

PRODUCT DESCRIPTION

optibelt SUPER X-POWER M=S

RAW EDGE, COGGED – DIN/ISO, ARPM/MPTA



Advantages

optibelt SUPER X-POWER M=S wedge belts are perfectly suited for applications with

- extremely small pulley diameters
- high rotational speeds
- high and low ambient temperatures

optibelt SUPER X-POWER M=S wedge belts offer

- high power transmission
- extremely low stretch
- improved maintenance intervals – low maintenance
- optimised running characteristics – smooth running
- excellent heat and oil resistance
- M=S, for set matching
- electrically conductive according to ISO 1813

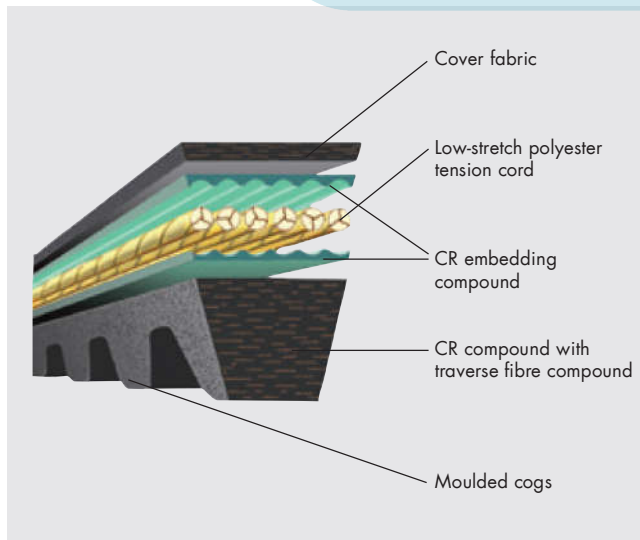
Drive ratios $i = 1 : 12$ are possible with optibelt SUPER X-POWER.

Multi-stage drives can be eliminated.

optibelt SUPER X-POWER M=S wedge belts in profiles XPZ, XPA, XPB, XPC, 3VX/9NX and 5VX/15NX, offer the best technical and economic solutions due to their harmonised premium materials.

Structure/Properties

optibelt SUPER X-POWER M=S consist of:



1. The special polyester tension cord of optibelt SUPER X-POWER M=S is extremely low-stretch and allows for maintenance-free drives.

The number of re-tensioning processes is reduced and the drive becomes less expensive in the long term.

2. The structure of the cover fabric supports the tension cord and this is how the optibelt SUPER X-POWER M=S achieves its high level of flexibility.

3. The belt base structure consists of a high performance chloroprene compound, reinforced with a traverse fibre compound.

The special tension cord and the optimum tooth shape allow for higher dynamic power transmissions, improved bending stress and a higher temperature resistance.



As high power transmission is possible, even with small pulley diameters and high engine speed, weight and space can be reduced thus also substantially reducing costs.

Application areas Machines:

- compressors
- fans
- compactors
- pumps
- wood working machines
- high performance saws
- special machines

Machine tools:

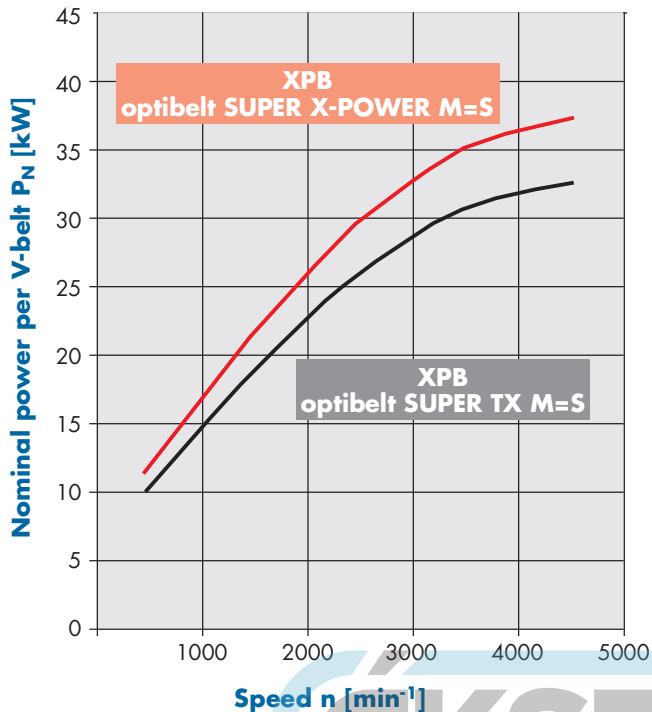
- lathes and drilling machines
- grinding machines

optibelt SUPER X-POWER M=S V-belts are recommended for mechanical engineering applications wherever wrapped V-belts are likely to reach their performance limits.

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Belt tension / Static shaft load

Belt tension and static shaft load are calculated in the same way as for wrapped belts. When dealing with the same geometric ratios, the shaft load does not exceed that of wrapped belts although the quantity of the belts is often less. Therefore, only the individual V-belt requires higher tension than wrapped belts.

The precise edges of the optibelt SUPER X-POWER M=S V-belt ensure uniform seating in the pulley grooves, resulting in smoother running.

Drive calculation

Drive design using optibelt SUPER X-POWER M=S belts should be carried out according to the examples given on pages 85 to 87. The higher power ratings given in the relevant tables, apply. These are based on a theoretical laboratory running time of 25,000 hours.

Standardisation/Dimensions

The cross sections and dimensions of optibelt SUPER X-POWER M=S V-belts are in accordance with DIN 7753 Part 1, DIN 2215, ISO 4184 and ARPM/MPTA. The basis for the length measurement is the datum length (L_d) to DIN/ISO.

Table 8

Profile	Top belt width $b_o \approx$	Datum width b_d	Belt height $h \approx$	Meter weight [kg/m] \approx
XPZ	9.7	8.5	8	0.065
XPA	12.7	11.0	10	0.105
XPB	16.3	14.0	13	0.183
XPC	22.0	19.0	18	0.340
3VX/9NX	9.0	—	8	0.065
5VX/15NX	15.0	—	13	0.183

V-grooved pulleys

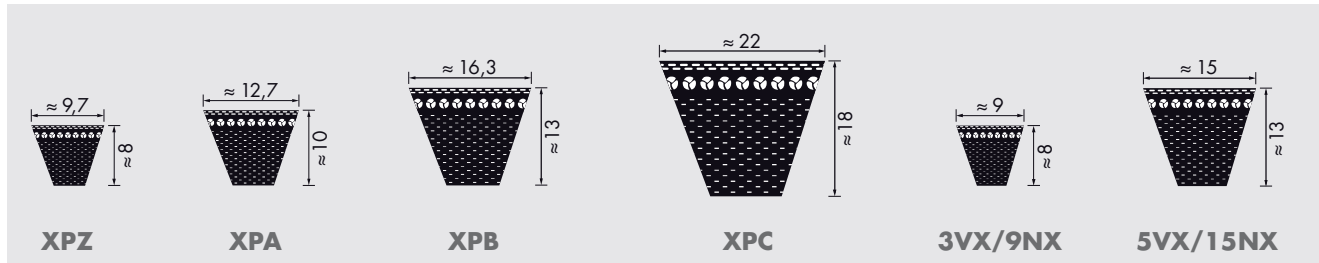
optibelt SUPER X-POWER M=S are used with pulleys according to DIN 2211, DIN 2217, ISO 4183 and ARPM/MPTA. Considerably smaller minimum pulley datum diameters are allowed.

Table 9

Profile	Recommended minimum pulley diameter [mm]	
	Raw edge, coggged	wedge belt
XPZ	56	63
XPA	71	90
XPB	112	140
XPC	180	224
3VX/9NX	56	67
5VX/15NX	112	151

STANDARD RANGE

optibelt SUPER X-POWER M=S WEDGE BELTS – RAW EDGE, COGGED DIN 7753 PART 1 / ISO 4184 AND ARPM/MPTA



Profile XPZ			Profile XPA		Profile XPB		Profile XPC		Profile 3VX/9NX			Profile 5VX/15NX	
Datum length ISO L_d [mm]			Datum length ISO L_d [mm]		Datum length ISO L_d [mm]		Datum length ISO L_d [mm]		Belt designation			Belt designation	
									Profile, length code	Profile, outside length, L_o [mm]	Profile, length code	Profile, outside length, L_o [mm]	
587	1112	1900	707	1432	1250	2000			3VX 250	9NX 635	5VX 500	15NX 1270	
612	1120	1950	732	1450	1320	2120			3VX 265	9NX 673	5VX 530	15NX 1346	
630	1137	2000	757	1457	1400	2240			3VX 280	9NX 711	5VX 560	15NX 1422	
637	1162	2120	782	1482	1500	2360			3VX 300	9NX 762	5VX 600	15NX 1524	
662	1180	2150	800	1500	1600	2500			3VX 315	9NX 800	5VX 630	15NX 1600	
670	1187	2240	807	1507	1700	2650			3VX 335	9NX 851	5VX 670	15NX 1702	
687	1202	2360	832	1532	1750	2800			3VX 355	9NX 902	5VX 710	15NX 1803	
710	1212	2500	850	1557	1800	3000			3VX 375	9NX 952	5VX 750	15NX 1905	
730	1237	2540	857	1582	1850	3150			3VX 400	9NX 1016	5VX 800	15NX 2032	
737	1250	2650	882	1600	1900	3350			3VX 425	9NX 1079	5VX 850	15NX 2159	
750	1262	2690	900	1607	2000	3550			3VX 450	9NX 1143	5VX 900	15NX 2286	
762	1287	2800	907	1632	2020				3VX 475	9NX 1206	5VX 950	15NX 2413	
772	1312	2840	932	1650	2120				3VX 500	9NX 1270	5VX 1000	15NX 2540	
787	1320	3000	950	1682	2150				3VX 530	9NX 1346	5VX 1060	15NX 2692	
800	1337	3150	957	1700	2240				3VX 560	9NX 1422	5VX 1120	15NX 2845	
812	1362	3350	982	1732	2280				3VX 600	9NX 1524	5VX 1180	15NX 2997	
825	1387	3550	1000	1750	2360				3VX 630	9NX 1600	5VX 1250	15NX 3175	
837	1400		1007	1757	2400				3VX 670	9NX 1702	5VX 1320	15NX 3353	
850	1412		1030	1782	2500				3VX 710	9NX 1803	5VX 1400	15NX 3556	
862	1437		1060	1800	2650				3VX 750	9NX 1905			
875	1462		1082	1832	2680				3VX 800	9NX 2032			
887	1487		1107	1850	2800				3VX 850	9NX 2159			
900	1500		1120	1882	2840				3VX 900	9NX 2286			
912	1512		1132	1900	3000				3VX 950	9NX 2413			
925	1537		1157	1932	3150				3VX 1000	9NX 2540			
937	1562		1180	1950	3350				3VX 1060	9NX 2692			
950	1587		1207	1982	3550				3VX 1120	9NX 2845			
962	1600		1232	2000					3VX 1180	9NX 2997			
987	1612		1250	2120					3VX 1250	9NX 3175			
1000	1662		1257	2240					3VX 1320	9NX 3353			
1012	1700		1272	2360					3VX 1400	9NX 3556			
1037	1750		1282	2500									
1060	1762		1307	2650									
1077	1800		1320	2800									
1087	1850		1332	3000									
			1357	3150									
			1382	3350									
			1400	3550									
Weight: ≈ 0.065 kg/m			Weight: ≈ 0.096 kg/m		Weight: ≈ 0.183 kg/m		Weight: ≈ 0.340 kg/m		Weight: ≈ 0.065 kg/m			Weight: ≈ 0.183 kg/m	

Datum length $L_d \triangleq$ Pitch length L_w/L_p Further sizes on request