



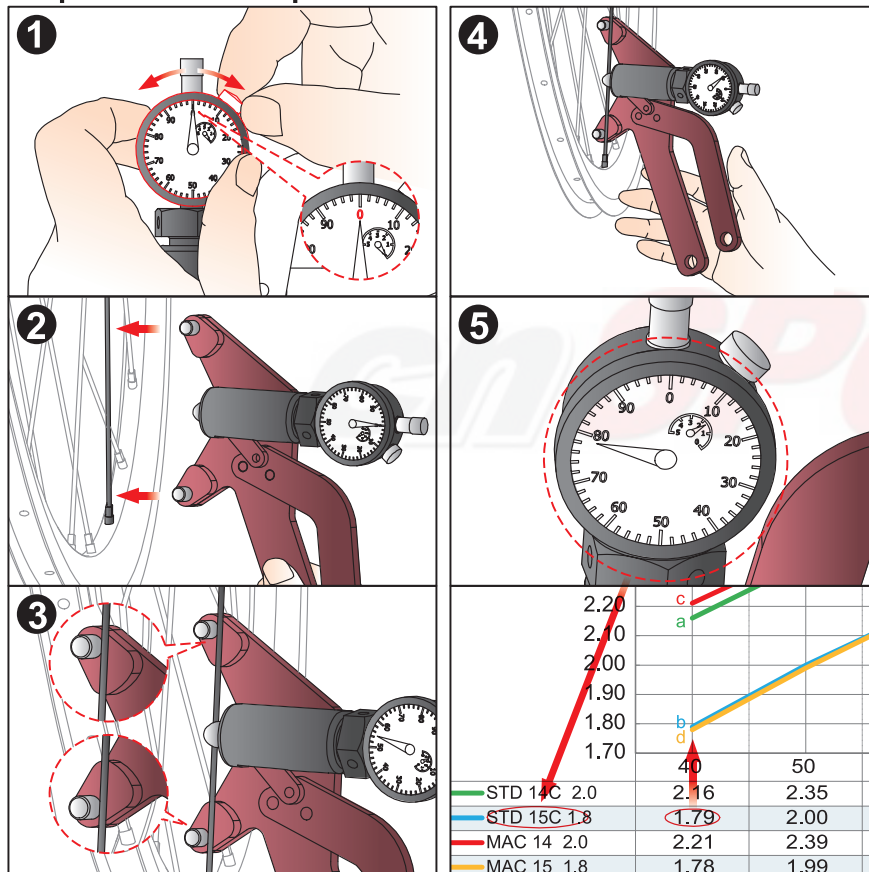
Rev. 1.0

TEN'SEE 22

***cn*SPOKE**

TENSION GAUGE

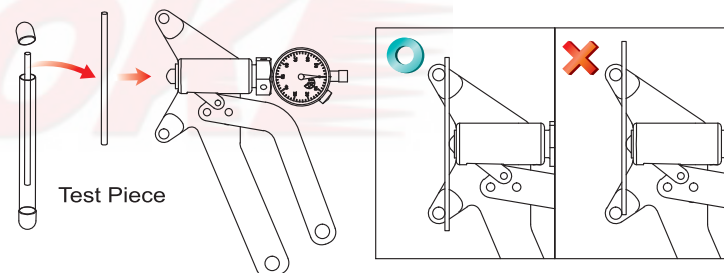
Maunal Steps to Measure Spoke Tension



► Precision Check

Under some circumstances or after periods of use, gauge may need to be re-checked for its precision. Precision Check can be performed by measuring "test piece" to obtain reading number. If the number is **within** "Factory Parameters" indicated below, congratulations, that means the gauge is in **good condition**. If the number is **beyond** "Factory Parameters", this gauge may **need to be serviced**.

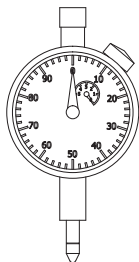
Please contact service center or the seller that you purchased.



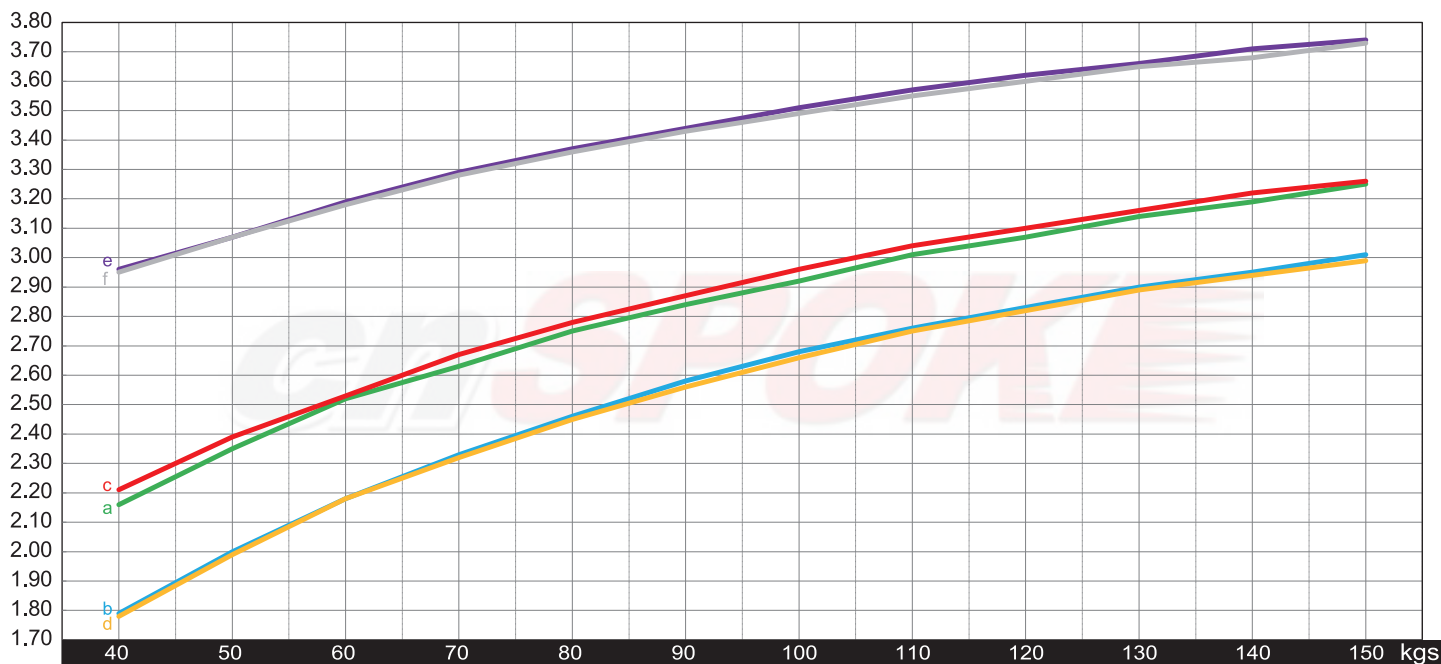
Date / Factory Parameters

	NG<	~	<NG
	NG<	~	<NG
	NG<	~	<NG
	NG<	~	<NG

Plain Gauge



Measured value
(mm)

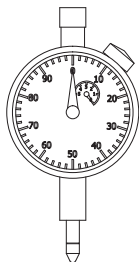


	40	50	60	70	80	90	100	110	120	130	140	150
a	2.16	2.35	2.52	2.63	2.75	2.84	2.92	3.01	3.07	3.14	3.19	3.25
b	1.79	2.00	2.18	2.33	2.46	2.58	2.68	2.76	2.83	2.90	2.95	3.01
c	2.21	2.39	2.53	2.67	2.78	2.87	2.96	3.04	3.10	3.16	3.22	3.26
d	1.78	1.99	2.18	2.32	2.45	2.56	2.66	2.75	2.82	2.89	2.94	2.99
e	2.96	3.07	3.19	3.29	3.37	3.44	3.51	3.57	3.62	3.66	3.71	3.74
f	2.95	3.07	3.18	3.28	3.36	3.43	3.49	3.55	3.60	3.65	3.68	3.73

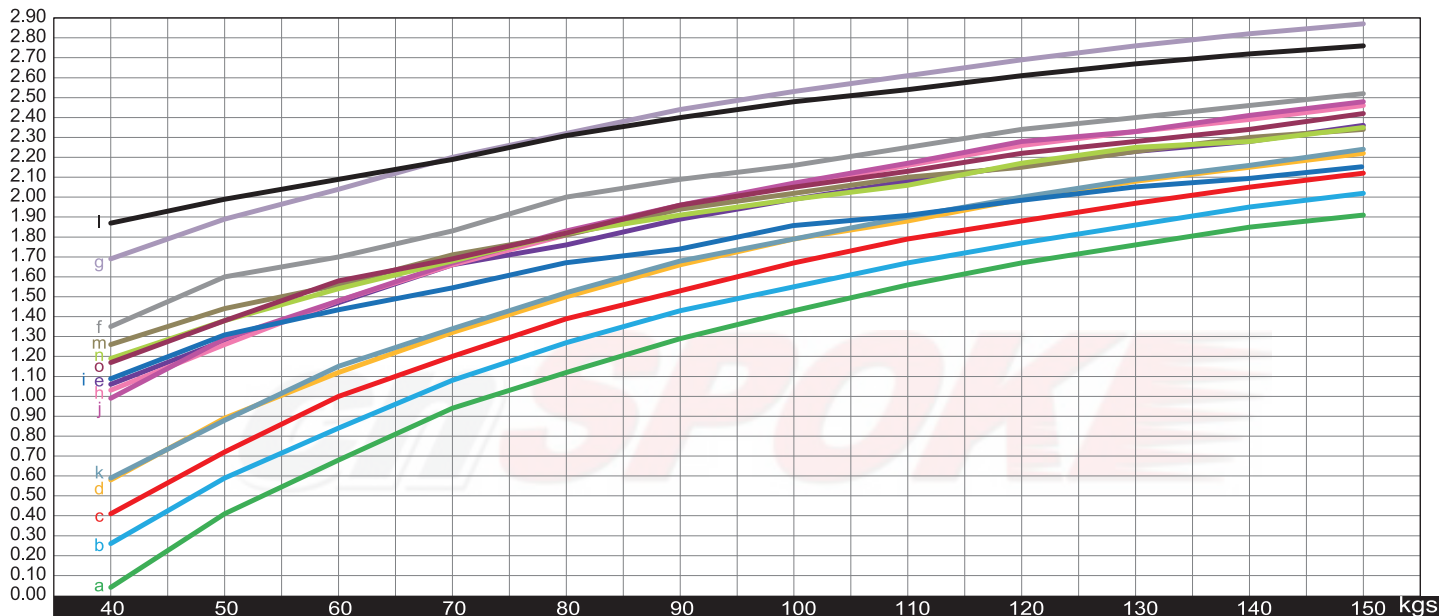
1 kgf = 9.8 N = 2.204 lbf

Spoke Tension (kgf)

Aero Spoke



Measured value
(mm)

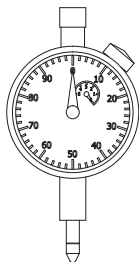


		40	50	60	70	80	90	100	110	120	130	140	150	kgs
a	Aero 330 2.0-2.1*0.8-2.0	0.04	0.41	0.68	0.94	1.12	1.29	1.43	1.56	1.67	1.76	1.85	1.91	
b	Aero 360 2.0-2.1*0.85-2.0	0.26	0.59	0.84	1.08	1.27	1.43	1.55	1.67	1.77	1.86	1.95	2.02	
c	Aero 424 2.0-2.2*0.9-2.0	0.41	0.72	1.00	1.20	1.39	1.53	1.67	1.79	1.88	1.97	2.05	2.12	
d	Aero 464 2.0-2.2*1.0-2.0	0.58	0.89	1.12	1.32	1.50	1.66	1.79	1.88	1.99	2.08	2.15	2.22	
e	Aero 434 2.0-2.2*1.1-2.0	1.06	1.28	1.47	1.66	1.76	1.89	1.99	2.08	2.16	2.23	2.28	2.36	
f	Aero 454 2.0-2.2*1.2-2.0	1.35	1.60	1.70	1.83	2.00	2.09	2.16	2.25	2.34	2.40	2.46	2.52	
g	Aero 474 2.0-2.3*1.5-2.0	1.69	1.89	2.04	2.20	2.32	2.44	2.53	2.61	2.69	2.76	2.82	2.87	
h	Aero 494 2.0-3.0*1.2-2.0	1.03	1.26	1.48	1.66	1.81	1.95	2.06	2.16	2.26	2.33	2.39	2.46	
i	Aero 494C 2.0-3.5*1.1-2.0	1.09	1.35	1.50	1.63	1.78	1.86	2.00	2.06	2.15	2.23	2.28	2.35	
j	Aero 585 2.0-2.3*1.2-2.0	0.99	1.29	1.48	1.67	1.83	1.96	2.07	2.17	2.28	2.33	2.41	2.48	
k	Aero 595 2.0-3.0*1.0-2.0	0.59	0.88	1.15	1.34	1.52	1.68	1.79	1.90	2.00	2.09	2.16	2.24	
l	Aero 374T 2.3-1.4*3.2-2.0T	1.87	1.99	2.09	2.19	2.31	2.40	2.48	2.54	2.61	2.67	2.72	2.76	
m	Aero 384T 2.3-1.3*4.3-2.0T	1.26	1.44	1.56	1.71	1.81	1.94	2.02	2.10	2.17	2.23	2.30	2.34	
n	Aero 394T 2.3-1.1*5.0-2.0T	1.19	1.38	1.54	1.68	1.82	1.91	1.99	2.06	2.17	2.25	2.28	2.35	
o	Aries 384 2.3-1.2*2.5-2.0	1.17	1.38	1.58	1.69	1.82	1.96	2.05	2.13	2.22	2.28	2.34	2.42	

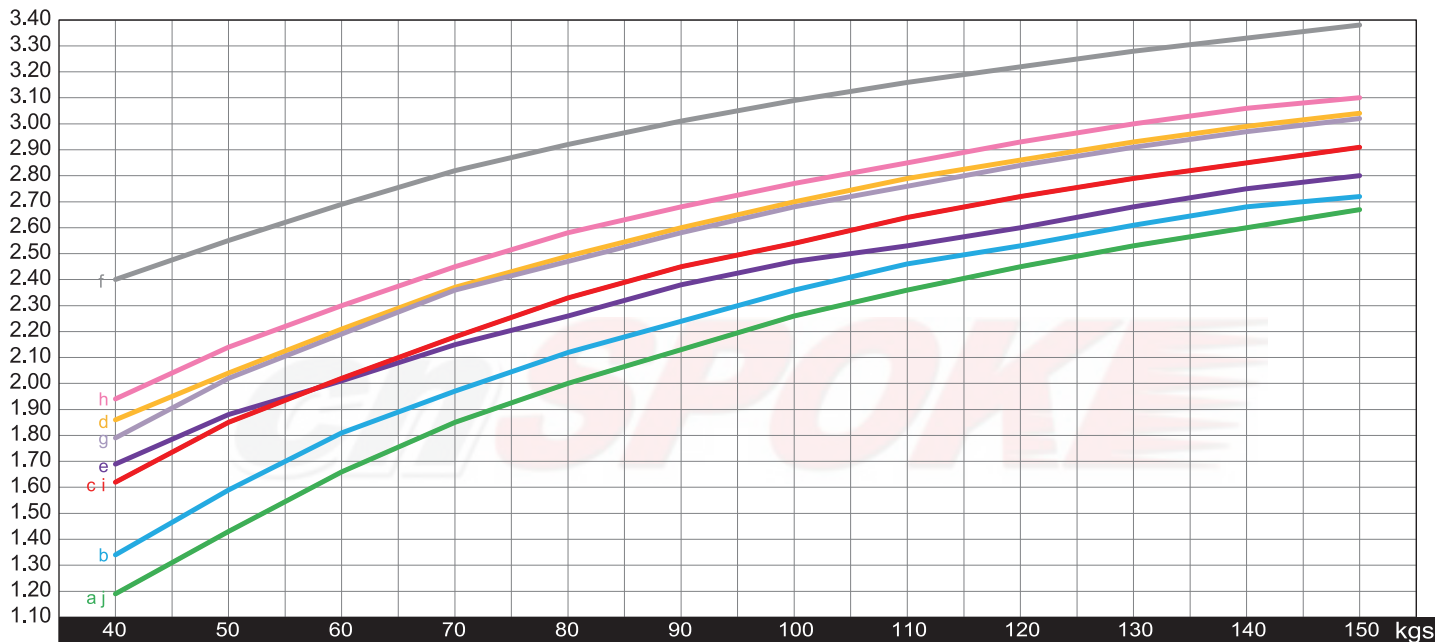
1 kgf = 9.8 N = 2.204 lbf

Spoke Tension (kgf)

Butted Spoke



Measured value
(mm)



1 kgf = 9.8 N = 2.204 lbf

Spoke Tension (kgf)

Model	Dimension	40	50	60	70	80	90	100	110	120	130	140	150	kgs
STD 14C	2.0	2.16	2.35	2.52	2.63	2.75	2.84	2.92	3.01	3.07	3.14	3.19	3.25	
STD 15C	1.8	1.79	2.00	2.18	2.33	2.46	2.58	2.68	2.76	2.83	2.90	2.95	3.01	
MAC 14	2.0	2.21	2.39	2.53	2.67	2.78	2.87	2.96	3.04	3.10	3.16	3.22	3.26	
MAC 15	1.8	1.78	1.99	2.18	2.32	2.45	2.56	2.66	2.75	2.82	2.89	2.94	2.99	
CN134T	2.3-2.0T	2.96	3.07	3.19	3.29	3.37	3.44	3.51	3.57	3.62	3.66	3.71	3.74	
M134T	2.3-2.0T	2.95	3.07	3.18	3.28	3.36	3.43	3.49	3.55	3.6	3.65	3.68	3.73	
DB 474	2.0-1.5-2.0	1.19	1.43	1.66	1.85	2.00	2.13	2.26	2.36	2.45	2.53	2.60	2.67	
DB 464	2.0-1.6-2.0	1.34	1.59	1.81	1.97	2.12	2.24	2.36	2.46	2.53	2.61	2.68	2.72	
DB 404	2.0-1.7-2.0	1.62	1.85	2.02	2.18	2.33	2.45	2.54	2.64	2.72	2.79	2.85	2.91	
DB 454	2.0-1.8-2.0	1.86	2.04	2.21	2.37	2.49	2.60	2.70	2.79	2.86	2.93	2.99	3.04	
DB 565	1.8-1.6-1.8	1.69	1.88	2.01	2.15	2.26	2.38	2.47	2.53	2.60	2.68	2.75	2.80	
OP 344	2.3-2.0-2.0	2.40	2.55	2.69	2.82	2.92	3.01	3.09	3.16	3.22	3.28	3.33	3.38	
OP 455	2.0-1.8-1.8	1.79	2.02	2.19	2.36	2.47	2.58	2.68	2.76	2.84	2.91	2.97	3.02	
TB 354	2.3-1.8-2.0	1.94	2.14	2.30	2.45	2.58	2.68	2.77	2.85	2.93	3.00	3.06	3.10	
TB 405	2.0-1.7-1.8	1.62	1.85	2.02	2.18	2.33	2.45	2.54	2.64	2.72	2.79	2.85	2.91	
TB 475	2.0-1.5-1.8	1.19	1.43	1.66	1.85	2.00	2.13	2.26	2.36	2.45	2.53	2.60	2.67	
Aero 330	2.0-2.1*0.8-2.0	0.04	0.41	0.68	0.94	1.12	1.29	1.43	1.56	1.67	1.76	1.85	1.91	
Aero 360	2.0-2.1*0.85-2.0	0.26	0.59	0.84	1.08	1.27	1.43	1.55	1.67	1.77	1.86	1.95	2.02	
Aero 424	2.0-2.2*0.9-2.0	0.41	0.72	1.00	1.20	1.39	1.53	1.67	1.79	1.88	1.97	2.05	2.12	
Aero 464	2.0-2.2*1.0-2.0	0.58	0.89	1.12	1.32	1.50	1.66	1.79	1.88	1.99	2.08	2.15	2.22	
Aero 434	2.0-2.2*1.1-2.0	1.06	1.28	1.47	1.66	1.76	1.89	1.99	2.08	2.16	2.23	2.28	2.36	
Aero 454	2.0-2.2*1.2-2.0	1.35	1.60	1.70	1.83	2.00	2.09	2.16	2.25	2.34	2.40	2.46	2.52	
Aero 474	2.0-2.3*1.5-2.0	1.69	1.89	2.04	2.20	2.32	2.44	2.53	2.61	2.69	2.76	2.82	2.87	
Aero 494	2.0-3.0*1.2-2.0	1.03	1.26	1.48	1.66	1.81	1.95	2.06	2.16	2.26	2.33	2.39	2.46	
Aero 494C	2.0-3.5*1.1-2.0	1.09	1.35	1.5	1.63	1.78	1.86	2.00	2.06	2.15	2.23	2.28	2.35	
Aero 585	2.0-2.3*1.2-2.0	0.99	1.29	1.48	1.67	1.83	1.96	2.07	2.17	2.28	2.33	2.41	2.48	
Aero 595	2.0-3.0*1.0-2.0	0.59	0.88	1.15	1.34	1.52	1.68	1.79	1.90	2.00	2.09	2.16	2.24	
Aero 374T	2.3-1.4*3.2-2.0T	1.87	1.99	2.09	2.19	2.31	2.40	2.48	2.54	2.61	2.67	2.72	2.76	
Aero 384T	2.3-1.3*4.3-2.0T	1.26	1.44	1.56	1.71	1.81	1.94	2.02	2.10	2.15	2.23	2.30	2.34	
Aero 394T	2.3-1.1*5.0-2.0T	1.19	1.38	1.54	1.68	1.82	1.91	1.99	2.06	2.17	2.25	2.28	2.35	
Aries 384	2.3-1.2*2.5-2.0	1.17	1.38	1.58	1.69	1.82	1.96	2.05	2.13	2.22	2.28	2.34	2.42	

More Models

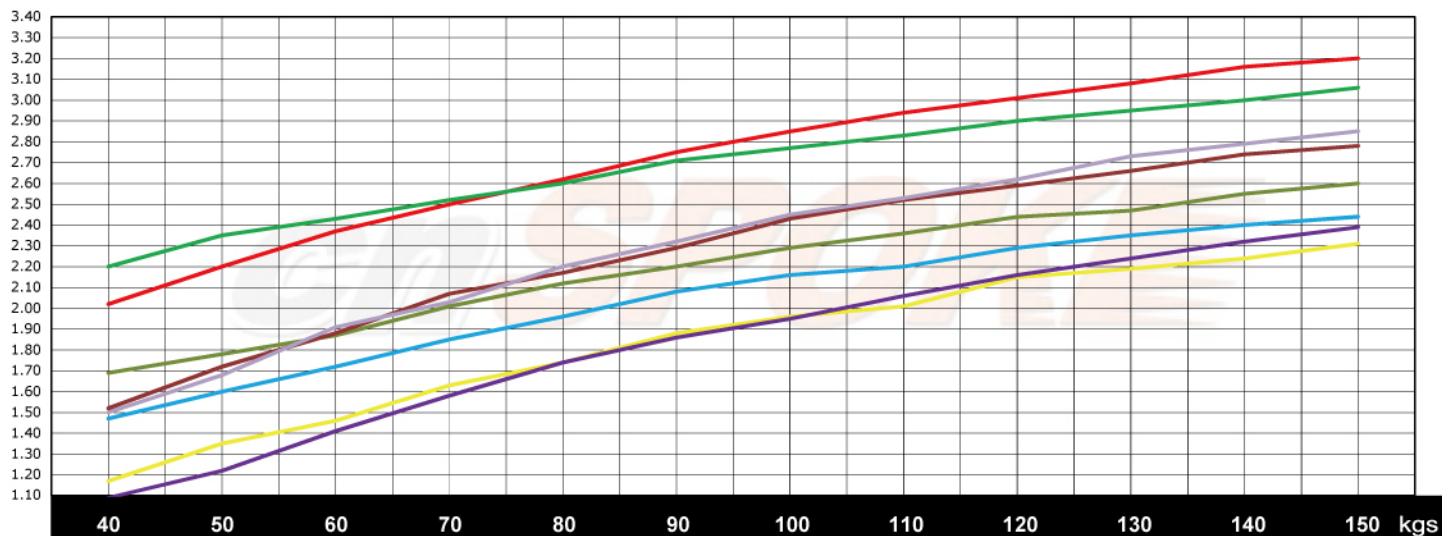
TENSION CHART 2

Model	40	50	60	70	80	90	100	110	120	130	140	150	kg
Aero 416	1.17	1.35	1.46	1.63	1.74	1.88	1.96	2.01	2.15	2.19	2.24	2.31	
Aero 417	1.47	1.60	1.72	1.85	1.96	2.08	2.16	2.20	2.29	2.35	2.40	2.44	
Aero 418	1.69	1.78	1.87	2.01	2.12	2.2	2.29	2.36	2.44	2.47	2.55	2.6	
Ti 14C	2.02	2.20	2.37	2.50	2.62	2.75	2.85	2.94	3.01	3.08	3.16	3.20	
Ti-Aero	1.52	1.72	1.88	2.07	2.17	2.29	2.43	2.52	2.59	2.66	2.74	2.78	
Ti-Duo Areo	1.09	1.22	1.41	1.58	1.74	1.86	1.95	2.06	2.16	2.24	2.32	2.39	
Ti-Duo	1.50	1.68	1.91	2.03	2.20	2.32	2.45	2.53	2.62	2.73	2.79	2.85	
TB 304	2.20	2.35	2.43	2.52	2.60	2.71	2.77	2.83	2.90	2.95	3.00	3.06	

More
Models



Measured value
(mm)



Aero 416	1.17	1.35	1.46	1.63	1.74	1.88	1.96	2.01	2.15	2.19	2.24	2.31
Aero 417	1.47	1.60	1.72	1.85	1.96	2.08	2.16	2.20	2.29	2.35	2.40	2.44
Aero 418	1.69	1.78	1.87	2.01	2.12	2.2	2.29	2.36	2.44	2.47	2.55	2.6
Ti 14C	2.02	2.20	2.37	2.50	2.62	2.75	2.85	2.94	3.01	3.08	3.16	3.20
Ti-Aero	1.52	1.72	1.88	2.07	2.17	2.29	2.43	2.52	2.59	2.66	2.74	2.78
Ti-Duo Areo	1.09	1.22	1.41	1.58	1.74	1.86	1.95	2.06	2.16	2.24	2.32	2.39
Ti-Duo	1.50	1.68	1.91	2.03	2.20	2.32	2.45	2.53	2.62	2.73	2.79	2.85
TB 304	2.20	2.35	2.43	2.52	2.60	2.71	2.77	2.83	2.90	2.95	3.00	3.06

1 kgf = 9.8 N = 2.204 lbf

Spoke Tension (kgf)