

FLANGED MIXING TEES

FMT SERIES

FEATURES

- Construction
- Internal pipe and orifices
- Incorporated gas adjuster
- High capacity with low pressure drop
- Flanged construction - no pipe union required

cast iron G25
AISI304

APPLICATIONS

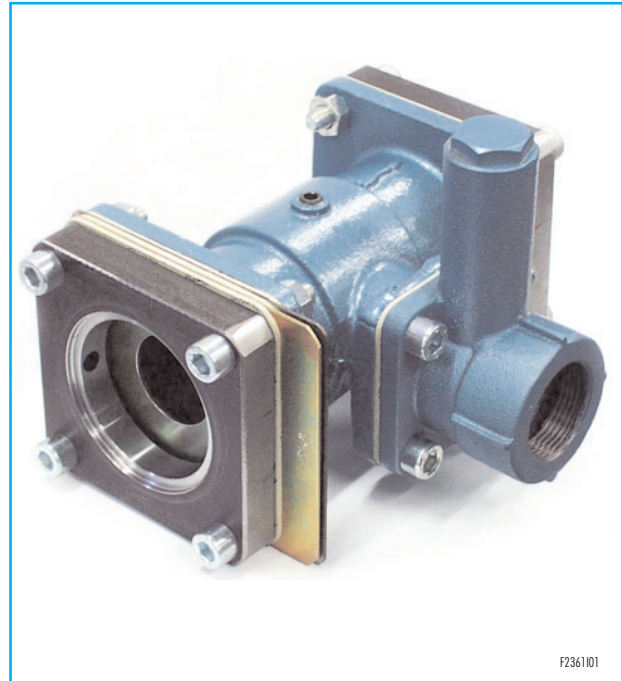
- Mixers for high capacity burners.

INSTALLATION

- The air and gas supply piping and mixture manifold should be the same size or larger than the pipe sizes on the FMT mixer body. Pressure losses in mixture piping should be kept less than 2.5 mbar. Use larger pipe if necessary.
- The recommended gas pressure to the BZR Regulator should be at least 2.5 mbar higher than maximum controlled air pressure.

DESCRIPTION

Flanged Mixing Tees are air-gas proportional type mixers designed for low pressure drop operation. Combustion air delivered through a manual or motorized control valve is metered through a precision machined orifice. Controlled air pressure is impulsed to the top of the gas balanced zero regulator. The zero regulator outlet pressure will always be the same as the controlled air pressure. An adjustable gas orifice sets the gas fuel flow rate. This pressure interlocked system maintains equal air and gas pressure drops at all flow rates. Air-gas ratio will be constant over the entire turndown range of the system.



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MIXER SELECTION

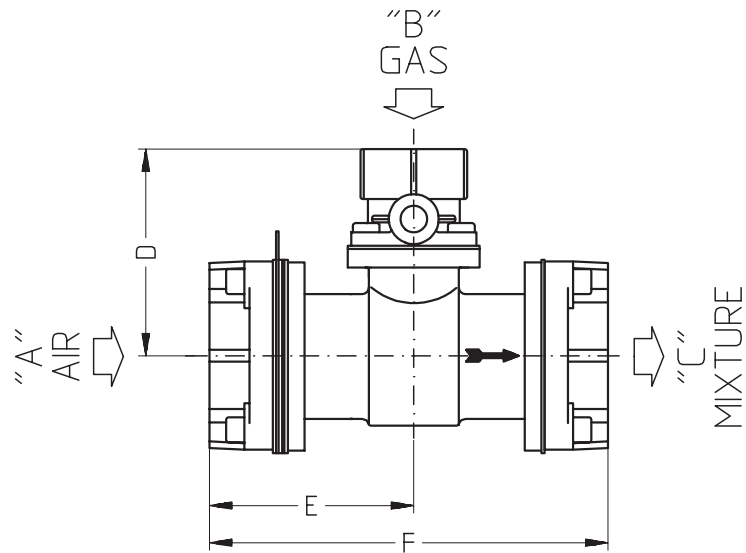
- Natural gas Pyroline burners operates best with 75% primary air. Maximum turndown ratio required by burner is 350 kW, 20 mbar initial mixture pressure. Minimum turndown ratio required by burner is 87 kW, 1.25 mbar mixture pressure.
- Theoretical turndown range 4 to 1.
- Air required through mixer is $350 \times 0.75 = 262.5 \text{ Nm}^3/\text{h}$ (capacity value in kW is equivalent to air flow rate value in Nm^3/h)
- From capacity table select 32FMT - 150 for 6 to 1 turndown range. When capacity falls between two sizes always select smaller size.
- The sum of the high fire burner mixture pressure, pressure drop across the mixture, pressure losses in the air supply to the mixer and furnace pressure determines the minimum blower air pressure required.

AIR FLOW RATE TABLE (Nm³/H)

Hi-fire air pressure drop across FMT mixer (mbar)	0.178	0.71	2.86	6.43	11.43	17.86	25.71	35
Maximum mixer turndown ratio	none	2 to 1	4 to 1	6 to 1	8 to 1	10 to 1	12 to 1	14 to 1
10 FMT -25	7	14	28	42	57	71	85	99
12 FMT -35	10	20	40	60	79	99	119	139
16 FMT -50	14	28	57	85	114	142	171	199
16 FMT -60	17	34	68	102	136	170	204	238
20 FMT -80	23	45	91	136	182	227	273	318
24 FMT -100	28	57	114	171	227	284	341	398
24 FMT -120	34	68	136	204	273	341	409	477
32 FMT -150	43	85	170	255	341	426	511	596
32 FMT -200	57	114	227	341	454	568	681	795
32 FMT -250	71	142	284	426	567	710	852	994
48 FMT -350	99	199	398	597	795	994	1193	1392
48 FMT -500	142	284	568	852	1134	1420	1704	1988
48 FMT -600	170	341	682	1023	1363	1704	2045	2386

NOTE: capacity value in kW is equivalent to air flow rate value in Nm³/h

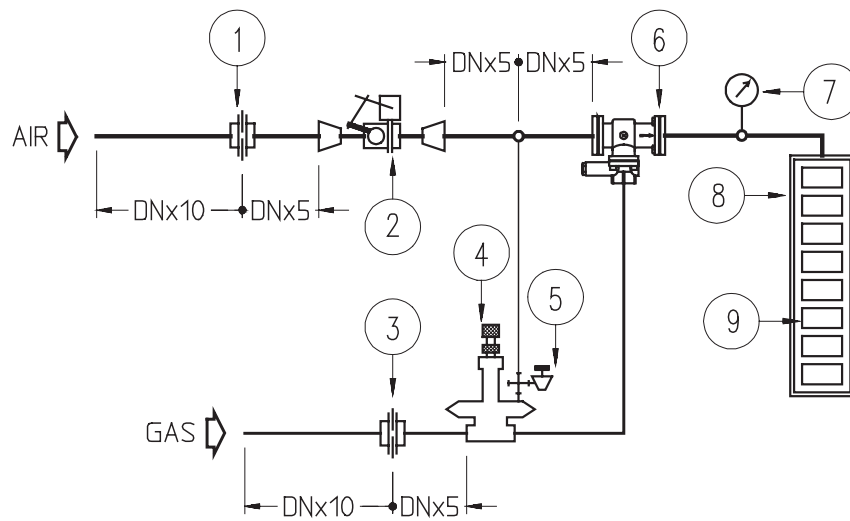
DIMENSIONS



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Catalog no.	ø A	ø B	ø C	D mm	E mm	F mm	Mass kg
10 FMT	G - 1.1/4"	G - 1"	G - 1.1/4"	95.25	82.5	190.5	3.9
12 FMT	G - 1.1/2"	G - 1"	G - 1.1/2"	95.25	82.5	190.5	4.3
16 FMT	G - 2"	G - 1.1/4"	G - 2"	108	82.5	190.5	5.7
20 FMT	G - 2.1/2"	G - 1.1/4"	G - 2.1/2"	124	117.5	232	8.1
24 FMT	G - 3"	G - 1.1/4"	G - 3"	124	117.5	232	7.5
32 FMT	G - 4"	G - 2.1/2"	G - 4"	203	158.7	355.6	21.4
48 FMT	G - 6"	G - 3"	G - 6"	270	194	435	38.3

FLOW CHART



Pos.	Model identification
1	Orifice flow meter
2	Motorized air valve
3	Orifice flow meter
4	Balanced zero regulator
5	Impulse line
6	Mixer FMT
7	Mixture pressure gauge
8	Mixture manifold
9	Burner

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