



**SPGM – Features**

- Simple capacity adjustment
- Use with most commercial fuel gases
- Simple accurate air/gas ratio adjustment
- Wide turndown range
- Single air valve control for manual or automatic systems
- Operates with low pressure air

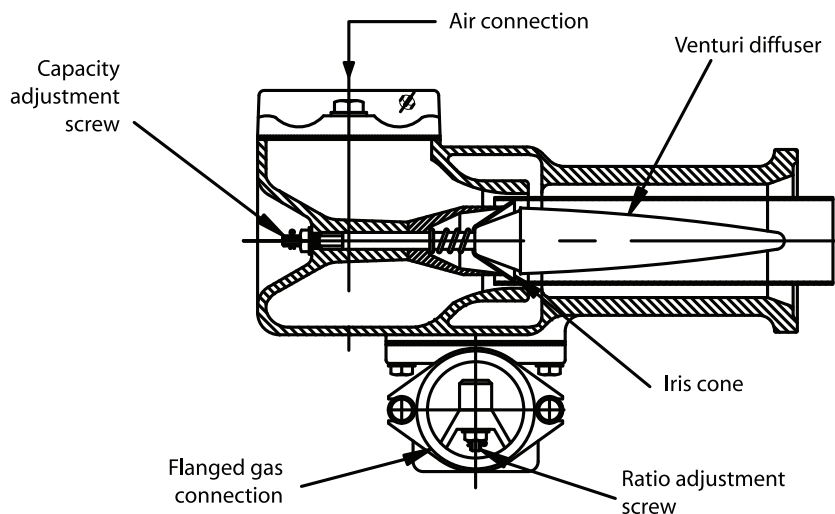
The SPGM Air/Gas Mixers are compactly designed units providing accurate proportioning of air/gas mixtures for supplying combustion systems which use premix burners or nozzles.

The mixers are available in five sizes ranging from Rp1 to Rp4 mixture outlets with capacities ranging from 29kW to 2000kW.

External gas/air ratio adjustments and mixture capacities are easily set; no internal components need to be changed to achieve the wide range of operating characteristics.

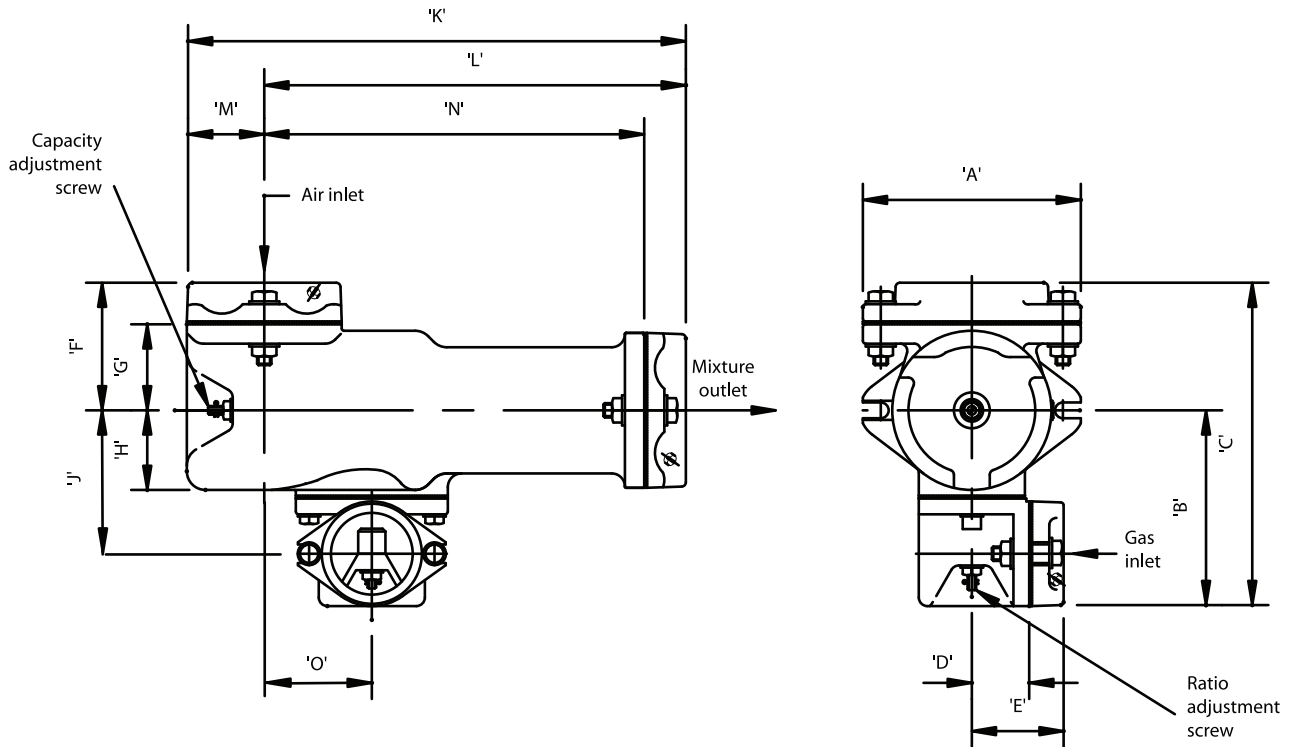
With gas needs at zero pressure from a suitably sized regulator, the correct air/gas mixture is determined by the flow of air entering the mixer which induces the appropriate amount of gas from the zero regulator.

Burners and nozzles can be manually or automatically operated from low fire to high fire by means of a suitably selected air control valve mounted in the combustion air supply line to the mixer.



Dimensions

SPGM Proportional Air/Gas Mixers



| Model No. | Part No. | Air Inlet Mixture Outlet        | Gas Inlet                       | Dimensions (mm) |     |     |    |    |     |    |    |     |     |     |    |     | Weight (kg) |      |
|-----------|----------|---------------------------------|---------------------------------|-----------------|-----|-----|----|----|-----|----|----|-----|-----|-----|----|-----|-------------|------|
|           |          |                                 |                                 | A               | B   | C   | D  | E  | F   | G  | H  | J   | K   | L   | M  | N   |             | O    |
| SPGM.25   | 3.10.034 | Rp1                             | Rp <sup>3</sup> / <sub>4</sub>  | NA              | 78  | 122 | 27 | 44 | 44  | NA | 27 | 60  | 154 | 132 | 22 | NA  | 37          | 1.9  |
| SPGM.40   | 3.10.035 | Rp1 <sup>1</sup> / <sub>2</sub> | Rp1                             | NA              | 87  | 141 | 27 | 46 | 54  | NA | 35 | 65  | 217 | 187 | 29 | NA  | 43          | 3.2  |
| SPGM.50   | 3.10.036 | Rp2                             | Rp1 <sup>1</sup> / <sub>2</sub> | NA              | 106 | 170 | 30 | 51 | 63  | NA | 43 | 76  | 248 | 211 | 37 | NA  | 51          | 5.0  |
| SPGM.80   | 3.10.037 | Rp3                             | Rp2                             | 156             | 137 | 224 | 40 | 62 | 87  | 59 | 56 | 100 | 344 | 291 | 54 | 262 | 76          | 11.6 |
| SPGM.100  | 3.10.038 | Rp4                             | Rp2 <sup>1</sup> / <sub>2</sub> | 194             | 168 | 278 | 48 | 76 | 110 | 75 | 71 | 124 | 425 | 356 | 70 | 321 | 95          | 19.3 |

**SPGM Mixer Selection Table 1**

Natural Gas - CV 8320 Kcal / Nm<sup>3</sup> - S.G. 0.56

| Air pressure at mixer inlet (mbar)  | 28                | 35.5 | 44.5 | 53       | 71 | 90 | 107 | 142 |
|-------------------------------------|-------------------|------|------|----------|----|----|-----|-----|
| Normal mixture pressure (mbar)      | 7.5               | 10   | 12.4 | 14.9     | 20 | 25 | 30  | 35  |
| Gas capacities (Nm <sup>3</sup> /h) | Select Mixer Size |      |      |          |    |    |     |     |
| 2.83                                |                   |      |      |          |    |    |     |     |
| 4.25                                |                   |      |      |          |    |    |     |     |
| 5.05                                |                   |      |      |          |    |    |     |     |
| 5.66                                |                   |      |      | SPGM.25  |    |    |     |     |
| 7.08                                |                   |      |      |          |    |    |     |     |
| 8.50                                |                   |      |      |          |    |    |     |     |
| 9.91                                |                   |      |      | SPGM.40  |    |    |     |     |
| 11.30                               |                   |      |      |          |    |    |     |     |
| 12.70                               |                   |      |      |          |    |    |     |     |
| 14.20                               |                   |      |      |          |    |    |     |     |
| 17                                  |                   |      |      |          |    |    |     |     |
| 19.8                                |                   |      |      | SPGM.50  |    |    |     |     |
| 22.7                                |                   |      |      |          |    |    |     |     |
| 25.5                                |                   |      |      |          |    |    |     |     |
| 28.3                                |                   |      |      |          |    |    |     |     |
| 34                                  |                   |      |      |          |    |    |     |     |
| 39.6                                |                   |      |      |          |    |    |     |     |
| 45.3                                |                   |      |      | SPGM.80  |    |    |     |     |
| 51                                  |                   |      |      |          |    |    |     |     |
| 56.6                                |                   |      |      |          |    |    |     |     |
| 63.7                                |                   |      |      |          |    |    |     |     |
| 70.8                                |                   |      |      |          |    |    |     |     |
| 77.9                                |                   |      |      |          |    |    |     |     |
| 85                                  |                   |      |      |          |    |    |     |     |
| 99.1                                |                   |      |      |          |    |    |     |     |
| 113                                 |                   |      |      | SPGM.100 |    |    |     |     |
| 127                                 |                   |      |      |          |    |    |     |     |
| 142                                 |                   |      |      |          |    |    |     |     |
| 156                                 |                   |      |      |          |    |    |     |     |
| 170                                 |                   |      |      |          |    |    |     |     |
| 184                                 |                   |      |      |          |    |    |     |     |
| 198                                 |                   |      |      |          |    |    |     |     |
| 227                                 |                   |      |      |          |    |    |     |     |

**Mixer Selection**

Determine the type of gas and flow capacity to be used by the burner or nozzle and also the mixture pressure required.

Select the mixer based on the gas capacity required in Nm<sup>3</sup>/h and the available air pressure in mbar.

In the table above the mixture pressure is dependent on the air pressure supplied at the mixer inlet.

**SPGM Mixer Selection Table 2**

Propane Gas – CV 20,800 Kcal / Nm<sup>3</sup> – S.G. 1.52

| Air pressure at mixer inlet (mbar)  | 28                | 35.5 | 44.5 | 53       | 71 | 90 | 107  | 142 |
|-------------------------------------|-------------------|------|------|----------|----|----|------|-----|
| Normal mixture pressure (mbar)      | 8.7               | 11.2 | 13.7 | 16       | 22 | 30 | 32.5 | 40  |
| Gas capacities (Nm <sup>3</sup> /h) | Select Mixer Size |      |      |          |    |    |      |     |
| 0.57                                |                   |      |      |          |    |    |      |     |
| 0.85                                |                   |      |      |          |    |    |      |     |
| 1.13                                |                   |      |      |          |    |    |      |     |
| 1.42                                |                   |      |      |          |    |    |      |     |
| 1.70                                |                   |      |      |          |    |    |      |     |
| 2.10                                |                   |      |      | SPGM.25  |    |    |      |     |
| 2.27                                |                   |      |      |          |    |    |      |     |
| 2.83                                |                   |      |      |          |    |    |      |     |
| 3.40                                |                   |      |      |          |    |    |      |     |
| 3.96                                |                   |      |      | SPGM.40  |    |    |      |     |
| 4.53                                |                   |      |      |          |    |    |      |     |
| 5.1                                 |                   |      |      |          |    |    |      |     |
| 5.66                                |                   |      |      |          |    |    |      |     |
| 6.37                                |                   |      |      |          |    |    |      |     |
| 7.08                                |                   |      |      | SPGM.50  |    |    |      |     |
| 7.79                                |                   |      |      |          |    |    |      |     |
| 8.5                                 |                   |      |      |          |    |    |      |     |
| 9.91                                |                   |      |      |          |    |    |      |     |
| 11.3                                |                   |      |      |          |    |    |      |     |
| 14.2                                |                   |      |      |          |    |    |      |     |
| 17                                  |                   |      |      |          |    |    |      |     |
| 19.8                                |                   |      |      | SPGM.80  |    |    |      |     |
| 22.7                                |                   |      |      |          |    |    |      |     |
| 25.5                                |                   |      |      |          |    |    |      |     |
| 28.3                                |                   |      |      |          |    |    |      |     |
| 35.4                                |                   |      |      |          |    |    |      |     |
| 42.5                                |                   |      |      | SPGM.100 |    |    |      |     |
| 49.6                                |                   |      |      |          |    |    |      |     |
| 56.6                                |                   |      |      |          |    |    |      |     |
| 63.7                                |                   |      |      |          |    |    |      |     |
| 70.8                                |                   |      |      |          |    |    |      |     |
| 85                                  |                   |      |      |          |    |    |      |     |
| 99.1                                |                   |      |      |          |    |    |      |     |

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In the table above the mixture pressure is dependent on the air pressure supplied at the mixer inlet.

**WARNING:** The data outlined is for information only and does not form part of any contract. Our policy is one of continuous improvement and we therefore reserve the right to modify specifications or dimensions without prior warning. Situations dangerous to personnel and property can develop from incorrect installation and operation of combustion equipment. Fives North American Combustion UK, Ltd urges compliance with International, National and Local Safety Standards and that installation is carried out by properly qualified personnel.

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