

Sound power level and spectrum								
FW01 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	24.8	39.1	41.7	38.4	33.7	21.6	15.6	45
med	19.4	34.1	35.9	30.3	24.3	15.8	15.4	39
min	13.6	29.7	29.0	22.0	16.2	15.2	15.2	33
FW02 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	28.8	42.7	45.8	43.6	39.3	29.9	17.2	50
med	22.9	37.8	40.7	36.2	30.3	19.6	15.4	44
min	18.0	33.1	35.4	29.1	22.7	15.5	15.3	38
FW03 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	27.8	40.9	43.5	40.4	34.0	23.4	18.0	47
med	23.0	36.0	37.9	33.0	25.7	18.4	16.6	41
min	15.6	28.8	28.8	22.0	17.2	16.0	15.6	33
FW04 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	31.7	45.4	47.7	45.4	41.7	32.0	19.2	52
med	23.6	37.6	39.8	34.2	28.7	21.6	16.5	43
min	17.8	31.8	31.5	24.4	17.2	16.5	15.4	35
FW06 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	36.1	49.3	51.4	50.6	47.4	39.1	24.7	56
med	28.9	43.0	45.2	42.3	38.1	28.1	17.9	49
min	23.7	37.4	39.8	34.4	28.6	21.9	16.8	43
FW08 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	37.1	51.3	52.8	51.6	49.8	43.5	32.3	58
med	30.6	44.9	46.4	44.7	42.1	33.2	20.9	51
min	24.8	38.8	39.1	37.4	32.6	22.8	18.2	44
FW10 FN/FV								
Sound power levels dBA	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	42.6	56.0	58.2	58.4	56.5	51.7	44.4	64
med	36.6	49.6	52.9	51.6	49.5	43.2	32.7	57
min	27.8	42.3	43.8	41.7	38.3	28.6	20.7	48

NOTES

To calculate the sound pressure you must define some conditions and use this formula

$$L_p = L_w - 10 \times \text{Log}_{10} \left(\frac{4\pi \times d^2}{Q} \right)$$

- Where: **Q** = direction factor: is Q=4 if the FCU is installed near 2 walls (vertical or floor-ceiling). Q=2 if the FCU is installed near 1 wall (at floor or ceiling but faraway the 2° wall)
- d** = distance (mt) from the sound source and the measure point
- Lp** = sound pressure (dBA)
- Lw** = sound power (dBA)

Conditions of measurements:

ISO3741 : In case of (M) models, the sound power is calculated WITHOUT any additional inlet or outlet grill or plenum

Sound power level and Spectrum

FW01 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	24.8	39.1	41.7	38.4	33.7	21.6	15.6	45
Med.	19.4	34.1	35.9	30.3	24.3	15.8	15.4	39
Min.	13.6	29.7	29.0	22.0	16.2	15.2	15.2	33

FW02 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	28.8	42.7	45.8	43.6	39.3	29.9	17.2	50
Med.	22.9	37.8	40.7	36.2	30.3	19.6	15.4	44
Min.	18.0	33.1	35.4	29.1	22.7	15.5	15.3	38

FW03 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	27.8	40.9	43.5	40.4	34.0	23.4	18.0	47
Med.	23.0	36.0	37.9	33.0	25.7	18.4	16.6	41
Min.	15.6	28.8	28.8	22.0	17.2	16.0	15.6	33

FW04 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	31.7	45.4	47.7	45.4	41.7	32.0	19.2	52
Med.	23.6	37.6	39.8	34.2	28.7	21.6	16.5	43
Min.	17.8	31.8	31.5	24.4	17.2	16.5	15.4	35

FW06 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	36.1	49.3	51.4	50.6	47.4	39.1	24.7	56
Med.	28.9	43.0	45.2	42.3	38.1	28.1	17.9	49
Min.	23.7	37.4	39.8	34.4	28.6	21.9	16.8	43

FW08 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	39.0	53.2	54.8	53.7	51.8	45.4	34.2	60
Med.	33.6	47.9	49.2	47.7	45.0	36.3	23.9	54
Min.	26.7	40.7	41.1	39.3	34.5	24.8	20.1	46

FW10 FN/TV

Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
Max.	44.5	58.0	60.1	60.4	58.4	53.6	46.3	66
Med.	38.5	51.7	54.8	53.5	51.5	45.3	34.7	59
Min.	28.8	43.2	44.8	42.6	39.1	29.6	21.9	49

Conditions of measurements in case of (M) models the sound power is calculated **WITHOUT** any additional inlet or outlet grill or plenum!

4TW60017-1A (Sheet 2/2)

To calculate the sound pressure you must define some conditions and use this formula

$$L_p = L_w - 10 \times \log_{10} \left(\frac{4\pi \times d^2}{Q} \right)$$

Where:

Q = direction factor: is Q=4 if the FCU is installed near 2 walls (vertical or floor-ceiling), Q=2 if the FCU is installed near 1 wall (at floor or ceiling but faraway the 2nd wall)

d = distance (mt) from the sound source and the measure point

LP = Sound pressure (dBA)

Lw = Sound power (dBA)