



OPTIKRIK TENSION GAUGES FOR OPTIBELT V-BELTS AND RIBBED BELTS

This simplified method for static tension measuring should be used for installation and maintenance tensioning of the belt when the important technical data is unavailable and the optimum tension cannot be calculated. This method requires only knowledge of the small pulley diameter and the belt section and construction. The gauges may also be used to set tensions when the optimum tension has been calculated from known technical data.



OPTIBELT TENSION GAUGES – INSTRUCTIONS FOR USE –

Tension Gauges:

- OPTIKRIK 0** range: 70 - 150 N
- OPTIKRIK I** range: 150 - 600 N
- OPTIKRIK II** range: 500 - 1400 N
- OPTIKRIK III** range: 1300 - 3100 N



- Select the gauge appropriate to the belt section and construction being tensioned. See notes below the simplified tensioning table.
- The illustration above (A, B or C) shows three ways to hold the gauge so that pressure is applied to the pad only.
- Position the gauge on one of the belts on the drive in the middle of an accessible span length. Take care to ensure that the gauge is only in contact with one of the belts, and that the indicator arm is pushed down into the gauge body. Align the gauge so that its body is parallel with the sides of the belt.
- Push down on the pressure pad slowly and firmly with **one** finger in one of the ways illustrated above (A, B or C). When a "click" is heard and/or felt, stop immediately and remove the gauge carefully to avoid disturbing the indicator arm.
- Read the gauge to judge the tension as follows and as illustrated in the sketch above.
- Turn the gauge sideways to ascertain the exact point where the top surface of the indicator arm crosses the scale.
- Mark this point mentally or with a thumbnail and turn the gauge to read the scale.
- Check the tension found against the simplified tensioning table or the calculated tension. Tighten or slacken the belt, if necessary.

TENSION VALUES – INDUSTRIAL V-BELTS

Belt section	Diameter of the small pulley [mm]	Static belt tension [N]								
		Standard (wrapped)		SUPER X-POWER M=5 SUPER XE-POWER PRO (SUPER TX M=5)		RED POWER 3		BLUE POWER*		
		Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation up new belts	New installation existing belts	Diameter of the small pulley [mm]	Initial installation up new belts	Operating after running in
SPZ; 3V/9N; XPZ; 3VX/9NX	≤ 71 > 71 ≤ 90 > 90 ≤ 125 > 125*	200 250 350	150 200 250	250 300 400	200 250 300	250 300 400	200 250 300	–	–	–
SPA; XPA	≤ 100 > 100 ≤ 140 > 140 ≤ 200 > 200*	350 400 500	250 300 400	400 500 600	300 400 450	400 500 600	300 400 450	–	–	–
SPB; 5V/15N; XPB; 5VX/15NX	≤ 160 > 160 ≤ 224 > 224 ≤ 355 > 355*	650 700 900	500 550 700	700 850 1000	550 650 800	700 850 1000	550 650 800	≤ 180 > 180 ≤ 236 > 236 ≤ 400 > 400*	780 1100 1500	600 850 1100
SPC; XPC	≤ 250 > 250 ≤ 355 > 355 ≤ 560 > 560*	1000 1400 1800	800 1100 1400	1400 1600 1900	1100 1200 1500	1400 1600 1900	1100 1200 1500	≤ 280 > 280 ≤ 375 > 375 ≤ 700 > 700*	1600 2500 3100	1200 1900 2400
Z/10; ZX/X10	≤ 50 > 50 ≤ 71 > 71 ≤ 100 > 100*	90 120 140	70 90 110	120 140 160	90 110 130	–	–	–	–	–
A/13; AX/X13	≤ 80 > 80 ≤ 100 > 100 ≤ 132 > 132*	150 200 300	110 150 250	200 250 400	150 200 300	–	–	–	–	–
B/17; BX/X17	≤ 125 > 125 ≤ 160 > 160 ≤ 200 > 200*	300 400 500	250 300 400	450 500 600	350 400 450	–	–	–	–	–
C/22; CX/X22	≤ 200 > 200 ≤ 250 > 250 ≤ 355 > 355*	700 800 900	500 600 700	800 900 1000	600 700 800	–	–	–	–	–
8V		Check of the belt tension with help of the length addition value								

* Tension values for these pulleys and belt types must be calculated, please consult Optibelt. • No **OPTIKRIK** measurement. Reference values only.

TENSION VALUES – AUTOMOTIVE INDUSTRY

Belt section	Initial installation	Tension after 30-120 min. running in	Minimum tension
	Static tension [N]	Static tension [N]	Static tension [N]
AVX 10	550 ± 50	350 ± 50	≥ 200
MARATHON X, MARATHON 2	650 ± 50	400 ± 50	≥ 300
AVX 13	1100 ± 50	700 ± 50	≥ 400
MARATHON X, MARATHON 2	1650 ± 50	1050 ± 50	≥ 600
KB - 2 AVX 10	1300 ± 50	800 ± 50	≥ 600
KB - 3 AVX 13	1950 ± 50	1200 ± 50	≥ 900
RB - 3 PK	400 ± 50	250 ± 50	≥ 200
RB - 4 PK	500 ± 50	350 ± 50	≥ 250
RB - 5 PK	600 ± 50	400 ± 50	≥ 300
RB - 6 PK	750 ± 50	500 ± 50	≥ 350

TENSION VALUES – INDUSTRIAL RIBBED BELTS

Belt section	Diameter of the small pulley d _s [mm]	Static tension T _{max} [N]								
		Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation	Operating after running in	Initial installation	Operating after running in	
PH	≤ 25 > 25 ≤ 71 > 71*	90 110	4 PH 70	150 200	8 PH 130	12 PH 250 300	200 250	16 PH 300 350	20 PH 400 450	300 350
PJ	≤ 40 > 40 ≤ 80 > 80 ≤ 132 > 132*	200 200 250	4 PJ 150 200	350 400 450	8 PJ 300 350 350	12 PJ 500 600 700	400 500 550	16 PJ 700 800 900	24 PJ 1000 1200 1300	800 1000 1000
PK	≤ 63 > 63 ≤ 100 > 100 ≤ 140 > 140*	300 400 450	4 PK 250 300 350	600 800 900	8 PK 450 600 700	10 PK 700 1000 1100	600 700 800	12 PK 900 1200 1300	16 PK 1200 1500 1600	900 1200 1300
PL	≤ 90 > 90 ≤ 140 > 140 ≤ 200 > 200*	800 1000 1100	6 PL 600 700 800	1000 1300 1400	8 PL 800 1000 1100	10 PL 1300 1600 1900	1000 1300 1400	12 PL 1500 1900 2100	16 PL 1900 2500 2800	1500 1900 2100