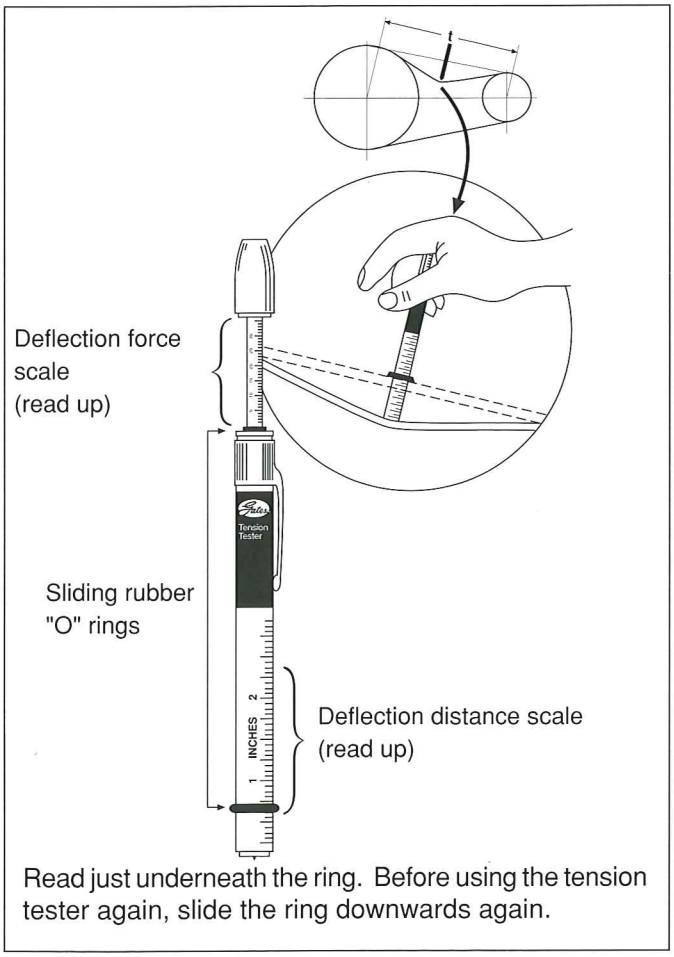
1. Measure the span length (t).
2. Apply force in the middle of the span with Gates' tension tester perpendicular to the span. The force must be large enough to deflect 1 belt 1 mm per 100 mm of span length from its normal position. Read the deflection distance on the lower scale by sighting straight across the top of the belt. A straight edge laid across the belt(s) helps to ensure accurate reading. The scale is divided in 2 mm increments.
3. Read the deflection force on upper scale. A rubber "O-ring" slides up the scale as the tester compresses and stays up for accurate reading. You can read the deflection force at the bottom edge of the ring. When you use the "Double Tension Tester" you need to calculate the sum of both values. Slide ring(s) down before reusing.
4. Compare the deflection force with the range of forces given in the table. If less than minimum recommended deflection force, tighten the belt. If more than maximum, belt is tighter than necessary.

IMPORTANT:

During the run-in period, a drop in tension might occur. Therefore, new V-belt drives should be tensioned with a deflection force 1/3 greater than maximum recommended force. Check tension in V-belt drives frequently after run-in. Synchronous drives should not be retensioned.

Single tension tester



Read just underneath the ring. Before using the tension tester again, slide the ring downwards again.

Belt cross-section	Small pulley diameter	Recommended deflection force*	
	mm	N	
		min	max
Hi-Power® / Hi-Power® MN			
Z / Z-MN	60 - 67	6	8
	71 - 80	7	9
	85 - 100	8	11
	106 - 140	9	12
	150 - 224	10	14
A / A-MN	60 - 80	7	12
	85 - 90	9	13
	95 - 106	10	15
	112 - 180	13	20
B / B-MN	80 - 106	11	17
	112 - 118	14	20
	125 - 140	15	23
	150 - 170	19	27
	180 - 1250	22	33
C / C-MN	150 - 170	21	33
	180	24	35
	190	26	38
	200 - 212	30	45
	224 - 265	33	50
	280 - 400	38	58
D	300 - 335	51	73
	355 - 400	56	82
	425 - 560	65	99
Super HC® / Super HC® MN			
SPZ / SPZ-MN / 3V	56 - 67	7	10
	71	8	11
	75 - 80	9	13
	85 - 95	10	15
	100 - 125	12	17
	132 - 180	13	19
SPA / SPA-MN	80 - 95	12	16
	100 - 125	14	21
	132 - 200	19	28
	212 - 250	20	30
SPB / SPB-MN / 5V	112 - 150	23	36
	160 - 200	29	44
	212 - 280	36	50
	300 - 400	38	58
SPC / SPC-MN	180 - 236	40	60
	250 - 355	51	75
	375 - 530	60	90
8V / 25 J	317 - 431	76	113
	457 - 610	88	133
8VK	380 - 437	97	145
	450 - 600	112	166
Quad-Power II			
XPZ / 3VX	56	7	11
	60 - 63	8	13
	67 - 71	9	14
	75 - 80	10	15
	85 - 95	11	16
	100 - 125	13	19
	132 - 180	16	24
XPA	80 - 125	18	27
	132 - 200	22	31
XPB / 5VX	112 - 118	24	36
	125 - 140	27	41
	150 - 170	30	47
	180 - 200	36	53
	212 - 280	38	55
	300 - 400	41	64
XPC	180 - 236	50	75
	250 - 355	65	95
	375 - 530	80	110

* This recommendation is for uncritical drive configurations. For critical drives individual design calculations are required.