

# Spot Nozzle: SPN

1) X = Sphere of influence / Throw in 'm' for a velocity of 0.5 (m/s)

2) V<sub>k</sub> = Effective velocity (m/s)

3) P<sub>t</sub> = Total Pressure Loss (Pa)

4) NR = Sound level (dB)

## Performance Data :

| Air Flow rate       |       | Diffuser Diameter     | 100    | 180    | 240    | 325    | 400    | 500    |
|---------------------|-------|-----------------------|--------|--------|--------|--------|--------|--------|
|                     |       | Supply Mouth          | 50     | 77     | 107    | 172    | 240    | 300    |
| (m <sup>3</sup> /h) | (l/s) | (Ak(m <sup>2</sup> )) | 0.0019 | 0.0046 | 0.009  | 0.0232 | 0.0452 | 0.0707 |
| 20                  | 5.6   | X                     | 2.7    | 1.7    |        |        |        |        |
|                     |       | V <sub>k</sub>        | 2.92   | 1.21   |        |        |        |        |
|                     |       | P <sub>t</sub>        | 11.0   | 1.7    |        |        |        |        |
|                     |       | NR                    |        |        |        |        |        |        |
| 40                  | 11.1  | X                     | 5.3    | 3.4    |        |        |        |        |
|                     |       | V <sub>k</sub>        | 5.85   | 2.42   |        |        |        |        |
|                     |       | P <sub>t</sub>        | 43.8   | 6.8    |        |        |        |        |
|                     |       | NR                    | 15     |        |        |        |        |        |
| 60                  | 16.7  | X                     | 8.0    | 5.0    | 3.3    |        |        |        |
|                     |       | V <sub>k</sub>        | 8.77   | 3.62   | 1.85   |        |        |        |
|                     |       | P <sub>t</sub>        | 98.6   | 15.3   | 2.7    |        |        |        |
|                     |       | NR                    | 28     | 3      |        |        |        |        |
| 80                  | 22.2  | X                     | 10.7   | 6.7    | 4.3    |        |        |        |
|                     |       | V <sub>k</sub>        | 11.70  | 4.83   | 2.47   |        |        |        |
|                     |       | P <sub>t</sub>        | 173.3  | 27.2   | 4.7    |        |        |        |
|                     |       | NR                    | 36     | 12     |        |        |        |        |
| 100                 | 27.8  | X                     | 13.4   | 8.4    | 5.4    |        |        |        |
|                     |       | V <sub>k</sub>        | 14.62  | 6.04   | 3.09   |        |        |        |
|                     |       | P <sub>t</sub>        | 273.9  | 42.5   | 7.4    |        |        |        |
|                     |       | NR                    | 43     | 19     |        |        |        |        |
| 125                 | 34.7  | X                     | 16.7   | 10.5   | 6.8    | 4.1    |        |        |
|                     |       | V <sub>k</sub>        | 18.27  | 7.55   | 3.86   | 1.50   |        |        |
|                     |       | P <sub>t</sub>        | 428.0  | 66.4   | 11.6   | 1.6    |        |        |
|                     |       | NR                    | 50     | 26     | 3      |        |        |        |
| 150                 | 41.7  | X                     |        | 12.6   | 8.1    | 4.9    |        |        |
|                     |       | V <sub>k</sub>        |        | 9.06   | 4.63   | 1.80   |        |        |
|                     |       | P <sub>t</sub>        |        | 95.7   | 16.7   | 2.3    |        |        |
|                     |       | NR                    |        | 31     | 9      |        |        |        |
| 200                 | 56.6  | X                     |        | 16.8   | 10.8   | 6.6    | 4.7    |        |
|                     |       | V <sub>k</sub>        |        | 12.08  | 6.17   | 2.39   | 1.23   |        |
|                     |       | P <sub>t</sub>        |        | 170.1  | 29.7   | 4.0    | 1.1    |        |
|                     |       | NR                    |        | 40     | 17     |        |        |        |
| 300                 | 83.3  | X                     |        | 25.1   | 16.3   | 9.9    | 7.1    |        |
|                     |       | V <sub>k</sub>        |        | 18.12  | 9.26   | 3.59   | 1.84   |        |
|                     |       | P <sub>t</sub>        |        | 382.6  | 66.8   | 9.1    | 2.4    |        |
|                     |       | NR                    |        | 52     | 30     | 4      |        |        |
| 400                 | 111.1 | X                     |        |        | 21.7   | 13.2   | 9.5    | 7.2    |
|                     |       | V <sub>k</sub>        |        |        | 12.35  | 4.79   | 2.46   | 1.57   |
|                     |       | P <sub>t</sub>        |        |        | 118.7  | 16.2   | 4.3    | 1.5    |
|                     |       | NR                    |        |        | 38     | 12     |        |        |
| 500                 | 138.9 | X                     |        |        | 27.1   | 16.5   | 11.8   | 9.1    |
|                     |       | V <sub>k</sub>        |        |        | 15.43  | 5.99   | 3.07   | 1.96   |
|                     |       | P <sub>t</sub>        |        |        | 185.5  | 25.3   | 6.7    | 2.3    |
|                     |       | NR                    |        |        | 45     | 19     |        |        |
| 600                 | 166.7 | X                     |        |        | 32.5   | 19.7   | 14.2   | 10.9   |
|                     |       | V <sub>k</sub>        |        |        | 18.52  | 7.18   | 3.69   | 2.36   |
|                     |       | P <sub>t</sub>        |        |        | 267.1  | 36.4   | 9.7    | 3.3    |
|                     |       | NR                    |        |        | 51     | 25     | 7      |        |
| 700                 | 194.4 | X                     |        |        | 37.9   | 23.0   | 16.5   | 12.7   |
|                     |       | V <sub>k</sub>        |        |        | 21.60  | 8.38   | 4.30   | 2.75   |
|                     |       | P <sub>t</sub>        |        |        | 363.50 | 49.5   | 13.2   | 4.5    |
|                     |       | NR                    |        |        | 55     | 29     | 12     |        |
| 800                 | 222.2 | X                     |        |        |        | 26.3   | 18.9   | 14.5   |
|                     |       | V <sub>k</sub>        |        |        |        | 9.58   | 4.92   | 3.14   |
|                     |       | P <sub>t</sub>        |        |        |        | 64.7   | 17.2   | 5.9    |
|                     |       | NR                    |        |        |        | 33     | 16     |        |
| 900                 | 250.0 | X                     |        |        |        | 29.6   | 21.3   | 16.3   |
|                     |       | V <sub>k</sub>        |        |        |        | 10.78  | 5.53   | 3.54   |
|                     |       | P <sub>t</sub>        |        |        |        | 81.9   | 21.8   | 7.5    |
|                     |       | NR                    |        |        |        | 37     | 20     | 6      |
| 1000                | 277.8 | X                     |        |        |        | 32.9   | 23.6   | 18.1   |
|                     |       | V <sub>k</sub>        |        |        |        | 11.97  | 6.15   | 3.93   |
|                     |       | P <sub>t</sub>        |        |        |        | 101.1  | 26.9   | 9.3    |
|                     |       | NR                    |        |        |        | 40     | 23     | 9      |
| 1500                | 416.7 | X                     |        |        |        | 49.4   | 35.5   | 27.2   |
|                     |       | V <sub>k</sub>        |        |        |        | 17.96  | 9.22   | 5.89   |
|                     |       | P <sub>t</sub>        |        |        |        | 227.5  | 60.5   | 20.8   |
|                     |       | NR                    |        |        |        | 53     | 35     | 21     |
| 2000                | 555.6 | X                     |        |        |        |        | 47.3   | 36.2   |
|                     |       | V <sub>k</sub>        |        |        |        |        | 12.29  | 7.86   |
|                     |       | P <sub>t</sub>        |        |        |        |        | 107.5  | 37.0   |
|                     |       | NR                    |        |        |        |        | 44     | 30     |
| 2500                | 694.4 | X                     |        |        |        |        | 59.1   | 45.3   |
|                     |       | V <sub>k</sub>        |        |        |        |        | 15.36  | 9.82   |
|                     |       | P <sub>t</sub>        |        |        |        |        | 168.0  | 57.9   |
|                     |       | NR                    |        |        |        |        | 51     | 37     |
| 3000                | 833.3 | X                     |        |        |        |        | 70.9   | 54.3   |
|                     |       | V <sub>k</sub>        |        |        |        |        | 18.44  | 11.79  |
|                     |       | P <sub>t</sub>        |        |        |        |        | 241.9  | 83.4   |
|                     |       | NR                    |        |        |        |        | 56     | 42     |