

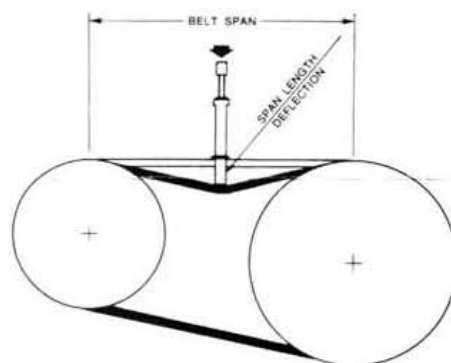
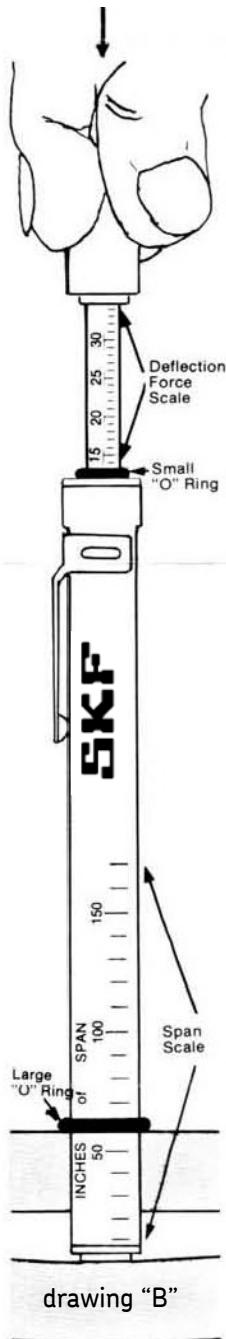
INDUSTRIAL V-BELT TENSION TESTER

GENERAL RULES OF TENSIONING

1. Ideal tension is the lowest tension at which the belt will not slip under peak load conditions
2. Check the belt tension frequently during the first 24 to 48 hours of operation.
3. Over tensioning will shorten the life of the belt and the bearings.
4. Keep belts free from foreign material which may cause slip.
5. Make V-belt drive inspections periodically and re-tension as required. This will prevent slippage and optimize belt life.
6. SKF does not recommend belt dressing as this will damage the belt and promote premature failures.

TENSION MEASUREMENT PROCEDURE

1. Measure the belt span (see drawing "A")
2. position the bottom of the large O ring on the pen scale at the measured belt span (see drawing "B")
3. Set the small O ring on the deflection force scale to zero.
4. Place the tension tester squarely on one belt at the center of the belt span (see drawing "A") apply downward force to the plunger until the bottom of the large O ring is even with the next belt or with the bottom of a straight edge laid across the pulleys.
5. Remove the tension tester and read the force applied with the values given in the tables. The force should be between the minimum and the maximum shown. The maximum value shown is for new belts, this will allow for anticipated tension loss. Used belts should be maintained at the minimum value as indicated in the tables.



drawing "A"

Belt type	Smallest pulley diameter inches	R/min range	Belt deflection force LBS			
			Un-cogged belts		Cogged belts	
			Used belt	New belt	Used belt	New belt
Z, ZX	1.5-2.5	1000-2500	1.0	1.4	1.1	1.7
		2501-4000	1.2	1.8	1.4	2.0
	2.5-over	1000-2500	1.7	2.5	1.9	2.9
		2501-4000	1.7	2.5	1.9	2.9
A, AX	3.0-3.6	1000-2500	3.1	4.7	3.5	5.2
		2501-4000	2.4	3.6	2.9	4.3
	3.8-4.8	1000-2500	3.8	5.8	4.3	6.3
		2501-4000	3.2	4.8	3.7	5.4
	5.0-over	1000-2500	4.6	6.8	4.8	7.1
		2501-4000	4.0	6.0	4.3	6.5
		860-2500	--	--	4.2	6.1
		2501-4000	--	--	3.6	5.3
B, BX	3.4-4.2	860-2500	4.5	6.7	6.0	8.9
		2501-4000	3.8	5.7	5.2	7.7
	4.4-5.6	860-2500	5.4	8.0	7.2	10.7
		2501-4000	5.1	7.6	6.2	9.3
	5.8-over	860-2500	5.4	8.0	7.2	10.7
		2501-4000	5.1	7.6	6.2	9.3
C, CX	7.0-9.0	500-1740	9.8	14.5	12.5	18.5
		1741-3000	8.0	11.7	10.1	14.9
	9.5-over	500-1740	12.0	17.9	13.5	20.0
		1741-3000	10.6	15.7	12.4	18.4
D	12.0-16.0	200-850	21.2	31.5	--	--
		851-1500	18.0	26.6	--	--
	18.0-over	200-850	25.8	38.4	--	--
		851-1500	21.8	32.3	--	--
SPZ, XPZ	1.5-2.5	1000-2500	3.2	4.9	3.5	5.2
		2501-4000	2.6	4.2	2.9	4.2
	2.5-3	1000-2500	3.7	6.9	4.2	6.3
		2501-4000	4.0	6.1	4.0	6.1
	3-over	1000-2500	4.6	6.9	4.8	7.2
		2501-4000	4.2	6.3	4.5	6.9
SPA, XPA	3.8-4.1	1000-2500	5.5	8.3	6.3	9.5
		2501-4000	5.0	7.4	5.7	8.5
	4.1-5.5	1000-2500	6.6	9.9	7.7	11.5
		2501-4000	6.0	9.0	6.9	10.3
	5.5-over	1000-2500	8.3	12.7	9.5	14.5
		2501-4000	8.4	12.6	8.6	13.0
SPB, XPB	3.4-4.2	860-2500	9.4	13.9	10.7	16.1
		2501-4000	9.0	13.5	10.3	15.5
	4.4-5.6	860-2500	12.1	17.9	13.8	20.7
		2501-4000	10.7	16.1	12.8	19.1
	5.8-over	860-2500	14.4	21.4	15.3	23.0
		2501-4000	12.2	18.4	13.9	21.0
SPC, XPC	7.0-9.0	500-1740	19.4	29.0	22.2	33.2
		1741-3000	19.6	29.4	22.4	33.7
	9.5-over	500-1740	22.1	33.0	25.2	37.8
		1741-3000	25.6	38.3	29.2	43.9
3V, 3VX	2.2-2.4	1000-2500	--	--	2.8	4.2
		2501-4000	--	--	2.5	3.7
	2.65-3.65	1000-2500	3.1	4.3	3.6	5.3
		2501-4000	2.6	3.7	3.2	4.8
	4.12-over	1000-2500	4.2	6.2	4.5	6.7
		2501-4000	3.7	5.6	4.2	6.2
5V, 5VX	4.4-6.7	1000-2500	--	--	8.0	12.9
		2501-4000	--	--	5.3	11.2
	7.1-10.9	500-1740	10.8	16.1	12.6	18.8
		1741-3001	9.5	14.2	11.6	17.1
	11.8-over	500-1740	13.2	19.9	14.5	21.7
		1741-3001	12.4	18.5	14.3	21.7
8V	12.5-17.0	200-850	28.1	41.9	--	--
		851-1500	22.8	33.9	--	--
	18.0-over	200-850	33.7	50.3	--	--
		851-1500	30.0	44.8	--	--

Belt type	Smallest pulley diameter inches	R/min range	Belt deflection force LBS			
			Un-cogged belts		Cogged belts	
			Used belt	New belt	Used belt	New belt
SPZ -XP	1.5-2.5	1000-2500	4.2	6.4	--	--
		2501-4000	3.3	5.4	--	--
	2.5-3	1000-2500	4.7	8.9	--	--
		2501-4000	5.2	7.9	--	--
	3-over	1000-2500	5.9	8.9	--	--
		2501-4000	5.4	8.1	--	--
SPA-XP	3.8-4.1	1000-2500	7.2	10.8	--	--
		2501-4000	6.5	9.6	--	--
	4.1-5.5	1000-2500	8.6	12.9	--	--
		2501-4000	7.8	11.7	--	--
	5.5-over	1000-2500	10.8	16.4	--	--
		2501-4000	10.9	16.3	--	--
SPB-XP	3.4-4.2	860-2500	12.1	18.0	--	--
		2501-4000	11.7	17.5	--	--
	4.4-5.6	860-2500	15.6	23.2	--	--
		2501-4000	13.9	20.8	--	--
	5.8-over	860-2500	18.6	27.7	--	--
		2501-4000	15.8	23.8	--	--
SPC-XP	7.0-9.0	500-1740	25.1	37.5	--	--
		1741-3000	25.3	38.1	--	--
	9.5-over	500-1740	28.6	42.7	--	--
		1741-3000	33.1	49.5	--	--
3V-XP	2.2-2.4	1000-2500			--	--
		2501-4000			--	--
	2.65-3.65	1000-2500	4.0	5.6	--	--
		2501-4000	3.3	4.8	--	--
	4.12-over	1000-2500	5.4	8.0	--	--
		2501-4000	4.8	7.3	--	--
5V-XP	4.4-6.7	1000-2500			--	--
		2501-4000			--	--
	7.1-10.9	500-1740	14.0	20.8	--	--
		1741-3001	12.3	18.4	--	--
	11.8-over	500-1740	17.1	25.7	--	--
		1741-3001	16.1	24.0	--	--
8V-XP	12.5-17.0	200-850	36.3	54.2	--	--
		851-1500	29.5	43.9	--	--
	18.0-over	200-850	43.6	65.1	--	--
		851-1500	38.8	58.0	--	--

Belt type	Smallest pulley diameter millimeters	R/min range	Belt deflection force KG			
			Un-cogged belts		Cogged belts	
			Used belt	New belt	Used belt	New belt
Z, ZX	40-60	1000-2500	0.5	0.7	0.5	0.8
		2501-4000	0.5	0.8	0.6	0.9
	60 - over	1000-2500	0.8	1.1	0.9	1.3
		2501-4000	0.8	1.1	0.9	1.3
A, AX	75-90	1000-2500	1.4	2.1	1.6	2.4
		2501-4000	1.1	1.6	1.3	2.0
	91-120	1000-2500	1.7	2.6	2.0	2.9
		2501-4000	1.4	2.2	1.7	2.5
	121 - over	1000-2500	2.0	3.1	2.2	3.2
		2501-4000	1.8	2.7	2.0	2.9
B, BX	85-105	860-2500	--	--	1.9	2.8
		2501-4000	--	--	1.6	2.4
	106-140	860-2500	2.0	3.1	2.7	4.1
		2501-4000	1.7	2.6	2.4	3.5
	141 - over	860-2500	2.5	3.7	3.3	4.8
		2501-4000	2.3	3.4	2.8	4.2
C, CX	175-230	500-1740	4.4	6.5	5.7	8.4
		1741-3000	3.7	5.4	4.6	6.7
	231 - over	500-1740	5.4	8.1	6.1	9.1
		1741-3000	4.8	7.1	5.6	8.3
D	305-400	200-850	9.6	14.3	--	--
		851-1500	8.2	12.1	--	--
	401 - over	200-850	11.7	17.4	--	--
		851-1500	9.9	14.6	--	--
SPZ, XPZ	56-79	1000-2500	1.5	2.3	1.6	2.3
		2501-4000	1.1	1.9	1.3	1.9
	80-95	1000-2500	1.7	3.1	1.9	2.9
		2501-4000	1.8	2.8	1.8	2.8
	95 - over	1000-2500	2.1	3.1	2.2	3.3
		2501-4000	1.9	2.9	2.0	3.1
SPA, XPA	71-105	1000-2500	2.5	3.8	2.9	4.3
		2501-4000	2.3	3.4	2.6	3.9
	106-140	1000-2500	3.0	4.5	3.5	5.2
		2501-4000	2.7	4.1	3.1	4.7
	141 - over	1000-2500	3.8	5.7	4.3	6.6
		2501-4000	3.8	5.7	3.9	5.9
SPB, XPB	107-159	860-2500	4.3	6.3	4.9	7.3
		2501-4000	4.1	6.1	4.7	7.0
	160-250	860-2500	5.5	8.2	6.2	9.4
		2501-4000	4.9	7.3	5.8	8.7
	250 - over	860-2500	6.5	9.7	6.9	10.4
		2501-4000	5.5	8.3	6.3	9.5
SPC, XPC	200-355	500-1740	8.8	13.1	10.1	15.1
		1741-3000	8.9	13.3	10.1	15.3
	356 - over	500-1740	10.0	15.0	11.4	17.2
		1741-3000	11.6	17.4	13.3	19.9
3V, 3VX	55-60	1000-2500	--	--	1.3	1.9
		2501-4000	--	--	1.1	1.7
	61-90	1000-2500	1.4	2.0	1.6	2.4
		2501-4000	1.2	1.7	1.4	2.1
	91 - over	1000-2500	1.9	2.8	2.0	3.1
		2501-4000	1.7	2.6	1.9	2.8
5V, 5VX	110-170	1000-2500	--	--	3.9	5.9
		2501-4000	--	--	2.1	3.3
	171-275	500-1740	4.9	7.3	5.7	8.5
		1741-3001	4.3	6.5	5.3	7.7
	276 - over	500-1740	6.0	9.0	6.6	9.9
		1741-3001	5.6	8.4	6.5	9.6
8V	315-430	200-850	12.8	19.0	--	--
		851-1500	10.4	15.4	--	--
	431 - over	200-850	15.3	22.8	--	--
		851-1500	13.6	20.3	--	--

Belt type	Smallest pulley diameter millimeters	R/min range	Belt deflection force KG			
			Un-cogged belts		Cogged belts	
			Used belt	New belt	Used belt	New belt
SPZ-XP	56-79	1000-2500	1.8	2.7	--	--
		2501-4000	1.4	2.3	--	--
	80-95	1000-2500	2.0	3.8	--	--
		2501-4000	2.2	3.4	--	--
	95 - over	1000-2500	2.5	3.8	--	--
		2501-4000	2.3	3.5	--	--
SPA-XP	71-105	1000-2500	3.0	4.6	--	--
		2501-4000	2.8	4.1	--	--
	106-140	1000-2500	3.7	5.5	--	--
		2501-4000	3.3	4.9	--	--
	141 - over	1000-2500	4.6	6.9	--	--
		2501-4000	4.6	6.9	--	--
SPB-XP	107-159	860-2500	5.1	7.7	--	--
		2501-4000	4.9	7.4	--	--
	160-250	860-2500	6.6	9.9	--	--
		2501-4000	5.9	8.8	--	--
	250 - over	860-2500	7.9	11.7	--	--
		2501-4000	6.7	10.1	--	--
SPC-XP	200-355	500-1740	10.7	15.9	--	--
		1741-3000	10.7	16.1	--	--
	356 - over	500-1740	12.1	18.1	--	--
		1741-3000	14.0	21.0	--	--
	55-60	1000-2500			--	--
		2501-4000			--	--
3V-XP	61-90	1000-2500	1.6	2.4	--	--
		2501-4000	1.4	2.1	--	--
	91 - over	1000-2500	2.3	3.4	--	--
		2501-4000	2.1	3.1	--	--
	110-170	1000-2500			--	--
		2501-4000			--	--
5V-XP	171-275	500-1740	6.0	8.8	--	--
		1741-3001	5.2	7.8	--	--
	276 - over	500-1740	7.2	10.9	--	--
		1741-3001	6.8	10.2	--	--
	315-430	200-850	15.4	23.0	--	--
		851-1500	12.5	18.6	--	--
8V-XP	431 - over	200-850	18.5	27.6	--	--
		851-1500	15.0	22.3	--	--