

Wheel Off-set and Backspacing

Backspacing is the measurement from the inner-most part of the wheel to the mounting surface.

Offset is the measurement from the middle of the wheel to the mounting surface.

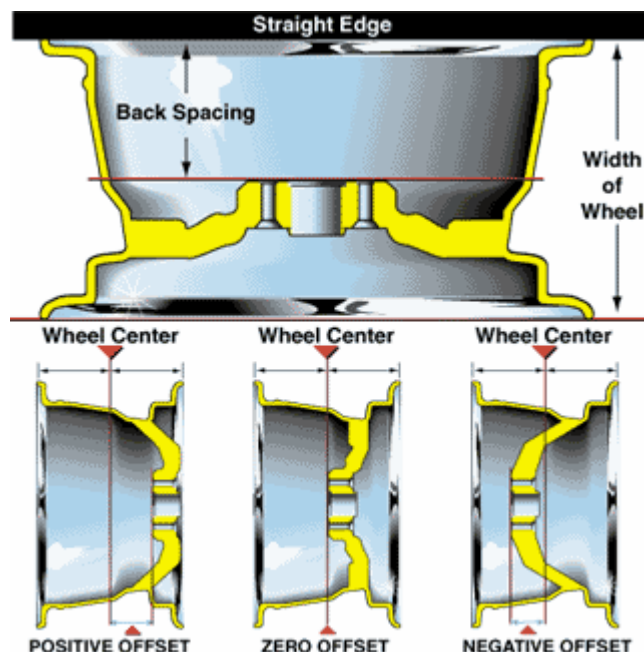
If you have a 15" x 8" wheel with a zero offset, how would you figure the backspacing?

The first step is to find the middle of the wheel

An 8-inch wide wheel actually measures 9-inches in total width as you have a ½-inch lip on each side.

If you have an 8" wheel, add 1" making it a 9" outer measurement and divide that by 2 equaling 4.5". Which is the middle of the wheel.

A wheel that has a zero offset means that the mounting plate is in the center of the wheel. So a 15" x 8" wheel with a zero offset has a 4.5" backspacing.



Example - 17 x 8.5" + 20 mm offset:

1. $8.5" + 1.0" = 9.5"$
2. $9.5" \div 2 = 4.75"$
3. Offset is + 20 mm (Convert mm to inches):
4. $20\text{mm} \div 25.4 = .787$
5. The middle of the wheel is 4.75
6. $4.75 + .787 = 5.53$

Ans: Total backspacing = 5.53"

Reverse Example - 17 x 9.5" with a 6.25" backspacing:

1. $9.5" + 1.0" = 10.5"$
2. $10.5" \div 2 = 5.25"$
3. $6.25" - 5.25" = 1.0"$ of offset

Ans: 1.0" = 25.4 mm of offset

Conversion Chart

Inches	=	Millimeters (mm)	Inches	=	Millimeters (mm)
1"	=	25.4 mm	1/2"	=	12.70 mm
3/4"	=	19.05 mm	1/4"	=	6.35 mm

Inches to millimeters: Multiply inches by 25.4. **Millimeters to inches:** Divide millimeters by 25.4.

Wheel Width												
Offset		6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11
	0	3.5	3.75	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6
	6	3.73	3.98	4.23	4.48	4.73	4.98	5.23	5.48	5.73	5.98	6.23
	10	3.89	4.14	4.39	4.64	4.89	5.14	5.39	5.64	5.89	6.14	6.39
	12	3.97	4.22	4.47	4.72	4.97	5.22	5.47	5.72	5.97	6.22	6.47
	14	4.05	4.3	4.55	4.8	5.05	5.3	5.55	5.8	6.05	6.3	6.55
	15	4.09	4.34	4.59	4.84	5.09	5.34	5.59	5.84	6.09	6.34	6.59
	18	4.2	4.45	4.7	4.95	5.2	5.45	5.7	5.95	6.2	6.45	6.7
	19	4.24	4.49	4.74	4.99	5.24	5.49	5.74	5.99	6.24	6.49	6.74
	20	4.28	4.53	4.78	5.03	5.28	5.53	5.78	6.03	6.28	6.53	6.78
	25	4.48	4.73	4.98	5.23	5.48	5.73	5.98	6.23	6.48	6.73	6.98
	30	4.68	4.93	5.18	5.43	5.68	5.93	6.18	6.43	6.68	6.93	7.18
	35	4.87	5.12	5.37	5.62	5.87	6.12	6.37	6.62	6.87	7.12	7.37
	36	4.91	5.16	5.41	5.66	4.91	6.16	6.41	6.66	6.91	7.16	7.41
	37	4.95	5.2	5.45	5.7	5.95	6.2	6.45	6.7	6.95	7.2	7.45
	38	4.99	5.24	5.49	5.74	5.99	6.24	6.49	6.74	6.99	7.24	7.49
	40	5.07	5.32	5.57	5.82	6.07	6.32	6.57	6.82	7.07	7.32	7.57
	42	5.15	5.4	5.65	5.9	6.15	6.4	6.65	6.9	7.15	7.4	7.65
	44	5.23	5.48	5.73	5.98	6.23	6.48	6.73	6.98	7.23	7.48	7.73
	45	5.27	5.52	5.77	6.02	6.27	6.52	6.77	7.02	7.27	7.52	7.77
	47	5.35	5.6	5.85	6.1	6.35	6.6	6.85	7.1	7.35	7.6	7.85
	48	5.38	5.63	5.88	6.13	6.38	6.63	6.88	7.13	7.38	7.63	7.88
	49	5.42	5.67	5.92	6.17	6.42	6.67	6.92	7.17	7.42	7.67	7.92
	50	5.46	5.71	5.96	6.21	6.46	6.71	6.96	7.21	7.46	7.71	7.96
	51	5.5	5.75	6	6.25	6.5	6.75	7	7.25	7.5	7.75	8
	52	5.54	5.79	6.04	6.29	6.54	6.79	7.04	7.29	7.54	7.79	8.04
	54	5.62	5.87	6.12	6.37	6.62	6.87	7.12	7.37	7.62	7.87	8.12
	55	5.66	5.91	6.16	6.41	6.66	6.91	7.16	7.41	7.66	7.91	8.16

Backspace												
Wheel Width		3.25	3.5	3.75	4	4.25	4.5	5	5.25	5.5	5.75	6
	5.5	0	6	12	19	25	32	44	52	57	63	69
	6	-6.4	0	6	12	19	25	38	44	51	57	63
	6.5	-12	-6	0	6	12	19	32	38	44	51	57
	7	-19	-12	-6	0	6	12	25	32	38	44	51
	8	-32	-25	-19	-12	-6	0	12	19	25	32	38
	8.5	-38	-32	-25	-19	-12	-6	6	12	19	25	32
	9	-44	-38	-32	-25	-19	-12	0	6	12	19	25
	9.5	-51	-44	-38	-32	-25	-19	-6	0	6	12	19
	10	-57	-51	-44	-38	-32	-25	-12	-6	0	6	12
	10.5	-63	-57	-51	-44	-38	-32	-19	-12	-6	0	6
	11	-69	-63	-57	-51	-44	-38	-25	-19	-12	-6	0
	12	-75	-69	-63	-57	-51	-44	-38	-32	-25	-19	-6