Precalculated Metal Rod Chime Dimensions

- For the Aluminum mm family
- Tubing sized in inches
- Length and hang-point listed for inches & mm
- Select rod size from menu to the left of this page

Caution: if you are attempting to create exact notes for an orchestra setting, exact tuning is required and the use of an electronic tuning device or a good tuning ear is necessary. On the other hand, if you desire a good sounding set of chimes but do not need orchestra accuracy, then carefully cut the tube to the length suggested by this pre-calculated table, or the DIY calculator listed on the website.

Do not use these calculations for an orchestra or a musical setting unless you know for sure they tune to A4=440 Hz. An orchestra will typically tune for A4= 442, 43 or 44 Hz and this chart uses A4=440 Hz. Most symphony grade instruments are shipped with A4=442 Hz.

Caution: While there are a host of apps for Chromatic Tuners available for an iPhone, iPad or Android, measuring the exact frequency and musical note of the chime is challenging at best. Non linearity of the human ear and the chime's non-harmonic overtones are two reasons.

It is difficult to provide an exact recommendation when to use the a chromatic tuner to measure a chime's note, but in general, I find most any note below C4 difficult to measure and on occasion below C5. Long, low frequencies tubes, measure incorrectly because of the "missing fundamental effect", and the preponderance of high amplitude overtones. Thick-walled tank chimes/bells can measure with surprising accuracy because its single pure tone above C4 is not cluttered with unimportant sidebands. More info about this topic is here: www.leehite.org/Chimes.htm#Tuning:

From:

www.leehite.org/Chimes.htm

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 6mm Diameter

OD inches = **0.2362** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	35 3/4	8	907.3	203.4	C5	523.30	8 16/17	2	226.9	50.9
C#/Db	34.60	34 3/4	7 13/16	882.0	197.7	C#/Db	554.40	8 11/16	1 15/16	220.5	49.4
D	36.70	33 3/4	7 9/16	856.6	192.0	D	587.30	8 11/25	1 7/8	214.2	48.0
D#/Eb	38.90	32 13/16	7 3/8	832.8	186.7	D#/Eb	622.30	8 1/5	1 13/16	208.1	46.7
E	41.21	31 7/8	7 1/8	809.0	181.4	E	659.30	7 57/59	1 13/16	202.2	45.3
F	43.70	30 15/16	6 15/16	785.2	176.0	F	698.50	7 17/23	1 3/4	196.4	44.0
F#/Gb	46.30	30 1/16	6 3/4	763.0	171.1	F#/Gb	740.00	7 27/52	1 11/16	190.8	42.8
G	49.00	29 1/4	6 9/16	742.4	166.4	G	784.00	7 29/95	1 5/8	185.4	41.6
G#/Ab	51.90	28 3/8	6 3/8	720.2	161.5	G#/Ab	830.60	7 7/72	1 9/16	180.1	40.4
A	55.01	27 9/16	6 3/16	699.5	156.8	A	880.00	6 17/19	1 9/16	175.0	39.2
A#/Bb	58.30	26 13/16	6	680.5	152.6	A#/Bb	932.30	6 7/10	1 1/2	170.0	38.1
B	61.70	26 1/16	5 13/16	661.5	148.3	B	987.80	6 31/61	1 7/16	165.2	37.0
C2	65.40	25 5/16	5 11/16	642.4	144.0	C6	1,046.50	6 31/96	1 7/16	160.5	36.0
C#/Db	69.30	24 9/16	5 1/2	623.4	139.8	C#/Db	1,108.70	6 1/7	1 3/8	155.9	35.0
D	73.41	23 7/8	5 3/8	605.9	135.9	D	1,174.61	5 61/63	1 5/16	151.5	34.0
D#/Eb	77.80	23 3/16	5 3/16	588.5	131.9	D#/Eb	1,244.50	5 4/5	1 5/16	147.2	33.0
E	82.40	22 9/16	5 1/16	572.6	128.4	E	1,318.50	5 19/30	1 1/4	143.0	32.1
F	87.30	21 7/8	4 7/8	555.2	124.5	F	1,397.00	5 43/91	1 1/4	138.9	31.1
F#/Gb	92.50	21 1/4	4 3/4	539.3	120.9	F#/Gb	1,480.00	5 13/41	1 3/16	134.9	30.3
G	98.01	20 11/16	4 5/8	525.0	117.7	G	1,568.00	5 1/6	1 3/16	131.1	29.4
G#/Ab	103.80	20 1/16	4 1/2	509.2	114.2	G#/Ab	1,661.20	5 1/54	1 1/8	127.4	28.6
A	110.00	19 1/2	4 3/8	494.9	111.0	A	1,760.00	4 7/8	1 1/16	123.7	27.7
A#/Bb	116.50	18 15/16	4 1/4	480.6	107.8	A#/Bb	1,864.60	4 14/19	1 1/16	120.2	27.0
B	123.50	18 3/8	4 1/8	466.4	104.6	B	1,975.50	4 59/98	1 1/16	116.8	26.2
C3	130.81	17 7/8	4	453.7	101.7	C7	2,093.00	4 8/17	1	113.5	25.4
C#/Db	138.60	17 3/8	3 7/8	441.0	98.9	C#/Db	2,217.40	4 11/32	1	110.2	24.7
D	146.80	16 7/8	3 13/16	428.3	96.0	D	2,349.20	4 11/50	15/16	107.1	24.0
D#/Eb	155.60	16 3/8	3 11/16	415.6	93.2	D#/Eb	2,489.01	4 1/10	15/16	104.1	23.3
E	164.80	15 15/16	3 9/16	404.5	90.7	E	2,637.00	3 59/60	7/8	101.1	22.7
F	174.61	15 1/2	3 1/2	393.4	88.2	F	2,794.00	3 20/23	7/8	98.2	22.0
F#/Gb	185.00	15 1/16	3 3/8	382.3	85.7	F#/Gb	2,960.00	3 19/25	13/16	95.4	21.4
G	196.00	14 5/8	3 1/4	371.2	83.2	G	3,136.00	3 62/95	13/16	92.7	20.8
G#/Ab	207.70	14 3/16	3 3/16	360.1	80.7	G#/Ab	3,322.41	3 17/31	13/16	90.1	20.2
A	220.00	13 13/16	3 1/8	350.6	78.6	A	3,520.00	3 17/38	3/4	87.5	19.6
A#/Bb	233.10	13 3/8	3	339.5	76.1	A#/Bb	3,729.20	3 7/20	3/4	85.0	19.1
B	246.90	13	2 15/16	329.9	74.0	B	3,951.00	3 15/59	3/4	82.6	18.5
C4	261.60	12 5/8	2 13/16	320.4	71.8	C8	4,186.00	3 5/31	11/16	80.2	18.0
C#/Db	277.20	12 5/16	2 3/4	312.5	70.1	C#/Db	4,434.81	3 1/14	11/16	78.0	17.5
D	293.70	11 15/16	2 11/16	303.0	67.9	D	4,698.40	2 62/63	11/16	75.7	17.0
D#/Eb	311.10	11 5/8	2 5/8	295.0	66.1	D#/Eb	4,978.00	2 9/10	5/8	73.6	16.5
E	329.61	11 1/4	2 1/2	285.5	64.0	E	5,274.00	2 49/60	5/8	71.5	16.0
F	349.30	10 15/16	2 7/16	277.6	62.2	F	5,588.00	2 67/91	5/8	69.4	15.6
F#/Gb	370.00	10 5/8	2 3/8	269.7	60.5	F#/Gb	5,920.00	2 27/41	5/8	67.5	15.1
G	392.00	10 5/16	2 5/16	261.7	58.7	G	6,272.00	2 7/12	9/16	65.6	14.7
G#/Ab	415.30	10 1/16	2 1/4	255.4	57.3	G#/Ab	6,644.80	2 27/53	9/16	63.7	14.3
A	440.01	9 3/4	2 3/16	247.5	55.5	A	7,040.00	2 7/16	9/16	61.9	13.9
A#/Bb	466.20	9 1/2	2 1/8	241.1	54.1	A#/Bb	7,458.40	2 7/19	1/2	60.1	13.5
B	493.91	9 3/16	2 1/16	233.2	52.3	B	7,902.01	2 28/93	1/2	58.4	13.1
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	2 17/72	1/2	56.8	12.7

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 8mm Diameter

OD inches = **0.3149** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	41 5/16	9 1/4	1,048.5	235.1	C5	523.30	10 12/37	2 5/16	262.0	58.7
C#/Db	34.60	40 1/8	9	1,018.4	228.3	C#/Db	554.40	10 3/98	2 1/4	254.6	57.1
D	36.70	39	8 3/4	989.8	221.9	D	587.30	9 41/55	2 3/16	247.3	55.5
D#/Eb	38.90	37 7/8	8 1/2	961.3	215.5	D#/Eb	622.30	9 36/77	2 1/8	240.3	53.9
E	41.21	36 13/16	8 1/4	934.3	209.5	E	659.30	9 1/5	2 1/16	233.4	52.3
F	43.70	35 3/4	8	907.3	203.4	F	698.50	8 44/47	2	226.8	50.8
F#/Gb	46.30	34 11/16	7 3/4	880.4	197.4	F#/Gb	740.00	8 15/22	1 15/16	220.3	49.4
G	49.00	33 3/4	7 9/16	856.6	192.0	G	784.00	8 10/23	1 7/8	214.1	48.0
G#/Ab	51.90	32 13/16	7 3/8	832.8	186.7	G#/Ab	830.60	8 15/77	1 13/16	208.0	46.6
A	55.01	31 13/16	7 1/8	807.4	181.0	A	880.00	7 25/26	1 13/16	202.1	45.3
A#/Bb	58.30	30 15/16	6 15/16	785.2	176.0	A#/Bb	932.30	7 61/83	1 3/4	196.3	44.0
B	61.70	30 1/16	6 3/4	763.0	171.1	B	987.80	7 18/35	1 11/16	190.7	42.8
C2	65.40	29 3/16	6 9/16	740.8	166.1	C6	1,046.50	7 3/10	1 5/8	185.3	41.5
C#/Db	69.30	28 3/8	6 3/8	720.2	161.5	C#/Db	1,108.70	7 4/43	1 9/16	180.0	40.4
D	73.41	27 9/16	6 3/16	699.5	156.8	D	1,174.61	6 41/46	1 9/16	174.9	39.2
D#/Eb	77.80	26 3/4	6	678.9	152.2	D#/Eb	1,244.50	6 41/59	1 1/2	169.9	38.1
E	82.40	26	5 13/16	659.9	147.9	E	1,318.50	6 1/2	1 7/16	165.1	37.0
F	87.30	25 1/4	5 11/16	640.8	143.7	F	1,397.00	6 22/69	1 7/16	160.4	36.0
F#/Gb	92.50	24 9/16	5 1/2	623.4	139.8	F#/Gb	1,480.00	6 5/36	1 3/8	155.8	34.9
G	98.01	23 7/8	5 3/8	605.9	135.9	G	1,568.00	5 27/28	1 5/16	151.4	33.9
G#/Ab	103.80	23 3/16	5 3/16	588.5	131.9	G#/Ab	1,661.20	5 58/73	1 5/16	147.1	33.0
A	110.00	22 1/2	5 1/16	571.1	128.0	A	1,760.00	5 17/27	1 1/4	142.9	32.0
A#/Bb	116.50	21 7/8	4 7/8	555.2	124.5	A#/Bb	1,864.60	5 23/49	1 1/4	138.8	31.1
B	123.50	21 1/4	4 3/4	539.3	120.9	B	1,975.50	5 16/51	1 3/16	134.9	30.2
C3	130.81	20 5/8	4 5/8	523.5	117.4	C7	2,093.00	5 13/80	1 3/16	131.0	29.4
C#/Db	138.60	20 1/16	4 1/2	509.2	114.2	C#/Db	2,217.40	5 1/64	1 1/8	127.3	28.5
D	146.80	19 1/2	4 3/8	494.9	111.0	D	2,349.20	4 48/55	1 1/16	123.7	27.7
D#/Eb	155.60	18 15/16	4 1/4	480.6	107.8	D#/Eb	2,489.01	4 69/94	1 1/16	120.1	26.9
E	164.80	18 3/8	4 1/8	466.4	104.6	E	2,637.00	4 3/5	1	116.7	26.2
F	174.61	17 7/8	4	453.7	101.7	F	2,794.00	4 22/47	1	113.4	25.4
F#/Gb	185.00	17 3/8	3 7/8	441.0	98.9	F#/Gb	2,960.00	4 15/44	1	110.2	24.7
G	196.00	16 7/8	3 13/16	428.3	96.0	G	3,136.00	4 5/23	15/16	107.0	24.0
G#/Ab	207.70	16 3/8	3 11/16	415.6	93.2	G#/Ab	3,322.41	4 4/41	15/16	104.0	23.3
A	220.00	15 15/16	3 9/16	404.5	90.7	A	3,520.00	3 51/52	7/8	101.0	22.7
A#/Bb	233.10	15 1/2	3 1/2	393.4	88.2	A#/Bb	3,729.20	3 72/83	7/8	98.2	22.0
B	246.90	15	3 3/8	380.7	85.4	B	3,951.00	3 25/33	13/16	95.4	21.4
C4	261.60	14 5/8	3 1/4	371.2	83.2	C8	4,186.00	3 13/20	13/16	92.6	20.8
C#/Db	277.20	14 3/16	3 3/16	360.1	80.7	C#/Db	4,434.81	3 47/86	13/16	90.0	20.2
D	293.70	13 3/4	3 1/16	349.0	78.2	D	4,698.40	3 41/92	3/4	87.4	19.6
D#/Eb	311.10	13 3/8	3	339.5	76.1	D#/Eb	4,978.00	3 33/95	3/4	85.0	19.0
E	329.61	13	2 15/16	329.9	74.0	E	5,274.00	3 1/4	3/4	82.5	18.5
F	349.30	12 5/8	2 13/16	320.4	71.8	F	5,588.00	3 11/69	11/16	80.2	18.0
F#/Gb	370.00	12 1/4	2 3/4	310.9	69.7	F#/Gb	5,920.00	3 5/72	11/16	77.9	17.5
G	392.00	11 15/16	2 11/16	303.0	67.9	G	6,272.00	2 55/56	11/16	75.7	17.0
G#/Ab	415.30	11 9/16	2 9/16	293.5	65.8	G#/Ab	6,644.80	2 35/39	5/8	73.5	16.5
A	440.01	11 1/4	2 1/2	285.5	64.0	A	7,040.00	2 22/27	5/8	71.4	16.0
A#/Bb	466.20	10 15/16	2 7/16	277.6	62.2	A#/Bb	7,458.40	2 36/49	5/8	69.4	15.6
B	493.91	10 5/8	2 3/8	269.7	60.5	B	7,902.01	2 44/67	5/8	67.4	15.1
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	2 39/67	9/16	65.5	14.7

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 10mm Diameter

OD inches = **0.3937** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	46 3/16	10 3/8	1,172.2	262.8	C5	523.30	11 37/68	2 9/16	293.0	65.7
C#/Db	34.60	44 7/8	10 1/16	1,138.9	255.3	C#/Db	554.40	11 11/51	2 1/2	284.7	63.8
D	36.70	43 9/16	9 3/4	1,105.6	247.9	D	587.30	10 87/97	2 7/16	276.6	62.0
D#/Eb	38.90	42 5/16	9 1/2	1,073.9	240.8	D#/Eb	622.30	10 17/29	2 3/8	268.7	60.2
E	41.21	41 1/8	9 1/4	1,043.8	234.0	E	659.30	10 2/7	2 5/16	261.0	58.5
F	43.70	39 15/16	8 15/16	1,013.6	227.3	F	698.50	10	2 1/4	253.6	56.9
F#/Gb	46.30	38 13/16	8 11/16	985.1	220.9	F#/Gb	740.00	9 46/65	2 3/16	246.4	55.2
G	49.00	37 3/4	8 7/16	958.1	214.8	G	784.00	9 22/51	2 1/8	239.4	53.7
G#/Ab	51.90	36 11/16	8 1/4	931.1	208.8	G#/Ab	830.60	9 15/92	2 1/16	232.6	52.1
A	55.01	35 5/8	8	904.2	202.7	A	880.00	8 46/51	2	225.9	50.7
A#/Bb	58.30	34 9/16	7 3/4	877.2	196.7	A#/Bb	932.30	8 24/37	1 15/16	219.5	49.2
B	61.70	33 5/8	7 9/16	853.4	191.3	B	987.80	8 35/87	1 7/8	213.3	47.8
C2	65.40	32 5/8	7 5/16	828.0	185.6	C6	1,046.50	8 8/49	1 13/16	207.2	46.5
C#/Db	69.30	31 3/4	7 1/8	805.8	180.7	C#/Db	1,108.70	7 27/29	1 3/4	201.3	45.1
D	73.41	30 13/16	6 15/16	782.0	175.3	D	1,174.61	7 67/95	1 3/4	195.6	43.8
D#/Eb	77.80	29 15/16	6 11/16	759.8	170.4	D#/Eb	1,244.50	7 17/35	1 11/16	190.0	42.6
E	82.40	29 1/16	6 1/2	737.6	165.4	E	1,318.50	7 3/11	1 5/8	184.6	41.4
F	87.30	28 1/4	6 5/16	717.0	160.7	F	1,397.00	7 3/46	1 9/16	179.3	40.2
F#/Gb	92.50	27 7/16	6 1/8	696.4	156.1	F#/Gb	1,480.00	6 51/59	1 9/16	174.2	39.1
G	98.01	26 11/16	6	677.3	151.9	G	1,568.00	6 2/3	1 1/2	169.3	37.9
G#/Ab	103.80	25 15/16	5 13/16	658.3	147.6	G#/Ab	1,661.20	6 23/48	1 7/16	164.4	36.9
A	110.00	25 3/16	5 5/8	639.3	143.3	A	1,760.00	6 28/95	1 7/16	159.8	35.8
A#/Bb	116.50	24 7/16	5 1/2	620.2	139.1	A#/Bb	1,864.60	6 3/26	1 3/8	155.2	34.8
B	123.50	23 3/4	5 5/16	602.8	135.1	B	1,975.50	5 16/17	1 5/16	150.8	33.8
C3	130.81	23 1/16	5 3/16	585.3	131.2	C7	2,093.00	5 17/22	1 5/16	146.5	32.8
C#/Db	138.60	22 7/16	5	569.5	127.7	C#/Db	2,217.40	5 45/74	1 1/4	142.3	31.9
D	146.80	21 13/16	4 7/8	553.6	124.1	D	2,349.20	5 13/29	1 1/4	138.3	31.0
D#/Eb	155.60	21 3/16	4 3/4	537.7	120.6	D#/Eb	2,489.01	5 17/58	1 3/16	134.3	30.1
E	164.80	20 9/16	4 5/8	521.9	117.0	E	2,637.00	5 1/7	1 1/8	130.5	29.3
F	174.61	20	4 1/2	507.6	113.8	F	2,794.00	5	1 1/8	126.8	28.4
F#/Gb	185.00	19 7/16	4 3/8	493.3	110.6	F#/Gb	2,960.00	4 76/89	1 1/16	123.2	27.6
G	196.00	18 7/8	4 1/4	479.0	107.4	G	3,136.00	4 68/95	1 1/16	119.7	26.8
G#/Ab	207.70	18 5/16	4 1/8	464.8	104.2	G#/Ab	3,322.41	4 25/43	1	116.3	26.1
A	220.00	17 13/16	4	452.1	101.4	A	3,520.00	4 23/51	1	113.0	25.3
A#/Bb	233.10	17 5/16	3 7/8	439.4	98.5	A#/Bb	3,729.20	4 12/37	1	109.8	24.6
B	246.90	16 13/16	3 3/4	426.7	95.7	B	3,951.00	4 1/5	15/16	106.6	23.9
C4	261.60	16 5/16	3 11/16	414.0	92.8	C8	4,186.00	4 4/49	15/16	103.6	23.2
C#/Db	277.20	15 7/8	3 9/16	402.9	90.3	C#/Db	4,434.81	3 28/29	7/8	100.6	22.6
D	293.70	15 7/16	3 7/16	391.8	87.8	D	4,698.40	3 81/95	7/8	97.8	21.9
D#/Eb	311.10	15	3 3/8	380.7	85.4	D#/Eb	4,978.00	3 26/35	13/16	95.0	21.3
E	329.61	14 9/16	3 1/4	369.6	82.9	E	5,274.00	3 7/11	13/16	92.3	20.7
F	349.30	14 1/8	3 3/16	358.5	80.4	F	5,588.00	3 49/92	13/16	89.7	20.1
F#/Gb	370.00	13 3/4	3 1/16	349.0	78.2	F#/Gb	5,920.00	3 35/81	3/4	87.1	19.5
G	392.00	13 5/16	3	337.9	75.8	G	6,272.00	3 1/3	3/4	84.6	19.0
G#/Ab	415.30	12 15/16	2 7/8	328.4	73.6	G#/Ab	6,644.80	3 23/96	3/4	82.2	18.4
A	440.01	12 9/16	2 13/16	318.8	71.5	A	7,040.00	3 14/95	11/16	79.9	17.9
A#/Bb	466.20	12 1/4	2 3/4	310.9	69.7	A#/Bb	7,458.40	3 3/52	11/16	77.6	17.4
B	493.91	11 7/8	2 11/16	301.4	67.6	B	7,902.01	2 33/34	11/16	75.4	16.9
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	2 55/62	5/8	73.3	16.4

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 12mm Diameter

OD inches = **0.4724** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	50 9/16	11 5/16	1,283.3	287.7	C5	523.30	12 20/31	2 13/16	320.9	72.0
C#/Db	34.60	49 3/16	11	1,248.4	279.9	C#/Db	554.40	12 2/7	2 3/4	311.8	69.9
D	36.70	47 3/4	10 11/16	1,211.9	271.7	D	587.30	11 59/63	2 11/16	302.9	67.9
D#/Eb	38.90	46 3/8	10 3/8	1,177.0	263.9	D#/Eb	622.30	11 59/99	2 5/8	294.3	66.0
E	41.21	45 1/16	10 1/8	1,143.7	256.4	E	659.30	11 21/79	2 1/2	285.9	64.1
F	43.70	43 3/4	9 13/16	1,110.4	248.9	F	698.50	10 69/73	2 7/16	277.8	62.3
F#/Gb	46.30	42 1/2	9 1/2	1,078.7	241.8	F#/Gb	740.00	10 45/71	2 3/8	269.9	60.5
G	49.00	41 5/16	9 1/4	1,048.5	235.1	G	784.00	10 1/3	2 5/16	262.2	58.8
G#/Ab	51.90	40 1/8	9	1,018.4	228.3	G#/Ab	830.60	10 1/27	2 1/4	254.7	57.1
A	55.01	39	8 3/4	989.8	221.9	A	880.00	9 3/4	2 3/16	247.5	55.5
A#/Bb	58.30	37 7/8	8 1/2	961.3	215.5	A#/Bb	932.30	9 9/19	2 1/8	240.4	53.9
B	61.70	36 13/16	8 1/4	934.3	209.5	B	987.80	9 11/54	2 1/16	233.6	52.4
C2	65.40	35 3/4	8	907.3	203.4	C6	1,046.50	8 65/69	2	226.9	50.9
C#/Db	69.30	34 3/4	7 13/16	882.0	197.7	C#/Db	1,108.70	8 11/16	1 15/16	220.5	49.4
D	73.41	33 3/4	7 9/16	856.6	192.0	D	1,174.61	8 11/25	1 7/8	214.2	48.0
D#/Eb	77.80	32 13/16	7 3/8	832.8	186.7	D#/Eb	1,244.50	8 1/5	1 13/16	208.1	46.7
E	82.40	31 7/8	7 1/8	809.0	181.4	E	1,318.50	7 29/30	1 13/16	202.2	45.3
F	87.30	30 15/16	6 15/16	785.2	176.0	F	1,397.00	7 17/23	1 3/4	196.4	44.0
F#/Gb	92.50	30 1/16	6 3/4	763.0	171.1	F#/Gb	1,480.00	7 27/52	1 11/16	190.8	42.8
G	98.01	29 1/4	6 9/16	742.4	166.4	G	1,568.00	7 29/95	1 5/8	185.4	41.6
G#/Ab	103.80	28 3/8	6 3/8	720.2	161.5	G#/Ab	1,661.20	7 7/72	1 9/16	180.1	40.4
A	110.00	27 9/16	6 3/16	699.5	156.8	A	1,760.00	6 17/19	1 9/16	175.0	39.2
A#/Bb	116.50	26 13/16	6	680.5	152.6	A#/Bb	1,864.60	6 7/10	1 1/2	170.0	38.1
B	123.50	26	5 13/16	659.9	147.9	B	1,975.50	6 31/61	1 7/16	165.2	37.0
C3	130.81	25 5/16	5 11/16	642.4	144.0	C7	2,093.00	6 31/96	1 7/16	160.5	36.0
C#/Db	138.60	24 9/16	5 1/2	623.4	139.8	C#/Db	2,217.40	6 1/7	1 3/8	155.9	35.0
D	146.80	23 7/8	5 3/8	605.9	135.9	D	2,349.20	5 61/63	1 5/16	151.5	34.0
D#/Eb	155.60	23 3/16	5 3/16	588.5	131.9	D#/Eb	2,489.01	5 4/5	1 5/16	147.2	33.0
E	164.80	22 9/16	5 1/16	572.6	128.4	E	2,637.00	5 19/30	1 1/4	143.0	32.1
F	174.61	21 7/8	4 7/8	555.2	124.5	F	2,794.00	5 43/91	1 1/4	138.9	31.1
F#/Gb	185.00	21 1/4	4 3/4	539.3	120.9	F#/Gb	2,960.00	5 13/41	1 3/16	134.9	30.3
G	196.00	20 11/16	4 5/8	525.0	117.7	G	3,136.00	5 1/6	1 3/16	131.1	29.4
G#/Ab	207.70	20 1/16	4 1/2	509.2	114.2	G#/Ab	3,322.41	5 1/54	1 1/8	127.4	28.6
A	220.00	19 1/2	4 3/8	494.9	111.0	A	3,520.00	4 7/8	1 1/16	123.7	27.7
A#/Bb	233.10	18 15/16	4 1/4	480.6	107.8	A#/Bb	3,729.20	4 14/19	1 1/16	120.2	27.0
B	246.90	18 7/16	4 1/8	467.9	104.9	B	3,951.00	4 59/98	1 1/16	116.8	26.2
C4	261.60	17 7/8	4	453.7	101.7	C8	4,186.00	4 8/17	1	113.5	25.4
C#/Db	277.20	17 3/8	3 7/8	441.0	98.9	C#/Db	4,434.81	4 11/32	1	110.2	24.7
D	293.70	16 7/8	3 13/16	428.3	96.0	D	4,698.40	4 11/50	15/16	107.1	24.0
D#/Eb	311.10	16 3/8	3 11/16	415.6	93.2	D#/Eb	4,978.00	4 1/10	15/16	104.1	23.3
E	329.61	15 15/16	3 9/16	404.5	90.7	E	5,274.00	3 59/60	7/8	101.1	22.7
F	349.30	15 1/2	3 1/2	393.4	88.2	F	5,588.00	3 20/23	7/8	98.2	22.0
F#/Gb	370.00	15 1/16	3 3/8	382.3	85.7	F#/Gb	5,920.00	3 19/25	13/16	95.4	21.4
G	392.00	14 5/8	3 1/4	371.2	83.2	G	6,272.00	3 62/95	13/16	92.7	20.8
G#/Ab	415.30	14 3/16	3 3/16	360.1	80.7	G#/Ab	6,644.80	3 17/31	13/16	90.1	20.2
A	440.01	13 13/16	3 1/8	350.6	78.6	A	7,040.00	3 17/38	3/4	87.5	19.6
A#/Bb	466.20	13 3/8	3	339.5	76.1	A#/Bb	7,458.40	3 7/20	3/4	85.0	19.1
B	493.91	13	2 15/16	329.9	74.0	B	7,902.01	3 15/59	3/4	82.6	18.5
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	3 13/80	11/16	80.3	18.0

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 14mm Diameter

OD inches = **0.5512** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	54 5/8	12 1/4	1,386.4	310.8	C5	523.30	13 60/91	3 1/16	346.7	77.7
C#/Db	34.60	53 1/8	11 15/16	1,348.3	302.3	C#/Db	554.40	13 13/48	3	336.8	75.5
D	36.70	51 9/16	11 9/16	1,308.7	293.4	D	587.30	12 42/47	2 7/8	327.2	73.4
D#/Eb	38.90	50 1/8	11 1/4	1,272.2	285.2	D#/Eb	622.30	12 51/97	2 13/16	317.9	71.3
E	41.21	48 11/16	10 15/16	1,235.7	277.0	E	659.30	12 11/65	2 3/4	308.9	69.2
F	43.70	47 1/4	10 9/16	1,199.2	268.9	F	698.50	11 65/79	2 5/8	300.1	67.3
F#/Gb	46.30	45 15/16	10 5/16	1,165.9	261.4	F#/Gb	740.00	11 18/37	2 9/16	291.5	65.4
G	49.00	44 5/8	10	1,132.6	253.9	G	784.00	11 15/94	2 1/2	283.2	63.5
G#/Ab	51.90	43 3/8	9 3/4	1,100.9	246.8	G#/Ab	830.60	10 16/19	2 7/16	275.2	61.7
A	55.01	42 1/8	9 7/16	1,069.1	239.7	A	880.00	10 8/15	2 3/8	267.3	59.9
A#/Bb	58.30	40 15/16	9 3/16	1,039.0	232.9	A#/Bb	932.30	10 7/30	2 5/16	259.7	58.2
B	61.70	39 3/4	8 15/16	1,008.9	226.2	B	987.80	9 81/86	2 1/4	252.3	56.6
C2	65.40	38 5/8	8 11/16	980.3	219.8	C6	1,046.50	9 29/44	2 3/16	245.1	55.0
C#/Db	69.30	37 9/16	8 7/16	953.3	213.7	C#/Db	1,108.70	9 5/13	2 1/8	238.2	53.4
D	73.41	36 1/2	8 3/16	926.4	207.7	D	1,174.61	9 2/17	2 1/16	231.4	51.9
D#/Eb	77.80	35 7/16	7 15/16	899.4	201.6	D#/Eb	1,244.50	8 6/7	2	224.8	50.4
E	82.40	34 7/16	7 3/4	874.0	196.0	E	1,318.50	8 23/38	1 15/16	218.4	49.0
F	87.30	33 7/16	7 1/2	848.6	190.3	F	1,397.00	8 9/25	1 7/8	212.2	47.6
F#/Gb	92.50	32 1/2	7 5/16	824.9	184.9	F#/Gb	1,480.00	8 11/90	1 13/16	206.1	46.2
G	98.01	31 9/16	7 1/16	801.1	179.6	G	1,568.00	7 49/55	1 3/4	200.3	44.9
G#/Ab	103.80	30 11/16	6 7/8	778.8	174.6	G#/Ab	1,661.20	7 2/3	1 3/4	194.6	43.6
A	110.00	29 13/16	6 11/16	756.6	169.6	A	1,760.00	7 13/29	1 11/16	189.0	42.4
A#/Bb	116.50	28 15/16	6 1/2	734.4	164.7	A#/Bb	1,864.60	7 13/55	1 5/8	183.7	41.2
B	123.50	28 1/8	6 5/16	713.8	160.0	B	1,975.50	7 1/33	1 9/16	178.4	40.0
C3	130.81	27 5/16	6 1/8	693.2	155.4	C7	2,093.00	6 39/47	1 9/16	173.3	38.9
C#/Db	138.60	26 9/16	5 15/16	674.2	151.1	C#/Db	2,217.40	6 7/11	1 1/2	168.4	37.8
D	146.80	25 13/16	5 13/16	655.1	146.9	D	2,349.20	6 21/47	1 7/16	163.6	36.7
D#/Eb	155.60	25 1/16	5 5/8	636.1	142.6	D#/Eb	2,489.01	6 5/19	1 3/8	159.0	35.6
E	164.80	24 5/16	5 7/16	617.1	138.3	E	2,637.00	6 5/59	1 3/8	154.4	34.6
F	174.61	23 5/8	5 5/16	599.6	134.4	F	2,794.00	5 72/79	1 5/16	150.0	33.6
F#/Gb	185.00	23	5 3/16	583.7	130.9	F#/Gb	2,960.00	5 55/74	1 5/16	145.8	32.7
G	196.00	22 5/16	5	566.3	127.0	G	3,136.00	5 40/69	1 1/4	141.6	31.8
G#/Ab	207.70	21 11/16	4 7/8	550.4	123.4	G#/Ab	3,322.41	5 8/19	1 3/16	137.6	30.8
A	220.00	21 1/16	4 3/4	534.6	119.8	A	3,520.00	5 4/15	1 3/16	133.7	30.0
A#/Bb	233.10	20 7/16	4 9/16	518.7	116.3	A#/Bb	3,729.20	5 7/60	1 1/8	129.9	29.1
B	246.90	19 7/8	4 7/16	504.4	113.1	B	3,951.00	4 67/69	1 1/8	126.2	28.3
C4	261.60	19 5/16	4 5/16	490.2	109.9	C8	4,186.00	4 73/88	1 1/16	122.6	27.5
C#/Db	277.20	18 3/4	4 3/16	475.9	106.7	C#/Db	4,434.81	4 9/13	1 1/16	119.1	26.7
D	293.70	18 1/4	4 1/16	463.2	103.8	D	4,698.40	4 19/34	1	115.7	25.9
D#/Eb	311.10	17 11/16	3 15/16	448.9	100.6	D#/Eb	4,978.00	4 3/7	1	112.4	25.2
E	329.61	17 3/16	3 7/8	436.2	97.8	E	5,274.00	4 23/76	15/16	109.2	24.5
F	349.30	16 3/4	3 3/4	425.1	95.3	F	5,588.00	4 9/50	15/16	106.1	23.8
F#/Gb	370.00	16 1/4	3 5/8	412.4	92.5	F#/Gb	5,920.00	4 3/49	15/16	103.1	23.1
G	392.00	15 13/16	3 9/16	401.3	90.0	G	6,272.00	3 52/55	7/8	100.1	22.5
G#/Ab	415.30	15 5/16	3 7/16	388.6	87.1	G#/Ab	6,644.80	3 5/6	7/8	97.3	21.8
A	440.01	14 7/8	3 5/16	377.5	84.6	A	7,040.00	3 21/29	13/16	94.5	21.2
A#/Bb	466.20	14 1/2	3 1/4	368.0	82.5	A#/Bb	7,458.40	3 34/55	13/16	91.8	20.6
B	493.91	14 1/16	3 1/8	356.9	80.0	B	7,902.01	3 17/33	13/16	89.2	20.0
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	3 5/12	3/4	86.7	19.4

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 14mm Diameter

OD inches = **0.5512** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	54 5/8	12 1/4	1,386.4	310.8	C5	523.30	13 60/91	3 1/16	346.7	77.7
C#/Db	34.60	53 1/8	11 15/16	1,348.3	302.3	C#/Db	554.40	13 13/48	3	336.8	75.5
D	36.70	51 9/16	11 9/16	1,308.7	293.4	D	587.30	12 42/47	2 7/8	327.2	73.4
D#/Eb	38.90	50 1/8	11 1/4	1,272.2	285.2	D#/Eb	622.30	12 51/97	2 13/16	317.9	71.3
E	41.21	48 11/16	10 15/16	1,235.7	277.0	E	659.30	12 11/65	2 3/4	308.9	69.2
F	43.70	47 1/4	10 9/16	1,199.2	268.9	F	698.50	11 65/79	2 5/8	300.1	67.3
F#/Gb	46.30	45 15/16	10 5/16	1,165.9	261.4	F#/Gb	740.00	11 18/37	2 9/16	291.5	65.4
G	49.00	44 5/8	10	1,132.6	253.9	G	784.00	11 15/94	2 1/2	283.2	63.5
G#/Ab	51.90	43 3/8	9 3/4	1,100.9	246.8	G#/Ab	830.60	10 16/19	2 7/16	275.2	61.7
A	55.01	42 1/8	9 7/16	1,069.1	239.7	A	880.00	10 8/15	2 3/8	267.3	59.9
A#/Bb	58.30	40 15/16	9 3/16	1,039.0	232.9	A#/Bb	932.30	10 7/30	2 5/16	259.7	58.2
B	61.70	39 3/4	8 15/16	1,008.9	226.2	B	987.80	9 81/86	2 1/4	252.3	56.6
C2	65.40	38 5/8	8 11/16	980.3	219.8	C6	1,046.50	9 29/44	2 3/16	245.1	55.0
C#/Db	69.30	37 9/16	8 7/16	953.3	213.7	C#/Db	1,108.70	9 5/13	2 1/8	238.2	53.4
D	73.41	36 1/2	8 3/16	926.4	207.7	D	1,174.61	9 2/17	2 1/16	231.4	51.9
D#/Eb	77.80	35 7/16	7 15/16	899.4	201.6	D#/Eb	1,244.50	8 6/7	2	224.8	50.4
E	82.40	34 7/16	7 3/4	874.0	196.0	E	1,318.50	8 23/38	1 15/16	218.4	49.0
F	87.30	33 7/16	7 1/2	848.6	190.3	F	1,397.00	8 9/25	1 7/8	212.2	47.6
F#/Gb	92.50	32 1/2	7 5/16	824.9	184.9	F#/Gb	1,480.00	8 11/90	1 13/16	206.1	46.2
G	98.01	31 9/16	7 1/16	801.1	179.6	G	1,568.00	7 49/55	1 3/4	200.3	44.9
G#/Ab	103.80	30 11/16	6 7/8	778.8	174.6	G#/Ab	1,661.20	7 2/3	1 3/4	194.6	43.6
A	110.00	29 13/16	6 11/16	756.6	169.6	A	1,760.00	7 13/29	1 11/16	189.0	42.4
A#/Bb	116.50	28 15/16	6 1/2	734.4	164.7	A#/Bb	1,864.60	7 13/55	1 5/8	183.7	41.2
B	123.50	28 1/8	6 5/16	713.8	160.0	B	1,975.50	7 1/33	1 9/16	178.4	40.0
C3	130.81	27 5/16	6 1/8	693.2	155.4	C7	2,093.00	6 39/47	1 9/16	173.3	38.9
C#/Db	138.60	26 9/16	5 15/16	674.2	151.1	C#/Db	2,217.40	6 7/11	1 1/2	168.4	37.8
D	146.80	25 13/16	5 13/16	655.1	146.9	D	2,349.20	6 21/47	1 7/16	163.6	36.7
D#/Eb	155.60	25 1/16	5 5/8	636.1	142.6	D#/Eb	2,489.01	6 5/19	1 3/8	159.0	35.6
E	164.80	24 5/16	5 7/16	617.1	138.3	E	2,637.00	6 5/59	1 3/8	154.4	34.6
F	174.61	23 5/8	5 5/16	599.6	134.4	F	2,794.00	5 72/79	1 5/16	150.0	33.6
F#/Gb	185.00	23	5 3/16	583.7	130.9	F#/Gb	2,960.00	5 55/74	1 5/16	145.8	32.7
G	196.00	22 5/16	5	566.3	127.0	G	3,136.00	5 40/69	1 1/4	141.6	31.8
G#/Ab	207.70	21 11/16	4 7/8	550.4	123.4	G#/Ab	3,322.41	5 8/19	1 3/16	137.6	30.8
A	220.00	21 1/16	4 3/4	534.6	119.8	A	3,520.00	5 4/15	1 3/16	133.7	30.0
A#/Bb	233.10	20 7/16	4 9/16	518.7	116.3	A#/Bb	3,729.20	5 7/60	1 1/8	129.9	29.1
B	246.90	19 7/8	4 7/16	504.4	113.1	B	3,951.00	4 67/69	1 1/8	126.2	28.3
C4	261.60	19 5/16	4 5/16	490.2	109.9	C8	4,186.00	4 73/88	1 1/16	122.6	27.5
C#/Db	277.20	18 3/4	4 3/16	475.9	106.7	C#/Db	4,434.81	4 9/13	1 1/16	119.1	26.7
D	293.70	18 1/4	4 1/16	463.2	103.8	D	4,698.40	4 19/34	1	115.7	25.9
D#/Eb	311.10	17 11/16	3 15/16	448.9	100.6	D#/Eb	4,978.00	4 3/7	1	112.4	25.2
E	329.61	17 3/16	3 7/8	436.2	97.8	E	5,274.00	4 23/76	15/16	109.2	24.5
F	349.30	16 3/4	3 3/4	425.1	95.3	F	5,588.00	4 9/50	15/16	106.1	23.8
F#/Gb	370.00	16 1/4	3 5/8	412.4	92.5	F#/Gb	5,920.00	4 3/49	15/16	103.1	23.1
G	392.00	15 13/16	3 9/16	401.3	90.0	G	6,272.00	3 52/55	7/8	100.1	22.5
G#/Ab	415.30	15 5/16	3 7/16	388.6	87.1	G#/Ab	6,644.80	3 5/6	7/8	97.3	21.8
A	440.01	14 7/8	3 5/16	377.5	84.6	A	7,040.00	3 21/29	13/16	94.5	21.2
A#/Bb	466.20	14 1/2	3 1/4	368.0	82.5	A#/Bb	7,458.40	3 34/55	13/16	91.8	20.6
B	493.91	14 1/16	3 1/8	356.9	80.0	B	7,902.01	3 17/33	13/16	89.2	20.0
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	3 5/12	3/4	86.7	19.4

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 16mm Diameter

OD inches = **0.6299** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	58 7/16	13 1/8	1,483.1	332.5	C5	523.30	14 59/98	3 1/4	370.6	83.1
C#/Db	34.60	56 13/16	12 3/4	1,441.9	323.3	C#/Db	554.40	14 11/59	3 3/16	360.1	80.7
D	36.70	55 1/8	12 3/8	1,399.1	313.7	D	587.30	13 47/60	3 1/16	349.8	78.4
D#/Eb	38.90	53 9/16	12	1,359.4	304.8	D#/Eb	622.30	13 16/41	3	339.8	76.2
E	41.21	52 1/16	11 11/16	1,321.3	296.2	E	659.30	13	2 15/16	330.2	74.0
F	43.70	50 1/2	11 5/16	1,281.7	287.4	F	698.50	12 23/36	2 13/16	320.8	71.9
F#/Gb	46.30	49 1/16	11	1,245.2	279.2	F#/Gb	740.00	12 12/43	2 3/4	311.6	69.9
G	49.00	47 11/16	10 11/16	1,210.3	271.4	G	784.00	11 66/71	2 11/16	302.8	67.9
G#/Ab	51.90	46 3/8	10 3/8	1,177.0	263.9	G#/Ab	830.60	11 36/61	2 5/8	294.2	66.0
A	55.01	45 1/16	10 1/8	1,143.7	256.4	A	880.00	11 19/73	2 1/2	285.8	64.1
A#/Bb	58.30	43 3/4	9 13/16	1,110.4	248.9	A#/Bb	932.30	10 78/83	2 7/16	277.7	62.2
B	61.70	42 1/2	9 1/2	1,078.7	241.8	B	987.80	10 27/43	2 3/8	269.7	60.5
C2	65.40	41 5/16	9 1/4	1,048.5	235.1	C6	1,046.50	10 14/43	2 5/16	262.1	58.8
C#/Db	69.30	40 1/8	9	1,018.4	228.3	C#/Db	1,108.70	10 2/63	2 1/4	254.6	57.1
D	73.41	39	8 3/4	989.8	221.9	D	1,174.61	9 50/67	2 3/16	247.4	55.5
D#/Eb	77.80	37 7/8	8 1/2	961.3	215.5	D#/Eb	1,244.50	9 15/32	2 1/8	240.3	53.9
E	82.40	36 13/16	8 1/4	934.3	209.5	E	1,318.50	9 1/5	2 1/16	233.5	52.3
F	87.30	35 3/4	8	907.3	203.4	F	1,397.00	8 89/95	2	226.8	50.9
F#/Gb	92.50	34 3/4	7 13/16	882.0	197.7	F#/Gb	1,480.00	8 28/41	1 15/16	220.4	49.4
G	98.01	33 3/4	7 9/16	856.6	192.0	G	1,568.00	8 27/62	1 7/8	214.1	48.0
G#/Ab	103.80	32 13/16	7 3/8	832.8	186.7	G#/Ab	1,661.20	8 9/46	1 13/16	208.0	46.6
A	110.00	31 7/8	7 1/8	809.0	181.4	A	1,760.00	7 51/53	1 13/16	202.1	45.3
A#/Bb	116.50	30 15/16	6 15/16	785.2	176.0	A#/Bb	1,864.60	7 64/87	1 3/4	196.3	44.0
B	123.50	30 1/16	6 3/4	763.0	171.1	B	1,975.50	7 17/33	1 11/16	190.7	42.8
C3	130.81	29 3/16	6 9/16	740.8	166.1	C7	2,093.00	7 22/73	1 5/8	185.3	41.5
C#/Db	138.60	28 3/8	6 3/8	720.2	161.5	C#/Db	2,217.40	7 3/32	1 9/16	180.0	40.4
D	146.80	27 9/16	6 3/16	699.5	156.8	D	2,349.20	6 33/37	1 9/16	174.9	39.2
D#/Eb	155.60	26 3/4	6	678.9	152.2	D#/Eb	2,489.01	6 16/23	1 1/2	169.9	38.1
E	164.80	26	5 13/16	659.9	147.9	E	2,637.00	6 1/2	1 7/16	165.1	37.0
F	174.61	25 1/4	5 11/16	640.8	143.7	F	2,794.00	6 23/72	1 7/16	160.4	36.0
F#/Gb	185.00	24 9/16	5 1/2	623.4	139.8	F#/Gb	2,960.00	6 6/43	1 3/8	155.8	34.9
G	196.00	23 7/8	5 3/8	605.9	135.9	G	3,136.00	5 55/57	1 5/16	151.4	33.9
G#/Ab	207.70	23 3/16	5 3/16	588.5	131.9	G#/Ab	3,322.41	5 66/83	1 5/16	147.1	33.0
A	220.00	22 1/2	5 1/16	571.1	128.0	A	3,520.00	5 46/73	1 1/4	142.9	32.0
A#/Bb	233.10	21 7/8	4 7/8	555.2	124.5	A#/Bb	3,729.20	5 39/83	1 1/4	138.8	31.1
B	246.90	21 1/4	4 3/4	539.3	120.9	B	3,951.00	5 11/35	1 3/16	134.9	30.2
C4	261.60	20 5/8	4 5/8	523.5	117.4	C8	4,186.00	5 7/43	1 3/16	131.0	29.4
C#/Db	277.20	20 1/16	4 1/2	509.2	114.2	C#/Db	4,434.81	5 1/63	1 1/8	127.3	28.5
D	293.70	19 1/2	4 3/8	494.9	111.0	D	4,698.40	4 62/71	1 1/16	123.7	27.7
D#/Eb	311.10	18 15/16	4 1/4	480.6	107.8	D#/Eb	4,978.00	4 47/64	1 1/16	120.2	26.9
E	329.61	18 3/8	4 1/8	466.4	104.6	E	5,274.00	4 3/5	1	116.7	26.2
F	349.30	17 7/8	4	453.7	101.7	F	5,588.00	4 37/79	1	113.4	25.4
F#/Gb	370.00	17 3/8	3 7/8	441.0	98.9	F#/Gb	5,920.00	4 14/41	1	110.2	24.7
G	392.00	16 7/8	3 13/16	428.3	96.0	G	6,272.00	4 5/23	15/16	107.0	24.0
G#/Ab	415.30	16 3/8	3 11/16	415.6	93.2	G#/Ab	6,644.80	4 9/92	15/16	104.0	23.3
A	440.01	15 15/16	3 9/16	404.5	90.7	A	7,040.00	3 52/53	7/8	101.0	22.7
A#/Bb	466.20	15 1/2	3 1/2	393.4	88.2	A#/Bb	7,458.40	3 46/53	7/8	98.2	22.0
B	493.91	15	3 3/8	380.7	85.4	B	7,902.01	3 25/33	13/16	95.4	21.4
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	3 58/89	13/16	92.7	20.8

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum — 18mm Diameter

OD inches = **0.7087** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	61 15/16	13 7/8	1,572.0	352.4	C5	523.30	15 21/43	3 1/2	393.1	88.1
C#/Db	34.60	60 1/4	13 1/2	1,529.1	342.8	C#/Db	554.40	15 1/21	3 3/8	381.9	85.6
D	36.70	58 1/2	13 1/8	1,484.7	332.9	D	587.30	14 31/50	3 1/4	371.1	83.2
D#/Eb	38.90	56 13/16	12 3/4	1,441.9	323.3	D#/Eb	622.30	14 13/64	3 3/16	360.5	80.8
E	41.21	55 3/16	12 3/8	1,400.7	314.0	E	659.30	13 4/5	3 1/16	350.2	78.5
F	43.70	53 5/8	12	1,361.0	305.1	F	698.50	13 13/32	3	340.2	76.3
F#/Gb	46.30	52 1/16	11 11/16	1,321.3	296.2	F#/Gb	740.00	13 2/81	2 15/16	330.6	74.1
G	49.00	50 5/8	11 3/8	1,284.9	288.1	G	784.00	12 17/26	2 13/16	321.2	72.0
G#/Ab	51.90	49 3/16	11	1,248.4	279.9	G#/Ab	830.60	12 5/17	2 3/4	312.0	70.0
A	55.01	47 3/4	10 11/16	1,211.9	271.7	A	880.00	11 67/71	2 11/16	303.1	68.0
A#/Bb	58.30	46 3/8	10 3/8	1,177.0	263.9	A#/Bb	932.30	11 32/53	2 5/8	294.5	66.0
B	61.70	45 1/8	10 1/8	1,145.3	256.8	B	987.80	11 3/11	2 1/2	286.1	64.1
C2	65.40	43 13/16	9 13/16	1,112.0	249.3	C6	1,046.50	10 20/21	2 7/16	278.0	62.3
C#/Db	69.30	42 9/16	9 9/16	1,080.2	242.2	C#/Db	1,108.70	10 25/39	2 3/8	270.1	60.5
D	73.41	41 3/8	9 1/4	1,050.1	235.4	D	1,174.61	10 24/71	2 5/16	262.4	58.8
D#/Eb	77.80	40 3/16	9	1,020.0	228.7	D#/Eb	1,244.50	10 1/23	2 1/4	254.9	57.1
E	82.40	39 1/16	8 3/4	991.4	222.3	E	1,318.50	9 25/33	2 3/16	247.6	55.5
F	87.30	37 15/16	8 1/2	962.9	215.9	F	1,397.00	9 35/73	2 1/8	240.6	53.9
F#/Gb	92.50	36 13/16	8 1/4	934.3	209.5	F#/Gb	1,480.00	9 17/81	2 1/16	233.7	52.4
G	98.01	35 13/16	8	908.9	203.8	G	1,568.00	8 18/19	2	227.1	50.9
G#/Ab	103.80	34 3/4	7 13/16	882.0	197.7	G#/Ab	1,661.20	8 9/13	1 15/16	220.6	49.5
A	110.00	33 13/16	7 9/16	858.2	192.4	A	1,760.00	8 4/9	1 7/8	214.3	48.1
A#/Bb	116.50	32 13/16	7 3/8	832.8	186.7	A#/Bb	1,864.60	8 8/39	1 13/16	208.2	46.7
B	123.50	31 7/8	7 1/8	809.0	181.4	B	1,975.50	7 34/35	1 13/16	202.3	45.4
C3	130.81	31	6 15/16	786.8	176.4	C7	2,093.00	7 35/47	1 3/4	196.6	44.1
C#/Db	138.60	30 1/8	6 3/4	764.6	171.4	C#/Db	2,217.40	7 11/21	1 11/16	191.0	42.8
D	146.80	29 1/4	6 9/16	742.4	166.4	D	2,349.20	7 9/29	1 5/8	185.5	41.6
D#/Eb	155.60	28 3/8	6 3/8	720.2	161.5	D#/Eb	2,489.01	7 6/59	1 9/16	180.2	40.4
E	164.80	27 5/8	6 3/16	701.1	157.2	E	2,637.00	6 9/10	1 9/16	175.1	39.3
F	174.61	26 13/16	6	680.5	152.6	F	2,794.00	6 45/64	1 1/2	170.1	38.1
F#/Gb	185.00	26 1/16	5 13/16	661.5	148.3	F#/Gb	2,960.00	6 21/41	1 7/16	165.3	37.1
G	196.00	25 5/16	5 11/16	642.4	144.0	G	3,136.00	6 17/52	1 7/16	160.6	36.0
G#/Ab	207.70	24 9/16	5 1/2	623.4	139.8	G#/Ab	3,322.41	6 5/34	1 3/8	156.0	35.0
A	220.00	23 7/8	5 3/8	605.9	135.9	A	3,520.00	5 69/71	1 5/16	151.6	34.0
A#/Bb	233.10	23 3/16	5 3/16	588.5	131.9	A#/Bb	3,729.20	5 4/5	1 5/16	147.3	33.0
B	246.90	22 9/16	5 1/16	572.6	128.4	B	3,951.00	5 7/11	1 1/4	143.1	32.1
C4	261.60	21 7/8	4 7/8	555.2	124.5	C8	4,186.00	5 10/21	1 1/4	139.0	31.2
C#/Db	277.20	21 1/4	4 3/4	539.3	120.9	C#/Db	4,434.81	5 25/78	1 3/16	135.0	30.3
D	293.70	20 11/16	4 5/8	525.0	117.7	D	4,698.40	5 12/71	1 3/16	131.2	29.4
D#/Eb	311.10	20 1/16	4 1/2	509.2	114.2	D#/Eb	4,978.00	5 1/46	1 1/8	127.5	28.6
E	329.61	19 1/2	4 3/8	494.9	111.0	E	5,274.00	4 29/33	1 1/8	123.8	27.8
F	349.30	18 15/16	4 1/4	480.6	107.8	F	5,588.00	4 54/73	1 1/16	120.3	27.0
F#/Gb	370.00	18 7/16	4 1/8	467.9	104.9	F#/Gb	5,920.00	4 49/81	1 1/16	116.9	26.2
G	392.00	17 7/8	4	453.7	101.7	G	6,272.00	4 9/19	1	113.5	25.5
G#/Ab	415.30	17 3/8	3 7/8	441.0	98.9	G#/Ab	6,644.80	4 9/26	1	110.3	24.7
A	440.01	16 7/8	3 13/16	428.3	96.0	A	7,040.00	4 2/9	15/16	107.2	24.0
A#/Bb	466.20	16 7/16	3 11/16	417.2	93.5	A#/Bb	7,458.40	4 4/39	15/16	104.1	23.3
B	493.91	15 15/16	3 9/16	404.5	90.7	B	7,902.01	3 69/70	7/8	101.2	22.7
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	3 69/79	7/8	98.3	22.0

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 20mm Diameter

OD inches = **0.7874** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	65 5/16	14 5/8	1,657.6	371.6	C5	523.30	16 14/43	3 11/16	414.3	92.9
C#/Db	34.60	63 1/2	14 1/4	1,611.6	361.3	C#/Db	554.40	15 31/36	3 9/16	402.6	90.3
D	36.70	61 5/8	13 13/16	1,564.0	350.7	D	587.30	15 39/95	3 7/16	391.1	87.7
D#/Eb	38.90	59 7/8	13 7/16	1,519.6	340.7	D#/Eb	622.30	14 67/69	3 3/8	380.0	85.2
E	41.21	58 3/16	13 1/16	1,476.8	331.1	E	659.30	14 6/11	3 1/4	369.1	82.8
F	43.70	56 1/2	12 11/16	1,434.0	321.5	F	698.50	14 3/23	3 3/16	358.6	80.4
F#/Gb	46.30	54 7/8	12 5/16	1,392.7	312.2	F#/Gb	740.00	13 43/59	3 1/16	348.4	78.1
G	49.00	53 3/8	11 15/16	1,354.7	303.7	G	784.00	13 24/71	3	338.5	75.9
G#/Ab	51.90	51 13/16	11 5/8	1,315.0	294.8	G#/Ab	830.60	12 23/24	2 7/8	328.9	73.7
A	55.01	50 3/8	11 5/16	1,278.5	286.6	A	880.00	12 56/95	2 13/16	319.5	71.6
A#/Bb	58.30	48 15/16	11	1,242.0	278.5	A#/Bb	932.30	12 3/13	2 3/4	310.4	69.6
B	61.70	47 9/16	10 11/16	1,207.1	270.6	B	987.80	11 15/17	2 11/16	301.6	67.6
C2	65.40	46 3/16	10 3/8	1,172.2	262.8	C6	1,046.50	11 6/11	2 9/16	293.0	65.7
C#/Db	69.30	44 7/8	10 1/16	1,138.9	255.3	C#/Db	1,108.70	11 8/37	2 1/2	284.7	63.8
D	73.41	43 9/16	9 3/4	1,105.6	247.9	D	1,174.61	10 87/97	2 7/16	276.6	62.0
D#/Eb	77.80	42 5/16	9 1/2	1,073.9	240.8	D#/Eb	1,244.50	10 17/29	2 3/8	268.7	60.2
E	82.40	41 1/8	9 1/4	1,043.8	234.0	E	1,318.50	10 2/7	2 5/16	261.0	58.5
F	87.30	40	8 15/16	1,015.2	227.6	F	1,397.00	10	2 1/4	253.6	56.9
F#/Gb	92.50	38 13/16	8 11/16	985.1	220.9	F#/Gb	1,480.00	9 46/65	2 3/16	246.4	55.2
G	98.01	37 3/4	8 7/16	958.1	214.8	G	1,568.00	9 22/51	2 1/8	239.4	53.7
G#/Ab	103.80	36 11/16	8 1/4	931.1	208.8	G#/Ab	1,661.20	9 15/92	2 1/16	232.6	52.1
A	110.00	35 5/8	8	904.2	202.7	A	1,760.00	8 46/51	2	225.9	50.7
A#/Bb	116.50	34 5/8	7 3/4	878.8	197.0	A#/Bb	1,864.60	8 24/37	1 15/16	219.5	49.2
B	123.50	33 5/8	7 9/16	853.4	191.3	B	1,975.50	8 31/77	1 7/8	213.3	47.8
C3	130.81	32 5/8	7 5/16	828.0	185.6	C7	2,093.00	8 8/49	1 13/16	207.2	46.5
C#/Db	138.60	31 3/4	7 1/8	805.8	180.7	C#/Db	2,217.40	7 27/29	1 3/4	201.3	45.1
D	146.80	30 13/16	6 15/16	782.0	175.3	D	2,349.20	7 67/95	1 3/4	195.6	43.8
D#/Eb	155.60	29 15/16	6 11/16	759.8	170.4	D#/Eb	2,489.01	7 17/35	1 11/16	190.0	42.6
E	164.80	29 1/16	6 1/2	737.6	165.4	E	2,637.00	7 3/11	1 5/8	184.6	41.4
F	174.61	28 1/4	6 5/16	717.0	160.7	F	2,794.00	7 3/46	1 9/16	179.3	40.2
F#/Gb	185.00	27 7/16	6 1/8	696.4	156.1	F#/Gb	2,960.00	6 51/59	1 9/16	174.2	39.1
G	196.00	26 11/16	6	677.3	151.9	G	3,136.00	6 2/3	1 1/2	169.3	37.9
G#/Ab	207.70	25 15/16	5 13/16	658.3	147.6	G#/Ab	3,322.41	6 23/48	1 7/16	164.4	36.9
A	220.00	25 3/16	5 5/8	639.3	143.3	A	3,520.00	6 28/95	1 7/16	159.8	35.8
A#/Bb	233.10	24 7/16	5 1/2	620.2	139.1	A#/Bb	3,729.20	6 3/26	1 3/8	155.2	34.8
B	246.90	23 3/4	5 5/16	602.8	135.1	B	3,951.00	5 16/17	1 5/16	150.8	33.8
C4	261.60	23 1/16	5 3/16	585.3	131.2	C8	4,186.00	5 17/22	1 5/16	146.5	32.8
C#/Db	277.20	22 7/16	5	569.5	127.7	C#/Db	4,434.81	5 45/74	1 1/4	142.3	31.9
D	293.70	21 13/16	4 7/8	553.6	124.1	D	4,698.40	5 13/29	1 1/4	138.3	31.0
D#/Eb	311.10	21 3/16	4 3/4	537.7	120.6	D#/Eb	4,978.00	5 17/58	1 3/16	134.3	30.1
E	329.61	20 9/16	4 5/8	521.9	117.0	E	5,274.00	5 1/7	1 1/8	130.5	29.3
F	349.30	20	4 1/2	507.6	113.8	F	5,588.00	5	1 1/8	126.8	28.4
F#/Gb	370.00	19 7/16	4 3/8	493.3	110.6	F#/Gb	5,920.00	4 76/89	1 1/16	123.2	27.6
G	392.00	18 7/8	4 1/4	479.0	107.4	G	6,272.00	4 68/95	1 1/16	119.7	26.8
G#/Ab	415.30	18 5/16	4 1/8	464.8	104.2	G#/Ab	6,644.80	4 25/43	1	116.3	26.1
A	440.01	17 13/16	4	452.1	101.4	A	7,040.00	4 23/51	1	113.0	25.3
A#/Bb	466.20	17 5/16	3 7/8	439.4	98.5	A#/Bb	7,458.40	4 12/37	1	109.8	24.6
B	493.91	16 13/16	3 3/4	426.7	95.7	B	7,902.01	4 1/5	15/16	106.6	23.9
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	4 1/12	15/16	103.6	23.2

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 22mm Diameter

OD inches = **0.8661** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	68 1/2	15 3/8	1,738.5	389.8	C5	523.30	17 11/90	3 13/16	434.6	97.4
C#/Db	34.60	66 9/16	14 15/16	1,689.4	378.8	C#/Db	554.40	16 40/63	3 3/4	422.2	94.7
D	36.70	64 5/8	14 1/2	1,640.2	367.7	D	587.30	16 6/37	3 5/8	410.2	92.0
D#/Eb	38.90	62 13/16	14 1/16	1,594.2	357.4	D#/Eb	622.30	15 54/77	3 1/2	398.5	89.3
E	41.21	61	13 11/16	1,548.2	347.1	E	659.30	15 15/59	3 7/16	387.2	86.8
F	43.70	59 1/4	13 5/16	1,503.8	337.1	F	698.50	14 41/50	3 5/16	376.1	84.3
F#/Gb	46.30	57 9/16	12 7/8	1,460.9	327.5	F#/Gb	740.00	14 2/5	3 1/4	365.4	81.9
G	49.00	55 15/16	12 9/16	1,419.7	318.3	G	784.00	13 87/88	3 1/8	355.0	79.6
G#/Ab	51.90	54 3/8	12 3/16	1,380.0	309.4	G#/Ab	830.60	13 13/22	3 1/16	344.9	77.3
A	55.01	52 13/16	11 13/16	1,340.4	300.5	A	880.00	13 11/54	2 15/16	335.1	75.1
A#/Bb	58.30	51 5/16	11 1/2	1,302.3	292.0	A#/Bb	932.30	12 77/93	2 7/8	325.6	73.0
B	61.70	49 7/8	11 3/16	1,265.8	283.8	B	987.80	12 43/93	2 13/16	316.3	70.9
C2	65.40	48 7/16	10 7/8	1,229.3	275.6	C6	1,046.50	12 7/65	2 11/16	307.3	68.9
C#/Db	69.30	47 1/16	10 9/16	1,194.4	267.8	C#/Db	1,108.70	11 29/38	2 5/8	298.6	66.9
D	73.41	45 11/16	10 1/4	1,159.5	260.0	D	1,174.61	11 3/7	2 9/16	290.1	65.0
D#/Eb	77.80	44 7/16	9 15/16	1,127.8	252.9	D#/Eb	1,244.50	11 7/68	2 1/2	281.8	63.2
E	82.40	43 1/8	9 11/16	1,094.5	245.4	E	1,318.50	10 48/61	2 7/16	273.8	61.4
F	87.30	41 15/16	9 3/8	1,064.4	238.6	F	1,397.00	10 35/73	2 3/8	266.0	59.6
F#/Gb	92.50	40 3/4	9 1/8	1,034.2	231.9	F#/Gb	1,480.00	10 2/11	2 5/16	258.4	57.9
G	98.01	39 9/16	8 7/8	1,004.1	225.1	G	1,568.00	9 74/83	2 3/16	251.0	56.3
G#/Ab	103.80	38 7/16	8 5/8	975.5	218.7	G#/Ab	1,661.20	9 36/59	2 1/8	243.9	54.7
A	110.00	37 3/8	8 3/8	948.6	212.7	A	1,760.00	9 1/3	2 1/16	237.0	53.1
A#/Bb	116.50	36 5/16	8 1/8	921.6	206.6	A#/Bb	1,864.60	9 7/99	2 1/16	230.2	51.6
B	123.50	35 1/4	7 7/8	894.6	200.6	B	1,975.50	8 13/16	2	223.7	50.1
C3	130.81	34 1/4	7 11/16	869.3	194.9	C7	2,093.00	8 32/57	1 15/16	217.3	48.7
C#/Db	138.60	33 1/4	7 7/16	843.9	189.2	C#/Db	2,217.40	8 7/22	1 7/8	211.1	47.3
D	146.80	32 5/16	7 1/4	820.1	183.9	D	2,349.20	8 3/37	1 13/16	205.1	46.0
D#/Eb	155.60	31 3/8	7 1/16	796.3	178.5	D#/Eb	2,489.01	7 40/47	1 3/4	199.3	44.7
E	164.80	30 1/2	6 13/16	774.1	173.6	E	2,637.00	7 32/51	1 11/16	193.6	43.4
F	174.61	29 5/8	6 5/8	751.9	168.6	F	2,794.00	7 16/39	1 11/16	188.1	42.2
F#/Gb	185.00	28 13/16	6 7/16	731.3	163.9	F#/Gb	2,960.00	7 1/5	1 5/8	182.7	41.0
G	196.00	28	6 1/4	710.6	159.3	G	3,136.00	7	1 9/16	177.5	39.8
G#/Ab	207.70	27 3/16	6 1/8	690.0	154.7	G#/Ab	3,322.41	6 35/44	1 1/2	172.5	38.7
A	220.00	26 7/16	5 15/16	671.0	150.4	A	3,520.00	6 3/5	1 1/2	167.6	37.6
A#/Bb	233.10	25 5/8	5 3/4	650.4	145.8	A#/Bb	3,729.20	6 12/29	1 7/16	162.8	36.5
B	246.90	24 15/16	5 9/16	632.9	141.9	B	3,951.00	6 3/13	1 3/8	158.2	35.5
C4	261.60	24 3/16	5 7/16	613.9	137.6	C8	4,186.00	6 2/37	1 3/8	153.6	34.4
C#/Db	277.20	23 1/2	5 1/4	596.4	133.7	C#/Db	4,434.81	5 67/76	1 5/16	149.3	33.5
D	293.70	22 7/8	5 1/8	580.6	130.2	D	4,698.40	5 5/7	1 1/4	145.0	32.5
D#/Eb	311.10	22 3/16	5	563.1	126.3	D#/Eb	4,978.00	5 16/29	1 1/4	140.9	31.6
E	329.61	21 9/16	4 13/16	547.3	122.7	E	5,274.00	5 24/61	1 3/16	136.9	30.7
F	349.30	20 15/16	4 11/16	531.4	119.1	F	5,588.00	5 6/25	1 3/16	133.0	29.8
F#/Gb	370.00	20 3/8	4 9/16	517.1	115.9	F#/Gb	5,920.00	5 1/11	1 1/8	129.2	29.0
G	392.00	19 13/16	4 7/16	502.8	112.7	G	6,272.00	4 35/37	1 1/8	125.5	28.1
G#/Ab	415.30	19 1/4	4 5/16	488.6	109.5	G#/Ab	6,644.80	4 33/41	1 1/16	122.0	27.3
A	440.01	18 11/16	4 3/16	474.3	106.3	A	7,040.00	4 2/3	1 1/16	118.5	26.6
A#/Bb	466.20	18 1/8	4 1/16	460.0	103.1	A#/Bb	7,458.40	4 53/99	1	115.1	25.8
B	493.91	17 5/8	3 15/16	447.3	100.3	B	7,902.01	4 13/32	1	111.8	25.1
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	4 11/39	15/16	108.7	24.4

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 24mm Diameter

OD inches = **0.9449** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	71 9/16	16 1/16	1,816.3	407.2	C5	523.30	17 61/69	4	453.9	101.8
C#/Db	34.60	69 9/16	15 5/8	1,765.5	395.8	C#/Db	554.40	17 3/8	3 7/8	441.0	98.9
D	36.70	67 9/16	15 1/8	1,714.7	384.4	D	587.30	16 67/76	3 13/16	428.5	96.1
D#/Eb	38.90	65 5/8	14 11/16	1,665.6	373.4	D#/Eb	622.30	16 2/5	3 11/16	416.2	93.3
E	41.21	63 3/4	14 5/16	1,618.0	362.7	E	659.30	15 14/15	3 9/16	404.4	90.7
F	43.70	61 7/8	13 7/8	1,570.4	352.1	F	698.50	15 47/98	3 1/2	392.9	88.1
F#/Gb	46.30	60 1/8	13 1/2	1,526.0	342.1	F#/Gb	740.00	15 2/51	3 3/8	381.7	85.6
G	49.00	58 7/16	13 1/8	1,483.1	332.5	G	784.00	14 11/18	3 1/4	370.8	83.1
G#/Ab	51.90	56 13/16	12 3/4	1,441.9	323.3	G#/Ab	830.60	14 17/87	3 3/16	360.3	80.8
A	55.01	55 3/16	12 3/8	1,400.7	314.0	A	880.00	13 72/91	3 1/16	350.0	78.5
A#/Bb	58.30	53 9/16	12	1,359.4	304.8	A#/Bb	932.30	13 2/5	3	340.1	76.2
B	61.70	52 1/16	11 11/16	1,321.3	296.2	B	987.80	13 1/59	2 15/16	330.4	74.1
C2	65.40	50 9/16	11 5/16	1,283.3	287.7	C6	1,046.50	12 11/17	2 13/16	321.0	72.0
C#/Db	69.30	49 1/8	11	1,246.8	279.5	C#/Db	1,108.70	12 2/7	2 3/4	311.8	69.9
D	73.41	47 3/4	10 11/16	1,211.9	271.7	D	1,174.61	11 15/16	2 11/16	303.0	67.9
D#/Eb	77.80	46 3/8	10 3/8	1,177.0	263.9	D#/Eb	1,244.50	11 40/67	2 5/8	294.3	66.0
E	82.40	45 1/16	10 1/8	1,143.7	256.4	E	1,318.50	11 4/15	2 1/2	286.0	64.1
F	87.30	43 13/16	9 13/16	1,112.0	249.3	F	1,397.00	10 35/37	2 7/16	277.8	62.3
F#/Gb	92.50	42 9/16	9 9/16	1,080.2	242.2	F#/Gb	1,480.00	10 59/93	2 3/8	269.9	60.5
G	98.01	41 5/16	9 1/4	1,048.5	235.1	G	1,568.00	10 1/3	2 5/16	262.2	58.8
G#/Ab	103.80	40 1/8	9	1,018.4	228.3	G#/Ab	1,661.20	10 2/53	2 1/4	254.8	57.1
A	110.00	39	8 3/4	989.8	221.9	A	1,760.00	9 3/4	2 3/16	247.5	55.5
A#/Bb	116.50	37 7/8	8 1/2	961.3	215.5	A#/Bb	1,864.60	9 37/78	2 1/8	240.5	53.9
B	123.50	36 13/16	8 1/4	934.3	209.5	B	1,975.50	9 9/44	2 1/16	233.6	52.4
C3	130.81	35 3/4	8	907.3	203.4	C7	2,093.00	8 82/87	2	227.0	50.9
C#/Db	138.60	34 3/4	7 13/16	882.0	197.7	C#/Db	2,217.40	8 11/16	1 15/16	220.5	49.4
D	146.80	33 3/4	7 9/16	856.6	192.0	D	2,349.20	8 41/93	1 7/8	214.2	48.0
D#/Eb	155.60	32 13/16	7 3/8	832.8	186.7	D#/Eb	2,489.01	8 1/5	1 13/16	208.1	46.7
E	164.80	31 7/8	7 1/8	809.0	181.4	E	2,637.00	7 29/30	1 13/16	202.2	45.3
F	174.61	30 15/16	6 15/16	785.2	176.0	F	2,794.00	7 54/73	1 3/4	196.4	44.0
F#/Gb	185.00	30 1/16	6 3/4	763.0	171.1	F#/Gb	2,960.00	7 13/25	1 11/16	190.8	42.8
G	196.00	29 1/4	6 9/16	742.4	166.4	G	3,136.00	7 11/36	1 5/8	185.4	41.6
G#/Ab	207.70	28 3/8	6 3/8	720.2	161.5	G#/Ab	3,322.41	7 4/41	1 9/16	180.1	40.4
A	220.00	27 9/16	6 3/16	699.5	156.8	A	3,520.00	6 60/67	1 9/16	175.0	39.2
A#/Bb	233.10	26 13/16	6	680.5	152.6	A#/Bb	3,729.20	6 7/10	1 1/2	170.0	38.1
B	246.90	26 1/16	5 13/16	661.5	148.3	B	3,951.00	6 29/57	1 7/16	165.2	37.0
C4	261.60	25 5/16	5 11/16	642.4	144.0	C8	4,186.00	6 32/99	1 7/16	160.5	36.0
C#/Db	277.20	24 9/16	5 1/2	623.4	139.8	C#/Db	4,434.81	6 1/7	1 3/8	155.9	35.0
D	293.70	23 7/8	5 3/8	605.9	135.9	D	4,698.40	5 31/32	1 5/16	151.5	34.0
D#/Eb	311.10	23 3/16	5 3/16	588.5	131.9	D#/Eb	4,978.00	5 4/5	1 5/16	147.2	33.0
E	329.61	22 9/16	5 1/16	572.6	128.4	E	5,274.00	5 19/30	1 1/4	143.0	32.1
F	349.30	21 7/8	4 7/8	555.2	124.5	F	5,588.00	5 35/74	1 1/4	138.9	31.1
F#/Gb	370.00	21 1/4	4 3/4	539.3	120.9	F#/Gb	5,920.00	5 13/41	1 3/16	135.0	30.3
G	392.00	20 11/16	4 5/8	525.0	117.7	G	6,272.00	5 1/6	1 3/16	131.1	29.4
G#/Ab	415.30	20 1/16	4 1/2	509.2	114.2	G#/Ab	6,644.80	5 1/53	1 1/8	127.4	28.6
A	440.01	19 1/2	4 3/8	494.9	111.0	A	7,040.00	4 7/8	1 1/16	123.8	27.7
A#/Bb	466.20	18 15/16	4 1/4	480.6	107.8	A#/Bb	7,458.40	4 14/19	1 1/16	120.2	27.0
B	493.91	18 7/16	4 1/8	467.9	104.9	B	7,902.01	4 53/88	1 1/16	116.8	26.2
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	4 43/91	1	113.5	25.4

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 26mm Diameter

OD inches = **1.0236** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	74 7/16	16 11/16	1,889.2	423.6	C5	523.30	18 35/57	4 3/16	472.4	105.9
C#/Db	34.60	72 3/8	16 1/4	1,836.9	411.8	C#/Db	554.40	18 7/83	4 1/16	459.0	102.9
D	36.70	70 5/16	15 3/4	1,784.5	400.1	D	587.30	17 4/7	3 15/16	445.9	100.0
D#/Eb	38.90	68 1/4	15 5/16	1,732.2	388.4	D#/Eb	622.30	17 2/29	3 13/16	433.2	97.1
E	41.21	66 5/16	14 7/8	1,683.0	377.3	E	659.30	16 7/12	3 11/16	420.9	94.4
F	43.70	64 7/16	14 7/16	1,635.4	366.7	F	698.50	16 1/9	3 5/8	408.9	91.7
F#/Gb	46.30	62 9/16	14	1,587.8	356.0	F#/Gb	740.00	15 32/49	3 1/2	397.3	89.1
G	49.00	60 13/16	13 5/8	1,543.4	346.0	G	784.00	15 11/53	3 7/16	386.0	86.5
G#/Ab	51.90	59 1/8	13 1/4	1,500.6	336.4	G#/Ab	830.60	14 55/71	3 5/16	375.0	84.1
A	55.01	57 7/16	12 7/8	1,457.8	326.8	A	880.00	14 17/48	3 3/16	364.3	81.7
A#/Bb	58.30	55 3/4	12 1/2	1,414.9	317.2	A#/Bb	932.30	13 87/92	3 1/8	353.9	79.4
B	61.70	54 3/16	12 1/8	1,375.3	308.3	B	987.80	13 17/31	3 1/16	343.9	77.1
C2	65.40	52 5/8	11 13/16	1,335.6	299.4	C6	1,046.50	13 7/43	2 15/16	334.1	74.9
C#/Db	69.30	51 1/8	11 7/16	1,297.6	290.9	C#/Db	1,108.70	12 67/85	2 7/8	324.6	72.8
D	73.41	49 11/16	11 1/8	1,261.1	282.7	D	1,174.61	12 14/33	2 13/16	315.3	70.7
D#/Eb	77.80	48 1/4	10 13/16	1,224.6	274.6	D#/Eb	1,244.50	12 4/57	2 11/16	306.3	68.7
E	82.40	46 15/16	10 1/2	1,191.3	267.1	E	1,318.50	11 8/11	2 5/8	297.6	66.7
F	87.30	45 9/16	10 3/16	1,156.4	259.3	F	1,397.00	11 31/79	2 9/16	289.1	64.8
F#/Gb	92.50	44 1/4	9 15/16	1,123.1	251.8	F#/Gb	1,480.00	11 5/73	2 1/2	280.9	63.0
G	98.01	43	9 5/8	1,091.3	244.7	G	1,568.00	10 58/77	2 7/16	272.9	61.2
G#/Ab	103.80	41 13/16	9 3/8	1,061.2	237.9	G#/Ab	1,661.20	10 17/38	2 5/16	265.2	59.4
A	110.00	40 5/8	9 1/8	1,031.1	231.2	A	1,760.00	10 3/20	2 1/4	257.6	57.8
A#/Bb	116.50	39 7/16	8 13/16	1,000.9	224.4	A#/Bb	1,864.60	9 31/36	2 3/16	250.3	56.1
B	123.50	38 5/16	8 9/16	972.4	218.0	B	1,975.50	9 47/81	2 1/8	243.1	54.5
C3	130.81	37 1/4	8 3/8	945.4	212.0	C7	2,093.00	9 4/13	2 1/16	236.2	53.0
C#/Db	138.60	36 3/16	8 1/8	918.4	205.9	C#/Db	2,217.40	9 2/47	2	229.5	51.5
D	146.80	35 1/8	7 7/8	891.5	199.9	D	2,349.20	8 11/14	2	223.0	50.0
D#/Eb	155.60	34 1/8	7 5/8	866.1	194.2	D#/Eb	2,489.01	8 23/43	1 15/16	216.6	48.6
E	164.80	33 3/16	7 7/16	842.3	188.8	E	2,637.00	8 7/24	1 7/8	210.5	47.2
F	174.61	32 1/4	7 1/4	818.5	183.5	F	2,794.00	8 1/18	1 13/16	204.5	45.8
F#/Gb	185.00	31 5/16	7	794.7	178.2	F#/Gb	2,960.00	7 81/98	1 3/4	198.6	44.5
G	196.00	30 7/16	6 13/16	772.5	173.2	G	3,136.00	7 32/53	1 11/16	193.0	43.3
G#/Ab	207.70	29 9/16	6 5/8	750.3	168.2	G#/Ab	3,322.41	7 12/31	1 5/8	187.5	42.0
A	220.00	28 11/16	6 7/16	728.1	163.2	A	3,520.00	7 17/96	1 5/8	182.2	40.8
A#/Bb	233.10	27 7/8	6 1/4	707.5	158.6	A#/Bb	3,729.20	6 36/37	1 9/16	177.0	39.7
B	246.90	27 1/8	6 1/16	688.4	154.3	B	3,951.00	6 24/31	1 1/2	171.9	38.5
C4	261.60	26 5/16	5 7/8	667.8	149.7	C8	4,186.00	6 25/43	1 1/2	167.0	37.4
C#/Db	277.20	25 9/16	5 3/4	648.8	145.5	C#/Db	4,434.81	6 13/33	1 7/16	162.3	36.4
D	293.70	24 7/8	5 9/16	631.3	141.5	D	4,698.40	6 7/33	1 3/8	157.7	35.3
D#/Eb	311.10	24 1/8	5 7/16	612.3	137.3	D#/Eb	4,978.00	6 2/57	1 3/8	153.2	34.3
E	329.61	23 7/16	5 1/4	594.8	133.4	E	5,274.00	5 19/22	1 5/16	148.8	33.4
F	349.30	22 13/16	5 1/8	579.0	129.8	F	5,588.00	5 55/79	1 1/4	144.6	32.4
F#/Gb	370.00	22 1/8	4 15/16	561.5	125.9	F#/Gb	5,920.00	5 39/73	1 1/4	140.5	31.5
G	392.00	21 1/2	4 13/16	545.7	122.3	G	6,272.00	5 29/77	1 3/16	136.5	30.6
G#/Ab	415.30	20 7/8	4 11/16	529.8	118.8	G#/Ab	6,644.80	5 17/76	1 3/16	132.6	29.7
A	440.01	20 5/16	4 9/16	515.5	115.6	A	7,040.00	5 3/40	1 1/8	128.8	28.9
A#/Bb	466.20	19 3/4	4 7/16	501.3	112.4	A#/Bb	7,458.40	4 67/72	1 1/8	125.1	28.1
B	493.91	19 3/16	4 5/16	487.0	109.2	B	7,902.01	4 64/81	1 1/16	121.6	27.3
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	4 19/29	1 1/16	118.1	26.5

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 28mm Diameter

OD inches = **1.1024** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	77 1/4	17 5/16	1,960.6	439.6	C5	523.30	19 13/41	4 5/16	490.3	109.9
C#/Db	34.60	75 1/8	16 13/16	1,906.7	427.5	C#/Db	554.40	18 33/43	4 3/16	476.3	106.8
D	36.70	72 15/16	16 3/8	1,851.2	415.0	D	587.30	18 15/64	4 1/16	462.8	103.8
D#/Eb	38.90	70 7/8	15 7/8	1,798.8	403.3	D#/Eb	622.30	17 5/7	4	449.6	100.8
E	41.21	68 13/16	15 7/16	1,746.5	391.6	E	659.30	17 17/81	3 7/8	436.8	97.9
F	43.70	66 7/8	15	1,697.3	380.5	F	698.50	16 18/25	3 3/4	424.4	95.1
F#/Gb	46.30	64 15/16	14 9/16	1,648.1	369.5	F#/Gb	740.00	16 11/45	3 5/8	412.3	92.4
G	49.00	63 1/8	14 1/8	1,602.1	359.2	G	784.00	15 61/78	3 9/16	400.5	89.8
G#/Ab	51.90	61 5/16	13 3/4	1,556.1	348.9	G#/Ab	830.60	15 1/3	3 7/16	389.1	87.2
A	55.01	59 9/16	13 3/8	1,511.7	338.9	A	880.00	14 26/29	3 5/16	378.1	84.8
A#/Bb	58.30	57 7/8	13	1,468.9	329.3	A#/Bb	932.30	14 43/91	3 1/4	367.3	82.4
B	61.70	56 1/4	12 5/8	1,427.6	320.1	B	987.80	14 3/50	3 1/8	356.8	80.0
C2	65.40	54 5/8	12 1/4	1,386.4	310.8	C6	1,046.50	13 33/50	3 1/16	346.7	77.7
C#/Db	69.30	53 1/16	11 7/8	1,346.7	301.9	C#/Db	1,108.70	13 16/59	3	336.8	75.5
D	73.41	51 9/16	11 9/16	1,308.7	293.4	D	1,174.61	12 42/47	2 7/8	327.2	73.4
D#/Eb	77.80	50 1/8	11 1/4	1,272.2	285.2	D#/Eb	1,244.50	12 10/19	2 13/16	317.9	71.3
E	82.40	48 11/16	10 15/16	1,235.7	277.0	E	1,318.50	12 9/53	2 3/4	308.9	69.2
F	87.30	47 5/16	10 5/8	1,200.8	269.2	F	1,397.00	11 65/79	2 5/8	300.1	67.3
F#/Gb	92.50	45 15/16	10 5/16	1,165.9	261.4	F#/Gb	1,480.00	11 18/37	2 9/16	291.5	65.4
G	98.01	44 5/8	10	1,132.6	253.9	G	1,568.00	11 15/94	2 1/2	283.2	63.5
G#/Ab	103.80	43 3/8	9 3/4	1,100.9	246.8	G#/Ab	1,661.20	10 16/19	2 7/16	275.2	61.7
A	110.00	42 1/8	9 7/16	1,069.1	239.7	A	1,760.00	10 8/15	2 3/8	267.3	59.9
A#/Bb	116.50	40 15/16	9 3/16	1,039.0	232.9	A#/Bb	1,864.60	10 7/30	2 5/16	259.7	58.2
B	123.50	39 3/4	8 15/16	1,008.9	226.2	B	1,975.50	9 49/52	2 1/4	252.3	56.6
C3	130.81	38 5/8	8 11/16	980.3	219.8	C7	2,093.00	9 29/44	2 3/16	245.1	55.0
C#/Db	138.60	37 9/16	8 7/16	953.3	213.7	C#/Db	2,217.40	9 5/13	2 1/8	238.2	53.4
D	146.80	36 1/2	8 3/16	926.4	207.7	D	2,349.20	9 2/17	2 1/16	231.4	51.9
D#/Eb	155.60	35 7/16	7 15/16	899.4	201.6	D#/Eb	2,489.01	8 6/7	2	224.8	50.4
E	164.80	34 7/16	7 3/4	874.0	196.0	E	2,637.00	8 23/38	1 15/16	218.4	49.0
F	174.61	33 7/16	7 1/2	848.6	190.3	F	2,794.00	8 9/25	1 7/8	212.2	47.6
F#/Gb	185.00	32 1/2	7 5/16	824.9	184.9	F#/Gb	2,960.00	8 11/90	1 13/16	206.1	46.2
G	196.00	31 9/16	7 1/16	801.1	179.6	G	3,136.00	7 49/55	1 3/4	200.3	44.9
G#/Ab	207.70	30 11/16	6 7/8	778.8	174.6	G#/Ab	3,322.41	7 2/3	1 3/4	194.6	43.6
A	220.00	29 13/16	6 11/16	756.6	169.6	A	3,520.00	7 13/29	1 11/16	189.0	42.4
A#/Bb	233.10	28 15/16	6 1/2	734.4	164.7	A#/Bb	3,729.20	7 13/55	1 5/8	183.7	41.2
B	246.90	28 1/8	6 5/16	713.8	160.0	B	3,951.00	7 1/33	1 9/16	178.4	40.0
C4	261.60	27 5/16	6 1/8	693.2	155.4	C8	4,186.00	6 39/47	1 9/16	173.3	38.9
C#/Db	277.20	26 9/16	5 15/16	674.2	151.1	C#/Db	4,434.81	6 7/11	1 1/2	168.4	37.8
D	293.70	25 13/16	5 13/16	655.1	146.9	D	4,698.40	6 21/47	1 7/16	163.6	36.7
D#/Eb	311.10	25 1/16	5 5/8	636.1	142.6	D#/Eb	4,978.00	6 5/19	1 3/8	159.0	35.6
E	329.61	24 5/16	5 7/16	617.1	138.3	E	5,274.00	6 5/59	1 3/8	154.4	34.6
F	349.30	23 5/8	5 5/16	599.6	134.4	F	5,588.00	5 72/79	1 5/16	150.0	33.6
F#/Gb	370.00	23	5 3/16	583.7	130.9	F#/Gb	5,920.00	5 55/74	1 5/16	145.8	32.7
G	392.00	22 5/16	5	566.3	127.0	G	6,272.00	5 40/69	1 1/4	141.6	31.8
G#/Ab	415.30	21 11/16	4 7/8	550.4	123.4	G#/Ab	6,644.80	5 8/19	1 3/16	137.6	30.8
A	440.01	21 1/16	4 3/4	534.6	119.8	A	7,040.00	5 4/15	1 3/16	133.7	30.0
A#/Bb	466.20	20 7/16	4 9/16	518.7	116.3	A#/Bb	7,458.40	5 7/60	1 1/8	129.9	29.1
B	493.91	19 7/8	4 7/16	504.4	113.1	B	7,902.01	4 67/69	1 1/8	126.2	28.3
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	4 59/71	1 1/16	122.6	27.5

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 30mm Diameter

OD inches = **1.1811** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	80	17 15/16	2,030.4	455.2	C5	523.30	20	4 1/2	507.5	113.8
C#/Db	34.60	77 3/4	17 7/16	1,973.3	442.4	C#/Db	554.40	19 23/54	4 3/8	493.0	110.5
D	36.70	75 1/2	16 15/16	1,916.2	429.6	D	587.30	18 7/8	4 1/4	479.0	107.4
D#/Eb	38.90	73 5/16	16 7/16	1,860.7	417.2	D#/Eb	622.30	18 1/3	4 1/8	465.4	104.3
E	41.21	71 1/4	16	1,808.3	405.4	E	659.30	17 48/59	4	452.1	101.4
F	43.70	69 3/16	15 1/2	1,756.0	393.7	F	698.50	17 19/62	3 7/8	439.2	98.5
F#/Gb	46.30	67 1/4	15 1/16	1,706.8	382.7	F#/Gb	740.00	16 57/70	3 3/4	426.7	95.7
G	49.00	65 5/16	14 5/8	1,657.6	371.6	G	784.00	16 1/3	3 11/16	414.6	93.0
G#/Ab	51.90	63 1/2	14 1/4	1,611.6	361.3	G#/Ab	830.60	15 27/31	3 9/16	402.8	90.3
A	55.01	61 11/16	13 13/16	1,565.6	351.0	A	880.00	15 31/74	3 7/16	391.3	87.7
A#/Bb	58.30	59 7/8	13 7/16	1,519.6	340.7	A#/Bb	932.30	14 49/50	3 3/8	380.2	85.2
B	61.70	58 1/4	13 1/16	1,478.4	331.5	B	987.80	14 26/47	3 1/4	369.4	82.8
C2	65.40	56 9/16	12 11/16	1,435.6	321.9	C6	1,046.50	14 11/79	3 3/16	358.9	80.5
C#/Db	69.30	54 15/16	12 5/16	1,394.3	312.6	C#/Db	1,108.70	13 14/19	3 1/16	348.6	78.2
D	73.41	53 3/8	11 15/16	1,354.7	303.7	D	1,174.61	13 9/26	3	338.7	75.9
D#/Eb	77.80	51 7/8	11 5/8	1,316.6	295.2	D#/Eb	1,244.50	12 28/29	2 15/16	329.1	73.8
E	82.40	50 3/8	11 5/16	1,278.5	286.6	E	1,318.50	12 34/57	2 13/16	319.7	71.7
F	87.30	48 15/16	11	1,242.0	278.5	F	1,397.00	12 19/80	2 3/4	310.6	69.6
F#/Gb	92.50	47 9/16	10 11/16	1,207.1	270.6	F#/Gb	1,480.00	11 8/9	2 11/16	301.8	67.7
G	98.01	46 3/16	10 3/8	1,172.2	262.8	G	1,568.00	11 27/49	2 9/16	293.2	65.7
G#/Ab	103.80	44 7/8	10 1/16	1,138.9	255.3	G#/Ab	1,661.20	11 2/9	2 1/2	284.8	63.9
A	110.00	43 5/8	9 3/4	1,107.2	248.2	A	1,760.00	10 65/72	2 7/16	276.7	62.0
A#/Bb	116.50	42 3/8	9 1/2	1,075.5	241.1	A#/Bb	1,864.60	10 16/27	2 3/8	268.8	60.3
B	123.50	41 3/16	9 1/4	1,045.3	234.4	B	1,975.50	10 16/55	2 5/16	261.2	58.6
C3	130.81	40	8 15/16	1,015.2	227.6	C7	2,093.00	10	2 1/4	253.7	56.9
C#/Db	138.60	38 7/8	8 11/16	986.6	221.2	C#/Db	2,217.40	9 5/7	2 3/16	246.5	55.3
D	146.80	37 3/4	8 7/16	958.1	214.8	D	2,349.20	9 7/16	2 1/8	239.5	53.7
D#/Eb	155.60	36 11/16	8 1/4	931.1	208.8	D#/Eb	2,489.01	9 1/6	2 1/16	232.7	52.2
E	164.80	35 5/8	8	904.2	202.7	E	2,637.00	8 88/97	2	226.1	50.7
F	174.61	34 5/8	7 3/4	878.8	197.0	F	2,794.00	8 49/75	1 15/16	219.6	49.2
F#/Gb	185.00	33 5/8	7 9/16	853.4	191.3	F#/Gb	2,960.00	8 11/27	1 7/8	213.4	47.8
G	196.00	32 11/16	7 5/16	829.6	186.0	G	3,136.00	8 1/6	1 13/16	207.3	46.5
G#/Ab	207.70	31 3/4	7 1/8	805.8	180.7	G#/Ab	3,322.41	7 29/31	1 3/4	201.4	45.2
A	220.00	30 13/16	6 15/16	782.0	175.3	A	3,520.00	7 22/31	1 3/4	195.7	43.9
A#/Bb	233.10	29 15/16	6 11/16	759.8	170.4	A#/Bb	3,729.20	7 25/51	1 11/16	190.1	42.6
B	246.90	29 1/8	6 1/2	739.2	165.7	B	3,951.00	7 18/65	1 5/8	184.7	41.4
C4	261.60	28 1/4	6 5/16	717.0	160.7	C8	4,186.00	7 3/43	1 9/16	179.4	40.2
C#/Db	277.20	27 1/2	6 3/16	698.0	156.5	C#/Db	4,434.81	6 33/38	1 9/16	174.3	39.1
D	293.70	26 11/16	6	677.3	151.9	D	4,698.40	6 35/52	1 1/2	169.4	38.0
D#/Eb	311.10	25 15/16	5 13/16	658.3	147.6	D#/Eb	4,978.00	6 14/29	1 7/16	164.5	36.9
E	329.61	25 3/16	5 5/8	639.3	143.3	E	5,274.00	6 17/57	1 7/16	159.9	35.8
F	349.30	24 1/2	5 1/2	621.8	139.4	F	5,588.00	6 7/59	1 3/8	155.3	34.8
F#/Gb	370.00	23 3/4	5 5/16	602.8	135.1	F#/Gb	5,920.00	5 17/18	1 5/16	150.9	33.8
G	392.00	23 1/8	5 3/16	586.9	131.6	G	6,272.00	5 38/49	1 5/16	146.6	32.9
G#/Ab	415.30	22 7/16	5	569.5	127.7	G#/Ab	6,644.80	5 11/18	1 1/4	142.4	31.9
A	440.01	21 13/16	4 7/8	553.6	124.1	A	7,040.00	5 14/31	1 1/4	138.4	31.0
A#/Bb	466.20	21 3/16	4 3/4	537.7	120.6	A#/Bb	7,458.40	5 8/27	1 3/16	134.4	30.1
B	493.91	20 9/16	4 5/8	521.9	117.0	B	7,902.01	5 8/55	1 1/8	130.6	29.3
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	5	1 1/8	126.9	28.5

Caution, these values allow you to get close to the desired note (typically within 1%) but if you desire an exact note, cut slightly long and grind to the final frequency, typically not required for wind chimes. Do not use these calculations for an orchestra or a musical setting unless you are certain they use A4=440 Hz. An orchestra or symphony may brighten slightly and will typically tune for A4=442, 43 or 44. Symphony grade instruments are normally shipped with A4=442 Hz.

Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 32mm Diameter

OD inches = **1.2598** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	82 5/8	18 1/2	2,097.0	470.2	C5	523.30	20 13/20	4 5/8	524.1	117.5
C#/Db	34.60	80 5/16	18	2,038.3	457.0	C#/Db	554.40	20 1/16	4 1/2	509.2	114.2
D	36.70	78	17 1/2	1,979.6	443.8	D	587.30	19 34/69	4 3/8	494.7	110.9
D#/Eb	38.90	75 3/4	17	1,922.5	431.0	D#/Eb	622.30	18 59/63	4 1/4	480.6	107.8
E	41.21	73 9/16	16 1/2	1,867.0	418.6	E	659.30	18 33/83	4 1/8	466.9	104.7
F	43.70	71 7/16	16	1,813.1	406.5	F	698.50	17 7/8	4	453.6	101.7
F#/Gb	46.30	69 7/16	15 9/16	1,762.3	395.1	F#/Gb	740.00	17 19/52	3 7/8	440.7	98.8
G	49.00	67 1/2	15 1/8	1,713.2	384.1	G	784.00	16 27/31	3 13/16	428.2	96.0
G#/Ab	51.90	65 9/16	14 11/16	1,664.0	373.1	G#/Ab	830.60	16 9/23	3 11/16	416.0	93.3
A	55.01	63 11/16	14 1/4	1,616.4	362.4	A	880.00	15 61/66	3 9/16	404.2	90.6
A#/Bb	58.30	61 7/8	13 7/8	1,570.4	352.1	A#/Bb	932.30	15 41/87	3 7/16	392.7	88.0
B	61.70	60 1/8	13 1/2	1,526.0	342.1	B	987.80	15 1/33	3 3/8	381.5	85.5
C2	65.40	58 7/16	13 1/8	1,483.1	332.5	C6	1,046.50	14 44/73	3 1/4	370.6	83.1
C#/Db	69.30	56 3/4	12 3/4	1,440.3	322.9	C#/Db	1,108.70	14 3/16	3 3/16	360.1	80.7
D	73.41	55 1/8	12 3/8	1,399.1	313.7	D	1,174.61	13 47/60	3 1/16	349.8	78.4
D#/Eb	77.80	53 9/16	12	1,359.4	304.8	D#/Eb	1,244.50	13 25/64	3	339.9	76.2
E	82.40	52 1/16	11 11/16	1,321.3	296.2	E	1,318.50	13	2 15/16	330.2	74.0
F	87.30	50 9/16	11 5/16	1,283.3	287.7	F	1,397.00	12 23/36	2 13/16	320.8	71.9
F#/Gb	92.50	49 1/8	11	1,246.8	279.5	F#/Gb	1,480.00	12 12/43	2 3/4	311.6	69.9
G	98.01	47 11/16	10 11/16	1,210.3	271.4	G	1,568.00	11 66/71	2 11/16	302.8	67.9
G#/Ab	103.80	46 3/8	10 3/8	1,177.0	263.9	G#/Ab	1,661.20	11 36/61	2 5/8	294.2	66.0
A	110.00	45 1/16	10 1/8	1,143.7	256.4	A	1,760.00	11 19/73	2 1/2	285.8	64.1
A#/Bb	116.50	43 3/4	9 13/16	1,110.4	248.9	A#/Bb	1,864.60	10 78/83	2 7/16	277.7	62.2
B	123.50	42 1/2	9 1/2	1,078.7	241.8	B	1,975.50	10 49/78	2 3/8	269.7	60.5
C3	130.81	41 5/16	9 1/4	1,048.5	235.1	C7	2,093.00	10 14/43	2 5/16	262.1	58.8
C#/Db	138.60	40 1/8	9	1,018.4	228.3	C#/Db	2,217.40	10 2/63	2 1/4	254.6	57.1
D	146.80	39	8 3/4	989.8	221.9	D	2,349.20	9 50/67	2 3/16	247.4	55.5
D#/Eb	155.60	37 7/8	8 1/2	961.3	215.5	D#/Eb	2,489.01	9 15/32	2 1/8	240.3	53.9
E	164.80	36 13/16	8 1/4	934.3	209.5	E	2,637.00	9 1/5	2 1/16	233.5	52.3
F	174.61	35 3/4	8	907.3	203.4	F	2,794.00	8 89/95	2	226.8	50.9
F#/Gb	185.00	34 3/4	7 13/16	882.0	197.7	F#/Gb	2,960.00	8 28/41	1 15/16	220.4	49.4
G	196.00	33 3/4	7 9/16	856.6	192.0	G	3,136.00	8 27/62	1 7/8	214.1	48.0
G#/Ab	207.70	32 3/4	7 5/16	831.2	186.4	G#/Ab	3,322.41	8 17/87	1 13/16	208.0	46.6
A	220.00	31 7/8	7 1/8	809.0	181.4	A	3,520.00	7 51/53	1 13/16	202.1	45.3
A#/Bb	233.10	30 15/16	6 15/16	785.2	176.0	A#/Bb	3,729.20	7 64/87	1 3/4	196.3	44.0
B	246.90	30 1/16	6 3/4	763.0	171.1	B	3,951.00	7 17/33	1 11/16	190.7	42.8
C4	261.60	29 3/16	6 9/16	740.8	166.1	C8	4,186.00	7 22/73	1 5/8	185.3	41.5
C#/Db	277.20	28 3/8	6 3/8	720.2	161.5	C#/Db	4,434.81	7 3/32	1 9/16	180.0	40.4
D	293.70	27 9/16	6 3/16	699.5	156.8	D	4,698.40	6 33/37	1 9/16	174.9	39.2
D#/Eb	311.10	26 13/16	6	680.5	152.6	D#/Eb	4,978.00	6 16/23	1 1/2	169.9	38.1
E	329.61	26	5 13/16	659.9	147.9	E	5,274.00	6 1/2	1 7/16	165.1	37.0
F	349.30	25 1/4	5 11/16	640.8	143.7	F	5,588.00	6 23/72	1 7/16	160.4	36.0
F#/Gb	370.00	24 9/16	5 1/2	623.4	139.8	F#/Gb	5,920.00	6 6/43	1 3/8	155.8	34.9
G	392.00	23 7/8	5 3/8	605.9	135.9	G	6,272.00	5 55/57	1 5/16	151.4	33.9
G#/Ab	415.30	23 3/16	5 3/16	588.5	131.9	G#/Ab	6,644.80	5 66/83	1 5/16	147.1	33.0
A	440.01	22 1/2	5 1/16	571.1	128.0	A	7,040.00	5 46/73	1 1/4	142.9	32.0
A#/Bb	466.20	21 7/8	4 7/8	555.2	124.5	A#/Bb	7,458.40	5 39/83	1 1/4	138.8	31.1
B	493.91	21 1/4	4 3/4	539.3	120.9	B	7,902.01	5 11/35	1 3/16	134.9	30.2
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	5 12/73	1 3/16	131.1	29.4

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Chime length for a resonate rod unrestricted at both ends - A4=440Hz

Aluminum - 34mm Diameter

OD inches = **1.3386** | **Metal =** **Aluminum**

Values can vary slightly because of manufacturing tolerances. Length and hang point calculated for fundamental freq.

Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point	Note	Freq Hz	Length inches	Hang Point	Length mm	Hang Point
C1	32.70	85 1/8	19 1/16	2,160.5	484.4	C5	523.30	21 2/7	4 3/4	540.2	121.1
C#/Db	34.60	82 13/16	18 9/16	2,101.8	471.2	C#/Db	554.40	20 49/72	4 5/8	524.9	117.7
D	36.70	80 3/8	18	2,039.9	457.3	D	587.30	20 4/43	4 1/2	510.0	114.3
D#/Eb	38.90	78 1/16	17 1/2	1,981.2	444.2	D#/Eb	622.30	19 13/25	4 3/8	495.4	111.1
E	41.21	75 7/8	17	1,925.7	431.7	E	659.30	18 27/28	4 1/4	481.3	107.9
F	43.70	73 11/16	16 1/2	1,870.2	419.3	F	698.50	18 14/33	4 1/8	467.6	104.8
F#/Gb	46.30	71 9/16	16 1/16	1,816.3	407.2	F#/Gb	740.00	17 9/10	4	454.3	101.9
G	49.00	69 9/16	15 5/8	1,765.5	395.8	G	784.00	17 34/87	3 7/8	441.4	99.0
G#/Ab	51.90	67 9/16	15 1/8	1,714.7	384.4	G#/Ab	830.60	16 43/48	3 13/16	428.8	96.1
A	55.01	65 5/8	14 11/16	1,665.6	373.4	A	880.00	16 17/41	3 11/16	416.6	93.4
A#/Bb	58.30	63 3/4	14 5/16	1,618.0	362.7	A#/Bb	932.30	15 18/19	3 9/16	404.8	90.7
B	61.70	62	13 7/8	1,573.6	352.8	B	987.80	15 36/73	3 1/2	393.2	88.2
C2	65.40	60 3/16	13 1/2	1,527.6	342.5	C6	1,046.50	15 1/19	3 3/8	382.0	85.7
C#/Db	69.30	58 1/2	13 1/8	1,484.7	332.9	C#/Db	1,108.70	14 5/8	3 1/4	371.2	83.2
D	73.41	56 13/16	12 3/4	1,441.9	323.3	D	1,174.61	14 16/77	3 3/16	360.6	80.8
D#/Eb	77.80	55 3/16	12 3/8	1,400.7	314.0	D#/Eb	1,244.50	13 49/61	3 1/8	350.3	78.5
E	82.40	53 5/8	12	1,361.0	305.1	E	1,318.50	13 16/39	3	340.4	76.3
F	87.30	52 1/8	11 11/16	1,322.9	296.6	F	1,397.00	13 1/36	2 15/16	330.7	74.1
F#/Gb	92.50	50 5/8	11 3/8	1,284.9	288.1	F#/Gb	1,480.00	12 48/73	2 13/16	321.2	72.0
G	98.01	49 3/16	11	1,248.4	279.9	G	1,568.00	12 11/37	2 3/4	312.1	70.0
G#/Ab	103.80	47 13/16	10 3/4	1,213.5	272.1	G#/Ab	1,661.20	11 18/19	2 11/16	303.2	68.0
A	110.00	46 7/16	10 7/16	1,178.6	264.2	A	1,760.00	11 17/28	2 5/8	294.6	66.0
A#/Bb	116.50	45 1/8	10 1/8	1,145.3	256.8	A#/Bb	1,864.60	11 13/47	2 1/2	286.2	64.2
B	123.50	43 13/16	9 13/16	1,112.0	249.3	B	1,975.50	10 43/45	2 7/16	278.1	62.3
C3	130.81	42 9/16	9 9/16	1,080.2	242.2	C7	2,093.00	10 56/87	2 3/8	270.1	60.6
C#/Db	138.60	41 3/8	9 1/4	1,050.1	235.4	C#/Db	2,217.40	10 15/44	2 5/16	262.4	58.8
D	146.80	40 3/16	9	1,020.0	228.7	D	2,349.20	10 2/43	2 1/4	255.0	57.2
D#/Eb	155.60	39 1/16	8 3/4	991.4	222.3	D#/Eb	2,489.01	9 19/25	2 3/16	247.7	55.5
E	164.80	37 15/16	8 1/2	962.9	215.9	E	2,637.00	9 14/29	2 1/8	240.7	54.0
F	174.61	36 7/8	8 1/4	935.9	209.8	F	2,794.00	9 7/33	2 1/16	233.8	52.4
F#/Gb	185.00	35 13/16	8	908.9	203.8	F#/Gb	2,960.00	8 19/20	2	227.2	50.9
G	196.00	34 13/16	7 13/16	883.5	198.1	G	3,136.00	8 16/23	1 15/16	220.7	49.5
G#/Ab	207.70	33 13/16	7 9/16	858.2	192.4	G#/Ab	3,322.41	8 43/96	1 7/8	214.4	48.1
A	220.00	32 13/16	7 3/8	832.8	186.7	A	3,520.00	8 17/82	1 13/16	208.3	46.7
A#/Bb	233.10	31 7/8	7 1/8	809.0	181.4	A#/Bb	3,729.20	7 37/38	1 13/16	202.4	45.4
B	246.90	31	6 15/16	786.8	176.4	B	3,951.00	7 59/79	1 3/4	196.6	44.1
C4	261.60	30 1/8	6 3/4	764.6	171.4	C8	4,186.00	7 10/19	1 11/16	191.0	42.8
C#/Db	277.20	29 1/4	6 9/16	742.4	166.4	C#/Db	4,434.81	7 5/16	1 5/8	185.6	41.6
D	293.70	28 7/16	6 3/8	721.7	161.8	D	4,698.40	7 8/77	1 9/16	180.3	40.4
D#/Eb	311.10	27 5/8	6 3/16	701.1	157.2	D#/Eb	4,978.00	6 55/61	1 9/16	175.2	39.3
E	329.61	26 13/16	6	680.5	152.6	E	5,274.00	6 55/78	1 1/2	170.2	38.2
F	349.30	26 1/16	5 13/16	661.5	148.3	F	5,588.00	6 37/72	1 7/16	165.3	37.1
F#/Gb	370.00	25 5/16	5 11/16	642.4	144.0	F#/Gb	5,920.00	6 24/73	1 7/16	160.6	36.0
G	392.00	24 5/8	5 1/2	625.0	140.1	G	6,272.00	6 11/74	1 3/8	156.1	35.0
G#/Ab	415.30	23 7/8	5 3/8	605.9	135.9	G#/Ab	6,644.80	5 37/38	1 5/16	151.6	34.0
A	440.01	23 3/16	5 3/16	588.5	131.9	A	7,040.00	5 45/56	1 5/16	147.3	33.0
A#/Bb	466.20	22 9/16	5 1/16	572.6	128.4	A#/Bb	7,458.40	5 30/47	1 1/4	143.1	32.1
B	493.91	21 15/16	4 15/16	556.8	124.8	B	7,902.01	5 43/90	1 1/4	139.0	31.2
www.home.fuse.net/engineering/Chimes.htm						C9	8,367.01	5 11/34	1 3/16	135.1	30.3

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