Design Manual

Industrial V-belts

Quad-Power II • Super HC® MN • Hi-Power® • PowerBand® • Micro-V® • Polyflex® JB™

Gates®

E2/20070 ED 2004

GATES INDUSTRIAL V-BELT DRIVE DESIGN MANUAL

CONTENTS

INTRODUCTION

This manual includes updated tables, specifications and procedures necessary to design drives using the following Gates industrial V-belts:

- **Quad-Power II** raw edge, moulded notch, narrow section V-belt;
- **Super HC® MN** raw edge, moulded notch, narrow section V-belt;
- **Super HC®** wrapped, narrow section V-belt;
- **Hi-Power®** wrapped V-belt of conventional cross-section;
- **PowerBand®** multiple V-belt;
- **Micro-V®** multi-ribbed belt;
- **Polyflex® JB™** polyurethane multiple V-belt.

Special recommendations for the use of idlers are also included.

Throughout the years, the Gates Corporation has played a key role in the creation and development of high-quality belts.

It all started back in 1917, when John Gates invented the V-belt, now essential to most industrial power transmission applications. Through an ongoing programme of development of new belt products and improvement of existing belts in anticipation of industry's requirements, the Gates Power Transmission Division offers a complete range of premium products. Typical examples are V-belts such as Quad-Power II, Super HC® MN, Hi-Power®, PowerBand®, Micro-V® and Polyflex® JB™ and synchronous belts such as PowerGrip® GT3, Poly Chain® GT2 and Long Length.

Gates continues investing in quality, research and development to assist you with whatever industrial drive design challenge you may be confronted with.

All Gates antistatic V-belts are in accordance with the antistatic requirements as stated in EN 13463-5 - "Non-electrical equipment intended for use in potentially explosive atmospheres - Part-5: protection by constructural safety" - and can as such be used in the conditions described in the Directive 94/9/EC - ATEX.

® Registered trademark of The Gates Corporation.

Important!
According to the ISO 4184 standard all V-belts are identified by datum length instead of pitch length. Please consult page 21.

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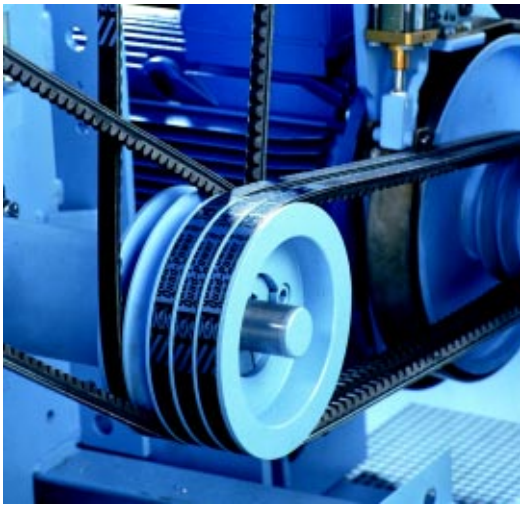
QUAD-POWER II

Raw edge, moulded notch, narrow section V-belt



Quad-Power II is Gates' top-of-the-range narrow section V-belt for heavy-duty industrial drives. It has been developed to replace traditional V-belts on applications where space and weight savings are critical: Quad-Power II is the V-belt with the highest power capacity even on small pulley diameters.
Improved resistance to outside bends allows the use of back idlers. The new optimised notch profile makes the belts run smoothly in the pulley grooves.

Identification

Durable blue marking indicating type and dimensions.

Construction

* Raw edge construction, ground.
* Narrow cross-section.
* New, optimised notch profile reduces and evenly distributes thermal and bending stresses. Notch depth is in proportion to the cross-section to ensure perfect stability.
* Precision-ground sidewalls give a uniform wedging action.
* Fibre-loaded elastomeric compound withstands heat, ozone and sunlight.
* Flex-bonded polyester tensile cords are vulcanised as one solid unit, increasing the belt's resistance to tensile and flexing forces.
* Double Flex-Weave® textile backing protects the belt against wear — especially when back idlers are used.
* Cross-cords improve belt stability.
* The belt will not catch fire from heat buildup, even with severe slippage.
* Static conductive (ISO 1813).

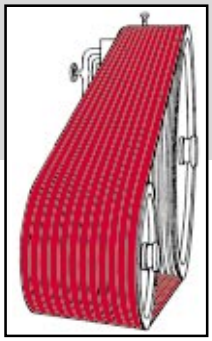
IMPORTANT INFORMATION!
Extensive testing has proven that, compared to the former Quad-Power generation, Gates Quad-Power II V-belt offers up to 15% higher power rating values, ensuring the same service life.

Advantages

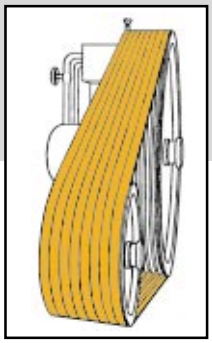
* The most powerful belt in Gates' industrial V-belt range.
* Excellent performance / cost ratio.
* Increased transmission efficiency as compared to other V-belt types.
* Cost and space savings.
* Maximum belt life reducing maintenance time.
* Match system: all sizes meet Gates UNISET tolerances.

Sections and nominal dimensions

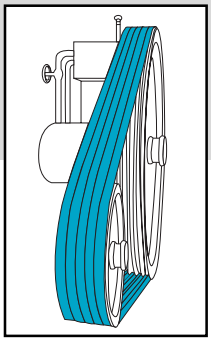
	Width mm	Height mm
XPZ	10	8
XPA	13	10
XPB	16	13
XPC	22	18



Hi-Power®
12 x B 46
pulley width: 234 mm
25 000 hr belt life

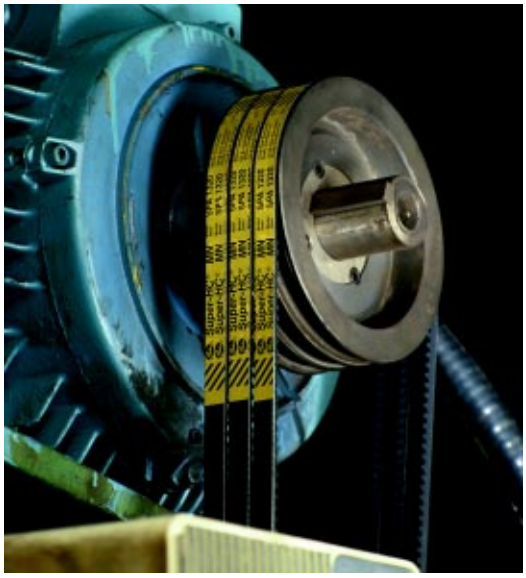


Super HC®
8 x SPB 1250
pulley width: 158 mm
25 000 hr belt life



Quad-Power II
5 x XPB 1250
pulley width: 100 mm
25 000 hr belt life

SUPER HC® MN *Raw edge, moulded notch, narrow section V-belt*
SUPER HC® *Wrapped, narrow section V-belt*



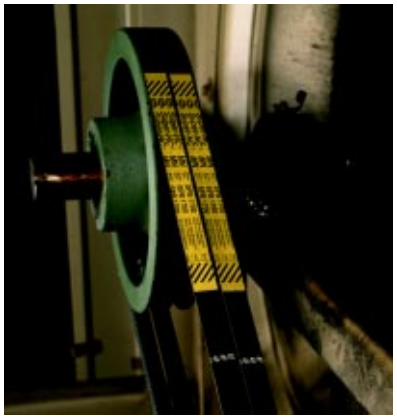
In addition to the Super HC® wrapped, narrow section V-belt, Gates markets the Super HC® Moulded Notch V-belt construction. Super HC® MN V-belts put more power where high speeds, high speed ratios or small pulley diameters are required, thus offering significant advantages over classical section V-belts.
Developed through specialised research, Super HC® MN is highly recommended for use on all industrial heavy-duty, narrow section V-belt drives. The Super HC® MN increased transmission efficiency allows more compact and highly economical drive design. Super HC® MN belts are available up to 4750 mm ISO datum lengths.

Identification

Durable yellow marking indicating type and dimensions.

Construction

* Raw edge construction, ground.
* Narrow cross-section.
* Moulded notches reduce and evenly distribute thermal and bending stresses. The moulded notch pattern also reduces noise.
* Precision-ground straight sidewalls give a uniform wedging action to ensure the belt fits correctly in the pulley grooves.
* Allows use of back idlers.
* Flex-bonded tensile cords are vulcanised as one solid unit making the belt highly resistant to tensile and flexing forces, fatigue and shock loads.
* Elastomeric compound protects the belt against heat, ozone and sunlight.
* The belt will not catch fire from heat buildup, even with severe slippage.
* Static conductive (ISO 1813).



Advantages

* Excellent performance / cost ratio.
* More power in the same space or same power in 1/3 to 1/2 less space when compared to classical section V-belts.
* Cost and space savings by reducing size of pulleys, bearings, guards and mounts.
* Improved belt life reducing expensive maintenance time.
* Match system: all sizes meet Gates UNISET tolerances.

Sections and nominal dimensions

	Width mm	Height mm
SPZ	10	8
SPA	13	10
SPB	16	13
SPC	22	18

1

HI-POWER®

Wrapped V-belt of conventional cross-section

The wrapped classical section Hi-Power® V-belt has a long reputation for reliability on agricultural and industrial applications.
The arched top of the Hi-Power® belt provides superior strength to prevent “dishing” and distortion of the tensile section. The cords are properly aligned, each of them carrying its full share of the load.
The Flex-Weave® cover increases the angle facing the direction of pull. As a result, the Flex-Weave® fabric develops even less stress for a given amount of bending.

Identification

Durable red marking indicating type and dimensions.

Construction

* Classical cross-section
* Arched top, concave sidewalls and rounded corners provide uniform tensile loading and uniform pulley sidewall contact for excellent belt service life and reduced pulley wear.
* The Flex-Weave® oil and heat resistant cover protects the belt core from the toughest environments.
* The vulcanised Flex-bonded tensile cords provide superior resistance to tensile and flexing forces, fatigue and shock loads.
* High-quality rubber compound protects the belt against heat, ozone and sunlight.
* The belt will not catch fire from heat build-up, even with severe slippage.
* Static conductive (ISO 1813).

Advantages

* Excellent performance / cost ratio.
* Reliability and efficiency.
* Long belt life reducing replacement and maintenance costs.
* Match system: all sizes meet Gates UNISET tolerances.

Sections and nominal dimensions

	Width mm	Height mm
Z	10	6
A	13	8
B	17	11
C	22	14
D	32	19

POWERBAND®

Multiple V-belt

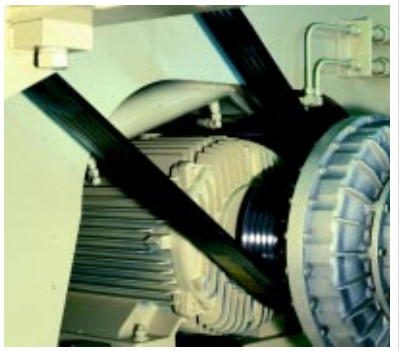
Gates PowerBand® offers a solution for drives where single belts vibrate, turn over or jump off the pulleys.
PowerBand® is especially developed for drives subjected to pulsating loads. It consists of several V-belts joined together by a permanent, high strength tie band, thus being tougher than all the belts taken separately. PowerBand® is available in SPB, SPC, 8V/25J, 9J, 15J, 3VX and 5VX sections. B, C and D sections are available on request.

Identification

Durable marking indicating type and dimensions.

Construction

* Strong band controls belt-to-belt distance and prevents sideways bending.
* Flex-bonded cords.
* Concave sides, arched top and Flex-Weave® cover for PowerBands of wrapped construction (SPB, SPC, 9J, 15J and 8V/25J).
* Hi-Power® PowerBand® B, C and D sections are available on request.
* Moulded notches for PowerBands of raw edge construction (3VX and 5VX).
* Elastomeric compound.
* Static conductive (ISO 1813).



Advantages

* High stability and smooth running on the toughest drives.
* Important design economies possible.
* Savings in drive space and weight thanks to high transmission efficiency.

Sections and nominal dimensions

	Width mm	Height mm
B	17	10
C	22	12
D	32	19
SPB	16	13
SPC	22	18

	Width mm	Height mm
9J	10	8
15J	16	13
8V/25J	26	23
3VX	10	8
5VX	16	13

1

MICRO-V®

Multi-ribbed belt

Through its truncated rib design, Gates Micro-V® multi-ribbed belt ensures an outstanding performance at higher speeds on smaller diameter pulleys.
This smooth-running belt provides a power capacity increase up to 80% higher than RMA standards.
The Micro-V® size range comprises more than 125 standard effective lengths covering a multitude of applications.

Identification

Durable yellow marking indicating type and dimension.

Construction

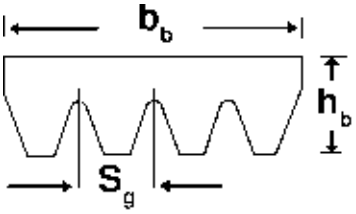
* Truncated ribs ensure flexibility, reduce heat buildup and improve rib crack resistance.
* High modulus, low stretch polyester tensile member provides superior resistance to fatigue and shock loads.
* All elastomeric rubber compound provides oil and heat resistance.
* Specially formulated fibre reinforced undercord stock improves belt stability.

Advantages

* Extremely smooth and cool running.
* Very high power capacity per rib.
* Long life due to extra load-carrying capacity.
* Improved performance on back idlers.
* Smaller drive package.
* Tolerant of pulley groove debris.

Sections and nominal dimensions

Micro-V® belts are available in PJ, PL and PM sections. The figure below shows a cross-sectional view illustrating the nominal belt dimensions — rib width and belt height. All these belts will operate in standard pulleys provided the pulleys are manufactured to the DIN 7867 or ISO 9982 standard for the specific cross-section.

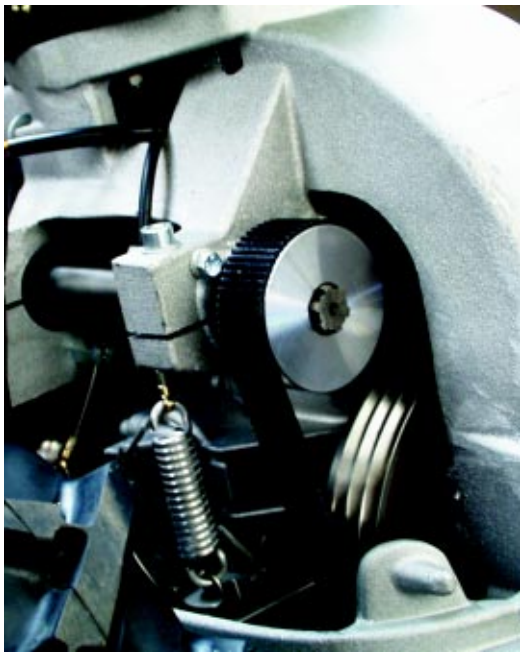


Nominal top width: $b_b = N_r \times S_g$
Where: N_r = number of ribs
S_g = pulley groove spacing

	Pitch S_g mm	Height h_b mm
PJ	2.34	3.6
PL	4.70	6.4
PM	9.40	12.5

POLYFLEX® JB™

Polyurethane multiple V-belt



Polyflex® JB™ is synonymous with high power density in small spaces. Developed by Gates and produced to patented manufacturing processes, Polyflex® JB™ belts provide more load- carrying capacity at higher speeds to small precision multiple V-belt drives. This results in significant cost savings and improved design freedom. Recommended for use on bench type milling machines, lathe drives, woodworking and metalworking machine spindle drives, computer peripheral equipment, small blowers, etc.

Identification

Durable marking indicating type.

Construction

* Joined belt construction improves stability.
* Ribs relieve bending stress on small pulleys and provide lateral rigidity.
* 60° angle provides more undercord support to the tensile section and distributes the load more evenly.
* Small cross-section meets special application needs such as high shaft speeds, small drive package size and smooth running requirements.
* High modulus polyurethane compound with a high friction coefficient. The precise casting method eliminates overlaps and layers.
* Excellent adhesion of tensile cords and polyurethane compound leads to high fatigue resistance and long belt life.
* Extra toughness. The polyurethane compound resists fatigue, wear and ozone.

Advantages

* Long belt life on small pulleys and compact drives.
* Greater shaft speeds, in excess of 10000 rpm.
* High performance and smooth running for precision applications.
* Cost savings and design freedom.
* Avoids vibrations when subjected to shock loads.

Single belt sections and nominal dimensions

	Width mm	Height mm
3M-JB	3	2.3
5M-JB	5	3.3
7M-JB	7	5.3
11M-JB	11	7.1

TOOLS

2

Gates 505C sonic tension meter

Correct belt installation is essential for optimum performance of V- and synchronous belt drives. Gates' 505C sonic tension meter allows a simple and accurate tension measurement by analysing sound waves (natural frequencies) from the belt through the sensor. The tension meter processes the input signals and gives an accurate digital display of tension. The tester is compact, computerised and stores data for repetitive use measuring belt tension accurately time after time.
Gates' 505 sonic tension meter is supplied with a handy instruction manual (E/20106). See also page 34 for more information on how to check belt tension.

Features

* Stores weight, width and span constants for up to ten different systems.
* New auto gain adjustment function cancels out background noise automatically.
* Shuts off automatically after ten minutes of inactivity, making it an energy-saving device.
* Measurement range: 10 Hz to 1000 Hz.
* Flexible sensor (cord sensor and inductive sensor available on request).
* H 160 mm x D 26 mm x W 59 mm.

Optional accessories

Cord sensor
The cord sensor is recommended for measuring tensions at a distance from the tension meter.
Inductive sensor
The inductive sensor is recommended for measurement of steel corded belts particularly in noisy or windy environments.
Sonic tension meter calibrator – model U-305-OS1
This special calibrator (oscillator) is available for the frequency test of the 505C model. This oscillator generates five types of oscillations (sine wave): 25, 90, 500, 2000 and 4000 Hz. It features a frequency accuracy of 0.1% or even lower.

Gates laser alignment device LASER AT-1

The LASER AT-1 identifies parallel as well as angular misalignment between the pulleys and is suitable for pulley diameters of 60 mm and larger. Mounted in a few seconds, the laser line projected on the targets allows you to quickly ascertain and correct misalignment. It is so light it can be mounted on non-magnetic pulleys with the double sided adhesive tape and used on both horizontal and vertical shaft installations.
For more information please see leaflet E2/20121.

WARNING
Gates' Sonic tension meter 505C and laser alignment device LASER AT-1 are not certified for use in explosion risk areas.

QUAD-POWER II SIZE LISTING

XPZ

Belt reference ISO	Datum length mm ISO	Belt reference ISO	Datum length mm ISO	Belt reference ISO	Datum length mm ISO
XPZ 630	630	XPZ 1180	1180	XPZ 2650	2650
XPZ 637	637	XPZ 1187	1187	XPZ 2690	2690
XPZ 662	662	XPZ 1200	1200	XPZ 2800	2800
XPZ 670	670	XPZ 1202	1202	XPZ 2840	2840
XPZ 687	687	XPZ 1212	1212	XPZ 3000	3000
XPZ 710	710	XPZ 1237	1237	XPZ 3150	3150
XPZ 722	722	XPZ 1250	1250	XPZ 3350	3350
XPZ 730	730	XPZ 1262	1262	XPZ 3550	3550
XPZ 737	737	XPZ 1270	1270		
XPZ 750	750	XPZ 1280	1280		
XPZ 760	760	XPZ 1285	1285		
XPZ 762	762	XPZ 1287	1287		
XPZ 772	772	XPZ 1312	1312		
XPZ 787	787	XPZ 1320	1320		
XPZ 800	800	XPZ 1337	1337		
XPZ 812	812	XPZ 1340	1340		
XPZ 837	837	XPZ 1362	1362		
XPZ 850	850	XPZ 1400	1400		
XPZ 862	862	XPZ 1412	1412		
XPZ 875	875	XPZ 1420	1420		
XPZ 887	887	XPZ 1450	1450		
XPZ 900	900	XPZ 1487	1487		
XPZ 912	912	XPZ 1500	1500		
XPZ 925	925	XPZ 1512	1512		
XPZ 937	937	XPZ 1520	1520		
XPZ 950	950	XPZ 1537	1537		
XPZ 962	962	XPZ 1550	1550		
XPZ 975	975	XPZ 1587	1587		
XPZ 980	980	XPZ 1600	1600		
XPZ 987	987	XPZ 1650	1650		
XPZ 1000	1000	XPZ 1687	1687		
XPZ 1010	1010	XPZ 1700	1700		
XPZ 1012	1012	XPZ 1750	1750		
XPZ 1030	1030	XPZ 1800	1800		
XPZ 1037	1037	XPZ 1850	1850		
XPZ 1060	1060	XPZ 1900	1900		
XPZ 1062	1062	XPZ 1950	1950		
XPZ 1077	1077	XPZ 2000	2000		
XPZ 1080	1080	XPZ 2030	2030		
XPZ 1087	1087	XPZ 2120	2120		
XPZ 1090	1090	XPZ 2160	2160		
XPZ 1112	1112	XPZ 2240	2240		
XPZ 1120	1120	XPZ 2280	2280		
XPZ 1137	1137	XPZ 2360	2360		
XPZ 1140	1140	XPZ 2410	2410		
XPZ 1150	1150	XPZ 2500	2500		
XPZ 1162	1162	XPZ 2540	2540		

Dimensions in bold are available from stock.

XPA

Belt reference ISO	Datum length mm ISO
XPA 747	747
XPA 757	757
XPA 782	782
XPA 800	800
XPA 832	832
XPA 850	850
XPA 857	857
XPA 882	882
XPA 900	900
XPA 907	907
XPA 925	925
XPA 932	932
XPA 950	950
XPA 957	957
XPA 975	975
XPA 982	982
XPA 1000	1000
XPA 1007	1007
XPA 1030	1030
XPA 1060	1060
XPA 1082	1082
XPA 1090	1090
XPA 1107	1107
XPA 1120	1120
XPA 1140	1140
XPA 1150	1150
XPA 1157	1157
XPA 1180	1180
XPA 1207	1207
XPA 1215	1215
XPA 1232	1232
XPA 1250	1250
XPA 1257	1257
XPA 1282	1282
XPA 1285	1285
XPA 1307	1307
XPA 1320	1320
XPA 1332	1332
XPA 1357	1357
XPA 1360	1360
XPA 1400	1400
XPA 1450	1450
XPA 1482	1482
XPA 1500	1500
XPA 1507	1507
XPA 1532	1532
XPA 1550	1550

QUAD-POWER II SIZE LISTING

2

Belt reference ISO	Datum length mm ISO
XPA 1582	**1582**
XPA 1600	**1600**
XPA 1650	**1650**
XPA 1700	**1700**
XPA 1750	**1750**
XPA 1800	**1800**
XPA 1850	**1850**
XPA 1900	**1900**
XPA 1950	**1950**
XPA 2000	**2000**
XPA 2060	**2060**
XPA 2120	**2120**
XPA 2240	**2240**
XPA 2360	**2360**
XPA 2430	**2430**
XPA 2500	**2500**
XPA 2650	**2650**
XPA 2800	**2800**
XPA 3000	**3000**
XPA 3150	**3150**
XPA 3350	**3350**
XPA 3550	**3550**
XPA 3750	**3750**
XPA 4000	**4000**

XPB

Belt reference ISO	Datum length mm ISO
XPB 1250	**1250**
XPB 1260	**1260**
XPB 1320	**1320**
XPB 1340	**1340**
XPB 1400	**1400**
XPB 1410	**1410**
XPB 1450	**1450**
XPB 1500	**1500**
XPB 1510	**1510**
XPB 1550	**1550**
XPB 1590	**1590**
XPB 1600	**1600**
XPB 1650	**1650**
XPB 1690	**1690**
XPB 1700	**1700**
XPB 1750	**1750**
XPB 1800	**1800**
XPB 1850	**1850**
XPB 1900	**1900**
XPB 1950	**1950**
XPB 2000	**2000**
XPB 2020	**2020**
XPB 2120	**2120**
XPB 2150	**2150**
XPB 2240	**2240**
XPB 2280	**2280**
XPB 2360	**2360**
XPB 2410	**2410**
XPB 2500	**2500**
XPB 2530	**2530**
XPB 2650	**2650**
XPB 2680	**2680**
XPB 2800	**2800**
XPB 2840	**2840**
XPB 2990	**2990**
XPB 3000	**3000**
XPB 3150	**3150**
XPB 3350	**3350**
XPB 3550	**3550**
XPB 3750	**3750**
XPB 4000	**4000**
XPB 4250	**4250**
XPB 4500	**4500**
XPB 4750	**4750**

XPC

Belt reference ISO	Datum length mm ISO
XPC 2000	**2000**
XPC 2120	**2120**
XPC 2240	**2240**
XPC 2360	**2360**
XPC 2500	**2500**
XPC 2650	**2650**
XPC 2800	**2800**
XPC 3000	**3000**
XPC 3150	**3150**
XPC 3350	**3350**
XPC 3550	**3550**
XPC 3750	**3750**
XPC 4000	**4000**
XPC 4250	**4250**
XPC 4500	**4500**
XPC 4750	**4750**

Dimensions in bold are available from stock.

SUPER HC® MN / SUPER HC® BELT LISTING

SPZ

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPZ 560	SPZ 560	560
SPZ 562	SPZ 562	562
SPZ 612	SPZ 612	612
	SPZ 615	615
SPZ 630	SPZ 630	630
SPZ 637	SPZ 637	637
SPZ 662	SPZ 662	662
SPZ 670	SPZ 670	670
SPZ 687	SPZ 687	687
SPZ 710	SPZ 710	710
SPZ 722		722
SPZ 730	SPZ 730	730
SPZ 737	SPZ 737	737
SPZ 750	SPZ 750	750
SPZ 760		760
SPZ 762	SPZ 762	762
SPZ 772		772
SPZ 775	SPZ 775	775
SPZ 787	SPZ 787	787
SPZ 800	SPZ 800	800
SPZ 812	SPZ 812	812
SPZ 825	SPZ 825	825
SPZ 837	SPZ 837	837
SPZ 850	SPZ 850	850
SPZ 862	SPZ 862	862
SPZ 875	SPZ 875	875
SPZ 887	SPZ 887	887
SPZ 900	SPZ 900	900
SPZ 912	SPZ 912	912
SPZ 925	SPZ 925	925
SPZ 937	SPZ 937	937
SPZ 950	SPZ 950	950
SPZ 962	SPZ 962	962
SPZ 975	SPZ 975	975
SPZ 987	SPZ 987	987
SPZ 1000	SPZ 1000	1000
SPZ 1010		1010
SPZ 1012	SPZ 1012	1012
SPZ 1025		1025
SPZ 1030	SPZ 1030	1030
SPZ 1037	SPZ 1037	1037
SPZ 1047		1047
SPZ 1060	SPZ 1060	1060
SPZ 1062	SPZ 1062	1062
SPZ 1077		1077
SPZ 1080		1080
SPZ 1087	SPZ 1087	1087
SPZ 1090	SPZ 1090	1090
SPZ 1112	SPZ 1112	1112
SPZ 1120	SPZ 1120	1120
SPZ 1137	SPZ 1137	1137
SPZ 1140		1140
SPZ 1150	SPZ 1150	1150
SPZ 1162	SPZ 1162	1162
SPZ 1180	SPZ 1180	1180
SPZ 1187	SPZ 1187	1187
SPZ 1200		1200
SPZ 1202		1202
SPZ 1212	SPZ 1212	1212
	SPZ 1215	1215
SPZ 1237	SPZ 1237	1237
SPZ 1250	SPZ 1250	1250
SPZ 1262	SPZ 1262	1262
SPZ 1270		1270
	SPZ 1285	1285
SPZ 1287	SPZ 1287	1287
SPZ 1312	SPZ 1312	1312
SPZ 1320	SPZ 1320	1320
SPZ 1337	SPZ 1337	1337
SPZ 1340		1340
SPZ 1347		1347
	SPZ 1360	1360
SPZ 1362	SPZ 1362	1362
SPZ 1387	SPZ 1387	1387
SPZ 1400	SPZ 1400	1400
SPZ 1412		1412
SPZ 1420		1420
SPZ 1437	SPZ 1437	1437
SPZ 1450	SPZ 1450	1450
SPZ 1462	SPZ 1462	1462
SPZ 1487	SPZ 1487	1487
SPZ 1500	SPZ 1500	1500
SPZ 1512		1512
SPZ 1520		1520
SPZ 1537		1537
SPZ 1550	SPZ 1550	1550
SPZ 1562		1562
SPZ 1587	SPZ 1587	1587
SPZ 1600	SPZ 1600	1600
SPZ 1612	SPZ 1612	1612
SPZ 1637	SPZ 1637	1637
SPZ 1650	SPZ 1650	1650
SPZ 1662		1662
SPZ 1687		1687
SPZ 1700	SPZ 1700	1700
SPZ 1737		1737
SPZ 1750	SPZ 1750	1750
SPZ 1762		1762
SPZ 1782		1782
SPZ 1787	SPZ 1787	1787
SPZ 1800	SPZ 1800	1800
SPZ 1812		1812
SPZ 1837	SPZ 1837	1837
SPZ 1850	SPZ 1850	1850
SPZ 1862		1862
SPZ 1887		1887
SPZ 1900	SPZ 1900	1900
SPZ 1937		1937
SPZ 1950	SPZ 1950	1950
SPZ 1987		1987
SPZ 2000	SPZ 2000	2000
SPZ 2037		2037
SPZ 2060	SPZ 2060	2060
SPZ 2120	SPZ 2120	2120
SPZ 2137		2137
SPZ 2160		2160
SPZ 2180	SPZ 2180	2180
SPZ 2187		2187
SPZ 2240	SPZ 2240	2240
SPZ 2262		2262
SPZ 2280		2280
SPZ 2287		2287
SPZ 2360	SPZ 2360	2360
SPZ 2410		2410
SPZ 2430	SPZ 2430	2430
SPZ 2500	SPZ 2500	2500
SPZ 2540		2540
SPZ 2650	SPZ 2650	2650
SPZ 2690		2690
SPZ 2800	SPZ 2800	2800
SPZ 2840		2840
SPZ 3000	SPZ 3000	3000
SPZ 3150	SPZ 3150	3150
SPZ 3350	SPZ 3350	3350
SPZ 3550	SPZ 3550	3550

Dimensions in bold are available from stock.

SPA

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPA 732	SPA 732	732
SPA 757		757
SPA 782		782
SPA 800	SPA 800	800
SPA 807		807
SPA 832	SPA 832	832
SPA 850	SPA 850	850
SPA 857	SPA 857	857
SPA 882	SPA 882	882
SPA 900	SPA 900	900
SPA 907	SPA 907	907
SPA 925	SPA 925	925
SPA 932	SPA 932	932
SPA 950	SPA 950	950
SPA 957	SPA 957	957
SPA 975	SPA 975	975
SPA 982	SPA 982	982
SPA 1000	SPA 1000	1000
SPA 1007	SPA 1007	1007
SPA 1030	SPA 1030	1030
SPA 1032	SPA 1032	1032
	SPA 1057	1057
SPA 1060	SPA 1060	1060
SPA 1082	SPA 1082	1082
SPA 1090	SPA 1090	1090
SPA 1107	SPA 1107	1107
SPA 1120	SPA 1120	1120
SPA 1132	SPA 1132	1132
SPA 1140		1140
SPA 1150	SPA 1150	1150
SPA 1157	SPA 1157	1157
SPA 1180	SPA 1180	1180
SPA 1207	SPA 1207	1207
SPA 1215	SPA 1215	1215
SPA 1232	SPA 1232	1232
SPA 1250	SPA 1250	1250
SPA 1257	SPA 1257	1257
SPA 1272		1272
SPA 1282	SPA 1282	1282
SPA 1285	SPA 1285	1285
SPA 1307	SPA 1307	1307
SPA 1320	SPA 1320	1320
SPA 1332	SPA 1332	1332
SPA 1357	SPA 1357	1357
SPA 1360	SPA 1360	1360
SPA 1382	SPA 1382	1382
SPA 1400	SPA 1400	1400

SUPER HC® MN / SUPER HC® BELT LISTING

SPA (cont'd)

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPA 1407	SPA 1407	1407
SPA 1432	SPA 1432	1432
SPA 1450	SPA 1450	1450
SPA 1457	SPA 1457	1457
SPA 1482	SPA 1482	1482
SPA 1500	SPA 1500	1500
SPA 1507	SPA 1507	1507
SPA 1532	SPA 1532	1532
SPA 1550	SPA 1550	1550
SPA 1557	SPA 1557	1557
SPA 1582		1582
SPA 1600	SPA 1600	1600
SPA 1607		1607
SPA 1632		1632
SPA 1650	SPA 1650	1650
SPA 1657		1657
SPA 1682		1682
SPA 1700	SPA 1700	1700
SPA 1707		1707
SPA 1732	SPA 1732	1732
SPA 1750	SPA 1750	1750
SPA 1757		1757
SPA 1782	SPA 1782	1782
SPA 1800	SPA 1800	1800
SPA 1807		1807
SPA 1832	SPA 1832	1832
SPA 1857	SPA 1857	1857
SPA 1882		1882
SPA 1900	SPA 1900	1900
SPA 1907		1907
SPA 1932	SPA 1932	1932
SPA 1950	SPA 1950	1950
SPA 1957		1957
SPA 1982		1982
SPA 2000	SPA 2000	2000
SPA 2032	SPA 2032	2032
SPA 2057		2057
SPA 2060	SPA 2060	2060
SPA 2082	SPA 2082	2082
SPA 2120	SPA 2120	2120
SPA 2132	SPA 2132	2132
SPA 2182		2182
SPA 2207	SPA 2207	2207
SPA 2232		2232
SPA 2240	SPA 2240	2240
SPA 2282		2282
SPA 2300	SPA 2300	2300

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPA 2307		2307
SPA 2332		2332
SPA 2360	SPA 2360	2360
SPA 2382		2382
SPA 2430	SPA 2430	2430
SPA 2482		2482
SPA 2500	SPA 2500	2500
SPA 2532		2532
SPA 2582		2582
SPA 2607		2607
SPA 2632		2632
SPA 2650	SPA 2650	2650
SPA 2682		2682
SPA 2732		2732
SPA 2782		2782
SPA 2800	SPA 2800	2800
SPA 2832		2832
SPA 2847		2847
SPA 2882		2882
SPA 2900	SPA 2900	2900
SPA 2932		2932
SPA 2982		2982
SPA 3000	SPA 3000	3000
SPA 3150	SPA 3150	3150
SPA 3350	SPA 3350	3350
SPA 3550	SPA 3550	3550
SPA 3750	SPA 3750	3750
SPA 4000	SPA 4000	4000
	SPA 4250	4250
	SPA 4500	4500

SPB

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPB 1250	SPB 1250	1250
SPB 1260		1260
SPB 1320		1320
SPB 1340		1340
SPB 1400		1400
SPB 1410		1410
SPB 1500	SPB 1500	1500
SPB 1510		1510
SPB 1590		1590
SPB 1600	SPB 1600	1600
SPB 1690		1690
SPB 1700	SPB 1700	1700
SPB 1800	SPB 1800	1800
SPB 1900	SPB 1900	1900
SPB 2000	SPB 2000	2000
SPB 2020		2020
SPB 2120	SPB 2120	2120
SPB 2150		2150
SPB 2240	SPB 2240	2240
SPB 2280		2280
SPB 2360	SPB 2360	2360
SPB 2410		2410
SPB 2500	SPB 2500	2500
SPB 2530		2530
SPB 2650	SPB 2650	2650
SPB 2680		2680
SPB 2800	SPB 2800	2800
SPB 2840		2840
SPB 2990		2990
SPB 3000	SPB 3000	3000
SPB 3150	SPB 3150	3150
SPB 3350	SPB 3350	3350
SPB 3550	SPB 3550	3550
SPB 3750	SPB 3750	3750
SPB 4000	SPB 4000	4000
SPB 4250	SPB 4250	4250
SPB 4500	SPB 4500	4500
SPB 4750	SPB 4750	4750
	SPB 5000	5000
	SPB 5300	5300
	SPB 5600	5600
	SPB 6000	6000
	SPB 6300	6300
	SPB 6700	6700
	SPB 7100	7100
	SPB 7500	7500
	SPB 8000	8000

SPC

ISO belt ref. MN	ISO belt ref. Wrapped	Datum length mm ISO
SPC 2000	SPC 2000	2000
SPC 2120	SPC 2120	2120
SPC 2240	SPC 2240	2240
SPC 2360	SPC 2360	2360
SPC 2500	SPC 2500	2500
SPC 2650	SPC 2650	2650
SPC 2800	SPC 2800	2800
SPC 3000	SPC 3000	3000
SPC 3150	SPC 3150	3150
SPC 3350	SPC 3350	3350
SPC 3550	SPC 3550	3550
SPC 3750	SPC 3750	3750
SPC 4000	SPC 4000	4000
SPC 4250	SPC 4250	4250
SPC 4500	SPC 4500	4500
SPC 4750	SPC 4750	4750
	SPC 5000	5000
	SPC 5300	5300
	SPC 5600	5600
	SPC 6000	6000
	SPC 6300	6300
	SPC 6700	6700
	SPC 7100	7100
	SPC 7500	7500
	SPC 8000	8000
	SPC 8500	8500
	SPC 9000	9000
	SPC 9500	9500
	SPC 10000	10000
	SPC 10600	10600

Dimensions in bold are available from stock.

HI-POWER® SIZE LISTING

Z 10 mm		A 13 mm					
ISO belt ref.	Datum length mm ISO	ISO belt ref.	Datum length mm ISO	ISO belt ref.	Datum length mm ISO	ISO belt ref.	Datum length mm ISO
Z-17 1/2	470	A-21	570	A-63	1635	A-130	3340
Z-18 1/2	495	A-22	595	A-64	1660	A-134	3440
Z-19	505	A-23	620	A-65	1690	A-136	3490
Z-19 1/2	520	A-23 1/2	630	A-66	1715	A-140	3590
Z-20 1/2	550	A-24	645	A-67	1735	A-144	3695
Z-22	580	A-24 1/2	655	A-68	1765	A-147	3770
Z-22 1/2	595	A-25	680	A-69	1790	A-158	4050
Z-23 1/2	620	A-26	705	A-70	1815	A-173	4430
Z-24	630	A-27	720	A-71	1840	A-180	4610
Z-25	655	A-27 1/2	730	A-72	1865		
Z-26 1/2	695	A-28	745	A-73	1890		
Z-28	730	A-28 1/2	755	A-74	1915		
Z-29	755	A-29 1/2	780	A-75	1940		
Z-29 1/2	770	A-30	795	A-76	1965		
Z-30 1/2	795	A-31	825	A-77	1990		
Z-31	805	A-32	850	A-78	2020		
Z-31 1/2	820	A-33	875	A-79	2040		
Z-32 1/2	845	A-34	900	A-80	2070		
Z-33 1/2	870	A-35	925	A-81	2095		
Z-34 1/2	895	A-36	950	A-82	2120		
Z-35 1/2	920	A-37	975	A-83	2145		
Z-36	930	A-38	1000	A-84	2170		
Z-37	955	A-39	1025	A-85	2195		
Z-37 1/2	970	A-40	1055	A-86	2220		
Z-38 1/2	995	A-41	1080	A-87	2245		
Z-39	1005	A-41 1/2	1090	A-88	2270		
Z-39 1/2	1020	A-42	1105	A-89	2295		
Z-41 1/2	1070	A-43	1130	A-90	2325		
Z-42	1080	A-44	1155	A-91	2350		
Z-44	1140	A-45	1180	A-92	2375		
Z-45	1170	A-46	1205	A-93	2400		
Z-45 1/2	1180	A-47	1230	A-94	2425		
Z-46	1200	A-48	1255	A-95	2450		
Z-47	1220	A-49	1280	A-96	2475		
Z-48	1245	A-50	1310	A-97	2500		
Z-48 1/2	1255	A-51	1330	A-98	2525		
Z-49	1270	A-52	1355	A-100	2575		
Z-50	1295	A-53	1385	A-102	2625		
Z-51	1320	A-54	1410	A-104	2680		
Z-52	1340	A-55	1435	A-105	2705		
Z-55	1420	A-56	1460	A-108	2780		
Z-57	1470	A-57	1485	A-110	2830		
Z-59	1520	A-58	1510	A-112	2880		
Z-63 1/2	1630	A-59	1535	A-118	3035		
Z-67	1720	A-60	1560	A-120	3085		
Z-71	1820	A-61	1585	A-124	3185		
Z-75	1920	A-62	1610	A-128	3290		

Dimensions in bold are available from stock.

HI-POWER® SIZE LISTING

B — 17 mm

ISO belt ref.	Datum length mm ISO
B-25	695
B-26	710
B-27	735
B-27 1/2	745
B-28	770
B-29	795
B-30	815
B-31	845
B-32	870
B-33	895
B-34	920
B-35	940
B-36	965
B-37	990
B-38	1015
B-39	1040
B-40	1065
B-41	1095
B-42	1120
B-43	1145
B-44	1170
B-45	1195
B-46	1220
B-47	1245
B-48	1270
B-49	1295
B-50	1320
B-51	1345
B-52	1370
B-53	1395
B-54	1425
B-55	1450
B-56	1475
B-57	1500
B-58	1525
B-59	1550
B-60	1575
B-61	1600
B-62	1625
B-63	1650
B-64	1675
B-65	1700
B-66	1730
B-67	1755
B-68	1780
B-69	1805
B-70	1830

ISO belt ref.	Datum length mm ISO
B-71	1855
B-72	1880
B-73	1905
B-74	1930
B-75	1955
B-76	1980
B-77	2005
B-78	2030
B-79	2060
B-80	2085
B-81	2110
B-82	2135
B-83	2160
B-84	2185
B-85	2210
B-86	2235
B-87	2260
B-88	2285
B-89	2310
B-90	2335
B-91	2365
B-92	2390
B-93	2415
B-94	2440
B-95	2465
B-96	2490
B-97	2515
B-98	2540
B-99	2565
B-100	2590
B-102	2640
B-103	2665
B-104	2695
B-105	2720
B-106	2745
B-108	2795
B-110	2845
B-112	2895
B-114	2945
B-116	3000
B-118	3050
B-120	3100
B-122	3150
B-124	3200
B-128	3300
B-130	3350
B-131	3380

ISO belt ref.	Datum length mm ISO
B-133	3430
B-134	3455
B-136	3505
B-140	3610
B-144	3710
B-147	3785
B-148	3810
B-152	3910
B-157	4040
B-158	4065
B-162	4165
B-165	4240
B-167	4295
B-173	4445
B-175	4495
B-177	4545
B-180	4625
B-186	4775
B-195	5005
B-196	5030
B-204	5250
B-208	5335
B-210	5385
B-221	5625
B-225	5730
B-240	6110
B-249	6340
B-270	6870
B-300	7635

Dimensions in bold are available from stock.

HI-POWER® SIZE LISTING

C — 22 mm

ISO belt ref.	Datum length mm ISO
C-42	1145
C-43	1165
C-46	1245
C-48	1290
C-49	1320
C-51	1370
C-53	1420
C-54	1445
C-55	1470
C-59	1570
C-60	1595
C-62	1650
C-65	1725
C-66	1750
C-68	1800
C-70	1850
C-71	1875
C-72	1900
C-74	1950
C-75	1980
C-78	2055
C-81	2130
C-82	2155
C-83	2180
C-85	2230
C-88	2310
C-90	2360
C-92	2410
C-93	2435
C-95	2485
C-96	2510
C-97	2535
C-98	2560
C-99	2590
C-100	2615
C-102	2665
C-104	2715
C-105	2740
C-108	2815
C-110	2865
C-112	2920
C-115	2995
C-116	3020
C-118	3070
C-120	3120
C-124	3225
C-128	3325
C-130	3375
C-132	3425
C-134	3475
C-136	3525
C-140	3630
C-144	3730
C-147	3805
C-153	3960
C-158	4085
C-162	4190
C-165	4265
C-173	4465
C-177	4570
C-180	4645
C-195	5025
C-208	5355
C-210	5405
C-222	5660
C-225	5735
C-238	6065
C-240	6120
C-250	6370
C-255	6500
C-265	6755
C-270	6880
C-280	7135
C-285	7260
C-300	7640
C-330	8405

D — 32 mm

ISO belt ref.	Datum length mm ISO
D-98	2570
D-104	2720
D-110	2975
D-120	3130
D-124	3230
D-128	3330
D-137	3560
D-140	3635
D-144	3740
D-158	4095
D-162	4195
D-170	4400
D-173	4475
D-177	4575
D-180	4650
D-187	4830
D-195	5035
D-197	5085
D-204	5260
D-210	5415
D-223	5680
D-240	6115
D-250	6365
D-270	6875
D-282	7180
D-298	7585
D-300	7635
D-330	8400
D-360	9160

Dimensions in bold are available from stock.

HI-POWER® DUBL-V SIZE LISTING

AA — 13 mm

Belt ref.	Effective length mm RMA	Datum length mm ISO
AA51	1350	1330
AA55	1450	1435
AA60	1575	1560
AA68	1780	1765
AA75	1960	1940
AA80	2085	2070
AA85	2210	2195
AA90	2340	2325
AA92	2390	2375
AA96	2490	2475
AA105	2720	2705
AA112	2900	2880
AA120	3100	3085
AA128	3305	3290

BB — 17 mm

Belt ref.	Effective length mm RMA	Datum length mm ISO
BB35	965	940
BB38	1040	1015
BB42	1140	1120
BB43	1165	1145
BB45	1215	1195
BB46	1240	1220
BB51	1370	1345
BB53	1420	1395
BB55	1470	1450
BB60	1600	1575
BB68	1800	1780
BB71	1880	1855
BB73	1925	1905
BB74	1955	1930
BB75	1980	1955
BB81	2130	2110
BB85	2235	2210
BB90	2360	2335
BB92	2410	2390
BB93	2435	2415
BB94	2460	2440
BB97	2535	2515
BB105	2740	2720
BB107	2790	2770
BB108	2815	2795
BB111	2895	2870
BB112	2920	2895
BB116	3020	3000

BB — 17 mm

Belt ref.	Effective length mm RMA	Datum length mm ISO
BB118	3070	3050
BB120	3120	3100
BB122	3170	3150
BB123	3195	3175
BB124	3220	3200
BB127	3300	3275
BB128	3325	3300
BB129	3350	3325
BB130	3375	3350
BB136	3528	3505
BB144	3730	3710
BB155	4010	3990
BB158	4085	4065
BB168	4340	4320
BB169	4365	4345
BB173	4470	4445
BB180	4645	4625
BB195	5025	5005
BB210	5410	5385
BB226	5814	5755
BB228	5864	5805
BB230	5915	5855
BB240	6130	6110
BB270	6895	6870
BB277	7070	7050
BB300	7655	7635

CC — 22 mm

Belt ref.	Effective length mm RMA	Datum length mm ISO
CC75	2010	1980
CC81	2165	2130
CC85	2265	2230
CC90	2395	2360
CC96	2545	2510
CC105	2775	2740
CC112	2950	2920
CC120	3155	3120
CC128	3360	3325
CC136	3560	3525
CC144	3765	3730
CC158	4120	4085
CC162	4220	4190
CC173	4500	4465
CC180	4680	4645
CC195	5060	5025
CC210	5440	5405
CC240	6150	6120
CC270	6915	6880
CC300	7675	7640
CC330	8440	8405
CC360	9200	9165
CC390	9960	9930
CC420	10725	10690

DD — 32 mm

Belt ref.	Effective length mm RMA	Datum length mm ISO
DD210	5465	5415
DD270	6925	6875
DD300	7690	7635
DD360	9215	9160

This Hi-Power® belt is characterised by its double-V profile. It is the ideal solution for "serpentine" drives (drives with counterrotating shafts) requiring power to be transmitted to grooved pulleys from both the top and the bottom of the belts.

Dimensions in bold are available from stock.

POWERBAND® SIZE LISTING

QUAD-POWER II POWERBAND®

3VX

Belt ref. RMA	Effective length mm RMA
3VX-250	635
3VX-265	675
3VX-280	710
3VX-300	760
3VX-315	800
3VX-335	850
3VX-355	900
3VX-375	950
3VX-400	1015
3VX-425	1080
3VX-450	1145
3VX-475	1205
3VX-500	1270
3VX-530	1345
3VX-560	1420
3VX-600	1525
3VX-630	1600
3VX-670	1700
3VX-710	1805
3VX-750	1905
3VX-800	2030
3VX-850	2160
3VX-900	2285
3VX-950	2415
3VX-1000	2540
3VX-1060	2690
3VX-1120	2845
3VX-1180	2995
3VX-1250	3175
3VX-1320	3355
3VX-1400	3555

5VX

Belt ref. RMA	Effective length mm RMA
5VX-500	1270
5VX-530	1345
5VX-560	1420
5VX-600	1525
5VX-630	1600
5VX-670	1700
5VX-710	1805
5VX-750	1905
5VX-800	2030
5VX-850	2160
5VX-900	2285
5VX-950	2415
5VX-1000	2540
5VX-1060	2690
5VX-1120	2845
5VX-1180	2995
5VX-1250	3175
5VX-1320	3355
5VX-1400	3555
5VX-1500	3810
5VX-1600	4065
5VX-1700	4320
5VX-1800	4570
5VX-1900	4825
5VX-2000	5080

* Dimensions according to ISO 4184.

Hi-Power® PowerBand® B, C and D sections are available on request.

8V and 8VK sizes with aramid cord are available on special request.

3VX and 5VX are available in 2, 3, 4 and 5 strands;
8V is available in 3, 4 and 5 strands.

8V PowerBand® belts are designed for use both in 8V and 25J pulleys.

Dimensions in bold are available from stock.

SUPER HC® POWERBAND®

SPB

Belt ref.	Datum length mm ISO*
SPB 2120	**2120**
SPB 2240	**2240**
SPB 2360	**2360**
SPB 2500	**2500**
SPB 2650	**2650**
SPB 2800	**2800**
SPB 3000	**3000**
SPB 3150	**3150**
SPB 3350	**3350**
SPB 3550	**3550**
SPB 3750	**3750**
SPB 4000	**4000**
SPB 4250	**4250**
SPB 4500	**4500**
SPB 4750	**4750**
SPB 5000	**5000**
SPB 5300	**5300**
SPB 5600	**5600**
SPB 6000	**6000**
SPB 6300	**6300**
SPB 6700	**6700**
SPB 7100	**7100**
SPB 7500	**7500**
SPB 8000	**8000**

9J

Belt ref.	Effective length mm ISO**
9J 1250	**1250**
9J 1320	**1320**
9J 1400	**1400**
9J 1500	**1500**
9J 1600	**1600**
9J 1700	**1700**
9J 1800	**1800**
9J 1900	**1900**
9J 2000	**2000**
9J 2120	**2120**
9J 2240	**2240**
9J 2360	**2360**
9J 2500	**2500**
9J 2650	**2650**
9J 2800	**2800**
9J 3000	**3000**
9J 3150	**3150**
9J 3350	**3350**
9J 3550	**3550**

9J / 15J / 25J are ISO standards for RMA 3V-PB / 5V-PB / 8V-PB.

** Dimensions according to ISO 5290.

15J

Belt ref.	Effective length mm ISO**
15J 1250	**1250**
15J 1320	**1320**
15J 1400	**1400**
15J 1500	**1500**
15J 1600	**1600**
15J 1700	**1700**
15J 1800	**1800**
15J 1900	**1900**
15J 2000	**2000**
15J 2120	**2120**
15J 2240	**2240**
15J 2360	**2360**
15J 2500	**2500**
15J 2650	**2650**
15J 2800	**2800**
15J 3000	**3000**
15J 3150	**3150**
15J 3350	**3350**
15J 3550	**3550**
15J 3750	**3750**
15J 4000	**4000**
15J 4250	**4250**
15J 4500	**4500**
15J 4750	**4750**
15J 5000	**5000**
15J 5300	**5300**
15J 5600	**5600**
15J 6000	**6000**
15J 6300	**6300**
15J 6700	**6700**
15J 7100	**7100**
15J 8000	**8000**
15J 9000	**9000**

SPC

Belt ref.	Datum length mm ISO*
SPC 3000	**3000**
SPC 3150	**3150**
SPC 3350	**3350**
SPC 3550	**3550**
SPC 3750	**3750**
SPC 4000	**4000**
SPC 4250	**4250**
SPC 4500	**4500**
SPC 4750	**4750**
SPC 5000	**5000**

8V (25J)

Belt ref. RMA	Effective length mm ISO**
8V 1000	2540
8V 1060	2690
8V 1120	2845
8V 1180	2995
8V 1250	3175
8V 1320	3355
8V 1400	3555
8V 1500	3810
8V 1600	4065
8V 1700	4320
8V 1800	4570
8V 1900	4825
8V 2000	5080
8V 2120	5385
8V 2240	5690
8V 2360	5995
8V 2500	6350
8V 2650	6730
8V 2800	7110
8V 3000	7620
8V 3150	8000
8V 3350	8510
8V 3550	9015
8V 3750	9525
8V 4000	10160
8V 4250	10795
8V 4500	11430
8V 4750	12065
8V 5000	12700
8V 5600	14225
8V 6000	15240

MICRO-V® SIZE LISTING

2

PJ

Belt ref.		Effective length
DIN 7867	RMA	mm DIN/ISO
PJ 406	160 J	406
PJ 432	170 J	432
PJ 457	180 J	457
PJ 483	190 J	483
PJ 508	200 J	508
PJ 559	220 J	559
PJ 584	230 J	584
PJ 610	240 J	610
PJ 660	260 J	660
PJ 711	280 J	711
PJ 723	285 J	723
PJ 737	290 J	737
PJ 762	300 J	762
PJ 813	320 J	813
PJ 838	330 J	838
PJ 864	340 J	864
PJ 914	360 J	914
PJ 955	376 J	955
PJ 965	380 J	965
PJ 1016	400 J	1016
PJ 1041	410 J	1041
PJ 1067	420 J	1067
PJ 1092	430 J	1092
PJ 1105	435 J	1105
PJ 1110	437 J	1110
PJ 1118	440 J	1118
PJ 1123	442 J	1123
PJ 1130	445 J	1130
PJ 1136	447 J	1136
PJ 1150	453J	1150
PJ 1168	460 J	1168
PJ 1194	470 J	1194
PJ 1200	473 J	1200
PJ 1222	480 J	1222
PJ 1233	485 J	1233
PJ 1244	490 J	1244
PJ 1262	497 J	1262
PJ 1270	500 J	1270
PJ 1280	504 J	1280
PJ 1300	512 J	1300
PJ 1309	515 J	1309
PJ 1321	520 J	1321
PJ 1333	525 J	1333
PJ 1355	534 J	1355
PJ 1371	540 J	1371
PJ 1397	550 J	1397

PJ

Belt ref.		Effective length
DIN 7867	RMA	mm DIN/ISO
PJ 1428	562 J	1428
PJ 1439	567 J	1439
PJ 1473	580 J	1473
PJ 1549	610 J	1549
PJ 1600	630 J	1600
PJ 1651	650 J	1651
PJ 1663	655 J	1663
PJ 1752	690 J	1752
PJ 1854	730 J	1854
PJ 1895	746 J	1895
PJ 1910	752 J	1910
PJ 1930	760 J	1930
PJ 1956	770 J	1956
PJ 1981	780 J	1981
PJ 1992	784 J	1992
PJ 2083	820 J	2083
PJ 2210	870 J	2210
PJ 2337	920 J	2337
PJ 2489	980 J	2489

PL

Belt ref.		Effective length
DIN 7867	RMA	mm DIN/ISO
PL 954	375 L	954
PL 991	390 L	991
PL 1075	423 L	1075
PL 1270	500 L	1270
PL 1333	525 L	1333
PL 1371	540 L	1371
PL 1397	550 L	1397
PL 1422	560 L	1422
PL 1562	615 L	1562
PL 1613	635 L	1613
PL 1664	655 L	1664
PL 1715	675 L	1715
PL 1765	695 L	1765
PL 1803	710 L	1803
PL 1842	725 L	1842
PL 1943	765 L	1943
PL 1981	780 L	1981
PL 2019	795 L	2019
PL 2070	815 L	2070
PL 2096	825 L	2096
PL 2134	840 L	2134
PL 2197	865 L	2197

PL

Belt ref.		Effective length
DIN 7867	RMA	mm DIN/ISO
PL 2235	880 L	2235
PL 2324	915 L	2324
PL 2362	930 L	2362
PL 2476	975 L	2476
PL 2515	990 L	2515
PL 2705	1065 L	2705
PL 2743	1080 L	2743
PL 2845	1120 L	2845
PL 2896	1140 L	2896
PL 2921	1150 L	2921
PL 2997	1180 L	2997
PL 3086	1215 L	3086
PL 3124	1230 L	3124
PL 3289	1295 L	3289
PL 3327	1310 L	3327
PL 3493	1375 L	3493
PL 3696	1455 L	3696

PM

Belt ref.		Effective length
DIN 7867	RMA	mm DIN/ISO
PM 2286	900 M	2286
PM 2388	940 M	2388
PM 2515	990 M	2515
PM 2693	1060 M	2693
PM 2832	1115 M	2832
PM 2921	1150 M	2921
PM 3010	1185 M	3010
PM 3124	1230 M	3124
PM 3327	1310 M	3327
PM 3531	1390 M	3531
PM 3734	1470 M	3734
PM 4089	1610 M	4089
PM 4191	1650 M	4191
PM 4470	1760 M	4470
PM 4648	1830 M	4648
PM 5029	1980 M	5029
PM 5410	2130 M	5410
PM 6121	2410 M	6121
PM 6502	2560 M	6502
PM 6883	2710 M	6883
PM 7646	3010 M	7646
PM 8408	3310 M	8408
PM 9169	3610 M	9169
PM 9931	3910 M	9931

Dimensions in bold are available from stock.

POLYFLEX® JB™ SIZE LISTING

3M - JB

Belt ref.	Effective length mm
3M-JB 175	175
3M-JB 180	180
3M-JB 185	185
3M-JB 190	190
3M-JB 195	195
3M-JB 200	200
3M-JB 206	206
3M-JB 212	212
3M-JB 218	218
3M-JB 224	224
3M-JB 230	230
3M-JB 236	236
3M-JB 243	243
3M-JB 250	250
3M-JB 258	258
3M-JB 265	265
3M-JB 272	272
3M-JB 280	280
3M-JB 290	290
3M-JB 300	300
3M-JB 307	307
3M-JB 315	315
3M-JB 319	319
3M-JB 325	325
3M-JB 335	335
3M-JB 345	345
3M-JB 350	350
3M-JB 355	355
3M-JB 365	365
3M-JB 375	375
3M-JB 387	387
3M-JB 400	400
3M-JB 406	406
3M-JB 412	412
3M-JB 425	425
3M-JB 437	437
3M-JB 450	450
3M-JB 462	462
3M-JB 475	475
3M-JB 487	487
3M-JB 500	500
3M-JB 515	515
3M-JB 530	530
3M-JB 545	545
3M-JB 553	553
3M-JB 560	560

3M - JB

Belt ref.	Effective length mm
3M-JB 580	580
3M-JB 600	600
3M-JB 615	615
3M-JB 630	630
3M-JB 650	650
3M-JB 670	670
3M-JB 690	690
3M-JB 710	710
3M-JB 730	730
3M-JB 750	750

5M - JB

Belt ref.	Effective length mm
5M-JB 280	280
5M-JB 290	290
5M-JB 300	300
5M-JB 307	307
5M-JB 315	315
5M-JB 325	325
5M-JB 335	335
5M-JB 345	345
5M-JB 355	355
5M-JB 365	365
5M-JB 375	375
5M-JB 387	387
5M-JB 400	400
5M-JB 412	412
5M-JB 425	425
5M-JB 437	437
5M-JB 450	450
5M-JB 462	462
5M-JB 475	475
5M-JB 487	487
5M-JB 500	500
5M-JB 515	515
5M-JB 530	530
5M-JB 545	545
5M-JB 560	560
5M-JB 580	580
5M-JB 600	600
5M-JB 615	615
5M-JB 630	630
5M-JB 650	650

5M - JB

Belt ref.	Effective length mm
5M-JB 670	670
5M-JB 690	690
5M-JB 710	710
5M-JB 730	730
5M-JB 750	750
5M-JB 775	775
5M-JB 800	800
5M-JB 825	825
5M-JB 850	850
5M-JB 875	875
5M-JB 900	900
5M-JB 925	925
5M-JB 950	950
5M-JB 975	975
5M-JB 1000	1000
5M-JB 1030	1030
5M-JB 1060	1060
5M-JB 1090	1090
5M-JB 1120	1120
5M-JB 1150	1150
5M-JB 1180	1180
5M-JB 1220	1220
5M-JB 1250	1250
5M-JB 1280	1280
5M-JB 1320	1320
5M-JB 1360	1360
5M-JB 1400	1400
5M-JB 1450	1450
5M-JB 1500	1500

Please contact Gates application engineers for 3M-JB drive design data.

Dimensions in bold are available from stock.

POLYFLEX® JB™ SIZE LISTING

7M - JB

Belt ref.	Effective length mm
7M-JB 500	490
7M-JB 515	505
7M-JB 530	520
7M-JB 545	535
7M-JB 560	550
7M-JB 580	570
7M-JB 600	590
7M-JB 615	605
7M-JB 630	620
7M-JB 650	640
7M-JB 670	660
7M-JB 690	680
7M-JB 710	703
7M-JB 730	723
7M-JB 750	743
7M-JB 775	768
7M-JB 800	793
7M-JB 825	818
7M-JB 850	843
7M-JB 875	868
7M-JB 900	893
7M-JB 925	918
7M-JB 950	943
7M-JB 975	968
7M-JB 1000	993
7M-JB 1030	1023
7M-JB 1060	1053
7M-JB 1090	1083
7M-JB 1120	1113
7M-JB 1150	1143
7M-JB 1180	1173
7M-JB 1220	1213
7M-JB 1250	1243
7M-JB 1280	1273
7M-JB 1320	1313
7M-JB 1360	1353
7M-JB 1400	1393
7M-JB 1450	1443
7M-JB 1500	1493
7M-JB 1550	1543
7M-JB 1600	1593
7M-JB 1650	1643
7M-JB 1700	1693
7M-JB 1750	1743
7M-JB 1800	1793
7M-JB 1850	1843

7M - JB

Belt ref.	Effective length mm
7M-JB 1900	1893
7M-JB 1950	1943
7M-JB 2000	1993
7M-JB 2060	2053
7M-JB 2120	2113
7M-JB 2180	2173
7M-JB 2240	2233
7M-JB 2300	2293

Standard widths are:

3M-JB:	2 and 3 ribs
5M-JB:	2, 3, 4 and 5 ribs
7MJB:	2, 3, 4 and 5 ribs
11M-JB:	2 & 3 ribs

11M - JB

Belt ref.	Effective length mm
11M-JB 710	692
11M-JB 730	712
11M-JB 750	732
11M-JB 775	757
11M-JB 800	782
11M-JB 825	807
11M-JB 850	832
11M-JB 875	857
11M-JB 900	882
11M-JB 925	907
11M-JB 950	932
11M-JB 975	957
11M-JB 1000	982
11M-JB 1030	1012
11M-JB 1060	1042
11M-JB 1090	1072
11M-JB 1120	1102
11M-JB 1150	1132
11M-JB 1180	1162
11M-JB 1220	1202
11M-JB 1250	1232
11M-JB 1280	1262
11M-JB 1320	1302
11M-JB 1360	1342
11M-JB 1400	1382
11M-JB 1450	1432
11M-JB 1500	1482
11M-JB 1550	1532
11M-JB 1600	1582
11M-JB 1650	1632
11M-JB 1700	1682
11M-JB 1750	1732
11M-JB 1800	1782
11M-JB 1850	1832
11M-JB 1900	1882
11M-JB 1950	1932
11M-JB 2000	1982
11M-JB 2060	2042
11M-JB 2120	2102
11M-JB 2180	2162
11M-JB 2240	2222
11M-JB 2300	2282

Dimensions in bold are available from stock.

DRIVE DESIGN

Before designing a V-belt drive, you need to know these four things:

1. power requirement of the drive;

2. the RPM of the driveR machine;

3. the RPM of the driveN machine;

4. the approximate centre distance for the drive.

Important!
This drive design manual has been adapted to the ISO 1081 standard, which involves a change in belt length terminology. **All belts according to ISO 4184 in this manual are identified with their datum length. This length is only a reference and replaces the former pitch length for V-belts.** In order to find the pitch length, the values mentioned in the tables below have to be added to or subtracted from this datum length.

V-Belts

FOR SECTION	SPZ XPZ	SPA XPA	SPB XPB	SPC XPC	3V 3VX	5V 5VX	8V/25J 8VK	9J	15J	Z	A	B	C	D
Subtract	0	0	0	0	4	7.5	16	4	7.5	0	0	0	0	0

Micro-V® and Polyflex® JB™ Belts

FOR SECTION	PJ	PL	PM	5M-JB	7M-JB	11M-JB
Add	8	22	31	4	7	11

STEP 1

SELECT THE DESIRED SERVICE LIFE RANGE

Service life of a belt drive depends on the specific use and function. Usually a machine completes 2 to 5 years of service before needing new belts. For the belt drive, this may mean an actual operating time from a few hundred hours to many thousands of hours.
The performance rating (belt life) given is based on constant load / constant speed laboratory testing under controlled environmental conditions.
By selecting the appropriate service life for a drive and designing accordingly, you obtain the most economical drive for your specific application. You can design your drive through the computerised design service offered by Gates, by using DesignFlex, Gates' Windows based drive design software program (see also page 93) or by using this manual.

- Gates Drive Design Manual facilitates the design of Gates V-belt drives for different service lives according to the needs of the machine by applying the appropriate additional kW.

- Industrial machinery for continuous use is usually designed without a service life correction factor. This results in 3 to 5 years belt life.

In selecting the service life also consider the following factors:

1. the probability of more severe use of the drive in some special applications or geographical areas;

2. the machine-warranty period;

3. the cost of down-time needed to replace belts.

Table No. 1 - Service factors

DriveN machine	DriveR*					
The machines listed below are representative examples only. Select the group of which the load characteristics most closely approximate those of the machine being considered.	**AC Motors:** Normal torque, squirrel cage, synchronous. **DC Motors:** Shunt wound. **Engines:** Multiple cylinder internal, combustion.			**AC Motors:** High torque, single phase, slip ring. **DC Motors:** Series wound, compound wound. **Engines:** Single cylinder internal combustion. **Line shafts - clutches**		
	Intermittent service Up to 8 hrs daily or seasonal	**Normal service** 8-16 hrs daily	**Continuous service** >16 hrs daily	**Intermittent service** Up to 8 hrs daily or seasonal	**Normal service** 8-16 hrs daily	**Continuous service** >16 hrs daily
Agitators for liquids Blowers & exhausters Centrifugal pumps & compressors Fans up to 7.5 kW Light-duty conveyors	1.0	1.1	1.2	1.1	1.2	1.3
Conveyor belts for sand, grain, etc. Dough mixers Fans over 7.5 kW Generators Line shafts Laundry machinery Machine tools Punches-presses-shears Printing machinery Positive displacement rotary pumps Revolving and vibrating screens	1.1	1.2	1.3	1.2	1.3	1.4
Brick machinery Bucket elevators Exciters Piston compressors Conveyors (drag-pan-screw) Hammer mills Paper mill beaters Piston pumps Positive displacement blowers Pulverizers Saw mill and woodworking machinery Textile machinery	1.2	1.3	1.4	1.4	1.5	1.6
Crushers (gyratory-jaw-roll) Mills (ball-rod-tube) Hoists Rubber calenders-extruders-mills	1.3	1.4	1.5	1.5	1.6	1.8

* Apply indicated service factor to continuous engine rating. Deduct 0.2 (with a minimum service factor of 1.0) when applying to maximum intermittent rating. The use of a service factor of 2.0 is recommended for equipment subject to choking and to stalling.

STEP 2

DETERMINE THE DESIGN POWER

Design power = service factor x drive power (kW).

A. Select the proper service factor from Table No. 1. If your driveN machine is not listed, use the service factor of a machine with comparable starting, running and shock load characteristics.

B. The power requirement of the drive is usually taken as the name plate rating of the driveR. The actual load requirement of the driveN machine, if known, may be used as the power requirement to give a more accurate design.

C. Determine the design kilowatt by multiplying the power requirement of the drive by the service factor.

STEP 3

SELECT THE PROPER V-BELT SECTION

Speed of the faster shaft and design power determine the proper cross-section.

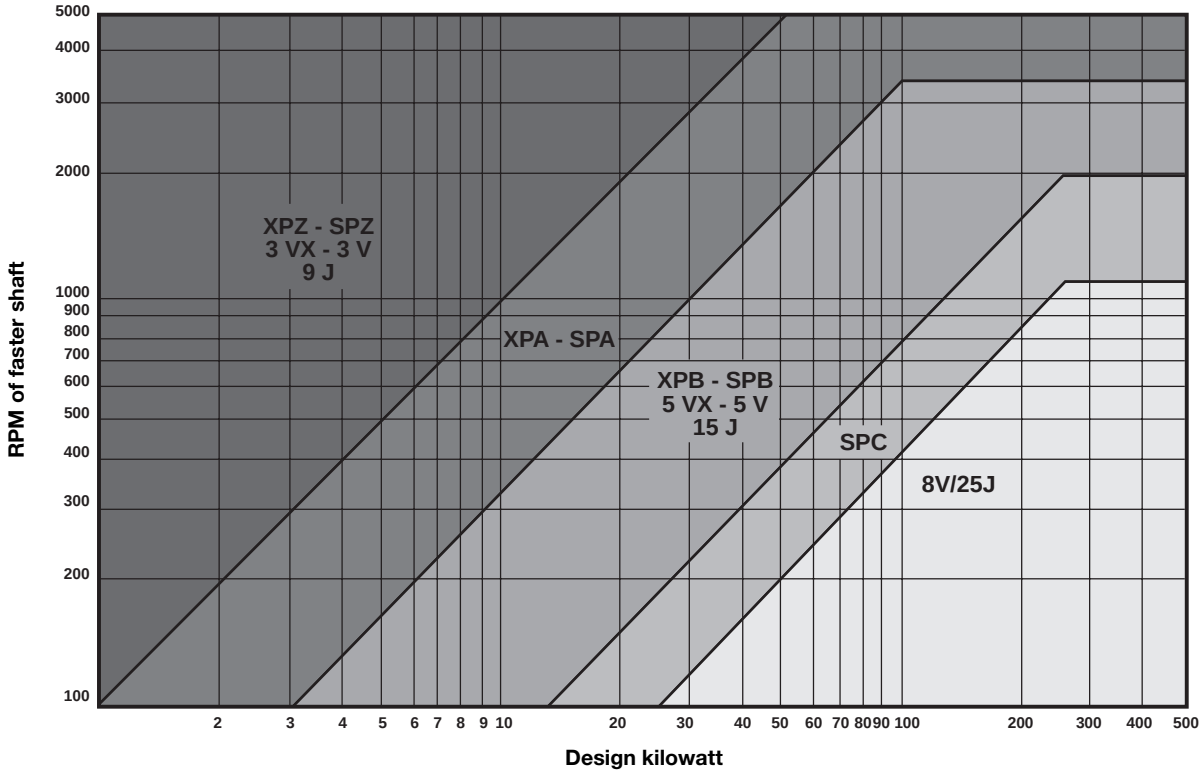
A. At the bottom of Table No. 2, 3 or 4 read across to the design power of the drive, interpolating if necessary.

B. Read straight up to the rpm of the faster shaft. Interpolate if necessary.

C. The designation (e.g.: XPZ - SPZ - 3VX - 3V etc.) in the area surrounding the point of intersection is the proper belt cross-section.

NOTE: if the intersection is found between two areas, select the most economical belt section.

Table No. 2 - Cross-section selection chart - V-belts



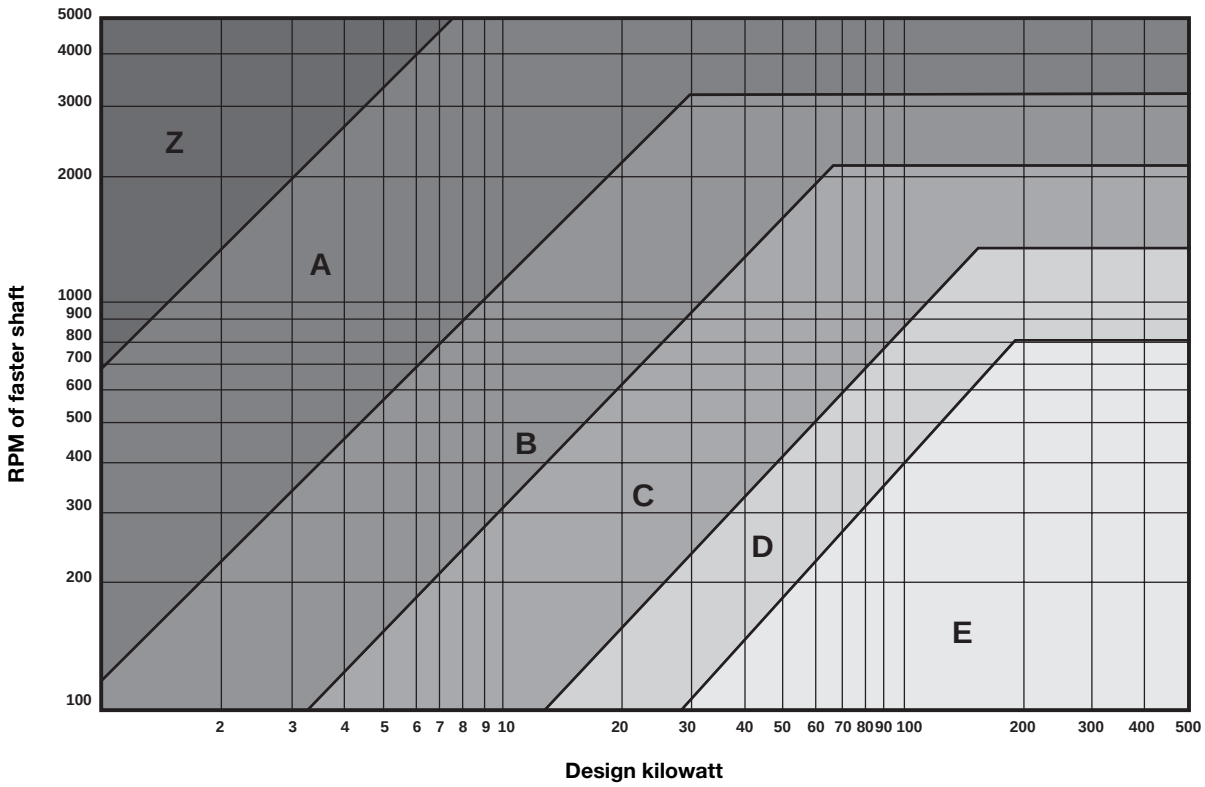


Table No. 3 - Cross-section selection chart - Micro-V® belts

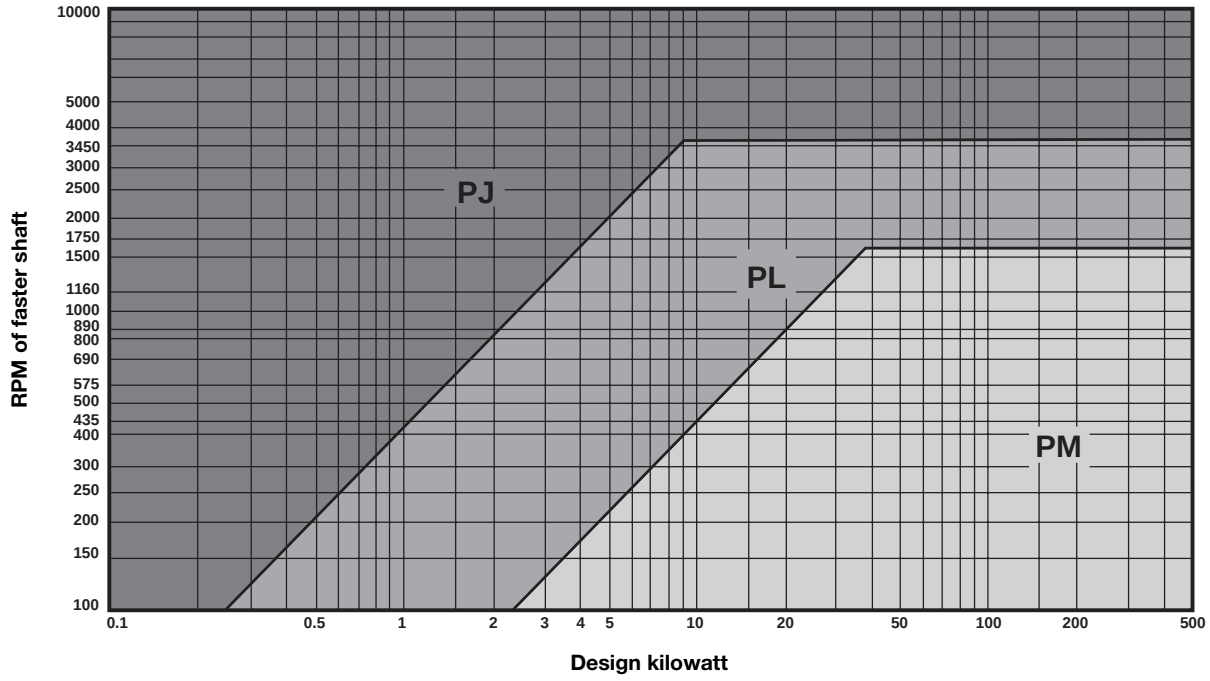


Table No. 4 - Cross-section selection chart - Polyflex® JB™ belts

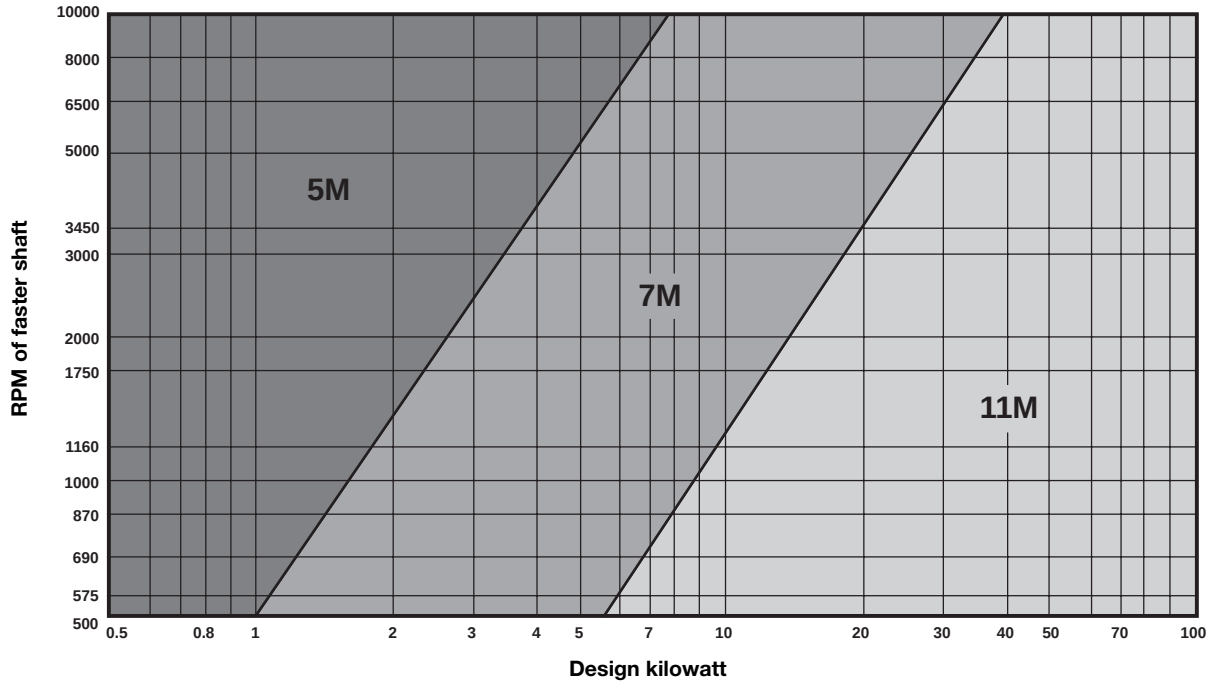


Table No. 5 - Recommended pulley diameters

Section	20	24	26	28	30	32	34	36	38	40	42	45	48	50	53	56	60	63	67	71	75	80	85	90	95	100	106	112	118
PJ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X		X		X	
PL																					X	X		X		X		X	
PM																													
SPZ / 3V																M	M	M	M	X	X	X	X	X	X	X	X	X	X
SPA																						M	M	M	M	X	X	X	X
SPB/ 5V																												M	M
SPC																													
8V / 25J																													
8VK																													
XPZ / 3VX																X	X	X	X	X	X	X	X	X	X	X	X	X	X
XPA																						X	X	X	X	X	X	X	X
XPB / 5VX																												X	X
XPC																													
Z																	X	X	X	X	X	X	X	X	X	X	X	X	X
A																							X	X	X	X	X	X	X
B																												X	X
C																													
D																													
5M			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X			
7M											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11M																			X	X	X	X	X	X	X	X	X	X	X

M = Only for belts with moulded notch construction.

Table No. 6 - Available speed ratios with standard diameter pulleys

Pulley Ø mm	20	24	26	28	30	32	34	36	38	40	42	45	48	50	53	56	60	63	67	71	75	80	85	90	95	100	106	112	118
20	1.00	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.25	2.40	2.50	2.65	2.80	3.00	3.15	3.35	3.55	3.75	4.00	4.25	4.50	4.75	5.00	5.30	5.60	5.90
24		1.00	1.08	1.17	1.25	1.33	1.42	1.50	1.58	1.67	1.75	1.88	2.00	2.08	2.21	2.33	2.50	2.63	2.79	2.96	3.13	3.33	3.54	3.75	3.96	4.17	4.42	4.67	4.92
26			1.00	1.08	1.15	1.23	1.31	1.38	1.46	1.54	1.62	1.73	1.85	1.92	2.04	2.15	2.31	2.42	2.58	2.73	2.88	3.08	3.27	3.46	3.65	3.85	4.08	4.31	4.54
28				1.00	1.07	1.14	1.21	1.29	1.36	1.43	1.50	1.61	1.71	1.79	1.89	2.00	2.14	2.25	2.39	2.54	2.68	2.86	3.04	3.21	3.39	3.57	3.79	4.00	4.21
30					1.00	1.07	1.13	1.20	1.27	1.33	1.40	1.50	1.60	1.67	1.77	1.87	2.00	2.10	2.23	2.37	2.50	2.67	2.83	3.00	3.17	3.33	3.53	3.73	3.93
32						1.00	1.06	1.13	1.19	1.25	1.31	1.41	1.50	1.56	1.66	1.75	1.88	1.97	2.09	2.22	2.34	2.50	2.66	2.81	2.97	3.13	3.31	3.50	3.69
34							1.00	1.06	1.12	1.18	1.24	1.32	1.41	1.47	1.56	1.65	1.76	1.85	1.97	2.09	2.21	2.35	2.50	2.65	2.79	2.94	3.12	3.29	3.47
36								1.00	1.06	1.11	1.17	1.25	1.33	1.39	1.47	1.56	1.67	1.75	1.86	1.97	2.08	2.22	2.36	2.50	2.64	2.78	2.94	3.11	3.28
38									1.00	1.05	1.11	1.18	1.26	1.32	1.39	1.47	1.58	1.66	1.76	1.87	1.97	2.11	2.24	2.37	2.50	2.63	2.79	2.95	3.11
40										1.00	1.05	1.13	1.20	1.25	1.33	1.40	1.50	1.58	1.68	1.78	1.88	2.00	2.13	2.25	2.38	2.50	2.65	2.80	2.95
42											1.00	1.07	1.14	1.19	1.26	1.33	1.43	1.50	1.60	1.69	1.79	1.90	2.02	2.14	2.26	2.38	2.52	2.67	2.81
45												1.00	1.07	1.11	1.18	1.24	1.33	1.40	1.49	1.58	1.67	1.78	1.89	2.00	2.11	2.22	2.36	2.49	2.62
48													1.00	1.04	1.10	1.17	1.25	1.31	1.40	1.48	1.56	1.67	1.77	1.88	1.98	2.08	2.21	2.33	2.46
50														1.00	1.06	1.12	1.20	1.26	1.34	1.42	1.50	1.60	1.70	1.80	1.90	2.00	2.12	2.24	2.36
53															1.00	1.06	1.13	1.19	1.26	1.34	1.42	1.51	1.60	1.70	1.79	1.89	2.00	2.11	2.23
56																1.00	1.07	1.13	1.20	1.27	1.34	1.43	1.52	1.61	1.70	1.79	1.89	2.00	2.11
60																	1.00	1.05	1.12	1.18	1.25	1.33	1.42	1.50	1.58	1.67	1.77	1.87	1.97
63																		1.00	1.06	1.13	1.19	1.27	1.35	1.43	1.51	1.59	1.68	1.78	1.87
67																			1.00	1.06	1.12	1.19	1.27	1.34	1.42	1.49	1.58	1.67	1.76
71																				1.00	1.06	1.13	1.20	1.27	1.34	1.41	1.49	1.58	1.66
75																					1.00	1.07	1.13	1.20	1.27	1.33	1.41	1.49	1.57
80																						1.00	1.06	1.13	1.19	1.25	1.33	1.40	1.48
85																							1.00	1.06	1.12	1.18	1.25	1.32	1.39
90																								1.00	1.06	1.11	1.18	1.24	1.31
95																									1.00	1.05	1.12	1.18	1.24
100																										1.00	1.06	1.12	1.18
106																											1.00	1.06	1.11
112																												1.00	1.05
118																													1.00
125																													
132																													
140																													
150																													
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710																													
800																													
900																													
1000																													
1120																													
1250																													
1400																													
1600																													

DRIVE DESIGN

125	132	140	150	160	170	180	190	200	212	224	236	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	Section
X		X		X																									PJ
X		X		X		X		X		X		X	X	X	X	X													PL
						X		X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	PM
X	X	X	X	X		X		X		X		X	X	X	X	X	X	X		X		X							SPZ / 3V
X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X		X		X					SPA
M	M	M	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			SPB/ 5V
						M	M	M	M	M	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			SPC
														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8V / 25J
																	X	X	X	X	X	X	X	X	X	X	X	X	8VK
X	X	X	X	X		X		X		X		X	X	X	X	X	X	X		X		X							XPZ / 3VX
X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X		X		X					XPA
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			XPB / 5VX
						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			XPC
X	X	X	X	X		X		X		X		X	X	X	X	X	X	X											Z
X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X		X		X					A
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			B
						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			C
														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	D
X				X				X				X		X		X													5M
X				X				X				X		X		X		X		X									7M
X	X	X	X	X	X	X	X	X				X		X		X		X		X		X		X					11M

125	132	140	150	160	170	180	190	200	212	224	236	250	280	315	355	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	Pulley Ø mm
6.25	6.60	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.60	11.20	11.80	12.50	14.00	15.75	17.75	20.00	22.50	25.00	28.00										20
5.21	5.50	5.83	6.25	6.67	7.08	7.50	7.92	8.33	8.83	9.33	9.83	10.42	11.67	13.13	14.79	16.67	18.75	20.83	23.33	26.25	29.58								24
4.81	5.08	5.38	5.77	6.15	6.54	6.92	7.31	7.69	8.15	8.62	9.08	9.62	10.77	12.12	13.65	15.38	17.31	19.23	21.54	24.23	27.31								26
4.46	4.71	5.00	5.36	5.71	6.07	6.43	6.79	7.14	7.57	8.00	8.43	8.93	10.00	11.25	12.68	14.29	16.07	17.86	20.00	22.50	25.36	28.57							28
4.17	4.40	4.67	5.00	5.33	5.67	6.00	6.33	6.67	7.07	7.47	7.87	8.33	9.33	10.50	11.83	13.33	15.00	16.67	18.67	21.00	23.67	26.67							30
3.91	4.13	4.38	4.69	5.00	5.31	5.63	5.94	6.25	6.63	7.00	7.38	7.81	8.75	9.84	11.09	12.50	14.06	15.63	17.50	19.69	22.19	25.00	28.13						32
3.68	3.88	4.12	4.41	4.71	5.00	5.29	5.59	5.88	6.24	6.59	6.94	7.35	8.24	9.26	10.44	11.76	13.24	14.71	16.47	18.53	20.88	23.53	26.47	29.41					34
3.47	3.67	3.89	4.17	4.44	4.72	5.00	5.28	5.56	5.89	6.22	6.56	6.94	7.78	8.75	9.86	11.11	12.50	13.89	15.56	17.50	19.72	22.22	25.00	27.78					36
3.29	3.47	3.68	3.95	4.21	4.47	4.74	5.00	5.26	5.58	5.89	6.21	6.58	7.37	8.29	9.34	10.53	11.84	13.16	14.74	16.58	18.68	21.05	23.68	26.32	29.47				38
3.13	3.30	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.30	5.60	5.90	6.25	7.00	7.88	8.88	10.00	11.25	12.50	14.00	15.75	17.75	20.00	22.50	25.00	28.00				40
2.98	3.14	3.33	3.57	3.81	4.05	4.29	4.52	4.76	5.05	5.33	5.62	5.95	6.67	7.50	8.45	9.52	10.71	11.90	13.33	15.00	16.90	19.05	21.43	23.81	26.67	29.76			42
2.78	2.93	3.11	3.33	3.56	3.78	4.00	4.22	4.44	4.71	4.98	5.24	5.56	6.22	7.00	7.89	8.89	10.00	11.11	12.44	14.00	15.78	17.78	20.00	22.22	24.89	27.78			45
2.60	2.75	2.92	3.13	3.33	3.54	3.75	3.96	4.17	4.42	4.67	4.92	5.21	5.83	6.56	7.40	8.33	9.38	10.42	11.67	13.13	14.79	16.67	18.75	20.83	23.33	26.04	29.17		48
2.50	2.64	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.24	4.48	4.72	5.00	5.60	6.30	7.10	8.00	9.00	10.00	11.20	12.60	14.20	16.00	18.00	20.00	22.40	25.00	28.00		50
2.36	2.49	2.64	2.83	3.02	3.21	3.40	3.58	3.77	4.00	4.23	4.45	4.72	5.28	5.94	6.70	7.55	8.49	9.43	10.57	11.89	13.40	15.09	16.98	18.87	21.13	23.58	26.42		53
2.23	2.36	2.50	2.68	2.86	3.04	3.21	3.39	3.57	3.79	4.00	4.21	4.46	5.00	5.63	6.34	7.14	8.04	8.93	10.00	11.25	12.68	14.29	16.07	17.86	20.00	22.32	25.00	28.57	56
2.08	2.20	2.33	2.50	2.67	2.83	3.00	3.17	3.33	3.53	3.73	3.93	4.17	4.67	5.25	5.92	6.67	7.50	8.33	9.33	10.50	11.83	13.33	15.00	16.67	18.67	20.83	23.33	26.67	60
1.98	2.10	2.22	2.38	2.54	2.70	2.86	3.02	3.17	3.37	3.56	3.75	3.97	4.44	5.00	5.63	6.35	7.14	7.94	8.89	10.00	11.27	12.70	14.29	15.87	17.78	19.84	22.22	25.40	63
1.87	1.97	2.09	2.24	2.39	2.54	2.69	2.84	2.99	3.16	3.34	3.52	3.73	4.18	4.70	5.30	5.97	6.72	7.46	8.36	9.40	10.60	11.94	13.43	14.93	16.72	18.66	20.90	23.88	67
1.76	1.86	1.97	2.11	2.25	2.39	2.54	2.68	2.82	2.99	3.15	3.32	3.52	3.94	4.44	5.00	5.63	6.34	7.04	7.89	8.87	10.00	11.27	12.68	14.08	15.77	17.61	19.72	22.54	71
1.67	1.76	1.87	2.00	2.13	2.27	2.40	2.53	2.67	2.83	2.99	3.15	3.33	3.73	4.20	4.73	5.33	6.00	6.67	7.47	8.40	9.47	10.67	12.00	13.33	14.93	16.67	18.67	21.33	75
1.56	1.65	1.75	1.88	2.00	2.13	2.25	2.38	2.50	2.65	2.80	2.95	3.13	3.50	3.94	4.44	5.00	5.63	6.25	7.00	7.88	8.88	10.00	11.25	12.50	14.00	15.63	17.50	20.00	80
1.47	1.55	1.65	1.76	1.88	2.00	2.12	2.24	2.35	2.49	2.64	2.78	2.94	3.29	3.71	4.18	4.71	5.29	5.88	6.59	7.41	8.35	9.41	10.59	11.76	13.18	14.71	16.47	18.82	85
1.39	1.47	1.56	1.67	1.78	1.89	2.00	2.11	2.22	2.36	2.49	2.62	2.78	3.11	3.50	3.94	4.44	5.00	5.56	6.22	7.00	7.89	8.89	10.00	11.11	12.44	13.89	15.56	17.78	90
1.32	1.39	1.47	1.58	1.68	1.79	1.89	2.00	2.11	2.23	2.36	2.48	2.63	2.95	3.32	3.74	4.21	4.74	5.26	5.89	6.63	7.47	8.42	9.47	10.53	11.79	13.16	14.74	16.84	95
1.25	1.32	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.12	2.24	2.36	2.50	2.80	3.15	3.55	4.00	4.50	5.00	5.60	6.30	7.10	8.00	9.00	10.00	11.20	12.50	14.00	16.00	100
1.18	1.25	1.32	1.42	1.51	1.60	1.70	1.79	1.89	2.00	2.11	2.23	2.36	2.64	2.97	3.35	3.77	4.25	4.72	5.28	5.94	6.70	7.55	8.49	9.43	10.57	11.79	13.21	15.09	106
1.12	1.18	1.25	1.34	1.43	1.52	1.61	1.70	1.79	1.89	2.00	2.11	2.23	2.50	2.81	3.17	3.57	4.02	4.46	5.00	5.63	6.34	7.14	8.04	8.93	10.00	11.16	12.50	14.29	112
1.06	1.12	1.19	1.27	1.36	1.44	1.53	1.61	1.69	1.80	1.90	2.00	2.12	2.37	2.67	3.01	3.39	3.81	4.24	4.75	5.34	6.02	6.78	7.63	8.47	9.49	10.59	11.86	13.56	118
1.00	1.06	1.12	1.20	1.28	1.36	1.44	1.52	1.60	1.70	1.79	1.89	2.00	2.24	2.52	2.84	3.20	3.60	4.00	4.48	5.04	5.68	6.40	7.20	8.00	8.96	10.00	11.20	12.8	125
	1.00	1.06	1.14	1.21	1.29	1.36	1.44	1.52	1.61	1.70	1.79	1.89	2.12	2.39	2.69	3.03	3.41	3.79	4.24	4.77	5.38	6.06	6.82	7.58	8.48	9.47	10.61	12.12	132
		1.00	1.07	1.14	1.21	1.29	1.36	1.43	1.51	1.60	1.69	1.79	2.00	2.25	2.54	2.86	3.21	3.57	4.00	4.50	5.07	5.71	6.43	7.14	8.00	8.93	10.00	11.43	140
			1.00	1.07	1.13	1.20	1.27	1.33	1.41	1.49	1.57	1.67	1.87	2.10	2.37	2.67	3.00	3.33	3.73	4.20	4.73	5.33	6.00	6.67	7.47	8.33	9.33	10.67	150
				1.00	1.06	1.13	1.19	1.25	1.33	1.40	1.48	1.56	1.75	1.97	2.22	2.50	2.81	3.13	3.50	3.94	4.44	5.00	5.63	6.25	7.00	7.81	8.75	10.00	160
					1.00	1.06	1.12	1.18	1.25	1.32	1.39	1.47	1.65	1.85	2.09	2.35	2.65	2.94	3.29	3.71	4.18	4.71	5.29	5.88	6.59	7.35	8.24	9.41	170
						1.00	1.06	1.11	1.18	1.24	1.31	1.39	1.56	1.75	1.97	2.22	2.50	2.78	3.11	3.50	3.94	4.44	5.00	5.56	6.22	6.94	7.78	8.89	180
							1.00	1.05	1.12	1.18	1.24	1.32	1.47	1.66	1.87	2.11	2.37	2.63	2.95	3.32	3.74	4.21	4.74	5.26	5.89	6.58	7.37	8.42	190
								1.00	1.06	1.12	1.18	1.25	1.40	1.58	1.78	2.00	2.25	2.50	2.80	3.15	3.55	4.00	4.50	5.00	5.60	6.25	7.00	8.00	200
									1.00	1.06	1.11	1.18	1.32	1.49	1.67	1.89	2.12	2.36	2.64	2.97	3.35	3.77	4.25	4.72	5.28	5.90	6.60	7.55	212
										1.00	1.05	1.12	1.25	1.41	1.58	1.79	2.01	2.23	2.50	2.81	3.17	3.57	4.02	4.46	5.00	5.58	6.25	7.14	224
											1.00	1.06	1.19	1.33	1.50	1.69	1.91	2.12	2.37	2.67	3.01	3.39	3.81	4.24	4.75	5.30	5.93	6.78	236
												1.00	1.12	1.26	1.42	1.60	1.80	2.00	2.24	2.52	2.84	3.20	3.60	4.00	4.48	5.00	5.60	6.40	250
													1.00	1.13	1.27	1.43	1.61	1.79	2.00	2.25	2.54	2.86	3.21	3.57	4.00	4.46	5.00	5.71	280
														1.00	1.13	1.27	1.43	1.59	1.78	2.00	2.25	2.54	2.86	3.17	3.56	3.97	4.44	5.08	315
															1.00	1.13	1.27	1.41	1.58	1.77	2.00	2.25	2.54	2.82	3.15	3.52	3.94	4.51	355
																1.00	1.13	1.25	1.40	1.58	1.78	2.00	2.25	2.50	2.80	3.13	3.50	4.00	400
																	1.00	1.11	1.24	1.40	1.58	1.78	2.00	2.22	2.49	2.78	3.11	3.56	450
																		1.00	1.12	1.26	1.42	1.60	1.80	2.00	2.24	2.50	2.80	3.20	500
																			1.00	1.13	1.27	1.43	1.61	1.79	2.00	2.23	2.50	2.86	560
																				1.00	1.13	1.27	1.43	1.59	1.78	1.98	2.22	2.54	630
																					1.00	1.13	1.27	1.41	1.58	1.76	1.97	2.25	710
																						1.00	1.13	1.25	1.40	1.56	1.75	2.00	800
																							1.00	1.11	1.24	1.39	1.56	1.78	900
																								1.00	1.12	1.25	1.40	1.60	1000
																									1.00	1.12	1.25	1.43	1120
																										1.00	1.12	1.28	1250
																											1.00	1.14	1400
																												1.00	1600

STEP 4

DETERMINE THE SPEED RATIO

Formula No. 1:

$$\text{Speed ratio} = \frac{\text{RPM of faster shaft}}{\text{RPM of slower shaft}}$$

Determine the desired SPEED RATIO by dividing the RPM of the faster shaft by the RPM of the slower shaft.
If you are replacing a chain or gear drive, the speed ratio is the number of teeth on the large sprocket or gear divided by the number of teeth on the small sprocket or gear. If you are replacing a flat belt drive, divide the larger pulley diameter by the smaller pulley diameter.

STEP 5

CHOOSE THE PULLEY DATUM DIAMETER

You should use standard diameter pulleys for the drive in order to obtain the most economical drive.
Table No. 5 on page 28 shows the diameters of the available standard pulleys for each cross-section.
If a minimum or maximum diameter for one of the pulleys is known, or if you have one pulley on hand, start with that diameter. If you do not know the datum diameter of a pulley on hand, measure the outside diameter and groove width. Determine from the tables Nos. 15 to 18 (pages 38 to 40) if the pulley is of ISO, DIN or RMA dimension, referring to the column identified as “go” (groove outside diameter). Then subtract or add the value shown in table No. 7 or 8 (page 29) to find the datum diameter.

STEP 6

CALCULATE THE BELT SPEED

A. Formula No. 2:

$$V = \frac{d \times n}{19100}$$

Where: V = belt speed (m/s)
d = datum diameter of one pulley (mm)
n = RPM of that same pulley

For belt speeds higher than 30 m/s dynamically balanced pulleys are required. If the belt speed is too high, choose smaller diameter pulleys (see step 6, C).

B. Locate the small pulley datum diameter in the appropriate column of table No. 6 (page 26). Read across to the available speed ratio closest to the value calculated in step 4. Find the LARGE PULLEY DATUM DIAMETER at the head of the column. You can also locate the datum diameter of a known large pulley and read down to the speed ratio, to find the datum diameter of the small pulley in the appropriate column at the left of the table. Pulleys with these datum diameters are generally available from stock. To be sure, check with your supplier. If necessary, use the next pulley combination giving the required speed ratio.

NOTE: speed ratios shown in table No. 6 are based on standard datum diameters. Speed ratios of actual drives may vary slightly due to drive tension, load and/or belt construction. If the driveN speed of your drive is critical, check with your Gates representative.

C. Most machines do not require exact driveN speeds to operate efficiently. Speeds vary because the speed of common driveR motors usually varies by several percent. The speed of an ordinary induction motor for example, varies with load and line voltage.
Because of the different standardisation systems not all cross-sections in table No. 5 are identified with their reference or datum diameter. For the cross-sections identified with effective length, the effective diameter is given (e.g. Micro-V®, PowerBand®, Polyflex® JB™). To find the exact speed ratio you have to correct these effective diameters by using the values given in the tables Nos. 7 and 8 (see page 29).

D. Belt speed should be kept reasonably high if possible (20 to 30 m/s) by using larger pulley diameters. Higher belt speed results in higher power ratings and fewer belts, thus producing a more economical drive.
Higher belt speed also means lower operating tensions, thereby decreasing shaft and bearing loads. High belt speed is less important on lightly loaded, normal speed drives, where the cost of larger diameter pulleys (to obtain high belt speed) may result in a less economical drive, or in the use of one belt which sacrifices multiple belt dependability. For heavy-duty drives, it is best to compare several design possibilities to make the most economical choice.

Table No. 7 - Amount in mm to subtract from the outside diameter to find the datum diameter of a grooved V-belt pulley

FOR SECTION	SPZ XPZ	SPA XPA	SPB XPB	SPC XPC	3V 3VX	5V 5VX	8V/25J 8VK	9J	15J	Z	A	B	C	D
Subtract	4	5.5	7	9.6	1.3	2.5	5	1.2	2.6	5	6.6	8.4	11.4	16.2

Table No. 8 - Amount in mm to add to the outside diameter to find the datum diameter of a Micro-V® or Polyflex® JB™ pulley

FOR SECTION	PJ	PL	PM	5M-JB	7M-JB	11M-JB
Add	2.5	7	10	1.3	2.3	3.6

STEP 7

SELECT CENTRE DISTANCE AND V-BELT LENGTH

There are practically no centre distance limits for Gates V-belt drives. They are especially recommended for short centre distances, which means more economical drives and more compact designs. However, long centre distances can be used just as well if required.

A. If you do not know an approximate centre distance for the drive, a TENTATIVE CENTRE DISTANCE needs to be taken. To obtain a good estimate, use the large pulley diameter.
Alternatively the centre distance can be calculated by:

Formula No. 3:

$$TCD = \frac{D + 3d}{2}$$

Where: TCD = tentative centre distance (mm)
D = datum diameter large pulley (mm)
d = datum diameter small pulley (mm)

You can then find a tentative belt length by using the following formula:

Formula No. 4:

$$TBL = 2 \times TCD + 1.57 (D + d) + \frac{(D - d)^2}{4 \times TCD}$$

Where: TBL = tentative belt length (mm)

B. Now select a STANDARD V-BELT LENGTH from the size listing on pages 9 to 20, closest to the length obtained by using formula No. 4. THE ACTUAL CENTRE DISTANCE can then be calculated by using formula No. 5:

Formula No. 5:

$$A = \frac{F - h (D - d)}{2}$$

Where: A = actual centre distance (mm)
F = PL - 1.57 (D + d)
with PL = belt datum length (mm)
h = a centre distance factor depending on the value of (D - d)/F.
See Table No. 9.

Table No. 9 - Centre distance factor "h"

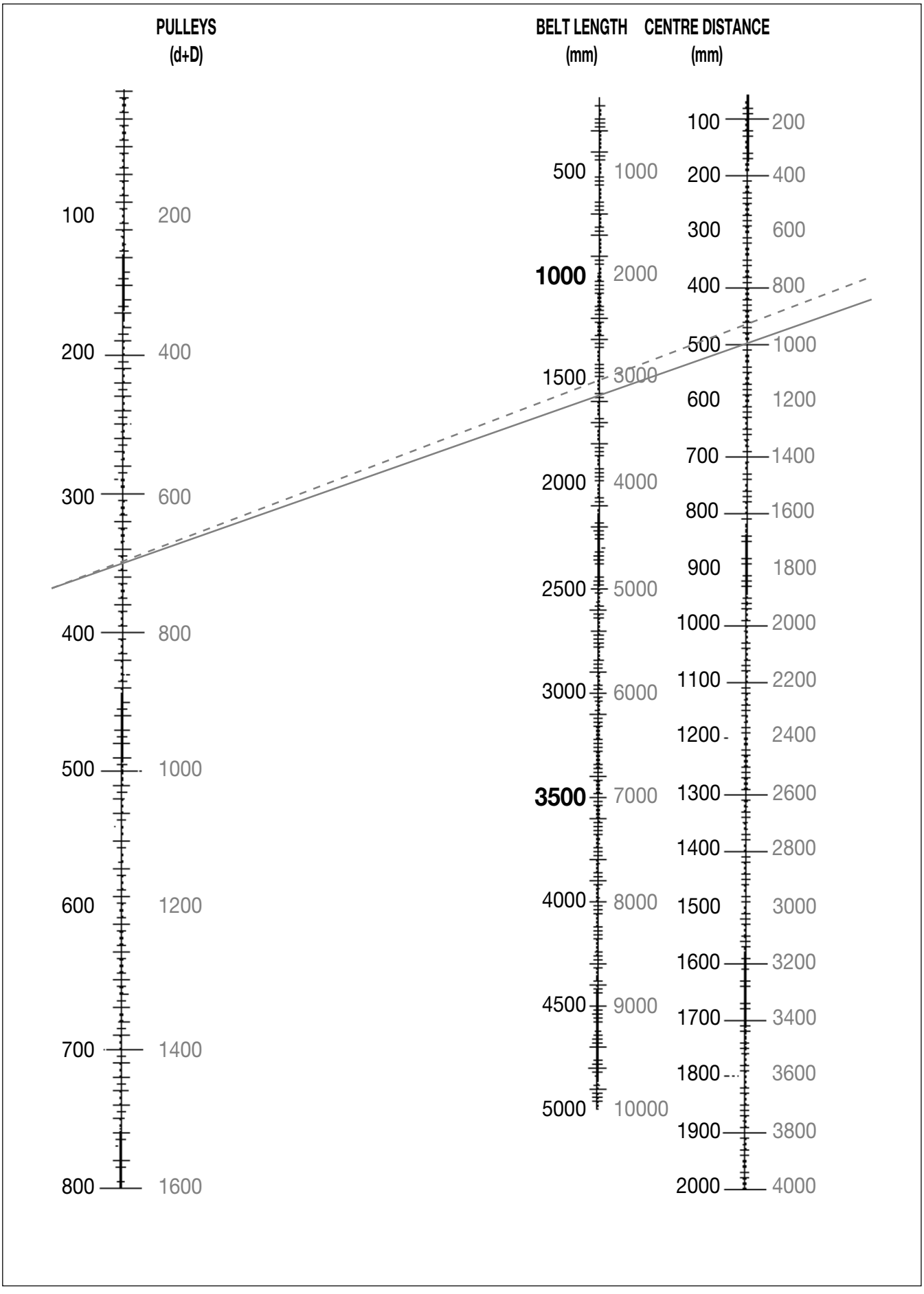
D - d / F	Factor h	D - d / F	Factor h	D - d / F	Factor h
0.00	0.00	0.21	0.11	0.40	0.22
0.02	0.01	0.23	0.12	0.41	0.23
0.04	0.02	0.25	0.13	0.43	0.24
0.06	0.03	0.27	0.14	0.44	0.25
0.08	0.04	0.29	0.15	0.46	0.26
0.10	0.05	0.30	0.16	0.47	0.27
0.12	0.06	0.32	0.17	0.48	0.28
0.14	0.07	0.34	0.18	0.50	0.29
0.16	0.08	0.35	0.19	0.51	0.30
0.18	0.09	0.37	0.20		
0.20	0.10	0.39	0.21		

C. Alternative method
The nomogram (table No. 10) allows you to calculate centre distance and belt length in a fast and efficient way and converts the nominal values to design values. The centre distance and belt length calculated this way are approximate values and can only be used where centre distance corrections are still possible. Two scales are given to enhance readability. Make sure to use the corresponding colours.

Example:
Pulleys: DriveR = XPB-112
DriveN machine = XPB-236
Requested centre distance: 500 mm (black scale)
(d + D) = 112 + 236 = 348 (black scale)

Indicated length (continuous line) = approx. 1550 mm
Closest standard length = XPB-1500
Indicated centre distance (dotted line) = approx. 475 mm

Table No. 10 - Centre distance and belt length



STEP 8

DETERMINE THE NUMBER OF BELTS OR RIBS REQUIRED

For the following design steps, fold out the back cover page and open the manual on the pages with the kW rating tables for the selected cross-section.

A. Determine the basic kilowatt rating "A" for your small pulley diameter and speed from the appropriate cross-section table A (pages 46 to 87).

BASIC kW RATING (A)

B. Then define the "additional kilowatt" for the speed ratio, from table B.

ADDITIONAL kW RATING FOR SPEED RATIO (B)

C. Table C gives the additional kW rating per belt for the chosen service life. If 12000 hrs were chosen then no additional kW is added (C=0). For 25000 hrs or 6000 hrs apply the formula in table C under the number of hours chosen.

ADDITIONAL kW RATING FOR BELT LIFE (C)

No value "C" is given for Micro-V® and Polyflex® JB™ belts. The calculated number of ribs only goes for a service life of 12000 hrs.

D. Calculate (D - d)/A and find the arc correction factor G from table G (D and d are the large and small datum diameters and A is the centre distance in mm).

ARC CORRECTION FACTOR (G)

E. Then determine the belt length correction factor C_L from table C_L for the chosen belt length.

BELT LENGTH CORRECTION FACTOR (C_L)

F. Your net kW per belt or rib is found by following calculation:
$(A + B + C) \times G \times C_L$

NET kW PER BELT OR RIB

G. Divide the design kilowatt by the net kilowatt per belt/rib to find the number of belts or ribs required for your drive.

$$\text{Number of belts or ribs} = \frac{\text{Design kW}}{\text{Net kW per belt/rib}}$$

The answer will usually contain a fraction. Use the next larger whole number of belts or ribs.

NUMBER OF BELTS OR RIBS

Before deciding upon this drive as your final design, see step 6, D for a drive review.

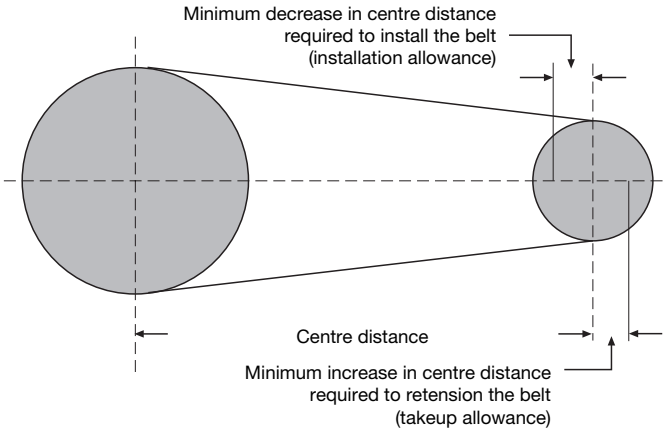
FINAL SELECTION

STEP 9

PROVIDE THE MINIMUM INSTALLATION AND TAKEUP ALLOWANCES

A. Find the recommended installation and takeup allowances from table No. 11.

Figure 1



B. If you cannot adjust the centre distance to install or takeup the belts, it is advisable to use an idler. Separate instructions on the use of idlers are given on page 43.

Table No. 11 - Minimum installation and takeup allowances

V-belts

Datum length mm	Minimum installation allowance - mm																Minimum takeup allowance mm
	V-belt section																
	XPZ 3VX SPZ 3V	XPA SPA	XPB 5VX SPB 5V	XPC SPC	8V 8VK	9J PB	15J PB	8V PB* 25J PB*	Z	A	A PB	B	B PB SPB PB	C	C PB SPC PB	D	All sections
420 - 1199	15	20	-	-	-	30	-	-	15	20	30	25	35	40	50	-	25
1200 - 1999	20	25	25	-	-	35	55	-	20	20	30	30	40	40	50	50	35
2000 - 2749	20	25	25	35	40	35	55	85	20	25	35	30	40	40	50	50	40
2750 - 3499	20	25	25	35	40	35	55	85	-	25	35	30	40	40	50	50	45
3500 - 4499	20	25	25	35	40	35	55	85	-	25	35	30	40	50	60	55	55
4500 - 5499	-	25	25	35	45	-	55	90	-	25	35	40	50	50	60	60	65
5500 - 6499	-	-	35	40	45	-	60	90	-	25	35	40	50	50	60	60	85
6500 - 7999	-	-	35	40	45	-	60	90	-	-	-	40	50	50	60	65	95
8000 -	-	-	35	45	50	-	60	100	-	-	-	-	50	50	60	65	110

* PB = PowerBand®

Micro-V® belts

Effective length mm	Minimum installation allowance - mm			Minimum takeup allowance mm
	Micro-V® belt section			
	PJ	PL	PM	All sections
up to 500	10			10
501 - 1000	15			20
1001 - 1500	15	25		25
1501 - 2000	20	25		35
2001 - 2500	20	30	40	40
2501 - 3000		30	40	45
3001 - 4000		35	45	60
4001 - 5000			45	65
5001 - 6000			50	70
6001 - 7500			55	85
7501 - 9000			65	100
9001 -			70	115

Polyflex® JB™ belts

Effective length mm	Minimum installation allowance - mm			Minimum takeup allowance mm
	Polyflex® JB™ belt section			
	5M-JB	7M-JB	11M-JB	All sections
280 - 300	10			5
307 - 710	15	15	25	15
730 - 1090	25	25	30	30
1120 - 1500	30	30	35	35
1550 - 1900	-	30	40	35
1950 - 2300	-	40	50	45

V-BELT TENSIONING METHOD

Although tension on a V-belt drive is usually not critical, it is certainly important. Undertensioning creates slippage, generating excessive heat. This results in premature belt failure. Overtensioning also results in short belt life and increases shaft loads. To tension the drives properly and to keep V-belt tension under control Gates developed a "Tension Deflection Method".

STEP 10

FIND THE REQUIRED STATIC TENSION

Determine tension per strand/rib or belt.

The static tension (T_s) is given by this formula:

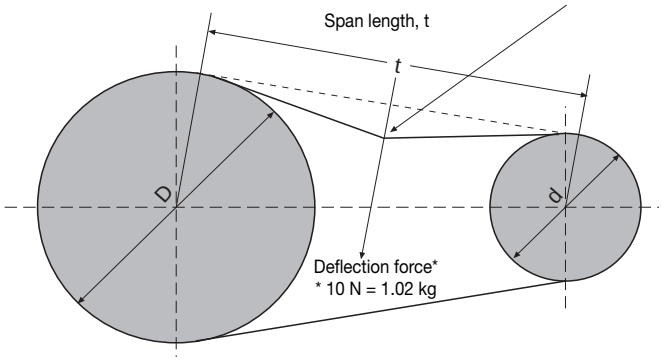
Formula No. 6:

$$T_s = 475 \times \frac{(R - G)}{G} \times \frac{\text{Drive Power kW}}{N \times V} + MV^2$$

Where: T_s = static tension (N) per strand/rib or belt
G = arc correction factor (Table G from pages 47 to 87)
R = tension ratio factor: for V-belts and Polyflex® JB™: 2.5; for Micro-V® belts: 2.67
N = number of belts or ribs
V = belt speed (m/s)
M = constant from table No. 13

Figure 2 - Tension measurement by deflection

Deflection force must always be directed perpendicular to the span.
Deflection = 1 mm per 100 mm of span.



IMPORTANT

Polyflex® JB™ belts need minimum static tension per strand. If the calculated values are lower than the values given in table No. 12, do not use the calculated values, but the required minimum values given in table No. 12.

Table No. 12 - Minimum static tension per strand for Polyflex® JB™ belts

Section	Minimum static tension per strand (N)
5M-JB	35
7M-JB	65
11M-JB	160

STEP 11

DETERMINE THE DEFLECTION FORCES

Determine the minimum and maximum recommended forces to deflect one belt (or one belt with different strands if PowerBand®, Micro-V® or Polyflex® JB™ is used) for 1 mm per 100 mm of span length

A. The span length can be measured on the drive itself or from a scaled layout of the drive. For drives using only two pulleys, the span length can be calculated by this formula:

Formula No. 7:

$$t = A \left[1 - 0.125 \left(\frac{D - d}{A}\right)^2\right]$$

Where: t = span length (mm)
A = centre distance (mm)
D = large pulley datum diameter (mm)
d = small pulley datum diameter (mm)

B. Calculate the deflection by following formula:

Formula No. 8:

$$\text{Deflection} = \frac{t}{100}$$

Where t = span length (mm) (see fig. 2)

C. If your drive uses two or more individual belts, Micro-V® belts, Polyflex® JB™ or PowerBand® calculate the minimum and maximum recommended deflection forces by following formulas:

Formula No. 9:

$$\text{Min. recommended deflection force (N)} = \frac{T_s + Y}{25}$$

Formula No. 10:

$$\text{Max. recommended deflection force (N)} = \frac{1.5\,T_s + Y}{25}$$

Where Y = constant from Table No. 13

D. If your drive has only one PowerBand®, Polyflex® JB™, individual belt or Micro-V® belt, calculate the minimum and maximum recommended deflection forces by following formulas:

Formula No. 11:

Minimum recommended deflection force (N) = $\dfrac{T_s + \left(\dfrac{t}{L}\right) \times Y}{25}$

Formula No. 12:

Maximum recommended deflection force (N) = $\dfrac{1.5\,T_s + \left(\dfrac{t}{L}\right) \times Y}{25}$

Where: L = datum length in mm

E. The deflection forces calculated in step 11, D are for individual belts only. Multiply these forces by the number of individual belts or ribs in a band to get the minimum and maximum recommended forces for a PowerBand®, Polyflex® JB™ or Micro-V® belt. (If your drive uses 2 or more PowerBand®, Polyflex® JB™ or Micro-V® belts, use the band with the fewest number of individual belts).

Table No. 13 - Factor M and factor Y

Individual V-belt and Micro-V® cross-section	M	Y	PowerBand® and Polyflex® JB™ cross-section	M
Z	0.05	9		
A	0.09	13	A	0.11
B	0.14	19	B	0.17
C	0.26	30	C	0.31
D	0.52	63	D	0.59
SPZ/3V	0.066	15	9J/3V	0.08
SPA	0.12	20		
SPB/5V	0.17	26	SPB	0.21
			15J/5V	0.21
SPC	0.32	41	SPC	0.36
8V	0.46	60	8V/25J	0.53
SPZ*	0.05	15		
SPA*	0.1	20		
SPB*	0.15	26		
SPC*	0.28	41		
XPZ/3VX	0.06	15	3VX	0.07
XPA	0.104	20		
XPB/5VX	0.13	26	5VX	0.16
XPC	0.30	41		
PJ	0.006	1		
PL	0.022	4.4		
PM	0.089	11		
5M	0.006	2.2	5M-JB	0.009
7M	0.019	8.4	7M-JB	0.025
11M	0.039	15.5	11M-JB	0.053

STEP 12

CHECK IF THE BELTS ARE PROPERLY TENSIONED

A. Measure at the centre of the span (t) the force required to deflect the belt (or band of belts if PowerBand®, Polyflex® JB™ or Micro-V® are used) on the drive 1 mm per 100 mm span length from its normal position. If your drive is a single belt drive, or uses only one PowerBand®, be sure that at least one pulley is free to rotate. If not, use formulas 11 and 12.

B. If the measured force is less than the minimum recommended deflection force, the belts should be tightened.

C. New belts can be tensioned until the deflection force per belt is as close as possible to the maximum recommended deflection force. For used belts a deflection force above minimum is acceptable.

D. To facilitate tension measuring Gates has developed three tension testers. The single tension tester measures deflection force up to ±120 N, the double tension tester measures deflection force up to ±300 N and the sonic tension meter measures all tension values by analysing sound waves. The first two tension testers consist of a calibrated spring with two scales: one to measure the deflection and another to measure the applied force (see figure on page 35). The reading of these scales can be done as follows.

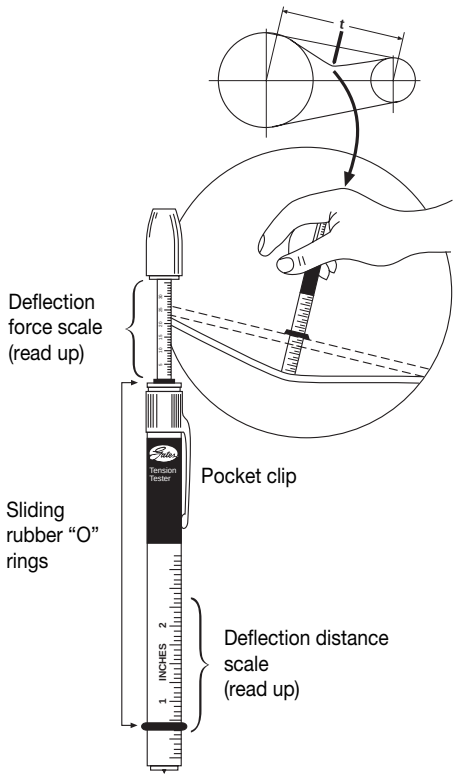
1. Measure the span length (t).
2. The calculated deflection (formula No. 8) should be positioned with the lower ring on the distance scale. The upper ring should be on the zero position of the deflection force scale.
3. Put the tension tester perpendicular to the span and in the middle of the span. Exercise enough pressure to the tension tester to deflect the belt by the amount indicated by the lower ring. A straight edge, laid across pulleys, can help accuracy of reading.
4. The upper ring will slide up the upper scale and indicates the deflection force. Read at the bottom edge of the ring. When you use the double tension tester you can read the values just underneath the rings and calculate the sum of both values. This value has to be compared with the calculated min./max. forces as per formula Nos. 9 to 12.

* Moulded notch construction.

Note: for additional tensioning information on PowerBand®, see pages 35 to 37.

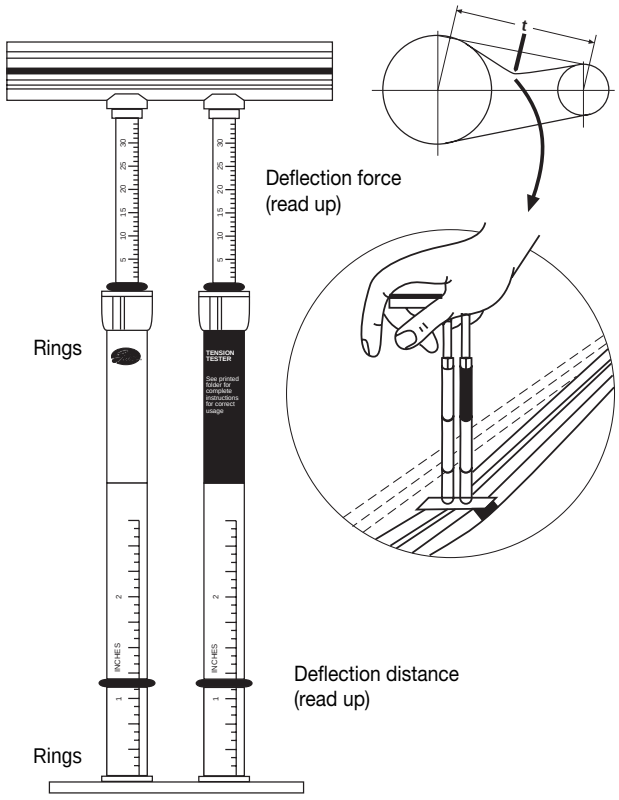
TENSIONING

Single tension tester



Read just underneath the ring. Before using the tension tester again, slide the ring downwards again.

Double tension tester



Read just underneath the rings. Before using the tension tester again, slide the rings downwards again.

Sonic tension meter 505C

Unlike conventional tension testers which use force deflection, the sonic tension meter measures tension by analysing the sound waves which the belt produces when strummed. A belt vibrates at a particular frequency based on its tension, mass and span length. The tension tester transforms this frequency in a tension value.

The hand-held tension tester, running on batteries or on the mains (adapter included), is supplied with two types of sensors (rigid and flexible), either of which is quickly attached to meet a specific need.

1. Enter belt unit weight (provided with operating instructions), width and span on the keypad. These data remain in the meter even after shut-off.
2. Hold the small sensor up to the belt span and strum the belt slightly to make it vibrate.
3. Press the "measure" button. The computer processes the variations in sound pressure emanating from the belt span. The belt tension values are displayed on the panel in newtons. If desired, the belt span frequencies can be displayed directly in Hz.

For more detailed information, e.g. suitability of the tension meter for different belt product lines, please contact your Gates representative.
For more details on the use of Gates' sonic tension meter, please consult Gates' sonic tension meter manual (E2/20106).

Warning
Gates sonic tension meter 505C is not certified for use in explosion risk areas.

POWERBAND® TENSIONING METHOD

When the cross-section and number of individual belts become so large that tensioning by deflection cannot reasonably be done, another method will be used. This alternative method of checking PowerBand® tension is the elongation method. The principle is simple. Each tension value corresponds with a given amount of elongation.

TENSIONING

Therefore the elongation of a PowerBand® as it is installed and tensioned on a drive is a measure of the static tension in the belt.

Elongation method for tensioning PowerBand®:

STEP I

DETERMINE THE REQUIRED TENSION PER STRAND OF BELT (STATIC TENSION)

A. Determine the **required static tension per strand**, T_s, using formula No. 6 in step 10 of the regular V-belt tensioning method.

B. Determine the recommended minimum and maximum tension.
Minimum tension = T_s
Maximum tension = $1.5 \times T_s$

STEP II

DETERMINE THE AMOUNT TO ELONGATE THE BELT (ON THE DRIVE) TO OBTAIN THE ABOVE TENSION

A. Measure the outside circumference of the belt at no tension. This can be done with the belt either on or off the drive.
NOTE: if you are retensioning a used drive, slack off on the drive until there is no tension, then tape the outside circumference of the belt while it is still on the drive.

B. Determine the correct belt **length multiplier** from table No. 14 for each of the static tensions you calculated above.

C. Multiply the taped outside circumference of the PowerBand® by each of the length multipliers. This gives the **elongated outside circumference** of the PowerBand® corresponding to each of the calculated tensions.

Table No. 14 - Belt length multipliers for PowerBand®

T_s (N)	9J (3V)	15 J (5V) SPB	SPC	25J (8V)	3VX	5VX	8VK	A	B		C		D
									< 3250	>3250	< 3250	>3250	
300	1.00821				1.00613								
350	1.00957				1.00715								
400	1.01094				1.00817								
450	1.01231	1.00532			1.00919	1.00337		1.00481					
500	1.01367	1.00591			1.01021	1.00374		1.00535					
550	1.01504	1.00650			1.01124	1.00412		1.00588					
600	1.01641	1.00709	1.00481		1.01226	1.00449		1.00642	1.00562	1.00674			
650	1.01778	1.00769	1.00515		1.01328	1.00487		1.00695	1.00608	1.00730			
700	1.01915	1.00828	1.00549	1.00449	1.01430	1.00524		1.00749	1.00655	1.00786	1.00393	1.00524	
750	1.02051	1.00887	1.00584	1.00481	1.01532	1.00561		1.00802	1.00702	1.00843	1.00421	1.00561	
800	1.02188	1.00946	1.00618	1.00513	1.01634	1.00599		1.00856	1.00749	1.00899	1.00449	1.00599	1.00310
900	1.02462	1.01064	1.00686	1.00578	1.01839	1.00674		1.00963	1.00843	1.01011	1.00505	1.00674	1.00348
1000	1.02735	1.01183	1.00754	1.00642	1.02043	1.00749	1.00132	1.01070	1.00936	1.01124	1.00562	1.00749	1.00387
1200		1.01419	1.00891	1.00770		1.00899	1.00158	1.01284	1.01124	1.01348	1.00674	1.00899	1.00465
1400		1.01656	1.01028	1.00899		1.01049	1.00185	1.01498	1.01311	1.01573	1.00786	1.01049	1.00542
1600		1.01893	1.01164	1.01027		1.01198	1.00211		1.01498	1.01798	1.00899	1.01198	1.00620
1800		1.02129	1.01301	1.01156		1.01348	1.00237		1.01686	1.02023	1.01011	1.01348	1.00697
2000		1.02366	1.01438	1.01284		1.01498	1.00264		1.01873	1.02248	1.01124	1.01498	1.00775
2250		1.02662	1.01608	1.01445		1.01685	1.00297		1.02107	1.02529	1.01264	1.01685	1.00872
2500		1.02957	1.01779	1.01605		1.01873	1.00330		1.02341	1.02810	1.01405	1.01873	1.00968
2750			1.01950	1.01766			1.00363				1.01545	1.02060	1.01065
3000			1.02121	1.01926			1.00396				1.01686	1.02247	1.01162
3250			1.02292	1.02087			1.00429				1.01826	1.02435	1.01259
3500			1.02462	1.02247			1.00462				1.01967	1.02622	1.01356
3750			1.02633	1.02408			1.00495				1.02107	1.02809	1.01453
4000			1.02804	1.02569			1.00528				1.02248	1.02997	1.01550
4250			1.02975	1.02729			1.00561				1.02388	1.03184	1.01647
4500			1.03146	1.02890			1.00594				1.02529	1.03371	1.01744
4750			1.03316	1.03050			1.00627				1.02669	1.03559	1.01840
5000			1.03487	1.03211			1.00660				1.02810	1.03746	1.01937
5250				1.03371			1.00693						1.02034
5500				1.03532			1.00727						1.02131
6000				1.03853			1.00793						1.02325

STEP III

TENSION THE DRIVE

A. With the PowerBand® installed on the drive, tighten it until the taped outside circumference corresponds to the elongated outside circumference range calculated above.

B. For new belts, tighten the belts as close as possible to the calculated maximum elongated outside length based on the maximum tension.

1. GROOVE SPECIFICATIONS FOR V-BELT PULLEYS

Figure 3 - Groove dimension nomenclature for V-belts

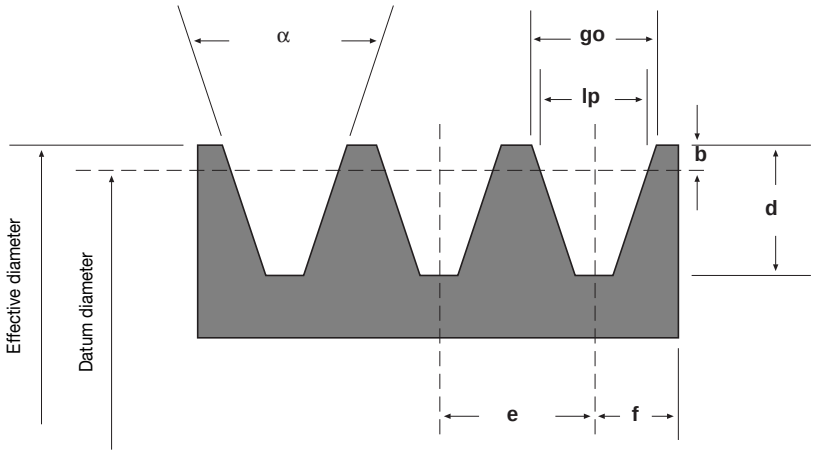


Table No. 15 - Groove dimensions and tolerances for Hi-Power® PowerBand® according to RMA engineering standards

Cross-section	Effective diam. range mm	Groove angle a	go mm	d mm	e * mm	f mm
A - PowerBand®	< 140 > 140	34° ± 1/2° 38° ± 1/2°	12.55 ± 0.13 12.80 ± 0.13	12.45 ± 0.79 12.45 ± 0.79	15.88 ± 0.60 15.88 ± 0.60	9.53 (+1.78/-0) 9.53 (+1.78/-0)
B - PowerBand®	< 180 > 180	34° ± 1/2° 38° ± 1/2°	16.18 ± 0.13 16.51 ± 0.13	14.73 ± 0.79 14.73 ± 0.79	19.05 ± 0.60 19.05 ± 0.60	12.70 (+3.80/-0) 12.70 (+3.80/-0)
C - PowerBand®	< 200 200 to 315 > 315	34° ± 1/2° 36° ± 1/2° 38° ± 1/2°	22.33 ± 0.18 22.53 ± 0.18 22.73 ± 0.18	19.81 ± 0.79 19.81 ± 0.79 19.81 ± 0.79	25.40 ± 0.60 25.40 ± 0.60 25.40 ± 0.60	17.48 (+3.80/-0) 17.48 (+3.80/-0) 17.48 (+3.80/-0)
D - PowerBand®	< 355 355 to 450 > 450	34° ± 1/2° 36° ± 1/2° 38° ± 1/2°	31.98 ± 0.18 32.28 ± 0.18 32.59 ± 0.18	26.67 ± 0.79 26.67 ± 0.79 26.67 ± 0.79	36.53 ± 0.60 36.53 ± 0.60 36.53 ± 0.60	22.23 (+6.35/-0) 22.23 (+6.35/-0) 22.23 (+6.35/-0)

* Summation of the deviations from “e” for all grooves in any pulley shall not exceed ± 1.2 mm.

Table No. 16 - Groove dimensions and tolerances for Super HC® PowerBand® according to ISO 5290 engineering standards

Section	Effective diameter mm	Groove angle a	go mm	d mm	e * mm	f mm
9J PowerBand®	< 90	36° ± 1/4°	8.9 ± 0.13	8.9 (+0.25/-0)	10.3 ± 0.40	9 (+2.4/-0)
	90 to 150	38° ± 1/4°	8.9 ± 0.13	8.9 (+0.25/-0)	10.3 ± 0.40	9 (+2.4/-0)
	151 to 300	40° ± 1/4°	8.9 ± 0.13	8.9 (+0.25/-0)	10.3 ± 0.40	9 (+2.4/-0)
	> 300	42° ± 1/4°	8.9 ± 0.13	8.9 (+0.25/-0)	10.3 ± 0.40	9 (+2.4/-0)
15J PowerBand®	< 250	38° ± 1/4°	15.2 ± 0.13	15.2 (+0.25/-0)	17.5 ± 0.40	13 (+3.2/-0)
	250 to 400	40° ± 1/4°	15.2 ± 0.13	15.2 (+0.25/-0)	17.5 ± 0.40	13 (+3.2/-0)
	> 400	42° ± 1/4°	15.2 ± 0.13	15.2 (+0.25/-0)	17.5 ± 0.40	13 (+3.2/-0)
25J PowerBand®	< 400	38° ± 1/4°	25.4 ± 0.13	25.4 (+0.25/-0)	28.6 ± 0.40	19 (+6.3/-0)
	400 to 560	40° ± 1/4°	25.4 ± 0.13	25.4 (+0.25/-0)	28.6 ± 0.40	19 (+6.3/-0)
	> 560	42° ± 1/4°	25.4 ± 0.13	25.4 (+0.25/-0)	28.6 ± 0.40	19 (+6.3/-0)

* Summation of the deviations from "e" for all grooves in any pulley shall not exceed ± 0.5 mm for 9J and 15J, ± 0.8 mm for 25J.

Table No. 17 - Groove dimensions and tolerances for Super HC® PowerBand® according to RMA engineering standards

Section	Datum width mm	Effective diam. range mm	Groove angle a	go mm	d mm (minimum)	e * mm	f mm	b mm
3V/3VX and PowerBand®	8.45	< 90	36° ± 1/4°	8.89 ± 0.13	8.6	10.32 ± 0.40	8.73 (+2.4/-0)	0.65
		90 to 150	38° ± 1/4°	8.89 ± 0.13	8.6	10.32 ± 0.40	8.73 (+2.4/-0)	0.65
		151 to 300	40° ± 1/4°	8.89 ± 0.13	8.6	10.32 ± 0.40	8.73 (+2.4/-0)	0.65
		> 300	42° ± 1/4°	8.89 ± 0.13	8.6	10.32 ± 0.40	8.73 (+2.4/-0)	0.65
5V/5VX and PowerBand®	14.4	< 250	38° ± 1/4°	15.24 ± 0.13	15.0	17.46 ± 0.40	12.7 (+3.2/-0)	1.25
		250 to 400	40° ± 1/4°	15.24 ± 0.13	15.0	17.46 ± 0.40	12.7 (+3.2/-0)	1.25
		> 400	42° ± 1/4°	15.24 ± 0.13	15.0	17.46 ± 0.40	12.7 (+3.2/-0)	1.25
8V/8VK and PowerBand®	23.65	< 400	38° ± 1/4°	25.4 ± 0.13	25.1	28.58 ± 0.40	19.05 (+6.3/-0)	2.54
		400 to 560	40° ± 1/4°	25.4 ± 0.13	25.1	28.58 ± 0.40	19.05 (+6.3/-0)	2.54
		> 560	42° ± 1/4°	25.4 ± 0.13	25.1	28.58 ± 0.40	19.05 (+6.3/-0)	2.54

* Summation of the deviations from "e" for all grooves in any pulley shall not exceed ± 0.79 mm.

Groove dimensions and tolerances for Super HC® PowerBand® according to the ISO 4183 engineering standards are shown in table No. 18 (SPB-PB/SPC-PB) on page 40.

Table No. 18 - Groove dimensions and tolerances according to ISO 4183, DIN 2211 and DIN 2217 engineering standards

Belt section	Datum width lp mm	Datum diameter mm	Groove angle a	go mm	d mm	e mm	f* mm	b mm
D** mm	27	355 to 500 > 500	36° ± 1/2° 38° ± 1/2°	32 32	28 (min.) 28 (min.)	37 ± 0.60 37 ± 0.60	24 (±2) 24 (±2)	8.1 8.1
E** mm	32	500 to 630 > 630	36° ± 1/2° 38° ± 1/2°	40 40	33 (min.) 33 (min.)	44.5 ± 0.70 44.5 ± 0.70	29 (±2) 29 (±2)	12 12
Z** SPZ*** XPZ	8.5	63 to 80 > 80	34° ± 1° 38° ± 1°	9.72 9.88	11 (+0.25/-0) 11 (+0.25/-0)	12 ± 0.30 12 ± 0.30	8 ± 0.6 8 ± 0.6	2 2
A** SPA*** XPA	11	90 to 118 > 118	34° ± 1° 38° ± 1°	12.68 12.89	13.75 (+0.25/-0) 13.75 (+0.25/-0)	15 ± 0.30 15 ± 0.30	10 ± 0.6 10 ± 0.6	2.75 2.75
B** SPB*** SPB-PB XPB	14	140 to 190 > 190	34° ± 1° 38° ± 1°	16.14 16.41	17.5 (+0.25/-0) 17.5 (+0.25/-0)	19 ± 0.40 19 ± 0.40	12.5 ± 0.8 12.5 ± 0.8	3.5 3.5
C** SPC*** SPC-PB XPC	19	224 to 315 > 315	34° ± 1/2° 38° ± 1/2°	21.94 22.31	24 (+0.25/-0) 24 (+0.25/-0)	25.5 ± 0.50 25.5 ± 0.50	17 ± 1.0 17 ± 1.0	4.8 4.8

Tolerances on datum diameters can be calculated by applying the tolerance (+ 1.6 /- 0%) to the nominal value of the datum diameter in mm.

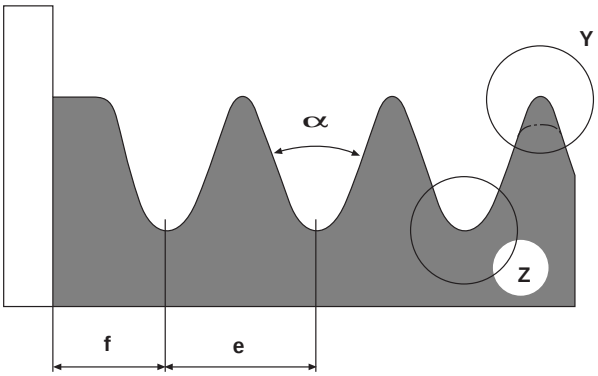
* These tolerances have to be taken into account when aligning the pulleys.
** According to DIN 2217.
*** According to DIN 2211 and ISO 4183.

Important

For PowerBands other than SPB-PB and SPC-PB, refer to tables 15 to 17 (pages 38 to 39).

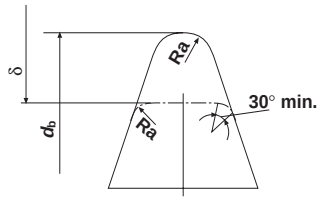
2. GROOVE SPECIFICATIONS FOR MICRO-V® BELT PULLEYS

Figure 4 - Groove dimension nomenclature for Micro-V® belts



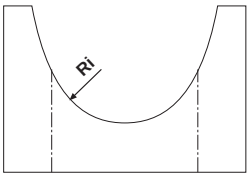
Groove dimension

Detail Y: Groove top



The design of the groove top may not exceed indicated minimum and maximum values (depending on pulley manufacture).

Detail Z: Groove bottom



The groove bottom design may not exceed the indicated Ri value (depending on pulley manufacture).

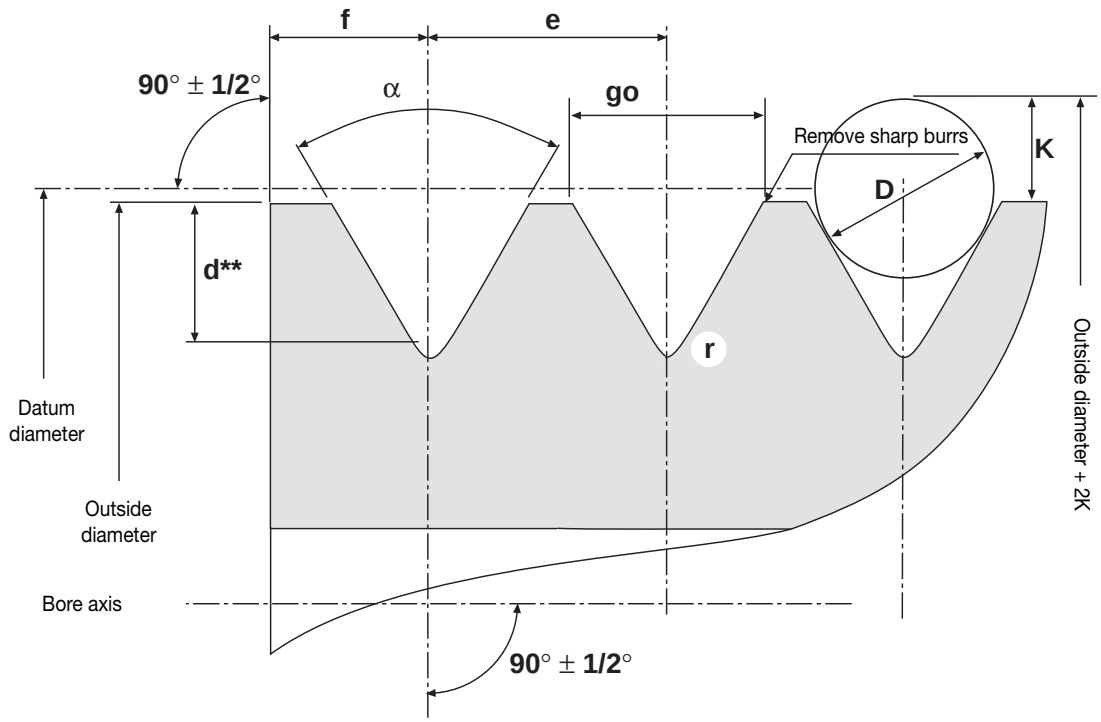
Table No. 19 - Groove dimensions and tolerances for Micro-V® according to DIN 7867 and ISO 9982 engineering standards

Section	Groove angle a	e* mm	Ri mm max.	Ra mm min.	f mm min.
PJ	40 ± 1/2°	2.34 ± 0.03	0.40	0.20	1.8
PL	40 ± 1/2°	4.70 ± 0.05	0.40	0.40	3.3
PM	40 ± 1/2°	9.40 ± 0.08	0.75	0.75	6.4

* Summation of the deviations from “e” for all grooves in any pulley shall not exceed ± 0.30 mm.

3. GROOVE SPECIFICATIONS FOR POLYFLEX® JB™ BELT PULLEYS

Figure 5 - Groove dimension nomenclature for Polyflex® JB™ belts



** Groove depth to bottom of straight-sidewall portion groove; i.e. tangent point of "d" and "r" dimensions.

Table No. 20 - Groove dimensions and tolerances for Polyflex® JB™

Groove designation	Outside diameter	Groove angle a	go mm	d** mm	e mm	f mm	r mm	2K mm	D mm
5M	26-32	60° (± 1/4°)	4.50 (± 0.05 mm)	3.28	5.30 (+0.13/-0.05)	3.45	0.4	5.71	4.50
	33-97	62° (± 1/4°)	4.50 (± 0.05 mm)	3.15	5.30 (+0.13/-0.05)	3.45	0.4	5.75	4.50
	> 97	64° (± 1/4°)	4.50 (± 0.05 mm)	3.05	5.30 (+0.13/-0.05)	3.45	0.4	5.79	4.50
7M	42-76	60° (± 1/4°)	7.10 (± 0.05 mm)	5.28	8.50 (+0.13/-0.05)	5.65	0.6	10.20	7.50
	> 76	62° (± 1/4°)	7.10 (± 0.05 mm)	5.08	8.50 (+0.13/-0.05)	5.65	0.6	10.25	7.50
11M	67-117	60° (± 1/4°)	11.20 (± 0.05 mm)	8.51	13.20 (+0.13/-0.05)	8.60	0.8	15.10	11.50
	> 117	62° (± 1/4°)	11.20 (± 0.05 mm)	8.20	13.20 (+0.13/-0.05)	8.60	0.8	15.19	11.50

NOTES

1. The sides of the groove shall not exceed 3 micron (RMS) roughness.
2. The summation of the deviations from "e" for all grooves in any pulley shall not exceed ± 0.30 mm.
3. The tolerance on the outside diameter is:
   0.13 mm for pulleys with 26 mm up through 125 mm outside diameter;
   0.38 mm for pulleys with 126 mm up through 250 mm outside diameter;
   0.76 mm for pulleys with 251 mm up through 500 mm outside diameter;
   1.27 mm for pulleys with 501 mm outside diameter and more.
4. Radial run-out shall not exceed 0.13 mm TIR* for outside diameters up through 250 mm.
   Add 0.01 mm TIR* per 25 mm of outside diameter more than 250 mm.
5. Axial run-out shall not exceed 0.03 mm TIR* per 25 mm of outside diameter for diameters up through 500 mm.
   Add 0.01 mm TIR* per 25 mm of outside diameter for diameters more than 500 mm.

* TIR: Total Indicator Reading.
** Groove depth to bottom of straight-sidewall portion groove; i.e. tangent point of "d" and "r" dimensions.

IDLERS

IDLERS ON V-BELT DRIVES

An idler as used on V-belt drives, is a wheel that is not loaded and may be either a grooved or a flat pulley. Idlers are used on V-belt drives for various reasons:

1. To provide takeup for drives with fixed centre distance.
2. To clear obstructions.
3. To turn corners (as in mule pulley drives).
4. To break up long spans where belt vibration may be a problem.
5. To maintain tension.
6. To act as a clutching device.

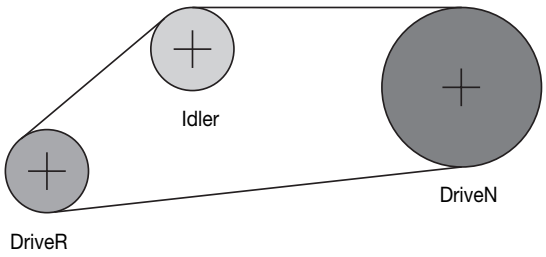
Idlers always impose additional bending stresses on the belts. Therefore it is recommended to avoid idlers if possible. If needed at all in the drive, idler dimensions and locations should be designed for a minimum reduction of belt life.

PLACEMENT OF IDLERS ON THE DRIVE

Inside or outside idlers

Idlers may be placed either inside or outside the drive. An inside idler decreases the arc of contact on the adjacent pulleys. Inside idlers can be either grooved or flat for Hi-Power® V-belts, but are always grooved for Quad-Power II or Super HC® MN belts. Super HC® PowerBand® however will run satisfactorily with flat inside idlers, because the tie band will keep the individual belts from tipping.

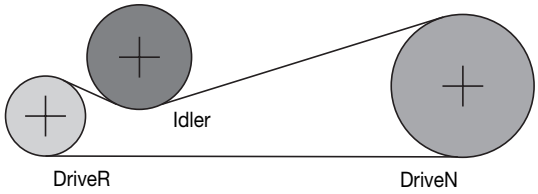
Figure 6 - Inside idler



An outside idler increases the arc of contact but the amount of takeup is limited by the span on the opposite side. Outside idlers are always flat pulleys.

NOTE: the use of outside idlers is not recommended for Polyflex® JB™ belt drives.

Figure 7 - Outside idler



Tight or slack spans

Idlers should be placed, if at all possible, on the slack side of a drive, rather than on the tight side. Springloaded or weighted idlers should always be located on the slack side because the spring force, or weight, can be much less in this position. Also, such idlers should not be used on drives where the load can be reversed (i.e. where the slack side can become the tight side).

Figure 8 - Tight side idler

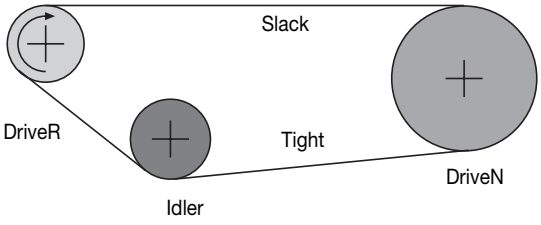
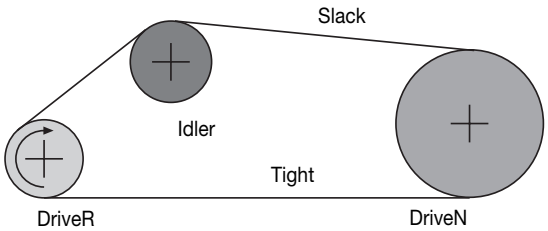


Figure 9 - Slack side idler

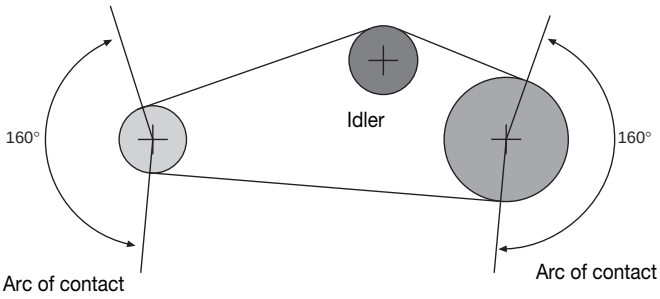


IDLERS

Location of the idler in the span

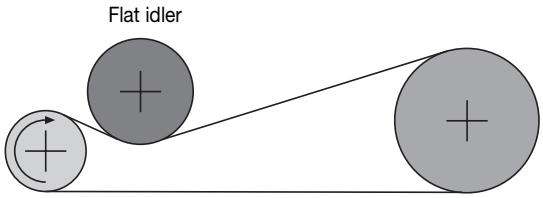
A grooved inside idler may be located at any point along the span, but preferably so that it results in nearly equal arcs of contact on the two adjacent pulleys.

Figure 10 - Equal arcs



A flat idler pulley, whether it is inside or outside should be located as far as is practical from the next pulley the belt is entering. This is because V-belts move back and forth slightly on a flat pulley, and locating it as far away from the next pulley minimises the possibility of the belt entering that pulley in a misaligned condition. The use of flat idler pulleys on long span drives can cause severe belt whip, and should be avoided if possible.

Figure 11 - Locating flat idler



FURTHER INFORMATION

Idler diameters

Inside idlers should be at least as large as the smallest power transmitting pulley. Outside idlers should be at least 50% larger than the smallest power transmitting pulley. Belt power ratings or belt life are reduced significantly when using idlers that are too small.

Belt length

A drive using an idler should be laid out to scale, the extreme installation and takeup positions established and the length measured in each position. Make sure that the belt you select allows sufficient installation and takeup.

Flat idlers

Flat idlers for V-belt drives should not be crowned. Flanging of idlers, however, is good practice. If flanging is used, the inside bottom corners should not be rounded since this may cause the belt to climb off the pulley. A general rule to determine the face width of a flat idler (between the flanges if flanged) is to add 1.5 times the nominal belt top width to the face width of the grooved pulley used.

Reduction of power rating

As stated above, the use of an idler (or several idlers) will have its effect on belt performance. So for equal belt life power rating should be reduced. If the above recommendations are used, it is possible to design satisfactory V-belt drives using idlers by multiplying the normal rating by the following factor:

Number of idlers	Multiplier
1	0.91
2	0.86
3	0.81

These factors are approximate. They apply only when idler diameters are in accordance with the above recommendations. If power rating is not reduced to account for an idler, belt life will be reduced. Belt life and power rating are much more reduced, when too small idlers are used, as the extra bending stress increases with decrease in diameter.

5

POWER RATINGS QUAD-POWER II

Basic kW per belt

XPZ-3VX

RPM of faster shaft	56	60	63	67	71	75	80	85	90	95	100	106	112	118	125	132	140
585	0.60	0.69	0.77	0.86	0.96	1.06	1.18	1.30	1.42	1.54	1.66	1.80	1.94	2.08	2.25	2.41	2.59
700	0.70	0.81	0.90	1.01	1.13	1.24	1.39	1.53	1.67	1.81	1.95	2.12	2.29	2.45	2.65	2.84	3.06
725	0.72	0.84	0.93	1.05	1.16	1.28	1.43	1.58	1.72	1.87	2.01	2.19	2.36	2.53	2.73	2.93	3.16
870	0.84	0.98	1.09	1.23	1.37	1.51	1.69	1.86	2.03	2.21	2.38	2.58	2.79	2.99	3.23	3.47	3.73
950	0.90	1.06	1.17	1.33	1.48	1.63	1.82	2.01	2.20	2.39	2.58	2.80	3.02	3.24	3.50	3.76	4.05
1160	1.07	1.26	1.40	1.58	1.77	1.95	2.18	2.41	2.63	2.86	3.08	3.35	3.62	3.89	4.20	4.50	4.85
1450	1.30	1.53	1.70	1.92	2.15	2.38	2.66	2.94	3.22	3.49	3.77	4.10	4.43	4.75	5.13	5.51	5.93
1750	1.52	1.79	1.99	2.27	2.54	2.80	3.14	3.47	3.80	4.13	4.46	4.85	5.23	5.62	6.07	6.51	7.01
2850	2.26	2.69	3.01	3.43	3.85	4.27	4.79	5.30	5.81	6.31	6.81	7.40	7.99	8.57	9.24	9.90	10.64
3450	2.63	3.14	3.52	4.02	4.51	5.00	5.61	6.21	6.81	7.40	7.98	8.67	9.35	10.02	10.78	11.53	12.37
100	0.13	0.14	0.16	0.18	0.19	0.21	0.24	0.26	0.28	0.30	0.33	0.35	0.38	0.41	0.44	0.47	0.50
200	0.23	0.27	0.29	0.33	0.37	0.40	0.44	0.49	0.53	0.58	0.62	0.67	0.72	0.77	0.83	0.89	0.96
300	0.33	0.38	0.42	0.48	0.53	0.58	0.64	0.71	0.77	0.83	0.90	0.97	1.05	1.13	1.21	1.30	1.40
400	0.43	0.50	0.55	0.62	0.68	0.75	0.84	0.92	1.00	1.09	1.17	1.27	1.37	1.47	1.58	1.70	1.83
500	0.52	0.60	0.67	0.75	0.84	0.92	1.02	1.13	1.23	1.33	1.43	1.56	1.68	1.80	1.94	2.08	2.24
600	0.61	0.71	0.78	0.88	0.98	1.08	1.21	1.33	1.45	1.57	1.70	1.84	1.99	2.13	2.30	2.47	2.66
700	0.70	0.81	0.90	1.01	1.13	1.24	1.39	1.53	1.67	1.81	1.95	2.12	2.29	2.45	2.65	2.84	3.06
800	0.78	0.91	1.01	1.14	1.27	1.40	1.56	1.72	1.88	2.04	2.20	2.39	2.58	2.77	2.99	3.21	3.46
900	0.86	1.01	1.12	1.27	1.41	1.56	1.74	1.92	2.10	2.27	2.45	2.66	2.88	3.09	3.33	3.57	3.85
1000	0.95	1.11	1.23	1.39	1.55	1.71	1.91	2.11	2.30	2.50	2.70	2.93	3.16	3.40	3.67	3.94	4.24
1100	1.03	1.20	1.34	1.51	1.69	1.86	2.08	2.30	2.51	2.73	2.94	3.20	3.45	3.70	4.00	4.29	4.62
1200	1.10	1.30	1.44	1.63	1.82	2.01	2.25	2.48	2.72	2.95	3.18	3.46	3.73	4.01	4.33	4.64	5.00
1300	1.18	1.39	1.54	1.75	1.95	2.16	2.41	2.67	2.92	3.17	3.42	3.72	4.01	4.31	4.65	4.99	5.38
1400	1.26	1.48	1.65	1.87	2.09	2.30	2.58	2.85	3.12	3.39	3.65	3.97	4.29	4.60	4.97	5.34	5.75
1500	1.33	1.57	1.75	1.98	2.22	2.45	2.74	3.03	3.32	3.60	3.89	4.22	4.56	4.90	5.29	5.68	6.12
1600	1.41	1.66	1.85	2.10	2.35	2.59	2.90	3.21	3.51	3.81	4.12	4.48	4.83	5.19	5.60	6.01	6.48
1700	1.48	1.75	1.95	2.21	2.47	2.73	3.06	3.38	3.70	4.02	4.34	4.72	5.10	5.48	5.91	6.34	6.84
1800	1.55	1.83	2.04	2.32	2.60	2.87	3.22	3.56	3.90	4.23	4.57	4.97	5.37	5.76	6.22	6.67	7.19
1900	1.62	1.92	2.14	2.43	2.72	3.01	3.37	3.73	4.09	4.44	4.79	5.21	5.63	6.04	6.52	7.00	7.54
2000	1.70	2.00	2.24	2.54	2.85	3.15	3.53	3.90	4.28	4.65	5.01	5.45	5.89	6.32	6.82	7.32	7.88
2100	1.77	2.09	2.33	2.65	2.97	3.29	3.68	4.07	4.46	4.85	5.23	5.69	6.15	6.60	7.12	7.64	8.22
2200	1.83	2.17	2.42	2.76	3.09	3.42	3.83	4.24	4.65	5.05	5.45	5.93	6.40	6.87	7.41	7.95	8.56
2300	1.90	2.25	2.52	2.86	3.21	3.56	3.98	4.41	4.83	5.25	5.67	6.16	6.65	7.14	7.70	8.26	8.89
2400	1.97	2.34	2.61	2.97	3.33	3.69	4.13	4.57	5.01	5.45	5.88	6.39	6.90	7.41	7.99	8.57	9.22
2500	2.04	2.42	2.70	3.07	3.45	3.82	4.28	4.74	5.19	5.64	6.09	6.62	7.15	7.67	8.27	8.87	9.54
2600	2.10	2.50	2.79	3.18	3.56	3.95	4.43	4.90	5.37	5.83	6.30	6.85	7.39	7.93	8.55	9.17	9.86
2700	2.17	2.57	2.88	3.28	3.68	4.08	4.57	5.06	5.54	6.03	6.50	7.07	7.63	8.19	8.83	9.46	10.18
2800	2.23	2.65	2.97	3.38	3.79	4.20	4.71	5.22	5.72	6.22	6.71	7.29	7.87	8.44	9.10	9.75	10.48
2900	2.30	2.73	3.05	3.48	3.91	4.33	4.86	5.38	5.89	6.40	6.91	7.51	8.11	8.69	9.37	10.04	10.79
3000	2.36	2.81	3.14	3.58	4.02	4.46	5.00	5.53	6.06	6.59	7.11	7.73	8.34	8.94	9.64	10.32	11.09
3100	2.42	2.88	3.22	3.68	4.13	4.58	5.14	5.69	6.23	6.77	7.31	7.94	8.57	9.19	9.90	10.60	11.38
3200	2.48	2.96	3.31	3.78	4.24	4.70	5.27	5.84	6.40	6.95	7.50	8.15	8.79	9.43	10.16	10.87	11.67
3300	2.54	3.03	3.39	3.87	4.35	4.82	5.41	5.99	6.56	7.13	7.70	8.36	9.02	9.67	10.41	11.14	11.95
3400	2.60	3.10	3.48	3.97	4.46	4.94	5.55	6.14	6.73	7.31	7.89	8.57	9.24	9.90	10.66	11.40	12.23
3500	2.66	3.18	3.56	4.06	4.57	5.06	5.68	6.29	6.89	7.49	8.07	8.77	9.46	10.13	10.90	11.66	12.51
3600	2.72	3.25	3.64	4.16	4.67	5.18	5.81	6.43	7.05	7.66	8.26	8.97	9.67	10.36	11.15	11.92	12.77
3700	2.78	3.32	3.72	4.25	4.78	5.30	5.94	6.58	7.21	7.83	8.44	9.17	9.88	10.58	11.38	12.16	13.03
3800	2.84	3.39	3.80	4.34	4.88	5.41	6.07	6.72	7.37	8.00	8.62	9.36	10.09	10.80	11.62	12.41	13.29
3900	2.89	3.46	3.88	4.43	4.98	5.53	6.20	6.86	7.52	8.17	8.80	9.56	10.29	11.02	11.84	12.65	13.54
4000	2.95	3.53	3.96	4.52	5.08	5.64	6.33	7.00	7.67	8.33	8.98	9.75	10.50	11.23	12.07	12.88	13.78
4200	3.06	3.66	4.11	4.70	5.28	5.86	6.58	7.28	7.97	8.65	9.32	10.11	10.89	11.64	12.50	13.34	14.25
4400	3.17	3.79	4.26	4.87	5.48	6.08	6.82	7.55	8.26	8.97	9.66	10.47	11.27	12.04	12.92	13.77	14.70
4600	3.27	3.92	4.40	5.04	5.67	6.29	7.06	7.81	8.55	9.27	9.98	10.82	11.63	12.42	13.32	14.18	15.12
4800	3.38	4.05	4.55	5.21	5.86	6.50	7.29	8.06	8.82	9.57	10.30	11.15	11.98	12.79	13.69	14.56	
5000	3.47	4.17	4.69	5.37	6.04	6.70	7.51	8.31	9.09	9.85	10.60	11.47	12.32	13.13	14.05	14.92	
5200	3.57	4.29	4.82	5.52	6.21	6.89	7.73	8.55	9.35	10.13	10.89	11.78	12.63	13.46	14.38		
5400	3.67	4.41	4.95	5.67	6.38	7.08	7.94	8.78	9.59	10.39	11.17	12.07	12.94	13.77			
5600	3.76	4.52	5.08	5.82	6.55	7.27	8.14	9.00	9.83	10.65	11.43	12.35	13.22	14.06			
5800	3.85	4.63	5.21	5.97	6.71	7.45	8.34	9.22	10.06	10.89	11.69	12.61	13.49				
6000	3.93	4.73	5.33	6.11	6.87	7.62	8.53	9.42	10.29	11.12	11.93	12.86					

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{567215}$	0	$\frac{d \times RPM}{600601}$

POWER RATINGS QUAD-POWER II

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.2	1.21 to 1.28	1.29 to 1.44	>1.44
585	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
700	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
725	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08
870	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10
950	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11
1160	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
1450	0.00	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17
1750	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
2850	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.26	0.29	0.33
3450	0.00	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40
100	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
200	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
300	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03
400	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
500	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
600	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07
700	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
800	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
900	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
1000	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12
1100	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
1200	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
1300	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
1400	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16
1500	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.13	0.15	0.17
1600	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1700	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.17	0.20
1800	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.18	0.21
1900	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.19	0.22
2000	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
2100	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24
2200	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
2300	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
2400	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.25	0.28
2500	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29
2600	0.00	0.03	0.07	0.10	0.13	0.17	0.20	0.23	0.27	0.30
2700	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
2800	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.29	0.32
2900	0.00	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.33
3000	0.00	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35
3100	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
3200	0.00	0.04	0.08	0.12	0.16	0.20	0.25	0.29	0.33	0.37
3300	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
3400	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.30	0.35	0.39
3500	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40
3600	0.00	0.05	0.09	0.14	0.18	0.23	0.28	0.32	0.37	0.41
3700	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43
3800	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
3900	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
4000	0.00	0.05	0.10	0.15	0.20	0.26	0.31	0.36	0.41	0.46
4200	0.00	0.05	0.11	0.16	0.22	0.27	0.32	0.38	0.43	0.48
4400	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
4600	0.00	0.06	0.12	0.18	0.24	0.29	0.35	0.41	0.47	0.53
4800	0.00	0.06	0.12	0.18	0.25	0.31	0.37	0.43	0.49	0.55
5000	0.00	0.06	0.13	0.19	0.26	0.32	0.38	0.45	0.51	0.58
5200	0.00	0.07	0.13	0.20	0.27	0.33	0.40	0.47	0.53	0.60
5400	0.00	0.07	0.14	0.21	0.28	0.35	0.41	0.48	0.55	0.62
5600	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.65
5800	0.00	0.07	0.15	0.22	0.30	0.37	0.45	0.52	0.59	0.67
6000	0.00	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	RMA eff. length mm	Corr. factor C_L
XPZ-630	630	0.83	3VX-250	635	0.83
XPZ-670	670	0.84	3VX-265	675	0.84
XPZ-710	710	0.85	3VX-280	710	0.85
XPZ-750	750	0.86	3VX-300	760	0.86
XPZ-800	800	0.87	3VX-315	800	0.87
XPZ-850	850	0.88	3VX-335	850	0.88
XPZ-900	900	0.89	3VX-355	900	0.89
XPZ-950	950	0.90	3VX-375	955	0.91
XPZ-1000	1000	0.91	3VX-400	1015	0.92
XPZ-1060	1060	0.92	3VX-425	1080	0.93
XPZ-1120	1120	0.93	3VX-450	1145	0.94
XPZ-1180	1180	0.94	3VX-475	1205	0.95
XPZ-1250	1250	0.95	3VX-500	1270	0.96
XPZ-1320	1320	0.96	3VX-530	1345	0.97
XPZ-1400	1400	0.98	3VX-560	1420	0.98
XPZ-1500	1500	0.99	3VX-600	1525	0.99
XPZ-1600	1600	1.00	3VX-630	1600	1.00
XPZ-1700	1700	1.01	3VX-670	1700	1.01
XPZ-1800	1800	1.02	3VX-710	1805	1.02
XPZ-1900	1900	1.03	3VX-750	1905	1.03
XPZ-2000	2000	1.04	3VX-800	2030	1.04
XPZ-2120	2120	1.05	3VX-850	2160	1.05
XPZ-2240	2240	1.06	3VX-900	2285	1.07
XPZ-2360	2360	1.07	3VX-950	2415	1.08
XPZ-2500	2500	1.08	3VX-1000	2540	1.08
XPZ-2650	2650	1.09	3VX-1060	2690	1.09
XPZ-2800	2800	1.10	3VX-1120	2845	1.11
XPZ-3000	3000	1.11	3VX-1180	2995	1.11
XPZ-3150	3150	1.12	3VX-1250	3175	1.13
XPZ-3350	3350	1.13	3VX-1320	3355	1.14
XPZ-3550	3550	1.15	3VX-1400	3555	1.15

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS QUAD-POWER II

Basic kW per belt

XPA

RPM of faster shaft	80	85	90	95	100	106	112	118	125	132	140	150	160	170	180	190	200
585	1.44	1.64	1.84	2.04	2.24	2.48	2.72	2.96	3.24	3.51	3.83	4.22	4.61	4.99	5.38	5.76	6.15
700	1.68	1.92	2.16	2.40	2.63	2.92	3.20	3.48	3.81	4.13	4.51	4.97	5.43	5.88	6.34	6.79	7.24
725	1.73	1.98	2.23	2.47	2.72	3.01	3.30	3.59	3.93	4.27	4.65	5.13	5.60	6.08	6.55	7.01	7.48
870	2.03	2.32	2.61	2.91	3.20	3.54	3.89	4.23	4.63	5.03	5.49	6.05	6.61	7.17	7.73	8.28	8.83
950	2.19	2.51	2.82	3.14	3.46	3.83	4.21	4.58	5.02	5.45	5.94	6.55	7.16	7.77	8.37	8.97	9.56
1160	2.59	2.98	3.36	3.74	4.12	4.57	5.03	5.48	6.00	6.52	7.11	7.84	8.57	9.29	10.01	10.73	11.44
1450	3.13	3.60	4.07	4.54	5.01	5.57	6.12	6.67	7.31	7.94	8.67	9.56	10.45	11.33	12.21	13.07	13.93
1750	3.67	4.23	4.79	5.34	5.89	6.55	7.21	7.86	8.62	9.37	10.22	11.27	12.32	13.35	14.37	15.38	16.38
2850	5.44	6.30	7.16	8.02	8.87	9.87	10.87	11.85	12.99	14.11	15.37	16.92	18.44	19.92	21.36	22.77	24.14
3450	6.29	7.31	8.32	9.32	10.31	11.48	12.63	13.77	15.08	16.36	17.80	19.54	21.23	22.87	24.44	25.95	
100	0.30	0.34	0.38	0.42	0.45	0.50	0.54	0.59	0.64	0.69	0.75	0.83	0.90	0.97	1.05	1.12	1.19
200	0.56	0.63	0.71	0.78	0.85	0.94	1.03	1.11	1.21	1.32	1.43	1.57	1.71	1.86	2.00	2.14	2.28
300	0.80	0.91	1.02	1.12	1.23	1.36	1.49	1.61	1.76	1.91	2.08	2.29	2.49	2.70	2.91	3.11	3.32
400	1.03	1.17	1.32	1.46	1.60	1.76	1.93	2.10	2.29	2.48	2.70	2.98	3.25	3.52	3.79	4.06	4.33
500	1.26	1.43	1.60	1.78	1.95	2.16	2.36	2.57	2.81	3.05	3.32	3.65	3.99	4.32	4.66	4.99	5.32
600	1.47	1.68	1.88	2.09	2.30	2.54	2.79	3.03	3.31	3.59	3.92	4.32	4.71	5.11	5.51	5.90	6.29
700	1.68	1.92	2.16	2.40	2.63	2.92	3.20	3.48	3.81	4.13	4.51	4.97	5.43	5.88	6.34	6.79	7.24
800	1.89	2.16	2.43	2.70	2.97	3.29	3.61	3.93	4.30	4.67	5.09	5.61	6.13	6.65	7.16	7.67	8.18
900	2.09	2.39	2.69	2.99	3.29	3.65	4.01	4.36	4.78	5.19	5.66	6.24	6.82	7.39	7.97	8.54	9.10
1000	2.29	2.62	2.95	3.29	3.62	4.01	4.40	4.80	5.25	5.71	6.22	6.86	7.50	8.13	8.76	9.39	10.01
1100	2.48	2.84	3.21	3.57	3.93	4.36	4.79	5.22	5.72	6.21	6.78	7.48	8.17	8.86	9.55	10.23	10.91
1200	2.67	3.07	3.46	3.85	4.25	4.71	5.18	5.64	6.18	6.72	7.33	8.08	8.83	9.58	10.32	11.06	11.79
1300	2.86	3.28	3.71	4.13	4.55	5.06	5.56	6.06	6.64	7.21	7.87	8.68	9.49	10.29	11.08	11.87	12.66
1400	3.04	3.50	3.95	4.41	4.86	5.40	5.93	6.47	7.09	7.70	8.40	9.27	10.13	10.99	11.83	12.68	13.51
1500	3.22	3.71	4.20	4.68	5.16	5.73	6.30	6.87	7.53	8.19	8.93	9.85	10.77	11.67	12.57	13.47	14.35
1600	3.40	3.92	4.43	4.95	5.46	6.06	6.67	7.27	7.97	8.66	9.45	10.43	11.39	12.35	13.30	14.24	15.17
1700	3.58	4.12	4.67	5.21	5.75	6.39	7.03	7.67	8.40	9.13	9.96	10.99	12.01	13.02	14.02	15.01	15.98
1800	3.75	4.33	4.90	5.47	6.04	6.71	7.39	8.06	8.83	9.60	10.47	11.55	12.62	13.68	14.72	15.76	16.78
1900	3.92	4.53	5.13	5.73	6.32	7.03	7.74	8.44	9.25	10.06	10.97	12.10	13.22	14.33	15.42	16.50	17.56
2000	4.09	4.73	5.36	5.98	6.61	7.35	8.09	8.82	9.67	10.51	11.47	12.65	13.81	14.96	16.10	17.22	18.33
2100	4.26	4.92	5.58	6.23	6.88	7.66	8.43	9.20	10.08	10.96	11.95	13.18	14.39	15.59	16.77	17.93	19.07
2200	4.42	5.11	5.80	6.48	7.16	7.97	8.77	9.57	10.49	11.40	12.43	13.71	14.96	16.20	17.42	18.63	19.81
2300	4.58	5.30	6.02	6.73	7.43	8.27	9.10	9.93	10.89	11.83	12.90	14.23	15.53	16.81	18.07	19.31	20.52
2400	4.74	5.49	6.23	6.97	7.70	8.57	9.44	10.29	11.28	12.26	13.37	14.74	16.08	17.40	18.70	19.97	21.22
2500	4.90	5.68	6.44	7.21	7.97	8.87	9.76	10.65	11.67	12.69	13.83	15.24	16.62	17.98	19.31	20.62	21.90
2600	5.06	5.86	6.65	7.44	8.23	9.16	10.08	11.00	12.06	13.10	14.28	15.73	17.15	18.55	19.92	21.26	22.56
2700	5.21	6.04	6.86	7.68	8.49	9.45	10.40	11.35	12.43	13.51	14.72	16.21	17.68	19.11	20.51	21.87	23.21
2800	5.36	6.22	7.06	7.91	8.74	9.73	10.71	11.69	12.81	13.91	15.16	16.69	18.19	19.65	21.08	22.47	23.83
2900	5.51	6.39	7.26	8.13	8.99	10.01	11.02	12.02	13.17	14.31	15.59	17.15	18.69	20.18	21.64	23.06	24.44
3000	5.66	6.56	7.46	8.35	9.24	10.29	11.33	12.35	13.53	14.70	16.01	17.61	19.18	20.70	22.18	23.63	25.02
3100	5.80	6.73	7.66	8.57	9.48	10.56	11.63	12.68	13.89	15.08	16.42	18.06	19.65	21.21	22.71	24.17	25.59
3200	5.94	6.90	7.85	8.79	9.72	10.83	11.92	13.00	14.24	15.46	16.82	18.49	20.12	21.70	23.23	24.70	26.13
3300	6.08	7.07	8.04	9.00	9.96	11.09	12.21	13.31	14.58	15.82	17.22	18.92	20.57	22.18	23.72	25.22	26.65
3400	6.22	7.23	8.23	9.21	10.19	11.35	12.49	13.62	14.91	16.18	17.61	19.34	21.02	22.64	24.20	25.71	
3500	6.35	7.39	8.41	9.42	10.42	11.61	12.77	13.92	15.24	16.54	17.98	19.74	21.45	23.09	24.67	26.18	
3600	6.49	7.54	8.59	9.62	10.65	11.86	13.05	14.22	15.57	16.88	18.35	20.14	21.86	23.52	25.11		
3700	6.62	7.70	8.77	9.83	10.87	12.10	13.32	14.51	15.88	17.22	18.72	20.53	22.27	23.94	25.54		
3800	6.75	7.85	8.94	10.02	11.09	12.35	13.58	14.80	16.19	17.55	19.07	20.90	22.66	24.34			
3900	6.87	8.00	9.12	10.22	11.30	12.58	13.84	15.08	16.49	17.87	19.41	21.26	23.04	24.73			
4000	7.00	8.15	9.28	10.40	11.51	12.82	14.10	15.35	16.79	18.19	19.74	21.61	23.40				
4200	7.24	8.43	9.61	10.77	11.92	13.27	14.59	15.88	17.36	18.79	20.38	22.28					
4400	7.47	8.71	9.93	11.13	12.31	13.70	15.06	16.39	17.90	19.36	20.98	22.90					
4600	7.69	8.97	10.23	11.47	12.68	14.11	15.51	16.87	18.41	19.90	21.53						
4800	7.90	9.22	10.52	11.79	13.04	14.51	15.93	17.32	18.89	20.40							
5000	8.10	9.46	10.80	12.10	13.38	14.88	16.33	17.75	19.33	20.86							
5200	8.29	9.69	11.06	12.40	13.70	15.23	16.71	18.14	19.75								
5400	8.48	9.91	11.31	12.67	14.01	15.56	17.06	18.51									
5600	8.65	10.11	11.54	12.93	14.29	15.87	17.39	18.85									
5800	8.80	10.30	11.76	13.18	14.55	16.15	17.69										
6000	8.95	10.48	11.96	13.40	14.80	16.41											

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{343643}$	0	$\frac{d \times RPM}{362319}$

POWER RATINGS QUAD-POWER II

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.2	1.21 to 1.28	1.29 to 1.44	>1.44
585	0.00	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16
700	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19
725	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19
870	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.21	0.23
950	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
1160	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
1450	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.30	0.34	0.39
1750	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47
2850	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
3450	0.00	0.10	0.20	0.31	0.41	0.51	0.61	0.72	0.82	0.92
100	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
200	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05
300	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
400	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08	0.09	0.11
500	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
600	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.12	0.14	0.16
700	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19
800	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.17	0.19	0.21
900	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.21	0.24
1000	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
1100	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.29
1200	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
1300	0.00	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35
1400	0.00	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37
1500	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40
1600	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43
1700	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
1800	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.43	0.48
1900	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
2000	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.47	0.53
2100	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.44	0.50	0.56
2200	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.52	0.59
2300	0.00	0.07	0.14	0.20	0.27	0.34	0.41	0.48	0.55	0.61
2400	0.00	0.07	0.14	0.21	0.28	0.36	0.43	0.50	0.57	0.64
2500	0.00	0.07	0.15	0.22	0.30	0.37	0.44	0.52	0.59	0.67
2600	0.00	0.08	0.15	0.23	0.31	0.39	0.46	0.54	0.62	0.69
2700	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
2800	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.66	0.75
2900	0.00	0.09	0.17	0.26	0.34	0.43	0.52	0.60	0.69	0.77
3000	0.00	0.09	0.18	0.27	0.36	0.44	0.53	0.62	0.71	0.80
3100	0.00	0.09	0.18	0.28	0.37	0.46	0.55	0.64	0.74	0.83
3200	0.00	0.10	0.19	0.28	0.38	0.47	0.57	0.66	0.76	0.86
3300	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.69	0.78	0.88
3400	0.00	0.10	0.20	0.30	0.40	0.50	0.61	0.71	0.81	0.91
3500	0.00	0.10	0.21	0.31	0.42	0.52	0.62	0.73	0.83	0.94
3600	0.00	0.11	0.21	0.32	0.43	0.53	0.64	0.75	0.85	0.96
3700	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99
3800	0.00	0.11	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.02
3900	0.00	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.93	1.04
4000	0.00	0.12	0.24	0.36	0.47	0.59	0.71	0.83	0.95	1.07
4200	0.00	0.12	0.25	0.37	0.50	0.62	0.75	0.87	1.00	1.12
4400	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.18
4600	0.00	0.14	0.27	0.41	0.55	0.68	0.82	0.96	1.09	1.23
4800	0.00	0.14	0.28	0.43	0.57	0.71	0.85	1.00	1.14	1.28
5000	0.00	0.15	0.30	0.44	0.59	0.74	0.89	1.04	1.19	1.34
5200	0.00	0.15	0.31	0.46	0.62	0.77	0.93	1.08	1.23	1.39
5400	0.00	0.16	0.32	0.48	0.64	0.80	0.96	1.12	1.28	1.44
5600	0.00	0.17	0.33	0.50	0.66	0.83	1.00	1.16	1.33	1.50
5800	0.00	0.17	0.34	0.52	0.69	0.86	1.03	1.20	1.38	1.55
6000	0.00	0.18	0.36	0.53	0.71	0.89	1.07	1.25	1.42	1.60

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L
XPA-800	800	0.82
XPA-850	850	0.83
XPA-900	900	0.84
XPA-950	950	0.85
XPA-1000	1000	0.86
XPA-1060	1060	0.87
XPA-1120	1120	0.88
XPA-1180	1180	0.89
XPA-1250	1250	0.90
XPA-1320	1320	0.91
XPA-1400	1400	0.92
XPA-1500	1500	0.93
XPA-1600	1600	0.94
XPA-1700	1700	0.95
XPA-1800	1800	0.96
XPA-1900	1900	0.97
XPA-2000	2000	0.98
XPA-2120	2120	0.99
XPA-2240	2240	1.00
XPA-2360	2360	1.01
XPA-2500	2500	1.02
XPA-2650	2650	1.03
XPA-2800	2800	1.04
XPA-3000	3000	1.05
XPA-3150	3150	1.06
XPA-3350	3350	1.07
XPA-3550	3550	1.08

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS QUAD-POWER II

Basic kW per belt

XPB-5VX

RPM of faster shaft	112	118	125	132	140	150	160	170	180	190	200	212	224	236	250	280	315
585	3.32	3.70	4.16	4.61	5.12	5.76	6.39	7.02	7.65	8.28	8.91	9.65	10.40	11.14	12.00	13.83	15.94
700	3.87	4.33	4.87	5.40	6.01	6.76	7.51	8.26	9.00	9.74	10.48	11.36	12.24	13.11	14.13	16.28	18.76
725	3.99	4.47	5.02	5.57	6.20	6.98	7.75	8.52	9.29	10.06	10.82	11.73	12.64	13.54	14.58	16.81	19.36
870	4.67	5.24	5.89	6.54	7.29	8.21	9.13	10.04	10.95	11.85	12.75	13.83	14.89	15.96	17.19	19.80	22.80
950	5.04	5.65	6.36	7.07	7.87	8.87	9.87	10.86	11.84	12.82	13.80	14.96	16.11	17.26	18.59	21.41	24.64
1160	5.98	6.71	7.57	8.41	9.38	10.58	11.77	12.96	14.14	15.31	16.47	17.86	19.23	20.60	22.18	25.51	29.31
1450	7.21	8.11	9.16	10.20	11.38	12.85	14.30	15.74	17.18	18.60	20.01	21.68	23.34	24.98	26.87	30.84	35.32
1750	8.42	9.49	10.73	11.96	13.35	15.08	16.79	18.49	20.16	21.82	23.47	25.41	27.33	29.23	31.40	35.92	40.95
2850	12.33	13.95	15.82	17.66	19.73	22.28	24.78	27.22	29.61	31.93	34.20	36.83	39.37				
3450	14.10	15.97	18.13	20.24	22.60	25.49	28.29	30.99	33.60	36.12							
100	0.69	0.77	0.85	0.94	1.03	1.15	1.27	1.39	1.51	1.63	1.75	1.89	2.04	2.18	2.34	2.69	3.10
200	1.29	1.43	1.59	1.76	1.94	2.18	2.41	2.64	2.87	3.10	3.33	3.60	3.87	4.15	4.46	5.14	5.92
300	1.84	2.05	2.29	2.53	2.81	3.15	3.49	3.83	4.16	4.50	4.83	5.23	5.63	6.03	6.49	7.48	8.62
400	2.38	2.65	2.97	3.28	3.64	4.09	4.53	4.97	5.42	5.86	6.30	6.82	7.34	7.86	8.47	9.76	11.25
500	2.89	3.23	3.62	4.00	4.45	5.00	5.55	6.09	6.64	7.18	7.72	8.37	9.01	9.65	10.39	11.98	13.81
600	3.39	3.79	4.25	4.71	5.24	5.89	6.54	7.19	7.83	8.47	9.11	9.88	10.64	11.40	12.28	14.15	16.31
700	3.87	4.33	4.87	5.40	6.01	6.76	7.51	8.26	9.00	9.74	10.48	11.36	12.24	13.11	14.13	16.28	18.76
800	4.35	4.87	5.48	6.08	6.76	7.62	8.47	9.31	10.15	10.99	11.83	12.82	13.81	14.80	15.94	18.36	21.15
900	4.81	5.39	6.07	6.74	7.51	8.46	9.41	10.35	11.29	12.22	13.15	14.25	15.35	16.45	17.72	20.41	23.49
1000	5.27	5.91	6.65	7.39	8.24	9.29	10.33	11.37	12.40	13.42	14.44	15.66	16.87	18.07	19.46	22.40	25.78
1100	5.71	6.41	7.23	8.04	8.96	10.10	11.24	12.37	13.49	14.61	15.72	17.04	18.35	19.66	21.17	24.36	28.00
1200	6.15	6.91	7.79	8.67	9.66	10.90	12.13	13.35	14.57	15.77	16.97	18.40	19.81	21.22	22.84	26.27	30.17
1300	6.58	7.40	8.34	9.29	10.36	11.69	13.01	14.32	15.62	16.92	18.20	19.73	21.25	22.75	24.48	28.13	32.28
1400	7.00	7.88	8.89	9.90	11.04	12.46	13.87	15.27	16.66	18.04	19.41	21.04	22.65	24.24	26.09	29.95	34.32
1500	7.42	8.35	9.42	10.50	11.71	13.23	14.73	16.21	17.69	19.15	20.60	22.32	24.02	25.71	27.65	31.72	36.30
1600	7.82	8.81	9.95	11.09	12.38	13.98	15.56	17.13	18.69	20.23	21.76	23.58	25.37	27.14	29.18	33.44	38.21
1700	8.22	9.26	10.47	11.67	13.03	14.72	16.39	18.04	19.68	21.30	22.90	24.81	26.69	28.54	30.67	35.11	40.05
1800	8.62	9.71	10.98	12.24	13.67	15.44	17.19	18.93	20.65	22.34	24.02	26.01	27.97	29.90	32.12	36.72	41.82
1900	9.00	10.15	11.48	12.80	14.30	16.15	17.99	19.80	21.59	23.37	25.12	27.19	29.22	31.23	33.52	38.27	43.51
2000	9.38	10.58	11.98	13.36	14.92	16.86	18.77	20.66	22.53	24.37	26.19	28.33	30.45	32.52	34.89	39.77	45.12
2100	9.76	11.01	12.46	13.90	15.53	17.54	19.53	21.50	23.44	25.35	27.23	29.45	31.63	33.77	36.21	41.21	46.65
2200	10.12	11.43	12.94	14.43	16.13	18.22	20.28	22.32	24.33	26.30	28.25	30.54	32.79	34.98	37.48	42.58	
2300	10.48	11.84	13.40	14.96	16.71	18.88	21.02	23.13	25.20	27.24	29.24	31.60	33.90	36.15	38.71	43.90	
2400	10.83	12.24	13.86	15.47	17.29	19.53	21.74	23.91	26.05	28.15	30.21	32.63	34.99	37.28	39.88		
2500	11.18	12.63	14.31	15.97	17.85	20.17	22.44	24.68	26.88	29.03	31.15	33.62	36.03	38.37	41.01		
2600	11.52	13.02	14.75	16.47	18.41	20.79	23.13	25.43	27.69	29.89	32.05	34.58	37.04	39.41	42.08		
2700	11.85	13.40	15.19	16.95	18.95	21.40	23.80	26.16	28.47	30.73	32.94	35.51	38.00	40.41			
2800	12.17	13.77	15.61	17.43	19.47	21.99	24.46	26.87	29.23	31.54	33.79	36.40	38.93	41.36			
2900	12.49	14.13	16.02	17.89	19.99	22.57	25.10	27.57	29.97	32.32	34.60	37.26	39.81				
3000	12.80	14.48	16.43	18.34	20.50	23.14	25.72	28.24	30.69	33.08	35.39	38.08					
3100	13.10	14.83	16.82	18.78	20.99	23.69	26.32	28.89	31.38	33.80	36.15	38.86					
3200	13.40	15.17	17.21	19.21	21.47	24.22	26.91	29.52	32.05	34.50	36.87						
3300	13.68	15.50	17.58	19.63	21.93	24.74	27.47	30.12	32.69	35.17	37.56						
3400	13.96	15.82	17.95	20.04	22.38	25.24	28.02	30.71	33.30	35.81							
3500	14.24	16.13	18.30	20.43	22.82	25.73	28.55	31.27	33.89	36.42							
3600	14.50	16.43	18.65	20.82	23.25	26.20	29.05	31.81	34.46								
3700	14.76	16.73	18.98	21.19	23.66	26.65	29.54	32.32	34.99								
3800	15.01	17.01	19.30	21.55	24.06	27.09	30.01	32.81									
3900	15.25	17.29	19.62	21.90	24.44	27.51	30.46	33.28									
4000	15.48	17.55	19.92	22.23	24.80	27.91	30.88										
4200	15.92	18.06	20.49	22.86	25.49	28.66											
4400	16.32	18.52	21.02	23.44	26.12	29.33											
4600	16.69	18.94	21.49	23.96	26.68												
4800	17.03	19.32	21.92	24.43													
5000	17.32	19.66	22.30	24.84													
5200	17.58	19.95	22.63														
5400	17.80	20.20															
5600	17.97	20.40															
5800	18.11																

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{214592}$	0	$\frac{d \times RPM}{226757}$

POWER RATINGS QUAD-POWER II

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.2	1.21 to 1.28	1.29 to 1.44	>1.44
585	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.31	0.34
700	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
725	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43
870	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51
950	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.43	0.50	0.56
1160	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68
1450	0.00	0.09	0.19	0.28	0.38	0.47	0.57	0.66	0.76	0.85
1750	0.00	0.11	0.23	0.34	0.46	0.57	0.68	0.80	0.91	1.03
2850	0.00	0.19	0.37	0.56	0.74	0.93	1.11	1.30	1.49	1.67
3450	0.00	0.23	0.45	0.67	0.90	1.12	1.35	1.57	1.80	2.02
100	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06
200	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.10	0.12
300	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
400	0.00	0.03	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.23
500	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.29
600	0.00	0.04	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35
700	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
800	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47
900	0.00	0.06	0.12	0.18	0.23	0.29	0.35	0.41	0.47	0.53
1000	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.52	0.59
1100	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.65
1200	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.55	0.63	0.70
1300	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
1400	0.00	0.09	0.18	0.27	0.37	0.46	0.55	0.64	0.73	0.82
1500	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.68	0.78	0.88
1600	0.00	0.10	0.21	0.31	0.42	0.52	0.63	0.73	0.83	0.94
1700	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.78	0.89	1.00
1800	0.00	0.12	0.23	0.35	0.47	0.59	0.70	0.82	0.94	1.06
1900	0.00	0.12	0.25	0.37	0.50	0.62	0.74	0.87	0.99	1.12
2000	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17
2100	0.00	0.14	0.27	0.41	0.55	0.68	0.82	0.96	1.10	1.23
2200	0.00	0.14	0.29	0.43	0.57	0.72	0.86	1.00	1.15	1.29
2300	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35
2400	0.00	0.16	0.31	0.47	0.63	0.78	0.94	1.09	1.25	1.41
2500	0.00	0.16	0.33	0.49	0.65	0.81	0.98	1.14	1.30	1.47
2600	0.00	0.17	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53
2700	0.00	0.18	0.35	0.53	0.70	0.88	1.06	1.23	1.41	1.58
2800	0.00	0.18	0.36	0.55	0.73	0.91	1.09	1.28	1.46	1.64
2900	0.00	0.19	0.38	0.57	0.76	0.94	1.13	1.32	1.51	1.70
3000	0.00	0.20	0.39	0.59	0.78	0.98	1.17	1.37	1.56	1.76
3100	0.00	0.20	0.40	0.61	0.81	1.01	1.21	1.41	1.62	1.82
3200	0.00	0.21	0.42	0.63	0.83	1.04	1.25	1.46	1.67	1.88
3300	0.00	0.22	0.43	0.64	0.86	1.07	1.29	1.51	1.72	1.94
3400	0.00	0.22	0.44	0.66	0.89	1.11	1.33	1.55	1.77	2.00
3500	0.00	0.23	0.46	0.68	0.91	1.14	1.37	1.60	1.83	2.05
3600	0.00	0.24	0.47	0.70	0.94	1.17	1.41	1.64	1.88	2.11
3700	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17
3800	0.00	0.25	0.49	0.74	0.99	1.24	1.49	1.73	1.98	2.23
3900	0.00	0.25	0.51	0.76	1.02	1.27	1.52	1.78	2.03	2.29
4000	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.09	2.35
4200	0.00	0.27	0.55	0.82	1.10	1.37	1.64	1.92	2.19	2.47
4400	0.00	0.29	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58
4600	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70
4800	0.00	0.31	0.62	0.94	1.25	1.56	1.88	2.19	2.50	2.82
5000	0.00	0.33	0.65	0.98	1.30	1.63	1.95	2.28	2.61	2.93
5200	0.00	0.34	0.68	1.02	1.36	1.69	2.03	2.37	2.71	3.05
5400	0.00	0.35	0.70	1.05	1.41	1.76	2.11	2.46	2.82	3.17
5600	0.00	0.37	0.73	1.09	1.46	1.82	2.19	2.55	2.92	3.29
5800	0.00	0.38	0.75	1.13	1.51	1.89	2.27	2.65	3.02	3.40

Arc of contact correction factor G

$\frac{D - d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	RMA eff. length mm	Corr. factor C_L
XPB-1250	1250	0.85	5VX-500	1270	0.85
XPB-1260	1260	0.85	5VX-530	1345	0.86
XPB-1320	1320	0.86	5VX-560	1420	0.87
XPB-1340	1340	0.86	5VX-600	1525	0.88
XPB-1400	1400	0.87	5VX-630	1600	0.89
XPB-1410	1410	0.87	5VX-670	1700	0.90
XPB-1500	1500	0.88	5VX-710	1805	0.91
XPB-1510	1510	0.88	5VX-750	1905	0.92
XPB-1590	1590	0.89	5VX-800	2030	0.93
XPB-1600	1600	0.89	5VX-850	2160	0.94
XPB-1690	1690	0.90	5VX-900	2285	0.95
XPB-1700	1700	0.90	5VX-950	2415	0.96
XPB-1800	1800	0.91	5VX-1000	2540	0.96
XPB-1900	1900	0.92	5VX-1060	2690	0.97
XPB-2000	2000	0.93	5VX-1120	2845	0.98
XPB-2020	2020	0.93	5VX-1180	2995	0.99
XPB-2120	2120	0.93	5VX-1250	3175	1.00
XPB-2150	2150	0.94	5VX-1320	3355	1.01
XPB-2240	2240	0.94	5VX-1400	3555	1.02
XPB-2280	2280	0.95	5VX-1500	3810	1.03
XPB-2360	2360	0.95	5VX-1600	4065	1.04
XPB-2410	2410	0.96	5VX-1700	4320	1.05
XPB-2500	2500	0.96	5VX-1800	4570	1.06
XPB-2530	2530	0.96	5VX-1900	4825	1.07
XPB-2650	2650	0.97	5VX-2000	5080	1.08
XPB-2680	2680	0.97			
XPB-2800	2800	0.98			
XPB-2840	2840	0.98			
XPB-2990	2990	0.99			
XPB-3000	3000	0.99			
XPB-3150	3150	1.00			
XPB-3350	3350	1.01			
XPB-3550	3550	1.02			

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS QUAD-POWER II

Basic kW per belt

XPC

RPM of faster shaft	180	190	200	212	224	236	250	265	280	300	315	335	355	375	400	425	450
585	10.15	11.29	12.44	13.81	15.17	16.52	18.10	19.78	21.45	23.67	25.32	27.51	29.69	31.86	34.55	37.22	39.87
700	11.86	13.22	14.57	16.18	17.79	19.39	21.24	23.22	25.19	27.79	29.74	32.31	34.87	37.40	40.55	43.66	46.75
725	12.23	13.63	15.02	16.69	18.35	20.00	21.91	23.96	25.99	28.68	30.68	33.33	35.97	38.58	41.82	45.03	48.21
870	14.30	15.96	17.61	19.58	21.53	23.48	25.74	28.14	30.53	33.69	36.04	39.14	42.22	45.27	49.04	52.76	56.43
950	15.42	17.21	19.00	21.13	23.25	25.35	27.79	30.39	32.97	36.37	38.90	42.25	45.56	48.83	52.87	56.86	60.78
1160	18.25	20.40	22.53	25.07	27.60	30.11	33.01	36.09	39.14	43.16	46.14	50.07	53.94	57.75	62.42	67.01	71.49
1450	21.93	24.54	27.13	30.21	33.26	36.28	39.77	43.46	47.10	51.87	55.39	59.99	64.50	68.90	74.25	79.43	84.43
1750	25.47	28.52	31.55	35.14	38.68	42.18	46.20	50.43	54.58	59.99	63.94	69.08	74.05	78.85			
2850	35.86	40.19	44.42	49.36	54.13												
3450	39.57	44.30															
100	2.11	2.32	2.54	2.80	3.06	3.32	3.62	3.94	4.26	4.69	5.00	5.43	5.85	6.27	6.79	7.31	7.83
200	3.93	4.34	4.76	5.26	5.76	6.26	6.84	7.45	8.07	8.89	9.50	10.31	11.12	11.92	12.93	13.93	14.92
300	5.63	6.25	6.86	7.59	8.32	9.05	9.90	10.80	11.70	12.90	13.79	14.98	16.16	17.33	18.80	20.26	21.71
400	7.27	8.07	8.87	9.83	10.79	11.74	12.85	14.03	15.21	16.77	17.94	19.49	21.03	22.57	24.48	26.38	28.26
500	8.84	9.84	10.82	12.01	13.18	14.36	15.72	17.17	18.62	20.54	21.97	23.88	25.77	27.65	29.99	32.31	34.62
600	10.37	11.55	12.72	14.12	15.51	16.90	18.51	20.23	21.94	24.21	25.90	28.15	30.38	32.59	35.34	38.07	40.78
700	11.86	13.22	14.57	16.18	17.79	19.39	21.24	23.22	25.19	27.79	29.74	32.31	34.87	37.40	40.55	43.66	46.75
800	13.31	14.84	16.37	18.19	20.01	21.81	23.91	26.14	28.36	31.29	33.47	36.37	39.23	42.08	45.60	49.08	52.52
900	14.72	16.43	18.13	20.16	22.18	24.19	26.51	28.99	31.45	34.70	37.12	40.32	43.48	46.62	50.49	54.31	58.08
1000	16.11	17.98	19.85	22.08	24.30	26.51	29.06	31.77	34.47	38.02	40.67	44.16	47.61	51.01	55.22	59.35	63.42
1100	17.45	19.50	21.54	23.97	26.38	28.77	31.54	34.49	37.41	41.26	44.12	47.88	51.60	55.27	59.78	64.20	68.53
1200	18.77	20.98	23.18	25.80	28.40	30.99	33.97	37.14	40.28	44.41	47.47	51.50	55.46	59.37	64.15	68.83	73.40
1300	20.06	22.43	24.79	27.60	30.38	33.15	36.34	39.72	43.07	47.46	50.72	54.99	59.19	63.31	68.34	73.25	78.02
1400	21.32	23.85	26.36	29.35	32.32	35.25	38.64	42.23	45.77	50.42	53.86	58.36	62.77	67.08	72.34	77.43	82.36
1500	22.54	25.23	27.89	31.06	34.20	37.30	40.88	44.67	48.40	53.29	56.89	61.59	66.19	70.68	76.12	81.37	
1600	23.73	26.57	29.38	32.72	36.03	39.30	43.06	47.03	50.94	56.05	59.80	64.70	69.46	74.09	79.69		
1700	24.90	27.88	30.84	34.34	37.81	41.23	45.17	49.31	53.39	58.70	62.59	67.65	72.56	77.32			
1800	26.03	29.16	32.25	35.92	39.54	43.11	47.21	51.52	55.75	61.24	65.26	70.47	75.50				
1900	27.13	30.39	33.62	37.44	41.21	44.92	49.18	53.64	58.01	63.68	67.80	73.13					
2000	28.20	31.59	34.95	38.92	42.83	46.67	51.07	55.68	60.18	65.99	70.20						
2100	29.23	32.76	36.24	40.35	44.39	48.36	52.89	57.63	62.24	68.18	72.47						
2200	30.23	33.88	37.48	41.73	45.90	49.98	54.64	59.49	64.20	70.24							
2300	31.20	34.97	38.68	43.06	47.34	51.53	56.30	61.26	66.05								
2400	32.13	36.01	39.83	44.33	48.72	53.01	57.88	62.92									
2500	33.02	37.02	40.94	45.55	50.04	54.42	59.38	64.49									
2600	33.88	37.98	42.00	46.71	51.30	55.75	60.78										
2700	34.70	38.90	43.01	47.81	52.48	57.01											
2800	35.48	39.77	43.96	48.86	53.60	58.19											
2900	36.22	40.60	44.87	49.84	54.65												
3000	36.93	41.38	45.72	50.76													
3100	37.59	42.12	46.52	51.62													
3200	38.21	42.80	47.26														
3300	38.78	43.44	47.95														
3400	39.32	44.03															
3500	39.80	44.56															
3600	40.25																
3700	40.64																

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{118064}$	0	$\frac{d \times RPM}{125156}$

POWER RATINGS QUAD-POWER II

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.2	1.21 to 1.28	1.29 to 1.44	>1.44
585	0.00	0.10	0.21	0.31	0.41	0.52	0.62	0.72	0.83	0.93
700	0.00	0.12	0.25	0.37	0.49	0.62	0.74	0.86	0.99	1.11
725	0.00	0.13	0.26	0.38	0.51	0.64	0.77	0.90	1.02	1.15
870	0.00	0.15	0.31	0.46	0.61	0.77	0.92	1.07	1.23	1.38
950	0.00	0.17	0.33	0.50	0.67	0.84	1.01	1.17	1.34	1.51
1160	0.00	0.21	0.41	0.61	0.82	1.02	1.23	1.43	1.64	1.84
1450	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.05	2.30
1750	0.00	0.31	0.62	0.93	1.24	1.54	1.85	2.16	2.47	2.78
2850	0.00	0.50	1.00	1.51	2.01	2.51	3.02	3.52	4.02	4.53
3450	0.00	0.61	1.22	1.82	2.44	3.04	3.65	4.26	4.87	5.48
100	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.12	0.14	0.16
200	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
300	0.00	0.05	0.11	0.16	0.21	0.26	0.32	0.37	0.42	0.48
400	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.64
500	0.00	0.09	0.18	0.26	0.35	0.44	0.53	0.62	0.71	0.79
600	0.00	0.11	0.21	0.32	0.42	0.53	0.64	0.74	0.85	0.95
700	0.00	0.12	0.25	0.37	0.49	0.62	0.74	0.86	0.99	1.11
800	0.00	0.14	0.28	0.42	0.56	0.71	0.85	0.99	1.13	1.27
900	0.00	0.16	0.32	0.48	0.64	0.79	0.95	1.11	1.27	1.43
1000	0.00	0.18	0.35	0.53	0.71	0.88	1.06	1.24	1.41	1.59
1100	0.00	0.19	0.39	0.58	0.78	0.97	1.16	1.36	1.55	1.75
1200	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.91
1300	0.00	0.23	0.46	0.69	0.92	1.15	1.38	1.61	1.84	2.07
1400	0.00	0.25	0.49	0.74	0.99	1.23	1.48	1.73	1.98	2.23
1500	0.00	0.27	0.53	0.79	1.06	1.32	1.59	1.85	2.12	2.38
1600	0.00	0.28	0.56	0.85	1.13	1.41	1.69	1.98	2.26	2.54
1700	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70
1800	0.00	0.32	0.63	0.95	1.27	1.59	1.91	2.22	2.54	2.86
1900	0.00	0.34	0.67	1.01	1.34	1.68	2.01	2.35	2.68	3.02
2000	0.00	0.35	0.70	1.06	1.41	1.76	2.12	2.47	2.82	3.18
2100	0.00	0.37	0.74	1.11	1.48	1.85	2.22	2.59	2.97	3.34
2200	0.00	0.39	0.78	1.16	1.55	1.94	2.33	2.72	3.11	3.50
2300	0.00	0.41	0.81	1.22	1.62	2.03	2.43	2.84	3.25	3.66
2400	0.00	0.42	0.85	1.27	1.69	2.12	2.54	2.96	3.39	3.81
2500	0.00	0.44	0.88	1.32	1.77	2.20	2.65	3.09	3.53	3.97
2600	0.00	0.46	0.92	1.38	1.84	2.29	2.75	3.21	3.67	4.13
2700	0.00	0.48	0.95	1.43	1.91	2.38	2.86	3.33	3.81	4.29
2800	0.00	0.49	0.99	1.48	1.98	2.47	2.96	3.46	3.95	4.45
2900	0.00	0.51	1.02	1.53	2.05	2.56	3.07	3.58	4.10	4.61
3000	0.00	0.53	1.06	1.59	2.12	2.65	3.18	3.71	4.24	4.77
3100	0.00	0.55	1.09	1.64	2.19	2.73	3.28	3.83	4.38	4.93
3200	0.00	0.57	1.13	1.69	2.26	2.82	3.39	3.95	4.52	5.09
3300	0.00	0.58	1.16	1.75	2.33	2.91	3.49	4.08	4.66	5.24
3400	0.00	0.60	1.20	1.80	2.40	3.00	3.60	4.20	4.80	5.40
3500	0.00	0.62	1.23	1.85	2.47	3.09	3.70	4.32	4.94	5.56
3600	0.00	0.64	1.27	1.90	2.54	3.18	3.81	4.45	5.08	5.72
3700	0.00	0.65	1.30	1.96	2.61	3.26	3.92	4.57	5.22	5.88

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L
XPC2000	2000	0,90
XPC2120	2120	0,91
XPC2240	2240	0,92
XPC2360	2360	0,93
XPC2500	2500	0,94
XPC2650	2650	0,95
XPC2800	2800	0,96
XPC3000	3000	0,97
XPC3150	3150	0,98
XPC3350	3350	0,99
XPC3550	3550	1,00
XPC3750	3750	1,00
XPC4000	4000	1,01
XPC4250	4250	1,02
XPC4500	4500	1,03

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC® MN / SUPER HC®

Basic kW per belt or rib

SPZ-3V-9J

All values printed in italics are for use with Super HC® Moulded Notch construction only.

RPM of faster shaft	56	60	63	67	71	75	80	85	90	95	100	106	112	118	125	132	140
585	*0.42*	*0.50*	*0.55*	*0.63*	0.66	0.74	0.84	0.94	1.04	1.14	1.24	1.36	1.47	1.59	1.73	1.86	2.01
700	*0.47*	*0.56*	*0.63*	*0.72*	0.77	0.86	0.98	1.10	1.22	1.33	1.45	1.59	1.73	1.87	2.03	2.19	2.37
725	*0.48*	*0.57*	*0.65*	*0.74*	0.79	0.89	1.01	1.13	1.26	1.38	1.50	1.64	1.78	1.93	2.09	2.26	2.44
870	*0.55*	*0.66*	*0.74*	*0.85*	0.92	1.04	1.19	1.33	1.47	1.62	1.76	1.93	2.10	2.26	2.46	2.65	2.87
950	*0.58*	*0.70*	*0.79*	*0.91*	0.99	1.12	1.28	1.43	1.59	1.74	1.90	2.08	2.27	2.45	2.66	2.87	3.11
1160	*0.67*	*0.81*	*0.91*	*1.06*	1.18	1.33	1.52	1.70	1.89	2.08	2.26	2.48	2.70	2.92	3.17	3.42	3.71
1450	*0.77*	*0.95*	*1.07*	*1.24*	1.41	1.60	1.83	2.06	2.29	2.51	2.74	3.01	3.28	3.54	3.85	4.15	4.50
1750	*0.87*	*1.07*	*1.22*	*1.42*	1.64	1.86	2.14	2.41	2.68	2.95	3.21	3.53	3.85	4.16	4.52	4.88	5.28
2850	*1.13*	*1.45*	*1.68*	*1.99*	2.40	2.74	3.15	3.57	3.97	4.38	4.77	5.24	5.71	6.16	6.69	7.20	7.77
3450	*1.24*	*1.62*	*1.89*	*2.26*	2.75	3.15	3.63	4.11	4.58	5.04	5.50	6.04	6.56	7.07	7.66	8.22	8.84
100	*0.11*	*0.12*	*0.13*	*0.14*	0.14	0.16	0.18	0.20	0.21	0.23	0.25	0.28	0.30	0.32	0.35	0.37	0.40
200	*0.19*	*0.21*	*0.23*	*0.26*	0.26	0.29	0.33	0.36	0.40	0.44	0.47	0.52	0.56	0.60	0.65	0.70	0.76
300	*0.25*	*0.30*	*0.33*	*0.36*	0.37	0.41	0.47	0.52	0.58	0.63	0.68	0.75	0.81	0.87	0.94	1.02	1.10
400	*0.31*	*0.36*	*0.41*	*0.46*	0.48	0.53	0.60	0.67	0.74	0.81	0.88	0.97	1.05	1.13	1.23	1.32	1.43
500	*0.37*	*0.44*	*0.48*	*0.55*	0.58	0.65	0.73	0.82	0.91	0.99	1.08	1.18	1.28	1.38	1.50	1.62	1.75
600	*0.42*	*0.51*	*0.56*	*0.64*	0.67	0.76	0.86	0.96	1.06	1.17	1.27	1.39	1.51	1.63	1.77	1.90	2.06
700	*0.47*	*0.56*	*0.63*	*0.72*	0.77	0.86	0.98	1.10	1.22	1.33	1.45	1.59	1.73	1.87	2.03	2.19	2.37
800	*0.52*	*0.62*	*0.69*	*0.79*	0.86	0.97	1.10	1.24	1.37	1.50	1.63	1.79	1.95	2.10	2.28	2.46	2.67
900	*0.56*	*0.67*	*0.76*	*0.87*	0.95	1.07	1.22	1.37	1.52	1.66	1.81	1.99	2.16	2.33	2.54	2.74	2.96
1000	*0.61*	*0.73*	*0.83*	*0.95*	1.04	1.17	1.34	1.50	1.66	1.82	1.99	2.18	2.37	2.56	2.78	3.00	3.25
1100	*0.65*	*0.78*	*0.88*	*1.01*	1.12	1.27	1.45	1.63	1.81	1.98	2.16	2.37	2.58	2.79	3.03	3.27	3.54
1200	*0.68*	*0.83*	*0.94*	*1.08*	1.21	1.37	1.56	1.75	1.95	2.14	2.33	2.55	2.78	3.01	3.27	3.53	3.82
1300	*0.72*	*0.88*	*0.99*	*1.14*	1.29	1.46	1.67	1.88	2.08	2.29	2.49	2.74	2.98	3.22	3.50	3.78	4.09
1400	*0.75*	*0.92*	*1.05*	*1.21*	1.37	1.55	1.78	2.00	2.22	2.44	2.66	2.92	3.18	3.44	3.73	4.03	4.37
1500	*0.79*	*0.97*	*1.10*	*1.28*	1.45	1.64	1.88	2.12	2.35	2.59	2.82	3.10	3.37	3.65	3.96	4.28	4.63
1600	*0.81*	*1.01*	*1.14*	*1.33*	1.53	1.73	1.99	2.24	2.49	2.73	2.98	3.27	3.56	3.85	4.19	4.52	4.90
1700	*0.85*	*1.05*	*1.20*	*1.40*	1.61	1.82	2.09	2.35	2.62	2.88	3.14	3.45	3.75	4.06	4.41	4.76	5.15
1800	*0.88*	*1.09*	*1.24*	*1.45*	1.68	1.91	2.19	2.47	2.74	3.02	3.29	3.62	3.94	4.26	4.63	4.99	5.41
1900	*0.91*	*1.13*	*1.29*	*1.51*	1.76	1.99	2.29	2.58	2.87	3.16	3.44	3.78	4.12	4.46	4.84	5.22	5.65
2000	*0.94*	*1.17*	*1.34*	*1.56*	1.83	2.08	2.39	2.69	2.99	3.30	3.59	3.95	4.30	4.65	5.05	5.45	5.90
2100	*0.97*	*1.20*	*1.39*	*1.62*	1.90	2.16	2.48	2.80	3.12	3.43	3.74	4.11	4.48	4.84	5.26	5.67	6.14
2200	*0.99*	*1.24*	*1.43*	*1.67*	1.97	2.24	2.58	2.91	3.24	3.56	3.89	4.27	4.65	5.03	5.46	5.89	6.37
2300	*1.01*	*1.28*	*1.46*	*1.73*	2.04	2.32	2.67	3.01	3.36	3.69	4.03	4.43	4.82	5.21	5.66	6.10	6.60
2400	*1.03*	*1.31*	*1.51*	*1.77*	2.11	2.40	2.76	3.12	3.47	3.82	4.17	4.58	4.99	5.39	5.86	6.31	6.82
2500	*1.07*	*1.34*	*1.55*	*1.83*	2.18	2.48	2.85	3.22	3.59	3.95	4.31	4.73	5.16	5.57	6.05	6.52	7.04
2600	*1.09*	*1.38*	*1.58*	*1.87*	2.24	2.55	2.94	3.32	3.70	4.07	4.44	4.88	5.32	5.74	6.23	6.72	7.26
2700	*1.11*	*1.41*	*1.63*	*1.93*	2.31	2.63	3.03	3.42	3.81	4.20	4.58	5.03	5.48	5.91	6.42	6.91	7.46
2800	*1.12*	*1.43*	*1.66*	*1.97*	2.37	2.70	3.11	3.52	3.92	4.32	4.71	5.17	5.63	6.08	6.60	7.10	7.67
2900	*1.14*	*1.46*	*1.71*	*2.01*	2.43	2.77	3.20	3.61	4.03	4.44	4.84	5.31	5.78	6.24	6.77	7.29	7.86
3000	*1.17*	*1.50*	*1.74*	*2.06*	2.49	2.84	3.28	3.71	4.13	4.55	4.96	5.45	5.93	6.40	6.94	7.47	8.06
3100	*1.19*	*1.52*	*1.77*	*2.10*	2.55	2.91	3.36	3.80	4.24	4.66	5.09	5.59	6.08	6.56	7.11	7.65	8.24
3200	*1.20*	*1.55*	*1.80*	*2.15*	2.61	2.98	3.44	3.89	4.34	4.78	5.21	5.72	6.22	6.71	7.27	7.82	8.42
3300	*1.22*	*1.57*	*1.84*	*2.19*	2.67	3.05	3.52	3.98	4.44	4.89	5.33	5.85	6.36	6.86	7.43	7.98	8.59
3400	*1.24*	*1.61*	*1.87*	*2.23*	2.72	3.11	3.59	4.07	4.53	4.99	5.44	5.98	6.50	7.00	7.58	8.14	8.76
3500	*1.25*	*1.63*	*1.90*	*2.28*	2.78	3.18	3.67	4.15	4.63	5.10	5.56	6.10	6.63	7.14	7.73	8.30	8.92
3600	*1.27*	*1.65*	*1.94*	*2.32*	2.83	3.24	3.74	4.24	4.72	5.20	5.67	6.22	6.76	7.28	7.87	8.45	9.08
3700	*1.29*	*1.68*	*1.97*	*2.35*	2.89	3.30	3.81	4.32	4.81	5.30	5.78	6.33	6.88	7.41	8.01	8.59	9.22
3800	*1.30*	*1.71*	*2.00*	*2.40*	2.94	3.36	3.88	4.40	4.90	5.40	5.88	6.45	7.00	7.54	8.14	8.73	9.36
3900	*1.32*	*1.73*	*2.04*	*2.43*	2.99	3.42	3.95	4.48	4.99	5.49	5.98	6.56	7.12	7.66	8.27	8.86	9.50
4000	*1.33*	*1.75*	*2.06*	*2.48*	3.04	3.48	4.02	4.55	5.07	5.58	6.08	6.67	7.23	7.78	8.40	8.99	9.62
4100	*1.34*	*1.77*	*2.09*	*2.51*	3.09	3.53	4.09	4.63	5.16	5.67	6.18	6.77	7.34	7.89	8.51	9.10	9.74
4200	*1.35*	*1.79*	*2.12*	*2.55*	3.13	3.59	4.15	4.70	5.24	5.76	6.27	6.87	7.45	8.00	8.63	9.22	9.86
4300	*1.36*	*1.82*	*2.15*	*2.59*	3.18	3.64	4.21	4.77	5.31	5.84	6.36	6.97	7.55	8.11	8.73	9.33	9.96
4400	*1.38*	*1.84*	*2.18*	*2.62*	3.22	3.69	4.27	4.84	5.39	5.93	6.45	7.06	7.65	8.21	8.83	9.43	10.06
4500	*1.39*	*1.86*	*2.20*	*2.65*	3.26	3.74	4.33	4.90	5.46	6.01	6.53	7.15	7.74	8.30	8.93	9.52	10.15
4600	*1.40*	*1.87*	*2.22*	*2.70*	3.31	3.79	4.39	4.97	5.53	6.08	6.62	7.23	7.83	8.39	9.02	9.61	10.23
4700	*1.41*	*1.89*	*2.26*	*2.73*	3.35	3.84	4.44	5.03	5.60	6.16	6.69	7.32	7.91	8.48	9.10	9.69	10.30
4800	*1.42*	*1.91*	*2.28*	*2.76*	3.38	3.88	4.50	5.09	5.67	6.23	6.77	7.39	7.99	8.56	9.18	9.76	10.37
4900	*1.43*	*1.93*	*2.30*	*2.79*	3.42	3.93	4.55	5.15	5.73	6.30	6.84	7.47	8.07	8.63	9.26	9.83	10.43
5000	*1.44*	*1.95*	*2.32*	*2.83*	3.46	3.97	4.60	5.20	5.79	6.36	6.91	7.54	8.14	8.70	9.32	9.89	10.47

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{589971}$	0	$\frac{d \times RPM}{624999}$

POWER RATINGS SUPER HC® MN / SUPER HC®

Additional kW per belt or rib for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.05	1.06 to 1.11	1.12 to 1.18	1.19 to 1.26	1.27 to 1.38	1.39 to 1.57	1.58 to 1.94	1.95 to 3.38	>3.38
585	0.00	0.01	0.02	0.04	0.05	0.07	0.08	0.09	0.09	0.10
700	0.00	0.01	0.03	0.05	0.06	0.08	0.09	0.10	0.11	0.12
725	0.00	0.01	0.03	0.05	0.07	0.08	0.10	0.11	0.12	0.12
870	0.00	0.01	0.03	0.06	0.08	0.10	0.11	0.13	0.14	0.15
950	0.00	0.01	0.04	0.06	0.09	0.11	0.12	0.14	0.15	0.16
1160	0.00	0.02	0.05	0.08	0.11	0.13	0.15	0.17	0.19	0.20
1450	0.00	0.02	0.06	0.10	0.13	0.16	0.19	0.21	0.23	0.25
1750	0.00	0.03	0.07	0.12	0.16	0.20	0.23	0.26	0.28	0.30
2850	0.00	0.04	0.11	0.19	0.26	0.32	0.37	0.42	0.46	0.49
3450	0.00	0.05	0.13	0.23	0.32	0.39	0.45	0.51	0.56	0.59
100	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
200	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03
300	0.00	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.05
400	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.07
500	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.07	0.08	0.09
600	0.00	0.01	0.02	0.04	0.06	0.07	0.08	0.09	0.10	0.10
700	0.00	0.01	0.03	0.05	0.06	0.08	0.09	0.10	0.11	0.12
800	0.00	0.01	0.03	0.05	0.07	0.09	0.11	0.12	0.13	0.14
900	0.00	0.01	0.04	0.06	0.08	0.10	0.12	0.13	0.15	0.15
1000	0.00	0.01	0.04	0.07	0.09	0.11	0.13	0.15	0.16	0.17
1100	0.00	0.02	0.04	0.07	0.10	0.12	0.14	0.16	0.18	0.19
1200	0.00	0.02	0.05	0.08	0.11	0.13	0.16	0.18	0.19	0.20
1300	0.00	0.02	0.05	0.09	0.12	0.15	0.17	0.19	0.21	0.22
1400	0.00	0.02	0.05	0.10	0.13	0.16	0.18	0.21	0.23	0.24
1500	0.00	0.02	0.06	0.10	0.14	0.17	0.20	0.22	0.24	0.26
1600	0.00	0.02	0.06	0.11	0.15	0.18	0.21	0.24	0.26	0.27
1700	0.00	0.02	0.07	0.12	0.16	0.19	0.22	0.25	0.27	0.29
1800	0.00	0.03	0.07	0.12	0.17	0.20	0.24	0.27	0.29	0.31
1900	0.00	0.03	0.07	0.13	0.18	0.21	0.25	0.28	0.31	0.32
2000	0.00	0.03	0.08	0.14	0.19	0.22	0.26	0.30	0.32	0.34
2100	0.00	0.03	0.08	0.14	0.19	0.24	0.28	0.31	0.34	0.36
2200	0.00	0.03	0.09	0.15	0.20	0.25	0.29	0.33	0.35	0.38
2300	0.00	0.03	0.09	0.16	0.21	0.26	0.30	0.34	0.37	0.39
2400	0.00	0.03	0.09	0.16	0.22	0.27	0.32	0.36	0.39	0.41
2500	0.00	0.04	0.10	0.17	0.23	0.28	0.33	0.37	0.40	0.43
2600	0.00	0.04	0.10	0.18	0.24	0.29	0.34	0.38	0.42	0.44
2700	0.00	0.04	0.11	0.18	0.25	0.30	0.36	0.40	0.44	0.46
2800	0.00	0.04	0.11	0.19	0.26	0.31	0.37	0.41	0.45	0.48
2900	0.00	0.04	0.11	0.20	0.27	0.33	0.38	0.43	0.47	0.50
3000	0.00	0.04	0.12	0.20	0.28	0.34	0.39	0.44	0.48	0.51
3100	0.00	0.04	0.12	0.21	0.29	0.35	0.41	0.46	0.50	0.53
3200	0.00	0.05	0.12	0.22	0.30	0.36	0.42	0.47	0.52	0.55
3300	0.00	0.05	0.13	0.22	0.31	0.37	0.43	0.49	0.53	0.56
3400	0.00	0.05	0.13	0.23	0.32	0.38	0.45	0.50	0.55	0.58
3500	0.00	0.05	0.14	0.24	0.32	0.39	0.46	0.52	0.56	0.60
3600	0.00	0.05	0.14	0.25	0.33	0.40	0.47	0.53	0.58	0.61
3700	0.00	0.05	0.14	0.25	0.34	0.42	0.49	0.55	0.60	0.63
3800	0.00	0.05	0.15	0.26	0.35	0.43	0.50	0.56	0.61	0.65
3900	0.00	0.06	0.15	0.27	0.36	0.44	0.51	0.58	0.63	0.67
4000	0.00	0.06	0.16	0.27	0.37	0.45	0.53	0.59	0.64	0.68
4100	0.00	0.06	0.16	0.28	0.38	0.46	0.54	0.61	0.66	0.70
4200	0.00	0.06	0.16	0.29	0.39	0.47	0.55	0.62	0.68	0.72
4300	0.00	0.06	0.17	0.29	0.40	0.48	0.57	0.64	0.69	0.73
4400	0.00	0.06	0.17	0.30	0.41	0.49	0.58	0.65	0.71	0.75
4500	0.00	0.06	0.18	0.31	0.42	0.51	0.59	0.67	0.73	0.77
4600	0.00	0.07	0.18	0.31	0.43	0.52	0.60	0.68	0.74	0.79
4700	0.00	0.07	0.18	0.32	0.44	0.53	0.62	0.70	0.76	0.80
4800	0.00	0.07	0.19	0.33	0.44	0.54	0.63	0.71	0.77	0.82
4900	0.00	0.07	0.19	0.33	0.45	0.55	0.64	0.73	0.79	0.84
5000	0.00	0.07	0.20	0.34	0.46	0.56	0.66	0.74	0.81	0.85

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	RMA effective length mm	Corr. factor C_L
SPZ-560	560	0.81	3V-250	635	0.83
SPZ-600	600	0.82	3V-265	675	0.84
SPZ-630	630	0.83	3V-280	710	0.85
SPZ-670	670	0.84	3V-300	760	0.86
SPZ-710	710	0.85	3V-315	800	0.87
SPZ-750	750	0.86	3V-335	850	0.88
SPZ-800	800	0.87	3V-355	900	0.89
SPZ-850	850	0.88	3V-375	955	0.91
SPZ-900	900	0.89	3V-400	1015	0.92
SPZ-950	950	0.90	3V-425	1080	0.93
SPZ-1000	1000	0.91	3V-450	1145	0.94
SPZ-1060	1060	0.92	3V-475	1205	0.95
SPZ-1120	1120	0.93	3V-500	1270	0.96
SPZ-1180	1180	0.94	3V-530	1345	0.97
SPZ-1250	1250	0.95	3V-560	1420	0.98
SPZ-1320	1320	0.96	3V-600	1525	0.99
SPZ-1400	1400	0.98	3V-630	1600	1.00
SPZ-1500	1500	0.99	3V-670	1700	1.01
SPZ-1600	1600	1.00	3V-710	1805	1.02
SPZ-1700	1700	1.01	3V-750	1905	1.03
SPZ-1800	1800	1.02	3V-800	2030	1.04
SPZ-1900	1900	1.03	3V-850	2160	1.05
SPZ-2000	2000	1.04	3V-900	2285	1.07
SPZ-2120	2120	1.05	3V-950	2415	1.08
SPZ-2240	2240	1.06	3V-1000	2540	1.08
SPZ-2360	2360	1.07	3V-1060	2690	1.09
SPZ-2500	2500	1.08	3V-1120	2845	1.11
SPZ-2650	2650	1.09	3V-1180	2995	1.11
SPZ-2800	2800	1.10	3V-1250	3175	1.13
SPZ-3000	3000	1.11	3V-1320	3355	1.14
SPZ-3150	3150	1.12	3V-1400	3555	1.15
SPZ-3350	3350	1.13			
SPZ-3550	3550	1.15			

The sizes printed in colour are available as 9J PowerBand®.

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC® MN / SUPER HC®

Basic kW per belt

SPA

All values printed in italics are for use with Super HC® Moulded Notch construction only.

RPM of faster shaft	80	85	90	95	100	106	112	118	125	132	140	150	160	170	180	190	200
585	*0.91*	*1.06*	*1.22*	*1.37*	1.49	1.69	1.88	2.08	2.31	2.53	2.79	3.11	3.43	3.74	4.06	4.37	4.68
700	*1.03*	*1.21*	*1.39*	*1.57*	1.74	1.97	2.20	2.43	2.70	2.96	3.27	3.64	4.02	4.39	4.76	5.13	5.49
725	*1.06*	*1.24*	*1.43*	*1.61*	1.79	2.03	2.27	2.50	2.78	3.06	3.37	3.76	4.14	4.53	4.91	5.29	5.66
870	*1.19*	*1.41*	*1.63*	*1.84*	2.08	2.37	2.65	2.93	3.26	3.58	3.95	4.41	4.86	5.31	5.76	6.21	6.65
950	*1.26*	*1.50*	*1.73*	*1.97*	2.24	2.55	2.85	3.16	3.51	3.86	4.26	4.76	5.25	5.74	6.22	6.70	7.18
1160	*1.43*	*1.72*	*2.00*	*2.27*	2.64	3.01	3.37	3.74	4.16	4.58	5.06	5.65	6.24	6.82	7.39	7.96	8.53
1450	*1.64*	*1.98*	*2.32*	*2.66*	3.16	3.61	4.06	4.50	5.01	5.52	6.10	6.82	7.53	8.22	8.92	9.60	10.27
1750	*1.83*	*2.23*	*2.63*	*3.03*	3.66	4.19	4.72	5.24	5.84	6.44	7.12	7.95	8.77	9.58	10.38	11.16	11.93
2850	*2.32*	*2.93*	*3.54*	*4.15*	5.20	5.99	6.77	7.53	8.40	9.25	10.21	11.36	12.48	13.55	14.58	15.55	16.49
3450	*2.49*	*3.22*	*3.93*	*4.65*	5.84	6.73	7.61	8.47	9.44	10.38	11.42	12.66	13.83	14.93	15.95	16.89	17.75
100	*0.24*	*0.27*	*0.30*	*0.33*	0.32	0.36	0.40	0.43	0.48	0.52	0.57	0.63	0.69	0.76	0.82	0.88	0.94
200	*0.41*	*0.47*	*0.53*	*0.59*	0.59	0.66	0.74	0.81	0.89	0.97	1.07	1.19	1.30	1.42	1.54	1.65	1.77
300	*0.56*	*0.65*	*0.73*	*0.81*	0.84	0.95	1.05	1.16	1.28	1.40	1.54	1.71	1.88	2.05	2.22	2.39	2.56
400	*0.69*	*0.80*	*0.91*	*1.02*	1.08	1.22	1.35	1.49	1.65	1.81	1.99	2.22	2.44	2.66	2.88	3.10	3.32
500	*0.82*	*0.95*	*1.08*	*1.21*	1.31	1.48	1.64	1.81	2.01	2.20	2.43	2.70	2.98	3.25	3.52	3.79	4.06
600	*0.93*	*1.08*	*1.24*	*1.40*	1.52	1.73	1.93	2.13	2.36	2.59	2.85	3.18	3.50	3.83	4.15	4.47	4.79
700	*1.03*	*1.21*	*1.39*	*1.57*	1.74	1.97	2.20	2.43	2.70	2.96	3.27	3.64	4.02	4.39	4.76	5.13	5.49
800	*1.13*	*1.33*	*1.53*	*1.73*	1.94	2.20	2.47	2.73	3.03	3.33	3.67	4.10	4.52	4.94	5.35	5.77	6.18
900	*1.22*	*1.44*	*1.67*	*1.89*	2.14	2.43	2.73	3.02	3.35	3.69	4.07	4.54	5.01	5.47	5.94	6.40	6.85
1000	*1.31*	*1.55*	*1.80*	*2.04*	2.34	2.66	2.98	3.30	3.67	4.04	4.45	4.97	5.49	6.00	6.51	7.01	7.51
1100	*1.39*	*1.66*	*1.92*	*2.19*	2.53	2.88	3.23	3.58	3.98	4.38	4.83	5.40	5.96	6.51	7.06	7.61	8.15
1200	*1.46*	*1.75*	*2.04*	*2.33*	2.71	3.09	3.47	3.85	4.28	4.72	5.21	5.82	6.42	7.02	7.61	8.19	8.78
1300	*1.54*	*1.85*	*2.16*	*2.46*	2.90	3.30	3.71	4.11	4.58	5.04	5.57	6.22	6.87	7.51	8.14	8.77	9.39
1400	*1.61*	*1.94*	*2.27*	*2.60*	3.07	3.51	3.94	4.37	4.87	5.37	5.93	6.62	7.31	7.99	8.66	9.32	9.98
1500	*1.67*	*2.03*	*2.38*	*2.72*	3.25	3.71	4.17	4.63	5.16	5.68	6.28	7.01	7.74	8.46	9.17	9.87	10.56
1600	*1.74*	*2.11*	*2.48*	*2.85*	3.42	3.91	4.39	4.88	5.44	5.99	6.62	7.39	8.16	8.92	9.66	10.40	11.12
1700	*1.80*	*2.19*	*2.58*	*2.97*	3.58	4.10	4.61	5.12	5.71	6.29	6.95	7.77	8.57	9.36	10.14	10.91	11.66
1800	*1.86*	*2.27*	*2.68*	*3.09*	3.74	4.29	4.82	5.36	5.98	6.59	7.28	8.13	8.97	9.80	10.61	11.41	12.19
1900	*1.91*	*2.34*	*2.77*	*3.20*	3.90	4.47	5.03	5.59	6.24	6.88	7.60	8.49	9.36	10.22	11.06	11.89	12.70
2000	*1.96*	*2.41*	*2.86*	*3.31*	4.05	4.65	5.24	5.82	6.49	7.16	7.91	8.83	9.74	10.63	11.50	12.35	13.18
2100	*2.01*	*2.48*	*2.95*	*3.42*	4.20	4.82	5.44	6.04	6.74	7.43	8.21	9.17	10.10	11.02	11.92	12.80	13.65
2200	*2.06*	*2.55*	*3.04*	*3.52*	4.35	4.99	5.63	6.26	6.98	7.70	8.50	9.49	10.46	11.41	12.33	13.23	14.10
2300	*2.10*	*2.62*	*3.12*	*3.63*	4.49	5.16	5.82	6.47	7.22	7.96	8.79	9.81	10.80	11.78	12.72	13.64	14.53
2400	*2.15*	*2.68*	*3.20*	*3.73*	4.63	5.32	6.00	6.67	7.45	8.21	9.07	10.12	11.14	12.13	13.10	14.03	14.94
2500	*2.19*	*2.74*	*3.28*	*3.82*	4.77	5.48	6.18	6.87	7.67	8.46	9.34	10.41	11.46	12.47	13.46	14.41	15.32
2600	*2.23*	*2.80*	*3.36*	*3.92*	4.90	5.63	6.35	7.07	7.89	8.69	9.60	10.70	11.77	12.80	13.80	14.76	15.68
2700	*2.27*	*2.85*	*3.44*	*4.01*	5.02	5.78	6.52	7.26	8.10	8.92	9.85	10.97	12.06	13.11	14.12	15.09	16.02
2800	*2.30*	*2.91*	*3.51*	*4.10*	5.14	5.92	6.69	7.44	8.30	9.15	10.09	11.24	12.34	13.41	14.43	15.41	16.34
2900	*2.34*	*2.96*	*3.58*	*4.19*	5.26	6.06	6.84	7.61	8.50	9.36	10.32	11.49	12.61	13.69	14.72	15.70	16.63
3000	*2.37*	*3.01*	*3.65*	*4.28*	5.38	6.19	7.00	7.78	8.68	9.57	10.54	11.73	12.86	13.95	14.99	15.97	16.89
3100	*2.40*	*3.06*	*3.71*	*4.36*	5.49	6.32	7.14	7.95	8.87	9.76	10.76	11.96	13.11	14.20	15.24	16.21	17.13
3200	*2.43*	*3.11*	*3.78*	*4.45*	5.59	6.45	7.28	8.10	9.04	9.95	10.96	12.17	13.33	14.43	15.47	16.44	17.34
3300	*2.46*	*3.15*	*3.84*	*4.53*	5.69	6.57	7.42	8.25	9.21	10.13	11.15	12.38	13.54	14.64	15.68	16.64	17.53
3400	*2.48*	*3.20*	*3.90*	*4.61*	5.79	6.68	7.55	8.40	9.36	10.30	11.33	12.57	13.74	14.84	15.86	16.81	17.68
3500	*2.51*	*3.24*	*3.96*	*4.68*	5.88	6.79	7.67	8.53	9.51	10.46	11.51	12.75	13.92	15.01	16.03	16.96	17.81
3600	*2.53*	*3.28*	*4.02*	*4.76*	5.97	6.89	7.79	8.66	9.66	10.61	11.67	12.91	14.08	15.17	16.17	17.09	17.90
3700	*2.55*	*3.32*	*4.08*	*4.83*	6.05	6.99	7.90	8.79	9.79	10.76	11.81	13.07	14.23	15.31	16.30	17.18	17.97
3800		*3.36*	*4.13*	*4.91*	6.13	7.08	8.01	8.90	9.92	10.89	11.95	13.20	14.36	15.43	16.40	17.26	18.01
3900		*3.39*	*4.19*	*4.98*	6.21	7.17	8.10	9.01	10.03	11.01	12.08	13.33	14.48	15.53	16.47	17.30	18.01
4000		*3.43*	*4.24*	*5.04*	6.28	7.25	8.20	9.11	10.14	11.12	12.19	13.44	14.58	15.61	16.52	17.32	17.98
4100		*3.46*	*4.29*	*5.11*	6.34	7.33	8.28	9.21	10.24	11.23	12.29	13.53	14.66	15.67	16.55	17.30	17.92
4200		*3.49*	*4.34*	*5.18*	6.40	7.40	8.36	9.29	10.33	11.32	12.38	13.61	14.72	15.70	16.55	17.26	17.82
4300			*4.39*	*5.24*	6.45	7.46	8.43	9.37	10.41	11.40	12.46	13.68	14.76	15.72	16.53	17.19	
4400			*4.43*	*5.31*	6.50	7.52	8.50	9.44	10.48	11.47	12.52	13.73	14.79	15.71	16.48	17.08	
4500			*4.48*	*5.37*	6.55	7.57	8.56	9.50	10.55	11.53	12.58	13.76	14.80	15.68	16.40	16.95	
4600				*5.43*	6.59	7.62	8.61	9.55	10.60	11.58	12.61	13.78	14.78	15.62	16.29		
4700				*5.49*	6.62	7.66	8.65	9.60	10.64	11.61	12.64	13.78	14.75	15.55	16.16		
4800					6.65	7.69	8.69	9.63	10.67	11.64	12.65	13.76	14.70	15.45			
4900					6.67	7.72	8.72	9.66	10.70	11.65	12.64	13.73	14.62	15.32			
5000					6.69	7.74	8.74	9.68	10.71	11.65	12.63	13.67	14.53	15.17			

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{361664}$	0	$\frac{d \times RPM}{382847}$

POWER RATINGS SUPER HC® MN / SUPER HC®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.05	1.06 to 1.11	1.12 to 1.18	1.19 to 1.26	1.27 to 1.38	1.39 to 1.57	1.58 to 1.94	1.95 to 3.38	>3.38
585	0.00	0.02	0.05	0.09	0.13	0.15	0.18	0.20	0.22	0.23
700	0.00	0.02	0.06	0.11	0.15	0.18	0.21	0.24	0.26	0.28
725	0.00	0.02	0.07	0.11	0.16	0.19	0.22	0.25	0.27	0.29
870	0.00	0.03	0.08	0.14	0.19	0.23	0.27	0.30	0.33	0.35
950	0.00	0.03	0.09	0.15	0.20	0.25	0.29	0.33	0.36	0.38
1160	0.00	0.04	0.11	0.18	0.25	0.30	0.35	0.40	0.43	0.46
1450	0.00	0.05	0.13	0.23	0.31	0.38	0.44	0.50	0.54	0.58
1750	0.00	0.06	0.16	0.28	0.38	0.46	0.53	0.60	0.66	0.69
2850	0.00	0.09	0.26	0.45	0.61	0.74	0.87	0.98	1.07	1.13
3450	0.00	0.11	0.31	0.55	0.74	0.90	1.05	1.19	1.29	1.37
100	0.00	0.00	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04
200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08
300	0.00	0.01	0.03	0.05	0.06	0.08	0.09	0.10	0.11	0.12
400	0.00	0.01	0.04	0.06	0.09	0.10	0.12	0.14	0.15	0.16
500	0.00	0.02	0.05	0.08	0.11	0.13	0.15	0.17	0.19	0.20
600	0.00	0.02	0.05	0.09	0.13	0.16	0.18	0.21	0.22	0.24
700	0.00	0.02	0.06	0.11	0.15	0.18	0.21	0.24	0.26	0.28
800	0.00	0.03	0.07	0.13	0.17	0.21	0.24	0.28	0.30	0.32
900	0.00	0.03	0.08	0.14	0.19	0.23	0.28	0.31	0.34	0.36
1000	0.00	0.03	0.09	0.16	0.22	0.26	0.31	0.34	0.37	0.40
1100	0.00	0.04	0.10	0.17	0.24	0.29	0.34	0.38	0.41	0.44
1200	0.00	0.04	0.11	0.19	0.26	0.31	0.37	0.41	0.45	0.48
1300	0.00	0.04	0.12	0.21	0.28	0.34	0.40	0.45	0.49	0.52
1400	0.00	0.05	0.13	0.22	0.30	0.37	0.43	0.48	0.52	0.56
1500	0.00	0.05	0.14	0.24	0.32	0.39	0.46	0.52	0.56	0.60
1600	0.00	0.05	0.15	0.25	0.34	0.42	0.49	0.55	0.60	0.64
1700	0.00	0.06	0.15	0.27	0.37	0.44	0.52	0.58	0.64	0.67
1800	0.00	0.06	0.16	0.28	0.39	0.47	0.55	0.62	0.67	0.71
1900	0.00	0.06	0.17	0.30	0.41	0.50	0.58	0.65	0.71	0.75
2000	0.00	0.07	0.18	0.32	0.43	0.52	0.61	0.69	0.75	0.79
2100	0.00	0.07	0.19	0.33	0.45	0.55	0.64	0.72	0.79	0.83
2200	0.00	0.07	0.20	0.35	0.47	0.57	0.67	0.76	0.82	0.87
2300	0.00	0.08	0.21	0.36	0.50	0.60	0.70	0.79	0.86	0.91
2400	0.00	0.08	0.22	0.38	0.52	0.63	0.73	0.83	0.90	0.95
2500	0.00	0.08	0.23	0.40	0.54	0.65	0.76	0.86	0.94	0.99
2600	0.00	0.09	0.24	0.41	0.56	0.68	0.79	0.89	0.97	1.03
2700	0.00	0.09	0.25	0.43	0.58	0.70	0.83	0.93	1.01	1.07
2800	0.00	0.09	0.25	0.44	0.60	0.73	0.86	0.96	1.05	1.11
2900	0.00	0.10	0.26	0.46	0.62	0.76	0.89	1.00	1.09	1.15
3000	0.00	0.10	0.27	0.47	0.65	0.78	0.92	1.03	1.12	1.19
3100	0.00	0.10	0.28	0.49	0.67	0.81	0.95	1.07	1.16	1.23
3200	0.00	0.11	0.29	0.51	0.69	0.84	0.98	1.10	1.20	1.27
3300	0.00	0.11	0.30	0.52	0.71	0.86	1.01	1.14	1.24	1.31
3400	0.00	0.11	0.31	0.54	0.73	0.89	1.04	1.17	1.27	1.35
3500	0.00	0.12	0.32	0.55	0.75	0.91	1.07	1.20	1.31	1.39
3600	0.00	0.12	0.33	0.57	0.78	0.94	1.10	1.24	1.35	1.43
3700	0.00	0.12	0.34	0.59	0.80	0.97	1.13	1.27	1.39	1.47
3800	0.00	0.13	0.34	0.60	0.82	0.99	1.16	1.31	1.42	1.51
3900	0.00	0.13	0.35	0.62	0.84	1.02	1.19	1.34	1.46	1.55
4000	0.00	0.13	0.36	0.63	0.86	1.04	1.22	1.38	1.50	1.59
4100	0.00	0.14	0.37	0.65	0.88	1.07	1.25	1.41	1.54	1.63
4200	0.00	0.14	0.38	0.66	0.90	1.10	1.28	1.44	1.57	1.67
4300	0.00	0.14	0.39	0.68	0.93	1.12	1.31	1.48	1.61	1.71
4400	0.00	0.15	0.40	0.70	0.95	1.15	1.34	1.51	1.65	1.75
4500	0.00	0.15	0.41	0.71	0.97	1.17	1.38	1.55	1.69	1.79
4600	0.00	0.15	0.42	0.73	0.99	1.20	1.41	1.58	1.72	1.83
4700	0.00	0.16	0.43	0.74	1.01	1.23	1.44	1.62	1.76	1.87
4800	0.00	0.16	0.44	0.76	1.03	1.25	1.47	1.65	1.80	1.91
4900	0.00	0.16	0.44	0.78	1.06	1.28	1.50	1.69	1.84	1.95
5000	0.00	0.17	0.45	0.79	1.08	1.30	1.53	1.72	1.87	1.98

Arc of contact correction factor G

$\frac{D - d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L
SPA-800	800	0.82
SPA-850	850	0.83
SPA-900	900	0.84
SPA-950	950	0.85
SPA-1000	1000	0.86
SPA-1060	1060	0.87
SPA-1120	1120	0.88
SPA-1180	1180	0.89
SPA-1250	1250	0.90
SPA-1320	1320	0.91
SPA-1400	1400	0.92
SPA-1500	1500	0.93
SPA-1600	1600	0.94
SPA-1700	1700	0.95
SPA-1800	1800	0.96
SPA-1900	1900	0.97
SPA-2000	2000	0.98
SPA-2120	2120	0.99
SPA-2240	2240	1.00
SPA-2360	2360	1.01
SPA-2500	2500	1.02
SPA-2650	2650	1.03
SPA-2800	2800	1.04
SPA-3000	3000	1.05
SPA-3150	3150	1.06
SPA-3350	3350	1.07
SPA-3550	3550	1.08
SPA-3750	3750	1.09
SPA-4000	4000	1.10
SPA-4250	4250	1.11
SPA-4500	4500	1.12

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC® MN / SUPER HC®

Basic kW per belt or rib

SPB-SPB PowerBand®-5V-15J

All values printed in italics are for use with Super HC® Moulded Notch construction only.

RPM of faster shaft	112	118	125	132	140	150	160	170	180	190	200	212	224	236	250	265	280
585	*2.10*	*2.39*	*2.73*	*3.07*	*3.46*	*3.93*	4.35	4.86	5.37	5.88	6.38	6.98	7.58	8.17	8.86	9.60	10.33
700	*2.38*	*2.73*	*3.13*	*3.52*	*3.98*	*4.53*	5.08	5.68	6.28	6.87	7.46	8.17	8.87	9.57	10.37	11.23	12.09
725	*2.44*	*2.80*	*3.21*	*3.62*	*4.08*	*4.66*	5.23	5.85	6.47	7.08	7.69	8.42	9.15	9.86	10.70	11.58	12.46
870	*2.77*	*3.19*	*3.67*	*4.15*	*4.70*	*5.37*	6.10	6.83	7.56	8.28	9.00	9.85	10.70	11.54	12.52	13.55	14.57
950	*2.94*	*3.39*	*3.91*	*4.43*	*5.02*	*5.75*	6.57	7.36	8.15	8.92	9.70	10.62	11.53	12.44	13.48	14.59	15.69
1160	*3.35*	*3.89*	*4.51*	*5.13*	*5.83*	*6.69*	7.74	8.69	9.62	10.54	11.46	12.54	13.62	14.68	15.90	17.19	18.46
1450	*3.85*	*4.50*	*5.25*	*6.00*	*6.85*	*7.89*	9.25	10.38	11.50	12.61	13.70	14.99	16.26	17.51	18.94	20.43	21.89
1750	*4.29*	*5.05*	*5.93*	*6.81*	*7.80*	*9.03*	10.67	11.98	13.27	14.53	15.78	17.25	18.68	20.08	21.66	23.30	24.88
2850	*5.37*	*6.50*	*7.81*	*9.09*	*10.54*	*12.31*	14.46	16.20	17.86	19.44	20.95	22.64	24.21	25.65	27.15	28.55	
3450	*0.00*	*6.95*	*8.44*	*9.91*	*11.54*	*13.54*	15.44	17.22	18.87	20.39	21.77	23.24					
100	*0.54*	*0.60*	*0.66*	*0.73*	*0.81*	*0.91*	0.92	1.01	1.11	1.21	1.31	1.43	1.54	1.66	1.79	1.94	2.08
200	*0.93*	*1.04*	*1.17*	*1.30*	*1.45*	*1.63*	1.70	1.89	2.08	2.26	2.45	2.67	2.90	3.12	3.38	3.65	3.92
300	*1.28*	*1.44*	*1.63*	*1.81*	*2.02*	*2.29*	2.43	2.71	2.98	3.25	3.53	3.85	4.18	4.50	4.88	5.28	5.67
400	*1.59*	*1.80*	*2.04*	*2.28*	*2.55*	*2.90*	3.13	3.49	3.85	4.20	4.56	4.98	5.41	5.83	6.32	6.84	7.36
500	*1.87*	*2.13*	*2.42*	*2.72*	*3.05*	*3.47*	3.80	4.24	4.68	5.12	5.56	6.08	6.60	7.11	7.71	8.35	8.98
600	*2.14*	*2.44*	*2.79*	*3.13*	*3.53*	*4.01*	4.45	4.97	5.49	6.01	6.52	7.14	7.75	8.36	9.06	9.81	10.56
700	*2.38*	*2.73*	*3.13*	*3.52*	*3.98*	*4.53*	5.08	5.68	6.28	6.87	7.46	8.17	8.87	9.57	10.37	11.23	12.09
800	*2.61*	*3.00*	*3.45*	*3.90*	*4.41*	*5.03*	5.69	6.37	7.04	7.71	8.38	9.17	9.96	10.74	11.65	12.61	13.56
900	*2.83*	*3.26*	*3.76*	*4.26*	*4.82*	*5.52*	6.28	7.03	7.78	8.53	9.26	10.14	11.02	11.88	12.88	13.94	14.99
1000	*3.04*	*3.51*	*4.06*	*4.60*	*5.22*	*5.98*	6.86	7.68	8.50	9.32	10.13	11.09	12.04	12.99	14.08	15.23	16.37
1100	*3.24*	*3.75*	*4.34*	*4.93*	*5.60*	*6.43*	7.42	8.31	9.21	10.09	10.97	12.01	13.04	14.06	15.23	16.47	17.69
1200	*3.42*	*3.97*	*4.62*	*5.25*	*5.97*	*6.87*	7.96	8.93	9.89	10.84	11.78	12.90	14.00	15.09	16.34	17.67	18.97
1300	*3.60*	*4.19*	*4.88*	*5.56*	*6.33*	*7.29*	8.49	9.52	10.55	11.56	12.57	13.76	14.93	16.09	17.41	18.81	20.18
1400	*3.76*	*4.40*	*5.13*	*5.85*	*6.68*	*7.69*	9.00	10.10	11.19	12.27	13.33	14.59	15.83	17.04	18.44	19.91	21.34
1500	*3.92*	*4.59*	*5.37*	*6.14*	*7.01*	*8.09*	9.50	10.66	11.81	12.94	14.06	15.39	16.69	17.96	19.42	20.95	22.43
1600	*4.07*	*4.78*	*5.60*	*6.42*	*7.34*	*8.47*	9.98	11.20	12.41	13.60	14.77	16.15	17.51	18.84	20.35	21.93	23.46
1700	*4.22*	*4.96*	*5.83*	*6.68*	*7.65*	*8.84*	10.44	11.72	12.99	14.23	15.45	16.89	18.30	19.67	21.24	22.86	24.43
1800	*4.35*	*5.14*	*6.04*	*6.94*	*7.95*	*9.20*	10.89	12.23	13.54	14.83	16.10	17.59	19.05	20.46	22.07	23.73	25.32
1900	*4.48*	*5.30*	*6.25*	*7.18*	*8.24*	*9.55*	11.32	12.71	14.07	15.41	16.72	18.26	19.76	21.21	22.85	24.53	26.14
2000	*4.60*	*5.46*	*6.44*	*7.42*	*8.53*	*9.89*	11.73	13.17	14.58	15.96	17.31	18.89	20.42	21.91	23.57	25.27	26.89
2100	*4.72*	*5.61*	*6.63*	*7.65*	*8.80*	*10.21*	12.12	13.61	15.07	16.49	17.87	19.49	21.05	22.55	24.23	25.94	27.55
2200	*4.83*	*5.75*	*6.82*	*7.87*	*9.06*	*10.53*	12.50	14.03	15.53	16.98	18.40	20.04	21.63	23.15	24.84	26.55	28.14
2300	*4.93*	*5.88*	*6.99*	*8.08*	*9.31*	*10.83*	12.86	14.43	15.96	17.45	18.89	20.56	22.16	23.69	25.38	27.07	28.64
2400	*5.02*	*6.01*	*7.16*	*8.29*	*9.56*	*11.13*	13.19	14.80	16.37	17.88	19.35	21.04	22.65	24.18	25.86	27.53	29.05
2500	*5.11*	*6.13*	*7.31*	*8.48*	*9.79*	*11.41*	13.51	15.16	16.75	18.29	19.77	21.47	23.09	24.61	26.27	27.90	29.36
2600	*5.19*	*6.25*	*7.47*	*8.67*	*10.02*	*11.68*	13.81	15.48	17.10	18.66	20.15	21.86	23.47	24.99	26.61	28.19	29.59
2700	*5.27*	*6.36*	*7.61*	*8.84*	*10.23*	*11.94*	14.09	15.79	17.43	19.00	20.50	22.21	23.81	25.30	26.89	28.40	29.71
2800	*5.34*	*6.46*	*7.74*	*9.01*	*10.44*	*12.19*	14.34	16.07	17.72	19.30	20.81	22.51	24.09	25.55	27.08	28.52	
2900	*5.40*	*6.55*	*7.87*	*9.17*	*10.64*	*12.43*	14.58	16.32	17.99	19.57	21.07	22.76	24.32	25.73	27.21		
3000	*5.46*	*6.64*	*7.99*	*9.32*	*10.82*	*12.65*	14.79	16.55	18.22	19.81	21.30	22.96	24.49	25.85	27.25		
3100		*6.72*	*8.10*	*9.47*	*11.00*	*12.87*	14.97	16.74	18.42	20.00	21.48	23.12	24.59	25.91			
3200		*6.79*	*8.21*	*9.60*	*11.17*	*13.08*	15.14	16.92	18.59	20.16	21.62	23.22	24.64	25.89			
3300			*8.31*	*9.73*	*11.33*	*13.27*	15.28	17.06	18.73	20.28	21.71	23.27	24.63				
3400			*8.40*	*9.85*	*11.47*	*13.45*	15.39	17.17	18.83	20.36	21.76	23.26	24.55				
3500				*9.96*	*11.61*	*13.62*	15.49	17.26	18.90	20.40	21.76	23.20					
3600					*11.74*	*13.78*	15.55	17.31	18.93	20.40	21.71	23.08					
3700						*13.93*	15.59	17.33	18.92	20.35	21.62						
3800							15.60	17.32	18.88	20.26	21.47						
3900							15.58	17.28	18.79	20.13							

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{228728}$	0	$\frac{d \times RPM}{242248}$

POWER RATINGS SUPER HC® MN / SUPER HC®

Additional kW per belt or rib for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.05	1.06 to 1.11	1.12 to 1.18	1.19 to 1.26	1.27 to 1.38	1.39 to 1.57	1.58 to 1.94	1.95 to 3.38	>3.38
585	0.00	0.04	0.12	0.20	0.28	0.34	0.39	0.44	0.48	0.51
700	0.00	0.05	0.14	0.24	0.33	0.40	0.47	0.53	0.58	0.61
725	0.00	0.05	0.14	0.25	0.34	0.42	0.49	0.55	0.60	0.63
870	0.00	0.06	0.17	0.30	0.41	0.50	0.59	0.66	0.72	0.76
950	0.00	0.07	0.19	0.33	0.45	0.55	0.64	0.72	0.78	0.83
1160	0.00	0.09	0.23	0.40	0.55	0.67	0.78	0.88	0.96	1.01
1450	0.00	0.11	0.29	0.50	0.69	0.83	0.98	1.10	1.20	1.27
1750	0.00	0.13	0.35	0.61	0.83	1.01	1.18	1.32	1.44	1.53
2850	0.00	0.21	0.57	0.99	1.35	1.64	1.92	2.16	2.35	2.49
3450	0.00	0.25	0.69	1.20	1.63	1.98	2.32	2.61	2.85	3.01
100	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.08	0.09
200	0.00	0.01	0.04	0.07	0.09	0.11	0.13	0.15	0.16	0.17
300	0.00	0.02	0.06	0.10	0.14	0.17	0.20	0.23	0.25	0.26
400	0.00	0.03	0.08	0.14	0.19	0.23	0.27	0.30	0.33	0.35
500	0.00	0.04	0.10	0.17	0.24	0.29	0.34	0.38	0.41	0.44
600	0.00	0.04	0.12	0.21	0.28	0.34	0.40	0.45	0.49	0.52
700	0.00	0.05	0.14	0.24	0.33	0.40	0.47	0.53	0.58	0.61
800	0.00	0.06	0.16	0.28	0.38	0.46	0.54	0.61	0.66	0.70
900	0.00	0.07	0.18	0.31	0.43	0.52	0.61	0.68	0.74	0.79
1000	0.00	0.07	0.20	0.35	0.47	0.57	0.67	0.76	0.82	0.87
1100	0.00	0.08	0.22	0.38	0.52	0.63	0.74	0.83	0.91	0.96
1200	0.00	0.09	0.24	0.42	0.57	0.69	0.81	0.91	0.99	1.05
1300	0.00	0.10	0.26	0.45	0.62	0.75	0.87	0.98	1.07	1.14
1400	0.00	0.10	0.28	0.49	0.66	0.80	0.94	1.06	1.15	1.22
1500	0.00	0.11	0.30	0.52	0.71	0.86	1.01	1.14	1.24	1.31
1600	0.00	0.12	0.32	0.56	0.76	0.92	1.08	1.21	1.32	1.40
1700	0.00	0.12	0.34	0.59	0.81	0.98	1.14	1.29	1.40	1.49
1800	0.00	0.13	0.36	0.63	0.85	1.03	1.21	1.36	1.48	1.57
1900	0.00	0.14	0.38	0.66	0.90	1.09	1.28	1.44	1.57	1.66
2000	0.00	0.15	0.40	0.70	0.95	1.15	1.35	1.51	1.65	1.75
2100	0.00	0.15	0.42	0.73	1.00	1.21	1.41	1.59	1.73	1.83
2200	0.00	0.16	0.44	0.77	1.04	1.26	1.48	1.67	1.81	1.92
2300	0.00	0.17	0.46	0.80	1.09	1.32	1.55	1.74	1.90	2.01
2400	0.00	0.18	0.48	0.84	1.14	1.38	1.61	1.82	1.98	2.10
2500	0.00	0.18	0.50	0.87	1.18	1.44	1.68	1.89	2.06	2.18
2600	0.00	0.19	0.52	0.91	1.23	1.49	1.75	1.97	2.14	2.27
2700	0.00	0.20	0.54	0.94	1.28	1.55	1.82	2.04	2.23	2.36
2800	0.00	0.21	0.56	0.97	1.33	1.61	1.88	2.12	2.31	2.45
2900	0.00	0.21	0.58	1.01	1.37	1.67	1.95	2.20	2.39	2.53
3000	0.00	0.22	0.60	1.04	1.42	1.72	2.02	2.27	2.47	2.62
3100	0.00	0.23	0.62	1.08	1.47	1.78	2.09	2.35	2.56	2.71
3200	0.00	0.23	0.64	1.11	1.52	1.84	2.15	2.42	2.64	2.80
3300	0.00	0.24	0.66	1.15	1.56	1.90	2.22	2.50	2.72	2.88
3400	0.00	0.25	0.68	1.18	1.61	1.95	2.29	2.57	2.80	2.97
3500	0.00	0.26	0.70	1.22	1.66	2.01	2.35	2.65	2.89	3.06
3600	0.00	0.26	0.72	1.25	1.71	2.07	2.42	2.73	2.97	3.14
3700	0.00	0.27	0.74	1.29	1.75	2.13	2.49	2.80	3.05	3.23
3800	0.00	0.28	0.76	1.32	1.80	2.18	2.56	2.88	3.13	3.32
3900	0.00	0.29	0.78	1.36	1.85	2.24	2.62	2.95	3.22	3.41

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	RMA effective length mm	Corr. factor C_L
SPB-1250	1250	0.85	5V-500	1270	0.85
SPB-1320	1320	0.86	5V-530	1345	0.86
SPB-1400	1400	0.87	5V-560	1420	0.87
SPB-1500	1500	0.88	5V-600	1525	0.88
SPB-1600	1600	0.89	5V-630	1600	0.89
SPB-1700	1700	0.90	5V-670	1700	0.90
SPB-1800	1800	0.91	5V-710	1805	0.91
SPB-1900	1900	0.92	5V-750	1905	0.92
SPB-2000	2000	0.93	5V-800	2030	0.93
SPB-2120	2120	0.93	5V-850	2160	0.94
SPB-2240	2240	0.94	5V-900	2285	0.95
SPB-2360	2360	0.95	5V-950	2415	0.96
SPB-2500	2500	0.96	5V-1000	2540	0.96
SPB-2650	2650	0.97	5V-1060	2690	0.97
SPB-2800	2800	0.98	5V-1120	2845	0.98
SPB-3000	3000	0.99	5V-1180	2995	0.99
SPB-3150	3150	1.00	5V-1250	3175	1.00
SPB-3350	3350	1.01	5V-1320	3355	1.01
SPB-3550	3550	1.02	5V-1400	3555	1.02
SPB-3750	3750	1.03	5V-1500	3810	1.03
SPB-4000	4000	1.04	5V-1600	4065	1.04
SPB-4250	4250	1.05	5V-1700	4320	1.05
SPB-4500	4500	1.06	5V-1800	4570	1.06
SPB-4750	4750	1.07	5V-1900	4825	1.07
SPB-5000	5000	1.07	5V-2000	5080	1.08
SPB-5300	5300	1.08	5V-2120	5385	1.09
SPB-5600	5600	1.09	5V-2240	5690	1.09
SPB-6000	6000	1.10	5V-2360	5995	1.10
SPB-6300	6300	1.11	5V-2500	6350	1.11
SPB-6700	6700	1.12	5V-2650	6730	1.12
SPB-7100	7100	1.13	5V-2800	7110	1.13
SPB-7500	7500	1.14	5V-3000	7620	1.14
SPB-8000	8000	1.15	5V-3150	8000	1.15
			5V-3550	9015	1.17

The sizes printed in colour are available as 15J PowerBand®.

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC® MN / SUPER HC®

Basic kW per belt

SPC-SPC PowerBand®

All values printed in italics are for use with Super HC® Moulded Notch construction only.

RPM of faster shaft	180	190	200	224	236	250	265	280	300	315	335	355	375	400	425	450	475
585	*7.24*	*8.01*	*8.78*	*10.59*	*11.49*	12.4	13.8	15.1	16.9	18.2	20.0	21.7	23.4	25.5	27.6	29.7	31.8
700	*8.23*	*9.13*	*10.02*	*12.13*	*13.17*	14.4	16.0	17.6	19.7	21.2	23.2	25.2	27.2	29.7	32.1	34.5	36.8
725	*8.43*	*9.36*	*10.28*	*12.45*	*13.53*	14.9	16.5	18.1	20.2	21.8	23.9	26.0	28.0	30.6	33.0	35.5	37.9
870	*9.57*	*10.65*	*11.72*	*14.24*	*15.49*	17.2	19.2	21.0	23.5	25.3	27.8	30.1	32.5	35.3	38.2	40.9	43.6
950	*10.16*	*11.32*	*12.46*	*15.18*	*16.51*	18.5	20.5	22.6	25.2	27.2	29.8	32.3	34.8	37.8	40.7	43.6	46.4
1160	*11.57*	*12.93*	*14.28*	*17.46*	*19.02*	21.6	24.0	26.3	29.4	31.6	34.5	37.4	40.2	43.5	46.7	49.8	52.7
1450	*13.26*	*14.89*	*16.49*	*20.25*	*22.09*	25.3	28.0	30.7	34.2	36.7	40.0	43.1	46.0	49.5	52.7	55.7	58.4
1750	*14.73*	*16.59*	*18.43*	*22.73*	*24.81*	28.3	31.3	34.2	37.9	40.6	43.9	47.0	49.8	53.0	55.7		
2850						31.1	33.6										
3450																	
50	*1.03*	*1.12*	*1.21*	*1.42*	*1.52*	1.4	1.5	1.7	1.9	2.0	2.2	2.4	2.5	2.8	3.0	3.2	3.4
100	*1.83*	*2.00*	*2.16*	*2.55*	*2.75*	2.6	2.9	3.1	3.5	3.8	4.1	4.4	4.8	5.2	5.7	6.1	6.5
150	*2.54*	*2.78*	*3.01*	*3.57*	*3.85*	3.8	4.1	4.5	5.0	5.4	5.9	6.4	6.9	7.6	8.2	8.8	9.4
200	*3.20*	*3.50*	*3.81*	*4.53*	*4.88*	4.9	5.4	5.9	6.5	7.0	7.7	8.4	9.0	9.8	10.7	11.5	12.3
250	*3.81*	*4.18*	*4.55*	*5.42*	*5.86*	5.9	6.5	7.2	8.0	8.6	9.4	10.2	11.0	12.0	13.0	14.0	15.0
300	*4.39*	*4.82*	*5.25*	*6.28*	*6.79*	7.0	7.7	8.4	9.4	10.1	11.1	12.0	13.0	14.2	15.4	16.5	17.7
350	*4.94*	*5.43*	*5.93*	*7.10*	*7.68*	8.0	8.8	9.7	10.8	11.6	12.7	13.8	14.9	16.3	17.6	19.0	20.3
400	*5.46*	*6.02*	*6.58*	*7.89*	*8.54*	8.9	9.9	10.9	12.1	13.1	14.3	15.6	16.8	18.3	19.9	21.4	22.9
450	*5.97*	*6.58*	*7.20*	*8.65*	*9.37*	9.9	11.0	12.0	13.4	14.5	15.9	17.3	18.6	20.3	22.0	23.7	25.4
500	*6.45*	*7.13*	*7.80*	*9.39*	*10.18*	10.8	12.0	13.2	14.7	15.9	17.4	18.9	20.4	22.3	24.2	26.0	27.8
550	*6.92*	*7.65*	*8.38*	*10.10*	*10.96*	11.8	13.1	14.3	16.0	17.3	18.9	20.6	22.2	24.2	26.2	28.2	30.2
600	*7.37*	*8.16*	*8.94*	*10.80*	*11.72*	12.7	14.1	15.4	17.2	18.6	20.4	22.2	23.9	26.1	28.2	30.4	32.4
650	*7.81*	*8.65*	*9.49*	*11.47*	*12.45*	13.6	15.0	16.5	18.5	19.9	21.8	23.7	25.6	27.9	30.2	32.4	34.7
700	*8.23*	*9.13*	*10.02*	*12.13*	*13.17*	14.4	16.0	17.6	19.7	21.2	23.2	25.2	27.2	29.7	32.1	34.5	36.8
750	*8.64*	*9.59*	*10.54*	*12.77*	*13.87*	15.3	17.0	18.6	20.8	22.5	24.6	26.7	28.8	31.4	34.0	36.4	38.9
800	*9.03*	*10.04*	*11.04*	*13.40*	*14.56*	16.1	17.9	19.6	22.0	23.7	25.9	28.2	30.4	33.1	35.7	38.3	40.9
850	*9.42*	*10.48*	*11.53*	*14.00*	*15.23*	16.9	18.8	20.6	23.1	24.9	27.3	29.6	31.9	34.7	37.5	40.2	42.8
900	*9.79*	*10.90*	*12.00*	*14.60*	*15.88*	17.7	19.7	21.6	24.2	26.0	28.5	31.0	33.4	36.3	39.1	41.9	44.6
950	*10.16*	*11.32*	*12.46*	*15.18*	*16.51*	18.5	20.5	22.6	25.2	27.2	29.8	32.3	34.8	37.8	40.7	43.6	46.4
1000	*10.51*	*11.72*	*12.92*	*15.74*	*17.13*	19.3	21.4	23.5	26.3	28.3	31.0	33.6	36.1	39.3	42.3	45.2	48.1
1050	*10.85*	*12.11*	*13.35*	*16.29*	*17.74*	20.0	22.2	24.4	27.3	29.4	32.1	34.8	37.5	40.7	43.8	46.7	49.6
1100	*11.18*	*12.49*	*13.78*	*16.83*	*18.33*	20.7	23.0	25.3	28.2	30.4	33.2	36.0	38.7	42.0	45.2	48.2	51.1
1150	*11.51*	*12.86*	*14.20*	*17.36*	*18.91*	21.4	23.8	26.1	29.2	31.4	34.3	37.2	39.9	43.3	46.5	49.5	52.5
1200	*11.82*	*13.22*	*14.61*	*17.87*	*19.47*	22.1	24.6	27.0	30.1	32.4	35.4	38.3	41.1	44.5	47.7	50.8	53.7
1250	*12.13*	*13.57*	*15.00*	*18.37*	*20.02*	22.8	25.3	27.8	31.0	33.3	36.4	39.3	42.2	45.6	48.9	52.0	54.9
1300	*12.42*	*13.92*	*15.39*	*18.86*	*20.56*	23.4	26.0	28.5	31.8	34.2	37.3	40.3	43.2	46.7	50.0	53.1	55.9
1350	*12.71*	*14.25*	*15.77*	*19.34*	*21.09*	24.1	26.7	29.3	32.6	35.1	38.3	41.3	44.2	47.7	51.0	54.0	56.9
1400	*12.99*	*14.57*	*16.13*	*19.80*	*21.60*	24.7	27.4	30.0	33.4	35.9	39.1	42.2	45.2	48.6	51.9	54.9	57.7
1450	*13.26*	*14.89*	*16.49*	*20.25*	*22.09*	25.3	28.0	30.7	34.2	36.7	40.0	43.1	46.0	49.5	52.7	55.7	58.4
1500	*13.53*	*15.19*	*16.84*	*20.70*	*22.58*	25.8	28.6	31.4	34.9	37.5	40.7	43.9	46.8	50.3	53.5	56.4	58.9
1550	*13.78*	*15.49*	*17.18*	*21.13*	*23.05*	26.4	29.2	32.0	35.6	38.2	41.5	44.6	47.6	51.0	54.1	56.9	59.4
1600	*14.03*	*15.78*	*17.50*	*21.54*	*23.51*	26.9	29.8	32.6	36.2	38.8	42.1	45.3	48.2	51.6	54.7	57.4	59.7
1650	*14.27*	*16.06*	*17.82*	*21.95*	*23.96*	27.4	30.3	33.2	36.8	39.5	42.8	45.9	48.8	52.1	55.1	57.7	
1700	*14.50*	*16.33*	*18.13*	*22.34*	*24.39*	27.8	30.8	33.7	37.4	40.0	43.4	46.5	49.3	52.6	55.4		
1750	*14.73*	*16.59*	*18.43*	*22.73*	*24.81*	28.3	31.3	34.2	37.9	40.6	43.9	47.0	49.8	53.0	55.7		
1800	*14.95*	*16.85*	*18.72*	*23.10*	*25.22*	28.7	31.8	34.7	38.4	41.1	44.4	47.4	50.2	53.2			
1850	*15.15*	*17.10*	*19.00*	*23.46*	*25.62*	29.1	32.2	35.1	38.9	41.5	44.8	47.8	50.5	53.4			
1900	*15.36*	*17.33*	*19.28*	*23.81*	*26.00*	29.5	32.6	35.5	39.3	41.9	45.1	48.1	50.7	53.5			
1950	*15.55*	*17.56*	*19.54*	*24.15*	*26.37*	29.8	32.9	35.9	39.6	42.2	45.4	48.3	50.8				
2000	*15.74*	*17.78*	*19.80*	*24.47*	*26.73*	30.1	33.3	36.3	40.0	42.5	45.7	48.5	50.9				
2050	*15.92*	*18.00*	*20.04*	*24.79*	*27.08*	30.4	33.6	36.6	40.2	42.8	45.8	48.5					
2100	*16.09*	*18.20*	*20.28*	*25.09*	*27.41*	30.7	33.9	36.8	40.5	43.0	46.0	48.6					
2150	*16.25*	*18.40*	*20.50*	*25.38*	*27.73*	30.9	34.1	37.0	40.6	43.1	46.0	48.5					
2200	*16.41*	*18.59*	*20.72*	*25.66*	*28.03*	31.2	34.3	37.2	40.8	43.2	46.0						
2250	*16.56*	*18.77*	*20.93*	*25.93*	*28.33*	31.3	34.5	37.4	40.9	43.2	45.9						
2300	*16.70*	*18.94*	*21.13*	*26.19*	*28.61*	31.5	34.6	37.5	40.9	43.2							
2350	*16.84*	*19.10*	*21.32*	*26.43*	*28.87*	31.6	34.7	37.5	40.9	43.1							
2400		*19.26*	*21.50*	*26.66*	*29.13*	31.7	34.8	37.6	40.8	42.9							
2450			*21.67*	*26.88*	*29.37*	31.8	34.8	37.5	40.7								
2500			*21.84*	*27.09*	*29.59*	31.8	34.8	37.5	40.6								

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{128090}$	0	$\frac{d \times RPM}{135630}$

POWER RATINGS SUPER HC® MN / SUPER HC®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.05	1.06 to 1.11	1.12 to 1.18	1.19 to 1.26	1.27 to 1.38	1.39 to 1.57	1.58 to 1.94	1.95 to 3.38	>3.38
585	0.00	0.12	0.32	0.55	0.75	0.91	1.07	1.20	1.31	1.39
700	0.00	0.14	0.38	0.66	0.90	1.09	1.28	1.44	1.57	1.66
725	0.00	0.14	0.39	0.69	0.93	1.13	1.32	1.49	1.62	1.72
870	0.00	0.17	0.47	0.82	1.12	1.36	1.59	1.79	1.95	2.06
950	0.00	0.19	0.52	0.90	1.22	1.48	1.74	1.95	2.13	2.25
1160	0.00	0.23	0.63	1.10	1.49	1.81	2.12	2.38	2.60	2.75
1450	0.00	0.29	0.79	1.37	1.87	2.26	2.65	2.98	3.25	3.44
1750	0.00	0.35	0.95	1.65	2.25	2.73	3.20	3.60	3.92	4.15
2850	0.00	0.57	1.55	2.69	3.67	4.44	5.21	5.86	6.38	6.76
3450	0.00	0.69	1.87	3.26	4.44	5.38	6.30	7.09	7.73	8.18
50	0.00	0.01	0.03	0.05	0.06	0.08	0.09	0.10	0.11	0.12
100	0.00	0.02	0.05	0.09	0.13	0.16	0.18	0.21	0.22	0.24
150	0.00	0.03	0.08	0.14	0.19	0.23	0.27	0.31	0.34	0.36
200	0.00	0.04	0.11	0.19	0.26	0.31	0.37	0.41	0.45	0.47
250	0.00	0.05	0.14	0.24	0.32	0.39	0.46	0.51	0.56	0.59
300	0.00	0.06	0.16	0.28	0.39	0.47	0.55	0.62	0.67	0.71
350	0.00	0.07	0.19	0.33	0.45	0.55	0.64	0.72	0.78	0.83
400	0.00	0.08	0.22	0.38	0.51	0.62	0.73	0.82	0.90	0.95
450	0.00	0.09	0.24	0.43	0.58	0.70	0.82	0.93	1.01	1.07
500	0.00	0.10	0.27	0.47	0.64	0.78	0.91	1.03	1.12	1.19
550	0.00	0.11	0.30	0.52	0.71	0.86	1.00	1.13	1.23	1.30
600	0.00	0.12	0.33	0.57	0.77	0.94	1.10	1.23	1.34	1.42
650	0.00	0.13	0.35	0.61	0.84	1.01	1.19	1.34	1.46	1.54
700	0.00	0.14	0.38	0.66	0.90	1.09	1.28	1.44	1.57	1.66
750	0.00	0.15	0.41	0.71	0.97	1.17	1.37	1.54	1.68	1.78
800	0.00	0.16	0.43	0.76	1.03	1.25	1.46	1.64	1.79	1.90
850	0.00	0.17	0.46	0.80	1.09	1.33	1.55	1.75	1.90	2.02
900	0.00	0.18	0.49	0.85	1.16	1.40	1.64	1.85	2.02	2.13
950	0.00	0.19	0.52	0.90	1.22	1.48	1.74	1.95	2.13	2.25
1000	0.00	0.20	0.54	0.95	1.29	1.56	1.83	2.06	2.24	2.37
1050	0.00	0.21	0.57	0.99	1.35	1.64	1.92	2.16	2.35	2.49
1100	0.00	0.22	0.60	1.04	1.42	1.72	2.01	2.26	2.46	2.61
1150	0.00	0.23	0.62	1.09	1.48	1.79	2.10	2.36	2.58	2.73
1200	0.00	0.24	0.65	1.13	1.54	1.87	2.19	2.47	2.69	2.85
1250	0.00	0.25	0.68	1.18	1.61	1.95	2.28	2.57	2.80	2.97
1300	0.00	0.26	0.71	1.23	1.67	2.03	2.37	2.67	2.91	3.08
1350	0.00	0.27	0.73	1.28	1.74	2.11	2.47	2.78	3.02	3.20
1400	0.00	0.28	0.76	1.32	1.80	2.18	2.56	2.88	3.14	3.32
1450	0.00	0.29	0.79	1.37	1.87	2.26	2.65	2.98	3.25	3.44
1500	0.00	0.30	0.81	1.42	1.93	2.34	2.74	3.08	3.36	3.56
1550	0.00	0.31	0.84	1.47	1.99	2.42	2.83	3.19	3.47	3.68
1600	0.00	0.32	0.87	1.51	2.06	2.50	2.92	3.29	3.58	3.80
1650	0.00	0.33	0.89	1.56	2.12	2.57	3.01	3.39	3.70	3.91
1700	0.00	0.34	0.92	1.61	2.19	2.65	3.11	3.49	3.81	4.03
1750	0.00	0.35	0.95	1.65	2.25	2.73	3.20	3.60	3.92	4.15
1800	0.00	0.36	0.98	1.70	2.32	2.81	3.29	3.70	4.03	4.27
1850	0.00	0.37	1.00	1.75	2.38	2.89	3.38	3.80	4.14	4.39
1900	0.00	0.38	1.03	1.80	2.44	2.96	3.47	3.91	4.25	4.51
1950	0.00	0.39	1.06	1.84	2.51	3.04	3.56	4.01	4.37	4.63
2000	0.00	0.40	1.08	1.89	2.57	3.12	3.65	4.11	4.48	4.74
2050	0.00	0.41	1.11	1.94	2.64	3.20	3.74	4.21	4.59	4.86
2100	0.00	0.42	1.14	1.99	2.70	3.28	3.84	4.32	4.70	4.98
2150	0.00	0.43	1.17	2.03	2.77	3.35	3.93	4.42	4.81	5.10
2200	0.00	0.44	1.19	2.08	2.83	3.43	4.02	4.52	4.93	5.22
2250	0.00	0.45	1.22	2.13	2.90	3.51	4.11	4.63	5.04	5.34
2300	0.00	0.46	1.25	2.17	2.96	3.59	4.20	4.73	5.15	5.46
2350	0.00	0.47	1.27	2.22	3.02	3.66	4.29	4.83	5.26	5.57
2400	0.00	0.48	1.30	2.27	3.09	3.74	4.38	4.93	5.37	5.69
2450	0.00	0.49	1.33	2.32	3.15	3.82	4.48	5.04	5.49	5.81
2500	0.00	0.50	1.36	2.36	3.22	3.90	4.57	5.14	5.60	5.93

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L
SPC-2000	2000	0.86
SPC-2120	2120	0.87
SPC-2240	2240	0.88
SPC-2360	2360	0.89
SPC-2500	2500	0.90
SPC-2650	2650	0.90
SPC-2800	2800	0.91
SPC-3000	3000	0.92
SPC-3150	3150	0.93
SPC-3350	3350	0.94
SPC-3550	3550	0.95
SPC-3750	3750	0.96
SPC-4000	4000	0.97
SPC-4250	4250	0.98
SPC-4500	4500	0.98
SPC-4750	4750	0.99
SPC-5000	5000	1.00
SPC-5300	5300	1.01
SPC-5600	5600	1.02
SPC-6000	6000	1.03
SPC-6300	6300	1.03
SPC-6700	6700	1.04
SPC-7100	7100	1.05
SPC-7500	7500	1.06
SPC-8000	8000	1.07
SPC-8500	8500	1.08
SPC-9000	9000	1.09

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC®

Basic kW per belt or rib

8V-25J

RPM of faster shaft	315	335	355	375	400	425	450	475	500	530	560	600	630	670	710	750	800
585	21.5	24.0	26.4	28.9	31.9	34.9	37.8	40.8	43.6	47.0	50.4	54.8	58.0	62.2	66.2	70.2	75.0
700	24.9	27.8	30.6	33.5	36.9	40.4	43.8	47.1	50.3	54.2	57.9	62.8	66.3	70.9	75.3	79.4	84.4
725	25.6	28.6	31.5	34.4	38.0	41.5	45.0	48.4	51.7	55.6	59.5	64.4	68.0	72.6	77.0	81.2	86.1
870	29.5	32.9	36.3	39.6	43.7	47.7	51.6	55.4	59.1	63.4	67.5	72.7	76.5	81.2	85.6	89.6	
950	31.5	35.2	38.8	42.3	46.6	50.8	54.9	58.8	62.6	67.1	71.3	76.5	80.3	84.8			
1160	36.2	40.4	44.5	48.4	53.2	57.7	62.1	66.2	70.1	74.5	78.6						
1450	41.3	45.9	50.3	54.5	59.5	64.1	68.2										
1750	44.6	49.3	53.6	57.6													
2850																	
3450																	
50	2.5	2.7	3.0	3.2	3.5	3.9	4.2	4.5	4.8	5.2	5.5	6.0	6.4	6.9	7.4	7.9	8.5
100	4.6	5.1	5.6	6.0	6.7	7.3	7.9	8.5	9.1	9.8	10.5	11.5	12.2	13.1	14.0	15.0	16.1
150	6.6	7.3	8.0	8.7	9.6	10.5	11.4	12.3	13.1	14.2	15.2	16.6	17.6	19.0	20.4	21.7	23.4
200	8.5	9.4	10.4	11.3	12.5	13.6	14.8	15.9	17.1	18.4	19.8	21.6	22.9	24.7	26.5	28.2	30.4
250	10.3	11.5	12.6	13.8	15.2	16.6	18.1	19.5	20.9	22.5	24.2	26.4	28.0	30.2	32.3	34.5	37.1
300	12.1	13.5	14.9	16.2	17.9	19.6	21.2	22.9	24.5	26.5	28.5	31.0	33.0	35.5	38.0	40.5	43.6
350	13.9	15.4	17.0	18.6	20.5	22.4	24.3	26.2	28.1	30.4	32.6	35.6	37.8	40.6	43.5	46.3	49.8
400	15.6	17.3	19.1	20.9	23.1	25.2	27.4	29.5	31.6	34.1	36.6	39.9	42.4	45.6	48.8	51.9	55.7
450	17.2	19.2	21.2	23.1	25.5	27.9	30.3	32.7	35.0	37.8	40.5	44.2	46.8	50.3	53.8	57.2	61.4
500	18.8	21.0	23.2	25.3	27.9	30.6	33.2	35.7	38.3	41.3	44.3	48.2	51.1	54.9	58.6	62.3	66.7
550	20.4	22.8	25.1	27.4	30.3	33.1	35.9	38.7	41.5	44.7	47.9	52.1	55.2	59.2	63.2	67.0	71.7
600	21.9	24.5	27.0	29.5	32.6	35.6	38.6	41.6	44.5	48.0	51.4	55.9	59.1	63.4	67.5	71.5	76.3
650	23.4	26.1	28.8	31.5	34.8	38.0	41.2	44.4	47.5	51.2	54.8	59.4	62.8	67.3	71.5	75.6	80.5
700	24.9	27.8	30.6	33.5	36.9	40.4	43.8	47.1	50.3	54.2	57.9	62.8	66.3	70.9	75.3	79.4	84.4
750	26.3	29.3	32.4	35.4	39.0	42.6	46.2	49.7	53.1	57.1	61.0	66.0	69.6	74.3	78.7	82.9	87.8
800	27.7	30.9	34.1	37.2	41.0	44.8	48.5	52.1	55.7	59.8	63.8	68.9	72.6	77.4	81.8	86.0	90.8
850	29.0	32.4	35.7	39.0	43.0	46.9	50.7	54.5	58.1	62.4	66.5	71.7	75.4	80.2	84.6	88.6	
900	30.3	33.8	37.3	40.7	44.8	48.9	52.9	56.7	60.5	64.8	69.0	74.2	78.0	82.7	87.0		
950	31.5	35.2	38.8	42.3	46.6	50.8	54.9	58.8	62.6	67.1	71.3	76.5	80.3	84.8			
1000	32.7	36.5	40.2	43.9	48.3	52.6	56.8	60.8	64.7	69.1	73.4	78.6	82.2				
1050	33.9	37.8	41.6	45.4	49.9	54.3	58.6	62.7	66.6	71.0	75.2	80.4	83.9				
1100	35.0	39.0	43.0	46.8	51.4	55.9	60.2	64.4	68.3	72.7	76.9	81.9					
1150	36.0	40.2	44.2	48.1	52.9	57.4	61.8	65.9	69.9	74.3	78.3						
1200	37.1	41.3	45.4	49.4	54.2	58.8	63.2	67.3	71.2	75.6							
1250	38.0	42.4	46.6	50.6	55.5	60.1	64.5	68.6	72.5	76.7							
1300	38.9	43.3	47.6	51.7	56.6	61.3	65.6	69.7	73.5								
1350	39.8	44.3	48.6	52.8	57.7	62.3	66.7	70.7									
1400	40.6	45.1	49.5	53.7	58.6	63.3	67.5	71.4									
1450	41.3	45.9	50.3	54.5	59.5	64.1	68.2										
1500	42.0	46.7	51.1	55.3	60.2	64.7											
1550	42.6	47.3	51.8	56.0	60.8	65.2											
1600	43.2	47.9	52.4	56.5	61.3												
1650	43.7	48.4	52.9	57.0	61.7												
1700	44.2	48.9	53.3	57.4													
1750	44.6	49.3	53.6	57.6													
1800	44.9	49.6	53.9														
1850	45.1	49.8	54.0														
1900	45.3	49.9															
1950	45.4	49.9															
2000	45.5																
2050	45.4																
2100	45.3																

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{91575}$	0	$\frac{d \times RPM}{96993}$

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SHC

POWER RATINGS SUPER HC®

Additional kW per belt or rib for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.05	1.06 to 1.11	1.12 to 1.18	1.19 to 1.26	1.27 to 1.38	1.39 to 1.57	1.58 to 1.94	1.95 to 3.38	>3.38
585	0.00	0.24	0.64	1.12	1.53	1.85	2.17	2.44	2.66	2.82
700	0.00	0.28	0.77	1.34	1.83	2.22	2.60	2.92	3.19	3.37
725	0.00	0.29	0.80	1.39	1.90	2.30	2.69	3.03	3.30	3.50
870	0.00	0.35	0.96	1.67	2.28	2.76	3.23	3.63	3.96	4.19
950	0.00	0.38	1.05	1.83	2.48	3.01	3.53	3.97	4.32	4.58
1160	0.00	0.47	1.28	2.23	3.03	3.68	4.31	4.85	5.28	5.59
1450	0.00	0.59	1.60	2.79	3.79	4.60	5.38	6.06	6.60	6.99
1750	0.00	0.71	1.93	3.36	4.58	5.55	6.50	7.31	7.96	8.44
2850	0.00	1.15	3.14	5.48	7.45	9.03	10.58	11.91	12.97	13.74
3450	0.00	1.40	3.80	6.63	9.02	10.93	12.81	14.41	15.70	16.63
50	0.00	0.02	0.06	0.10	0.13	0.16	0.19	0.21	0.23	0.24
100	0.00	0.04	0.11	0.19	0.26	0.32	0.37	0.42	0.46	0.48
150	0.00	0.06	0.17	0.29	0.39	0.48	0.56	0.63	0.68	0.72
200	0.00	0.08	0.22	0.38	0.52	0.63	0.74	0.84	0.91	0.96
250	0.00	0.10	0.28	0.48	0.65	0.79	0.93	1.04	1.14	1.21
300	0.00	0.12	0.33	0.58	0.78	0.95	1.11	1.25	1.37	1.45
350	0.00	0.14	0.39	0.67	0.92	1.11	1.30	1.46	1.59	1.69
400	0.00	0.16	0.44	0.77	1.05	1.27	1.48	1.67	1.82	1.93
450	0.00	0.18	0.50	0.86	1.18	1.43	1.67	1.88	2.05	2.17
500	0.00	0.20	0.55	0.96	1.31	1.58	1.86	2.09	2.28	2.41
550	0.00	0.22	0.61	1.06	1.44	1.74	2.04	2.30	2.50	2.65
600	0.00	0.24	0.66	1.15	1.57	1.90	2.23	2.51	2.73	2.89
650	0.00	0.26	0.72	1.25	1.70	2.06	2.41	2.72	2.96	3.13
700	0.00	0.28	0.77	1.34	1.83	2.22	2.60	2.92	3.19	3.37
750	0.00	0.30	0.83	1.44	1.96	2.38	2.78	3.13	3.41	3.62
800	0.00	0.32	0.88	1.54	2.09	2.54	2.97	3.34	3.64	3.86
850	0.00	0.34	0.94	1.63	2.22	2.69	3.16	3.55	3.87	4.10
900	0.00	0.36	0.99	1.73	2.35	2.85	3.34	3.76	4.10	4.34
950	0.00	0.38	1.05	1.83	2.48	3.01	3.53	3.97	4.32	4.58
1000	0.00	0.40	1.10	1.92	2.62	3.17	3.71	4.18	4.55	4.82
1050	0.00	0.42	1.16	2.02	2.75	3.33	3.90	4.39	4.78	5.06
1100	0.00	0.44	1.21	2.11	2.88	3.49	4.08	4.60	5.01	5.30
1150	0.00	0.47	1.27	2.21	3.01	3.64	4.27	4.80	5.23	5.54
1200	0.00	0.49	1.32	2.31	3.14	3.80	4.45	5.01	5.46	5.79
1250	0.00	0.51	1.38	2.40	3.27	3.96	4.64	5.22	5.69	6.03
1300	0.00	0.53	1.43	2.50	3.40	4.12	4.83	5.43	5.92	6.27
1350	0.00	0.55	1.49	2.59	3.53	4.28	5.01	5.64	6.14	6.51
1400	0.00	0.57	1.54	2.69	3.66	4.44	5.20	5.85	6.37	6.75
1450	0.00	0.59	1.60	2.79	3.79	4.60	5.38	6.06	6.60	6.99
1500	0.00	0.61	1.65	2.88	3.92	4.75	5.57	6.27	6.83	7.23
1550	0.00	0.63	1.71	2.98	4.05	4.91	5.75	6.48	7.05	7.47
1600	0.00	0.65	1.76	3.07	4.18	5.07	5.94	6.68	7.28	7.71
1650	0.00	0.67	1.82	3.17	4.32	5.23	6.13	6.89	7.51	7.95
1700	0.00	0.69	1.87	3.27	4.45	5.39	6.31	7.10	7.74	8.20
1750	0.00	0.71	1.93	3.36	4.58	5.55	6.50	7.31	7.96	8.44
1800	0.00	0.73	1.98	3.46	4.71	5.71	6.68	7.52	8.19	8.68
1850	0.00	0.75	2.04	3.55	4.84	5.86	6.87	7.73	8.42	8.92
1900	0.00	0.77	2.09	3.65	4.97	6.02	7.05	7.94	8.65	9.16
1950	0.00	0.79	2.15	3.75	5.10	6.18	7.24	8.15	8.88	9.40
2000	0.00	0.81	2.20	3.84	5.23	6.34	7.42	8.36	9.10	9.64
2050	0.00	0.83	2.26	3.94	5.36	6.50	7.61	8.56	9.33	9.88
2100	0.00	0.85	2.31	4.03	5.49	6.66	7.80	8.77	9.56	10.12

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	RMA effective length mm	Corr. factor C_L
8V-1000	2540	0.87
8V-1060	2690	0.87
8V-1120	2845	0.88
8V-1180	2995	0.89
8V-1250	3175	0.90
8V-1320	3355	0.91
8V-1400	3555	0.92
8V-1500	3810	0.93
8V-1600	4065	0.93
8V-1700	4320	0.94
8V-1800	4570	0.95
8V-1900	4825	0.96
8V-2000	5080	0.97
8V-2120	5385	0.98
8V-2240	5690	0.98
8V-2360	5995	0.99
8V-2500	6350	1.00
8V-2650	6730	1.01
8V-2800	7110	1.02
8V-3000	7620	1.03
8V-3150	8000	1.03
8V-3350	8510	1.05
8V-3550	9015	1.05
8V-3750	9525	1.06
8V-4000	10160	1.07
8V-4500	11430	1.09
8V-4750	12065	1.09
8V-5000	12700	1.10
8V-5600	14225	1.12

The sizes printed in colour are available in 8V PowerBand®.
8V PowerBands are designed both for use in 8V and 25J pulleys.

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS SUPER HC®

Basic kW per belt

8VK

RPM of faster shaft	425	437	450	462	475	487	500	515	530	545	560	600	630	670	710	750	800
585	41.3	43.8	46.5	49.0	51.7	54.2	56.9	59.9	63.0	66.0	69.0	77.0	82.8	90.6	98.1	105.6	114.7
700	47.4	50.3	53.5	56.4	59.5	62.3	65.4	68.9	72.4	75.9	79.4	88.4	95.1	103.8	112.3	120.6	130.6
725	48.7	51.7	54.9	57.9	61.1	64.0	67.2	70.8	74.4	78.0	81.5	90.8	97.6	106.5	115.2	123.6	133.8
870	55.5	58.9	62.6	66.0	69.7	73.0	76.6	80.7	84.8	88.8	92.8	103.2	110.7	120.5	129.8	138.8	149.5
950	58.8	62.5	66.5	70.1	74.0	77.5	81.3	85.6	89.9	94.1	98.3	109.1	116.9	127.0	136.5	145.6	156.2
1160	66.3	70.5	74.9	79.0	83.3	87.2	91.4	96.2	100.8	105.4	109.8	121.3	129.3				
1450	73.0	77.5	82.3	86.7	91.3	95.4	99.8	104.6									
1750	74.8																
2850																	
3450																	
50	5.0	5.3	5.6	5.8	6.1	6.4	6.7	7.0	7.3	7.6	8.0	8.8	9.5	10.3	11.2	12.0	13.1
100	9.3	9.8	10.3	10.8	11.3	11.8	12.4	13.0	13.6	14.2	14.9	16.5	17.7	19.4	21.0	22.6	24.6
150	13.2	13.9	14.7	15.4	16.2	17.0	17.7	18.7	19.6	20.5	21.4	23.8	25.6	27.9	30.3	32.7	35.6
200	16.9	17.9	18.9	19.9	20.9	21.8	22.9	24.1	25.2	26.4	27.6	30.7	33.0	36.1	39.2	42.3	46.1
250	20.5	21.6	22.9	24.1	25.4	26.5	27.8	29.2	30.7	32.1	33.6	37.4	40.3	44.1	47.8	51.6	56.2
300	23.9	25.3	26.8	28.2	29.7	31.0	32.5	34.3	36.0	37.7	39.4	43.9	47.2	51.7	56.1	60.5	66.0
350	27.2	28.8	30.5	32.1	33.8	35.4	37.1	39.1	41.1	43.0	45.0	50.2	54.0	59.1	64.2	69.2	75.4
400	30.4	32.2	34.1	35.9	37.9	39.7	41.6	43.8	46.0	48.2	50.4	56.2	60.5	66.3	71.9	77.5	84.4
450	33.5	35.5	37.6	39.6	41.8	43.8	45.9	48.4	50.8	53.2	55.7	62.1	66.9	73.2	79.4	85.5	93.1
500	36.5	38.7	41.0	43.2	45.6	47.7	50.1	52.8	55.5	58.1	60.8	67.8	73.0	79.8	86.6	93.3	101.5
550	39.3	41.7	44.3	46.7	49.2	51.6	54.1	57.0	59.9	62.8	65.7	73.3	78.9	86.2	93.5	100.6	109.4
600	42.1	44.7	47.5	50.0	52.8	55.3	58.0	61.2	64.3	67.4	70.4	78.5	84.5	92.4	100.1	107.7	116.9
650	44.8	47.6	50.5	53.3	56.2	58.9	61.8	65.1	68.4	71.7	75.0	83.6	89.9	98.2	106.4	114.3	124.0
700	47.4	50.3	53.5	56.4	59.5	62.3	65.4	68.9	72.4	75.9	79.4	88.4	95.1	103.8	112.3	120.6	130.6
750	49.9	53.0	56.3	59.4	62.7	65.7	68.9	72.6	76.3	79.9	83.6	93.0	100.0	109.1	117.9	126.5	136.8
800	52.3	55.5	59.0	62.2	65.7	68.8	72.2	76.1	80.0	83.8	87.5	97.4	104.7	114.0	123.1	131.9	142.5
850	54.6	58.0	61.6	65.0	68.6	71.9	75.4	79.5	83.5	87.4	91.3	101.6	109.0	118.7	128.0	137.0	147.6
900	56.8	60.3	64.1	67.6	71.3	74.8	78.4	82.6	86.8	90.9	94.9	105.5	113.1	123.0	132.5	141.5	152.2
950	58.8	62.5	66.5	70.1	74.0	77.5	81.3	85.6	89.9	94.1	98.3	109.1	116.9	127.0	136.5	145.6	156.2
1000	60.8	64.6	68.7	72.4	76.4	80.1	84.0	88.4	92.8	97.2	101.4	112.4	120.4	130.5	140.1	149.2	
1050	62.6	66.6	70.8	74.6	78.7	82.5	86.5	91.1	95.6	100.0	104.3	115.5	123.6	133.8	143.3		
1100	64.4	68.4	72.7	76.7	80.9	84.7	88.8	93.5	98.1	102.6	107.0	118.3	126.4	136.6			
1150	66.0	70.1	74.6	78.6	82.9	86.8	91.0	95.7	100.4	104.9	109.4	120.8	128.9				
1200	67.5	71.7	76.2	80.3	84.7	88.7	93.0	97.8	102.5	107.1	111.6	123.0	131.0				
1250	68.8	73.2	77.8	81.9	86.4	90.4	94.7	99.6	104.3	108.9	113.4	124.8					
1300	70.1	74.5	79.1	83.4	87.9	92.0	96.3	101.2	106.0	110.6	115.1						
1350	71.2	75.6	80.4	84.7	89.2	93.3	97.7	102.6	107.3	111.9	116.4						
1400	72.1	76.6	81.4	85.8	90.3	94.5	98.8	103.7	108.5	113.0							
1450	73.0	77.5	82.3	86.7	91.3	95.4	99.8	104.6									
1500	73.6	78.2	83.1	87.4	92.0	96.1	100.5										
1550	74.2	78.8	83.6	88.0	92.6	96.7											
1600	74.5	79.2	84.0	88.4	92.9												
1650	74.8	79.4	84.2	88.5													
1700	74.8	79.4															
1750	74.8																

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{51099}$	0	$\frac{d \times RPM}{54141}$

POWER RATINGS SUPER HC®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.21	1.22 to 1.29	1.3 to 1.46	>1.46
585	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.60
700	0.00	0.61	1.23	1.83	2.45	3.05	3.66	4.28	4.89	5.50
725	0.00	0.63	1.27	1.90	2.53	3.16	3.80	4.43	5.06	5.70
870	0.00	0.76	1.52	2.28	3.04	3.80	4.55	5.31	6.07	6.84
950	0.00	0.83	1.66	2.49	3.32	4.15	4.97	5.80	6.63	7.47
1160	0.00	1.01	2.03	3.03	4.05	5.06	6.07	7.09	8.10	9.12
1450	0.00	1.26	2.54	3.79	5.07	6.33	7.59	8.86	10.12	11.40
1750	0.00	1.52	3.06	4.58	6.11	7.64	9.16	10.69	12.22	13.76
2850	0.00	2.48	4.99	7.46	9.96	12.44	14.92	17.41	19.90	22.41
3450	0.00	3.00	6.04	9.03	12.05	15.06	18.06	21.07	24.09	27.13
50	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.31	0.35	0.39
100	0.00	0.09	0.18	0.26	0.35	0.44	0.52	0.61	0.70	0.79
150	0.00	0.13	0.26	0.39	0.52	0.65	0.79	0.92	1.05	1.18
200	0.00	0.17	0.35	0.52	0.70	0.87	1.05	1.22	1.40	1.57
250	0.00	0.22	0.44	0.65	0.87	1.09	1.31	1.53	1.75	1.97
300	0.00	0.26	0.53	0.78	1.05	1.31	1.57	1.83	2.09	2.36
350	0.00	0.30	0.61	0.92	1.22	1.53	1.83	2.14	2.44	2.75
400	0.00	0.35	0.70	1.05	1.40	1.75	2.09	2.44	2.79	3.14
450	0.00	0.39	0.79	1.18	1.57	1.96	2.36	2.75	3.14	3.54
500	0.00	0.43	0.88	1.31	1.75	2.18	2.62	3.05	3.49	3.93
550	0.00	0.48	0.96	1.44	1.92	2.40	2.88	3.36	3.84	4.32
600	0.00	0.52	1.05	1.57	2.10	2.62	3.14	3.66	4.19	4.72
650	0.00	0.56	1.14	1.70	2.27	2.84	3.40	3.97	4.54	5.11
700	0.00	0.61	1.23	1.83	2.45	3.05	3.66	4.28	4.89	5.50
750	0.00	0.65	1.31	1.96	2.62	3.27	3.93	4.58	5.24	5.90
800	0.00	0.70	1.40	2.09	2.80	3.49	4.19	4.89	5.59	6.29
850	0.00	0.74	1.49	2.22	2.97	3.71	4.45	5.19	5.93	6.68
900	0.00	0.78	1.58	2.35	3.14	3.93	4.71	5.50	6.28	7.08
950	0.00	0.83	1.66	2.49	3.32	4.15	4.97	5.80	6.63	7.47
1000	0.00	0.87	1.75	2.62	3.49	4.36	5.24	6.11	6.98	7.86
1050	0.00	0.91	1.84	2.75	3.67	4.58	5.50	6.41	7.33	8.26
1100	0.00	0.96	1.93	2.88	3.84	4.80	5.76	6.72	7.68	8.65
1150	0.00	1.00	2.01	3.01	4.02	5.02	6.02	7.02	8.03	9.04
1200	0.00	1.04	2.10	3.14	4.19	5.24	6.28	7.33	8.38	9.43
1250	0.00	1.09	2.19	3.27	4.37	5.45	6.54	7.64	8.73	9.83
1300	0.00	1.13	2.28	3.40	4.54	5.67	6.81	7.94	9.08	10.22
1350	0.00	1.17	2.36	3.53	4.72	5.89	7.07	8.25	9.42	10.61
1400	0.00	1.22	2.45	3.66	4.89	6.11	7.33	8.55	9.77	11.01
1450	0.00	1.26	2.54	3.79	5.07	6.33	7.59	8.86	10.12	11.40
1500	0.00	1.30	2.63	3.92	5.24	6.55	7.85	9.16	10.47	11.79
1550	0.00	1.35	2.71	4.06	5.42	6.76	8.12	9.47	10.82	12.19
1600	0.00	1.39	2.80	4.19	5.59	6.98	8.38	9.77	11.17	12.58
1650	0.00	1.43	2.89	4.32	5.76	7.20	8.64	10.08	11.52	12.97
1700	0.00	1.48	2.98	4.45	5.94	7.42	8.90	10.38	11.87	13.37
1750	0.00	1.52	3.06	4.58	6.11	7.64	9.16	10.69	12.22	13.76

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	RMA effective length mm	Corr. factor C_L
8VK-1250	3175	0.90
8VK-1320	3355	0.91
8VK-1400	3555	0.92
8VK-1500	3810	0.93
8VK-1600	4065	0.93
8VK-1700	4320	0.94
8VK-1800	4570	0.95
8VK-1900	4825	0.96
8VK-2000	5080	0.97
8VK-2120	5385	0.98
8VK-2240	5690	0.98
8VK-2360	5995	0.99
8VK-2500	6350	1.00
8VK-2650	6730	1.01
8VK-2800	7110	1.02
8VK-3000	7620	1.03
8VK-3150	8000	1.03
8VK-3350	8510	1.05
8VK-3550	9015	1.05
8VK-3750	9525	1.06
8VK-4000	10160	1.07
8VK-4500	11430	1.09
8VK-4750	12065	1.09
8VK-5000	12700	1.10
8VK-5600	14225	1.12

We recommend that all 8VK PowerBand® be matched in sets to one single match number only. To help alleviate some matching problems, the 8VK belts are now available in 3, 4, 5, 8, 10 and 12 strands. These are to be ordered in minimum quantities. Consult your Gates representative.

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS HI-POWER®

Basic kW per belt

Z

RPM of faster shaft	60	63	67	71	75	80	85	90	95	100	106	112	118	125	132	140	150
585	0.41	0.46	0.52	0.58	0.63	0.71	0.78	0.85	0.92	0.99	1.08	1.16	1.25	1.34	1.44	1.55	1.68
700	0.48	0.53	0.60	0.67	0.74	0.82	0.91	0.99	1.07	1.16	1.26	1.36	1.45	1.57	1.68	1.81	1.97
725	0.49	0.54	0.62	0.69	0.76	0.85	0.93	1.02	1.11	1.19	1.30	1.40	1.50	1.62	1.73	1.86	2.03
870	0.56	0.63	0.71	0.80	0.88	0.98	1.09	1.19	1.29	1.39	1.51	1.63	1.75	1.89	2.03	2.18	2.37
950	0.60	0.67	0.77	0.86	0.95	1.06	1.17	1.28	1.39	1.50	1.63	1.76	1.89	2.04	2.18	2.35	2.56
1160	0.70	0.79	0.90	1.01	1.11	1.25	1.38	1.51	1.64	1.77	1.93	2.08	2.23	2.41	2.58	2.78	3.03
1450	0.83	0.93	1.07	1.20	1.33	1.49	1.65	1.81	1.97	2.13	2.32	2.50	2.69	2.90	3.11	3.35	3.64
1750	0.96	1.08	1.23	1.39	1.54	1.73	1.92	2.11	2.30	2.48	2.70	2.91	3.13	3.38	3.62	3.89	4.23
2850	1.34	1.52	1.75	1.98	2.21	2.50	2.78	3.05	3.32	3.59	3.90	4.21	4.51	4.85	5.18	5.55	5.98
3450	1.50	1.71	1.98	2.25	2.52	2.84	3.16	3.48	3.78	4.08	4.43	4.77	5.09	5.46	5.81	6.19	6.64
100	0.10	0.10	0.12	0.13	0.14	0.15	0.17	0.18	0.20	0.21	0.23	0.25	0.26	0.28	0.30	0.32	0.35
200	0.17	0.19	0.21	0.23	0.25	0.28	0.31	0.34	0.36	0.39	0.42	0.45	0.49	0.52	0.56	0.60	0.65
300	0.24	0.26	0.30	0.33	0.36	0.40	0.44	0.48	0.52	0.56	0.60	0.65	0.70	0.75	0.80	0.86	0.94
400	0.30	0.34	0.38	0.42	0.46	0.51	0.56	0.61	0.66	0.72	0.78	0.84	0.89	0.96	1.03	1.11	1.21
500	0.36	0.40	0.45	0.50	0.56	0.62	0.68	0.74	0.81	0.87	0.94	1.01	1.09	1.17	1.25	1.35	1.47
600	0.42	0.47	0.53	0.59	0.65	0.72	0.80	0.87	0.94	1.01	1.10	1.19	1.27	1.37	1.47	1.58	1.72
700	0.48	0.53	0.60	0.67	0.74	0.82	0.91	0.99	1.07	1.16	1.26	1.36	1.45	1.57	1.68	1.81	1.97
800	0.53	0.59	0.67	0.74	0.82	0.92	1.01	1.11	1.20	1.30	1.41	1.52	1.63	1.76	1.89	2.03	2.21
900	0.58	0.65	0.73	0.82	0.91	1.01	1.12	1.22	1.33	1.43	1.56	1.68	1.80	1.94	2.09	2.25	2.44
1000	0.63	0.70	0.80	0.89	0.99	1.10	1.22	1.34	1.45	1.57	1.70	1.84	1.97	2.13	2.28	2.46	2.67
1100	0.68	0.76	0.86	0.96	1.07	1.19	1.32	1.45	1.57	1.70	1.84	1.99	2.14	2.30	2.47	2.66	2.90
1200	0.72	0.81	0.92	1.03	1.14	1.28	1.42	1.55	1.69	1.82	1.98	2.14	2.30	2.48	2.66	2.86	3.11
1300	0.77	0.86	0.98	1.10	1.22	1.37	1.51	1.66	1.80	1.95	2.12	2.29	2.46	2.65	2.84	3.06	3.33
1400	0.81	0.91	1.04	1.17	1.29	1.45	1.61	1.76	1.92	2.07	2.25	2.43	2.61	2.82	3.02	3.25	3.54
1500	0.85	0.96	1.10	1.23	1.37	1.53	1.70	1.86	2.03	2.19	2.38	2.57	2.76	2.98	3.20	3.44	3.74
1600	0.90	1.01	1.15	1.29	1.44	1.61	1.79	1.96	2.14	2.31	2.51	2.71	2.91	3.14	3.37	3.62	3.94
1700	0.94	1.05	1.21	1.36	1.51	1.69	1.88	2.06	2.24	2.42	2.64	2.85	3.06	3.30	3.54	3.80	4.13
1800	0.98	1.10	1.26	1.42	1.58	1.77	1.97	2.16	2.35	2.54	2.76	2.98	3.20	3.45	3.70	3.98	4.32
1900	1.01	1.14	1.31	1.48	1.64	1.85	2.05	2.25	2.45	2.65	2.88	3.11	3.34	3.60	3.86	4.15	4.51
2000	1.05	1.19	1.36	1.54	1.71	1.92	2.13	2.34	2.55	2.76	3.00	3.24	3.48	3.75	4.02	4.32	4.68
2100	1.09	1.23	1.41	1.59	1.77	2.00	2.22	2.43	2.65	2.86	3.11	3.36	3.61	3.89	4.17	4.48	4.86
2200	1.12	1.27	1.46	1.65	1.84	2.07	2.30	2.52	2.75	2.97	3.23	3.49	3.74	4.03	4.32	4.64	5.03
2300	1.16	1.31	1.51	1.70	1.90	2.14	2.37	2.61	2.84	3.07	3.34	3.60	3.87	4.17	4.46	4.79	5.19
2400	1.19	1.35	1.55	1.76	1.96	2.21	2.45	2.69	2.93	3.17	3.45	3.72	3.99	4.30	4.60	4.94	5.35
2500	1.23	1.39	1.60	1.81	2.02	2.27	2.53	2.78	3.02	3.27	3.55	3.83	4.11	4.43	4.74	5.08	5.50
2600	1.26	1.42	1.64	1.86	2.08	2.34	2.60	2.86	3.11	3.36	3.66	3.95	4.23	4.55	4.87	5.22	5.64
2700	1.29	1.46	1.69	1.91	2.13	2.40	2.67	2.94	3.20	3.45	3.76	4.05	4.34	4.67	5.00	5.35	5.78
2800	1.32	1.50	1.73	1.96	2.19	2.47	2.74	3.02	3.28	3.55	3.86	4.16	4.46	4.79	5.12	5.48	5.92
2900	1.35	1.53	1.77	2.01	2.24	2.53	2.81	3.09	3.37	3.63	3.95	4.26	4.56	4.91	5.24	5.61	6.05
3000	1.38	1.57	1.81	2.06	2.30	2.59	2.88	3.17	3.45	3.72	4.04	4.36	4.67	5.02	5.35	5.73	6.17
3100	1.41	1.60	1.85	2.10	2.35	2.65	2.95	3.24	3.52	3.81	4.13	4.46	4.77	5.12	5.46	5.84	6.28
3200	1.44	1.63	1.89	2.15	2.40	2.71	3.01	3.31	3.60	3.89	4.22	4.55	4.87	5.22	5.57	5.95	6.39
3300	1.46	1.66	1.93	2.19	2.45	2.76	3.07	3.38	3.67	3.97	4.31	4.64	4.96	5.32	5.67	6.05	6.50
3400	1.49	1.69	1.97	2.23	2.50	2.82	3.13	3.44	3.75	4.04	4.39	4.73	5.05	5.42	5.77	6.15	6.59
3500	1.51	1.72	2.00	2.27	2.54	2.87	3.19	3.51	3.82	4.12	4.47	4.81	5.14	5.51	5.86	6.24	6.68
3600	1.54	1.75	2.04	2.31	2.59	2.92	3.25	3.57	3.88	4.19	4.55	4.89	5.22	5.59	5.94	6.32	6.76
3700	1.56	1.78	2.07	2.35	2.63	2.97	3.31	3.63	3.95	4.26	4.62	4.97	5.30	5.67	6.02	6.40	6.84
3800	1.58	1.81	2.10	2.39	2.68	3.02	3.36	3.69	4.01	4.33	4.69	5.04	5.37	5.75	6.10	6.47	6.90
3900	1.61	1.83	2.13	2.43	2.72	3.07	3.41	3.75	4.08	4.39	4.76	5.11	5.45	5.82	6.17	6.54	6.96
4000	1.63	1.86	2.16	2.46	2.76	3.12	3.47	3.80	4.13	4.45	4.82	5.18	5.51	5.89	6.23	6.60	7.02
4200	1.67	1.91	2.22	2.53	2.83	3.20	3.56	3.91	4.24	4.57	4.94	5.30	5.64	6.01	6.35	6.70	7.10
4400	1.70	1.95	2.28	2.60	2.91	3.28	3.65	4.00	4.35	4.67	5.05	5.41	5.74	6.11	6.44	6.78	7.15
4600	1.74	1.99	2.33	2.65	2.97	3.36	3.73	4.09	4.44	4.77	5.15	5.50	5.83	6.19	6.51	6.83	7.16
4800	1.77	2.03	2.37	2.71	3.03	3.43	3.81	4.17	4.52	4.85	5.23	5.58	5.90	6.24	6.55	6.85	7.14
5000	1.79	2.06	2.42	2.76	3.09	3.49	3.87	4.24	4.59	4.92	5.29	5.64	5.95	6.28	6.57	6.84	7.08
5200	1.82	2.09	2.45	2.80	3.14	3.54	3.93	4.30	4.65	4.98	5.35	5.68	5.99	6.30	6.56	6.79	6.99
5400	1.84	2.12	2.49	2.84	3.18	3.59	3.98	4.35	4.70	5.03	5.39	5.71	6.00	6.29	6.52	6.72	6.86
5600	1.85	2.14	2.51	2.87	3.22	3.63	4.03	4.40	4.74	5.06	5.41	5.72	5.99	6.26	6.46	6.62	6.69
5800	1.87	2.16	2.54	2.90	3.25	3.67	4.06	4.43	4.77	5.08	5.42	5.72	5.97	6.20	6.37	6.48	6.48
6000	1.88	2.17	2.56	2.93	3.28	3.70	4.09	4.45	4.78	5.09	5.41	5.69	5.92	6.12	6.25	6.30	6.22

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{581734}$	0	$\frac{d \times RPM}{615765}$

POWER RATINGS HI-POWER®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.06	1.07 to 1.08	1.09 to 1.12	1.13 to 1.16	1.17 to 1.22	1.23 to 1.32	1.33 to 1.5	>1.5
585	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
700	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
725	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06
870	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07
950	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
1160	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.10
1450	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12
1750	0.00	0.02	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.14
2850	0.00	0.03	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.23
3450	0.00	0.03	0.06	0.09	0.13	0.16	0.19	0.22	0.25	0.28
100	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
200	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
300	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
400	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
500	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
600	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
700	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
800	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
900	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
1000	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08
1100	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1200	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.10
1300	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08	0.10	0.11
1400	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12
1500	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.10	0.11	0.12
1600	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
1700	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
1800	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
1900	0.00	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16
2000	0.00	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.16
2100	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.13	0.15	0.17
2200	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
2300	0.00	0.02	0.04	0.06	0.08	0.11	0.13	0.15	0.17	0.19
2400	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.18	0.20
2500	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.21
2600	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21
2700	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
2800	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.21	0.23
2900	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.21	0.24
3000	0.00	0.03	0.06	0.08	0.11	0.14	0.16	0.19	0.22	0.25
3100	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
3200	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.20	0.23	0.26
3300	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
3400	0.00	0.03	0.06	0.09	0.12	0.16	0.19	0.22	0.25	0.28
3500	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29
3600	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
3700	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.30
3800	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
3900	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.29	0.32
4000	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.26	0.29	0.33
4200	0.00	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35
4400	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
4600	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.34	0.38
4800	0.00	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40
5000	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
5200	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
5400	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.44
5600	0.00	0.05	0.10	0.15	0.21	0.26	0.31	0.36	0.41	0.46
5800	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.42	0.48
6000	0.00	0.05	0.11	0.17	0.22	0.27	0.33	0.38	0.44	0.49

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	ISO datum length mm	Corr. factor C_L
Z-17 1/2	470	0.73	Z-49	1270	1.04
Z-18 1/2	495	0.75	Z-50	1295	1.04
Z-19	505	0.75	Z-51	1320	1.05
Z-19 1/2	520	0.76	Z-52	1340	1.05
Z-20 1/2	550	0.78	Z-55	1420	1.70
Z-22	580	0.79	Z-57	1470	1.08
Z-22 1/2	595	0.80	Z-59	1520	1.09
Z-23 1/2	620	0.81	Z-63 1/2	1630	1.11
Z-24	630	0.82	Z-67	1720	1.13
Z-25	655	0.83	Z-71	1820	1.16
Z-26 1/2	695	0.85	Z-75	1920	1.16
Z-28	730	0.87			
Z-29	755	0.88			
Z-29 1/2	770	0.88			
Z-30 1/2	795	0.89			
Z-31	805	0.90			
Z-31 1/2	820	0.90			
Z-32 1/2	845	0.91			
Z-33 1/2	870	0.92			
Z-34 1/2	895	0.93			
Z-35 1/2	920	0.94			
Z-36	930	0.94			
Z-37	955	0.95			
Z-37 1/2	970	0.95			
Z-38 1/2	995	0.96			
Z-39	1005	0.96			
Z-39 1/2	1020	0.97			
Z-41 1/2	1070	0.98			
Z-42	1080	0.99			
Z-44	1140	1.00			
Z-45	1170	1.01			
Z-45 1/2	1180	1.01			
Z-46	1200	1.02			
Z-47	1220	1.02			
Z-48	1245	1.03			
Z-48 1/2	1255	1.03			

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS HI-POWER®

Basic kW per belt

A

RPM of faster shaft	85	90	95	100	106	112	118	125	132	140	150	160	170	180	190	200	212
585	0.90	1.02	1.13	1.24	1.38	1.51	1.64	1.80	1.95	2.13	2.34	2.56	2.77	2.98	3.19	3.40	3.65
700	1.04	1.17	1.31	1.44	1.60	1.76	1.91	2.09	2.27	2.48	2.73	2.98	3.23	3.48	3.73	3.97	4.26
725	1.07	1.21	1.35	1.48	1.65	1.81	1.97	2.16	2.34	2.55	2.81	3.07	3.33	3.59	3.84	4.09	4.39
870	1.23	1.40	1.56	1.72	1.91	2.10	2.29	2.51	2.73	2.98	3.28	3.59	3.89	4.18	4.48	4.77	5.12
950	1.32	1.50	1.67	1.84	2.05	2.26	2.46	2.70	2.94	3.20	3.53	3.86	4.18	4.50	4.82	5.14	5.51
1160	1.54	1.75	1.96	2.16	2.41	2.65	2.90	3.18	3.46	3.77	4.17	4.55	4.93	5.31	5.68	6.05	6.48
1450	1.81	2.07	2.32	2.57	2.87	3.17	3.46	3.80	4.14	4.51	4.98	5.44	5.89	6.34	6.78	7.21	7.71
1750	2.07	2.37	2.67	2.96	3.31	3.66	4.00	4.39	4.78	5.22	5.76	6.28	6.80	7.30	7.80	8.28	8.84
2850	2.83	3.27	3.70	4.13	4.63	5.12	5.60	6.14	6.67	7.26	7.96	8.62	9.25	9.84	10.39	10.89	11.45
3450	3.12	3.62	4.11	4.58	5.14	5.68	6.20	6.79	7.35	7.96	8.67	9.32	9.91	10.44	10.89	11.28	11.64
100	0.21	0.23	0.25	0.28	0.30	0.33	0.36	0.39	0.42	0.45	0.50	0.54	0.58	0.63	0.67	0.71	0.76
200	0.37	0.42	0.46	0.50	0.55	0.60	0.65	0.71	0.77	0.84	0.92	1.00	1.08	1.16	1.24	1.32	1.42
300	0.52	0.59	0.65	0.71	0.78	0.86	0.93	1.01	1.10	1.19	1.31	1.43	1.55	1.66	1.78	1.90	2.03
400	0.66	0.74	0.82	0.90	1.00	1.10	1.19	1.30	1.41	1.53	1.69	1.84	1.99	2.14	2.29	2.44	2.62
500	0.79	0.89	0.99	1.09	1.21	1.32	1.44	1.57	1.71	1.86	2.05	2.23	2.42	2.60	2.79	2.97	3.19
600	0.92	1.04	1.15	1.27	1.41	1.54	1.68	1.84	1.99	2.17	2.39	2.61	2.83	3.05	3.26	3.48	3.73
700	1.04	1.17	1.31	1.44	1.60	1.76	1.91	2.09	2.27	2.48	2.73	2.98	3.23	3.48	3.73	3.97	4.26
800	1.15	1.31	1.46	1.61	1.78	1.96	2.14	2.34	2.54	2.77	3.06	3.34	3.62	3.90	4.17	4.45	4.77
900	1.27	1.43	1.60	1.77	1.96	2.16	2.36	2.58	2.81	3.06	3.38	3.69	4.00	4.31	4.61	4.91	5.27
1000	1.37	1.56	1.74	1.92	2.14	2.35	2.57	2.82	3.06	3.34	3.69	4.03	4.37	4.70	5.03	5.36	5.75
1100	1.48	1.68	1.88	2.07	2.31	2.54	2.78	3.05	3.31	3.61	3.99	4.36	4.72	5.08	5.44	5.79	6.21
1200	1.58	1.79	2.01	2.22	2.48	2.73	2.98	3.27	3.55	3.88	4.28	4.68	5.07	5.46	5.84	6.22	6.66
1300	1.67	1.91	2.14	2.36	2.64	2.91	3.17	3.48	3.79	4.14	4.57	4.99	5.41	5.82	6.22	6.62	7.09
1400	1.77	2.01	2.26	2.50	2.79	3.08	3.37	3.70	4.02	4.39	4.85	5.29	5.73	6.17	6.60	7.02	7.51
1500	1.86	2.12	2.38	2.64	2.95	3.25	3.55	3.90	4.25	4.64	5.12	5.59	6.05	6.51	6.96	7.40	7.91
1600	1.95	2.22	2.50	2.77	3.10	3.42	3.74	4.10	4.47	4.87	5.38	5.87	6.36	6.83	7.30	7.76	8.30
1700	2.03	2.32	2.61	2.90	3.24	3.58	3.91	4.30	4.68	5.11	5.63	6.15	6.66	7.15	7.64	8.11	8.66
1800	2.11	2.42	2.72	3.03	3.38	3.74	4.09	4.49	4.88	5.33	5.88	6.42	6.94	7.45	7.95	8.44	9.01
1900	2.19	2.52	2.83	3.15	3.52	3.89	4.25	4.67	5.09	5.55	6.12	6.67	7.22	7.75	8.26	8.76	9.34
2000	2.27	2.61	2.94	3.27	3.65	4.04	4.42	4.85	5.28	5.76	6.35	6.92	7.48	8.02	8.55	9.06	9.65
2100	2.35	2.70	3.04	3.38	3.78	4.18	4.57	5.02	5.47	5.96	6.57	7.16	7.73	8.29	8.83	9.35	9.94
2200	2.42	2.78	3.14	3.49	3.91	4.32	4.73	5.19	5.65	6.16	6.79	7.39	7.98	8.54	9.09	9.61	10.22
2300	2.49	2.86	3.23	3.60	4.03	4.46	4.88	5.35	5.83	6.35	6.99	7.61	8.21	8.78	9.33	9.86	10.47
2400	2.56	2.94	3.33	3.70	4.15	4.59	5.02	5.51	5.99	6.53	7.19	7.82	8.42	9.01	9.56	10.10	10.70
2500	2.62	3.02	3.42	3.80	4.26	4.71	5.16	5.66	6.16	6.71	7.37	8.02	8.63	9.22	9.78	10.31	10.90
2600	2.69	3.10	3.50	3.90	4.37	4.84	5.29	5.81	6.31	6.88	7.55	8.20	8.82	9.41	9.97	10.50	11.09
2700	2.75	3.17	3.59	4.00	4.48	4.95	5.42	5.95	6.46	7.03	7.72	8.38	9.00	9.60	10.15	10.67	11.25
2800	2.80	3.24	3.67	4.09	4.58	5.07	5.54	6.08	6.60	7.19	7.88	8.54	9.17	9.76	10.31	10.83	11.39
2900	2.86	3.30	3.74	4.17	4.68	5.17	5.66	6.21	6.74	7.33	8.03	8.70	9.33	9.91	10.46	10.96	11.50
3000	2.91	3.37	3.82	4.26	4.77	5.28	5.77	6.33	6.87	7.46	8.17	8.84	9.46	10.05	10.58	11.07	11.58
3100	2.96	3.43	3.89	4.34	4.86	5.38	5.88	6.44	6.99	7.59	8.30	8.97	9.59	10.16	10.69	11.15	11.65
3200	3.01	3.49	3.95	4.41	4.95	5.47	5.98	6.55	7.10	7.71	8.42	9.09	9.70	10.26	10.77	11.22	11.68
3300	3.05	3.54	4.02	4.48	5.03	5.56	6.07	6.65	7.21	7.82	8.53	9.19	9.80	10.35	10.83	11.26	11.68
3400	3.10	3.59	4.08	4.55	5.10	5.64	6.16	6.75	7.31	7.92	8.63	9.28	9.88	10.41	10.88	11.28	11.66
3500	3.14	3.64	4.13	4.61	5.18	5.72	6.25	6.83	7.40	8.01	8.71	9.36	9.94	10.46	10.90	11.27	11.61
3600	3.17	3.69	4.19	4.68	5.24	5.79	6.32	6.92	7.48	8.09	8.79	9.43	9.99	10.48	10.90	11.24	11.53
3700	3.21	3.73	4.24	4.73	5.31	5.86	6.39	6.99	7.55	8.16	8.85	9.48	10.02	10.49	10.88	11.18	11.42
3800	3.24	3.77	4.28	4.78	5.36	5.92	6.46	7.06	7.62	8.22	8.91	9.51	10.04	10.48	10.83	11.09	11.27
3900	3.27	3.80	4.33	4.83	5.42	5.98	6.52	7.12	7.68	8.27	8.95	9.54	10.04	10.45	10.77	10.98	11.10
4000	3.29	3.84	4.37	4.88	5.47	6.03	6.57	7.17	7.73	8.31	8.97	9.54	10.02	10.40	10.67	10.84	10.89
4100	3.32	3.87	4.40	4.92	5.51	6.08	6.62	7.21	7.77	8.35	8.99	9.54	9.99	10.33	10.56	10.67	
4200	3.34	3.89	4.43	4.95	5.55	6.12	6.66	7.25	7.80	8.37	8.99	9.52	9.93	10.23	10.42	10.48	
4300	3.36	3.92	4.46	4.98	5.58	6.15	6.69	7.28	7.82	8.38	8.98	9.48	9.86	10.12	10.25		
4400	3.37	3.94	4.48	5.01	5.61	6.18	6.72	7.30	7.83	8.38	8.96	9.42	9.77	9.98	10.06		
4500	3.38	3.95	4.50	5.03	5.63	6.20	6.74	7.31	7.83	8.36	8.92	9.35	9.66	9.82	9.84		
4600	3.39	3.97	4.52	5.05	5.65	6.22	6.75	7.32	7.83	8.34	8.87	9.27	9.52	9.64			
4700	3.40	3.98	4.53	5.06	5.67	6.23	6.75	7.31	7.81	8.31	8.80	9.16	9.37	9.43			
4800	3.40	3.98	4.54	5.07	5.67	6.23	6.75	7.30	7.78	8.26	8.73	9.04	9.20				
4900	3.40	3.99	4.54	5.08	5.67	6.23	6.74	7.28	7.75	8.20	8.63	8.90	9.01				
5000	3.40	3.99	4.54	5.07	5.67	6.22	6.72	7.25	7.70	8.13	8.52	8.75	8.80				

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{380518}$	0	$\frac{d \times RPM}{402902}$

POWER RATINGS HI-POWER®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.06	1.07 to 1.08	1.09 to 1.12	1.13 to 1.16	1.17 to 1.22	1.23 to 1.32	1.33 to 1.5	>1.5
585	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
700	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
725	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
870	0.00	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16
950	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
1160	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.18	0.21
1450	0.00	0.03	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.26
1750	0.00	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31
2850	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51
3450	0.00	0.07	0.14	0.21	0.27	0.34	0.41	0.48	0.55	0.62
100	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
200	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04
300	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05
400	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07
500	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
600	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08	0.10	0.11
700	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
800	0.00	0.02	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.14
900	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16
1000	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1100	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.18	0.20
1200	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21
1300	0.00	0.03	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.23
1400	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.19	0.22	0.25
1500	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
1600	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.25	0.29
1700	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.30
1800	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.29	0.32
1900	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34
2000	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
2100	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
2200	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.31	0.35	0.39
2300	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
2400	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
2500	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
2600	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.41	0.47
2700	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.38	0.43	0.48
2800	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
2900	0.00	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52
3000	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.54
3100	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.43	0.49	0.55
3200	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.45	0.51	0.57
3300	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
3400	0.00	0.07	0.14	0.20	0.27	0.34	0.41	0.47	0.54	0.61
3500	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
3600	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.57	0.64
3700	0.00	0.07	0.15	0.22	0.29	0.37	0.44	0.51	0.59	0.66
3800	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68
3900	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.54	0.62	0.70
4000	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
4100	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.57	0.65	0.73
4200	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
4300	0.00	0.09	0.17	0.26	0.34	0.43	0.51	0.60	0.68	0.77
4400	0.00	0.09	0.18	0.26	0.35	0.44	0.53	0.61	0.70	0.79
4500	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
4600	0.00	0.09	0.18	0.27	0.37	0.46	0.55	0.64	0.73	0.82
4700	0.00	0.09	0.19	0.28	0.37	0.47	0.56	0.65	0.75	0.84
4800	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
4900	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.68	0.78	0.88
5000	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.89

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	ISO datum length mm	Corr. factor C_L
A-21	570	0.70	A-68	1765	1.01
A-22	595	0.71	A-69	1790	1.01
A-23	620	0.72	A-70	1815	1.01
A-23 1/2	630	0.73	A-71	1840	1.02
A-24	645	0.73	A-72	1865	1.02
A-24 1/2	655	0.74	A-73	1890	1.02
A-25	680	0.75	A-74	1915	1.03
A-26	705	0.76	A-75	1940	1.03
A-27	720	0.76	A-76	1965	1.03
A-27 1/2	730	0.77	A-77	1990	1.04
A-28	745	0.77	A-78	2020	1.04
A-28 1/2	755	0.77	A-79	2040	1.05
A-29 1/2	780	0.78	A-80	2070	1.05
A-30	805	0.79	A-81	2095	1.05
A-31	825	0.80	A-82	2120	1.06
A-32	850	0.81	A-83	2145	1.06
A-33	875	0.81	A-84	2170	1.06
A-34	900	0.82	A-85	2195	1.07
A-35	925	0.83	A-86	2220	1.07
A-36	950	0.84	A-87	2245	1.07
A-37	975	0.84	A-88	2270	1.07
A-38	1000	0.85	A-89	2295	1.07
A-39	1025	0.86	A-90	2325	1.08
A-40	1055	0.87	A-91	2350	1.08
A-41	1080	0.87	A-92	2375	1.09
A-42	1105	0.88	A-93	2400	1.09
A-43	1130	0.88	A-94	2425	1.09
A-44	1155	0.89	A-95	2450	1.09
A-45	1180	0.90	A-96	2475	1.10
A-46	1205	0.90	A-97	2500	1.10
A-47	1230	0.91	A-98	2525	1.10
A-48	1255	0.91	A-100	2575	1.11
A-49	1280	0.92	A-102	2625	1.11
A-50	1310	0.92	A-104	2680	1.12
A-51	1330	0.93	A-105	2705	1.12
A-52	1355	0.93	A-108	2780	1.13
A-53	1385	0.94	A-110	2830	1.13
A-54	1410	0.94	A-112	2880	1.14
A-55	1435	0.95	A-118	3035	1.15
A-56	1460	0.95	A-120	3085	1.16
A-57	1485	0.96	A-124	3185	1.17
A-58	1510	0.96	A-128	3290	1.18
A-59	1535	0.97	A-130	3340	1.18
A-60	1560	0.97	A-134	3440	1.19
A-61	1585	0.98	A-136	3490	1.19
A-62	1610	0.98	A-140	3590	1.20
A-63	1635	0.98	A-144	3695	1.21
A-64	1660	0.99	A-147	3770	1.21
A-65	1690	0.99	A-158	4050	1.23
A-66	1715	1.00	A-173	4430	1.26
A-67	1735	1.00	A-180	4610	1.27

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS HI-POWER®

Basic kW per belt

B

RPM of faster shaft	112	118	125	132	140	150	160	170	180	190	200	212	224	236	250	280	315
585	1.61	1.82	2.07	2.31	2.59	2.93	3.27	3.61	3.94	4.28	4.61	5.00	5.39	5.78	6.23	7.18	8.27
700	1.85	2.10	2.38	2.67	2.99	3.39	3.79	4.19	4.58	4.97	5.35	5.81	6.27	6.72	7.24	7.55	8.70
725	1.90	2.15	2.45	2.74	3.08	3.49	3.90	4.31	4.71	5.12	5.51	5.99	6.46	6.92	7.46	7.77	8.95
870	2.17	2.47	2.82	3.17	3.56	4.04	4.52	5.00	5.47	5.94	6.40	6.96	7.50	8.04	8.66	8.98	10.32
950	2.32	2.64	3.02	3.39	3.81	4.34	4.85	5.37	5.87	6.38	6.88	7.47	8.05	8.63	9.29	9.60	11.03
1160	2.67	3.05	3.50	3.94	4.44	5.06	5.67	6.28	6.88	7.46	8.05	8.74	9.41	10.08	10.84	11.11	12.70
1450	3.10	3.57	4.10	4.64	5.24	5.98	6.70	7.42	8.13	8.82	9.50	10.30	11.09	11.85	12.72	12.85	14.54
1750	3.49	4.03	4.65	5.27	5.96	6.81	7.65	8.46	9.26	10.04	10.80	11.69	12.55	13.38	14.31	14.16	15.79
2850	4.36	5.12	5.98	6.81	7.74	8.84	9.89	10.87	11.80	12.66	13.45	14.30	15.05	15.69	16.28		
3450	4.46	5.28	6.21	7.09	8.05	9.16	10.18	11.10	11.91	12.61	13.19	13.73					
50	0.21	0.24	0.26	0.29	0.32	0.35	0.39	0.43	0.46	0.50	0.53	0.58	0.62	0.66	0.71	0.76	0.87
100	0.39	0.43	0.48	0.53	0.58	0.65	0.72	0.79	0.85	0.92	0.99	1.07	1.15	1.23	1.32	1.40	1.62
150	0.54	0.60	0.67	0.74	0.82	0.92	1.02	1.12	1.22	1.32	1.42	1.53	1.65	1.76	1.90	2.01	2.32
200	0.69	0.77	0.86	0.95	1.05	1.18	1.31	1.44	1.57	1.70	1.82	1.97	2.12	2.27	2.45	2.59	2.99
250	0.82	0.92	1.03	1.15	1.27	1.43	1.59	1.75	1.91	2.06	2.22	2.40	2.59	2.77	2.98	3.15	3.63
300	0.95	1.07	1.20	1.34	1.49	1.67	1.86	2.05	2.23	2.41	2.60	2.82	3.03	3.25	3.50	3.69	4.26
350	1.08	1.21	1.36	1.52	1.69	1.91	2.12	2.34	2.55	2.76	2.97	3.22	3.47	3.72	4.00	4.21	4.87
400	1.20	1.35	1.52	1.69	1.89	2.13	2.38	2.62	2.86	3.09	3.33	3.61	3.89	4.17	4.50	4.73	5.46
450	1.32	1.48	1.67	1.87	2.09	2.36	2.63	2.89	3.16	3.42	3.69	4.00	4.31	4.62	4.98	5.23	6.03
500	1.43	1.61	1.82	2.03	2.27	2.57	2.87	3.16	3.45	3.74	4.03	4.38	4.72	5.06	5.45	5.71	6.59
550	1.54	1.74	1.97	2.20	2.46	2.78	3.11	3.43	3.74	4.06	4.37	4.75	5.12	5.49	5.91	6.19	7.14
600	1.64	1.86	2.11	2.36	2.64	2.99	3.34	3.68	4.03	4.37	4.71	5.11	5.51	5.91	6.36	6.65	7.68
650	1.75	1.98	2.25	2.51	2.82	3.19	3.57	3.94	4.31	4.67	5.03	5.47	5.89	6.32	6.81	7.11	8.20
700	1.85	2.10	2.38	2.67	2.99	3.39	3.79	4.19	4.58	4.97	5.35	5.81	6.27	6.72	7.24	7.55	8.70
750	1.95	2.21	2.51	2.82	3.16	3.59	4.01	4.43	4.85	5.26	5.67	6.16	6.64	7.12	7.67	7.98	9.20
800	2.04	2.32	2.64	2.97	3.33	3.78	4.23	4.67	5.11	5.55	5.98	6.49	7.00	7.51	8.09	8.40	9.68
850	2.14	2.43	2.77	3.11	3.49	3.97	4.44	4.91	5.37	5.83	6.28	6.82	7.36	7.89	8.50	8.81	10.14
900	2.23	2.54	2.89	3.25	3.65	4.15	4.65	5.14	5.62	6.11	6.58	7.15	7.71	8.26	8.90	9.21	10.59
950	2.32	2.64	3.02	3.39	3.81	4.34	4.85	5.37	5.87	6.38	6.88	7.47	8.05	8.63	9.29	9.60	11.03
1000	2.40	2.74	3.14	3.52	3.97	4.51	5.05	5.59	6.12	6.64	7.16	7.78	8.39	8.99	9.68	9.98	11.45
1050	2.49	2.84	3.25	3.66	4.12	4.69	5.25	5.81	6.36	6.91	7.45	8.08	8.71	9.34	10.05	10.35	11.86
1100	2.57	2.94	3.37	3.79	4.27	4.86	5.45	6.02	6.60	7.16	7.72	8.38	9.04	9.68	10.42	10.70	12.25
1150	2.65	3.04	3.48	3.92	4.41	5.03	5.64	6.24	6.83	7.41	7.99	8.68	9.35	10.01	10.77	11.05	12.63
1200	2.73	3.13	3.59	4.04	4.56	5.19	5.82	6.44	7.06	7.66	8.26	8.96	9.66	10.34	11.12	11.38	12.99
1250	2.81	3.22	3.70	4.17	4.70	5.36	6.01	6.65	7.28	7.90	8.52	9.25	9.96	10.66	11.46	11.70	13.33
1300	2.89	3.31	3.80	4.29	4.84	5.52	6.19	6.85	7.50	8.14	8.77	9.52	10.25	10.97	11.79	12.00	13.66
1350	2.96	3.40	3.90	4.41	4.97	5.67	6.36	7.04	7.71	8.37	9.02	9.79	10.54	11.27	12.11	12.30	13.97
1400	3.03	3.48	4.00	4.52	5.11	5.83	6.54	7.23	7.92	8.60	9.27	10.05	10.82	11.57	12.42	12.58	14.27
1450	3.10	3.57	4.10	4.64	5.24	5.98	6.70	7.42	8.13	8.82	9.50	10.30	11.09	11.85	12.72	12.85	14.54
1500	3.17	3.65	4.20	4.75	5.36	6.12	6.87	7.61	8.33	9.04	9.73	10.55	11.35	12.13	13.01	13.10	14.80
1600	3.30	3.81	4.39	4.96	5.61	6.41	7.19	7.96	8.72	9.45	10.18	11.03	11.85	12.66	13.56	13.57	15.25
1700	3.43	3.96	4.57	5.17	5.85	6.68	7.50	8.30	9.08	9.85	10.60	11.48	12.32	13.15	14.07	13.98	15.63
1800	3.54	4.10	4.73	5.36	6.07	6.94	7.79	8.62	9.43	10.22	11.00	11.89	12.76	13.60	14.53	14.33	15.93
1900	3.66	4.23	4.90	5.55	6.29	7.19	8.07	8.93	9.76	10.58	11.37	12.28	13.17	14.01	14.95	14.62	16.14
2000	3.76	4.36	5.05	5.73	6.49	7.42	8.33	9.21	10.07	10.90	11.71	12.64	13.53	14.38	15.32	14.84	16.26
2100	3.86	4.48	5.19	5.89	6.68	7.64	8.57	9.48	10.36	11.21	12.03	12.97	13.86	14.71	15.64	15.00	16.28
2200	3.95	4.59	5.33	6.05	6.86	7.85	8.80	9.73	10.63	11.49	12.32	13.26	14.16	15.00	15.91	15.08	16.21
2300	4.03	4.69	5.45	6.20	7.03	8.04	9.02	9.96	10.87	11.74	12.57	13.52	14.41	15.24	16.12	15.10	16.04
2400	4.11	4.79	5.57	6.33	7.19	8.22	9.22	10.17	11.09	11.97	12.80	13.75	14.63	15.43	16.29	15.04	15.76
2500	4.18	4.88	5.68	6.46	7.33	8.38	9.40	10.37	11.29	12.17	13.00	13.94	14.80	15.58	16.39	14.90	
2600	4.24	4.96	5.78	6.57	7.46	8.53	9.56	10.54	11.47	12.35	13.17	14.09	14.93	15.68	16.44	14.68	
2700	4.29	5.03	5.86	6.68	7.58	8.67	9.70	10.69	11.62	12.49	13.31	14.20	15.01	15.72	16.42	14.37	
2800	4.34	5.09	5.94	6.77	7.69	8.79	9.83	10.82	11.74	12.61	13.41	14.28	15.05	15.71	16.35		
2900	4.38	5.14	6.01	6.85	7.78	8.89	9.94	10.93	11.84	12.70	13.48	14.31	15.04	15.65	16.21		
3000	4.41	5.19	6.07	6.92	7.86	8.98	10.03	11.01	11.92	12.75	13.51	14.31	14.98	15.53	16.00		
3100	4.43	5.22	6.12	6.98	7.93	9.05	10.10	11.07	11.97	12.78	13.50	14.26	14.88	15.35			
3200	4.45	5.25	6.16	7.03	7.98	9.10	10.15	11.11	11.99	12.77	13.46	14.17	14.72	15.12			
3300	4.46	5.27	6.18	7.06	8.02	9.14	10.18	11.12	11.98	12.73	13.38	14.03	14.51				
3400	4.46	5.28	6.20	7.08	8.04	9.16	10.18	11.11	11.94	12.66	13.27	13.84	14.24				
3500	4.45	5.28	6.21	7.09	8.05	9.16	10.17	11.07	11.87	12.55	13.11	13.61					

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C

25000 Hrs	12000 Hrs	6000 Hrs
$-\frac{d \times RPM}{246609}$	0	$\frac{d \times RPM}{261096}$

POWER RATINGS HI-POWER®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.06	1.07 to 1.08	1.09 to 1.12	1.13 to 1.16	1.17 to 1.22	1.23 to 1.32	1.33 to 1.5	>1.5
585	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.21	0.23
700	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.22	0.25	0.28
725	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29
870	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.31	0.34
950	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
1160	0.00	0.05	0.10	0.15	0.20	0.26	0.31	0.36	0.41	0.46
1450	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.45	0.51	0.57
1750	0.00	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.62	0.69
2850	0.00	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13
3450	0.00	0.15	0.30	0.46	0.61	0.76	0.91	1.06	1.21	1.36
50	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
100	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
150	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06
200	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
250	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.10
300	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12
350	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
400	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.12	0.14	0.16
450	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
500	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.18	0.20
550	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.19	0.22
600	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.18	0.21	0.24
650	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
700	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.22	0.25	0.28
750	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
800	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
850	0.00	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.34
900	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
950	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
1000	0.00	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40
1050	0.00	0.05	0.09	0.14	0.18	0.23	0.28	0.32	0.37	0.42
1100	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
1150	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
1200	0.00	0.05	0.11	0.16	0.21	0.26	0.32	0.37	0.42	0.47
1250	0.00	0.05	0.11	0.17	0.22	0.27	0.33	0.38	0.44	0.49
1300	0.00	0.06	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.51
1350	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.53
1400	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.43	0.49	0.55
1450	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.45	0.51	0.57
1500	0.00	0.07	0.13	0.20	0.26	0.33	0.40	0.46	0.53	0.59
1600	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
1700	0.00	0.07	0.15	0.22	0.30	0.37	0.45	0.52	0.60	0.67
1800	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.55	0.63	0.71
1900	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
2000	0.00	0.09	0.18	0.26	0.35	0.44	0.53	0.62	0.70	0.79
2100	0.00	0.09	0.18	0.28	0.37	0.46	0.55	0.65	0.74	0.83
2200	0.00	0.10	0.19	0.29	0.39	0.48	0.58	0.68	0.77	0.87
2300	0.00	0.10	0.20	0.30	0.40	0.51	0.61	0.71	0.81	0.91
2400	0.00	0.11	0.21	0.32	0.42	0.53	0.63	0.74	0.84	0.95
2500	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99
2600	0.00	0.11	0.23	0.34	0.46	0.57	0.69	0.80	0.91	1.03
2700	0.00	0.12	0.24	0.36	0.47	0.59	0.71	0.83	0.95	1.07
2800	0.00	0.12	0.25	0.37	0.49	0.62	0.74	0.86	0.99	1.11
2900	0.00	0.13	0.26	0.38	0.51	0.64	0.77	0.89	1.02	1.15
3000	0.00	0.13	0.26	0.40	0.53	0.66	0.79	0.92	1.06	1.19
3100	0.00	0.14	0.27	0.41	0.55	0.68	0.82	0.95	1.09	1.23
3200	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.13	1.27
3300	0.00	0.15	0.29	0.44	0.58	0.73	0.87	1.01	1.16	1.31
3400	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35
3500	0.00	0.15	0.31	0.46	0.62	0.77	0.92	1.08	1.23	1.38

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	ISO datum length mm	Corr. factor C_L
B-25	695	0.70	B-84	2185	0.99
B-26	710	0.70	B-85	2210	0.99
B-27	735	0.71	B-86	2235	0.99
B-27 1/2	745	0.72	B-87	2260	1.00
B-28	770	0.72	B-88	2285	1.00
B-29	795	0.73	B-89	2310	1.00
B-30	815	0.74	B-90	2335	1.01
B-31	845	0.75	B-91	2365	1.01
B-32	870	0.76	B-92	2390	1.01
B-33	895	0.76	B-93	2415	1.01
B-34	920	0.77	B-94	2440	1.02
B-35	940	0.78	B-95	2465	1.02
B-36	965	0.78	B-96	2490	1.02
B-37	990	0.79	B-97	2515	1.02
B-38	1015	0.79	B-98	2540	1.03
B-39	1040	0.80	B-99	2565	1.03
B-40	1065	0.81	B-100	2590	1.03
B-41	1095	0.81	B-102	2640	1.04
B-42	1120	0.82	B-103	2665	1.04
B-43	1145	0.83	B-104	2695	1.04
B-44	1170	0.83	B-105	2720	1.04
B-45	1195	0.84	B-106	2745	1.05
B-46	1220	0.84	B-108	2795	1.05
B-47	1245	0.85	B-110	2845	1.06
B-48	1270	0.85	B-112	2895	1.06
B-49	1295	0.86	B-114	2945	1.06
B-50	1320	0.86	B-116	3000	1.07
B-51	1345	0.87	B-118	3050	1.07
B-52	1370	0.87	B-120	3100	1.08
B-53	1395	0.88	B-124	3200	1.09
B-54	1425	0.88	B-128	3300	1.09
B-55	1450	0.89	B-131	3380	1.10
B-56	1475	0.89	B-133	3430	1.10
B-57	1500	0.89	B-134	3455	1.10
B-58	1525	0.90	B-136	3505	1.11
B-59	1550	0.90	B-140	3610	1.12
B-60	1575	0.91	B-144	3710	1.12
B-61	1600	0.91	B-147	3785	1.13
B-62	1625	0.91	B-148	3810	1.13
B-63	1650	0.92	B-152	3910	1.14
B-64	1675	0.92	B-157	4040	1.14
B-65	1700	0.93	B-158	4065	1.15
B-66	1730	0.93	B-162	4165	1.15
B-67	1755	0.93	B-165	4240	1.16
B-68	1780	0.94	B-167	4295	1.16
B-69	1805	0.94	B-173	4445	1.17
B-70	1830	0.94	B-177	4545	1.17
B-71	1855	0.95	B-180	4625	1.18
B-72	1880	0.95	B-186	4775	1.19
B-73	1905	0.95	B-195	5005	1.20
B-74	1930	0.96	B-196	5030	1.20
B-75	1955	0.96	B-208	5335	1.21
B-76	1980	0.96	B-210	5385	1.22
B-77	2005	0.97	B-221	5625	1.23
B-78	2030	0.97	B-225	5730	1.23
B-79	2060	0.97	B-240	6110	1.25
B-80	2085	0.98	B-249	6340	1.26
B-81	2110	0.98	B-270	6870	1.28
B-82	2135	0.98	B-300	7635	1.31
B-83	2160	0.99			

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS HI-POWER®

Basic kW per belt

C

RPM of faster shaft	180	190	200	212	224	236	250	265	280	300	315	335	355	375	400	425
585	4.69	5.22	5.74	6.37	6.99	7.60	8.32	9.07	9.82	10.81	11.55	12.51	13.47	14.42	15.58	16.73
700	5.40	6.02	6.63	7.36	8.08	8.80	9.63	10.51	11.38	12.52	13.37	14.48	15.58	16.66	17.98	19.28
725	5.55	6.19	6.82	7.57	8.31	9.05	9.90	10.81	11.70	12.88	13.75	14.89	16.02	17.12	18.48	19.81
870	6.38	7.12	7.86	8.73	9.60	10.45	11.44	12.48	13.51	14.86	15.85	17.15	18.42	19.66	21.18	22.64
950	6.81	7.61	8.40	9.34	10.27	11.18	12.24	13.35	14.44	15.88	16.93	18.30	19.64	20.94	22.52	24.04
1160	7.86	8.80	9.72	10.81	11.89	12.95	14.16	15.44	16.68	18.30	19.48	20.99	22.46	23.86	25.53	27.09
1450	9.10	10.21	11.29	12.56	13.81	15.02	16.41	17.84	19.22	20.98	22.24	23.84	25.33	26.71	28.27	29.66
1750	10.13	11.37	12.58	14.00	15.36	16.68	18.16	19.66	21.09	22.85	24.07	25.55	26.86	27.98	29.11	29.93
2850	11.35	12.72	13.97	15.33	16.52	17.53	18.47	19.19								
3450	9.99	11.10	12.02	12.88												
50	0.59	0.65	0.70	0.77	0.84	0.90	0.98	1.06	1.14	1.25	1.33	1.44	1.54	1.65	1.78	1.92
100	1.08	1.18	1.29	1.41	1.54	1.67	1.81	1.97	2.12	2.32	2.48	2.68	2.88	3.08	3.33	3.58
150	1.52	1.68	1.83	2.01	2.19	2.38	2.59	2.81	3.04	3.33	3.55	3.85	4.14	4.43	4.79	5.15
200	1.94	2.14	2.34	2.58	2.82	3.05	3.33	3.62	3.91	4.30	4.58	4.96	5.34	5.72	6.19	6.65
250	2.34	2.59	2.83	3.12	3.41	3.70	4.04	4.40	4.75	5.22	5.57	6.04	6.50	6.96	7.53	8.10
300	2.72	3.01	3.30	3.65	3.99	4.33	4.73	5.15	5.57	6.12	6.54	7.08	7.63	8.17	8.84	9.50
350	3.09	3.43	3.76	4.16	4.55	4.94	5.40	5.88	6.36	7.00	7.47	8.10	8.72	9.34	10.10	10.86
400	3.45	3.83	4.20	4.65	5.09	5.53	6.05	6.59	7.13	7.85	8.38	9.08	9.78	10.47	11.33	12.18
450	3.80	4.22	4.63	5.13	5.62	6.11	6.68	7.28	7.88	8.67	9.26	10.04	10.82	11.58	12.53	13.46
500	4.14	4.60	5.05	5.60	6.14	6.68	7.30	7.96	8.62	9.48	10.13	10.98	11.82	12.66	13.69	14.71
550	4.47	4.97	5.46	6.06	6.64	7.23	7.90	8.62	9.33	10.27	10.97	11.89	12.80	13.70	14.81	15.91
600	4.79	5.33	5.86	6.50	7.13	7.76	8.49	9.26	10.03	11.04	11.79	12.78	13.75	14.72	15.90	17.07
650	5.10	5.68	6.25	6.94	7.61	8.29	9.07	9.89	10.71	11.79	12.59	13.64	14.68	15.70	16.96	18.20
700	5.40	6.02	6.63	7.36	8.08	8.80	9.63	10.51	11.38	12.52	13.37	14.48	15.58	16.66	17.98	19.28
750	5.70	6.35	7.00	7.78	8.54	9.30	10.18	11.11	12.02	13.23	14.12	15.29	16.45	17.58	18.97	20.32
800	5.99	6.68	7.37	8.18	8.99	9.79	10.71	11.69	12.65	13.92	14.86	16.08	17.29	18.47	19.91	21.32
850	6.27	7.00	7.72	8.58	9.43	10.27	11.23	12.26	13.27	14.59	15.57	16.85	18.10	19.33	20.82	22.27
900	6.54	7.31	8.06	8.96	9.85	10.73	11.74	12.81	13.87	15.24	16.26	17.59	18.89	20.15	21.69	23.18
950	6.81	7.61	8.40	9.34	10.27	11.18	12.24	13.35	14.44	15.88	16.93	18.30	19.64	20.94	22.52	24.04
1000	7.07	7.90	8.73	9.71	10.67	11.62	12.72	13.87	15.01	16.49	17.57	18.99	20.36	21.70	23.31	24.85
1050	7.33	8.19	9.05	10.06	11.06	12.05	13.19	14.38	15.55	17.08	18.19	19.65	21.05	22.42	24.05	25.61
1100	7.57	8.47	9.36	10.41	11.45	12.47	13.64	14.87	16.08	17.65	18.79	20.28	21.71	23.10	24.75	26.32
1150	7.81	8.74	9.66	10.75	11.82	12.87	14.08	15.35	16.58	18.19	19.36	20.88	22.34	23.74	25.40	26.97
1200	8.05	9.01	9.95	11.08	12.18	13.26	14.50	15.80	17.07	18.72	19.91	21.45	22.93	24.34	26.01	27.57
1250	8.27	9.26	10.24	11.39	12.53	13.64	14.91	16.25	17.54	19.22	20.43	21.99	23.48	24.90	26.56	28.11
1300	8.49	9.51	10.51	11.70	12.87	14.01	15.31	16.67	17.99	19.70	20.93	22.50	24.00	25.42	27.07	28.59
1350	8.70	9.75	10.78	12.00	13.19	14.36	15.69	17.08	18.42	20.15	21.39	22.98	24.48	25.89	27.53	29.01
1400	8.91	9.98	11.04	12.29	13.51	14.70	16.06	17.47	18.83	20.58	21.83	23.42	24.92	26.32	27.93	29.36
1450	9.10	10.21	11.29	12.56	13.81	15.02	16.41	17.84	19.22	20.98	22.24	23.84	25.33	26.71	28.27	29.66
1500	9.29	10.42	11.53	12.83	14.10	15.34	16.74	18.19	19.59	21.36	22.63	24.21	25.69	27.04	28.56	29.88
1550	9.48	10.63	11.76	13.08	14.38	15.63	17.06	18.52	19.93	21.72	22.98	24.55	26.01	27.33	28.80	30.04
1600	9.65	10.83	11.98	13.33	14.64	15.92	17.36	18.84	20.26	22.04	23.30	24.86	26.29	27.57	28.97	30.12
1650	9.82	11.02	12.19	13.56	14.89	16.19	17.64	19.13	20.56	22.34	23.59	25.13	26.52	27.76	29.08	30.13
1700	9.98	11.20	12.39	13.78	15.13	16.44	17.91	19.41	20.83	22.61	23.84	25.36	26.71	27.90	29.13	30.07
1750	10.13	11.37	12.58	14.00	15.36	16.68	18.16	19.66	21.09	22.85	24.07	25.55	26.86	27.98	29.11	29.93
1800	10.28	11.54	12.77	14.19	15.57	16.90	18.39	19.90	21.31	23.06	24.26	25.70	26.95	28.01	29.03	
1850	10.42	11.69	12.94	14.38	15.77	17.11	18.60	20.11	21.52	23.24	24.42	25.81	27.00	27.98	28.88	
1900	10.55	11.84	13.10	14.56	15.96	17.30	18.79	20.30	21.70	23.40	24.54	25.88	27.00	27.89	28.67	
1950	10.67	11.98	13.25	14.72	16.13	17.48	18.97	20.46	21.85	23.52	24.63	25.91	26.95	27.75		
2000	10.78	12.11	13.39	14.87	16.29	17.64	19.13	20.61	21.98	23.60	24.67	25.89	26.85	27.55		
2100	10.98	12.33	13.64	15.13	16.56	17.91	19.38	20.83	22.15	23.68	24.66	25.72	26.49			
2200	11.15	12.52	13.84	15.35	16.77	18.11	19.55	20.96	22.21	23.63	24.49	25.37				
2300	11.29	12.67	14.00	15.50	16.92	18.23	19.64	20.98	22.15	23.43	24.16					
2400	11.38	12.78	14.11	15.61	17.00	18.28	19.64	20.91	21.98	23.08	23.66					
2500	11.44	12.84	14.17	15.65	17.02	18.26	19.55	20.72	21.68	22.59						
2600	11.47	12.86	14.18	15.64	16.96	18.16	19.36	20.43	21.25							
2700	11.45	12.84	14.14	15.56	16.84	17.97	19.08	20.02	20.68							
2800	11.40	12.77	14.04	15.42	16.65	17.70	18.70	19.49								
2900	11.30	12.65	13.89	15.22	16.37	17.34	18.22									
3000	11.16	12.49	13.69	14.95	16.03	16.89	17.63									

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{162549}$	0	$\frac{d \times RPM}{172176}$

POWER RATINGS HI-POWER®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.06	1.07 to 1.08	1.09 to 1.12	1.13 to 1.16	1.17 to 1.22	1.23 to 1.32	1.33 to 1.5	>1.5
585	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.44	0.50
700	0.00	0.07	0.13	0.20	0.26	0.33	0.40	0.46	0.53	0.59
725	0.00	0.07	0.14	0.21	0.27	0.34	0.41	0.48	0.55	0.61
870	0.00	0.08	0.16	0.25	0.33	0.41	0.49	0.57	0.66	0.74
950	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
1160	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.76	0.87	0.98
1450	0.00	0.14	0.27	0.41	0.55	0.68	0.82	0.96	1.09	1.23
1750	0.00	0.17	0.33	0.50	0.66	0.82	0.99	1.15	1.32	1.48
2850	0.00	0.27	0.54	0.81	1.07	1.34	1.61	1.88	2.15	2.42
3450	0.00	0.33	0.65	0.98	1.30	1.63	1.95	2.27	2.60	2.93
50	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
100	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08
150	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
200	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
250	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21
300	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
350	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
400	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34
450	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
500	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.42
550	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.41	0.47
600	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	0.51
650	0.00	0.06	0.12	0.18	0.24	0.31	0.37	0.43	0.49	0.55
700	0.00	0.07	0.13	0.20	0.26	0.33	0.40	0.46	0.53	0.59
750	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.57	0.64
800	0.00	0.08	0.15	0.23	0.30	0.38	0.45	0.53	0.60	0.68
850	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
900	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76
950	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
1000	0.00	0.09	0.19	0.28	0.38	0.47	0.57	0.66	0.75	0.85
1050	0.00	0.10	0.20	0.30	0.40	0.49	0.59	0.69	0.79	0.89
1100	0.00	0.10	0.21	0.31	0.41	0.52	0.62	0.73	0.83	0.93
1150	0.00	0.11	0.22	0.33	0.43	0.54	0.65	0.76	0.87	0.98
1200	0.00	0.11	0.23	0.34	0.45	0.57	0.68	0.79	0.91	1.02
1250	0.00	0.12	0.24	0.35	0.47	0.59	0.71	0.82	0.94	1.06
1300	0.00	0.12	0.25	0.37	0.49	0.61	0.74	0.86	0.98	1.10
1350	0.00	0.13	0.25	0.38	0.51	0.64	0.76	0.89	1.02	1.14
1400	0.00	0.13	0.26	0.40	0.53	0.66	0.79	0.92	1.06	1.19
1450	0.00	0.14	0.27	0.41	0.55	0.68	0.82	0.96	1.09	1.23
1500	0.00	0.14	0.28	0.42	0.57	0.71	0.85	0.99	1.13	1.27
1550	0.00	0.15	0.29	0.44	0.58	0.73	0.88	1.02	1.17	1.31
1600	0.00	0.15	0.30	0.45	0.60	0.75	0.91	1.05	1.21	1.36
1650	0.00	0.16	0.31	0.47	0.62	0.78	0.93	1.09	1.24	1.40
1700	0.00	0.16	0.32	0.48	0.64	0.80	0.96	1.12	1.28	1.44
1750	0.00	0.17	0.33	0.50	0.66	0.82	0.99	1.15	1.32	1.48
1800	0.00	0.17	0.34	0.51	0.68	0.85	1.02	1.19	1.36	1.53
1850	0.00	0.17	0.35	0.52	0.70	0.87	1.05	1.22	1.40	1.57
1900	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.25	1.43	1.61
1950	0.00	0.18	0.37	0.55	0.73	0.92	1.10	1.29	1.47	1.65
2000	0.00	0.19	0.38	0.57	0.75	0.94	1.13	1.32	1.51	1.70
2100	0.00	0.20	0.40	0.59	0.79	0.99	1.19	1.38	1.58	1.78
2200	0.00	0.21	0.42	0.62	0.83	1.04	1.24	1.45	1.66	1.87
2300	0.00	0.22	0.43	0.65	0.87	1.08	1.30	1.52	1.73	1.95
2400	0.00	0.23	0.45	0.68	0.90	1.13	1.36	1.58	1.81	2.04
2500	0.00	0.24	0.47	0.71	0.94	1.18	1.41	1.65	1.89	2.12
2600	0.00	0.25	0.49	0.74	0.98	1.23	1.47	1.71	1.96	2.20
2700	0.00	0.25	0.51	0.76	1.02	1.27	1.53	1.78	2.04	2.29
2800	0.00	0.26	0.53	0.79	1.06	1.32	1.58	1.85	2.11	2.37
2900	0.00	0.27	0.55	0.82	1.09	1.37	1.64	1.91	2.19	2.46
3000	0.00	0.28	0.57	0.85	1.13	1.41	1.70	1.98	2.26	2.54

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L	Belt ref.	ISO datum length mm	Corr. factor C_L
C-42	1145	0.74	C-108	2815	0.94
C-43	1165	0.74	C-110	2865	0.95
C-46	1245	0.76	C-112	2920	0.95
C-48	1290	0.77	C-115	2995	0.96
C-49	1320	0.77	C-116	3020	0.96
C-51	1370	0.78	C-118	3070	0.96
C-53	1420	0.79	C-120	3120	0.96
C-54	1445	0.79	C-124	3225	0.97
C-55	1470	0.79	C-128	3325	0.98
C-59	1570	0.81	C-132	3425	0.99
C-60	1595	0.81	C-134	3475	0.99
C-62	1650	0.82	C-136	3525	0.99
C-65	1725	0.83	C-140	3630	1.00
C-66	1750	0.83	C-144	3730	1.01
C-68	1800	0.84	C-147	3805	1.01
C-70	1850	0.85	C-153	3960	1.02
C-71	1875	0.85	C-158	4085	1.03
C-72	1900	0.85	C-162	4190	1.03
C-74	1950	0.86	C-165	4265	1.04
C-75	1980	0.86	C-173	4465	1.05
C-78	2055	0.87	C-177	4570	1.05
C-81	2130	0.88	C-180	4645	1.05
C-82	2155	0.88	C-195	5025	1.07
C-83	2180	0.88	C-208	5355	1.09
C-85	2230	0.89	C-210	5405	1.09
C-88	2310	0.90	C-222	5660	1.10
C-90	2360	0.90	C-225	5735	1.10
C-92	2410	0.91	C-238	6065	1.11
C-93	2435	0.91	C-240	6120	1.12
C-95	2485	0.91	C-250	6370	1.13
C-96	2510	0.92	C-255	6500	1.13
C-97	2535	0.92	C-265	6755	1.14
C-98	2560	0.92	C-270	6880	1.14
C-99	2590	0.92	C-280	7135	1.15
C-100	2610	0.92	C-285	7260	1.16
C-102	2665	0.93	C-300	7640	1.17
C-104	2715	0.93	C-330	8405	1.19
C-105	2740	0.94			

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS HI-POWER®

Basic kW per belt

D

RPM of faster shaft	300	315	335	355	375	400	425	450	475	500	530	560	600	630	670	710	750
585	14.2	15.6	17.5	19.3	21.2	23.4	25.6	27.8	29.9	32.0	34.4	36.8	40.0	42.2	45.1	47.9	50.6
700	16.3	17.9	20.0	22.1	24.2	26.7	29.2	31.7	34.0	36.4	39.1	41.7	45.0	47.4	50.5	53.3	56.0
725	16.7	18.3	20.5	22.7	24.8	27.4	30.0	32.5	34.9	37.2	40.0	42.6	46.0	48.4	51.4	54.3	56.9
870	18.9	20.8	23.3	25.7	28.1	31.0	33.8	36.5	39.1	41.6	44.5	47.2	50.6	52.9	55.7	58.2	60.3
950	20.0	22.0	24.6	27.2	29.7	32.7	35.6	38.4	41.1	43.6	46.4	49.1	52.3	54.5	57.0	59.0	60.7
1160	22.3	24.5	27.5	30.3	32.9	36.1	39.1	41.9	44.5	46.8	49.3	51.4	53.7	55.0			
1450	24.2	26.6	29.7	32.5	35.1	38.1	40.7	42.9	44.7	46.1							
1750	24.4	26.8	29.5	32.0	34.1	36.2	37.6										
2850																	
3450																	
50	1.8	2.0	2.2	2.4	2.6	2.8	3.1	3.3	3.6	3.8	4.1	4.4	4.8	5.1	5.5	5.9	6.3
100	3.3	3.6	4.0	4.4	4.8	5.2	5.7	6.2	6.7	7.1	7.7	8.2	9.0	9.5	10.3	11.0	11.7
150	4.7	5.1	5.7	6.2	6.8	7.5	8.2	8.8	9.5	10.2	11.0	11.8	12.9	13.7	14.7	15.8	16.8
200	6.0	6.5	7.3	8.0	8.7	9.6	10.5	11.4	12.3	13.1	14.2	15.2	16.6	17.6	19.0	20.3	21.6
250	7.2	7.9	8.8	9.7	10.5	11.6	12.7	13.8	14.9	15.9	17.2	18.5	20.1	21.4	23.0	24.6	26.2
300	8.4	9.2	10.2	11.3	12.3	13.6	14.9	16.1	17.4	18.6	20.1	21.6	23.5	25.0	26.9	28.7	30.6
350	9.5	10.4	11.6	12.8	14.0	15.5	16.9	18.4	19.8	21.2	22.9	24.6	26.8	28.4	30.5	32.6	34.7
400	10.6	11.6	13.0	14.3	15.6	17.3	18.9	20.5	22.1	23.7	25.6	27.4	29.9	31.7	34.0	36.3	38.6
450	11.6	12.7	14.2	15.7	17.2	19.0	20.8	22.6	24.3	26.1	28.1	30.2	32.8	34.8	37.3	39.8	42.2
500	12.6	13.9	15.5	17.1	18.7	20.7	22.6	24.6	26.5	28.4	30.6	32.8	35.6	37.7	40.4	43.0	45.6
550	13.6	14.9	16.7	18.4	20.2	22.3	24.4	26.5	28.5	30.5	32.9	35.2	38.2	40.4	43.3	46.0	48.7
600	14.5	15.9	17.8	19.7	21.6	23.9	26.1	28.3	30.5	32.6	35.1	37.5	40.7	43.0	45.9	48.7	51.4
650	15.4	16.9	19.0	21.0	22.9	25.3	27.7	30.0	32.3	34.5	37.1	39.7	42.9	45.3	48.3	51.2	53.9
700	16.3	17.9	20.0	22.1	24.2	26.7	29.2	31.7	34.0	36.4	39.1	41.7	45.0	47.4	50.5	53.3	56.0
750	17.1	18.8	21.0	23.2	25.4	28.1	30.7	33.2	35.7	38.1	40.9	43.5	46.9	49.3	52.4	55.2	57.7
800	17.8	19.6	22.0	24.3	26.6	29.4	32.0	34.7	37.2	39.7	42.5	45.2	48.6	51.0	54.0	56.7	59.1
850	18.6	20.5	22.9	25.3	27.7	30.5	33.3	36.0	38.6	41.1	44.0	46.7	50.1	52.4	55.3	57.8	60.0
900	19.3	21.2	23.8	26.3	28.7	31.7	34.5	37.3	39.9	42.4	45.3	48.0	51.3	53.6	56.3	58.6	60.6
950	20.0	22.0	24.6	27.2	29.7	32.7	35.6	38.4	41.1	43.6	46.4	49.1	52.3	54.5	57.0	59.0	60.7
1000	20.6	22.7	25.4	28.0	30.6	33.7	36.6	39.4	42.1	44.6	47.4	50.0	53.1	55.1	57.3	59.1	60.3
1050	21.2	23.3	26.1	28.8	31.4	34.5	37.5	40.3	43.0	45.5	48.2	50.7	53.6	55.4	57.3	58.7	
1100	21.7	23.9	26.7	29.5	32.1	35.3	38.3	41.1	43.7	46.2	48.8	51.2	53.8	55.4	56.9		
1150	22.2	24.4	27.3	30.1	32.8	36.0	39.0	41.8	44.3	46.7	49.2	51.4	53.8	55.1			
1200	22.7	24.9	27.9	30.7	33.4	36.6	39.6	42.3	44.8	47.1	49.4	51.4	53.4	54.4			
1250	23.1	25.4	28.4	31.2	33.9	37.1	40.0	42.7	45.1	47.3	49.4	51.2	52.8				
1300	23.4	25.8	28.8	31.7	34.4	37.5	40.4	43.0	45.3	47.2	49.2	50.7					
1350	23.7	26.1	29.1	32.0	34.7	37.8	40.6	43.1	45.2	47.1	48.8	49.9					
1400	24.0	26.4	29.4	32.3	35.0	38.0	40.7	43.1	45.1	46.7	48.1						
1450	24.2	26.6	29.7	32.5	35.1	38.1	40.7	42.9	44.7	46.1							
1500	24.4	26.8	29.8	32.6	35.2	38.1	40.5	42.6	44.1	45.3							
1550	24.5	26.9	29.9	32.7	35.2	37.9	40.2	42.1	43.4								
1600	24.6	27.0	29.9	32.6	35.1	37.7	39.8	41.4	42.5								
1650	24.6	27.0	29.9	32.5	34.8	37.3	39.2	40.6									
1700	24.5	26.9	29.8	32.3	34.5	36.8	38.5										
1750	24.4	26.8	29.5	32.0	34.1	36.2	37.6										
1800	24.3	26.5	29.3	31.6	33.5	35.4											
1850	24.1	26.3	28.9	31.1	32.9	34.5											
1900	23.8	25.9	28.4	30.5	32.1	33.5											
1950	23.4	25.5	27.9	29.8	31.3												
2000	23.0	25.0	27.3	29.0	30.3												

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Additional kW per belt for belt life

C	25000 Hrs	12000 Hrs	6000 Hrs
	$-\frac{d \times RPM}{88652}$	0	$\frac{d \times RPM}{93899}$

POWER RATINGS HI-POWER®

Additional kW per belt for speed ratio

RPM of faster shaft	1 to 1.01	1.02 to 1.03	1.04 to 1.06	1.07 to 1.08	1.09 to 1.12	1.13 to 1.16	1.17 to 1.22	1.23 to 1.32	1.33 to 1.5	>1.5
585	0.00	0.17	0.33	0.50	0.67	0.84	1.00	1.17	1.34	1.50
700	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80
725	0.00	0.21	0.41	0.62	0.83	1.03	1.24	1.45	1.66	1.86
870	0.00	0.25	0.50	0.75	0.99	1.24	1.49	1.74	1.99	2.23
950	0.00	0.27	0.54	0.81	1.08	1.36	1.63	1.90	2.17	2.44
1160	0.00	0.33	0.66	1.00	1.32	1.66	1.99	2.32	2.65	2.98
1450	0.00	0.41	0.83	1.24	1.65	2.07	2.48	2.89	3.31	3.72
1750	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.49	4.00	4.49
2850	0.00	0.81	1.63	2.44	3.25	4.07	4.88	5.69	6.51	7.32
3450	0.00	0.99	1.97	2.96	3.94	4.92	5.91	6.89	7.88	8.86
50	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.13
100	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
150	0.00	0.04	0.09	0.13	0.17	0.21	0.26	0.30	0.34	0.39
200	0.00	0.06	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.51
250	0.00	0.07	0.14	0.21	0.29	0.36	0.43	0.50	0.57	0.64
300	0.00	0.09	0.17	0.26	0.34	0.43	0.51	0.60	0.69	0.77
350	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
400	0.00	0.11	0.23	0.34	0.46	0.57	0.69	0.80	0.91	1.03
450	0.00	0.13	0.26	0.39	0.51	0.64	0.77	0.90	1.03	1.16
500	0.00	0.14	0.29	0.43	0.57	0.71	0.86	1.00	1.14	1.28
550	0.00	0.16	0.31	0.47	0.63	0.79	0.94	1.10	1.26	1.41
600	0.00	0.17	0.34	0.51	0.68	0.86	1.03	1.20	1.37	1.54
650	0.00	0.19	0.37	0.56	0.74	0.93	1.11	1.30	1.48	1.67
700	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80
750	0.00	0.21	0.43	0.64	0.86	1.07	1.29	1.50	1.71	1.93
800	0.00	0.23	0.46	0.69	0.91	1.14	1.37	1.60	1.83	2.05
850	0.00	0.24	0.49	0.73	0.97	1.21	1.46	1.70	1.94	2.18
900	0.00	0.26	0.51	0.77	1.03	1.28	1.54	1.80	2.06	2.31
950	0.00	0.27	0.54	0.81	1.08	1.36	1.63	1.90	2.17	2.44
1000	0.00	0.29	0.57	0.86	1.14	1.43	1.71	2.00	2.28	2.57
1050	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70
1100	0.00	0.31	0.63	0.94	1.26	1.57	1.88	2.20	2.51	2.82
1150	0.00	0.33	0.66	0.99	1.31	1.64	1.97	2.30	2.63	2.95
1200	0.00	0.34	0.69	1.03	1.37	1.71	2.06	2.40	2.74	3.08
1250	0.00	0.36	0.71	1.07	1.43	1.78	2.14	2.50	2.85	3.21
1300	0.00	0.37	0.74	1.12	1.48	1.86	2.23	2.60	2.97	3.34
1350	0.00	0.39	0.77	1.16	1.54	1.93	2.31	2.69	3.08	3.47
1400	0.00	0.40	0.80	1.20	1.60	2.00	2.40	2.79	3.20	3.60
1450	0.00	0.41	0.83	1.24	1.65	2.07	2.48	2.89	3.31	3.72
1500	0.00	0.43	0.86	1.29	1.71	2.14	2.57	2.99	3.43	3.85
1550	0.00	0.44	0.89	1.33	1.77	2.21	2.66	3.09	3.54	3.98
1600	0.00	0.46	0.91	1.37	1.83	2.28	2.74	3.19	3.65	4.11
1650	0.00	0.47	0.94	1.42	1.88	2.36	2.83	3.29	3.77	4.24
1700	0.00	0.49	0.97	1.46	1.94	2.43	2.91	3.39	3.88	4.37
1750	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.49	4.00	4.49
1800	0.00	0.51	1.03	1.54	2.05	2.57	3.08	3.59	4.11	4.62
1850	0.00	0.53	1.06	1.59	2.11	2.64	3.17	3.69	4.23	4.75
1900	0.00	0.54	1.09	1.63	2.17	2.71	3.26	3.79	4.34	4.88
1950	0.00	0.56	1.11	1.67	2.23	2.78	3.34	3.89	4.45	5.01
2000	0.00	0.57	1.14	1.72	2.28	2.85	3.43	3.99	4.57	5.14

Arc of contact correction factor G

$\frac{D - d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	ISO datum length mm	Corr. factor C_L
D-98	2570	0.83
D-104	2720	0.84
D-110	2875	0.85
D-120	3130	0.87
D-124	3230	0.88
D-128	3330	0.88
D-137	3560	0.90
D-140	3635	0.90
D-144	3740	0.91
D-158	4095	0.92
D-162	4195	0.93
D-170	4400	0.94
D-173	4475	0.94
D-177	4575	0.95
D-180	4650	0.95
D-187	4830	0.96
D-195	5035	0.97
D-197	5085	0.97
D-204	5260	0.97
D-210	5415	0.98
D-223	5680	0.99
D-240	6115	1.01
D-250	6365	1.01
D-270	6875	1.03
D-282	7180	1.04
D-298	7585	1.05
D-300	7635	1.05
D-330	8400	1.07
D-360	9160	1.09

$$\text{Number of belts required} = \frac{\text{Design kW}}{(A + B + C) \times G \times C_L}$$

POWER RATINGS MICRO-V®

Basic Watt per rib

PJ

RPM of faster shaft	20	24	26	28	30	32	34	36	38	40	42	45	48	50	53	56	63
585	11	20	25	29	34	39	43	48	52	57	61	68	75	79	86	92	107
700	12	23	29	34	39	45	50	56	61	66	72	79	87	92	100	108	126
725	12	24	29	35	41	46	52	57	63	68	74	82	90	95	103	111	130
870	13	27	34	40	47	54	60	67	73	80	86	96	105	112	121	130	152
950	14	29	36	43	51	58	65	72	79	86	93	103	114	120	131	141	164
1160	15	33	42	51	59	68	76	85	93	102	110	122	135	143	155	167	195
1450	17	39	49	60	71	81	91	102	112	122	133	148	163	173	188	202	237
1750	18	44	57	69	82	94	106	119	131	143	155	173	191	203	220	238	278
2850	20	60	79	99	118	137	156	175	194	212	231	259	286	304	331	357	419
3450	19	67	90	113	136	158	181	203	225	247	269	301	334	355	386	417	489
100	3	5	6	7	8	9	9	10	11	12	13	14	16	17	18	19	22
200	5	9	10	12	14	16	17	19	21	22	24	27	29	31	33	36	41
300	7	12	15	17	20	22	25	27	30	32	34	38	42	44	48	51	60
400	8	15	18	22	25	28	31	35	38	41	44	49	54	57	61	66	77
500	10	18	22	26	30	34	38	42	46	50	54	59	65	69	75	80	94
600	11	20	25	30	35	40	44	49	53	58	63	70	76	81	88	94	110
700	12	23	29	34	39	45	50	56	61	66	72	79	87	92	100	108	126
800	13	25	32	38	44	50	56	62	68	74	80	89	98	104	113	121	141
900	14	28	35	42	48	55	62	69	75	82	89	99	108	115	125	134	157
1000	14	30	37	45	53	60	68	75	82	90	97	108	119	126	136	147	172
1100	15	32	40	49	57	65	73	81	89	97	105	117	129	137	148	160	186
1200	16	34	43	52	61	70	78	87	96	104	113	126	139	147	160	172	201
1300	16	36	46	55	65	74	84	93	102	112	121	135	148	157	171	184	215
1400	17	38	48	58	69	79	89	99	109	119	129	143	158	168	182	196	230
1500	17	40	51	62	72	83	94	105	115	126	136	152	168	178	193	208	244
1600	18	41	53	65	76	88	99	110	122	133	144	160	177	188	204	220	258
1700	18	43	55	68	80	92	104	116	128	140	151	169	186	198	215	232	271
1800	18	45	58	71	84	96	109	121	134	146	159	177	195	207	225	243	285
1900	19	46	60	74	87	100	114	127	140	153	166	185	204	217	236	255	298
2000	19	48	62	76	91	105	118	132	146	160	173	193	213	227	246	266	311
2200	19	51	67	82	97	113	128	143	158	172	187	209	231	245	267	288	337
2400	20	54	71	87	104	120	137	153	169	185	201	225	248	264	287	310	363
2600	20	57	75	93	110	128	146	163	180	197	214	240	265	282	307	331	388
2800	20	59	78	98	117	135	154	173	191	210	228	255	282	299	326	352	413
3000	20	62	82	102	123	143	163	182	202	221	241	269	298	317	345	373	437
3200	20	64	86	107	129	150	171	192	212	233	253	284	314	334	363	393	460
3400	19	66	89	112	134	157	179	201	223	244	266	298	330	351	382	413	483
3600	19	68	92	116	140	163	187	210	233	256	278	312	345	367	400	432	506
3800	19	70	95	121	145	170	194	219	243	267	290	325	360	383	417	451	528
4000	18	72	98	125	151	176	202	227	252	277	302	339	375	399	435	470	550
4200	18	74	101	129	156	183	209	236	262	288	314	352	390	414	451	488	571
4400	17	75	104	133	161	189	217	244	271	298	325	365	404	430	468	506	592
4600		77	107	137	166	195	224	252	280	308	336	377	418	445	484	524	613
4800		79	110	140	171	201	231	260	289	318	347	390	432	459	500	541	633
5000		80	112	144	175	207	238	268	298	328	358	402	445	474	516	558	652
5200		81	115	148	180	212	244	276	307	338	369	414	458	488	531	574	671
5400		83	117	151	185	218	251	283	315	347	379	426	471	502	546	590	690
5600		84	119	154	189	223	257	291	324	357	389	437	484	515	561	606	708
5800		85	121	158	193	229	263	298	332	366	399	448	497	529	575	622	726
6000		86	124	161	197	234	270	305	340	375	409	459	509	541	590	637	743
6200		87	126	164	201	239	276	312	348	383	418	470	521	554	603	651	759
6400		88	128	167	205	244	281	319	355	392	428	481	533	567	617	666	776
6600		89	129	170	209	248	287	325	363	400	437	491	544	579	630	680	791
6800		89	131	172	213	253	293	332	370	408	446	501	555	590	642	693	806
7000		90	133	175	217	258	298	338	377	416	455	511	566	602	655	706	821
7500		91	137	181	225	269	311	353	395	435	476	535	592	629	684	737	855
8000		92	140	187	233	279	324	368	411	453	495	557	616	655	711	766	886
8500		93	143	192	241	288	335	381	426	470	514	577	639	678	736	792	913
9000		93	145	197	247	297	346	393	440	486	531	596	659	700	759	815	937
10000		92	149	204	259	312	364	415	465	514	561	629	695	736	797	853	972

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

POWER RATINGS MICRO-V®

Additional Watt per rib for speed ratio

RPM of faster shaft	1 to 1.02	1.03 to 1.06	1.07 to 1.10	1.11 to 1.16	1.17 to 1.23	1.24 to 1.33	1.34 to 1.47	1.48 to 1.71	1.72 to 2.31	>2.31
85	0	1	1	2	3	3	4	5	6	6
700	0	1	2	2	3	4	5	6	7	7
725	0	1	2	3	3	4	5	6	7	8
870	0	1	2	3	4	5	6	7	8	9
950	0	1	2	3	5	6	7	8	9	10
1160	0	1	3	4	5	7	8	10	11	12
1450	0	2	3	5	7	9	10	12	14	15
1750	0	2	4	6	8	10	12	15	17	19
2850	0	3	7	10	14	17	20	24	27	30
3450	0	4	8	12	16	20	25	29	33	37
100	0	0	0	0	0	1	1	1	1	1
200	0	0	0	1	1	1	1	2	2	2
300	0	0	1	1	1	2	2	2	3	3
400	0	0	1	1	2	2	3	3	4	4
500	0	1	1	2	2	3	4	4	5	5
600	0	1	1	2	3	4	4	5	6	6
700	0	1	2	2	3	4	5	6	7	7
800	0	1	2	3	4	5	6	7	8	9
900	0	1	2	3	4	5	6	7	9	10
1000	0	1	2	4	5	6	7	8	9	11
1100	0	1	3	4	5	7	8	9	10	12
1200	0	1	3	4	6	7	9	10	11	13
1300	0	2	3	5	6	8	9	11	12	14
1400	0	2	3	5	7	8	10	12	13	15
1500	0	2	4	5	7	9	11	12	14	16
1600	0	2	4	6	8	9	11	13	15	17
1700	0	2	4	6	8	10	12	14	16	18
1800	0	2	4	6	9	11	13	15	17	19
1900	0	2	5	7	9	11	14	16	18	20
2000	0	2	5	7	9	12	14	17	19	21
2200	0	3	5	8	10	13	16	18	21	23
2400	0	3	6	9	11	14	17	20	23	26
2600	0	3	6	9	12	15	18	22	25	28
2800	0	3	7	10	13	17	20	23	27	30
3000	0	4	7	11	14	18	21	25	28	32
3200	0	4	8	11	15	19	23	27	30	34
3400	0	4	8	12	16	20	24	28	32	36
3600	0	4	9	13	17	21	26	30	34	38
3800	0	5	9	14	18	23	27	32	36	41
4000	0	5	9	14	19	24	28	33	38	43
4200	0	5	10	15	20	25	30	35	40	45
4400	0	5	10	16	21	26	31	36	42	47
4600	0	5	11	16	22	27	33	38	44	49
4800	0	6	11	17	23	28	34	40	45	51
5000	0	6	12	18	24	30	36	41	47	53
5200	0	6	12	18	25	31	37	43	49	55
5400	0	6	13	19	26	32	38	45	51	58
5600	0	7	13	20	27	33	40	46	53	60
5800	0	7	14	21	27	34	41	48	55	62
6000	0	7	14	21	28	36	43	50	57	64
6200	0	7	15	22	29	37	44	51	59	66
6400	0	8	15	23	30	38	46	53	61	68
6600	0	8	16	23	31	39	47	55	63	70
6800	0	8	16	24	32	40	48	56	64	73
7000	0	8	17	25	33	41	50	58	66	75
7500	0	9	18	27	36	44	53	62	71	80
8000	0	10	19	28	38	47	57	66	76	85
8500	0	10	20	30	40	50	60	71	81	91
9000	0	11	21	32	43	53	64	75	85	96
10000	0	12	24	36	47	59	71	83	95	107

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L
PJ 457	0.76
PJ 483	0.78
PJ 508	0.79
PJ 559	0.82
PJ 584	0.83
PJ 610	0.85
PJ 660	0.87
PJ 711	0.89
PJ 762	0.91
PJ 813	0.93
PJ 838	0.94
PJ 864	0.95
PJ 914	0.97
PJ 965	0.98
PJ 1016	1.00
PJ 1041	1.00
PJ 1067	1.01
PJ 1092	1.02
PJ 1118	1.03
PJ 1168	1.04
PJ 1219	1.05
PJ 1244	1.06
PJ 1270	1.07
PJ 1321	1.08
PJ 1397	1.10
PJ 1473	1.11
PJ 1549	1.13
PJ 1651	1.15
PJ 1854	1.18
PJ 2210	1.23
PJ 2337	1.25
PJ 2489	1.27

$$\text{Number of ribs required} = \frac{\text{Design kW} \times 1000}{(A + B) \times G \times C_L}$$

POWER RATINGS MICRO-V®

Basic kW per rib

PL

RPM of faster shaft	75	80	90	100	112	125	140	160	180	200	224	250	280	315	355	400	450
585	0.35	0.40	0.50	0.60	0.71	0.84	0.98	1.17	1.36	1.54	1.76	1.99	2.25	2.55	2.89	3.26	3.66
700	0.40	0.46	0.57	0.69	0.83	0.98	1.14	1.36	1.58	1.80	2.05	2.32	2.62	2.97	3.36	3.79	4.25
725	0.41	0.47	0.59	0.71	0.85	1.01	1.18	1.41	1.63	1.85	2.11	2.39	2.70	3.06	3.46	3.90	4.37
870	0.47	0.54	0.68	0.83	0.99	1.17	1.37	1.64	1.90	2.16	2.47	2.79	3.15	3.57	4.03	4.53	5.06
950	0.50	0.58	0.73	0.89	1.07	1.26	1.48	1.77	2.05	2.33	2.65	3.00	3.39	3.84	4.33	4.86	5.42
1160	0.58	0.68	0.86	1.04	1.26	1.49	1.75	2.09	2.42	2.75	3.13	3.54	3.99	4.50	5.06	5.65	6.27
1450	0.68	0.80	1.02	1.24	1.50	1.78	2.10	2.50	2.90	3.29	3.75	4.22	4.75	5.33	5.95	6.60	7.23
1750	0.78	0.92	1.18	1.44	1.74	2.07	2.43	2.91	3.37	3.81	4.33	4.86	5.44	6.07	6.72	7.35	
2850	1.07	1.27	1.67	2.05	2.50	2.97	3.49	4.15	4.76	5.33	5.94	6.52					
3450	1.20	1.43	1.88	2.33	2.84	3.36	3.94	4.65	5.29	5.85							
100	0.08	0.09	0.11	0.13	0.16	0.18	0.21	0.25	0.29	0.32	0.37	0.42	0.47	0.53	0.61	0.69	0.77
200	0.15	0.16	0.20	0.24	0.29	0.33	0.39	0.46	0.53	0.60	0.68	0.77	0.88	0.99	1.13	1.27	1.44
300	0.20	0.23	0.29	0.34	0.40	0.47	0.55	0.66	0.76	0.86	0.98	1.11	1.26	1.42	1.61	1.82	2.06
400	0.26	0.29	0.36	0.43	0.52	0.61	0.71	0.84	0.98	1.11	1.26	1.43	1.62	1.83	2.08	2.35	2.64
500	0.31	0.35	0.44	0.52	0.62	0.73	0.86	1.02	1.18	1.34	1.53	1.73	1.96	2.23	2.52	2.85	3.20
600	0.35	0.40	0.51	0.61	0.73	0.86	1.00	1.20	1.39	1.57	1.79	2.03	2.30	2.61	2.95	3.33	3.74
700	0.40	0.46	0.57	0.69	0.83	0.98	1.14	1.36	1.58	1.80	2.05	2.32	2.62	2.97	3.36	3.79	4.25
800	0.44	0.51	0.64	0.77	0.93	1.09	1.28	1.53	1.77	2.01	2.30	2.60	2.94	3.33	3.76	4.23	4.74
900	0.48	0.56	0.70	0.85	1.02	1.20	1.41	1.69	1.96	2.22	2.54	2.87	3.24	3.67	4.14	4.65	5.20
1000	0.52	0.60	0.76	0.92	1.11	1.31	1.54	1.85	2.14	2.43	2.77	3.13	3.54	4.00	4.51	5.05	5.63
1100	0.56	0.65	0.82	1.00	1.20	1.42	1.67	2.00	2.32	2.63	3.00	3.39	3.82	4.32	4.86	5.44	6.04
1200	0.60	0.69	0.88	1.07	1.29	1.53	1.80	2.15	2.49	2.83	3.22	3.64	4.10	4.62	5.19	5.80	6.42
1300	0.63	0.74	0.94	1.14	1.38	1.63	1.92	2.29	2.66	3.02	3.44	3.88	4.37	4.91	5.51	6.13	6.77
1400	0.67	0.78	0.99	1.21	1.46	1.73	2.04	2.43	2.82	3.20	3.64	4.11	4.62	5.20	5.81	6.45	7.09
1500	0.70	0.82	1.05	1.28	1.54	1.83	2.15	2.57	2.98	3.38	3.85	4.33	4.87	5.46	6.09	6.74	7.37
1600	0.73	0.86	1.10	1.34	1.62	1.93	2.27	2.71	3.14	3.56	4.05	4.55	5.11	5.72	6.36	7.00	7.62
1700	0.77	0.90	1.15	1.41	1.70	2.02	2.38	2.84	3.29	3.73	4.24	4.76	5.33	5.95	6.60	7.24	
1800	0.80	0.93	1.20	1.47	1.78	2.11	2.49	2.97	3.44	3.90	4.42	4.96	5.55	6.18	6.83	7.46	
1900	0.83	0.97	1.25	1.53	1.86	2.20	2.59	3.10	3.59	4.06	4.60	5.15	5.75	6.39	7.03	7.64	
2000	0.86	1.01	1.30	1.59	1.93	2.29	2.70	3.22	3.73	4.22	4.77	5.34	5.94	6.58	7.22		
2100	0.88	1.04	1.35	1.65	2.00	2.38	2.80	3.34	3.87	4.37	4.94	5.51	6.13	6.76	7.38		
2200	0.91	1.07	1.39	1.71	2.08	2.46	2.90	3.46	4.00	4.51	5.09	5.68	6.29	6.92			
2300	0.94	1.11	1.44	1.76	2.14	2.55	3.00	3.58	4.13	4.65	5.24	5.84	6.45	7.07			
2400	0.97	1.14	1.48	1.82	2.21	2.63	3.09	3.69	4.25	4.79	5.39	5.98	6.59	7.19			
2500	0.99	1.17	1.53	1.87	2.28	2.71	3.19	3.80	4.37	4.92	5.53	6.12	6.72				
2600	1.02	1.20	1.57	1.93	2.34	2.78	3.28	3.90	4.49	5.04	5.65	6.25	6.84				
2700	1.04	1.23	1.61	1.98	2.41	2.86	3.36	4.00	4.60	5.16	5.78	6.37	6.94				
2800	1.06	1.26	1.65	2.03	2.47	2.93	3.45	4.10	4.71	5.27	5.89	6.47					
2900	1.08	1.29	1.69	2.08	2.53	3.01	3.53	4.19	4.81	5.38	5.99	6.57					
3000	1.11	1.32	1.73	2.13	2.59	3.08	3.61	4.29	4.91	5.48	6.09	6.65					
3100	1.13	1.34	1.76	2.17	2.65	3.14	3.69	4.37	5.00	5.57	6.18						
3200	1.15	1.37	1.80	2.22	2.70	3.21	3.76	4.46	5.09	5.66	6.26						
3300	1.17	1.39	1.83	2.26	2.76	3.27	3.84	4.54	5.17	5.74	6.33						
3400	1.19	1.42	1.87	2.30	2.81	3.33	3.91	4.61	5.25	5.82	6.39						
3500	1.20	1.44	1.90	2.35	2.86	3.39	3.97	4.69	5.33	5.89							
3600	1.22	1.46	1.93	2.39	2.91	3.45	4.04	4.75	5.39	5.95							
3700	1.24	1.49	1.96	2.43	2.96	3.51	4.10	4.82	5.46	6.00							
3800	1.26	1.51	1.99	2.46	3.01	3.56	4.16	4.88	5.51	6.05							
3900	1.27	1.53	2.02	2.50	3.05	3.61	4.21	4.94	5.56								
4000	1.29	1.55	2.05	2.54	3.09	3.66	4.27	4.99	5.61								
4200	1.31	1.58	2.10	2.60	3.17	3.75	4.36	5.08	5.68								
4400	1.34	1.62	2.15	2.67	3.25	3.83	4.45	5.16									
4600	1.36	1.65	2.20	2.72	3.32	3.91	4.52	5.22									
4800	1.38	1.67	2.24	2.78	3.38	3.97	4.58										
5000	1.40	1.70	2.28	2.82	3.43	4.02	4.63										
5200	1.41	1.72	2.31	2.86	3.47	4.07	4.66										
5400	1.42	1.74	2.34	2.90	3.51	4.10	4.68										
5600	1.43	1.75	2.36	2.92	3.54	4.12											
5800	1.44	1.76	2.38	2.95	3.56	4.14											
6000	1.44	1.77	2.39	2.96	3.57	4.14											

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

POWER RATINGS MICRO-V®

Additional kW per rib for speed ratio

RPM of faster shaft	1 to 1.02	1.03 to 1.06	1.07 to 1.10	1.11 to 1.16	1.17 to 1.23	1.24 to 1.33	1.34 to 1.47	1.48 to 1.71	1.72 to 2.31	>2.31
585	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
700	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
725	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
870	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11
950	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12
1160	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.11	0.13	0.15
1450	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1750	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
2850	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
3450	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
100	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
200	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
300	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04
400	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05
500	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06
600	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
700	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
800	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
900	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11
1000	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
1100	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
1200	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.15
1300	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.16
1400	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1500	0.00	0.02	0.04	0.06	0.08	0.11	0.13	0.15	0.17	0.19
1600	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.20
1700	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.22
1800	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
1900	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.21	0.24
2000	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.23	0.25
2100	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
2200	0.00	0.03	0.06	0.09	0.12	0.15	0.19	0.22	0.25	0.28
2300	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.23	0.26	0.29
2400	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.30
2500	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
2600	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.26	0.29	0.33
2700	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.30	0.34
2800	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.35
2900	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.29	0.33	0.37
3000	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38
3100	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.31	0.35	0.39
3200	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.36	0.41
3300	0.00	0.05	0.09	0.14	0.19	0.23	0.28	0.32	0.37	0.42
3400	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
3500	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.34	0.39	0.44
3600	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.41	0.46
3700	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47
3800	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.43	0.48
3900	0.00	0.06	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
4000	0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51
4200	0.00	0.06	0.12	0.18	0.24	0.30	0.35	0.41	0.47	0.53
4400	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.43	0.50	0.56
4600	0.00	0.06	0.13	0.19	0.26	0.32	0.39	0.45	0.52	0.58
4800	0.00	0.07	0.14	0.20	0.27	0.34	0.41	0.47	0.54	0.61
5000	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
5200	0.00	0.07	0.15	0.22	0.29	0.37	0.44	0.51	0.59	0.66
5400	0.00	0.08	0.15	0.23	0.30	0.38	0.46	0.53	0.61	0.68
5600	0.00	0.08	0.16	0.24	0.32	0.39	0.47	0.55	0.63	0.71
5800	0.00	0.08	0.16	0.24	0.33	0.41	0.49	0.57	0.65	0.73
6000	0.00	0.08	0.17	0.25	0.34	0.42	0.51	0.59	0.68	0.76

Arc of contact correction factor G

$\frac{D - d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L
PL 1270	0.87
PL 1371	0.89
PL 1422	0.90
PL 1562	0.92
PL 1613	0.93
PL 1664	0.94
PL 1715	0.95
PL 1764	0.95
PL 1841	0.96
PL 1943	0.98
PL 1981	0.98
PL 2020	0.99
PL 2070	0.99
PL 2134	1.00
PL 2197	1.01
PL 2324	1.02
PL 2476	1.04
PL 2515	1.04
PL 2705	1.06
PL 2845	1.07
PL 2921	1.08
PL 3086	1.09
PL 3125	1.09
PL 3289	1.11
PL 3327	1.11
PL 3696	1.13

$$\text{Number of ribs required} = \frac{\text{Design kW}}{(A + B) \times G \times C_L}$$

POWER RATINGS MICRO-V®

Basic kW per rib

PM

RPM of faster shaft	180	190	200	212	224	236	250	280	315	355	400	450	500	560	630	710	800
585	2.96	3.26	3.56	3.92	4.27	4.62	5.02	5.88	6.86	7.95	9.15	10.44	11.70	13.16	14.78	16.54	18.39
700	3.40	3.75	4.10	4.51	4.92	5.33	5.80	6.79	7.92	9.18	10.55	12.02	13.44	15.06	16.85	18.73	20.65
725	3.49	3.85	4.21	4.64	5.06	5.48	5.96	6.98	8.14	9.44	10.84	12.35	13.80	15.45	17.26	19.16	21.08
870	4.00	4.42	4.84	5.34	5.83	6.31	6.87	8.05	9.38	10.86	12.45	14.13	15.72	17.50	19.39	21.29	23.06
950	4.27	4.72	5.17	5.70	6.23	6.75	7.35	8.61	10.03	11.59	13.27	15.02	16.67	18.48	20.37	22.19	23.77
1160	4.92	5.45	5.97	6.60	7.21	7.82	8.51	9.96	11.58	13.33	15.17	17.05	18.74	20.51	22.16		
1450	5.70	6.33	6.95	7.68	8.40	9.10	9.91	11.56	13.37	15.27	17.19	19.02	20.50				
1750	6.39	7.10	7.81	8.63	9.43	10.21	11.09	12.87	14.76	16.66	18.42						
2850	7.71	8.58	9.40	10.32	11.17	11.95	12.76										
3450	7.53	8.35	9.10	9.89													
100	0.70	0.76	0.82	0.90	0.97	1.05	1.13	1.31	1.52	1.76	2.02	2.31	2.59	2.93	3.31	3.75	4.24
200	1.25	1.37	1.48	1.62	1.76	1.89	2.05	2.39	2.78	3.21	3.70	4.23	4.75	5.37	6.08	6.88	7.76
300	1.74	1.91	2.08	2.27	2.47	2.67	2.89	3.38	3.93	4.55	5.24	6.00	6.74	7.61	8.61	9.72	10.95
400	2.20	2.41	2.63	2.88	3.14	3.39	3.68	4.30	5.01	5.81	6.69	7.65	8.59	9.69	10.94	12.33	13.84
500	2.62	2.88	3.14	3.45	3.76	4.07	4.42	5.17	6.03	6.99	8.05	9.20	10.32	11.62	13.10	14.71	16.43
600	3.02	3.33	3.63	4.00	4.36	4.71	5.13	6.00	7.00	8.11	9.34	10.66	11.94	13.42	15.07	16.85	18.71
700	3.40	3.75	4.10	4.51	4.92	5.33	5.80	6.79	7.92	9.18	10.55	12.02	13.44	15.06	16.85	18.73	20.65
800	3.76	4.15	4.54	5.00	5.46	5.92	6.44	7.54	8.80	10.19	11.69	13.30	14.82	16.55	18.42	20.34	22.21
900	4.10	4.53	4.96	5.47	5.98	6.48	7.05	8.26	9.63	11.14	12.76	14.47	16.09	17.88	19.78	21.65	23.36
1000	4.43	4.90	5.37	5.92	6.47	7.01	7.64	8.94	10.41	12.03	13.75	15.55	17.22	19.04	20.90	22.64	
1100	4.74	5.25	5.75	6.35	6.94	7.52	8.19	9.59	11.15	12.86	14.66	16.52	18.22	20.01	21.77		
1200	5.03	5.58	6.12	6.76	7.39	8.01	8.72	10.20	11.85	13.63	15.49	17.38	19.07	20.79	22.37		
1300	5.31	5.89	6.47	7.14	7.81	8.46	9.21	10.77	12.49	14.34	16.24	18.13	19.76	21.36			
1400	5.58	6.19	6.80	7.51	8.21	8.90	9.68	11.31	13.09	14.98	16.89	18.75	20.30				
1500	5.83	6.47	7.11	7.85	8.59	9.31	10.12	11.80	13.64	15.55	17.46	19.25	20.66				
1600	6.06	6.74	7.40	8.18	8.94	9.69	10.53	12.26	14.13	16.05	17.92	19.61					
1700	6.28	6.99	7.68	8.48	9.27	10.04	10.91	12.68	14.57	16.47	18.28						
1800	6.49	7.22	7.93	8.77	9.58	10.37	11.26	13.05	14.95	16.82	18.53						
1900	6.68	7.43	8.17	9.03	9.86	10.67	11.57	13.39	15.27	17.09	18.68						
2000	6.86	7.63	8.39	9.27	10.12	10.94	11.85	13.68	15.53	17.27							
2100	7.02	7.81	8.58	9.48	10.35	11.18	12.10	13.92	15.73	17.37							
2200	7.16	7.98	8.76	9.67	10.55	11.39	12.31	14.11	15.87								
2300	7.29	8.12	8.92	9.84	10.73	11.56	12.49	14.26	15.93								
2400	7.41	8.25	9.06	9.99	10.87	11.71	12.63	14.35	15.93								
2500	7.50	8.35	9.17	10.11	10.99	11.83	12.73	14.40									
2600	7.58	8.44	9.26	10.20	11.08	11.91	12.79	14.39									
2700	7.64	8.51	9.34	10.27	11.14	11.95	12.81	14.32									
2800	7.69	8.56	9.38	10.31	11.17	11.96	12.79										
2900	7.72	8.59	9.41	10.33	11.17	11.93	12.72										
3000	7.73	8.59	9.41	10.31	11.13	11.87	12.61										
3100	7.72	8.58	9.38	10.27	11.07	11.77											
3200	7.69	8.54	9.33	10.20	10.96	11.62											
3300	7.64	8.48	9.26	10.10	10.83												
3400	7.57	8.40	9.16	9.96	10.65												
3500	7.48	8.30	9.03	9.80													
3600	7.38	8.17	8.88	9.60													
3700	7.25	8.02	8.69														
3800	7.10	7.84	8.48														
3900	6.92	7.64															
4000	6.73	7.41															

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

POWER RATINGS MICRO-V®

Additional kW per rib for speed ratio

RPM of faster shaft	1 to 1.02	1.03 to 1.06	1.07 to 1.10	1.11 to 1.16	1.17 to 1.23	1.24 to 1.33	1.34 to 1.47	1.48 to 1.71	1.72 to 2.31	>2.31
585	0.00	0.05	0.11	0.16	0.21	0.26	0.32	0.37	0.42	0.47
700	0.00	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.50	0.57
725	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.52	0.59
870	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.55	0.63	0.70
950	0.00	0.09	0.17	0.26	0.34	0.43	0.51	0.60	0.68	0.77
1160	0.00	0.10	0.21	0.31	0.42	0.52	0.63	0.73	0.83	0.94
1450	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17
1750	0.00	0.16	0.31	0.47	0.63	0.79	0.94	1.10	1.26	1.42
2850	0.00	0.26	0.51	0.77	1.03	1.28	1.54	1.80	2.05	2.31
3450	0.00	0.31	0.62	0.93	1.24	1.55	1.86	2.17	2.48	2.79
100	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
200	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16
300	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24
400	0.00	0.04	0.07	0.11	0.14	0.18	0.22	0.25	0.29	0.32
500	0.00	0.05	0.09	0.14	0.18	0.22	0.27	0.31	0.36	0.40
600	0.00	0.05	0.11	0.16	0.22	0.27	0.32	0.38	0.43	0.49
700	0.00	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.50	0.57
800	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.58	0.65
900	0.00	0.08	0.16	0.24	0.32	0.40	0.49	0.57	0.65	0.73
1000	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
1100	0.00	0.10	0.20	0.30	0.40	0.49	0.59	0.69	0.79	0.89
1200	0.00	0.11	0.22	0.32	0.43	0.54	0.65	0.76	0.86	0.97
1300	0.00	0.12	0.23	0.35	0.47	0.58	0.70	0.82	0.94	1.05
1400	0.00	0.13	0.25	0.38	0.50	0.63	0.76	0.88	1.01	1.13
1500	0.00	0.14	0.27	0.41	0.54	0.67	0.81	0.94	1.08	1.21
1600	0.00	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.30
1700	0.00	0.15	0.31	0.46	0.61	0.76	0.92	1.07	1.22	1.38
1800	0.00	0.16	0.32	0.49	0.65	0.81	0.97	1.13	1.30	1.46
1900	0.00	0.17	0.34	0.51	0.68	0.85	1.03	1.20	1.37	1.54
2000	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62
2100	0.00	0.19	0.38	0.57	0.76	0.94	1.13	1.32	1.51	1.70
2200	0.00	0.20	0.40	0.59	0.79	0.99	1.19	1.39	1.58	1.78
2300	0.00	0.21	0.41	0.62	0.83	1.03	1.24	1.45	1.66	1.86
2400	0.00	0.22	0.43	0.65	0.86	1.08	1.30	1.51	1.73	1.94
2500	0.00	0.23	0.45	0.68	0.90	1.12	1.35	1.57	1.80	2.02
2600	0.00	0.23	0.47	0.70	0.94	1.17	1.40	1.64	1.87	2.10
2700	0.00	0.24	0.49	0.73	0.97	1.21	1.46	1.70	1.94	2.19
2800	0.00	0.25	0.50	0.76	1.01	1.26	1.51	1.76	2.01	2.27
2900	0.00	0.26	0.52	0.78	1.04	1.30	1.57	1.83	2.09	2.35
3000	0.00	0.27	0.54	0.81	1.08	1.35	1.62	1.89	2.16	2.43
3100	0.00	0.28	0.56	0.84	1.12	1.39	1.67	1.95	2.23	2.51
3200	0.00	0.29	0.58	0.86	1.15	1.44	1.73	2.02	2.30	2.59
3300	0.00	0.30	0.59	0.89	1.19	1.48	1.78	2.08	2.37	2.67
3400	0.00	0.31	0.61	0.92	1.22	1.53	1.84	2.14	2.45	2.75
3500	0.00	0.32	0.63	0.95	1.26	1.57	1.89	2.20	2.52	2.83
3600	0.00	0.32	0.65	0.97	1.30	1.62	1.94	2.27	2.59	2.91
3700	0.00	0.33	0.67	1.00	1.33	1.66	2.00	2.33	2.66	3.00
3800	0.00	0.34	0.68	1.03	1.37	1.71	2.05	2.39	2.73	3.08
3900	0.00	0.35	0.70	1.05	1.40	1.75	2.11	2.46	2.81	3.16
4000	0.00	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24

Arc of contact correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L
PM 2286	0.88
PM 2388	0.89
PM 2515	0.90
PM 2693	0.91
PM 2832	0.92
PM 2921	0.93
PM 3010	0.94
PM 3124	0.94
PM 3327	0.96
PM 3531	0.97
PM 3734	0.98
PM 4089	1.00
PM 4191	1.01
PM 4470	1.02
PM 4648	1.03
PM 5029	1.04
PM 5410	1.06
PM 6121	1.09
PM 6502	1.10
PM 6883	1.11
PM 7646	1.13
PM 8408	1.15
PM 9169	1.17

$$\text{Number of ribs required} = \frac{\text{Design kW}}{(A + B) \times G \times C_L}$$

POWER RATINGS POLYFLEX® JB™

Basic Watt per rib

5M-JB

RPM of faster shaft	26	28	30	32	34	36	38	40	42	45	48	50	53	56	63	67	71
585	75	96	116	136	156	176	195	215	234	264	293	312	341	369	436	473	511
700	85	109	133	156	180	203	226	250	273	307	341	364	398	431	509	554	598
725	87	112	136	161	185	209	233	257	281	316	352	375	410	445	525	571	616
870	98	127	156	185	214	242	271	299	327	369	410	438	479	520	615	669	723
950	104	136	167	198	229	260	291	321	352	397	442	472	517	561	664	722	780
1160	118	156	193	231	268	305	342	378	415	469	523	559	612	666	789	858	928
1450	134	181	227	272	318	363	408	453	498	564	630	674	739	804	955	1040	1125
1750	149	204	259	313	367	420	474	527	580	658	737	788	866	943	1121	1222	1322
2850	187	272	357	441	525	608	691	773	854	976	1097	1177	1296	1415	1689	1843	1997
3450	200	301	402	501	601	699	797	894	991	1135	1278	1373	1514	1654	1977	2159	2340
100	20	24	28	32	36	40	44	47	51	57	63	67	72	78	91	99	106
200	34	42	49	57	64	72	79	86	94	105	116	123	134	144	169	183	197
300	47	58	68	79	90	101	112	122	133	149	165	175	191	206	242	263	283
400	58	72	86	100	114	128	142	156	170	191	211	225	245	265	312	339	365
500	67	85	102	120	137	154	171	188	205	231	256	273	298	322	380	412	445
600	77	97	118	138	159	179	199	220	240	269	299	319	348	378	445	484	522
700	85	109	133	156	180	203	226	250	273	307	341	364	398	431	509	554	598
800	93	120	147	173	200	226	253	279	305	344	382	408	446	484	572	622	672
900	100	130	160	190	220	249	278	307	336	379	422	451	493	536	634	689	744
1000	107	140	173	206	238	271	303	335	367	414	462	493	540	586	694	755	816
1100	114	150	186	222	257	292	327	362	397	449	500	534	585	636	753	820	886
1200	120	159	198	237	275	313	351	389	426	482	538	575	630	685	812	884	955
1300	126	168	210	251	292	333	374	415	455	515	575	615	674	733	870	947	1024
1400	132	177	221	265	310	353	397	440	484	548	612	655	718	781	927	1009	1091
1500	137	185	232	279	326	373	419	466	512	580	648	693	761	828	983	1071	1158
1600	142	193	243	293	343	392	441	490	539	612	684	732	803	874	1039	1132	1224
1700	147	200	253	306	359	411	463	515	566	643	719	770	845	920	1094	1192	1289
1800	151	208	264	319	375	430	484	539	593	674	754	807	887	965	1148	1251	1354
1900	156	215	274	332	390	448	505	562	619	704	788	844	927	1010	1202	1310	1418
2000	160	222	283	344	405	466	526	586	645	734	822	881	968	1055	1255	1368	1481
2200	167	235	302	369	435	501	566	632	696	793	889	953	1048	1142	1360	1483	1606
2400	174	247	320	392	464	535	606	676	746	851	954	1023	1126	1228	1463	1596	1728
2600	180	259	337	414	491	568	644	720	795	907	1018	1092	1202	1312	1564	1707	1849
2800	186	270	353	436	518	600	681	762	843	962	1081	1160	1278	1394	1664	1816	1967
3000	191	280	369	457	544	631	718	804	889	1017	1143	1227	1352	1476	1762	1924	2084
3200	195	290	384	477	570	662	753	844	935	1070	1204	1292	1424	1556	1858	2029	2199
3400	199	299	398	497	595	692	788	884	980	1122	1263	1357	1496	1634	1953	2134	2312
3600	202	308	412	516	619	721	822	923	1024	1173	1322	1420	1567	1712	2047	2236	2423
3800	205	316	425	534	642	749	856	962	1067	1224	1379	1482	1636	1788	2139	2337	2533
4000	208	323	438	552	665	777	889	999	1110	1274	1436	1544	1704	1863	2230	2437	2641
4200	210	331	450	569	687	804	921	1036	1151	1322	1492	1604	1772	1937	2319	2535	2748
4400	212	337	462	586	709	831	952	1073	1192	1370	1547	1664	1838	2010	2408	2631	2853
4600	213	344	473	602	730	857	983	1108	1232	1418	1601	1722	1903	2082	2495	2726	2956
4800	214	350	484	618	751	882	1013	1143	1272	1464	1654	1780	1968	2153	2580	2820	3058
5000	214	355	495	633	771	907	1043	1177	1311	1510	1707	1837	2031	2223	2665	2913	3158
5200	215	360	505	648	790	932	1072	1211	1349	1555	1759	1893	2094	2292	2748	3004	3257
5400		365	514	663	810	956	1100	1244	1387	1599	1809	1948	2155	2360	2830	3094	3354
5600		369	524	677	828	979	1128	1277	1424	1643	1860	2003	2216	2427	2911	3182	3450
5800		373	532	690	847	1002	1156	1309	1460	1686	1909	2056	2276	2493	2990	3269	3544
6000		377	541	703	864	1024	1183	1340	1496	1728	1958	2109	2335	2558	3069	3355	3637
6200		380	549	716	882	1046	1209	1371	1531	1770	2006	2161	2393	2622	3146	3439	3728
6400		384	557	728	899	1068	1235	1401	1566	1811	2053	2213	2450	2685	3222	3522	3817
6600		386	564	740	915	1089	1260	1431	1600	1851	2099	2263	2506	2747	3296	3604	3906
6800		389	571	752	931	1109	1285	1460	1634	1891	2145	2313	2562	2808	3370	3684	3992
7000		391	578	763	947	1129	1310	1489	1666	1930	2190	2362	2617	2868	3442	3763	4077
7500		395	593	790	985	1178	1369	1558	1746	2025	2300	2481	2750	3014	3618	3954	4283
8000		397	606	814	1020	1223	1425	1625	1823	2116	2405	2595	2877	3155	3786	4137	4479
8500		397	618	836	1053	1267	1478	1688	1896	2203	2506	2705	2999	3289	3947	4311	4665
9000			627	856	1083	1307	1529	1748	1965	2286	2602	2810	3116	3418	4100	4476	4841
10000			640	890	1137	1381	1621	1859	2094	2441	2782	3005	3334	3657	4381	4778	5161

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Please contact Gates application engineers for 3M-JB drive design data.

POWER RATINGS POLYFLEX® JB™

Basic Watt per rib for speed ratio

RPM of faster shaft	1.00 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.21	1.22 to 1.29	1.30 to 1.46	>1.46
585	0	2	4	6	8	10	12	14	16	18
700	0	2	5	7	9	12	14	16	19	21
725	0	2	5	7	10	12	15	17	19	22
870	0	3	6	9	12	15	18	20	23	26
950	0	3	6	10	13	16	19	22	26	29
1160	0	4	8	12	16	19	23	27	31	35
1450	0	5	10	15	19	24	29	34	39	44
1750	0	6	12	18	24	29	35	41	47	53
2850	0	10	19	29	38	48	57	67	77	86
3450	0	12	23	35	46	58	69	81	93	104
100	0	0	1	1	1	2	2	2	3	3
200	0	1	1	2	3	3	4	5	5	6
300	0	1	2	3	4	5	6	7	8	9
400	0	1	3	4	5	7	8	9	11	12
500	0	2	3	5	7	8	10	12	13	15
600	0	2	4	6	8	10	12	14	16	18
700	0	2	5	7	9	12	14	16	19	21
800	0	3	5	8	11	13	16	19	21	24
900	0	3	6	9	12	15	18	21	24	27
1000	0	3	7	10	13	17	20	23	27	30
1100	0	4	7	11	15	18	22	26	30	33
1200	0	4	8	12	16	20	24	28	32	36
1300	0	4	9	13	17	22	26	31	35	39
1400	0	5	9	14	19	23	28	33	38	42
1500	0	5	10	15	20	25	30	35	40	45
1600	0	5	11	16	21	27	32	38	43	48
1700	0	6	11	17	23	29	34	40	46	51
1800	0	6	12	18	24	30	36	42	48	54
1900	0	6	13	19	26	32	38	45	51	57
2000	0	7	13	20	27	34	40	47	54	60
2200	0	7	15	22	30	37	44	52	59	66
2400	0	8	16	24	32	40	48	56	64	72
2600	0	9	17	26	35	44	52	61	70	78
2800	0	9	19	28	38	47	56	66	75	85
3000	0	10	20	30	40	50	60	70	81	91
3200	0	11	22	32	43	54	64	75	86	97
3400	0	11	23	34	46	57	68	80	91	103
3600	0	12	24	36	48	60	72	85	97	109
3800	0	13	26	38	51	64	77	89	102	115
4000	0	13	27	40	54	67	81	94	107	121
4200	0	14	28	42	56	70	85	99	113	127
4400	0	15	30	44	59	74	89	103	118	133
4600	0	15	31	46	62	77	93	108	124	139
4800	0	16	32	48	64	81	97	113	129	145
5000	0	17	34	50	67	84	101	117	134	151
5200	0	17	35	52	70	87	105	122	140	157
5400	0	18	36	54	73	91	109	127	145	163
5600	0	19	38	56	75	94	113	132	150	169
5800	0	19	39	58	78	97	117	136	156	175
6000	0	20	40	60	81	101	121	141	161	181
6200	0	21	42	62	83	104	125	146	167	187
6400	0	21	43	64	86	107	129	150	172	193
6600	0	22	44	66	89	111	133	155	177	199
6800	0	23	46	68	91	114	137	160	183	205
7000	0	23	47	70	94	117	141	164	188	211
7500	0	25	50	75	101	126	151	176	201	226
8000	0	27	54	80	107	134	161	188	215	242
8500	0	28	57	85	114	143	171	200	228	257
9000	0	30	61	91	121	151	181	211	242	272
10000	0	33	67	101	134	168	201	235	269	302

Arc of correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L	Belt ref.	Corr. factor C_L
5M-JB 280	0.83	5M-JB 800	1.14
5M-JB 290	0.84	5M-JB 825	1.15
5M-JB 300	0.85	5M-JB 850	1.16
5M-JB 307	0.86	5M-JB 875	1.17
5M-JB 315	0.87	5M-JB 900	1.17
5M-JB 325	0.88	5M-JB 925	1.18
5M-JB 335	0.89	5M-JB 950	1.19
5M-JB 345	0.89	5M-JB 975	1.20
5M-JB 355	0.90	5M-JB 1000	1.20
5M-JB 365	0.91	5M-JB 1030	1.21
5M-JB 375	0.92	5M-JB 1060	1.22
5M-JB 387	0.93	5M-JB 1090	1.23
5M-JB 400	0.94	5M-JB 1120	1.24
5M-JB 412	0.95	5M-JB 1150	1.25
5M-JB 425	0.96	5M-JB 1180	1.25
5M-JB 437	0.96	5M-JB 1220	1.26
5M-JB 450	0.97	5M-JB 1250	1.27
5M-JB 462	0.98	5M-JB 1280	1.28
5M-JB 475	0.99	5M-JB 1320	1.29
5M-JB 487	1.00	5M-JB 1360	1.29
5M-JB 500	1.00	5M-JB 1400	1.30
5M-JB 515	1.01	5M-JB 1450	1.31
5M-JB 530	1.02	5M-JB 1500	1.32
5M-JB 545	1.03		
5M-JB 560	1.04		
5M-JB 580	1.05		
5M-JB 600	1.06		
5M-JB 615	1.06		
5M-JB 630	1.07		
5M-JB 650	1.08		
5M-JB 670	1.09		
5M-JB 690	1.10		
5M-JB 710	1.10		
5M-JB 730	1.11		
5M-JB 750	1.12		
5M-JB 775	1.13		

$$\text{Number of ribs required} = \frac{\text{Design kW} \times 1000}{(A + B) \times G \times C_L}$$

POWER RATINGS POLYFLEX® JB™

Basic kW per rib

7M-JB

RPM of faster shaft	42	45	48	50	53	56	63	67	71	75	80	85	90	95	100	106	112
585	0.30	0.36	0.42	0.45	0.51	0.57	0.70	0.77	0.85	0.92	1.01	1.10	1.19	1.28	1.37	1.48	1.59
700	0.35	0.41	0.48	0.53	0.59	0.66	0.81	0.90	0.99	1.07	1.18	1.29	1.40	1.50	1.61	1.73	1.86
725	0.36	0.43	0.50	0.54	0.61	0.68	0.84	0.93	1.02	1.11	1.22	1.33	1.44	1.55	1.66	1.79	1.92
870	0.41	0.49	0.57	0.63	0.71	0.79	0.98	1.09	1.19	1.30	1.43	1.56	1.69	1.82	1.95	2.10	2.25
950	0.44	0.53	0.62	0.67	0.76	0.85	1.05	1.17	1.29	1.40	1.54	1.68	1.82	1.96	2.10	2.27	2.44
1160	0.51	0.61	0.72	0.79	0.90	1.00	1.25	1.39	1.52	1.66	1.83	2.00	2.17	2.34	2.51	2.70	2.90
1450	0.60	0.73	0.86	0.95	1.08	1.20	1.50	1.67	1.84	2.01	2.22	2.43	2.63	2.84	3.04	3.28	3.53
1750	0.68	0.84	0.99	1.10	1.25	1.40	1.76	1.96	2.16	2.36	2.60	2.85	3.09	3.33	3.58	3.86	4.15
2850	0.94	1.19	1.43	1.59	1.83	2.06	2.61	2.92	3.23	3.53	3.91	4.29	4.66	5.03	5.39	5.83	6.26
3450	1.06	1.35	1.63	1.82	2.11	2.39	3.03	3.40	3.76	4.12	4.57	5.01	5.44	5.87	6.30	6.80	7.30
100	0.07	0.08	0.09	0.10	0.11	0.12	0.15	0.16	0.18	0.19	0.21	0.23	0.25	0.26	0.28	0.30	0.32
200	0.13	0.15	0.17	0.18	0.21	0.23	0.28	0.30	0.33	0.36	0.39	0.43	0.46	0.49	0.53	0.57	0.61
300	0.18	0.21	0.24	0.26	0.29	0.32	0.39	0.43	0.47	0.51	0.56	0.61	0.66	0.71	0.76	0.82	0.87
400	0.22	0.26	0.30	0.33	0.37	0.41	0.50	0.56	0.61	0.66	0.72	0.79	0.85	0.92	0.98	1.05	1.13
500	0.27	0.32	0.37	0.40	0.45	0.50	0.61	0.67	0.74	0.80	0.88	0.96	1.04	1.12	1.19	1.29	1.38
600	0.31	0.37	0.42	0.46	0.52	0.58	0.71	0.79	0.86	0.94	1.03	1.13	1.22	1.31	1.40	1.51	1.62
700	0.35	0.41	0.48	0.53	0.59	0.66	0.81	0.90	0.99	1.07	1.18	1.29	1.40	1.50	1.61	1.73	1.86
800	0.38	0.46	0.54	0.59	0.66	0.74	0.91	1.01	1.11	1.21	1.33	1.45	1.57	1.69	1.81	1.95	2.09
900	0.42	0.50	0.59	0.65	0.73	0.81	1.01	1.12	1.23	1.34	1.47	1.61	1.74	1.87	2.01	2.16	2.32
1000	0.45	0.55	0.64	0.70	0.80	0.89	1.10	1.22	1.34	1.46	1.61	1.76	1.91	2.05	2.20	2.37	2.55
1100	0.49	0.59	0.69	0.76	0.86	0.96	1.19	1.33	1.46	1.59	1.75	1.91	2.07	2.23	2.39	2.58	2.77
1200	0.52	0.63	0.74	0.81	0.92	1.03	1.28	1.43	1.57	1.71	1.89	2.06	2.24	2.41	2.58	2.79	2.99
1300	0.55	0.67	0.79	0.87	0.98	1.10	1.37	1.53	1.68	1.83	2.02	2.21	2.40	2.58	2.77	2.99	3.21
1400	0.58	0.71	0.84	0.92	1.05	1.17	1.46	1.63	1.79	1.95	2.15	2.35	2.55	2.75	2.95	3.19	3.42
1500	0.61	0.75	0.88	0.97	1.10	1.24	1.55	1.72	1.90	2.07	2.28	2.50	2.71	2.92	3.13	3.38	3.63
1600	0.64	0.78	0.93	1.02	1.16	1.30	1.63	1.82	2.00	2.19	2.41	2.64	2.86	3.09	3.31	3.58	3.84
1700	0.67	0.82	0.97	1.07	1.22	1.37	1.72	1.91	2.11	2.30	2.54	2.78	3.02	3.25	3.49	3.77	4.05
1800	0.69	0.85	1.01	1.12	1.28	1.43	1.80	2.01	2.21	2.41	2.67	2.92	3.17	3.42	3.66	3.96	4.25
1900	0.72	0.89	1.06	1.17	1.33	1.50	1.88	2.10	2.31	2.53	2.79	3.06	3.32	3.58	3.84	4.14	4.45
2000	0.75	0.92	1.10	1.21	1.39	1.56	1.96	2.19	2.41	2.64	2.91	3.19	3.46	3.74	4.01	4.33	4.65
2200	0.80	0.99	1.18	1.31	1.50	1.68	2.12	2.37	2.61	2.86	3.16	3.46	3.76	4.05	4.34	4.69	5.04
2400	0.84	1.05	1.26	1.40	1.60	1.80	2.27	2.54	2.81	3.07	3.39	3.72	4.04	4.36	4.67	5.05	5.42
2600	0.89	1.11	1.33	1.48	1.70	1.92	2.43	2.71	3.00	3.28	3.63	3.97	4.32	4.66	5.00	5.40	5.80
2800	0.93	1.17	1.41	1.57	1.80	2.03	2.57	2.88	3.18	3.48	3.86	4.23	4.59	4.95	5.31	5.74	6.17
3000	0.97	1.23	1.48	1.65	1.90	2.15	2.72	3.04	3.36	3.68	4.08	4.47	4.86	5.24	5.62	6.08	6.52
3200	1.01	1.28	1.55	1.73	1.99	2.25	2.86	3.20	3.54	3.88	4.30	4.71	5.12	5.53	5.93	6.40	6.88
3400	1.05	1.34	1.62	1.80	2.08	2.36	3.00	3.36	3.72	4.07	4.51	4.95	5.38	5.80	6.22	6.72	7.22
3600	1.09	1.39	1.68	1.88	2.17	2.46	3.14	3.52	3.89	4.26	4.72	5.18	5.63	6.07	6.52	7.04	7.55
3800	1.12	1.44	1.75	1.95	2.26	2.57	3.27	3.67	4.06	4.45	4.93	5.41	5.88	6.34	6.80	7.34	7.88
4000	1.16	1.48	1.81	2.03	2.35	2.67	3.40	3.81	4.22	4.63	5.13	5.63	6.12	6.60	7.08	7.64	8.19
4200	1.19	1.53	1.87	2.09	2.43	2.76	3.53	3.96	4.39	4.81	5.33	5.84	6.35	6.85	7.35	7.93	8.50
4400	1.22	1.57	1.93	2.16	2.51	2.86	3.65	4.10	4.54	4.98	5.52	6.06	6.58	7.10	7.61	8.21	8.80
4600	1.25	1.62	1.99	2.23	2.59	2.95	3.77	4.24	4.70	5.15	5.71	6.26	6.81	7.34	7.87	8.49	9.09
4800	1.27	1.66	2.04	2.29	2.67	3.04	3.89	4.37	4.85	5.32	5.90	6.47	7.02	7.58	8.12	8.75	9.37
5000	1.30	1.70	2.09	2.35	2.74	3.13	4.01	4.51	5.00	5.48	6.08	6.66	7.24	7.80	8.36	9.01	9.65
5200	1.33	1.74	2.15	2.41	2.82	3.21	4.13	4.64	5.14	5.64	6.25	6.86	7.45	8.03	8.59	9.26	9.91
5400	1.35	1.77	2.20	2.47	2.89	3.30	4.24	4.76	5.28	5.80	6.42	7.04	7.65	8.24	8.82	9.50	10.16
5600	1.37	1.81	2.24	2.53	2.96	3.38	4.35	4.89	5.42	5.95	6.59	7.22	7.84	8.45	9.04	9.73	10.40
5800	1.39	1.84	2.29	2.59	3.02	3.46	4.45	5.01	5.56	6.09	6.76	7.40	8.03	8.65	9.26	9.96	10.64
6000	1.41	1.88	2.34	2.64	3.09	3.54	4.56	5.13	5.69	6.24	6.91	7.57	8.22	8.85	9.46	10.17	10.86
6200	1.43	1.91	2.38	2.69	3.15	3.61	4.66	5.24	5.81	6.38	7.07	7.74	8.40	9.04	9.66	10.38	11.07
6400	1.45	1.94	2.42	2.74	3.22	3.68	4.75	5.35	5.94	6.51	7.22	7.90	8.57	9.22	9.85	10.58	11.28
6600	1.46	1.97	2.46	2.79	3.28	3.75	4.85	5.46	6.06	6.64	7.36	8.06	8.74	9.39	10.03	10.76	11.47
6800	1.48	1.99	2.50	2.84	3.33	3.82	4.94	5.56	6.17	6.77	7.50	8.21	8.90	9.56	10.20	10.94	11.65
7000	1.49	2.02	2.54	2.88	3.39	3.89	5.03	5.67	6.29	6.89	7.64	8.35	9.05	9.72	10.37	11.11	
7500	1.52	2.08	2.63	2.99	3.52	4.05	5.24	5.91	6.55	7.18	7.95	8.69	9.40	10.09	10.74		
8000	1.54	2.13	2.70	3.08	3.64	4.19	5.44	6.13	6.80	7.45	8.23	8.99	9.71	10.40			
8500	1.56	2.17	2.77	3.16	3.75	4.32	5.61	6.32	7.01	7.68	8.48	9.25					
9000		2.20	2.82	3.24	3.84	4.43	5.77	6.50	7.21	7.89	8.70						
10000		2.23	2.91	3.34	3.99	4.62	6.02	6.78	7.51	8.21							

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Please contact Gates application engineers for 3M-JB drive design data.

POWER RATINGS POLYFLEX® JB™

Basic kW per rib for speed ratio

RPM of faster shaft	1.00 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.21	1.22 to 1.29	1.30 to 1.46	>1.46
585	0.000	0.005	0.011	0.016	0.022	0.027	0.033	0.038	0.044	0.049
700	0.000	0.007	0.013	0.020	0.026	0.033	0.039	0.046	0.052	0.059
725	0.000	0.007	0.014	0.020	0.027	0.034	0.041	0.047	0.054	0.061
870	0.000	0.008	0.016	0.024	0.033	0.041	0.049	0.057	0.065	0.073
950	0.000	0.009	0.018	0.027	0.036	0.044	0.053	0.062	0.071	0.080
1160	0.000	0.011	0.022	0.032	0.043	0.054	0.065	0.076	0.087	0.097
1450	0.000	0.013	0.027	0.041	0.054	0.068	0.081	0.095	0.108	0.122
1750	0.000	0.016	0.033	0.049	0.065	0.082	0.098	0.114	0.131	0.147
2850	0.000	0.026	0.053	0.080	0.107	0.133	0.160	0.186	0.213	0.239
3450	0.000	0.032	0.065	0.097	0.129	0.161	0.193	0.226	0.258	0.290
100	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.007	0.008
200	0.000	0.002	0.004	0.006	0.007	0.009	0.011	0.013	0.015	0.017
300	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.020	0.022	0.025
400	0.000	0.004	0.007	0.011	0.015	0.019	0.022	0.026	0.030	0.034
500	0.000	0.005	0.009	0.014	0.019	0.023	0.028	0.033	0.037	0.042
600	0.000	0.006	0.011	0.017	0.022	0.028	0.034	0.039	0.045	0.050
700	0.000	0.007	0.013	0.020	0.026	0.033	0.039	0.046	0.052	0.059
800	0.000	0.007	0.015	0.022	0.030	0.037	0.045	0.052	0.060	0.067
900	0.000	0.008	0.017	0.025	0.034	0.042	0.050	0.059	0.067	0.076
1000	0.000	0.009	0.019	0.028	0.037	0.047	0.056	0.065	0.075	0.084
1100	0.000	0.010	0.021	0.031	0.041	0.051	0.062	0.072	0.082	0.092
1200	0.000	0.011	0.022	0.034	0.045	0.056	0.067	0.078	0.090	0.101
1300	0.000	0.012	0.024	0.036	0.049	0.061	0.073	0.085	0.097	0.109
1400	0.000	0.013	0.026	0.039	0.052	0.065	0.078	0.092	0.105	0.118
1500	0.000	0.014	0.028	0.042	0.056	0.070	0.084	0.098	0.112	0.126
1600	0.000	0.015	0.030	0.045	0.060	0.075	0.090	0.105	0.120	0.134
1700	0.000	0.016	0.032	0.048	0.064	0.079	0.095	0.111	0.127	0.143
1800	0.000	0.017	0.034	0.050	0.067	0.084	0.101	0.118	0.135	0.151
1900	0.000	0.018	0.036	0.053	0.071	0.089	0.106	0.124	0.142	0.160
2000	0.000	0.019	0.037	0.056	0.075	0.093	0.112	0.131	0.149	0.168
2200	0.000	0.020	0.041	0.062	0.082	0.103	0.123	0.144	0.164	0.185
2400	0.000	0.022	0.045	0.067	0.090	0.112	0.134	0.157	0.179	0.202
2600	0.000	0.024	0.049	0.073	0.097	0.121	0.146	0.170	0.194	0.218
2800	0.000	0.026	0.052	0.078	0.105	0.131	0.157	0.183	0.209	0.235
3000	0.000	0.028	0.056	0.084	0.112	0.140	0.168	0.196	0.224	0.252
3200	0.000	0.030	0.060	0.090	0.120	0.149	0.179	0.209	0.239	0.269
3400	0.000	0.032	0.064	0.095	0.127	0.159	0.191	0.222	0.254	0.286
3600	0.000	0.033	0.067	0.101	0.135	0.168	0.202	0.235	0.269	0.302
3800	0.000	0.035	0.071	0.106	0.142	0.177	0.213	0.248	0.284	0.319
4000	0.000	0.037	0.075	0.112	0.150	0.187	0.224	0.262	0.299	0.336
4200	0.000	0.039	0.079	0.118	0.157	0.196	0.235	0.275	0.314	0.353
4400	0.000	0.041	0.082	0.123	0.164	0.205	0.247	0.288	0.329	0.370
4600	0.000	0.043	0.086	0.129	0.172	0.215	0.258	0.301	0.344	0.386
4800	0.000	0.045	0.090	0.134	0.179	0.224	0.269	0.314	0.359	0.403
5000	0.000	0.046	0.094	0.140	0.187	0.233	0.280	0.327	0.374	0.420
5200	0.000	0.048	0.097	0.146	0.194	0.243	0.291	0.340	0.389	0.437
5400	0.000	0.050	0.101	0.151	0.202	0.252	0.303	0.353	0.404	0.454
5600	0.000	0.052	0.105	0.157	0.209	0.262	0.314	0.366	0.419	0.471
5800	0.000	0.054	0.109	0.162	0.217	0.271	0.325	0.379	0.434	0.487
6000	0.000	0.056	0.112	0.168	0.224	0.280	0.336	0.392	0.448	0.504
6200	0.000	0.058	0.116	0.174	0.232	0.290	0.347	0.405	0.463	0.521
6400	0.000	0.059	0.120	0.179	0.239	0.299	0.359	0.418	0.478	0.538
6600	0.000	0.061	0.124	0.185	0.247	0.308	0.370	0.432	0.493	0.555
6800	0.000	0.063	0.127	0.190	0.254	0.318	0.381	0.445	0.508	0.571
7000	0.000	0.065	0.131	0.196	0.262	0.327	0.392	0.458	0.523	0.588
7500	0.000	0.070	0.140	0.210	0.280	0.350	0.420	0.490	0.561	0.630
8000	0.000	0.074	0.150	0.224	0.299	0.374	0.448	0.523	0.598	0.672
8500	0.000	0.079	0.159	0.238	0.318	0.397	0.476	0.556	0.635	0.714
9000	0.000	0.084	0.169	0.252	0.336	0.420	0.504	0.588	0.673	0.756
10000	0.000	0.093	0.187	0.280	0.374	0.467	0.560	0.654	0.747	0.840

Arc of correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L	Belt ref.	Corr. factor C_L
7M-JB 500	0.87	7M-JB 1400	1.13
7M-JB 515	0.88	7M-JB 1450	1.14
7M-JB 530	0.88	7M-JB 1500	1.15
7M-JB 545	0.89	7M-JB 1550	1.15
7M-JB 560	0.90	7M-JB 1600	1.16
7M-JB 580	0.91	7M-JB 1650	1.17
7M-JB 600	0.91	7M-JB 1700	1.18
7M-JB 615	0.92	7M-JB 1750	1.19
7M-JB 630	0.93	7M-JB 1800	1.19
7M-JB 650	0.94	7M-JB 1850	1.20
7M-JB 670	0.94	7M-JB 1900	1.21
7M-JB 690	0.95	7M-JB 1950	1.21
7M-JB 710	0.96	7M-JB 2000	1.22
7M-JB 730	0.96	7M-JB 2060	1.23
7M-JB 750	0.97	7M-JB 2120	1.23
7M-JB 775	0.98	7M-JB 2180	1.24
7M-JB 800	0.99	7M-JB 2240	1.25
7M-JB 825	1.00	7M-JB 2300	1.25
7M-JB 850	1.00		
7M-JB 875	1.01		
7M-JB 900	1.02		
7M-JB 925	1.02		
7M-JB 950	1.03		
7M-JB 975	1.04		
7M-JB 1000	1.04		
7M-JB 1030	1.05		
7M-JB 1060	1.06		
7M-JB 1090	1.07		
7M-JB 1120	1.07		
7M-JB 1150	1.08		
7M-JB 1180	1.09		
7M-JB 1220	1.09		
7M-JB 1250	1.10		
7M-JB 1280	1.11		
7M-JB 1320	1.11		
7M-JB 1360	1.12		

$$\text{Number of ribs required} = \frac{\text{Design kW}}{(A + B) \times G \times C_L}$$

POWER RATINGS POLYFLEX® JB™

Basic kW per rib

11M-JB

RPM of faster shaft	67	71	75	80	85	90	95	100	106	112	118	125	132	140	150	160	170
585	1.01	1.16	1.30	1.48	1.66	1.84	2.02	2.19	2.40	2.61	2.82	3.07	3.31	3.58	3.93	4.27	4.61
700	1.17	1.35	1.52	1.73	1.94	2.15	2.36	2.57	2.82	3.06	3.31	3.60	3.88	4.21	4.61	5.01	5.41
725	1.21	1.39	1.56	1.78	2.00	2.22	2.43	2.65	2.90	3.16	3.42	3.71	4.01	4.34	4.76	5.17	5.59
870	1.40	1.61	1.82	2.08	2.34	2.59	2.85	3.10	3.41	3.71	4.01	4.36	4.71	5.11	5.60	6.09	6.58
950	1.51	1.73	1.96	2.24	2.52	2.80	3.07	3.35	3.68	4.01	4.34	4.72	5.09	5.52	6.06	6.59	7.11
1160	1.77	2.04	2.31	2.65	2.98	3.32	3.65	3.98	4.38	4.77	5.17	5.62	6.07	6.59	7.23	7.86	8.49
1450	2.11	2.44	2.77	3.19	3.60	4.01	4.42	4.82	5.31	5.79	6.27	6.83	7.38	8.01	8.79	9.56	10.33
1750	2.44	2.84	3.23	3.72	4.21	4.70	5.18	5.66	6.23	6.80	7.37	8.03	8.68	9.42	10.34	11.24	12.14
2850	3.51	4.12	4.73	5.49	6.25	6.99	7.73	8.47	9.34	10.20	11.06	12.05	13.02	14.12	15.48	16.80	18.10
3450	4.01	4.73	5.45	6.35	7.23	8.11	8.98	9.83	10.85	11.86	12.85	13.99	15.11	16.36	17.90	19.39	20.84
100	0.23	0.25	0.28	0.32	0.35	0.39	0.42	0.45	0.49	0.53	0.58	0.62	0.67	0.72	0.79	0.85	0.92
200	0.41	0.46	0.52	0.58	0.65	0.72	0.78	0.85	0.92	1.00	1.08	1.17	1.26	1.36	1.49	1.61	1.74
300	0.58	0.66	0.74	0.83	0.93	1.02	1.12	1.21	1.33	1.44	1.55	1.68	1.81	1.96	2.15	2.33	2.52
400	0.74	0.84	0.94	1.07	1.19	1.32	1.44	1.57	1.72	1.86	2.01	2.18	2.35	2.55	2.79	3.03	3.27
500	0.89	1.02	1.14	1.29	1.45	1.60	1.76	1.91	2.09	2.27	2.45	2.66	2.87	3.11	3.41	3.70	4.00
600	1.04	1.18	1.33	1.51	1.70	1.88	2.06	2.24	2.46	2.67	2.89	3.14	3.38	3.67	4.02	4.37	4.71
700	1.17	1.35	1.52	1.73	1.94	2.15	2.36	2.57	2.82	3.06	3.31	3.60	3.88	4.21	4.61	5.01	5.41
800	1.31	1.50	1.70	1.94	2.17	2.41	2.65	2.88	3.17	3.45	3.73	4.05	4.37	4.74	5.20	5.65	6.10
900	1.44	1.66	1.87	2.14	2.40	2.67	2.93	3.20	3.51	3.82	4.13	4.50	4.86	5.26	5.77	6.28	6.78
1000	1.57	1.81	2.04	2.34	2.63	2.92	3.21	3.50	3.85	4.19	4.54	4.93	5.33	5.78	6.34	6.89	7.45
1100	1.69	1.95	2.21	2.53	2.85	3.17	3.49	3.80	4.18	4.56	4.93	5.36	5.80	6.29	6.90	7.50	8.10
1200	1.81	2.10	2.38	2.72	3.07	3.42	3.76	4.10	4.51	4.92	5.32	5.79	6.26	6.79	7.45	8.10	8.75
1300	1.93	2.24	2.54	2.91	3.29	3.66	4.03	4.39	4.83	5.27	5.70	6.21	6.71	7.28	7.99	8.69	9.39
1400	2.05	2.37	2.70	3.10	3.50	3.89	4.29	4.68	5.15	5.62	6.08	6.62	7.16	7.77	8.52	9.27	10.01
1500	2.16	2.51	2.85	3.28	3.70	4.13	4.55	4.97	5.47	5.96	6.46	7.03	7.60	8.25	9.05	9.85	10.63
1600	2.27	2.64	3.01	3.46	3.91	4.36	4.80	5.25	5.78	6.30	6.83	7.43	8.04	8.72	9.57	10.41	11.24
1700	2.38	2.77	3.16	3.63	4.11	4.58	5.06	5.52	6.08	6.64	7.19	7.83	8.47	9.19	10.08	10.97	11.85
1800	2.49	2.90	3.30	3.81	4.31	4.81	5.30	5.80	6.39	6.97	7.55	8.22	8.89	9.65	10.59	11.52	12.44
1900	2.60	3.02	3.45	3.98	4.51	5.03	5.55	6.07	6.68	7.30	7.91	8.61	9.31	10.11	11.09	12.06	13.02
2000	2.70	3.15	3.59	4.15	4.70	5.25	5.79	6.33	6.98	7.62	8.26	8.99	9.73	10.55	11.58	12.59	13.59
2200	2.90	3.39	3.88	4.48	5.08	5.68	6.27	6.86	7.56	8.25	8.94	9.74	10.54	11.43	12.54	13.64	14.72
2400	3.09	3.62	4.15	4.80	5.45	6.09	6.73	7.37	8.12	8.87	9.62	10.48	11.33	12.29	13.48	14.65	15.80
2600	3.28	3.85	4.41	5.11	5.81	6.50	7.18	7.86	8.67	9.47	10.27	11.19	12.09	13.12	14.38	15.63	16.85
2800	3.46	4.07	4.67	5.42	6.16	6.89	7.62	8.35	9.21	10.06	10.90	11.88	12.84	13.93	15.26	16.57	17.85
3000	3.64	4.28	4.92	5.71	6.50	7.28	8.05	8.82	9.73	10.63	11.52	12.55	13.56	14.71	16.11	17.48	18.82
3200	3.81	4.49	5.16	6.00	6.83	7.65	8.47	9.28	10.24	11.19	12.12	13.20	14.26	15.46	16.92	18.35	19.75
3400	3.97	4.69	5.40	6.28	7.15	8.02	8.88	9.72	10.73	11.72	12.70	13.83	14.94	16.19	17.71	19.19	20.63
3600	4.12	4.88	5.62	6.55	7.47	8.37	9.27	10.16	11.21	12.25	13.27	14.44	15.59	16.88	18.46	19.99	21.46
3800	4.27	5.06	5.84	6.81	7.77	8.72	9.65	10.58	11.67	12.75	13.81	15.03	16.22	17.56	19.18	20.74	22.25
4000	4.42	5.24	6.06	7.07	8.06	9.05	10.02	10.98	12.12	13.24	14.34	15.59	16.82	18.20	19.86	21.46	23.00
4200	4.56	5.41	6.26	7.31	8.35	9.37	10.38	11.38	12.55	13.71	14.84	16.14	17.40	18.81	20.50	22.13	23.69
4400	4.69	5.58	6.46	7.55	8.62	9.68	10.73	11.76	12.97	14.16	15.33	16.66	17.95	19.39	21.11	22.76	24.33
4600	4.82	5.74	6.65	7.78	8.89	9.98	11.06	12.12	13.37	14.59	15.79	17.15	18.47	19.93	21.68	23.34	
4800	4.94	5.89	6.84	8.00	9.15	10.27	11.38	12.47	13.76	15.01	16.23	17.62	18.97	20.45	22.21		
5000	5.05	6.04	7.01	8.21	9.39	10.55	11.69	12.81	14.12	15.40	16.65	18.07	19.43	20.93	22.70		
5200	5.16	6.18	7.18	8.41	9.63	10.82	11.99	13.13	14.47	15.78	17.05	18.48	19.86	21.37			
5400	5.26	6.31	7.34	8.61	9.85	11.07	12.27	13.44	14.81	16.14	17.43	18.88	20.27	21.78			
5600	5.36	6.43	7.49	8.79	10.07	11.32	12.54	13.73	15.12	16.47	17.78	19.24	20.64				
5800	5.45	6.55	7.64	8.97	10.27	11.55	12.79	14.01	15.42	16.79	18.10	19.58					
6000	5.53	6.66	7.77	9.14	10.47	11.76	13.03	14.26	15.70	17.08	18.41	19.89					
6200	5.61	6.77	7.90	9.29	10.65	11.97	13.26	14.51	15.96	17.35	18.68						
6400	5.68	6.86	8.02	9.44	10.82	12.16	13.47	14.73	16.20	17.60	18.94						
6600	5.75	6.95	8.13	9.58	10.98	12.34	13.66	14.94	16.42	17.82							
6800	5.81	7.03	8.24	9.70	11.13	12.51	13.84	15.13	16.61	18.02							
7000	5.86	7.11	8.33	9.82	11.26	12.66	14.01	15.31	16.79								
7500	5.96	7.26	8.53	10.07	11.55	12.98	14.35	15.66									
8000	6.01	7.36	8.67	10.25	11.76	13.21	14.58										
8500		7.41	8.75	10.36	11.89												

For speeds over 30 m/s we recommend that pulleys be dynamically balanced.

Please contact Gates application engineers for 3M-JB drive design data.

POWER RATINGS POLYFLEX® JB™

Basic kW per rib for speed ratio

RPM of faster shaft	1.00 to 1.01	1.02 to 1.03	1.04 to 1.05	1.06 to 1.08	1.09 to 1.11	1.12 to 1.15	1.16 to 1.21	1.22 to 1.29	1.30 to 1.46	>1.46
585	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
700	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.16
725	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
870	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.20
950	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
1160	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
1450	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.26	0.30	0.34
1750	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
2850	0.00	0.07	0.15	0.22	0.30	0.37	0.45	0.52	0.59	0.67
3450	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
100	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
200	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
300	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07
400	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
500	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.10	0.12
600	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.14
700	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.16
800	0.00	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.17	0.19
900	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21
1000	0.00	0.03	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.23
1100	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
1200	0.00	0.03	0.06	0.09	0.13	0.16	0.19	0.22	0.25	0.28
1300	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.30
1400	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.26	0.29	0.33
1500	0.00	0.04	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35
1600	0.00	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.38
1700	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.35	0.40
1800	0.00	0.05	0.09	0.14	0.19	0.23	0.28	0.33	0.38	0.42
1900	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
2000	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47
2200	0.00	0.06	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.52
2400	0.00	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.50	0.56
2600	0.00	0.07	0.14	0.20	0.27	0.34	0.41	0.47	0.54	0.61
2800	0.00	0.07	0.15	0.22	0.29	0.36	0.44	0.51	0.58	0.66
3000	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.55	0.63	0.70
3200	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
3400	0.00	0.09	0.18	0.27	0.35	0.44	0.53	0.62	0.71	0.80
3600	0.00	0.09	0.19	0.28	0.38	0.47	0.56	0.66	0.75	0.84
3800	0.00	0.10	0.20	0.30	0.40	0.50	0.59	0.69	0.79	0.89
4000	0.00	0.10	0.21	0.31	0.42	0.52	0.63	0.73	0.83	0.94
4200	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.98
4400	0.00	0.11	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
4600	0.00	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.08
4800	0.00	0.12	0.25	0.37	0.50	0.63	0.75	0.88	1.00	1.13
5000	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17
5200	0.00	0.13	0.27	0.41	0.54	0.68	0.81	0.95	1.08	1.22
5400	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.99	1.13	1.27
5600	0.00	0.15	0.29	0.44	0.58	0.73	0.88	1.02	1.17	1.31
5800	0.00	0.15	0.30	0.45	0.61	0.76	0.91	1.06	1.21	1.36
6000	0.00	0.16	0.31	0.47	0.63	0.78	0.94	1.09	1.25	1.41
6200	0.00	0.16	0.32	0.48	0.65	0.81	0.97	1.13	1.29	1.45
6400	0.00	0.17	0.33	0.50	0.67	0.83	1.00	1.17	1.34	1.50
6600	0.00	0.17	0.34	0.52	0.69	0.86	1.03	1.20	1.38	1.55
6800	0.00	0.18	0.36	0.53	0.71	0.89	1.06	1.24	1.42	1.59
7000	0.00	0.18	0.37	0.55	0.73	0.91	1.09	1.28	1.46	1.64
7500	0.00	0.19	0.39	0.59	0.78	0.98	1.17	1.37	1.56	1.76
8000	0.00	0.21	0.42	0.62	0.83	1.04	1.25	1.46	1.67	1.88
8500	0.00	0.22	0.44	0.66	0.89	1.11	1.33	1.55	1.77	1.99

Arc of correction factor G

$\frac{D-d}{A}$	Arc of contact on small pulley (degrees)	Factor G
0.00	180	1.00
0.10	174	0.99
0.20	169	0.97
0.30	163	0.96
0.40	157	0.94
0.50	151	0.93
0.60	145	0.91
0.70	139	0.89
0.80	133	0.87
0.90	127	0.85
1.00	120	0.82
1.10	113	0.80
1.20	106	0.77
1.30	99	0.73
1.40	91	0.70
1.50	83	0.65

Belt length correction factor C_L

Belt ref.	Corr. factor C_L	Belt ref.	Corr. factor C_L
11M-JB 710	0.90	11M-JB 2000	1.15
11M-JB 730	0.91	11M-JB 2060	1.15
11M-JB 750	0.91	11M-JB 2120	1.16
11M-JB 775	0.92	11M-JB 2180	1.17
11M-JB 800	0.93	11M-JB 2240	1.17
11M-JB 825	0.94	11M-JB 2300	1.18
11M-JB 850	0.94		
11M-JB 875	0.95		
11M-JB 900	0.96		
11M-JB 925	0.96		
11M-JB 950	0.97		
11M-JB 975	0.98		
11M-JB 1000	0.98		
11M-JB 1030	0.99		
11M-JB 1060	1.00		
11M-JB 1090	1.00		
11M-JB 1120	1.01		
11M-JB 1150	1.02		
11M-JB 1180	1.02		
11M-JB 1220	1.03		
11M-JB 1250	1.04		
11M-JB 1280	1.04		
11M-JB 1320	1.05		
11M-JB 1360	1.06		
11M-JB 1400	1.06		
11M-JB 1450	1.07		
11M-JB 1500	1.08		
11M-JB 1550	1.09		
11M-JB 1600	1.09		
11M-JB 1650	1.10		
11M-JB 1700	1.11		
11M-JB 1750	1.12		
11M-JB 1800	1.12		
11M-JB 1850	1.13		
11M-JB 1900	1.13		
11M-JB 1950	1.14		

$$\text{Number of ribs required} = \frac{\text{Design kW}}{(A + B) \times G \times C_L}$$

DRIVE DESIGN EXAMPLE

DRIVE DESIGN EXAMPLE, USING A STANDARD SPEED ELECTRIC MOTOR AND STANDARD PULLEY DIAMETERS

GIVEN

1. A 30 kilowatt squirrel cage electric motor is to drive an air compressor with following characteristics: flow 4m³/min at 0.7 MPa (7 kg/cm²) according to DIN.
2. 2850 RPM motor speed.
3. The desired compressor speed is 1250 RPM.
4. Shaft to shaft centre distance should be about 760 mm. Because of space limitations, the maximum pulley datum diameter cannot exceed 220 mm.
5. Normal service - one year of service is requested.

DRIVE DESIGN	RESULTS
Step 1 A one year belt service is normal for this kind of application, thus 6000 hrs life range needs to be taken.	Service life range: 6000 hrs.
Step 2 **A.** From table No. 1 the normal service factor is 1.2 **B.** The power requirement is 30 kW **C.** Design power = 1.2 x 30 kW = 36 kW	Service factor: 1.2 Design power: 36 kW
Step 3 From table No. 2, 3 or 4 find the proper cross-section: Gates Quad-Power II, moulded notch, XPA section.	Belt section: XPA
Step 4 Speed ratio: $\frac{2850}{1250} = 2.28$	Speed ratio: 2.28
Step 5 & 6 Pulley diameters can be selected from tables Nos. 5 and 6. In this case space availability is the limiting factor. For that reason we have to start from the driveN pulley. With a maximum of 220 mm, locate a possible large pulley diameter range in the top row of table No. 6 and go down to find a speed ratio close to 2.28. Using a driveN pulley of 212 mm and a ratio of 2.23 the driveR becomes 95 mm. $V = \frac{95 \times 2850}{19100} = 14.2$ m/s	d: 95 D: 212 Belt speed: 14.2 m/s
Step 7 **A.** Tentative belt length: $2 \times 760 + 1.57 (212 + 95) + \frac{(212 - 95)^2}{4 \times 760} = 2006$ mm **B.** From the size listing on page 11, find the closest standard datum length to be 2000 mm or XPA 2000. Then calculate the actual centre distance: F = 2000 - 1.57 (212 + 95) = 1518 mm $\frac{D - d}{F} = \frac{212 - 95}{1518} = 0.0771$ from table No. 9: h = 0.04 $A = \frac{1518 - 0.04 (212 - 95)}{2} = 757$ mm	Tentative belt length: 2006 mm Standard datum length: 2000 mm or XPA 2000 Actual centre distance: 757 mm
Step 8 **A.** From table A find the basic kW rating: 8.02 kW **B.** From table B find the additional kW for speed ratio: 0.66 kW **C.** Table C gives the additional kW for belt life: $C = \frac{95 \times 2850}{362319} = 0.75$	Basic kW A: 8.02 kW Additional kW B: 0.76 kW Additional kW C: 0.75 kW

DRIVE DESIGN EXAMPLE

Open the cover flap and follow step by step the drive design method.

$\frac{D - d}{A} = \frac{212 - 95}{757} = 0.15$	
D. From table G find the arc of contact correction factor G: 0.98	Arc correction factor G: 0.98
E. Table C_L gives the belt length correction factor: 0.98	Length correction factor C_L: 0.98
F. Net kW per belt: (8.02 + 0.76 + 0.75) x 0.98 x 0.98 = 9.15	Net kW per belt: 9.15
G. Number of belts required:	
$\frac{36}{9.15}$ = 3.93 or 4 belts	Number of belts: 4
Pulley width: (3 x 15) + (2 x 10) = 65 mm	Pulley width: 65 mm
Step 9	
From table No. 11 find the: - minimum allowance on centre distance for installation: 25 mm - minimum allowance on centre distance for takeup: 40 mm	Installation allowance: 25 mm Takeup allowance: 40 mm

THE DRIVE REQUIRES 4 GATES QUAD-POWER II BELTS WITH CROSS-SECTION XPA 2000

TENSIONING	
Step 10	
Static tension per belt (Table No. 13: M = 0.104)	
$T_s = 450 \times \frac{(2.5 - 0.98)}{0.98} \times \frac{30}{4 \times 14.2} + 0.104 \times (14.2)^2 = 390$ N	Static tension per belt: 390 N
Step 11	
A.	
Span length $t = 757 \left[1 - 0.125 \left(\frac{212 - 95}{757}\right)^2\right] = 755$ mm	Span length: 755 mm
B.	
Deflection = $\frac{755}{100}$ = 7.55 mm	Deflection: 7.55 mm
C. Minimum and maximum recommended deflection forces: (Table No. 13: Y = 20)	
Minimum recommended deflection force = $\frac{390 + 20}{25}$ = 16.4 N	Min. deflection force: 16 N
Maximum recommended deflection force = $\frac{1.5 \times 390 + 20}{25}$ = 24.2 N	Max. deflection force: 24 N

Kilowatt rating tables (Step 8)

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USEFUL DATA

EXPLANATION OF SYMBOLS

Physical quantity	Symbol	Unit	Abbreviation
Power	P	kiloWatt	kW
Torque	T	Newton metre	Nm
Force	F	Newton	N
Time	t	second	s
Velocity of rotation	n	rev./min.	rpm
Pulley datum diameter	D or d	millimetre	mm
Shaft centre distance	A	millimetre	mm
Belt datum length	L	millimetre	mm
Belt speed or velocity	V	metre/second	m/s
Mass	m	kilogramme	kg
Belt mass per datum length unit	M	gramme/metre	g/m
Belt effective tension	T_e	Newton	N
Belt centrifugal tension	T_c	Newton	N

FORMULAE

Belt speed

Conversion factor: 1 ft/min. = 0.00508 m/s

Metric units: $V\ (m/s) = \frac{d \times n}{19100}$

Imperial units: $V\ (ft/min.) = 0.262 \times d \times n$

Power

Metric units: $P(kW) = \frac{T_e \times V}{10^3}$

$P(kW) = \frac{T \times n}{9.55 \times 10^3}$

Torque

Metric units: $T(Nm) = \frac{9.55 \times 10^3\ P}{n}$

Belt effective tension

Metric units: $T_e\ (N) = \frac{2 \times 10^3\ T}{d}$

Belt centrifugal tension

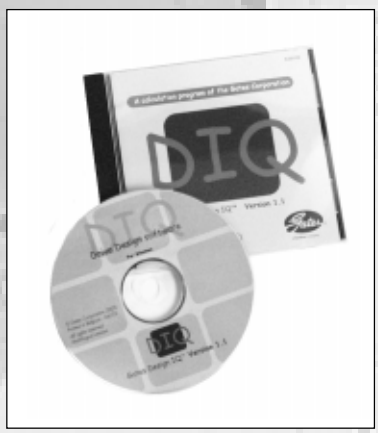
Metric units: $T_c\ (N) = \frac{MV^2}{10^3}$

CONVERSION TABLE

1 lbf	=	0.454 kgf
1 lbf	=	4.448 N
1 kgf	=	9.807 N
1 lbf in	=	0.113 Nm
1 ft	=	0.3048 m
1 in	=	25.4 mm
1 ft^2	=	0.093 m^2
1 in^2	=	645.16 mm^2
1 ft^3	=	0.028 m^3
1 in^3	=	16.387 cm^3
1 oz	=	28.35 g
1 lb	=	0.454 kg
1 UK ton	=	1.016 ton
1 UK gal	=	4.546 litre
1 UK pint	=	0.568 litre
1 radian	=	57.296 degree
1 degree	=	0.0175 radian
1 HP	=	0.746 kW

DESIGNFLEX CALCULATION SOFTWARE

You may calculate your own application by means of one of Gates' design manuals or by using DesignFlex, a Windows-based multilingual software program. The program is available on CD-ROM (E/20098), but can also be downloaded from Gates' website at www.gates.com/europe. The program offers a step-by-step drive calculation procedure for both V-belts and synchronous belts based on the criteria and/or limitations specified by the user.
DesignFlex runs under Windows 95, 98, 2000, NT or Millennium, requires a Pentium 133 processor or higher and an 800 x 600 screen resolution or higher. A minimum of 32 MB RAM is recommended for satisfactory calculation speed.



GATES' APPLICATION ENGINEERS AT YOUR SERVICE

If your application cannot be designed with the aid of Gates' design manuals or the DesignFlex software, you can always contact Gates' application engineers. They are at your service to solve even the most difficult drive design problem.

Gates' application engineers now use DESIGN IQ, a very powerful software program allowing them to calculate multiple pulley drives for the most diverse complex duty cycles. For more information on this brandnew software possibilities please contact your Gates representative.

ELECTRONIC PRICE LIST

Gates' electronic price list for industrial Power Transmission products is available on CD-ROM and enables the user to easily select any product from the power transmission range by product number, bar code, description, type, profile and dimension. A full colour photograph and a drawing of the belt profiles complete the information.
The information on the CD-ROM is available in six languages.

GATES LITERATURE

Please consult our web site at www.gates.com/europe for specific and updated information on other Gates industrial belt products and our list of available literature. Industrial Power Transmission brochures and leaflets can be downloaded from the site. Distributors may link up with the Gates European site thus supplying visitors with updated information on the European Gates organisation.

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DRIVE DESIGN

TENSIONING