



IPG GAS PILOT BURNERS

IPG Gas Pilot Burner Operational Information
NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

SPECIFICATIONS		BURNER SIZE		
		_411	_412	_413
Capacity (at 10% Excess Air)	(BTU/hr)	16,000	35,000	84,000
	(kW)	4.2	9.3	22.2
Air Capacity	(SCFH)	160	365	865
	(nm ³ /hr)	4.3	9.8	23.2
Air Pressure (to the mixing tee)	(in.w.c.)	27.7	27.7	27.7
	(mbar)	68.9	68.9	68.9
Gas Pressure (to inlet of regulator)	(in.w.c.)	13.9	13.9	13.9
	(mbar)	34.5	34.5	34.5
Pilot Mixture Pressure	(in.w.c.)	10.0	6.2	5.5
	(mbar)	24.9	15.4	13.7
Flame Length (at 10% Excess Air)	(in)	6.0	9.0	9.0
	(mm)	152	229	229
Operating Limits	(λ Max)	2.00	1.75	1.40
	(λ Min)	0.85	0.91	0.96

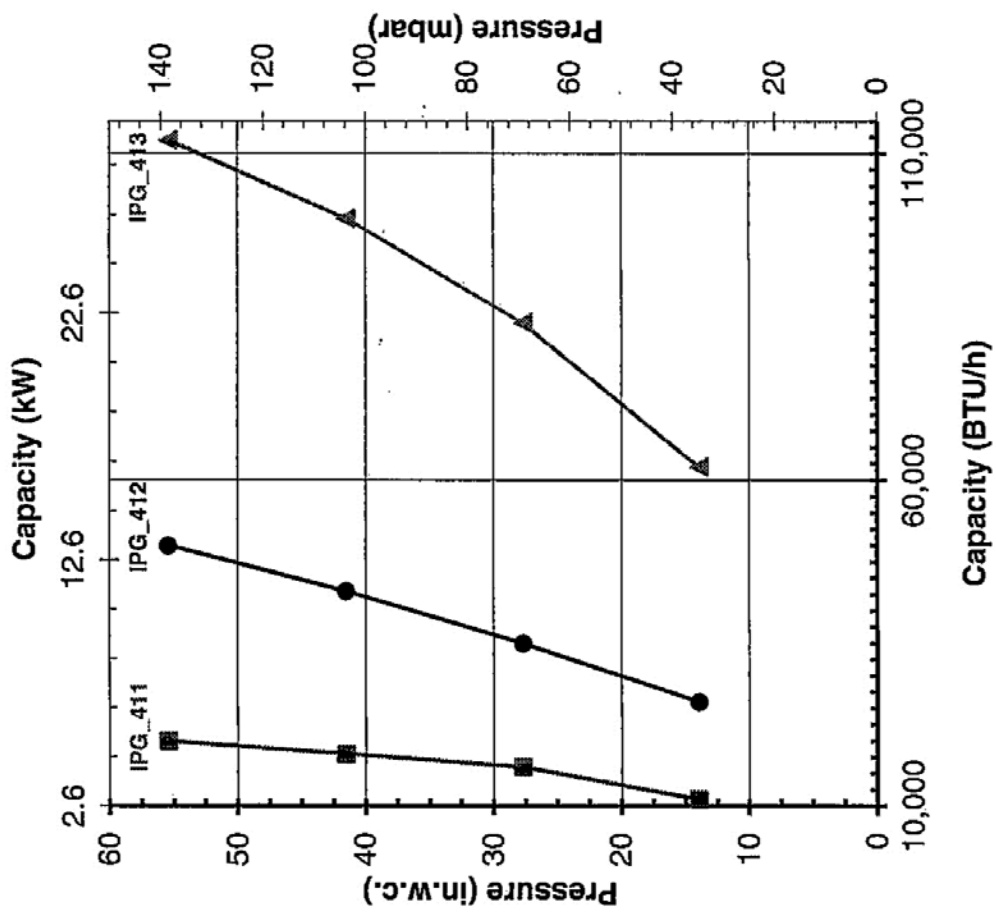
NOTES

1. Capacities based on Natural Gas with HHV of 1034 BTU/ft³ (Standard), and LHV of 10.21 kWh/nm³ (Metric), 0.62 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
2. Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
3. Air flow to the pilot is listed at 27.7 in.w.c., or 68.8 mbar, with ambient temperature air. Pilots can be operated with a minimum supply pressure of 13.9 in.w.c., or 34.5 mbar, up to a maximum supply pressure of 56 in.w.c., or 140 mbar.
4. Fuel flow to the pilot to be ambient temperature with a minimum supply pressure of 13.9 in.w.c., or 34.5 mbar, up to a maximum supply pressure of 28 in.w.c., or 70 mbar.
5. Pilot is suitable for use on gaseous fuels other than Natural Gas, consult Hauck.

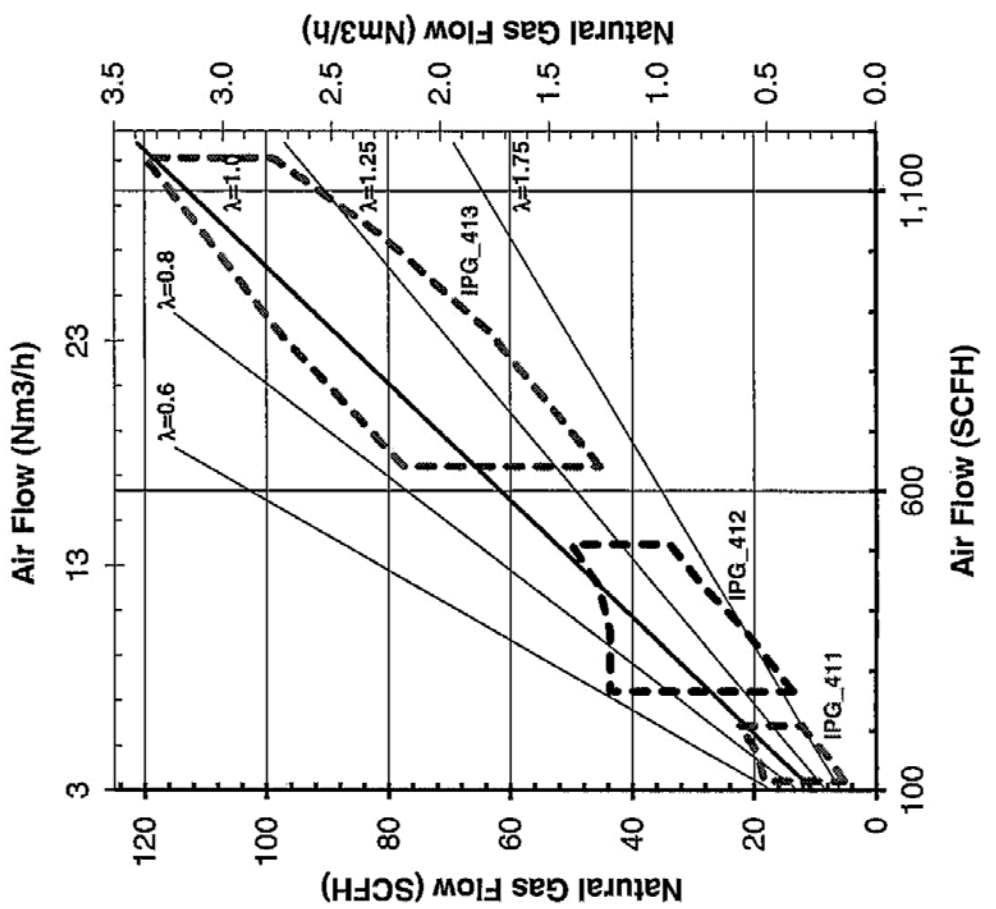
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IPG Burner Pressure Curves



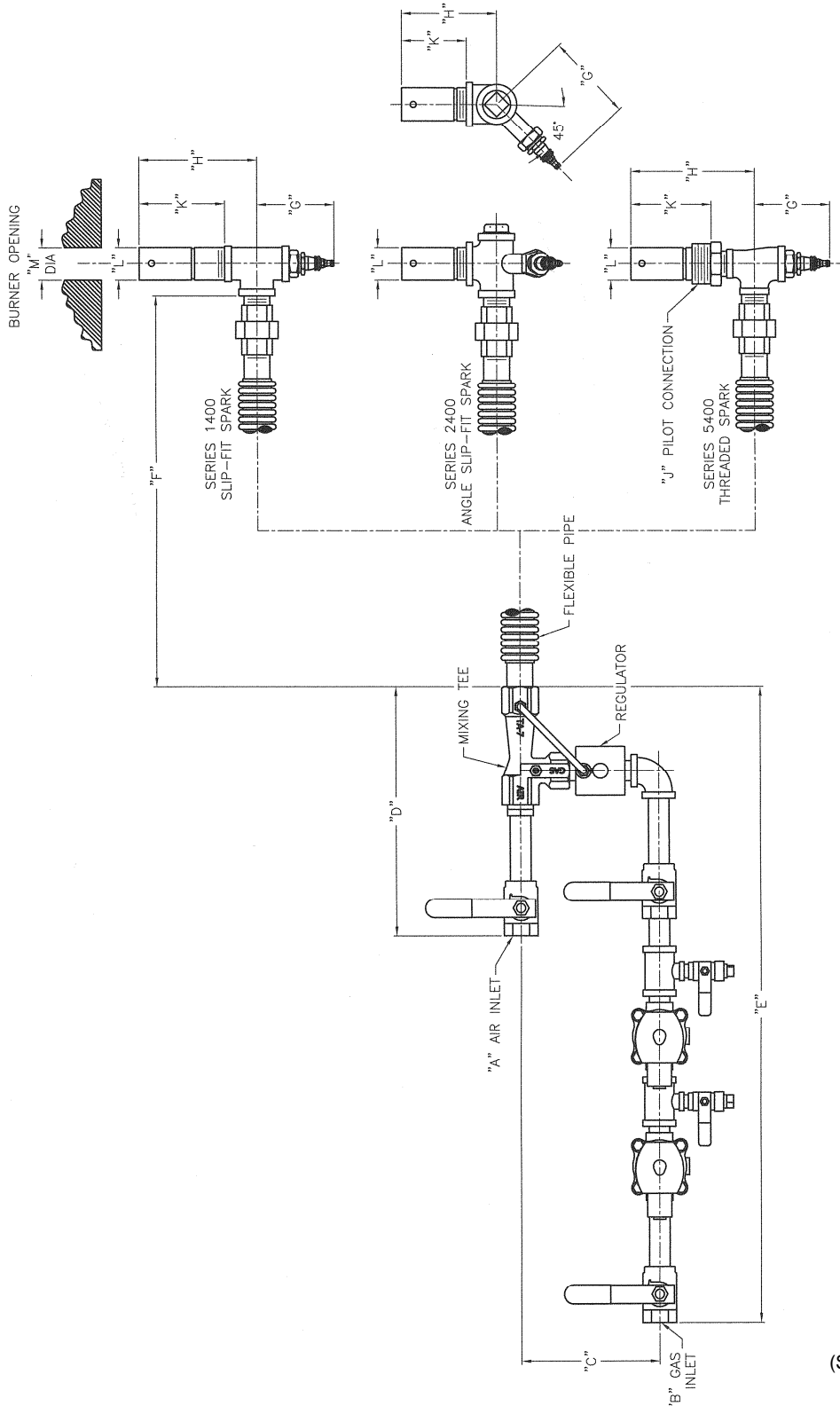
IPG Burner Operating Windows





DIMENSIONS

IPG GAS PILOT BURNERS WITH SOLENOID VALVES



MODEL NO.	A	B	C	D	E	F	G	H	J	K	L	M (MIN-MAX)
1411	3/8 NPT	3/8 NPT	3 7/16	8 1/16	26 13/16	5 5/8	2 15/16	3 1/2	-	2 7/16	27/32	.856-1.862
1412	1/2 NPT	1/2 NPT	5 5/8	10 1/8	25 3/4	6 1/4	3	4 3/8	-	3	1 1/16	1.066-1.072
1413	1/2 NPT	1/2 NPT	5 5/8	10 1/8	25 3/4	6 1/4	3	5	-	3 7/16	1 5/16	1.331-1.337
2411	"CONSULT HAUCK"											
5411	3/8 NPT	3/8 NPT	3 7/16	8 1/16	25 3/4	5 5/8	2 15/16	4 3/8	3/4 NPT	2 9/16	27/32	-
5413	1/2 NPT	1/2 NPT	5 5/8	10 1/8	25 3/4	6 1/4	3	5 3/8	1 1/4 NPT	2 15/16	1 11/32	-

(See Reverse Side For Metric Dimensions)

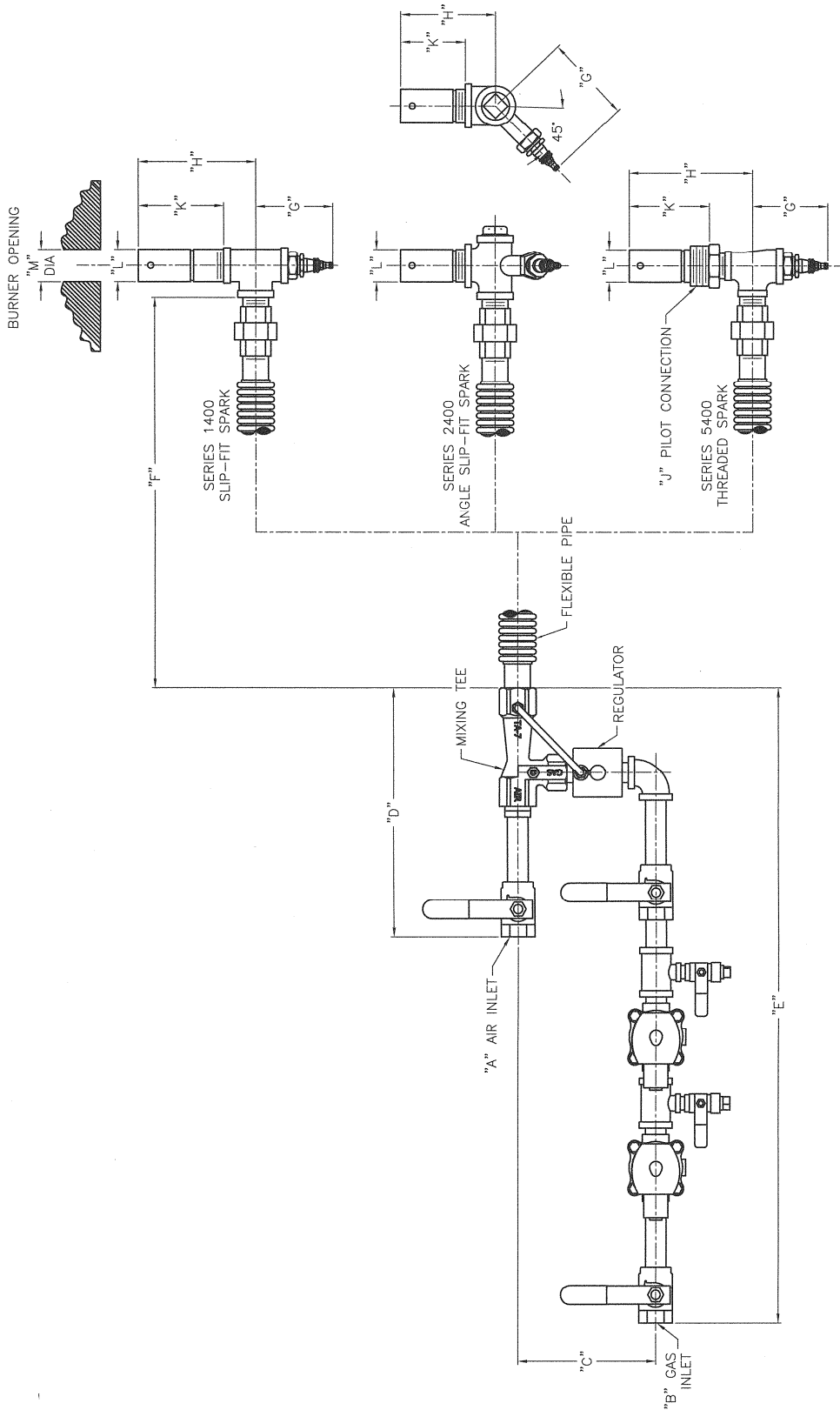
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METRIC DIMENSIONS

IPG GAS PILOT BURNERS WITH SOLENOID VALVES



MODEL NO.	A	B	C	D	E	F	G	H	J	K	L	M (MIN-MAX)
1411	3/8 NPT	3/8 NPT	87	205	681	143	75	89	-	62	21	21.7-21.9
1412	1/2 NPT	1/2 NPT	143	257	654	159	76	111	-	76	27	27.1-27.2
1413	1/2 NPT	1/2 NPT	143	257	654	159	76	127	-	87	33	33.8-34.0
2411	**CONSULT HAUCK**											
5411	3/8 NPT	3/8 NPT	87	205	654	143	75	111	3/4 NPT	65	21	-
5413	1/2 NPT	1/2 NPT	143	257	654	159	76	137	1 1/4 NPT	75	34	-

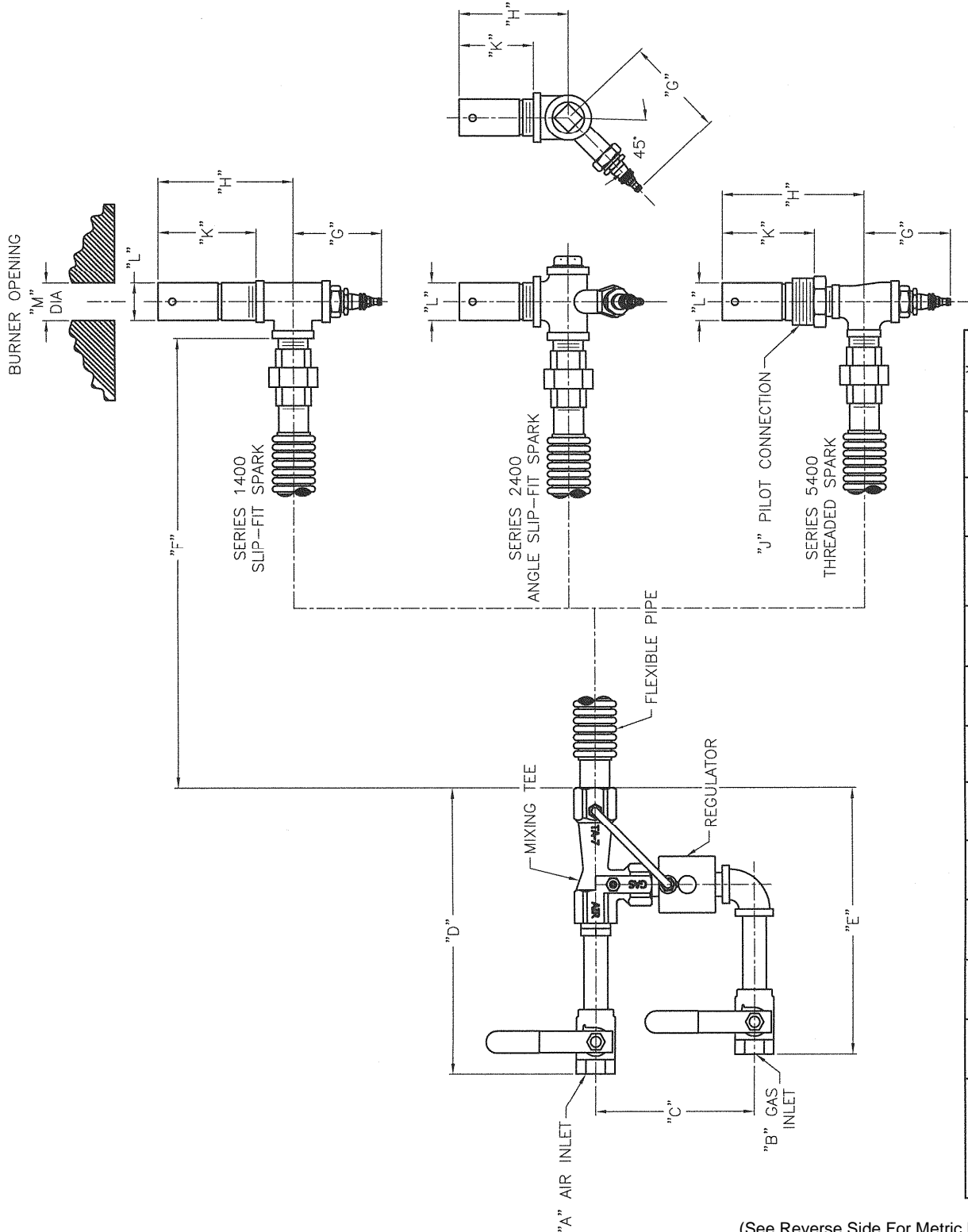
Y8131 METRIC
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NOTES:
1. DIMENSIONS AIR IN MM.



DIMENSIONS

IPG GAS PILOT BURNERS LESS SOLENOID VALVES



MODEL NO.	A	B	C	D	E	F	G	H	J	K	L	M (MIN-MAX)
1411	3/8 NPT	3/8 NPT	3 7/16	8 1/16	11 1/16	5 5/8	2 15/16	3 1/2	—	2 7/16	27/32	856-862
1412	1/2 NPT	1/2 NPT	5 5/8	10 1/8	9 7/16	6 1/4	3	4 3/8	—	3	1 1/16	1.066-1.072
1413	1/2 NPT	1/2 NPT	5 5/8	10 1/8	9 7/16	6 1/4	3	5	—	3 7/16	1 5/16	1.331-1.337
2411	"CONSULT HAUCK"											
5411	3/8 NPT	3/8 NPT	3 7/16	8 1/16	9 7/16	5 5/8	2 15/16	4 3/8	3/4 NPT	2 9/16	27/32	—
5413	1/2 NPT	1/2 NPT	5 5/8	10 1/8	9 7/16	6 1/4	3	5 3/8	1 1/4 NPT	2 15/16	1 11/32	—

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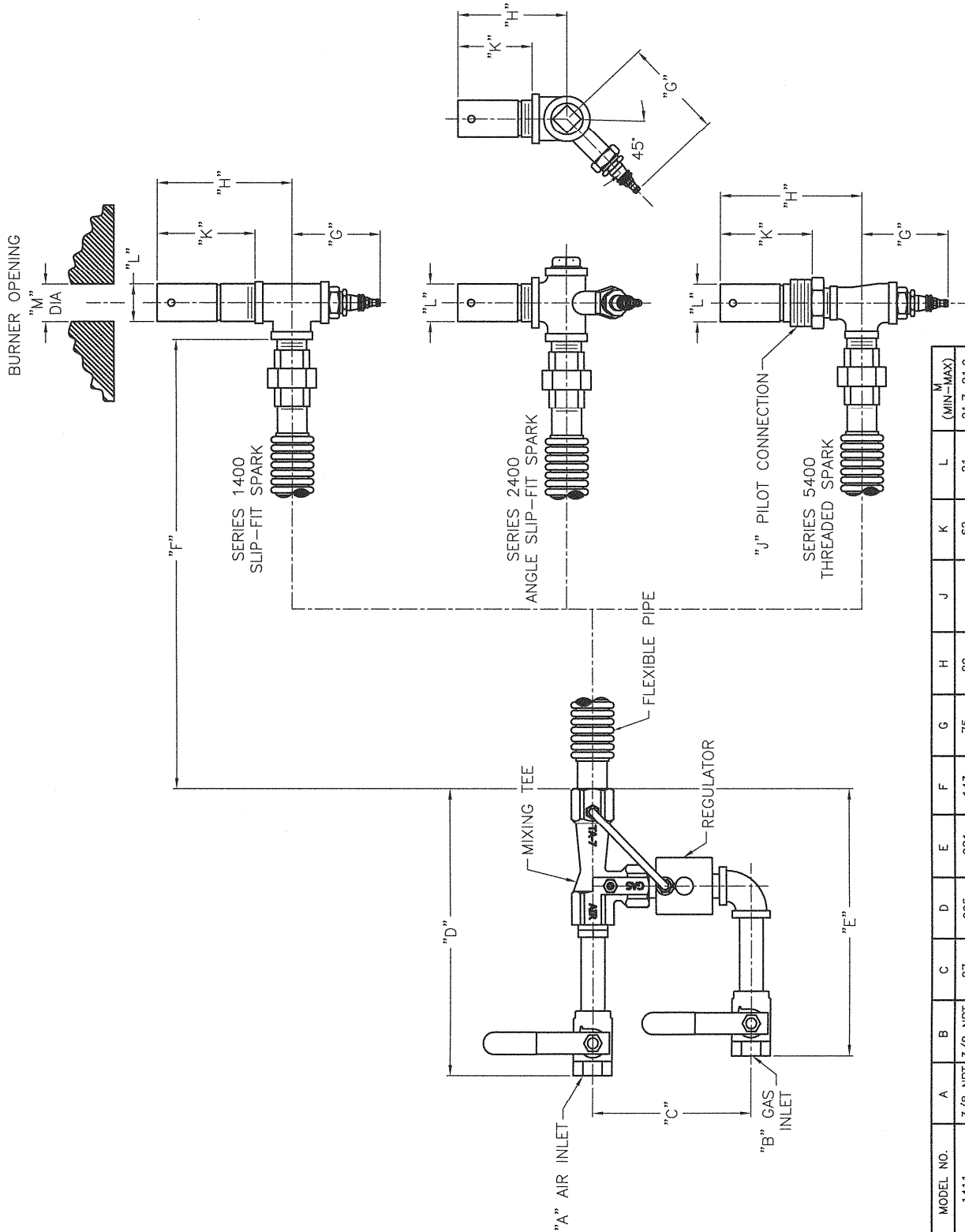
(See Reverse Side For Metric Dimensions)

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METRIC DIMENSIONS

IPG GAS PILOT BURNERS LESS SOLENOID VALVES



MODEL NO.	A	B	C	D	E	F	G	H	I	J	K	L	M (MIN-MAX)
1411	3/8 NPT	3/8 NPT	87	205	281	143	75	89	—	—	62	21	21.7-21.9
1412	1/2 NPT	1/2 NPT	143	257	240	159	76	111	—	—	76	27	27.1-27.2
1413	1/2 NPT	1/2 NPT	143	257	240	159	76	127	—	—	87	33	33.8-34.0
2411	3/8 NPT	3/8 NPT	87	205	240	143	75	111	3/4 NPT	65	21	—	—
5411	1/2 NPT	1/2 NPT	143	257	240	159	76	137	1 1/4 NPT	75	34	—	—

CONSULT HAUCK

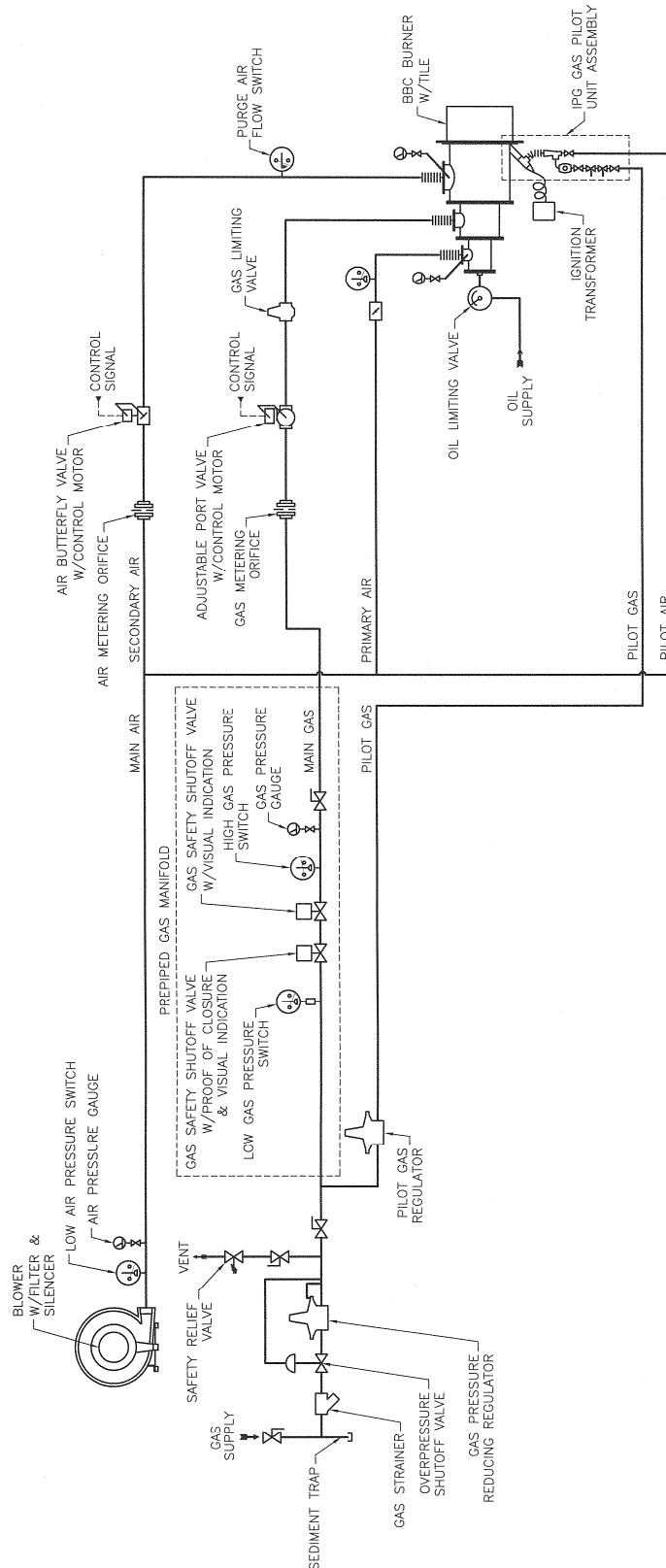
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IPG GAS PILOT BURNERS

TYPICAL PILOT INSTALLATION



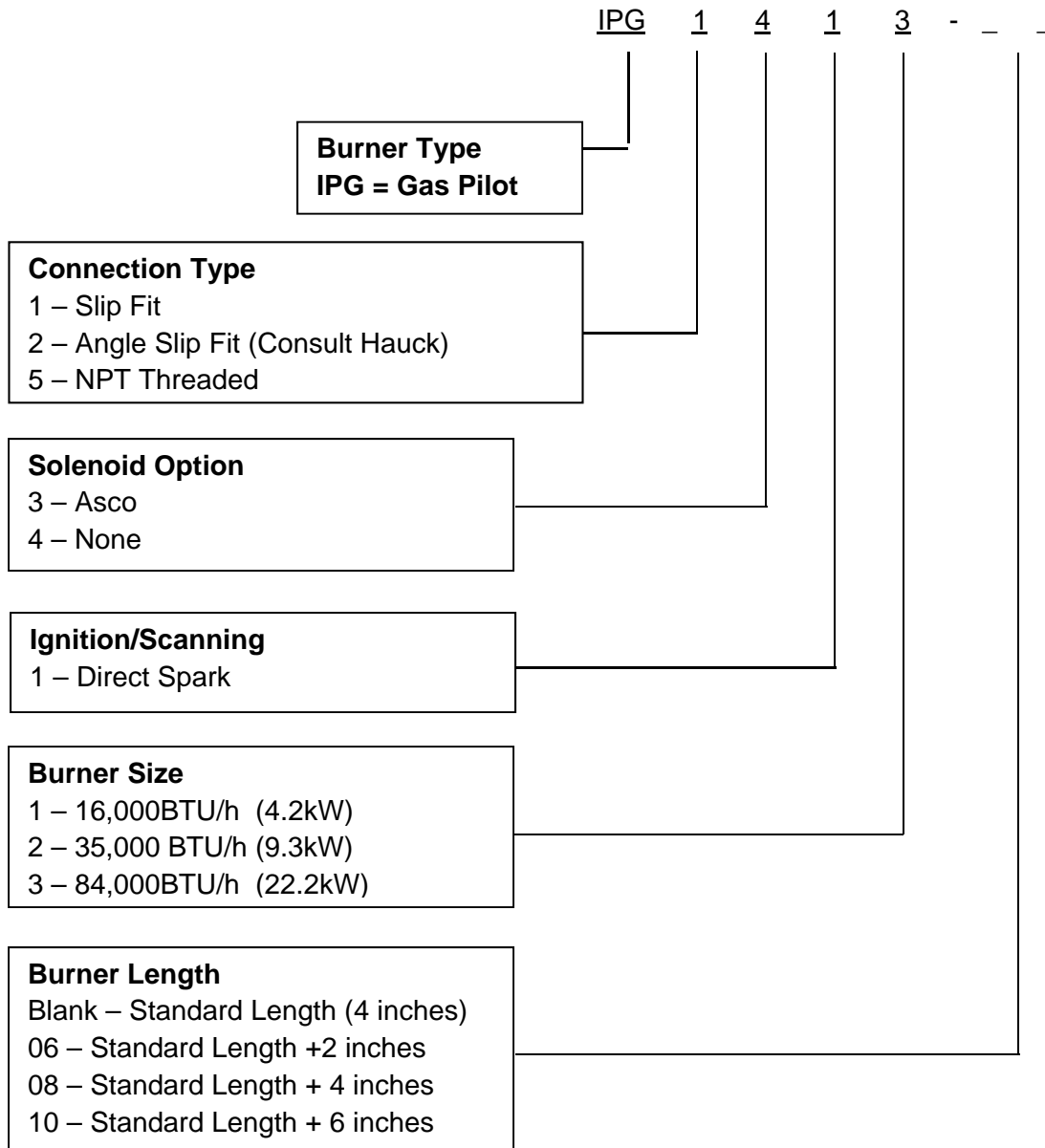
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IPG GAS PILOT BURNERS ORDERING INFORMATION



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