

## DIAMETER SELECTION - METRIC

### 4.5 BAR

| FLOW        |                      | LENGTH |       |       |       |       |       |        |        |        |        |
|-------------|----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| NI/s        | Nm <sup>3</sup> /min | 50 m   | 100 m | 150 m | 300 m | 500 m | 750 m | 1000 m | 1300 m | 1600 m | 2000 m |
| <b>3</b>    | <b>0.2</b>           | 20     | 20    | 20    | 20    | 20    | 20    | 25     | 25     | 25     | 25     |
| <b>8</b>    | <b>0.5</b>           | 20     | 20    | 25    | 25    | 25    | 40    | 40     | 40     | 40     | 40     |
| <b>14</b>   | <b>0.8</b>           | 25     | 25    | 25    | 40    | 40    | 40    | 40     | 40     | 50     | 50     |
| <b>19</b>   | <b>1.2</b>           | 25     | 40    | 40    | 40    | 40    | 40    | 50     | 50     | 50     | 50     |
| <b>28</b>   | <b>1.7</b>           | 40     | 40    | 40    | 40    | 50    | 50    | 50     | 50     | 63     | 63     |
| <b>42</b>   | <b>2.5</b>           | 40     | 40    | 40    | 50    | 50    | 63    | 63     | 63     | 63     | 63     |
| <b>69</b>   | <b>4</b>             | 40     | 50    | 50    | 63    | 63    | 63    | 80     | 80     | 80     | 80     |
| <b>97</b>   | <b>6</b>             | 50     | 50    | 63    | 63    | 80    | 80    | 80     | 80     | 100    | 100    |
| <b>139</b>  | <b>8</b>             | 50     | 63    | 63    | 80    | 80    | 80    | 100    | 100    | 100    | 100    |
| <b>208</b>  | <b>13</b>            | 63     | 63    | 80    | 80    | 100   | 100   | 100    | 158    | 158    | 158    |
| <b>278</b>  | <b>17</b>            | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| <b>347</b>  | <b>21</b>            | 80     | 80    | 80    | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| <b>417</b>  | <b>25</b>            | 80     | 80    | 100   | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| <b>486</b>  | <b>29</b>            | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| <b>556</b>  | <b>33</b>            | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 200    |
| <b>694</b>  | <b>42</b>            | 100    | 100   | 158   | 158   | 158   | 158   | 158    | 200    | 200    | 200    |
| <b>833</b>  | <b>50</b>            | 100    | 158   | 158   | 158   | 158   | 158   | 200    | 200    | 200    | 200    |
| <b>972</b>  | <b>58</b>            | 100    | 158   | 158   | 158   | 158   | 200   | 200    | 200    | 200    | 200    |
| <b>1111</b> | <b>67</b>            | 100    | 158   | 158   | 158   | 158   | 200   | 200    | 200    | 200    | 200    |
| <b>1250</b> | <b>75</b>            | 158    | 158   | 158   | 158   | 158   | 200   | 200    | 200    | 200    | 250    |
| <b>1389</b> | <b>83</b>            | 158    | 158   | 158   | 158   | 200   | 200   | 200    | 200    | 250    | 250    |
| <b>1528</b> | <b>92</b>            | 158    | 158   | 158   | 200   | 200   | 200   | 200    | 250    | 250    | 250    |
| <b>1667</b> | <b>100</b>           | 158    | 158   | 158   | 200   | 200   | 200   | 200    | 250    | 250    | 250    |

Advised pipe diameters assume a straight line system with a compressor outlet temperature of 30°C and a maximum pressured drop of 5%.  
For closed loop systems, flow rates can be doubled. (Example: 2000 m of 25 mm pipes in a closed loop system can achieve a 6 NI/s flow at 4.5 bar.)

## DIAMETER SELECTION - METRIC

### 7 BAR

| FLOW |                      | LENGTH |       |       |       |       |       |        |        |        |        |
|------|----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| NI/s | Nm <sup>3</sup> /min | 50 m   | 100 m | 150 m | 300 m | 500 m | 750 m | 1000 m | 1300 m | 1600 m | 2000 m |
| 3    | 0.2                  | 20     | 20    | 20    | 20    | 20    | 20    | 20     | 20     | 20     | 25     |
| 8    | 0.5                  | 20     | 20    | 20    | 25    | 25    | 25    | 40     | 40     | 40     | 40     |
| 14   | 0.8                  | 20     | 20    | 25    | 25    | 40    | 40    | 40     | 40     | 40     | 40     |
| 19   | 1.2                  | 20     | 25    | 25    | 40    | 40    | 40    | 40     | 40     | 40     | 40     |
| 28   | 1.7                  | 25     | 25    | 40    | 40    | 40    | 40    | 40     | 50     | 50     | 50     |
| 42   | 2.5                  | 25     | 40    | 40    | 40    | 40    | 50    | 50     | 50     | 50     | 63     |
| 69   | 4                    | 40     | 40    | 40    | 50    | 50    | 63    | 63     | 63     | 63     | 63     |
| 97   | 6                    | 40     | 40    | 50    | 50    | 63    | 63    | 63     | 80     | 80     | 80     |
| 139  | 8                    | 40     | 50    | 50    | 63    | 63    | 80    | 80     | 80     | 80     | 100    |
| 208  | 13                   | 50     | 63    | 63    | 63    | 80    | 80    | 100    | 100    | 100    | 100    |
| 278  | 17                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 100    | 158    |
| 347  | 21                   | 63     | 63    | 80    | 80    | 100   | 100   | 100    | 158    | 158    | 158    |
| 417  | 25                   | 63     | 80    | 80    | 100   | 100   | 100   | 158    | 158    | 158    | 158    |
| 486  | 29                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 556  | 33                   | 63     | 80    | 80    | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 694  | 42                   | 80     | 80    | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 833  | 50                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 972  | 58                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 200    | 200    |
| 1111 | 67                   | 100    | 100   | 158   | 158   | 158   | 158   | 158    | 200    | 200    | 200    |
| 1250 | 75                   | 100    | 158   | 158   | 158   | 158   | 158   | 200    | 200    | 200    | 200    |
| 1389 | 83                   | 100    | 158   | 158   | 158   | 158   | 158   | 200    | 200    | 200    | 200    |
| 1528 | 92                   | 100    | 158   | 158   | 158   | 158   | 200   | 200    | 200    | 200    | 200    |
| 1667 | 100                  | 100    | 158   | 158   | 158   | 158   | 200   | 200    | 200    | 200    | 200    |

Advised pipe diameters assume a straight line system with a compressor outlet temperature of 30°C and a maximum pressured drop of 5%.  
For closed loop systems, flow rates can be doubled. (Example: 2000 m of 25 mm pipes in a closed loop system can achieve a 6 NI/s flow at 7 bar.)

## DIAMETER SELECTION - METRIC

### 10 BAR

| FLOW |                      | LENGTH |       |       |       |       |       |        |        |        |        |
|------|----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| NI/s | Nm <sup>3</sup> /min | 50 m   | 100 m | 150 m | 300 m | 500 m | 750 m | 1000 m | 1300 m | 1600 m | 2000 m |
| 3    | 0.2                  | 20     | 20    | 20    | 20    | 20    | 20    | 20     | 20     | 20     | 20     |
| 8    | 0.5                  | 20     | 20    | 20    | 20    | 20    | 25    | 25     | 25     | 25     | 40     |
| 14   | 0.8                  | 20     | 20    | 20    | 25    | 25    | 25    | 40     | 40     | 40     | 40     |
| 19   | 1.2                  | 20     | 20    | 25    | 25    | 40    | 40    | 40     | 40     | 40     | 40     |
| 28   | 1.7                  | 20     | 25    | 25    | 40    | 40    | 40    | 40     | 40     | 40     | 40     |
| 42   | 2.5                  | 25     | 25    | 25    | 40    | 40    | 40    | 40     | 50     | 50     | 50     |
| 69   | 4                    | 40     | 40    | 40    | 40    | 50    | 50    | 50     | 50     | 63     | 63     |
| 97   | 6                    | 40     | 40    | 40    | 50    | 50    | 63    | 63     | 63     | 63     | 63     |
| 139  | 8                    | 40     | 40    | 40    | 50    | 63    | 63    | 63     | 80     | 80     | 80     |
| 208  | 13                   | 40     | 50    | 50    | 63    | 63    | 80    | 80     | 80     | 80     | 100    |
| 278  | 17                   | 50     | 50    | 63    | 80    | 80    | 80    | 80     | 100    | 100    | 100    |
| 347  | 21                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 100    | 100    |
| 417  | 25                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 158    | 158    |
| 486  | 29                   | 63     | 63    | 80    | 80    | 100   | 100   | 100    | 158    | 158    | 158    |
| 556  | 33                   | 63     | 63    | 80    | 80    | 100   | 100   | 158    | 158    | 158    | 158    |
| 694  | 42                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 833  | 50                   | 80     | 80    | 80    | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 972  | 58                   | 80     | 80    | 100   | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1111 | 67                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1250 | 75                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 200    |
| 1389 | 83                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 200    | 200    |
| 1528 | 92                   | 80     | 100   | 158   | 158   | 158   | 158   | 158    | 200    | 200    | 200    |
| 1667 | 100                  | 100    | 100   | 158   | 158   | 158   | 158   | 158    | 200    | 200    | 200    |

Advised pipe diameters assume a straight line system with a compressor outlet temperature of 30°C and a maximum pressured drop of 5%.  
For closed loop systems, flow rates can be doubled. (Example: 2000 m of 20 mm pipes in a closed loop system can achieve a 6 NI/s flow at 10 bar.)

## DIAMETER SELECTION - METRIC

### 13 BAR

| FLOW |                      | LENGTH |       |       |       |       |       |        |        |        |        |
|------|----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| NI/s | Nm <sup>3</sup> /min | 50 m   | 100 m | 150 m | 300 m | 500 m | 750 m | 1000 m | 1300 m | 1600 m | 2000 m |
| 3    | 0.2                  | 20     | 20    | 20    | 20    | 20    | 20    | 20     | 20     | 20     | 20     |
| 8    | 0.5                  | 20     | 20    | 20    | 20    | 20    | 20    | 25     | 25     | 25     | 25     |
| 14   | 0.8                  | 20     | 20    | 20    | 20    | 25    | 25    | 25     | 40     | 40     | 40     |
| 19   | 1.2                  | 20     | 20    | 20    | 25    | 25    | 40    | 40     | 40     | 40     | 40     |
| 28   | 1.7                  | 20     | 20    | 25    | 25    | 40    | 40    | 40     | 40     | 40     | 40     |
| 42   | 2.5                  | 20     | 25    | 25    | 40    | 40    | 40    | 40     | 40     | 40     | 50     |
| 69   | 4                    | 25     | 40    | 40    | 40    | 40    | 50    | 50     | 50     | 50     | 50     |
| 97   | 6                    | 40     | 40    | 40    | 40    | 50    | 50    | 50     | 63     | 63     | 63     |
| 139  | 8                    | 40     | 40    | 40    | 50    | 50    | 63    | 63     | 63     | 80     | 80     |
| 208  | 13                   | 40     | 40    | 50    | 50    | 63    | 63    | 63     | 80     | 80     | 80     |
| 278  | 17                   | 40     | 50    | 50    | 63    | 63    | 80    | 80     | 80     | 80     | 100    |
| 347  | 21                   | 50     | 50    | 63    | 63    | 80    | 80    | 80     | 100    | 100    | 100    |
| 417  | 25                   | 50     | 63    | 63    | 80    | 80    | 80    | 100    | 100    | 100    | 100    |
| 486  | 29                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 100    | 158    |
| 556  | 33                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 158    | 158    |
| 694  | 42                   | 63     | 63    | 80    | 80    | 100   | 100   | 100    | 158    | 158    | 158    |
| 833  | 50                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 972  | 58                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 1111 | 67                   | 80     | 80    | 80    | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1250 | 75                   | 80     | 80    | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1389 | 83                   | 80     | 80    | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1528 | 92                   | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1667 | 100                  | 80     | 100   | 100   | 158   | 158   | 158   | 158    | 158    | 158    | 158    |

Advised pipe diameters assume a straight line system with a compressor outlet temperature of 30°C and a maximum pressured drop of 5%.  
For closed loop systems, flow rates can be doubled. (Example: 2000 m of 20 mm pipes in a closed loop system can achieve a 6 NI/s flow at 13 bar.)

## DIAMETER SELECTION - METRIC

### 16 BAR

| FLOW |                      | LENGTH |       |       |       |       |       |        |        |        |        |
|------|----------------------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| NI/s | Nm <sup>3</sup> /min | 50 m   | 100 m | 150 m | 300 m | 500 m | 750 m | 1000 m | 1300 m | 1600 m | 2000 m |
| 3    | 0.2                  | 20     | 20    | 20    | 20    | 20    | 20    | 20     | 20     | 20     | 20     |
| 8    | 0.5                  | 20     | 20    | 20    | 20    | 20    | 20    | 20     | 20     | 25     | 25     |
| 14   | 0.8                  | 20     | 20    | 20    | 20    | 20    | 25    | 25     | 25     | 25     | 40     |
| 19   | 1.2                  | 20     | 20    | 20    | 20    | 25    | 25    | 25     | 40     | 40     | 40     |
| 28   | 1.7                  | 20     | 20    | 20    | 25    | 25    | 40    | 40     | 40     | 40     | 40     |
| 42   | 2.5                  | 20     | 20    | 25    | 40    | 40    | 40    | 40     | 40     | 40     | 40     |
| 69   | 4                    | 25     | 25    | 40    | 40    | 40    | 40    | 40     | 50     | 50     | 50     |
| 97   | 6                    | 25     | 40    | 40    | 40    | 40    | 50    | 50     | 50     | 50     | 63     |
| 139  | 8                    | 40     | 40    | 40    | 40    | 50    | 50    | 63     | 63     | 63     | 63     |
| 208  | 13                   | 40     | 40    | 40    | 50    | 63    | 63    | 63     | 63     | 80     | 80     |
| 278  | 17                   | 40     | 50    | 50    | 63    | 63    | 63    | 80     | 80     | 80     | 80     |
| 347  | 21                   | 40     | 50    | 50    | 63    | 63    | 80    | 80     | 80     | 80     | 100    |
| 417  | 25                   | 50     | 50    | 63    | 63    | 80    | 80    | 80     | 80     | 100    | 100    |
| 486  | 29                   | 50     | 50    | 63    | 63    | 80    | 80    | 80     | 100    | 100    | 100    |
| 556  | 33                   | 50     | 63    | 63    | 80    | 80    | 80    | 100    | 100    | 100    | 100    |
| 694  | 42                   | 50     | 63    | 63    | 80    | 80    | 100   | 100    | 100    | 158    | 158    |
| 833  | 50                   | 63     | 63    | 80    | 80    | 100   | 100   | 100    | 158    | 158    | 158    |
| 972  | 58                   | 63     | 80    | 80    | 100   | 100   | 100   | 158    | 158    | 158    | 158    |
| 1111 | 67                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 1250 | 75                   | 63     | 80    | 80    | 100   | 100   | 158   | 158    | 158    | 158    | 158    |
| 1389 | 83                   | 80     | 80    | 100   | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1528 | 92                   | 80     | 80    | 100   | 100   | 158   | 158   | 158    | 158    | 158    | 158    |
| 1667 | 100                  | 80     | 80    | 100   | 100   | 158   | 158   | 158    | 158    | 158    | 158    |

Advised pipe diameters assume a straight line system with a compressor outlet temperature of 30°C and a maximum pressured drop of 5%.  
For closed loop systems, flow rates can be doubled. (Example: 2000 m of 20 mm pipes in a closed loop system can achieve a 6 NI/s flow at 16 bar.)