

SOUND MEASUREMENT REPORT

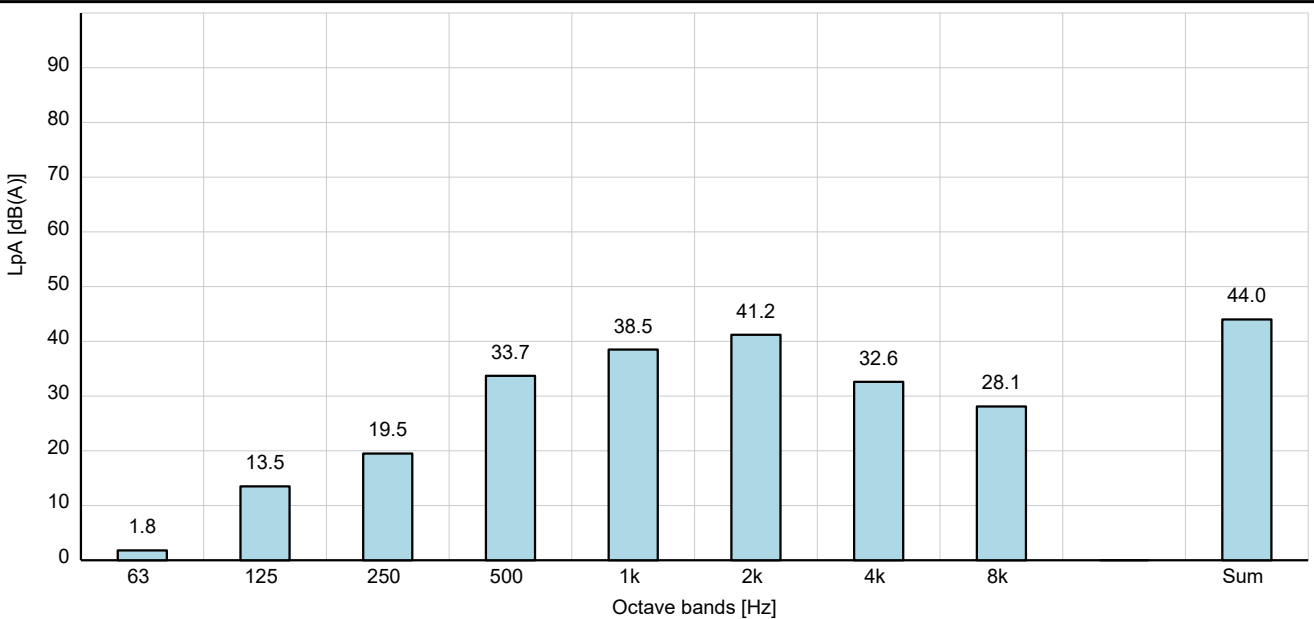


ISO 3745

Object: Motor type: MLE90D
 U: 3 x 440-480 [V]
 f: 50/60 [Hz]
 P2: 2.2 [kW]
 n: 3480 - 4000 [rpm]

Test conditions: Load: No load / Idle
 Sound test: 400 [V]
 f: 50 [Hz]
 P2: 0 [kW]
 n: 1500 [rpm]

Comments:



Sound pressure level L_{pA} : 44.0 [dB(A)]

Sound power level L_{WA} : 56.0 [dB(A)]

Notes:

- Sound power values L_{WA} determined according to IEC 60034-9, ISO 3745 and ISO 4871.
 - Associated uncertainty K_{WA} = 3 [dB(A)]
 - "The sum of measured noise emission values and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements".
- Sound power evaluated at rated speed and no load as specified in IEC 60034-9.
 - "The sound power levels, under full load condition, are normally higher than those at no-load. Generally, if ventilation noise is predominant the change may be small; but, if the electromagnetic noise is predominant the change may be significant".
 - Additionally - as outlined in IEC 60034-9 Amendment 1 - an increase in the noise level may also occur on variable speed drives due to increased level of higher harmonics and potential coincidence between these and structural resonances.
- The equivalent sound pressure level L_{pA} at 1 m distance are determined from the sound power level via ISO 11203 method Q2
 - The observer surface area S is given by a box shape enveloping the source – and here calculated for a specified distance of 1 m between the source and the observer surface.
 - The emission sound pressure level obtained with this method represents the average sound pressure level over the surface of area S in environmental conditions approximating to a free field over a reflecting plane".

References:

- (IEC 60034-9, ISO 3745 & 4871)
- (IEC 60064-9; Clause 8)
- (ISO 4871; Section B2)
- (IEC 60034; Clause 5.2)
- (IEC 60034-9; Clause 6, Note 2)
- (IEC 60034-9 amd 1; Clause 7)
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- (ISO 11203; Clause 6.2.3)

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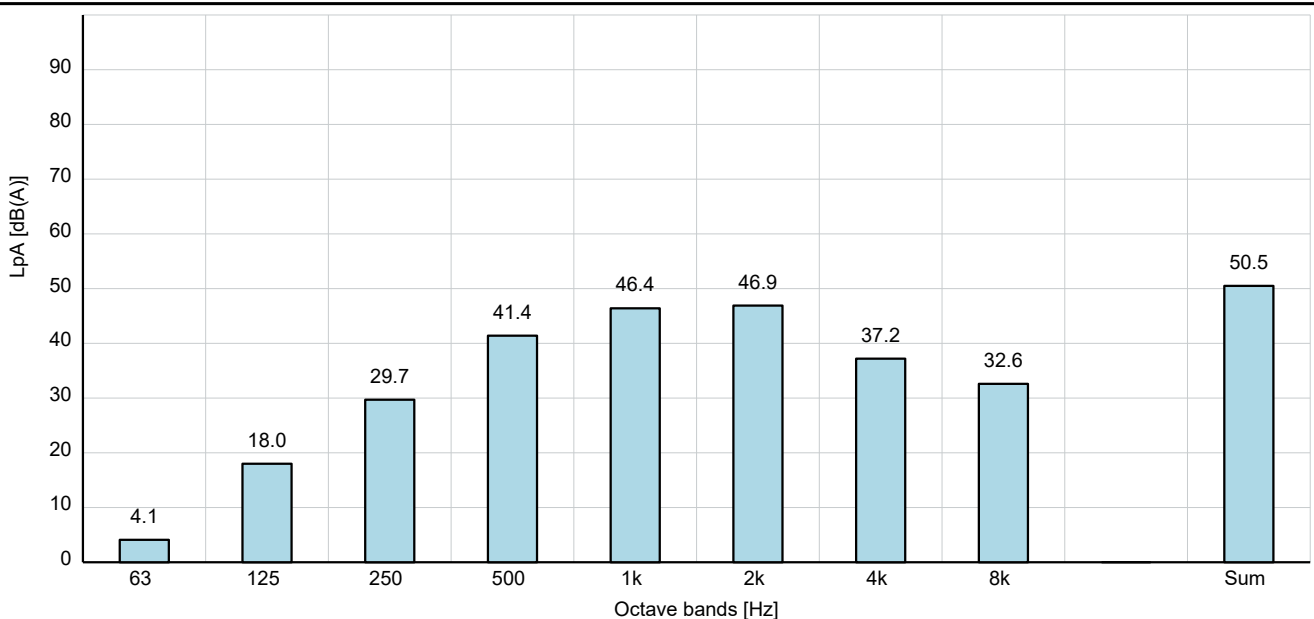


ISO 3745

Object: Motor type: MLE90D
 U: 3 x 440-480 [V]
 f: 50/60 [Hz]
 P2: 2.2 [kW]
 n: 3480 - 4000 [rpm]

Test conditions: Load: No load / Idle
 Sound test: 400 [V]
 f: 50 [Hz]
 P2: 0 [kW]
 n: 2250 [rpm]

Comments:



Sound pressure level L_{pA} : 50.5 [dB(A)]

Sound power level L_{WA} : 62.5 [dB(A)]

Notes:

- Sound power values L_{WA} determined according to IEC 60034-9, ISO 3745 and ISO 4871.
 - Associated uncertainty $K_{WA} = 3$ [dB(A)]
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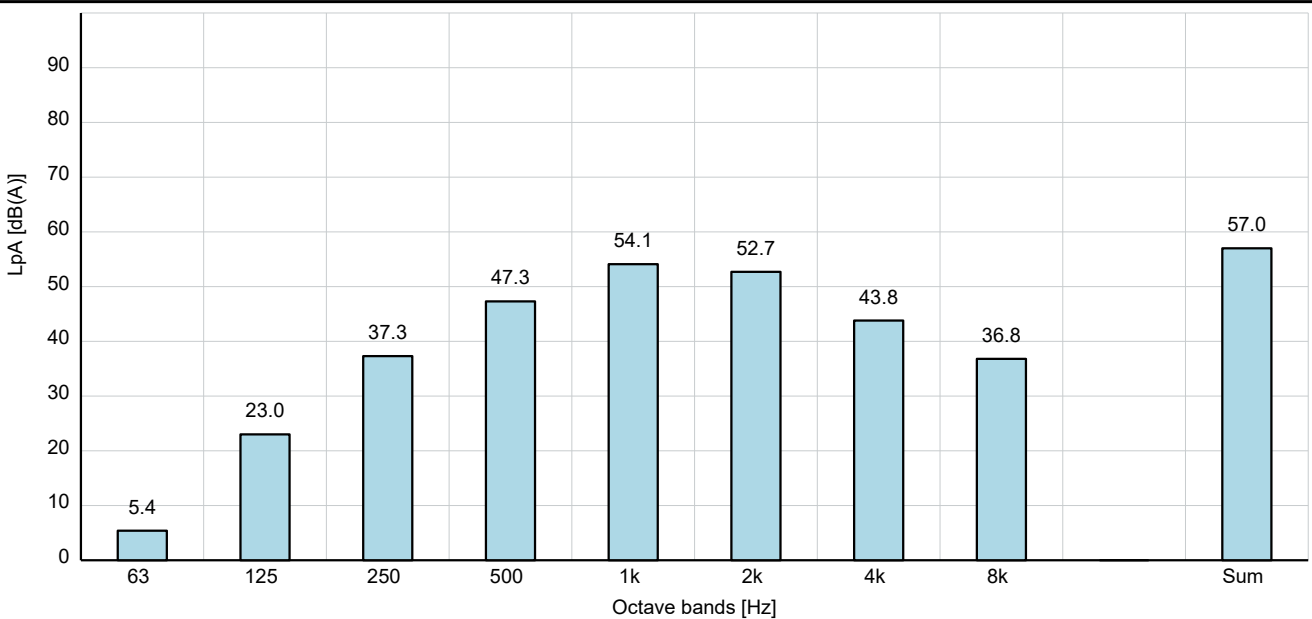


ISO 3745

Object: Motor type: MLE90D
 U: 3 x 440-480 [V]
 f: 50/60 [Hz]
 P2: 2.2 [kW]
 n: 3480 - 4000 [rpm]

Test conditions: Load: No load / Idle
 Sound test: 400 [V]
 f: 50 [Hz]
 P2: 0 [kW]
 n: 3000 [rpm]

Comments:



Sound pressure level L_{pA} : 57.0 [dB(A)]

Sound power level L_{WA} : 69.5 [dB(A)]

Notes:

- Sound power values L_{WA} determined according to IEC 60034-9, ISO 3745 and ISO 4871.
 - Associated uncertainty $K_{WA} = 3$ [dB(A)]
 - "The sum of measured noise emission values and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements".
- Sound power evaluated at rated speed and no load as specified in IEC 60034-9.
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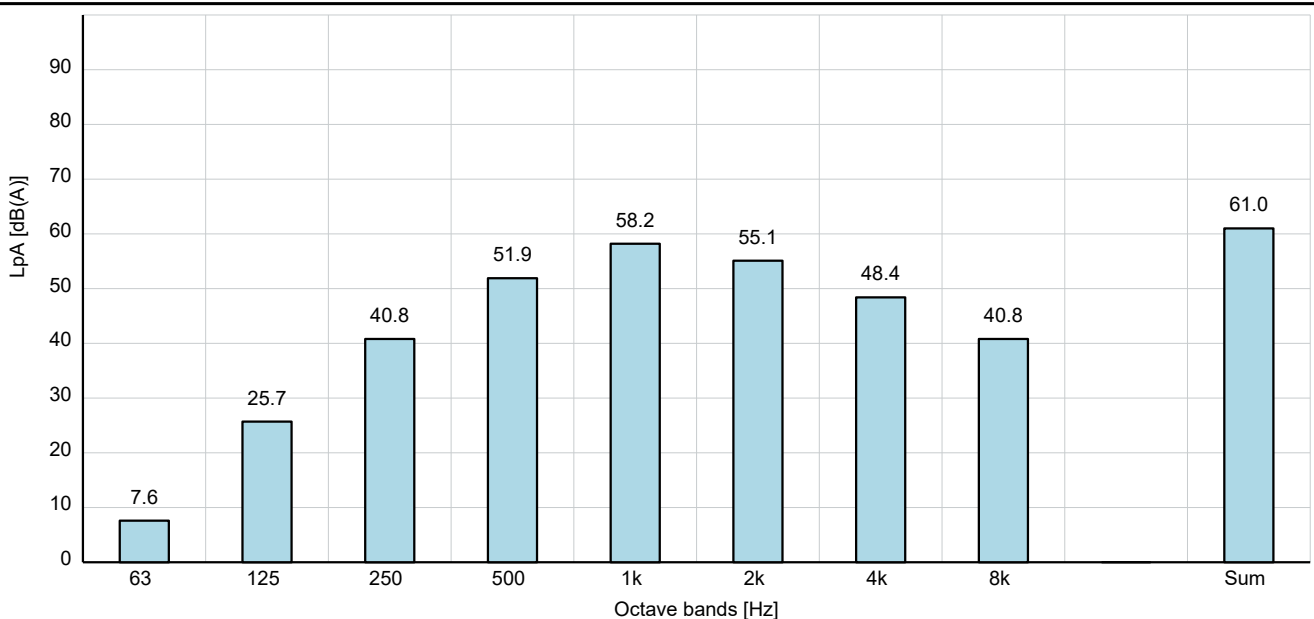


ISO 3745

Object: Motor type: MLE90D
 U: 3 x 440-480 [V]
 f: 50/60 [Hz]
 P2: 2.2 [kW]
 n: 3480 - 4000 [rpm]

Test conditions: Load: No load / Idle
 Sound test: 400 [V]
 f: 50 [Hz]
 P2: 0 [kW]
 n: 3600 [rpm]

Comments:



Sound pressure level L_{pA} : 61.0 [dB(A)]

Sound power level L_{WA} : 73.0 [dB(A)]

Notes:

- Sound power values L_{WA} determined according to IEC 60034-9, ISO 3745 and ISO 4871.
 - Associated uncertainty $K_{WA} = 3$ [dB(A)]
 - "The sum of measured noise emission values and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements".
- Sound power evaluated at rated speed and no load as specified in IEC 60034-9.
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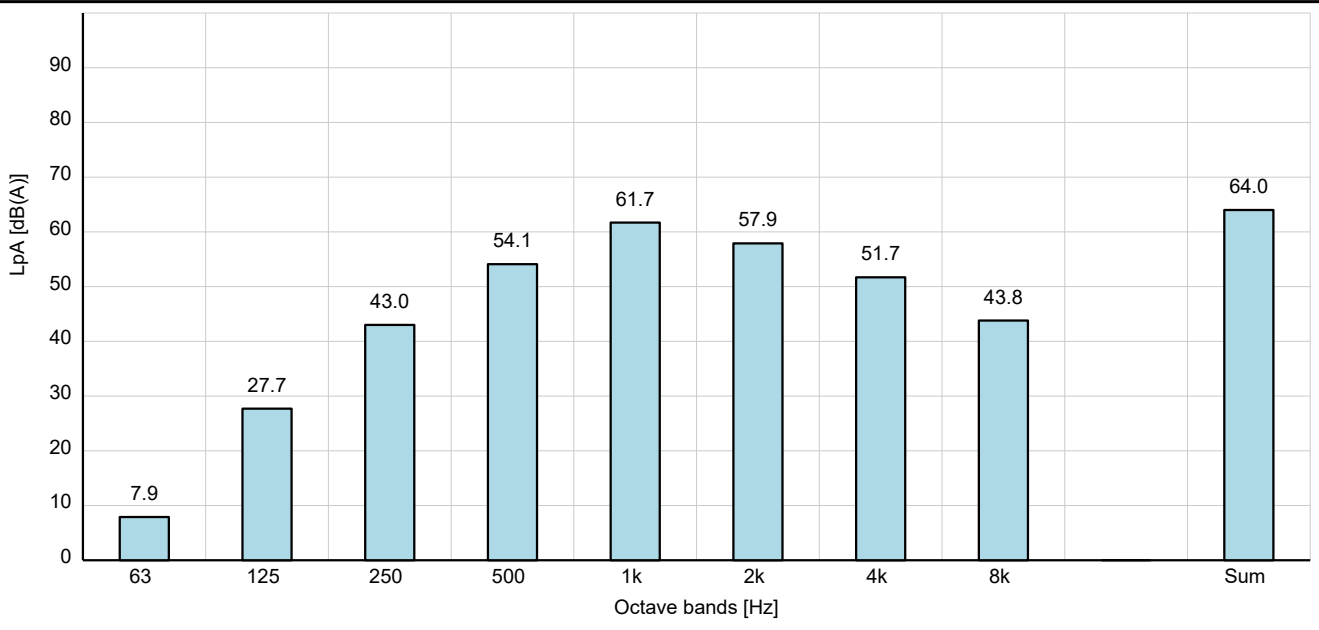


ISO 3745

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		f:	50/60 [Hz]
		P2:	2.2 [kW]
		n:	3480 - 4000 [rpm]

Test conditions:	Load: No load / Idle	Sound test:	400 [V]
		f:	50 [Hz]
		P2:	0 [kW]
		n:	4000 [rpm]

Comments:



Sound pressure level L_{pA} : 64.0 [dB(A)]

Sound power level L_{WA} : 76.0 [dB(A)]

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| <p>Notes:</p> <ul style="list-style-type: none"> • Sound power values L_{WA} determined according to IEC 60034-9, ISO 3745 and ISO 4871. <ul style="list-style-type: none"> - Associated uncertainty K_{WA} = 3 [dB(A)] - "The sum of measured noise emission values and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements". • Sound power evaluated at rated speed and no load as specified in IEC 60034-9. <ul style="list-style-type: none"> - "The sound power levels, under full load condition, are normally higher than those at no-load. Generally, if ventilation noise is predominant the change may be small; but, if the electromagnetic noise is predominant the change may be significant". - Additionally - as outlined in IEC 60034-9 Amendment 1 - an increase in the noise level may also occur on variable speed drives due to increased level of higher harmonics and potential coincidence between these and structural resonances. • The equivalent sound pressure level L_{pA} at 1 m distance are determined from the sound power level via ISO 11203 method Q2 <ul style="list-style-type: none"> - The observer surface area S is given by a box shape enveloping the source – and here calculated for a specified distance of 1 m between the source and the observer surface. - The emission sound pressure level obtained with this method represents the average sound pressure level over the surface of area S in environmental conditions approximating to a free field over a reflecting plane". | <p>References:</p> <p>(IEC 60034-9, ISO 3745 & 4871)
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