

專業張力計 使用說明書

PROFESSIONAL SPOKE TENSION METER INSTRUCTION



TB-ST11

相關工具介紹:
TOOLS FOR WHEEL & SPOKE



TB-PF36 Professional mechanic wheel truing stand (W/ dial indicator)



TB-1930 Wheel alignment gauge



TB-SW20 Spoke wrench
3.2 mm.



TB-SW22 Spoke wrench
3.5 mm.



TB-5502 Spoke key
0.9/1.1/1.3/1.9 mm.



TB-5523 B-shaped spoke wrench
3.2/3.3/3.5/4.0 mm.



TB-5516 Spoke wrench
3.2/3.5 mm.



TB-5517 Spoke wrench
For Shimano® 4.3/4.4 mm.



TB-5518 Spoke wrench
For both Mavic® 9 mm threaded eyelets and Mavic® 6 splines of integrated nipples with 5.65 mm outside diameter and 7 mm thread nipple.



TB-5540 Spoke wrench
3.2 mm.

TB-5550 Spoke wrench
3.3 mm.

TB-5555 Spoke wrench
3.5 mm.

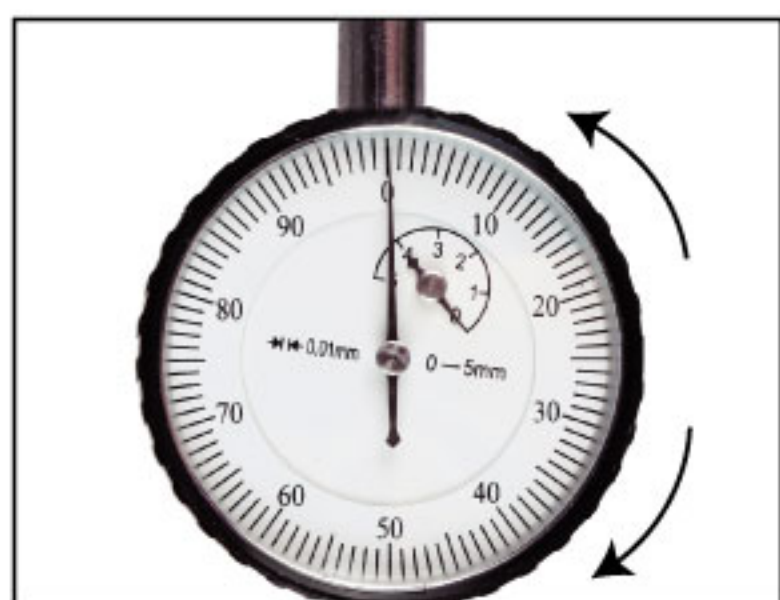
TB-5596 Spoke wrench
For Mavic® 6 splines of integrated nipples with 5.65 mm outside diameter and 7 mm thread nipple.

TB-5598 Spoke wrench
For Mavic® M7-spline nipples with a 6.4 mm outside spline diameter.

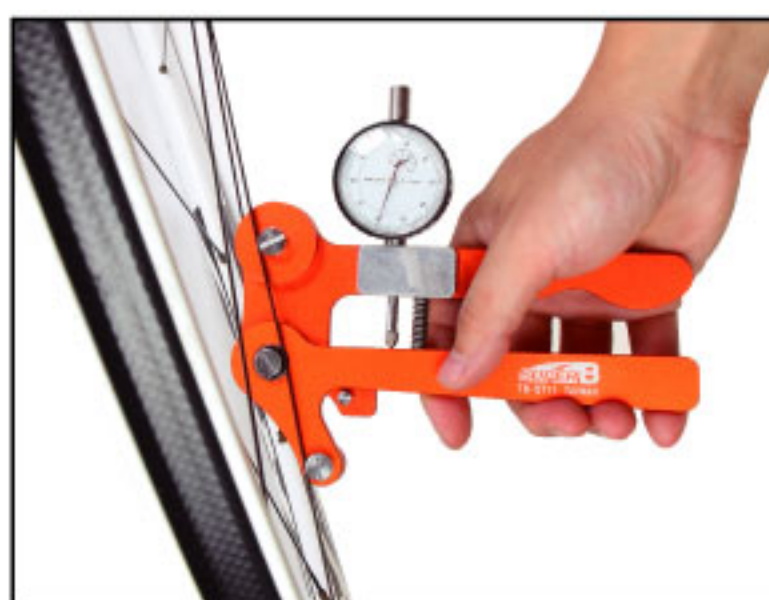
Convertible Table

Measured Value [mm] 量測數值

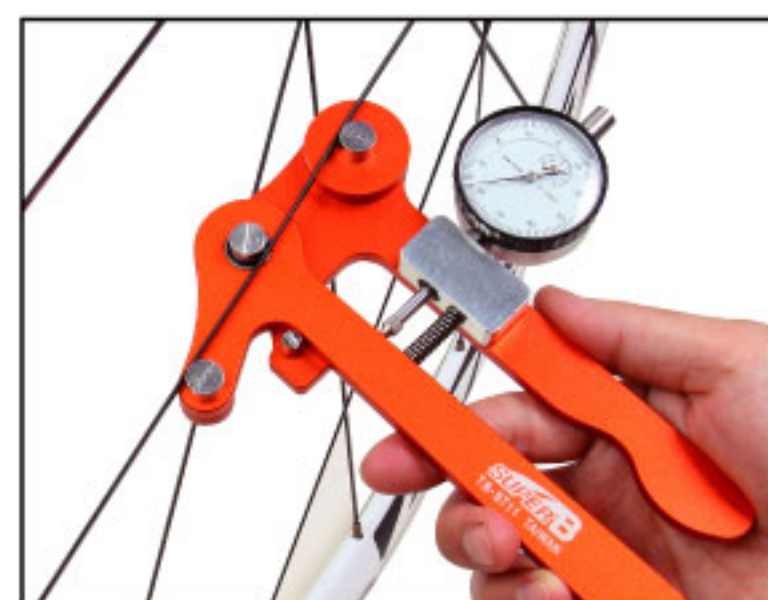
SPOKE SIZE	圓形幅條 Butted Spokes							扁形幅條 Bladed Spokes											
	2.3	2	1.8	1.7	1.6	1.5		4.5*0.95	3.3*1.1	3.2*1.0	2.8*1.3	2.3*1.2	2.3*0.9	2.25*1.2	2.2*0.9	2.0*0.95	2.0*0.9	1.7*0.9	
Spoke Tension [kgf] 張力	30	3.03	2.14	1.62	1.39	1.25	1.11	0.72	0.86	0.74	1.08	1.00	0.51	0.78	0.42	0.51	0.42	0.46	
	40	3.12	2.32	1.83	1.58	1.42	1.35	0.85	0.96	0.87	1.24	1.18	0.64	0.95	0.58	0.65	0.57	0.60	
	50	3.27	2.47	2.00	1.72	1.61	1.52	0.97	1.11	1.02	1.39	1.32	0.76	1.11	0.71	1.77	0.72	1.72	
	60	3.37	2.60	2.17	1.86	1.78	1.67	1.08	1.22	1.13	1.51	1.44	0.86	1.25	0.85	0.88	0.78	0.83	
	70	3.41	2.72	2.28	2.00	1.91	1.80	1.17	1.33	1.23	1.62	1.56	0.96	1.37	0.92	0.99	0.89	0.93	
	80	3.57	2.81	2.40	2.12	2.05	1.91	1.24	1.41	1.31	1.72	1.66	1.06	1.46	1.02	1.08	0.99	1.03	
	90	3.69	2.90	2.48	2.22	2.16	2.03	1.31	1.51	1.40	1.81	1.74	1.14	1.54	1.11	1.15	1.07	1.10	
	100	3.71	3.00	2.60	2.33	2.23	2.10	1.38	1.57	1.46	1.89	1.81	1.21	1.62	1.19	1.22	1.14	1.17	
	110	3.76	3.06	2.65	2.41	2.30	2.18	1.45	1.65	1.52	1.95	1.87	1.27	1.69	1.26	1.29	1.20	1.24	
	120	3.86	3.12	2.72	2.48	2.37	2.24	1.50	1.70	1.58	2.01	1.59	1.33	1.75	1.31	1.35	1.26	1.29	
	130	3.98	3.18	2.79	2.54	2.41	2.30	1.54	1.75	1.62	2.06	1.99	1.38	1.83	1.37	1.40	1.33	1.35	
	140	4.01	3.22	2.84	2.60	2.47	2.35	1.60	1.81	1.67	2.12	2.06	1.44	1.87	1.42	1.45	1.38	1.40	
	150	4.07	3.28	2.89	2.65	2.52	2.40	1.64	1.85	1.71	2.17	2.10	1.49	1.92	1.46	1.50	1.42	1.43	
	160	4.10	3.33	2.94	2.69	2.57	2.45	1.68	1.89	1.76	2.22	2.14	1.52	1.96	1.50	1.53	1.47	1.48	
	170	4.13	3.37	2.98	2.74	2.60	2.48	1.70	1.92	1.80	2.26	2.19	1.56	2.01	1.54	1.57	1.49	1.51	
	180	4.17	3.40	3.03	2.78	2.66	2.53	1.74	1.97	1.83	2.30	2.23	1.59	2.06	1.58	1.60	1.57	1.55	
	190	4.19	3.44	3.06	2.82	2.68	2.56	1.78	1.99	1.86	2.33	2.26	1.62	2.08	1.62	1.64	1.57	1.58	
	200	4.24	3.48	3.10	2.85	2.70	2.58	1.80	2.03	1.88	2.35	2.29	1.65	2.12	1.65	1.66	1.60	1.61	
	210	4.26	3.51	3.12	2.88	2.75	2.60	1.82	2.06	1.91	2.38	2.34	1.68	2.14	1.70	1.68	1.62	1.63	



- ① 使用前量錶歸零
The dial gauge has to be set to rest at the zero position before performing a measurement.



- ② 水平握持張力計量測
Hold the Professional Spoke Tension Meter horizontally and place the spoke between two fixed studs.



- ③ 量測幅條中段
圓形幅條請測量最小圓徑尺寸
扁形幅條請測量最窄尺寸(厚度),
-With butted spokes, position the fixed studs to rest on the narrowest portion of spoke.
-With aero/bladed spokes, position the fixed studs to rest against the wide, flat side of the spoke.



(2.0 mm butted spoke)

張力 Spoke Tension (kgf)	量測數值 Measured Value (mm)
60	2.60
70	2.72
80	2.81
90	2.90
100	3.00
110	3.06
120	3.12
130	3.18

- ④ 張力數據判讀/對照表讀取
例如:以2 mm 圓鋼絲
→看百分表數據 3.00
→得知張力數值100 kgf
Read the dial gauge
For example: 2 mm butted spokes.
→Read the dial gauge, 3.00.
→Get the tension 100 kgf from convertible table.

●張力計校正基準:

使用 2.0 mm 不銹鋼鋼絲時, 張力 100 kgf = 測量數值 3.00

Calibration

Calibrat the Professional Spoke Tension Meter by a 2.0 mm stainless steel spoke with 100 kgf spoke tension=measured value 3.00.

●嚴禁自行調整, 請送回代理商或製造商校正, 代理商將酌收費用

Please contact local distributor if there is any problem of the product. Return the product to authorized distributor or manufacturer for calibration, distributor will recalibrate and charge for a reasonable cost.

●注意!

1.本產品保固1年自購買日期起算

2.下列非保固範圍:

- 正常零件損耗
- 不正確的維護、使用、修理或校正等

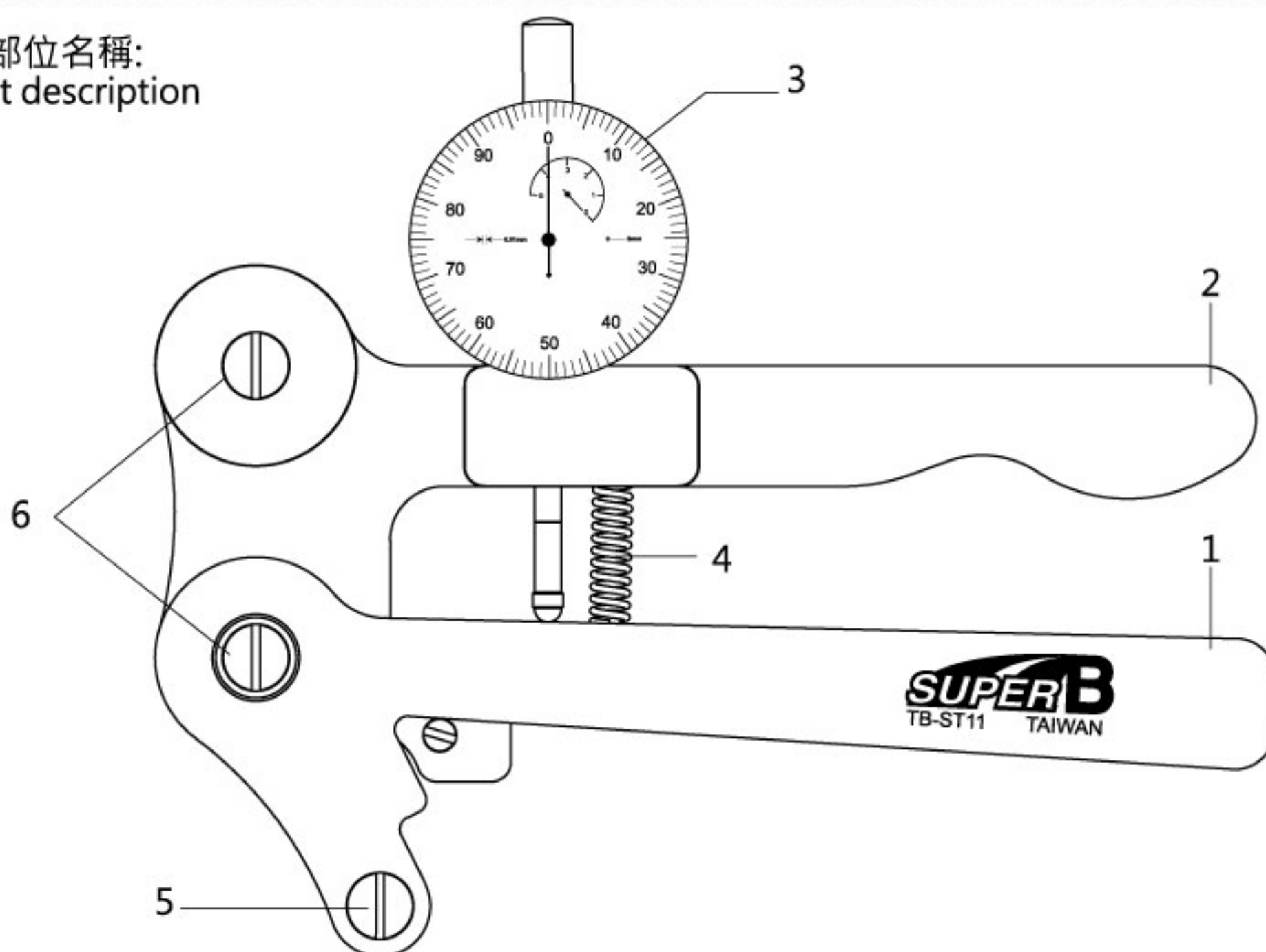
Note!

1.1 year limited warranty on this professional Spoke Tension Meter from the purchased date.

2.There shall be no claim under guarantee for:

- normal wear of parts.
- incorrect maintenance, misuse, incorrect repair or incorrect calibration.

各部位名稱:
Part description



1.活動測量主體

2.主體

3.百分錶

4.彈簧

5.可移動銷

6.固定銷

1.Pivoting Arm

2.Body

3.Dial Gauge

4.Spring

5.Movable Supporting Stud

6.Fixed Supporting Stud