

AIR/GAS RATIO REGULATORS



WESMAN

COMBUSTION EQUIPMENT

SERIES 7218

7218 REGULATORS accurately maintain a constant air/gas ratio over a wide range of firing rates in both nozzle-mix and premix gas burner systems. Molded diaphragms ensure excellent tracking, repeatability, maximum flows, and superior turndown.

NOZZLE-MIX BURNERS

When used with nozzle-mix burners, the vent of a 7218 Regulator is cross-connected to the main air line downstream of the control valve. Regulator outlet pressure then equals air impulse pressure, and gas flow remains proportional to air flow at all firing rates. One regulator can be used for several burners controlled by the same air valve, but often it is better to have a separate regulator for each burner.

When a dual-fuel burner's atomizing air is left on during gas operation, the 7218 Regulator can be set to compensate for the extra air over the controlled main air by adjusting the spring for up to 1 osi "leak" with no impulse pressure.

PREMIX BURNERS

With its vent open to atmosphere, the 7218 can be used as an atmospheric regulator (zero governor) to supply gas to an aspirator mixer feeding premix burners. If burner nozzles are sealed-in and furnace pressure is other than atmospheric, regulator vent must be connected to the combustion chamber. Controlled gas pressure then will match furnace pressure; this is necessary to maintain same air/gas ratio at all firing rates. A separate regulator for each mixer is preferred to avoid interference or interaction.



To size a regulator, determine required cfh of gas and pressure drop available at high fire. Never choose a regulator capacity based on more than 16 osi drop (even if more is available).

FACTORS

PRESSURE DROP, OSI	FACTOR	PRESSURE DROP, OSI	FACTOR
1	0.707	8	2.00
2	1.00	10	2.24
2½	1.12	12	2.45
3	1.22	14	2.65
4	1.41	16	2.83
6	1.73		

CAPACITIES CFH

WITH 2 OSI DROP THROUGH REGULATOR

MODEL	GAS GRAVITY	
	0.6	1.5
7218-01	285	180
7218-0	540	341
7218-1	700	442
7218-2	1730	1090
7218-3	2800	1770
7218-4	4800	3030
7218-5	6900	4360
7218-6	9100	5750
7218-7	17600	11120

SPECIFICATIONS

DIAPHRAGM COVER AND CASE: Aluminium
 BODY: Cast Iron SEAT: Brass SHAFT: SST
 BALANCING DIAPHRAGM: BUNA/Nylon (Standard)
 FKM/Polyster (7218-V)
 GAS DIAPHRAGM: Buna/Nylon (standard)
 FKM/Nomex (7218-v)
 MAXIMUM INLET PRESSURE: 2 psi
 MAXIMUM SHOCK LOAD: 5 psi
 MAXIMUM AMBIENT TEMPERATURE: 180°F (Standard)
 350°F (7218-V)
 LOW FIRE ACCURACY AT <3" WC IMPULSE:
 Spring bias setting capabilities: -0.2"wc to +1.7"wc
 Repeatability: ±0.05"wc
 HIGH FIRE ACCURACY AT 3" TO 41.5" WC IMPULSE:
 Impulse/outlet pressure offset: 0.5 to 5%
 Repeatability ±0.3" wc
 TURNDOWN: Exceeds 20:1

WESMAN THERMAL ENGINEERING PROCESSES PVT LTD
 WESMAN CENTER, 8 MAYFAIR ROAD, KOLKATA 700019, INDIA
 TEL: +91 (33) 40020300 FAX: +91 (33) 22816402
 EMAIL: combustion@wesman.com WEBSITE: www.wesman.com
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REGIONAL SALES AND SERVICE OFFICES:
 ■ MUMBAI (22) 28509521 ■ NEW DELHI (11) 26431723
 ■ CHENNAI (44) 28263581 ■ BANGALORE (80) 22225760
 ■ PUNE (20) 46703004 ■ AHMEDABAD (79) 30027355
 ■ HYDERABAD (40) 66312686 ■ NAGPUR (712) 6464349