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.