2.0 Weights and tension values

The values listed in the tables on following pages provide a guideline for belt tensioning. More accurate values for your specific belt drive can be obtained from belt drive calculations on skfptp.com.

Timing belts

Belt type	Belt type	Belt Tension		Mass
		New belt	Run in belt	
		N	N	kg/m
HiTD	5M 9	99	71	0,037
	5M 15	174	124	0,061
	5M 25	311	222	0,102
	8M 20	372	266	0,128
	8M 30	593	424	0,192
	8M 50	1 037	741	0,320
	8M 85	2 044	1 460	0,545
	14M 40	1 297	926	0,429
	14M 55	1 912	1 366	0,590
	14M 85	3 142	2 244	0,911
	14M 115	4 480	3 200	1,233
	14M 170	7 139	5 099	1,823
STPD	S8M20	390	279	0,111
	S8M30	620	443	0,167
	S8M50	1 110	793	0,278
	S8M85	2 030	1 450	0,473
	S14M40	1 340	957	0,462
	S14M55	1 925	1 375	0,634
	S14M85	3 165	2 261	0,981
	S14M115	4 465	3 189	1,327
	S14M170	6 975	4 982	1,962
Timing belts	XL 025	13	11	0,014
	XL 037	24	20	0,020
	L050	51	41	0,043
	L075	87	70	0,065
	L 100	122	98	0,087
	H075	220	176	0,084
	H100	311	249	0,112
	H150	485	388	0,168
	H200	667	534	0,223
	H300	1 045	836	0,335
	XH 200	907	726	0,572
	XH 300	1 428	1 142	0,858
	XH 400	2 019	1 615	1,144
	XXH 200	1 130	904	0,809
	XXH 300	1 748	1 398	1,213
	XXH 400	2 478	1 982	1,617
	XXH 500	3 198	2 558	2,022

Wrapped V, wedge and banded belts

Belt type	Smallest pulley diameter		Speed range		Belt tension per single belt*		Mass	
					New belt	Run in belt	Single belt	Belt in a band**
	from	incl.	from	incl.				
	mm		rpm		N	N	kg/m	
Z	40	60	1 000	2 500	104	69	0,051	n/a
			2 501	4 000	121	81		
	61 over		1 000	2 500	174	116		
			2 501	4 000	174	116		
A	75	90	1 000	2 500	332	222	0,115	0,150
			2 501	4 000	254	169		
	91	120	1 000	2 500	391	261		
			2 501	4 000	332	222		
	121	175	1 000	2 500	469	313		
			2 501	4 000	411	274		
B	105	140	860	2 500	469	313	0,193	0,260
			2 501	4 000	391	261		
	141	220	860	2 500	567	378		
			2 501	4 000	528	352		
C	175	230	500	1 740	1 017	678	0,320	0,417
			1 741	3 000	841	561		
	231	400	500	1 740	1 251	834		
			1 741	3 000	1 115	743		
D	305	400	200	850	2 210	1 473	0,669	0,870
			851	1 500	1 877	1 251		
	401	510	200	850	2 698	1 799		
			851	1 500	2 268	1 512		
SPZ	56	79	1 000	2 500	338	226	0,076	n/a
			2 501	4 000	262	175		
	80	95	1 000	2 500	383	255		
			2 501	4 000	415	276		
	96 over		1 000	2 500	477	318		
			2 501	4 000	438	292		
SPA	71	105	1 000	2 500	575	383	0,134	0,155
			2 501	4 000	524	349		
	106	140	1 000	2 500	696	464		
			2 501	4 000	628	418		
	141 over		1 000	2 500	872	581		
			2 501	4 000	876	584		
SPB	107	159	860	2 500	978	652	0,223	0,272
			2 501	4 000	941	627		
	160	250	860	2 500	1 255	837		
			2 501	4 000	1 116	744		
	251 over		860	2 500	1 496	997		
			2 501	4 000	1 275	850		

Wrapped V, wedge and banded belts

Belt type	Smallest pulley diameter		Speed range		Belt tension per single belt*		Mass	
					New belt	Run in belt	Single belt	Belt in a band**
	from	incl.	from	incl.				
	mm		rpm		N	N	kg/m	
SPC	200	355	500	1 740	2 026	1 350	0,354	0,394
			1 741	3000	2 043	1 362		
	356 over		500	1 740	2 305	1 537		
			1 741	3 000	2 671	1 781		
3V	61	90	1 000	2 500	313	209	0,076	0,099
			2 501	4 000	274	182		
	91	175	1 000	2 500	430	287		
			2 501	4000	391	261		
5V	171	275	500	1 740	1 134	756	0,223	0,272
			1 741	3 001	997	665		
	276	500	500	1 740	1 369	912		
			1 741	3 001	1 291	860		
8V	315	430	200	850	2 933	1 955	0,504	0,654
			851	1 500	2 386	1 590		
	431	570	200	850	3 520	2 346		
			851	1 500	3 129	2 086		

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

Wrapped and narrow wedge belts

Belt type	Smallest pulley diameter		Speed range		Belt tension per single belt*		Mass	
					New belt	Run in belt	Single belt	Belt in a band**
	from	incl.	from	incl.				
	mm		rpm		N	N	kg/m	
SPZ-XP	56	79	1 000	2 500	372	249	0,079	-
			2 501	4 000	288	193		
	80	95	1 000	2 500	421	281		
			2 501	4 000	457	304		
	96 over		1 000	2 500	525	350		
			2 501	4 000	482	321		
SPA-XP	71	105	1 000	2 500	633	421	0,122	-
			2 501	4 000	576	384		
	106	140	1 000	2 500	766	510		
			2 501	4 000	691	460		
	141 over		1 000	2 500	959	639		
			2 501	4 000	964	642		
SPB-XP	107	159	860	2 500	1076	717	0,202	-
			2 501	4 000	1035	690		
	160	250	860	2 500	1381	921		
			2 501	4 000	1228	818		
	251 over		860	2 500	1646	1097		
			2 501	4 000	1403	935		
SPC-XP	200	355	500	1 740	2229	1485	0,350	-
			1 741	3 000	2247	1498		
	356 over		500	1 740	2536	1691		
			1 741	3 000	2938	1959		
3V-XP	61	90	1 000	2 500	344	230	0,079	-
			2 501	4 000	301	200		
	91	175	1 000	2 500	473	316		
			2 501	4 000	430	287		
5V-XP	171	275	500	1 740	1247	832	0,202	-
			1 741	3 001	1097	732		
	276	500	500	1 740	1506	1003		
			1 741	3 001	1420	946		
8V-XP	315	430	200	850	3226	2151	0,520	-
			851	1 500	2625	1749		
	431	570	200	850	3872	2581		
			851	1 500	3442	2295		

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

Cogged raw edge V, wedge and banded belts

Belt type	Smallest pulley diameter		Speed range		Belt tension per single belt*		Mass	
					New belt	Run in belt	Single belt	Belt in a band**
	from	incl.	from	incl.				
	mm		rpm		N	N	kg/m	
ZX	40	60	1 000	2 500	119	80	0,051	n/a
			2 501	4 000	139	93		
	61 over		1 000	2 500	199	133		
			2 501	4 000	199	133		
AX	75	90	1 000	2 500	372	248	0,115	0,153
			2 501	4 000	293	196		
	91	120	1 000	2 500	450	300		
			2 501	4 000	391	261		
	121	175	1 000	2 500	508	339		
			2 501	4 000	450	300		
BX	85	105	860	2 500	430	287	0,193	0,225
			2 501	4 000	372	248		
	106	140	860	2 500	626	417		
			2 501	4 000	547	365		
	141	220	860	2 500	763	508		
			2 501	4 000	645	430		
CX	175	230	500	1 740	1 310	873	0,320	0,398
			1 741	3 000	1 056	704		
	231	400	500	1 740	1 408	939		
			1 741	3 000	1 291	860		
XPZ	56	79	1 000	2 500	362	241	0,076	n/a
			2 501	4 000	299	199		
	80	95	1 000	2 500	438	292		
			2 501	4 000	418	279		
	96 over		1 000	2 500	499	332		
			2 501	4 000	469	313		
XPA	71	105	1 000	2 500	657	438	0,134	0,156
			2 501	4 000	598	399		
	106	140	1 000	2 500	796	531		
			2 501	4 000	718	478		
	141 over		1 000	2 500	997	665		
			2 501	4 000	897	598		
XPB	107	159	860	2 500	1 116	744	0,223	0,279
			2 501	4 000	1 075	717		
	160	250	860	2 500	1 435	957		
			2 501	4 000	1 330	886		
	251 over		860	2 500	1 596	1 064		
			2 501	4 000	1 455	970		

Cogged raw edge V, wedge and banded belts

Belt type	Smallest pulley diameter		Speed range		Belt tension per single belt*		Mass	
					New belt	Run in belt	Single belt	Belt in a band**
	from	incl.	from	incl.				
	mm		rpm		N	N	kg/m	
XPC	200	355	500	1 740	2 313	1 542	0,354	0,548
			1 741	3 000	2 333	1 555		
	356 over		500	1 740	2 632	1 755		
			1 741	3 000	3 050	2 034		
3VX	55	60	1 000	2 500	293	196	0,076	0,102
			2 501	4 000	254	169		
	61	90	1 000	2 500	372	248		
			2 501	4 000	332	222		
	91	175	1 000	2 500	469	313		
			2 501	4 000	430	287		
5VX	110	170	1 000	2 500	899	600	0,223	0,252
			2 501	4 000	489	326		
	171	275	500	1 740	1 310	873		
			1 741	3 001	1 212	808		
	276	400	500	1 740	1 525	1 017		
			1 741	3 001	1 486	991		

* Multiply the belt tension required for a single belt by the number of the belts in the banded belt unit to get total tension to apply.

** Multiply the mass of one belt in a band by the number of the belts in the banded belt unit to get total mass to apply.

Ribbed belts

Belt type	Smallest pulley diameter	Speed range	Belt tension per one rib*		Mass**
			New belt	Run in belt	Single belt
	mm	rpm	N	N	kg/m
PJ	<80	n/a	67	45	0,010
	>80		90	60	
PK	<95	n/a	139	93	0,018
	>95		178	119	
PL	<150	n/a	216	144	0,057
	>150		312	208	
PM	<250	n/a	672	448	0,120
	>250		912	608	

* Multiply the belt tension required for one rib by the number of the ribs in the ribbed belt unit to get total tension to apply.

** Multiply the mass of one rib by the number of the ribs in the ribbed belt to get total mass to apply.