

Sound power level and Spectrum

FW01 F								
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
FW15 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	28.3	42.2	45.2	43.1	38.7	29.3	16.7	49
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
FW02 F								
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
FW25 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	28.8	42.0	44.6	41.5	35.1	24.5	19.1	48
med	24.9	37.9	39.8	34.9	27.7	20.3	18.6	43
min	17.0	30.2	30.1	23.3	18.6	17.3	17.0	34
FW03 F								
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
FW35 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	31.1	44.8	47.0	44.8	41.1	31.4	18.5	51
med	23.7	37.8	40.0	34.4	28.9	21.8	16.7	43
min	16.5	30.5	30.2	23.1	15.9	15.2	14.1	34
FW04 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	36.1	49.8	52.0	49.8	46.1	36.4	23.5	56
med	26.7	40.8	43.0	37.4	31.9	24.8	19.7	46
min	19.5	33.5	33.2	26.1	18.9	18.2	17.1	37
FW06 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	39.0	52.2	54.4	53.5	50.3	42.0	27.6	59
med	33.0	47.1	49.3	46.3	42.1	32.2	22.0	53
min	28.9	42.7	45.0	39.7	33.8	27.1	22.0	48
FW08 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	39.4	53.6	55.1	53.9	52.1	45.8	34.6	60
med	33.7	48.0	49.5	47.8	45.2	36.3	24.0	54
min	27.1	41.1	41.4	39.7	34.9	25.1	20.5	46
FW10 F								
Sound Power Levels dB(A)	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Global Lw
max	44.8	58.2	60.4	60.6	58.7	53.9	46.6	66
med	37.2	50.2	53.5	52.2	50.1	43.8	33.3	58
min	27.7	42.2	43.7	41.6	38.2	28.5	20.6	48
Conditions of measurements	ISO3741 : in case of (M) models the sound power is calculated WITHOUT any additional inlet or outlet grill or plenum !							

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 2° wall)
- d = distance (mt) from the sound source and the measure point
- Lp = sound pressure (dB A)
- Lw = sound power (dB A)