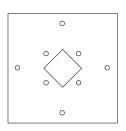
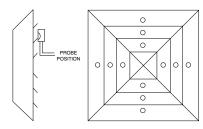
## **Engineering Data**



**Probe Position:** The probe is held 1 inch in from the outer edge of the diffuser, flush with the face.









Four-Way (Short Throw) · For throw in all four directions, use short throw data.

SBP (Page 93)



Three-Way (Short Throw) For throw in all three directions, use short throw data.



Three-Way (Long & Short)
• For throw in the #2 & #4 direction use long throw data.

For throw in the #1 & #3 directions, use short throw data

| Neck Velocity     |                        | 300     | 400     | 500      | 600      | 700      | 800      | 900      | 1000     | 1200     | 1400     |
|-------------------|------------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| Velocity Pressure |                        | .006    | .010    | .016     | .022     | .031     | .040     | .051     | .062     | .090     | .122     |
| 6"<br>Diameter    | CFM                    | 60      | 80      | 100      | 120      | 140      | 160      | 180      | 200      | 240      | 280      |
|                   | Total Pressure         | .005    | .008    | .013     | .025     | .025     | .032     | .041     | .050     | .027     | .098     |
|                   | Short Horizontal Throw | 2-1-1   | 2-1-1   | 3-1-1    | 3-2-1    | 4-2-1    | 4-2-1    | 5-2-2    | 5-3-2    | 6-3-2    | 7-4-2    |
|                   | Long Horizontal Throw  | 3-1-1   | 4-2-1   | 5-2-2    | 6-3-2    | 7-3-2    | 8-4-3    | 9-4-3    | 10-5-3   | 12-6-4   | 14-7-5   |
|                   | Noise Criteria         | <20     | <20     | <20      | <20      | <20      | 22       | 24       | 26       | 31       | 37       |
| 8"<br>Diameter    | CFM                    | 105     | 140     |          | 210      |          | 280      | 315      |          | 420      | 490      |
|                   | Total Pressure         | .009    | .015    |          | .034     | .046     | .061     | .077     | .095     | .136     | .185     |
|                   | Short Horizontal Throw | 3-1-1   | 4-2-1   | 5-2-2    | 6-4-3    | 7-3-2    | 8-4-3    | 9-4-3    |          | 12-6-4   | 14-7-5   |
|                   | Long Horizontal Throw  | 5-3-2   | 7-4-2   | 9-5-3    | 11-5-4   | 13-6-4   | 15-7-5   | 16-8-5   | 18-9-6   | 22-11-7  | 25-13-8  |
|                   | Noise Criteria         | <20     | <20     | <20      | <20      | 20       | 25       | 30       | 34       | 39       | 44       |
| 10"<br>Diameter   | CFM                    | 165     | 220     | 275      | 330      | 385      | 440      | 495      | 550      | 660      | 770      |
|                   | Total Pressure         | .013    | .023    | .036     | .052     | .071     | .092     | .117     | .144     | .208     | .283     |
|                   | Short Horizontal Throw | 5-2-2   | 6-3-2   | 8-4-3    | 10-5-3   | 11-6-4   | 13-6-4   | 14-7-5   | 16-8-5   | 19-10-6  | 23-11-8  |
|                   | Long Horizontal Throw  | 9-5-3   | 12-6-4  | 15-8-5   | 18-9-6   | 21-11-7  | 24-12-8  | 27-14-9  | 30-15-10 | 36-18-12 | 42-21-14 |
|                   | Noise Criteria         | <20     | <20     | <20      | 22       | 25       | 28       | 33       | 36       | 41       | 47       |
| 12"<br>Diameter   | CFM                    | 240     | 320     | 400      | 480      | 560      | 640      | 720      | 800      | 960      | 1120     |
|                   | Total Pressure         | .017    | .030    |          | .068     | .093     | .121     | .153     |          | .273     | .371     |
|                   | Short Horizontal Throw | 7-4-2   | 10-5-3  | 12-6-4   | 15-7-5   | 17-9-6   | 20-10-7  | 22-11-7  | 25-12-8  | 30-15-10 | 35-17-12 |
|                   | Long Horizontal Throw  | 14-7-5  | 19-9-6  | 23-12-8  | 28-14-9  | 33-16-11 | 37-19-12 | 42-21-14 | 47-23-16 | 56-28-19 | 65-33-22 |
|                   | Noise Criteria         | <20     | <20     | 21       | 25       | 29       | 32       | 35       |          | 44       | 50       |
| 14"<br>Diameter   | CFM                    | 330     | 440     | 550      | 660      | 770      | 880      | 990      | 1100     | 1320     | 1540     |
|                   | Total Pressure         | .020    | .036    |          | .081     | .111     | .145     | .183     |          | .326     | .443     |
|                   | Short Horizontal Throw | 11-6-4  | 15-7-5  | 18-9-6   | 22-11-7  | 26-13-9  | 29-15-10 |          |          | 44-22-15 | 52-26-17 |
|                   | Long Horizontal Throw  | 21-10-7 | 28-14-9 | 34-17-11 | 41-21-14 | 48-24-16 | 55-28-18 | 62-31-21 | 69-34-23 | 83-41-28 | 97-48-32 |
|                   | Noise Criteria         | <20     | <20     | 25       | 31       | 36       | 40       | 43       | 45       | 48       | 53       |

## Notes:



(Long & Short) • For throw in the #2 & #4 direction use long throw data.

Two-Way Corner

- For throw in the #1 & #3
- directions, use short throw data.
- 1. Tests conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
- 2. Tests conducted with a straight rigid inlet condition. Other inlet conditions may alter
- Unit of measure: Neck Velocity = FPM; Velocity Pressure = in. w.c. Air Flow Rate = CFM; Total Pressure = in. w.c. Throw = ft at 50, 100, and 150 fpm terminal velocity
- Noise Criteria (NC) is based upon 10 dB room absorption (Re: 10-12 watts) evaluated at 125 thru 4000 Hz octave bands.
- Noise Criteria (NC) is based upon 10 dB room absort
   Flow hoods are recommended for system balancing.



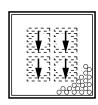
## Two-Way (Long Throw) • For throw in both directions use

long throw data.



Two-Way (Short Throw)

· For throw in both directions use short throw data.



One-Way (Long Throw) For throw use long throw data

## PD, PDR, RFPR, RENP (Page 60, 66, 67)

| <b>Neck Velocity</b> | 200 | 300  | 400  | 500  | 600  | 700  | 800  |      |
|----------------------|-----|------|------|------|------|------|------|------|
| 6" Diameter          | CFM | 40   | 60   | 80   | 100  | 120  | 135  | 155  |
| o Diametei           | -Ps | .003 | .007 | .012 | .019 | .027 | .034 | .044 |
| 8" Diameter          | CFM | 70   | 105  | 140  | 175  | 210  | 245  | 380  |
| o Diametei           | -Ps | .004 | .010 | .017 | .026 | .037 | .051 | .068 |
| 10" Diameter         | CFM | 110  | 165  | 220  | 275  | 325  | 380  | 435  |
| 10 Diameter          | -Ps | .005 | .011 | .020 | .030 | .043 | .058 | .076 |
| 12" Diameter         | CFM | 155  | 235  | 315  | 395  | 470  | 550  | 630  |
| 12" Diameter         | -Ps | .005 | .012 | .021 | .033 | .046 | .063 | .083 |
| 14" Diameter         | CFM | 215  | 320  | 430  | 535  | 640  | 750  | 855  |
| 14 Diameter          | -Ps | .006 | .013 | .023 | .035 | .050 | .069 | .090 |
| 16" Diameter         | CFM | 280  | 420  | 560  | 700  | 840  | 975  | 1115 |
| To Diameter          | -Ps | .008 | .018 | .031 | .048 | .070 | .094 | .120 |
| 19" Diameter         | CFM | 355  | 530  | 705  | 885  | 1060 | 1235 | 1415 |
| 18" Diameter         | -Ps | .008 | .018 | .031 | .049 | .070 | .092 | .125 |
| 24" x 24"            | CFM | 735  | 1100 | 1470 | 1835 | 2200 | 2570 | 2935 |
| 24 3 24              | -Ps | .008 | .018 | .032 | .050 | .070 | .095 | .130 |

Note: The use of a balancing hood is recommended to balance the system. NC is based on 10 db room attenuation (Re: 10 - 12 watts) ASHRAE 36-72. X=less than 20. Terminal velocity of 75 FPM.