

# DUAL DUCT

## Terminal Units

# PERFORMANCE DATA

## DPQ / DDQ – Standard Mixing Quiet Model - Typical Selection Guide

| Unit Size | Airflow | Min. ΔPs Across Unit | Min. ΔPt. | Discharge NC ΔPs Across Unit |            |            |            | Radiated NC ΔPs Across Unit |            |            |            |
|-----------|---------|----------------------|-----------|------------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|
|           |         |                      |           | 0.5 in.w.g                   | 1.0 in.w.g | 1.5 in.w.g | 3.0 in.w.g | 0.5 in.w.g                  | 1.0 in.w.g | 1.5 in.w.g | 3.0 in.w.g |
|           | cfm     | in.w.g               | in.w.g    |                              |            |            |            |                             |            |            |            |
| 4         | 75      | 0.06                 | 0.11      | --                           | --         | --         | --         | --                          | --         | --         | --         |
|           | 100     | 0.10                 | 0.18      | --                           | --         | --         | --         | --                          | --         | --         | --         |
|           | 150     | 0.23                 | 0.41      | --                           | --         | --         | --         | --                          | --         | --         | 21         |
|           | 200     | 0.40                 | 0.72      | --                           | --         | --         | --         | --                          | --         | 21         | 25         |
|           | 225     | 0.51                 | 0.92      | *                            | --         | --         | --         | *                           | 21         | 23         | 26         |
| 5         | 150     | 0.10                 | 0.17      | --                           | --         | --         | --         | --                          | --         | --         | --         |
|           | 200     | 0.19                 | 0.32      | --                           | --         | --         | 23         | --                          | --         | --         | 20         |
|           | 250     | 0.29                 | 0.49      | --                           | 21         | 23         | 27         | --                          | --         | --         | 23         |
|           | 300     | 0.42                 | 0.71      | --                           | 20         | 23         | 26         | --                          | --         | 21         | 25         |
|           | 350     | 0.57                 | 0.97      | *                            | 23         | 25         | 29         | *                           | 22         | 23         | 27         |
| 6         | 200     | 0.16                 | 0.22      | --                           | --         | --         | 21         | --                          | --         | --         | --         |
|           | 250     | 0.28                 | 0.37      | --                           | --         | 22         | 26         | --                          | --         | --         | 22         |
|           | 300     | 0.36                 | 0.49      | --                           | --         | 22         | 26         | --                          | --         | --         | 24         |
|           | 350     | 0.49                 | 0.67      | --                           | 22         | 25         | 29         | --                          | 21         | 23         | 26         |
|           | 400     | 0.64                 | 0.88      | *                            | 25         | 27         | 32         | *                           | 23         | 25         | 28         |
| 7         | 200     | 0.07                 | 0.10      | --                           | --         | --         | --         | --                          | --         | --         | --         |
|           | 300     | 0.16                 | 0.23      | --                           | --         | --         | 22         | --                          | --         | --         | 21         |
|           | 400     | 0.28                 | 0.41      | --                           | 20         | 23         | 28         | --                          | --         | 20         | 25         |
|           | 500     | 0.43                 | 0.63      | --                           | 25         | 28         | 33         | --                          | 23         | 25         | 29         |
|           | 550     | 0.52                 | 0.76      | *                            | 27         | 30         | 35         | *                           | 25         | 27         | 31         |
| 8         | 350     | 0.12                 | 0.17      | --                           | --         | --         | 25         | --                          | --         | --         | 26         |
|           | 450     | 0.20                 | 0.29      | --                           | --         | 23         | 30         | --                          | --         | 22         | 28         |
|           | 550     | 0.31                 | 0.44      | --                           | 23         | 27         | 33         | --                          | 21         | 24         | 30         |
|           | 700     | 0.50                 | 0.71      | 21                           | 27         | 31         | 37         | 21                          | 25         | 28         | 32         |
|           | 750     | 0.57                 | 0.81      | *                            | 26         | 30         | 36         | *                           | 26         | 29         | 34         |
| 9         | 400     | 0.08                 | 0.12      | --                           | --         | --         | 22         | --                          | --         | --         | 26         |
|           | 550     | 0.16                 | 0.24      | --                           | --         | 23         | 28         | --                          | --         | 22         | 29         |
|           | 700     | 0.26                 | 0.40      | --                           | 24         | 27         | 33         | --                          | 22         | 25         | 31         |
|           | 900     | 0.43                 | 0.65      | 20                           | 26         | 29         | 35         | --                          | 25         | 29         | 34         |
|           | 1000    | 0.53                 | 0.81      | *                            | 28         | 31         | 37         | *                           | 27         | 30         | 36         |
| 10        | 500     | 0.09                 | 0.13      | --                           | --         | --         | 23         | --                          | --         | 22         | 29         |
|           | 700     | 0.19                 | 0.27      | --                           | 20         | 24         | 29         | --                          | 21         | 24         | 31         |
|           | 900     | 0.31                 | 0.45      | --                           | 22         | 26         | 32         | --                          | 24         | 27         | 32         |
|           | 1100    | 0.46                 | 0.66      | 21                           | 26         | 30         | 35         | 22                          | 27         | 29         | 34         |
|           | 1300    | 0.64                 | 0.92      | *                            | 29         | 33         | 38         | *                           | 29         | 32         | 36         |
| 12        | 700     | 0.08                 | 0.12      | --                           | --         | --         | 24         | --                          | --         | --         | 27         |
|           | 1000    | 0.16                 | 0.24      | --                           | --         | 22         | 28         | --                          | --         | 23         | 31         |
|           | 1300    | 0.28                 | 0.41      | --                           | 23         | 27         | 33         | --                          | 22         | 26         | 34         |
|           | 1600    | 0.42                 | 0.62      | 21                           | 27         | 31         | 37         | --                          | 25         | 29         | 37         |
|           | 1900    | 0.60                 | 0.88      | *                            | 30         | 34         | 40         | *                           | 27         | 32         | 39         |
| 14        | 1000    | 0.10                 | 0.14      | --                           | --         | --         | 22         | --                          | --         | 23         | 30         |
|           | 1475    | 0.21                 | 0.31      | --                           | --         | 21         | 27         | --                          | 23         | 28         | 35         |
|           | 2100    | 0.43                 | 0.62      | --                           | 23         | 26         | 33         | 20                          | 28         | 32         | 40         |
|           | 2425    | 0.57                 | 0.83      | *                            | 25         | 29         | 35         | *                           | 30         | 34         | 41         |
|           | 2900    | 0.81                 | 1.18      | *                            | 28         | 32         | 38         | *                           | 32         | 36         | 44         |
| 16        | 1200    | 0.11                 | 0.15      | --                           | --         | 20         | 27         | --                          | --         | 23         | 31         |
|           | 1775    | 0.23                 | 0.31      | --                           | --         | 22         | 29         | --                          | 22         | 27         | 34         |
|           | 2350    | 0.40                 | 0.54      | --                           | 20         | 24         | 31         | --                          | 26         | 30         | 37         |
|           | 2800    | 0.57                 | 0.77      | *                            | 21         | 25         | 32         | *                           | 29         | 33         | 40         |
|           | 3500    | 0.89                 | 1.20      | *                            | 23         | 27         | 34         | *                           | 32         | 35         | 42         |

### Performance Notes:

1. NCs are derived from sound power levels, which are obtained in accordance with AHRI Standard 880-2017 and ASHRAE Standard 130-2016.
2. NCs are derived from sound power levels which include duct end corrections per AHRI Standard 880-2017.
3. Blank spaces (--) indicate NCs less than 20.
4. Asterisks (\*) indicate minimum static pressure of the unit exceeds the minimum operating pressure across the unit.
5. ΔPs is the difference in static pressure from inlet to discharge of the unit.
6. ΔPs for terminal units with electric coil is equal to basic unit. Resistance of the coil elements is negligible.
7. ΔPt is the difference in total pressure from inlet to discharge of the unit.
8. NC values are calculated based on typical attenuation values outlined in Appendix E, AHRI Standard 885-2008, "A Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets."

### Typical Attenuation Values:

#### Radiated Sound

| Total Deduction | Octave Band Mid Frequency, Hz |
|-----------------|-------------------------------|
| 120             | 250                           |
| 500             | 1000                          |
| 1000            | 2000                          |
| 2000            | 4000                          |

#### Discharge Sound

| Total Deduction | Octave Band Mid Frequency, Hz |
|-----------------|-------------------------------|
| 120             | 250                           |
| 500             | 1000                          |
| 1000            | 2000                          |
| 2000            | 4000                          |





# DUAL DUCT

## Terminal Units

# PERFORMANCE DATA

## DPQ / DDQ – Standard Mixing Quiet Model - Typical Selection Guide

Aluminum Foil Lined Construction, CRAF - No Lined Ductwork

| Unit Size | Airflow | Min. ΔPs Across Unit | Min. ΔPt. | Discharge NC<br>ΔPs Across Unit |             |             |             | Radiated NC<br>ΔPs Across Unit |             |             |             |
|-----------|---------|----------------------|-----------|---------------------------------|-------------|-------------|-------------|--------------------------------|-------------|-------------|-------------|
|           |         |                      |           | 0.5 in.w.g.                     | 1.0 in.w.g. | 1.5 in.w.g. | 3.0 in.w.g. | 0.5 in.w.g.                    | 1.0 in.w.g. | 1.5 in.w.g. | 3.0 in.w.g. |
| 4         | 75      | 0.06                 | 0.11      | —                               | —           | —           | —           | —                              | —           | —           | —           |
|           | 100     | 0.10                 | 0.18      | —                               | —           | —           | 21          | —                              | —           | —           | —           |
|           | 150     | 0.23                 | 0.41      | —                               | —           | —           | 23          | —                              | —           | —           | 21          |
|           | 200     | 0.40                 | 0.72      | —                               | —           | 20          | 24          | —                              | —           | 21          | 25          |
|           | 225     | 0.51                 | 0.92      | *                               | —           | 21          | 25          | *                              | 21          | 23          | 26          |
| 5         | 150     | 0.10                 | 0.17      | —                               | —           | 20          | 24          | —                              | —           | —           | —           |
|           | 200     | 0.19                 | 0.32      | —                               | 23          | 25          | 29          | —                              | —           | —           | 20          |
|           | 250     | 0.29                 | 0.49      | 23                              | 26          | 29          | 32          | —                              | —           | —           | 23          |
|           | 300     | 0.42                 | 0.71      | 22                              | 26          | 28          | 31          | —                              | —           | 21          | 25          |
|           | 350     | 0.57                 | 0.97      | *                               | 28          | 30          | 34          | *                              | 22          | 23          | 27          |
| 6         | 200     | 0.16                 | 0.22      | —                               | —           | 22          | 27          | —                              | —           | —           | —           |
|           | 250     | 0.28                 | 0.37      | 20                              | 24          | 27          | 31          | —                              | —           | —           | 22          |
|           | 300     | 0.36                 | 0.49      | 20                              | 24          | 27          | 31          | —                              | —           | —           | 24          |
|           | 350     | 0.49                 | 0.67      | 23                              | 27          | 30          | 34          | —                              | 21          | 23          | 26          |
|           | 400     | 0.64                 | 0.88      | *                               | 30          | 33          | 37          | *                              | 23          | 25          | 28          |
| 7         | 200     | 0.07                 | 0.10      | —                               | —           | —           | —           | —                              | —           | —           | —           |
|           | 300     | 0.16                 | 0.23      | —                               | —           | —           | 25          | —                              | —           | —           | 21          |
|           | 400     | 0.28                 | 0.41      | —                               | 23          | 26          | 31          | —                              | —           | 20          | 25          |
|           | 500     | 0.43                 | 0.63      | 22                              | 27          | 30          | 36          | —                              | 23          | 25          | 29          |
|           | 550     | 0.52                 | 0.76      | *                               | 30          | 33          | 38          | *                              | 25          | 27          | 31          |
| 8         | 350     | 0.12                 | 0.17      | —                               | —           | 21          | 28          | —                              | —           | —           | 26          |
|           | 450     | 0.20                 | 0.29      | —                               | 22          | 26          | 32          | —                              | —           | 22          | 28          |
|           | 550     | 0.31                 | 0.44      | —                               | 25          | 29          | 36          | —                              | 21          | 24          | 30          |
|           | 700     | 0.50                 | 0.71      | 23                              | 30          | 33          | 40          | 21                             | 25          | 28          | 32          |
|           | 750     | 0.57                 | 0.81      | *                               | 28          | 32          | 39          | *                              | 26          | 29          | 34          |
| 9         | 400     | 0.08                 | 0.12      | —                               | —           | —           | 25          | —                              | —           | —           | 26          |
|           | 550     | 0.16                 | 0.24      | —                               | 22          | 25          | 31          | —                              | —           | 22          | 29          |
|           | 700     | 0.26                 | 0.40      | 21                              | 27          | 30          | 36          | —                              | 22          | 25          | 31          |
|           | 900     | 0.43                 | 0.65      | 23                              | 29          | 32          | 38          | —                              | 25          | 29          | 34          |
|           | 1000    | 0.53                 | 0.81      | *                               | 31          | 34          | 40          | *                              | 27          | 30          | 36          |
| 10        | 500     | 0.09                 | 0.13      | —                               | —           | —           | 28          | —                              | —           | 22          | 29          |
|           | 700     | 0.19                 | 0.27      | —                               | 23          | 26          | 32          | —                              | 21          | 24          | 31          |
|           | 900     | 0.31                 | 0.45      | —                               | 25          | 28          | 34          | —                              | 24          | 27          | 32          |
|           | 1100    | 0.46                 | 0.66      | 23                              | 29          | 32          | 38          | 22                             | 27          | 29          | 34          |
|           | 1300    | 0.64                 | 0.92      | *                               | 32          | 35          | 41          | *                              | 29          | 32          | 36          |
| 12        | 700     | 0.08                 | 0.12      | —                               | —           | 22          | 31          | —                              | —           | —           | 27          |
|           | 1000    | 0.16                 | 0.24      | —                               | 21          | 25          | 31          | —                              | —           | 23          | 31          |
|           | 1300    | 0.28                 | 0.41      | —                               | 26          | 29          | 36          | —                              | 22          | 26          | 34          |
|           | 1600    | 0.42                 | 0.62      | 23                              | 30          | 33          | 40          | —                              | 25          | 29          | 37          |
|           | 1900    | 0.60                 | 0.88      | *                               | 33          | 36          | 43          | *                              | 27          | 32          | 39          |
| 14        | 1000    | 0.10                 | 0.14      | —                               | 23          | 28          | 36          | —                              | —           | 23          | 30          |
|           | 1475    | 0.21                 | 0.31      | —                               | 24          | 29          | 37          | —                              | 23          | 28          | 35          |
|           | 2100    | 0.43                 | 0.62      | —                               | 25          | 30          | 38          | 20                             | 28          | 32          | 40          |
|           | 2425    | 0.57                 | 0.83      | *                               | 28          | 31          | 38          | *                              | 30          | 34          | 41          |
|           | 2900    | 0.81                 | 1.18      | *                               | 31          | 34          | 40          | *                              | 32          | 36          | 44          |
| 16        | 1200    | 0.11                 | 0.15      | —                               | 23          | 28          | 36          | —                              | —           | 23          | 31          |
|           | 1775    | 0.23                 | 0.31      | —                               | 24          | 29          | 37          | —                              | 22          | 27          | 34          |
|           | 2350    | 0.40                 | 0.54      | —                               | 25          | 30          | 38          | —                              | 26          | 30          | 37          |
|           | 2800    | 0.57                 | 0.77      | *                               | 25          | 30          | 38          | *                              | 29          | 33          | 40          |
|           | 3500    | 0.89                 | 1.20      | *                               | 26          | 31          | 39          | *                              | 32          | 35          | 42          |

### Performance Notes:

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- ΔPs for terminal units with electric coil is equal to basic unit. Resistance of the coil elements is negligible.
- ΔPt is the difference in total pressure from inlet to discharge of the unit.
- NC values are calculated based on procedures outlined in AHRI Standard 885-2008, "A Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets."

**Discharge Sound** is based on environmental effect, end reflection, flex duct effect, space effect, and sound power division. No deductions for lined duct are included. These calculations are not covered by AHRI 885-2008 Appendix E.

| Total Deduction | Octave Band Mid Frequency, Hz |     |     |      |      |
|-----------------|-------------------------------|-----|-----|------|------|
|                 | 125                           | 250 | 500 | 1000 | 2000 |
| < 300 cfm       | 22                            | 22  | 27  | 28   | 30   |
| 300-700 cfm     | 25                            | 25  | 30  | 31   | 33   |
| > 700 cfm       | 27                            | 27  | 32  | 33   | 35   |

| Total Deduction | Octave Band Mid Frequency, Hz |
|-----------------|-------------------------------|
| 125             | 250                           |
| 500             | 1000                          |

All Sizes      18    19    20    26    31    36



