

PRODUCT DESCRIPTION

optibelt SUPER XE-POWER PRO M=S

RAW EDGE, COGGED – DIN/ISO, ARPM/MPTA



Advantages

The optibelt SUPER XE-POWER PRO M=S is used in demanding applications that require maximum load-bearing capacity under the most demanding conditions, such as

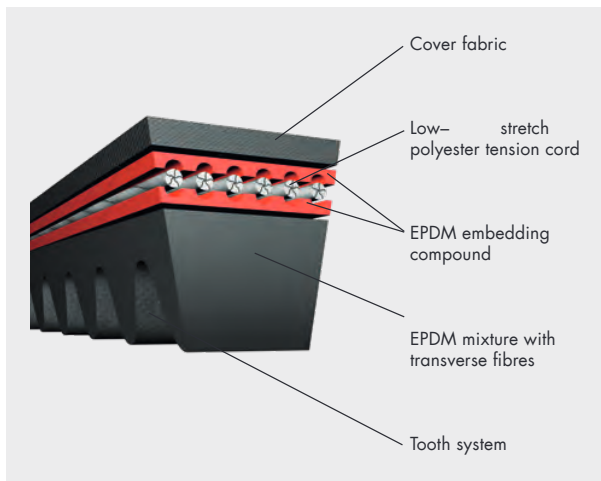
- Use of back bend idlers
- Extremely small pulley diameters
- High speeds
- High and low ambient temperatures

The optibelt SUPER XE-POWER PRO M=S V-belt stands for

- Capacity increase of 20% compared to optibelt SUPER X-POWER
- Maximum load-bearing capacity with extremely low elongation
- Exceptionally smooth running
- Compatible with back bend idlers
- Maintenance-free
- Extended temperature resistance from -40°C to $+120^{\circ}\text{C}$
- For use in sets without further measurement, M=S
- Electrically conductive to ISO 1813

Structure/Properties

optibelt SUPER XE-POWER PRO M=S



1. The low-stretch polyester tension cord of the optibelt SUPER XE-POWER PRO M=S has a very low elongation and thus allows for maintenance-free drives.

2. The red embedding compound ensures optimum adhesion of the tension cord.

3. The belt base structure consists of a high performance EPDM compound, reinforced with transverse fibres.

This substructure in combination with a special tension cord as well as the optimised tooth shape allow for higher power transmission, low bending stress and higher temperature resistance.

optibelt SUPER XE-POWER PRO M=S



The use of the optibelt SUPER XE-POWER PRO M=S allows for high power transmission, both with small pulley diameters and high engine speeds as well as with high torques. This saves space and weight when dimensioning drives and thus also reduces costs.

Application areas Machines:

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

In mechanical engineering, wrapped V-belts often work at their performance limit and can wear out quickly. In order to permanently prevent downtimes, we recommend using optibelt SUPER XE-POWER PRO M=S.

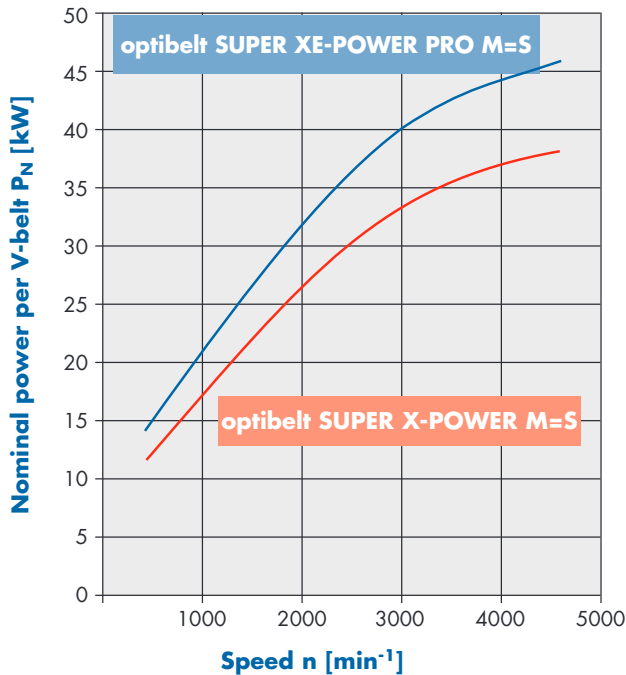
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Power diagram for profile XPB



Belt tension / Static shaft load

The belt tension and static axis force are designed according to the example (page 83f.). The optibelt SUPER XE-POWER PRO M=S must be brought to the required belt tension after the running-in process. This ensures maintenance-free operation of the belt.

Due to improved performance values, optibelt SUPER XE-POWER PRO M=S enables higher power transmission compared to standard V-belts. This allows a reduction in the number of belts that are required.

The low manufacturing tolerances of the optibelt SUPER XE-POWER PRO M=S ensure a uniform fit in the pulley grooves and improve the running characteristics of the belt.

Drive calculation

Drive design using optibelt SUPER XE-POWER PRO M=S belts should be carried out according to Optibelt's drive calculations. The stated performance values are based on a theoretical laboratory running time of 25,000 hours.

Standardisation/Dimensions

The cross sections and dimensions of optibelt SUPER XE-POWER PRO M=S are in accordance with DIN 7753 Part 1, DIN 2215, ISO 4148 and ARPM/MPTA.

The basis for the length measurement is the datum length (L_d) to DIN/ISO.

Table 10

Profile	Top belt width b_o [mm]	Belt height h [mm]	Metre weight [kg/m]
XPZ	~9.7	~8.5	~0.058
XPA	~12.7	~9.0	~0.089
XPB	~16.3	~13.0	~0.156
XPC	~22.0	~16.5	~0.274
3VX/9NX	~9.0	~8.5	~0.055
5VX/15NX	~15.0	~13.0	~0.152

V-grooved pulleys

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

The outer roller must be dimensioned so that it does not fall below 1.35 times the minimum pulley diameter, depending on the profile (see table 11, p. 18).

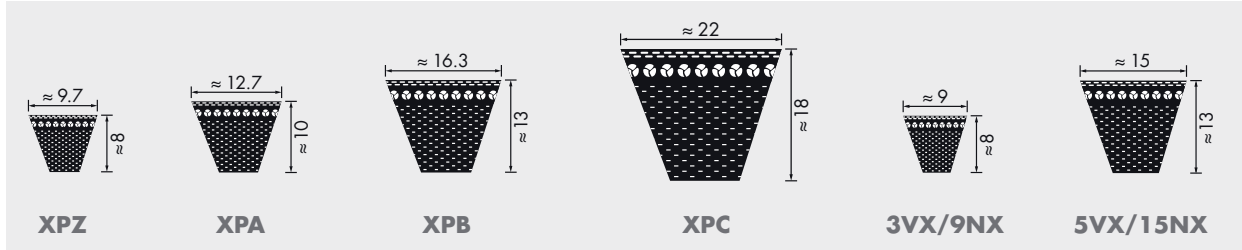
Table 11

Recommended minimum pulley diameter [mm] wedge belt			
Profile	Raw edge, cogged	Profile	Wrapped
XPZ	56	SPZ	63
XPA	71	SPA	90
XPB	112	SPB	140
XPC	180	SPC	224
3VX/9NX	56	3V/9N	67
5VX/15NX	112	5V/15N	151

STANDARD RANGE

optibelt **SUPER XE-POWER PRO 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 _e [mm]	Profile, length code	Profile, outside length, L _e [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: ≈ 0.058 kg/m			Weight: ≈ 0.089 kg/m		Weight: ≈ 0.156 kg/m	Weight: ≈ 0.274 kg/m	Weight: ≈ 0.055 kg/m			Weight: ≈ 0.152 kg/m	
Datum length L _d ± Pitch length L _w /L _p Further sizes on request											