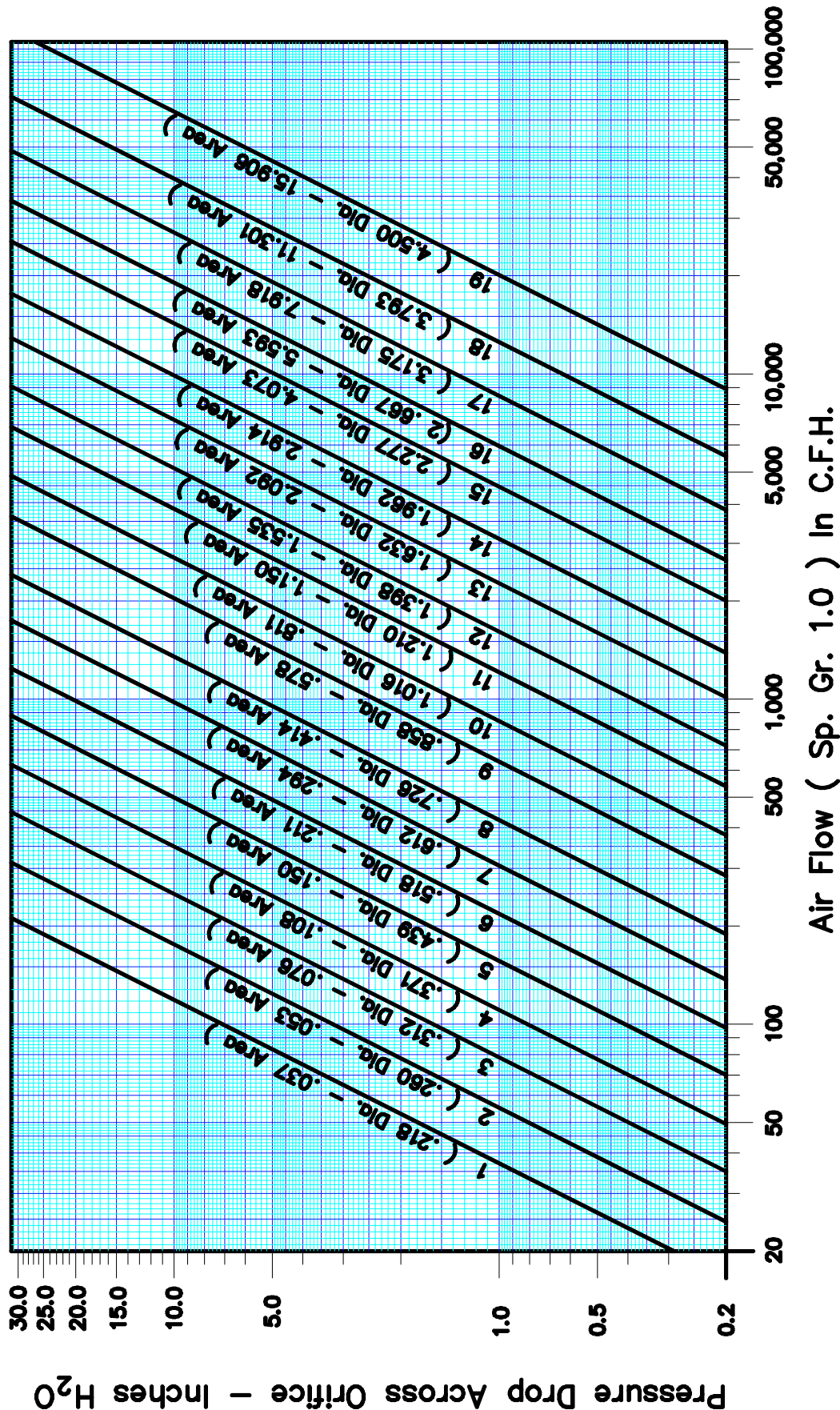
ORDAN THERMAL PRODUCTS LTD
Combustion Equipment & Controls for Industry
21 Amber St # 9, Markham Ontario Canada L3R 4Z3
Tel: (905) 475-9292 Fax: (905) 475-3286
www.ordanthermal.com

NOTICE: Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

ORIFICE FLOW CURVE FOR AIR

(SPECIFIC GRAVITY 1.0)

BULLETIN 5720
PAGE NO. 3



Air Flow (Sp. Gr. 1.0) In C.F.H.

TEMPERATURE FACTORS			
Inlet Gas Temperature - F.	60°	100°	150°
200°			
Multiplying Factor	1.0	0.963	0.924
500°			
Inlet Gas Temperature - F.	250°	300°	400°
500°			
Multiplying Factor	0.856	0.826	0.778
736			

PRESSURE FACTORS			
Inlet Pressure - psig	1.0	2.0	3.0
4.0			
Multiplying Factor	1.03	1.07	1.10
1.13			
Inlet Pressure - psig	5.0	6.0	7.0
8.0			
Multiplying Factor	1.16	1.19	1.21
1.24			

SPECIFIC GRAVITY FACTORS			
Specific Gravity	0.07	0.2	0.4
0.5	0.6		
3.8	2.2	1.6	1.4
1.3			
Specific Gravity	0.7	0.8	1.0
1.5	2.0		
1.2	1.1	1.0	0.82
0.71			

Note: Flow versus Pressure Drop Curves are based on air flows (sp. gr. = 1.0) at zero line pressure and 60° F temperature.

CAUTION: Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



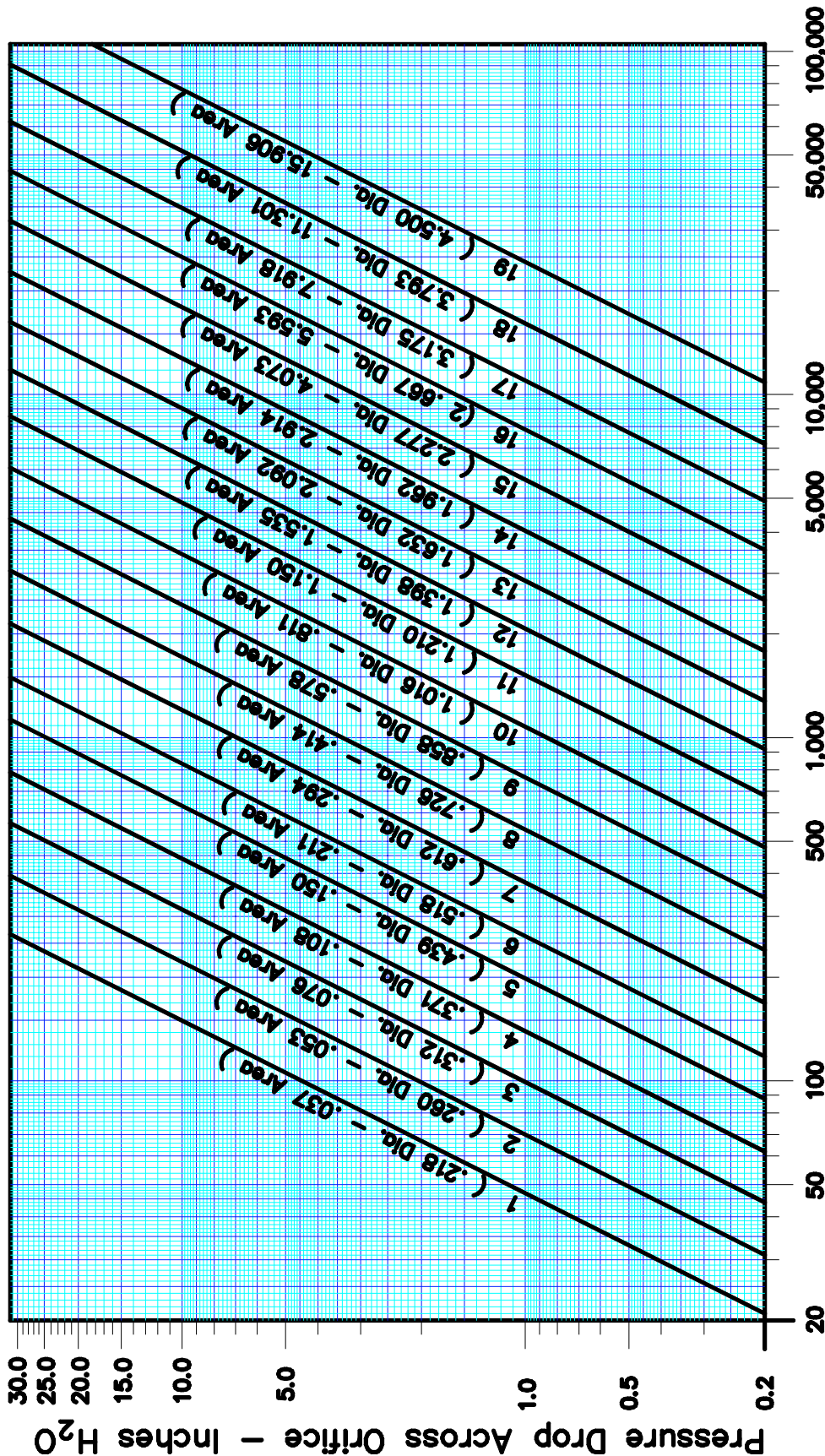
ORDAN THERMAL PRODUCTS LTD
Combustion Equipment & Controls for Industry
21 Amber St # 9, Markham Ontario Canada L3R 4Z3
Tel: (905) 475-9292 Fax: (905) 475-3286
www.ordanthermal.com

NOTICE: Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

ORIFICE FLOW CURVE FOR GAS

(SPECIFIC GRAVITY 0.6)

BULLETIN 5720
PAGE NO.4



TEMPERATURE FACTORS			
Inlet Gas Temperature - F.	60°	100°	150°
Multiplying Factor	1.0	0.963	0.924
Inlet Gas Temperature - F.	250°	300°	400°
Multiplying Factor	0.856	0.826	0.778
			500°
			0.736

PRESSURE FACTORS			
Inlet Pressure - psig	1.0	2.0	3.0
Multiplying Factor	1.03	1.07	1.10
Inlet Pressure - psig	5.0	6.0	7.0
Multiplying Factor	1.16	1.19	1.21
			8.0
			1.24

Note: Flow versus Pressure Drop Curves are based on gas flows (sp. gr. = 0.6) at zero line pressure and 60° F temperature.

CAUTION: Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



ORDAN THERMAL PRODUCTS LTD
 Combustion Equipment & Controls for Industry
 21 Amber St # 9, Markham Ontario Canada L3R 4Z3
 Tel: (905) 475-9292 Fax: (905) 475-3286
www.ordanthermal.com

NOTICE: Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.