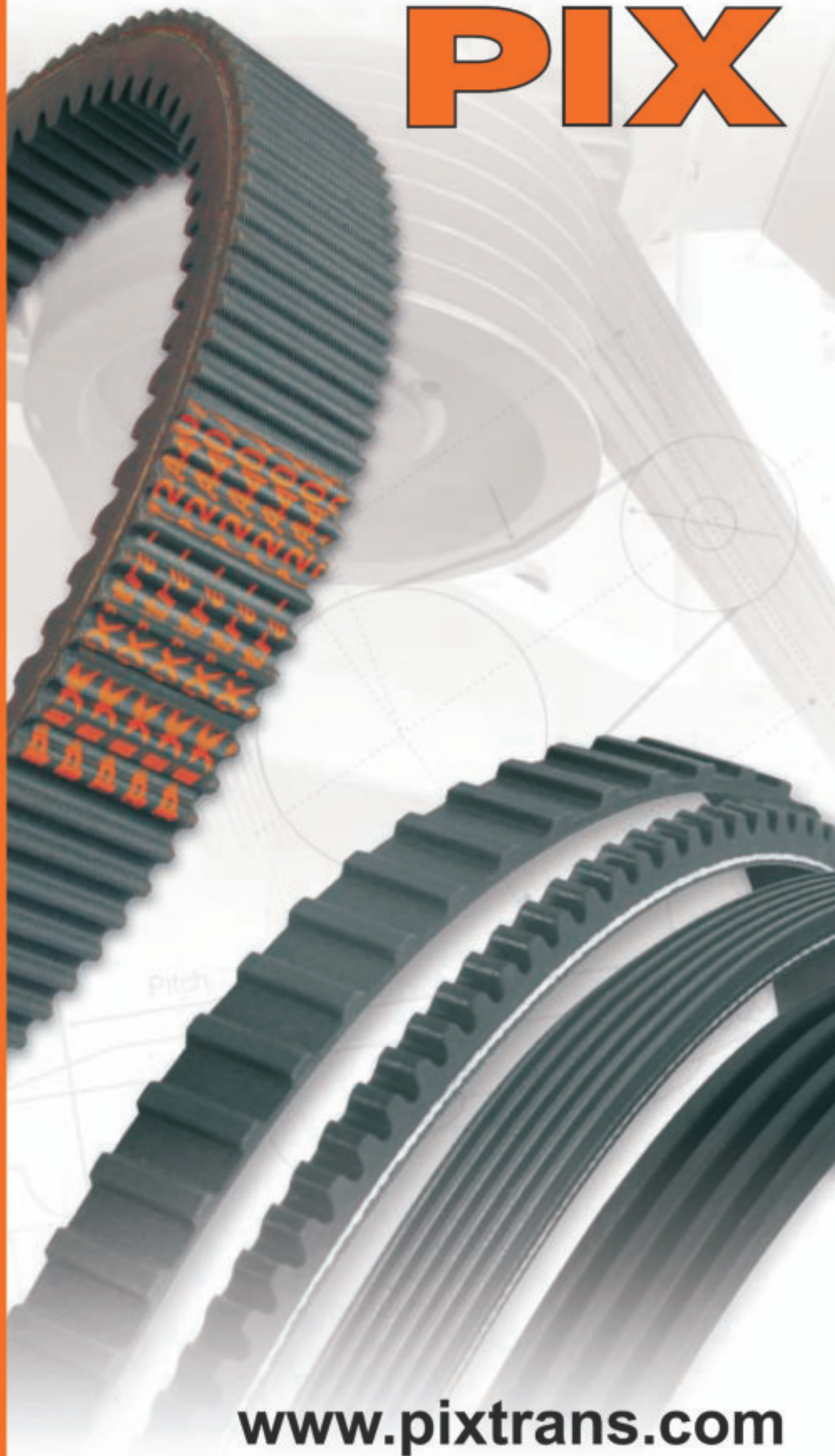


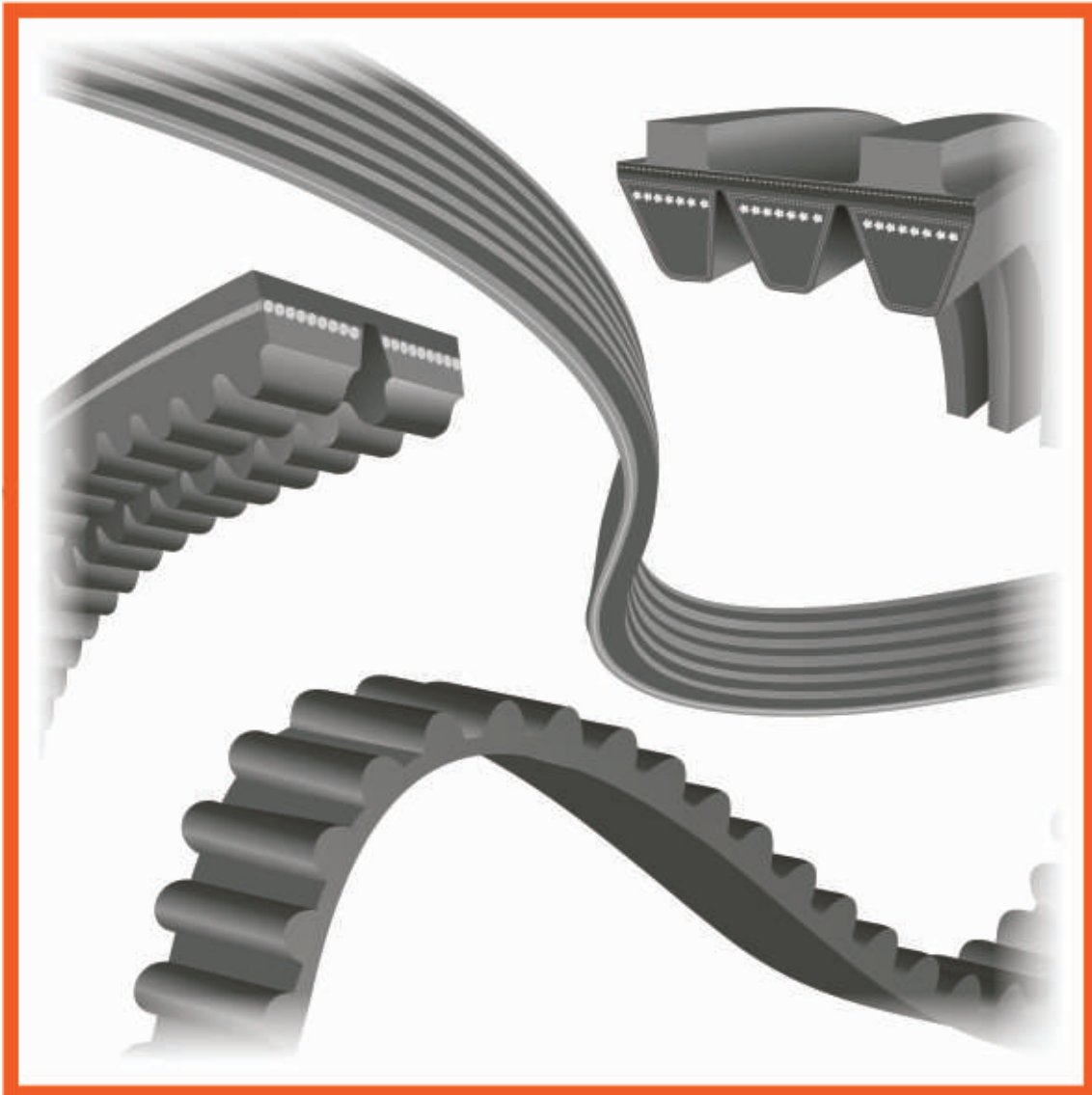
# Technical Manual

**PIX**



[www.pixtrans.com](http://www.pixtrans.com)

# PIX



**PIX-X'set**<sup>®</sup> Wrapped Construction Belts

**PIX-X'tra**<sup>®</sup> Raw Edge Moulded Cogged Belts

**PIX-X'ceed**<sup>®</sup> Ribbed Belts

**PIX-X'act**<sup>®</sup> Synchronous Belts

## Certifications





# PIX

## Global Presence

- Products exported to over 70 countries globally
- Distribution network in 45 countries





# PIX



**PIX MIDDLE EAST FZC**  
Ras-Al-Khaimah, UAE

**PIX TRANSMISSIONS LIMITED**  
Nagpur, India

**PIX HYDRAULICS & TRANSMISSIONS (Hangzhou) LTD.**  
Hangzhou, China

# PIX

## Special Application Belts



**PIX-X'set<sup>®</sup>**  
ARAMID CORD BELTS



**PIX-X'set<sup>®</sup> PT-6**  
PROFILE TOP BELT



**PIX-X'set<sup>®</sup> PT-7**  
PROFILE TOP BELT



**PIX-X'set<sup>®</sup> PT-0**  
PROFILE TOP BELT



**PIX-X'set<sup>®</sup> PT-HC**  
PROFILE TOP BELT



**PIX-X'set<sup>®</sup> PT-2TP**  
PROFILE TOP BELT



**PIX-X'tra<sup>®</sup>**  
CUT EDGE MOULDED  
COGGED BELT



**PIX-X'set<sup>®</sup> MB**  
WRAP BANDED BELT



**PIX-X'tra<sup>®</sup> MB**  
CUT EDGE MOULDED COGGED  
BANDED BELT



**PIX-X'set<sup>®</sup> VS**  
WRAP VARISPEED BELT



**PIX-X'tra<sup>®</sup> VS**  
CUT EDGE MOULDED COGGED  
VARISPEED BELT



**PIX-X'ceed<sup>®</sup> EL**  
ELASTICATED POLY BELT



**PIX-X'ceed<sup>®</sup>**  
EPDM POLY BELT



**PIX-X'ceed<sup>®</sup> DS**  
DOUBLE SIDED POLY BELT



SYNCHRONOUS BELT WITH  
V-POLY PROFILE



DOUBLE SIDED MOULDED  
COGGED BELT

Wrapped Belts	<b>PIX-X'set<sup>®</sup></b> Classical V-Belts	1-2
	<b>PIX-X'set<sup>®</sup></b> Wedge V-Belts	3
	<b>PIX-X'set<sup>®</sup></b> Narrow V-Belts	4
	<b>PIX-X'set<sup>®</sup> DS</b> Hexagonal Belts	5
	<b>PIX-X'set<sup>®</sup> MB</b> Banded Belts	6
Raw Edge Belts	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Moulded Cogged Belts	7-8
	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Classical Belts	8
	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Wedge Belts	9
	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Narrow Belts	9
	<b>PIX-X'tra<sup>®</sup> MB</b> Raw Edge Moulded Cogged Banded Belts	9
	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Plain Belts	10
	<b>PIX-X'tra<sup>®</sup></b> Raw Edge Laminated Belts	10
Standard Product Range		11
Special Construction Belts	High Power Belts	12
	Aramid Cord Belts	13
	FRAS V-Belts	13
	Dry Cover Belts	13
	Profile Top Belts	14
	Fractional Horse Power Belts	15
	Light Duty Single V-Belts	15
	Double Cog Belts	15
	Asymmetric Belts	15
Variable Speed Belts	<b>PIX-X'set<sup>®</sup> VS</b> Variable Speed Belts	16
	<b>PIX-X'tra<sup>®</sup> VS</b> Variable Speed Belts	16 -18
Automotive Belts		18
Free Set Concept		19
Design Hints	Drive Design Procedure for V-Belts	20
	Drive Design Example (Classical V-Belts)	21
	Drive Design Example (Wedge Belts)	22
	Drive Design Example (Raw Edge Belts)	23
	Service Factors for Belt Drives	24
	Selection of V-Belts Cross-Section	25-27
	Standard Pulley Pitch Diameters for Faster Shaft	28-29
	Power Rating Charts	30-64
	Arc of Contact Factors	65
	Pitch Length Correction Factors	66-67
	Installation and Take-up Allowances	68-69
	Idlers / Tension Pulleys	70-71
	V-Flat Drives	72
Standard V-Grooved Pulleys	73	



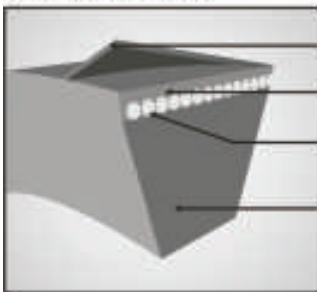
Index		Page No.
<b>Service Equipments</b>	PIX Pulley Gauges	74
	PIX Length Finder	74
	PIX Digital Tension Meter	75
	PIX V-Belts Tension Tester	75-76
	Deflection Force for Measuring Tension in V-Belt Drives	77
	Drive Design Software	78-79
<b>Maintenance of V-Belts</b>	General Guidelines	80
	Do's & Dont's	81
	Trouble Shooting (V-Belts)	82
<b>PIX-X'ceed<sup>®</sup></b>	Cross Sectional View, Features	83
<b>Ribbed Belts</b>	Standard Product Range	84
<b>Design Hints</b>	Drive Design Procedure for Ribbed Belts	85
	Drive Design Example for Ribbed belts	86
	Service Factor Selection	87
	Cross-Section Selection	87
	Pulley Groove Dimensions	88
	Definition of Small Pulley Effective Diameter	89
	Determination of Small Pulley Effective Diameter	89
	Standard Pulleys	90
Power Rating & Correction Factors	91-98	
<b>Maintenance of Ribbed Belts</b>	Installation & Maintenance	99
	Idlers	100
	Trouble Shooting	101
<b>Annexure</b>	Conversion Constants	102
	Questionnaire	103
	Notes	104-106

## Power Transmission

The transmission of power between belt and pulleys can either involve frictional forces or positive engagement and mechanical interlocking, for instance with the aid of cogs or teeth. The frictional forces, and thus the possible power rating, will depend on the coefficient of friction, the normal force and the contact area between belt and pulleys. The size of the contact area will depend on factors such as the arc of contact angle. Any increase in contact force between belt and pulleys will cause increased belt tension meaning increased loads on shafts and shaft bearings. One method of increasing frictional force without a corresponding increase of the belt tension is to utilize the wedge effect without locking the belt in the pulley groove, as in a V-belt.

## PIX-X'set® Wrap Construction Belts

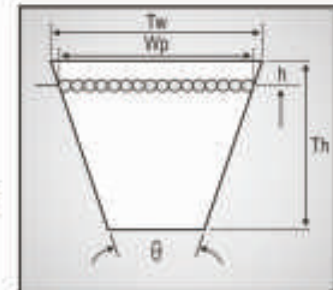
### Construction:



- Wear resistant bias cut neoprene rubberised polyester cotton fabric
- High tensile cord embedding cushion rubber compound
- High tenacity, low stretch, specially treated polyester & kevlar cords
- Specially compounded high modulus compression rubber

## PIX-X'set® Classical Belts

The first of the V-belts to enter the power transmission scenario. The continued efforts of PIX has enabled to achieve the power ratings considerably higher than most of the available in the market. The compounds used to build up these belts are well chosen to match the stipulated power ratings thus offering distinct advantages regarding the increased factor of safety on critical drives. The standards followed by PIX has put the tolerances to be much more stringent than BS 3790, which forms the basis of PIX classical belts.



### Features:

- Top width to height ratio 1.6:1
- Temperature range:  $-18^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$
- Maximum recommended belt speed is 30 m/sec
- Permissible flex rate  $f=80$  per second
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

### Applications:

Primarily used as replacement on industrial drives. The classical belts are recommended in special applications such as V-flat drives. In the same manner these belts are advantages where reverse idlers have to be used, because of smaller heights.



## Wrap Construction Belts

### PIX-X<sup>set</sup>® Classical Belts

#### Standards, Dimensions & Product Range:

We manufacture the entire range of Classical V-belts. The nominal length designation for these belts is inside length (Li) in inches. The length conversion factors are mentioned in the specification sheet below.

Section	Dimensions		Angle (Deg)	Pitch width Wp (mm)	Top to pitch h (mm)	Belt Length Factor			Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)				Lp to La (mm)	Li to Lp (mm)	Li to La (mm)			Min (inch)	Max (inch)	Length Designation
<b>8</b>	8	5	40	6.7	1.30	12	19	31	DIN 2215	40	35.0	172	Li
<b>Z</b>	10	6	40	8.5	2.00	16	22	38	IS 2494, BS 3790, ISO 4184	50	9.50	195	Li
<b>A</b>	13	8	40	11.0	2.75	20	30	50	IS 2494, BS 3790, ISO 4184	71	13.0	360	Li
<b>B</b>	17	11	40	14.0	3.50	26	43	69	IS 2494, BS 3790, ISO 4184	112	16.0	658	Li
<b>20</b>	20	13	40	17.0	4.00	31	48	79	DIN 2215	160	35.5	375	Li
<b>C</b>	22	14	40	19.0	4.80	32	56	88	IS 2494, BS 3790, ISO 4184	180	31.0	658	Li
<b>25</b>	25	16	40	21.0	6.00	39	61	100	DIN 2215	250	57.0	655	Li
<b>D</b>	32	19	40	27.0	8.10	40	79	119	IS 2494, BS 3790, ISO 4184	355	44.5	662	Li
<b>E</b>	38	23	40	32.0	9.60	53	92	145	IS 2494	500	90.0	658	Li

PIX FRAS belts conforms to :  II 2GD c IIB X (Test report no. IB-03-4-934) - ATEX

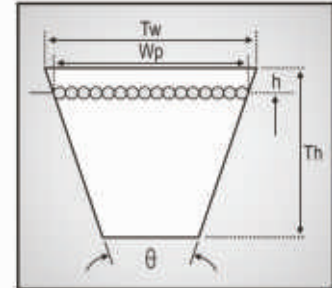
**Note:** Li: Inside Length, La: Outside Length, Lp: Pitch Length, Le: Effective Length



## Wrap Construction Belts

### PIX-X'set® Wedge Belts

Wedge belts have been the result of a continuous thrust by the manufacturers and users on higher power transmissions with reduced space requirements. Wedge belts can transmit higher power to the extent of 1.5 to 2 times the classical belts with the same top width. This has been achieved by dimensional changes, apart from better cord construction used and the optimum placement of the cord line which provides the best support to the cord while in motion. During manufacturing we pre-stretch the cord before building into the belt. It offers lower stretch properties in the drive. This way we are able to reduce minimum installation and take up allowances significantly. For the efficient performance of wedge drive it is essential that the proper tension be maintained in the drive, failure to maintain the same will render the purpose of wedge belts ineffective.



#### Features:

- Top width to height ratio is 1.2:1
- Temperature range: -18°C to +80°C
- Maximum recommended belt speed is 30 m/s\*
- Permissible flex rate  $f=100$  per second
- Less deformation of the belt cross-section when in contact with the pulleys ensures better contact between the belt flanks and the pulley grooves
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

#### Applications:

Wedge belts are used primarily on all new drives because of space savings achieved by using these belts. These belts find their extensive use in all industrial applications from light duty drives as those for pumps to heavily loaded stone crusher drives. In wedge belt drives, single belts can be replaced by banded belts without changing the pulley configuration.

#### Standards, Dimensions & Product Range:

We manufacture the entire range of wedge belts. The nominal length for wedge belts is designated as pitch length (Lp) in millimeter.

Section	Dimensions		Angle (Deg)	Pitch width	Top to pitch	Belt Length Factor			Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)		Wp (mm)	h (mm)	Lp to La (mm)	Li to Lp (mm)	Li to La (mm)			Min (mm)	Max (mm)	Length Designation
SPZ	10	8	40	8.5	2.00	13	37	50	BS 3790	63	365	4953	Lp
SPA	13	10	40	11.0	2.75	18	45	63	BS 3790	90	576	9144	Lp
SPB	17	14	40	14.0	3.50	28	60	88	BS 3790	140	940	16764	Lp
19	19	15	40	16.0	4.00	25	69	94	DIN 7753	180	2261	9601	Lp
SPC	22	18	40	19.0	4.80	30	83	113	BS 3790	224	1750	16789	Lp

PIX FRAS belts conform to:  II 2GD c IIB X (Test report no. IB-03-4-934)

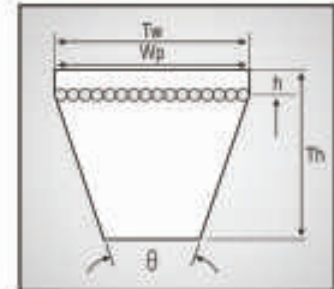
\* For belt speed more than 30 m/s, pulleys must be dynamically balanced.



## Wrap Construction Belts

### PIX-X'set<sup>®</sup> Narrow Belts

In construction and properties the narrow belts are similar to the wedge belts in performance, with the only difference being the additional top ridge provided in the narrow belts. These belts are manufactured according to specification RMA-IP 22 and also known as American Wedge Belts.



### Interchangeability between Narrow & Wedge belts

Narrow	Wedge
3V	SPZ
5V	SPB

Acceptable agreement and exchangeability is found between 3V and SPZ as well as between 5V and SPB sections. It is possible to use 3V and 5V section belts in pulleys of SPZ and SPB sections respectively but corollary is not recommended as the top width of the RMA standard pulleys are smaller. Section 8V is however, larger than SPC. Profile SPC may in some cases be used in grooves intended for the 8V profile with some loss of power rating but the opposite is not recommended.

### Features:

- Temperature Range: -18°C to +80°C
- Maximum recommended belt speed is 30 m/s\*
- Maximum flex rate is f=100 per second
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

### Applications:

These sections are standardized in USA and Canada therefore it is primarily used in machines exported to/from these countries. 8V section belts are used in heavy duty drives such as stone crushers.

### Standards, Dimensions & Product Range:

The standard length designation for Narrow belts is as follows:  
Belt number ÷ 10 = Outside length in inches

**Example:** 5V 950 means 950 ÷ 10= 95 inches outside length

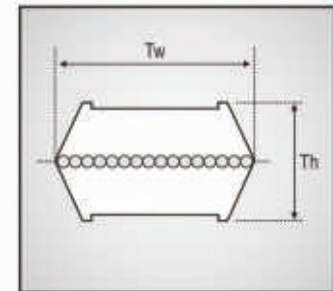
Section	Dimensions		Angle (Deg)	Pitch width Wp (mm)	Belt Length Factor			Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)			Lp to La (mm)	Li to Lp (mm)	Li to La (mm)			Min (inch)	Max (inch)	Length Designation
3V	9.7	8	40	9.7	13	37	50	RMA IP 22	63	19.5	190	La
5V	15.8	14	40	15.8	25	60	85	RMA IP 22	140	48.0	654	La
8V	25.4	23	40	25.4	53	92	145	RMA IP 22	335	90.0	654	La

\* For belt speed more than 30 m/s, pulleys must be dynamically balanced.

## Wrap Construction Belts

### PIX-X'set<sup>®</sup> DS Hexagonal Belts

Hexagonal V-belts are also known as Double V-belts. In simple terms it can be considered as two V-belts joined back to back. The neutral axis containing the tension member is exactly half way up the section.



#### Features:

- Temperature range: -18°C to +80°C
- Maximum recommended belt speed is 30 m/s
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

#### Applications:

Hexagonal belts find their application in the drives where several pulleys in the same plane are to be driven in the clockwise and anti-clockwise direction simultaneously. The polyester tension cord placed at the centre of the construction provides the belt extreme flexibility and low stretch properties. It is because of this positioning of the cord that these belts are not subjected to any other forces as in the case of normal V-belts. These are also used in rice mills. However off late these belts are rapidly finding application in industrial drives.

#### Drive Calculation:

The drive calculation for double V-belts differs from the drive calculations of two-pulley drives. The effective lengths, rotational speeds, transmission ratios and belt speeds are determined by the effective pulley diameters. There is no requirement of special pulleys for these belts. We suggest that the customer should get back to us for assistance in using these belts.

#### Standards, Dimensions & Product Range:

For all practical purposes the length of double V-belts is considered as the effective length which is roughly the belt length at the centre.

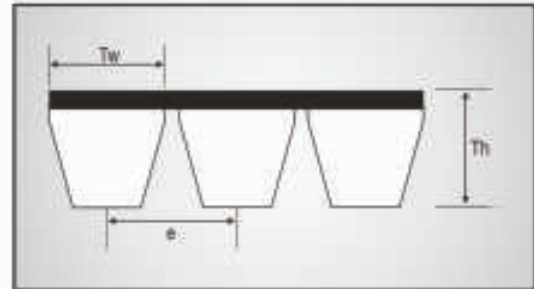
Section	Dimensions		Angle (Deg)	Standards	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)				Min (inch)	Max (inch)	Length Designation
AA	13	10	40	IS 11038, ISO 5289	80	43	260	Li
BB	17	14	40	IS 11038, ISO 5289	125	40	660	Li
CC	22	17	40	IS 11038, ISO 5289	224	73	658	Li
25	25	22	40	RMA IP 21, IS 11038, ISO 5289	280	89	681	Le



## Wrap Construction Belts

### PIX-X'set<sup>®</sup> MB Banded Belts

PIX Banded belts can be made by joining either Classical, Wedge or Narrow belts. Each band may contain the specified number of belts. We recommended maximum of five belts in one tie-band.



#### Features:

- Temperature range: -18°C to +80°C
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

#### Applications:

Banded belts are recommended under following conditions

- Severe vibrations
- Vertical shaft drives
- V-flat drives
- Agricultural drives
- Conveyer systems
- Stone crushers, reciprocating compressors, generator sets, pumps cold forging machine etc.

#### Note:

All **PIX-X'set<sup>®</sup> MB** Banded belts are high power belts (Please refer page no.12). While using these belts it is always recommended to use standard pulleys with a proper guard. Appropriate belt sitting can only be obtained if the pitch maintained for the belts and that of pulleys is the same. We recommend that the customer should get back to us with details before using banded belts to enable us to provide the best solution. Improper design using banded belts can lead to premature failure of the drive system.

Section	Dimensions		Angle (Deg)	Pitch (mm)	Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		Length Designation
	Tw (mm)	Th (mm)					Min (inch)	Max (inch)	
HA	13.0	10.0	40	15.9	ISO 5291	80 de	33.0	280.0	Li
HB	17.0	13.0	40	19.0	ISO 5291	130 de	41.0	628.0	Li
HC	22.0	16.0	40	25.5	ISO 5291	210 de	46.0	658.0	Li
HD	32.0	21.5	40	37.0	ISO 5291	370 de	90.0	658.0	Li
HE	38.0	27.0	40	44.5	PIX	520 de	90.0	658.0	Li
HZ	10.0	8.5	40	10.3	PIX	55 de	45.0	171.0	Li
HSPZ	10.0	10.0	40	12.0	BS 3790	67 dp	1168 mm	9042 mm	Lp
HSPA	13.0	12.0	40	15.0	BS 3790	100 dp	914 mm	5000 mm	Lp
HSPB	17.0	16.0	40	19.0	BS 3790	160 dp	1778 mm	9144 mm	Lp
HSPC	22.0	20.0	40	25.5	BS 3790	224 dp	2235 mm	16688 mm	Lp
H3V	9.7	10.0	40	10.3	ISO 5290	67 de	35.5	178.0	La
H5V	15.8	16.0	40	17.5	ISO 5290	180 de	48.0	660.0	La
H8V	25.4	25.0	40	28.6	ISO 5290	317 de	98.0	664.0	La

## PIX-x'tra® Raw Edge Belts

Raw Edge belts, as the name implies do not have textile wrapping on the outer surface. These are produced by slitting individual belts from rubber sleeve and hence they are called as Cut edge belts.

The manufacturing methods also make it simpler to produce belts with cogs underside thereby reducing the bending resistance of the belts and allowing them to operate on pulleys with approximately 20% smaller diameters. The decreased bending resistance reduces mechanical losses during bending and leads to improved efficiency and reduced working temperature. Heat dissipation is further improved by the larger area between the belt and the surrounding atmosphere and also by the air turbulence around the cogs during operation. Multi stage drives can be eliminated. These belts require a higher tension than the wrap belts so as to exhibit higher power transmission capability.

**Raw Edge Belts are of three types:**

- (i) **REC Belts** (Raw Edge Moulded Cogged Belts)
- (ii) **REP Belts** (Raw Edge Plain Belts)
- (iii) **REL Belts** (Raw Edge Laminated Belts)

### (i) **PIX-x'tra® Raw Edge Moulded Cogged Belts**

**Construction:**



Special Fabric layer

Polychloroprene cushion rubber compound  
Specially treated & stabilised polyester cord  
Fibre filled Polychloroprene base compound

Moulded cogs for better flexibility

**Features:**

#### **Special top layer with fabric**

The rigid layer on the top restricts top layer cracking and gives uniform tension on cord ends. Top fabric gives better support & protection from environment.

#### **Tough Tensile Member For Greater Strength**

Specially treated stabilised polyester cord provides high tensile strength with minimum stretch which in turn gives V-belt superior resistance to fatigue & shock loads.

#### **Moulded Cogs**

Moulded cogs allow the Raw edge cogged belts to operate even over smaller diameter pulley at high speeds. The cogs also help in reducing the bending stress apart from providing the higher surface area for proper heat dissipation.

#### **Polychloroprene Cushion Rubber Compound**

Ensures the best possible bond between the base compound, the tension cord & rubber impregnated fabric top surface that provides long service without cord separation.



## Raw Edge Belts

### PIX-x'tra® Raw Edge Moulded Cogged Belts

#### Features:

#### Fibre Filled Polychloroprene Base Compound

Gives increased power transmission capability, superior transverse stiffness & high wear resistance.

**Speed ratios up to 1:12 are possible:** This eliminates the need for multi stage drives.

Temperature range: -18°C to +100°C

Maximum recommended belt speed is 30 m/s\*

Antistatic, Oil and Heat resistant

ATEX certified FRAS belts are also available

**Applications:** It is recommended to use these belts in borderline cases if difficulties are anticipated in using wrap construction belts.

#### Advantages:

The advantages of Raw Edge Moulded Cogged Belts over Wrap Belts are of great importance in following cases-

1. Drives with very small pulley diameters
2. High ambient temperatures
3. High belt speeds
4. High level of power transmission

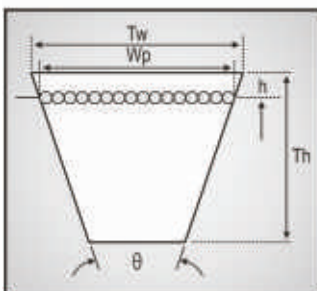
#### Sections:

The sections covered under this category are -

ZX, AX, BX, CX, XPZ, XPA, XPB, XPC, 3VX, 5VX & 8VX which offer the best technoeconomical solution for above conditions. PIX also manufactures entire range of Raw Edge Banded Belts to suit various applications.

### PIX-x'tra® Raw Edge Classical Belts:

Conforms to IS 2494, BS 3790, ISO 4184 standards

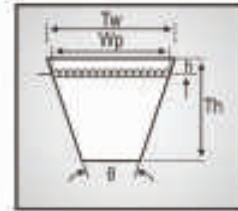


Section	Dimensions		Angle (Deg)	Pitch width Wp (mm)	Top to pitch h (mm)	Belt Length Factor			Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)				Lp to La (mm)	Li to Lp (mm)	Li to La (mm)		Min (inch)	Max (inch)	Length Designation
ZX	10	6	36	8.5	2.00	16	22	38	40	23	200	Li
AX	13	8	36	11.0	2.75	20	30	50	63	22	200	Li
BX	17	11	36	14.0	3.50	26	43	69	90	21	200	Li
CX	22	14	36	19.0	4.80	32	56	88	140	21	200	Li

\* For belt speed more than 30 m/s, pulleys must be dynamically balanced.

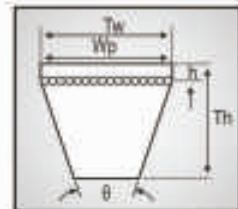
## Raw Edge Belts

Standards, dimensions & product range



### PIX-X'tra® Raw Edge Wedge Belts:

Section	Dimensions		Angle (Deg)	Pitch width Wp (mm)	Top to pitch h (mm)	Belt Length Factor			Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)				Lp to La (mm)	Li to Lp (mm)	Li to La (mm)			Min (mm)	Max (mm)	Length Designation
XPZ	10	8	36	8.5	2.00	13	37	50	BS 3790	56	590	5117	Lp
XPA	13	10	36	11.0	2.75	18	45	63	BS 3790	71	590	5125	Lp
XPB	17	14	36	14.0	3.50	28	60	88	BS 3790	112	600	5140	Lp
XPC	22	18	36	19.0	4.80	30	83	113	BS 3790	180	600	5163	Lp



### PIX-X'tra® Raw Edge Narrow V-Belts:

Section	Dimensions		Angle (Deg)	Pitch width Wp (mm)	Belt Length Factor			Standard	Recommended Minimum Pulley Diameter (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)			Lp to La (mm)	Li to Lp (mm)	Li to La (mm)			Min (inch)	Max (inch)	Length Designation
3VX	9.7	8	38	9.7	13	37	50	RMA IP 22	56	24	202	La
5VX	15.8	14	38	15.8	25	60	85	RMA IP 22	112	24	203	La
8VX	25.4	23	38	25.4	53	92	145	RMA IP 22	254	98	200	La



### PIX-X'tra® MB Raw Edge Moulded Cogged Banded Belts:

Conforms to ISO 5291, BS 3790, ISO 5290 & DIN 7753 Standards

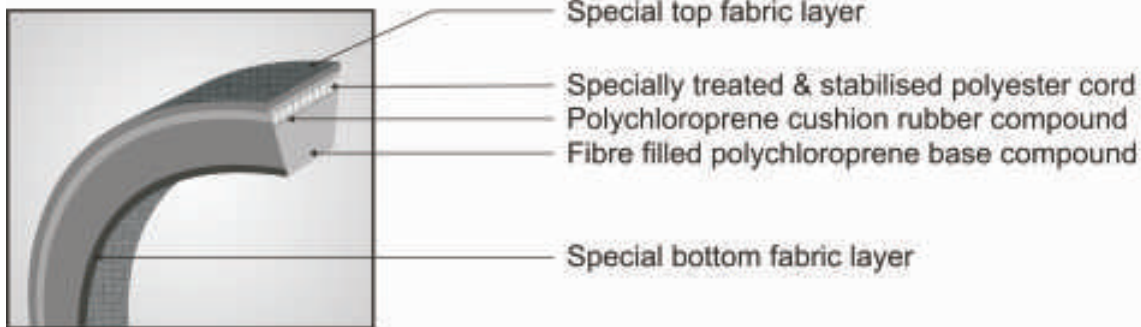
Section	Dimensions		Angle (Deg)	Pitch (mm)	Manufacturing Range		
	Tw (mm)	Th (mm)			Min	Max	Length Designation
HAX	13.0	10.0	36	15.9	23.5"	200"	Li
HBX	17.0	13.0	36	19.0	23.5"	200"	Li
HCX	22.0	16.0	36	25.5	23.5"	200"	Li
HXPZ	10.0	10.0	36	12.0	600 mm	5080 mm	Lp
HXPA	13.0	12.0	36	15.0	600 mm	5080 mm	Lp
HXPB	17.0	16.0	36	19.0	600 mm	5080 mm	Lp
HXPC	22.0	20.0	36	25.5	600 mm	5080 mm	Lp
H3VX	9.7	10.0	36	10.3	23.5"	200"	La
H5VX	15.8	16.0	36	17.5	23.5"	200"	La
HAVX-10	10.0	8.0	36	12.6	600 mm	5080 mm	La
HAVX-13	13.0	10.0	36	16.0	600 mm	5080 mm	La

Note: All PIX-X'tra® MB Raw Edge Banded belts are High Power belts.



## Raw Edge Belts

### PIX-X'tra<sup>®</sup> Raw Edge Plain Belts



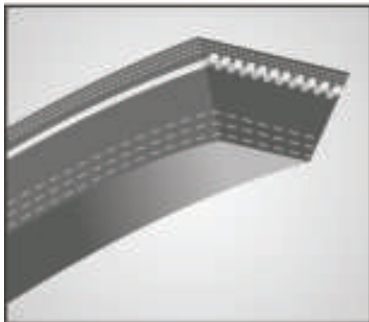
#### Construction:

The construction of REP (Raw Edge Plain) belts is similar to Raw Edge Moulded Cogged belts except it has one special bottom fabric layer.

#### Standards, Dimensions & Product Range:

Same as that of REC (Raw Edge Moulded Cogged) belts (Refer page 8 & 9)

### PIX-X'tra<sup>®</sup> Raw Edge Laminated Belts



#### Construction:

Raw Edge Plain Belts (REP) may or may not have a fabric layer at the bottom, but Raw Edge Laminated Belts (REL) will have more than one bottom layer. As a result they are excellent in resistance to transverse compression.

#### Standards, Dimensions & Product Range:

Same as that of Raw Edge Cogged belts (Refer page 8 & 9)

## Standard Product Range

PIX manufacture a wide range of V-belts in various lengths as below. The sheet also depicts the iterations along with minimum and maximum length range.

Section	Manufacturing Range		Length Interval	Length Designation
	From	To		
Z	9.5"	195"	0.5"	Li
A	13"	360"	0.5"	Li
B	16"	19"	1.0"	Li
B	19.5"	658"	0.5"	Li
C	31"	35"	2.0"	Li
C	35.5"	37"	0.5"	Li
C	37"	45"	1.0"	Li
C	45"	47"	0.5"	Li
C	47"	51"	1.0"	Li
C	51"	52"	0.5"	Li
C	52"	68"	1.0"	Li
C	68"	658"	0.5"	Li
D		44.5"	—	Li
D		59"	—	Li
D	71"	662"	0.5"	Li
E	90"	658"	0.5"	Li
8	35"	172"	0.5"	Li
20	35.5"	375"	0.5"	Li
25	57"	655"	0.5"	Li
SPZ	365 mm	370 mm	5 mm	Lp
SPZ	480 mm	4950 mm	5 mm	Lp
SPA	575 mm	9145 mm	5 mm	Lp
SPB	940 mm	16765 mm	5 mm	Lp
SPC	1750 mm	16790 mm	5 mm	Lp
19	2261 mm	9601 mm	5 mm	Lp
3V	19.5"	190"	0.5"	La
5V	48"	49"	1.0"	La
5V	49"	654"	0.5"	La
8V	90"	654"	0.5"	La
ZX	23"	200"	0.5"	Li
AX	22"	200"	0.5"	Li
BX	21"	200"	0.5"	Li
CX	21"	200"	0.5"	Li
XPZ	590 mm	5115 mm	5 mm	Lp
XPA	590 mm	5125 mm	5 mm	Lp
XPB	600 mm	5140 mm	5 mm	Lp
XPC	600 mm	5160 mm	5 mm	Lp
3VX	24"	202"	0.5"	La
5VX	24"	203"	0.5"	La
8VX	98"	200"	0.5"	La

**Note:** Unlisted sections and sizes available on request



## Special Construction Belts

### (I) High Power Belts

In some critical applications, whenever torque is applied to the belts, they get deflected in the pulley groove (See fig.1). Such deflection leads to an uneven distribution of load across the tension members.



Therefore, it is important for the compression rubber to be resistant to the lateral force, when entering into the pulley grooves. We have developed belts with the characteristics to withstand this lateral force in wrapped and raw edge constructions which are called as **PIX-X'set<sup>®</sup> HP** and **PIX-X'tra<sup>®</sup> HP** High Power Belts respectively.

These high power belts are designed in such a way that a composite layer with higher modulus across the belt section and with good flexibility along the belt circumference provides good support to High Modulus - Low Stretch (HMLS) tension member and thereby enhancing the power rating of the belt by 20% to 30% compared to the corresponding section of a standard V-Belt.

With the High Power Belts, the number of belts in a matched set of a multiple-belt-drive gets reduced and the belt life is also improved significantly. The HMLS tension member minimises the belt stretch, improving the machine-up time.

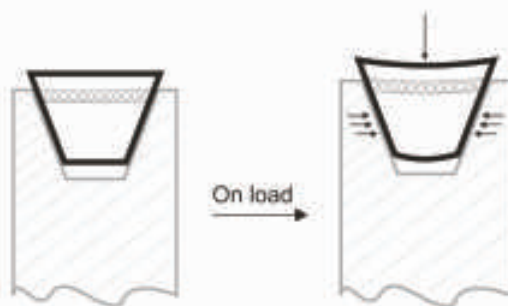


fig.1 Deflection of standard belt under load

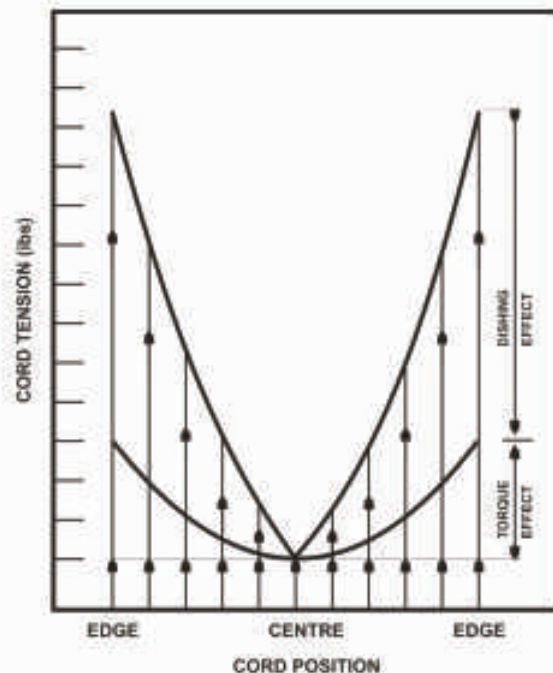


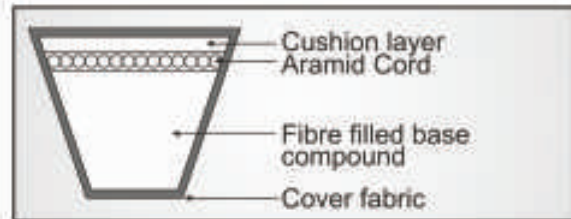
fig.2 Load distribution across tension member

## Special Construction Belts

### (ii) Aramid Cord Belts

Aramid is an organic polyamide fibre that is manufactured using complex chemical processes. It is generally used where the power transmission requirements are very critical, apart from space restrictions on the permissible installation and take up

allowances. Aramid is used as tension member because of its high tensile strength.



### Aramid Cord Belts are recommended where,

- There are restrictions on the drive width
- The installation & take-up allowances are minimal
- Critical drives

Material	Tensile Strength lb/in <sup>2</sup>	% Elongation at break
Polyester	162000	14
Aramid	400000	4

The drive design calculation associated with this belt is similar to the standard drive design procedure. We recommend that customer should get back to us for further information on this.

(iii) **FRAS V-Belts (Fire Resistant & Anti-Static)** Certain working environments such as coal mines & sensitive petro chemical installations require V-belts having fire resistant properties in addition to normal anti-static properties. PIX FRAS V-Belts are suitable for such environments. This construction is thoroughly tested during & after manufacture, to comply with all aspects of IS-2494 Part - II & BS-3790. FRAS Belts are also certified by ATEX.



**Range:** We can produce our entire range of belts in FRAS construction.

**Confoms to:** Ⓜ II 2GD c IIB X (Test report no. IB-03-4-934) - ATEX

### (iv) Dry Cover Belts

These are suitable for drives having clutch applications like lawn mowers and chemical industries where contamination is not acceptable. **PIX-X'set<sup>®</sup> DC** Dry Cover Belts are usually manufactured in Blue colour and can also be supplied in green, brown, red, black & white colours. These are available in polyester as well as aramid constructions.



**Range:** Entire range of wrap construction belts



## Special Construction Belts

### (v) Profile Top Belts

In some of the applications it is desired that the belt used to transmit the power should also convey material as in ceramic industries, agricultural machineries, continuous processes, steel plate cleaning system etc. In such cases, the V-belt needs to have a special construction depending on the type of material to be conveyed. PIX manufactures these type of belts to cater to such applications.

#### PIX-X'set® PT-0

Section	Dimensions		Height of Pattern (mm)	Manufacturing Range		Length Designation
	Top Width (mm)	Thickness (mm)		Min	Max	
B (17x14)	17	14	3	85 inch	658 inch	Li
B (17x16)	17	16	5	85 inch	658 inch	Li
A (13x13)	13	13	5	48 inch	257 inch	Li
37 x 25	37	25	5	4064 mm	16713 mm	Lp



Application: Food grain industries

#### PIX-X'set® PT-HC Honey Comb Belts

Section	Dimensions		Height of Pattern (mm)	Manufacturing Range		Length Designation
	Top Width (mm)	Thickness (mm)		Min (inch)	Max (inch)	
B (17x17)	17	17	6	32	658	Li
C (22x20)	22	20	6	38	658	Li



Note: Maximum height of PT-HC (Honey comb) pattern up to 12 mm provided on request

Application: Tile & general industries

#### PIX-X'set® PT-6

Section	Dimensions		Height of Pattern (mm)	Manufacturing Range		Length Designation
	Top Width (mm)	Thickness (mm)		Min (inch)	Max (inch)	
B (17x22)	17	22	11	85	375	Li
B (17x26)	17	26	15	66	375	Li
B (17x21)	17	21	10	42	79	Li
C (22x25)	22	25	11	73	350	Li



Application: Ceramic tile industries

#### PIX-X'set® PT-7

Section	Dimensions		Height of Pattern (mm)	Manufacturing Range		Length Designation
	Top Width (mm)	Thickness (mm)		Min	Max	
37(37x25)	37	25	7	4064 mm	8890 mm	Lp
D (32x26)	32	26	7	142 inch	633 inch	Li



Application: Horticultural industries

#### PIX-X'set® PT-2TP

Section	Dimensions		Height of Pattern (mm)	Manufacturing Range		Length Designation
	Top Width (mm)	Thickness (mm)		Min	Max	
3HSPB	10	12	6	2134 mm	9144 mm	Lp



Application: Steel plate cleaning system

## Special Construction Belts

### (vi) Fractional Horse Power Belts (FHP/M)

These belts are mainly used on Fractional Horse Power motors installed mainly in domestic appliances.

Series	2000
Top width (mm)	10.0
Thickness (mm)	6.0
Angle (deg)	40.0
Range La (inches)	11" - 173"

### (vii) Light Duty Single V-Belts

These belts are used for a smaller sized machineries installed in the household appliances and are available in three different sections to meet the varying requirements. These are always used in single belt drives.

Series	3L	4L	5L
Top width (mm)	10	13	17
Thickness (mm)	6	8	10
Angle (deg)	40	40	40
Range La (inches)	10.5"-160"	15"-360"	21"-220"

### (viii) Double Cog Belts

This special construction allows the use of belts on small pulley diameters due to increased flexibility.

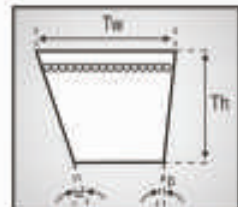
#### Features:

- Prevents buckling
- Extremely Flexible
- Can be used on smaller pulleys
- Better heat dissipation



### (ix) Asymmetric Belts

Asymmetric belts find application in torque converter systems. They are generally used in high performance golf-kart, snowmobiles, minibikes, material handling equipment and Industrial equipment.



Tw	Th	$\alpha$	$\beta$	Length (mm)	Length Designation
19	10	18°	2°	1005	La
16	9	18°	2°	695	La
19	10	18°	2°	740	La
19	8	18°	2°	680	La
19	10	18°	2°	685	La

Note: Unlisted sizes are available on request



## Variable Speed Belts

PIX Variable Speed Belts are specially designed to withstand high ambient temperature & oily conditions, generally encountered in adjustable speed applications.



### PIX-X'set® vs Variable Speed Belts:

#### As per ISO 3410:1989 standard

Section	Angle	Manufacturing Range		Length Designation
		Min (mm)	Max (mm)	
17x8	40	800	1262	Ll
25x13	30	1060	9068	Ll
32x15	34	1171	8179	Lp
38x18	30	1500	9093	Lp
45x20	30	1524	9525	Lp
51x20	34	1816	9525	Lp
58x25	30	1930	6604	Lp
64x25	30	1930	6604	Lp

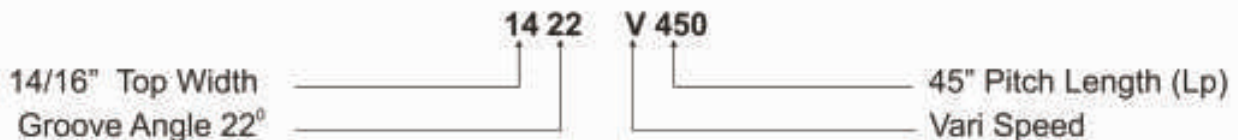
#### Non-standard sizes

Section	Angle	Manufacturing Range		Length Designation
		Min (mm)	Max (mm)	
13x11	40	1067	2032	La
15x9	40	608	7061	Lp
19x11	40	1100	8763	Lp
21x9	40	940	2286	Lp
22x16	40	1600	7162	Ll
30x12	30	1002	5385	Lp
33x22	30	3886	16510	La
38x23	26	2362	8192	La
40x20	30	878	6604	Lp
68x24	32	2464	9144	Lp

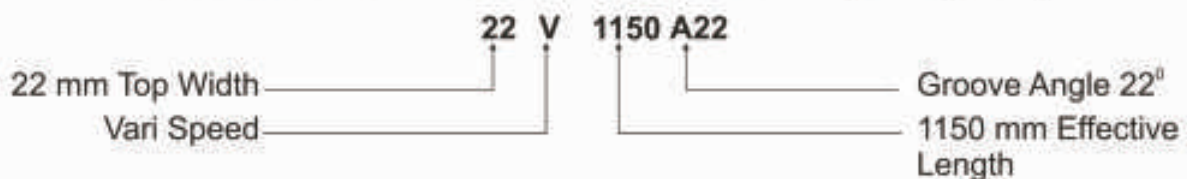
Note: Other non-standard sizes are also available.

### PIX-X'tra® vs Variable Speed Belts

#### Cross Sections Nomenclature : 14 22 V 450 (Metric System)



#### Cross Sections Nomenclature : 22 V 1150 A22 (S. I. System)



## PIX-X'tra® vs Variable Speed Belts

**Manufacturing Range: As per RMA IP 25/1991 standard (Dimensions in mm)**

Cross Section	Top width (Nominal) (mm)	Thickness (Nominal) (mm)	Angle (Deg)	Belt Length Factor (mm)			Pitch Length	
				Lp to La	Li to Lp	Li to La	Min	Max
22V - A22 / 1422V	22	8	22	15	35	50	700	5115
30V - A22 / 1922V	30	10	22	20	42	62	700	5125
37V - A22 / 2322V	37	11	22	23	46	69	700	5126
30V - A26 / 1926V	30	11	26	23	46	69	700	5126
46V - A26 / 2926V	46	13	26	27	55	82	700	5137
51V - A26 / 3226V	51	13	26	27	55	82	700	5137
40V - A30 / 2530V	40	15	30	30	65	95	700	5146
51V - A30 / 3230V	51	16	30	33	67	100	700	5147
70V - A30 / 4430V	70	18	30	37	77	114	700	5157
64V - A36 / 4036V	64	18	36	37	77	114	700	5157
70V - A36 / 4436V	70	18	36	37	77	114	700	5157
76V - A36 / 4836V	76	19	36	39	81	120	700	5161

**Manufacturing Range: As per ISO 3410 (E) / IS : 8777-1978 Standard**

Cross Section	Top width (Nominal) (mm)	Thickness (Nominal) (mm)	Angle (Deg)	Belt Length Factor (mm)			Pitch Length	
				Lp to La	Li to Lp	Li to La	Min	Max
HG	16.5	8.0	26	15	35	50	700	5115
HH	20.4	10.0	26	20	42	62	700	5125
HI	25.4	12.7	26	27	55	82	700	5135
HJ	31.8	15.1	26	30	65	95	700	5145
HK	38.1	17.5	26	37	77	114	700	5155
HL	44.5	19.8	26	40	82	122	700	5165
HM	50.8	22.2	26	45	90	135	700	5177
HN	57.2	23.9	26	50	100	150	700	5185
HO	63.5	25.4	26	53	106	159	700	5192

**Manufacturing Range: As per BS 3733:1974 Standard**

Cross Section	Top width (Nominal) (mm)	Thickness (Nominal) (mm)	Angle (Deg)	Belt Length Factor (mm)			Pitch Length	
				Lp to La	Li to Lp	Li to La	Min	Max
HI	25	13	30	27	55	82	700	5135
HJ	32	15	30	30	65	95	700	5145
HK	38	18	30	37	77	114	700	5103
HL	45	20	30	40	82	122	700	5167
HM	51	22	30	45	90	135	700	5257



## PIX-X'tra® vs Variable Speed Belts

### Manufacturing Range: Non-standard Variable Speed Belts

Thickness	Manufacturing Range		Length Designation
	Minimum (inch)	Maximum (inch)	
5.00 mm (REC / REP)	23.5	86	Li
8.00 mm (REC / REP)	24	200	Li
9.00 mm (REC / REP)	24	200	Li
10.00 mm (REC / REP)	24	200	Li
11.00 mm (REC / REP)	24	200	Li
12.00 mm (REC / REP)	24	200	Li
13.00 mm (REC / REP)	27	200	Li
14.00 mm (REC / REP)	27	200	Li
15.00 mm (REC / REP)	27	200	Li
16.00 mm (REC / REP)	27	200	Li
17.00 mm (REC / REP)	35	200	Li
18.00 mm (REC / REP)	35	200	Li
19.00 mm (REC / REP)	35	200	Li
20.00 mm (REC / REP)	35	200	Li
21.00 mm To 30.00 mm (REC)	63	200	Li
20.00 mm To 22.00 mm (REP)	63	200	Li

Note: These belts can be manufactured with following dimensions.

1. Top width: 5mm - 82mm 2. Angle: 22° - 60°

## Automotive Belts

### Manufacturing Range: PIX-X'tra® FORCE Raw Edge Construction Belts

Section	Top width (mm)	Thickness (mm)	Angle (Deg)	Length (mm)		Length Designation
				From	To	
X9.5 / AVX10	10.0	8.0	36	600	5130	La
X12.5 / AVX13	13.0	10.0	36	600	5143	La
X11A	11.5	8.0	36	610	5130	Le
X13A	13.5	9.0	36	600	5136	Le
X15A	17.0	10.5	38	600	5146	Le
X17A	18.5	11.0	36	600	5149	Le
X20A	21.5	12.5	36	610	5158	Le

### Manufacturing Range: PIX-X'set® FORCE Wrapped Construction Belts

Section	Top width (mm)	Thickness (mm)	Angle (Deg)	Length (mm)		Length Designation
				From	To	
9.5 / AV 10	9.5	8.0	40	375	4064	La
12.5 / AV 13	12.5	10.0	40	588	9296	La

PIX Automotive belts are specially designed to cater the needs of automotive industry. These belts are suitable to drive various accessories in automobile such as charging system, water pump, power steering pump, A/C compressors. PIX automotive belts are available in Wrap, Cut Edge, Ribbed and Synchronous constructions. Please refer page no.84 for Ribbed automotive belts. The PIX Synchronous belt catalogue can be referred for Synchronous or Timing belt applications.

## Free Set Concept

V-belts normally shrink during storage as a result of change in the climatic conditions. This shrinkage is a reversible process and PIX Free Set Belts would resume their original length on fitment and after an initial run. This does not affect the working performance of PIX Free Set V-Belts.

Free Set Concept is applicable for industrial belts which are produced in accordance with the standard BS 3790. Tolerances followed for PIX Free Set Belts are much more stringent than the "Matched Set Tolerances" given in the standard BS 3790.

### Features:

- No length code
- Low variation in length tolerances
- Less centre adjustment
- Low stretch
- Low variation in elongation within a set of belts
- Even power transmission
- Longer life
- Longer maintenance intervals
- Less inventory

### PIX Free Set V-Belts

Nominal Length	Tolerance in length (mm)
Up to 1905 mm (75 inches)	± 1
Beyond 1905 mm (75 inches) Up to 3150 mm (124 inches)	± 2
Beyond 3150 mm (124 inches) Up to 5004 mm (197 inches)	± 3
Beyond 5004 mm (197 inches) Up to 8992 mm (354 inches)	± 4
Beyond 8992 mm (354 inches) Up to 16002 mm (630 inches)	± 6

### PIX Free Set V-Belt Tensioning:

PIX Free Set Belts are manufactured with an exceptionally close belt length tolerances, by virtue of latest belt manufacturing technology. Further the belt length remains matched during storage and on the drive. Install PIX Belts and tension them as per the procedure given on page no 75. Run the belts under full load condition for about 24 hours. Stop the drive and re-check the tension. If necessary re-tension the belts (Refer table A, page 77).



## Drive Design Procedure for V-Belts

To obtain the best performance from a V-belt drive, it is necessary to design the drive correctly. The procedure for the same is as follows.

### STEP 1 Calculate Speed Ratio ( $S_r$ )

$$\text{Speed Ratio } (S_r) = \frac{\text{r. p. m. of faster shaft (R)}}{\text{r. p. m. of slower shaft (r)}}$$

### STEP 2 Select Service Factor (K)

Service factor is obtained from Table 1 on page 24

### STEP 3 Calculate Design Power ( $P_d$ )

Design Power ( $P_d$ ) = Power (P) x Service Factor (K)

### STEP 4 Select Belt Cross Section

Belt cross section is obtained from charts I, II & III on pages 25 to 27. When the point of intersection falls on or near the dividing line, feasibility of both cross sections should be checked.

### STEP 5 Select Pulley Pitch Diameters

Refer Tables 2 & 3 on pages 28 & 29 for selecting pulley pitch diameters. Try to avoid use of non standard pulleys but in some cases, it is necessary if the exact ratios are not covered by standard pulleys.

### STEP 6 Calculate Belt Pitch Length ( $L_p$ ) & Centre Distance (C)

$$\text{Belt Pitch Length } (L_p) = 2C + 1.57(D+d) + \frac{(D-d)^2}{4C}$$

Where D & d are pitch diameters of larger & smaller pulleys respectively.

If the Belt Pitch Length comes in a fraction, use next whole / round-off length.

If there is a space constraint or centre distance limitation, use the same calculated length. If so, exact centre distance calculations are not required again.

Calculate the exact centre distance by the formula

$$C = A + \sqrt{A^2 - B}$$

Where,  $A = \frac{L}{4} - 0.3925(D + d)$  and

$$B = \frac{(D - d)^2}{8}$$

### STEP 7 Determine Power Rating (P)

Refer power rating Tables from 4 to 26 on pages 30 to 64 for different belt sections.

Power rating per belt (P) = Rated power + Additional power for speed ratio

### STEP 8 Find Arc of Contact Correction Factor ( $F_c$ ) & Pitch Length Correction Factors ( $F_d$ )

Refer tables 27 & 28 on page 65 to 67 for arc of Contact Correction Factor & Belt Pitch Length Correction Factor respectively.

### STEP 9 Find Number of Belts (N)

$$\text{Number of Belts (N)} = \frac{P_d}{P \times F_c \times F_d}$$

If the number of belts comes in a fraction, use next whole number.

### STEP 10 Summary

- 1) Smaller & larger pulley pitch diameters & number of grooves obtained.
- 2) Number of belts along with size & section obtained.

## DRIVE DESIGN EXAMPLE (CLASSICAL)

Condition 1: Prime mover A. C. motor; 75kW, 1450 r.p.m. (Driver)

Condition 2: Reciprocating pump, 310 r.p.m., 18 hours per day

Condition 3: Approximate centre distance 1050 mm

### STEPS FORMULAE

**STEP 1** Speed Ratio ( $S_n$ ) =  $R/r$

**STEP 2** Service factor (K) from Table 1 on page 24

**STEP 3** Design power ( $P_d$ ) =  $P \times K$

**STEP 4** Belt cross section refer chart I on page 25

**STEP 5** Pulley pitch diameters from Table 2 page 28

**STEP 6** Belt pitch length ( $L_p$ ) & Centre dist. (C)

$$L_p = 2C + 1.57(D + d) + \frac{(D - d)^2}{4C}$$

Choose the nearest standard  $L_p$  from page 11.

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{L}{4} - 0.3925(D + d)$$

$$B = \frac{(D - d)^2}{8}$$

**STEP 7** Power rating (P) = Rated power + Additional power for speed ratio from Table 9 on page 37

**STEP 8** Arc of contact correction factor ( $F_c$ ) from table 27 on page 65 and Power Correction Factors for Belt Pitch Length ( $F_d$ ) from table 28 on page 66

**STEP 9** Number of belts (N) =  $\frac{P_d}{P \times F_c \times F_d}$

**STEP 10** Summary:

1. Smaller pulley fitted to prime mover
2. Larger pulley fitted to reciprocating pump
3. Classical belts required
4. Centre Distance

### CALCULATIONS

See above given condition 1 & 2

$$S_n = R/r = 1450/310 = 4.67$$

$$K = 1.4$$

$$P_d = 75 \times 1.4 = 105 \text{ kW}$$

Belt section indicated is "C"

$$d = 180 \text{ mm}, D = 840 \text{ mm}$$

$$L_p = 2(1050) + 1.57(840 + 180) + \frac{(840 - 180)^2}{4 \times 1050}$$

$$L_p = 3805.11 \text{ mm}$$

$$\text{Standard } L_p = 3803 \text{ mm}$$

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{3803}{4} - 0.3925(840 + 180)$$

$$A = 950.75 - 400.35 = 550.4$$

$$B = \frac{(840 - 180)^2}{8} = 54450$$

$$C = 550.40 + \sqrt{(550.40)^2 - (54450.0)}$$

$$C = 1049 \text{ mm}$$

$$P = 7.23 \text{ kW} + 1.48 \text{ kW}$$

$$P = 8.71 \text{ kW}$$

$$F_c = 0.97$$

$$F_d = 1.00$$

$$N = \frac{105}{8.71 \times 0.97 \times 1.00} = 12.43 \text{ (say 13 belts)}$$

- Smaller pulley of 180 mm pitch dia. with 13 grooves of "C" section.
- Larger pulley of 840 mm pitch dia. with 13 grooves of "C" section.
- 13 belts of "C" section each of 3803 mm pitch length
- 1049 mm.



## DRIVE DESIGN EXAMPLE (WEDGE)

Condition 1 : Normal torque A. C. electric motor 6 kW, 1440 r.p.m. (Driver)

Condition 2 : Centrifugal pump 720 r.p.m., continuous running

Condition 3 : Approximate centre distance 550 mm

### STEPS FORMULAE

**STEP 1** Speed Ratio ( $S_n$ ) =  $R/r$

**STEP 2** Service factor (K) from Table 1 on page 24

**STEP 3** Design power ( $P_d$ ) =  $P \times K$

**STEP 4** Belt cross section refer chart II on page 26

**STEP 5** Pulley pitch diameters from Table 2 page 28

**STEP 6** Belt pitch length ( $L_p$ ) & Centre dist. (C)

$$L_p = 2C + 1.57(D + d) + \frac{(D - d)^2}{4C}$$

Choose the nearest standard  $L_p$  from page 11.

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{L}{4} - 0.3925(D + d)$$

$$B = \frac{(D - d)^2}{8}$$

**STEP 7** Power rating (P) = Rated power + Additional power for speed ratio from Table 13 on page 44.

**STEP 8** Arc of contact correction factor ( $F_c$ ) from table 27 on page 65 and Power Correction Factors for Belt Pitch Length ( $F_d$ ) from table 28 on page 66.

**STEP 9** Number of belts (N) =  $\frac{P_d}{P \times F_c \times F_d}$

**STEP 10** Summary:

1. Smaller pulley fitted to electric motor shaft
2. Larger pulley fitted to pump shaft
3. Wedge belts required.
4. Centre distance

### CALCULATIONS

See above given condition 1 & 2

$$S_n = R/r = 1440/720 = 2$$

$$K = 1.2$$

$$P_d = 6 \times 1.2 = 7.2 \text{ kW}$$

Belt section indicated is "SPZ"

$$d = 80 \text{ mm}, D = 160 \text{ mm}$$

$$L_p = 2(550) + 1.57(160+80) + \frac{(160 - 80)^2}{4 \times 550}$$

$$L_p = 1480 \text{ mm}$$

$$\text{Standard } L_p = 1480 \text{ mm}$$

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{1480}{4} - 0.3925(160 + 80) = 370 - 94.2 \quad A = 275.8$$

$$B = \frac{(160 - 80)^2}{8} = 800$$

$$C = 275.8 + \sqrt{(275.8)^2 - (800)}$$

$$C = 550 \text{ mm}$$

$$P = 1.59 \text{ kW} + 0.23 \text{ kW} = 1.82 \text{ kW}$$

$$F_c = 1.00$$

$$F_d = 0.99$$

$$N = \frac{7.2}{1.82 \times 1.00 \times 0.99} = 3.99 \text{ (say 4 belts)}$$

- Smaller pulley of 80 mm pitch dia. with 4 grooves of "SPZ" section.
- Larger pulley of 160 mm pitch dia. with 4 grooves of "SPZ" section.
- 4 belts of "SPZ" section each of 1480 mm pitch length.
- 550 mm.

## DRIVE DESIGN EXAMPLE (RAW EDGE COGGED)

Condition 1 : Prime mover A. C. motor; 75 kW, 1450 r.p.m. (Driver)

Condition 2 : Reciprocating pump, 310 r.p.m., 18 hrs. per day

Condition 3 : Approximate centre distance 900 mm

### STEPS FORMULAE

**STEP 1** Speed Ratio ( $S_n$ ) =  $R/r$

**STEP 2** Service factor (K) from Table 1 on page 24

**STEP 3** Design power (Pd) =  $P \times K$

**STEP 4** Belt cross section refer chart II on page 26

**STEP 5** Pulley pitch diameters from Table 3, page 29

**STEP 6** Belt pitch length (Lp) & Centre dist. (C)

$$L_p = 2C + 1.57(D + d) + \frac{(D - d)^2}{4C}$$

Choose the nearest standard Lp from page 11.

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{L}{4} - 0.3925(D + d)$$

$$B = \frac{(D - d)^2}{8}$$

**STEP 7** Power rating (P) = Rated power + Additional power for speed ratio from Table 25 on page 61 & 62.

**STEP 8** Arc of contact correction factor (Fc) from table 27 on page 65 & Power Correction Factors for Belt Pitch Length (Fd) from table 28 on page 66 & 67.

**STEP 9** Number of belts (N) =  $\frac{P_d}{P \times F_c \times F_d}$

**STEP 10** Summary:

1. Smaller pulley fitted to prime mover
2. Larger pulley fitted to reciprocating pump
3. Cut Edge Cogged belts required
4. Centre distance

### CALCULATIONS

See above given condition 1 & 2  
 $S_n = R/r = 1450/310 = 4.67$

$$K = 1.4$$

$$P_d = 75 \times 1.4 = 105 \text{ kW}$$

Belt section indicated is "XPB"

$$d = 125 \text{ mm}, D = 584 \text{ mm}$$

$$L_p = 2(900) + 1.57(584 + 125) + \frac{(584 - 125)^2}{4 \times 900}$$

$$L_p = 2972 \text{ mm}$$

$$\text{Standard } L_p = 2975 \text{ mm}$$

$$C = A + \sqrt{A^2 - B}$$

$$A = \frac{2975}{4} - 0.3925(584 + 125) = 743.75 - 278.28 \quad A = 465.47$$

$$B = \frac{(584 - 125)^2}{8} = 26335.125$$

$$C = 465.47 + \sqrt{(465.47)^2 - (26335.125)}$$

$$C = 902 \text{ mm}$$

$$P = 7.17 \text{ kW} + 1.03 \text{ kW}$$

$$P = 8.2 \text{ kW}$$

$$F_c = 0.98$$

$$F_d = 0.97$$

$$N = \frac{105}{8.2 \times 0.98 \times 0.97} = 13.47 \text{ (say 14 belts)}$$

- Smaller pulley of 125 mm pitch diameter with 14 grooves of "XPB" section.
- Larger pulley of 584 mm pitch diameter with 14 grooves of "XPB" section.
- 14 belts of "XPB" section each of 2975 mm pitch length
- 902 mm.



**Table 1:**  
**Service Factors for Belt Drives (See Note 1)**

TYPE OF DRIVEN MACHINE		SERVICE FACTOR					
		SOFT START +			HEAVY START #		
EXAMPLES	WORKING HOURS	10 & Under	Over 10 to 16	Over 16	10 & Under	Over 10 to 16	Over 16
	<b>Class 1 : LIGHT DUTY</b> Agitators (uniform density), Blowers Exhausts & fans (up to 7.5 kW), Centrifugal compressors & pumps, Belt conveyors (uniformly loaded)		1.0	1.1	1.2	1.1	1.2
<b>Class 2 : MEDIUM DUTY</b> Agitators & mixers (variable density), Blowers, Exhausts & fans (over 7.5 kW), Rotary compressors & pumps (other than centrifugal), Belt conveyors (not uniformly loaded), Generators & exciters, laundry machinery, line shafts, machine tools, printing machinery, saw mill & wood working machinery, screens (rotary).		1.1	1.2	1.3	1.2	1.3	1.4
<b>Class 3 : HEAVY DUTY</b> Brick machinery, bucket elevators, compressors & pumps (reciprocating), conveyors (heavy duty), hoists, mills (hammer), pulverisers, punches, presses, shears, quarry plant, rubber machinery, screens (vibrating), textile machinery.		1.2	1.3	1.4	1.4	1.5	1.6
<b>Class 4 : EXTRA HEAVY DUTY</b> Crushers (gyratory jaw - roll) Mills (ball - rod - tube)		1.3	1.4	1.5	1.5	1.6	1.8

### For Speed - Increasing Drives of

Speed ratio	1.00 to 1.24	: Multiply service factor by 1.00
Speed ratio	1.25 to 1.74	: Multiply service factor by 1.05
Speed ratio	1.75 to 2.49	: Multiply service factor by 1.11
Speed ratio	2.50 to 3.49	: Multiply service factor by 1.18
Speed ratio	3.50 & over	: Multiply service factor by 1.25

+ e.g. Electric motors (a.c. start, delta start, d.c. shunt wound), internal combustion engines with four or more cylinders, all prime movers fitted with centrifugal clutches, dry or fluid couplings.

# e.g. Electric motors (a.c. direct -on - line start, d.c. series & compound wound), internal combustion engines with less than four cylinders.

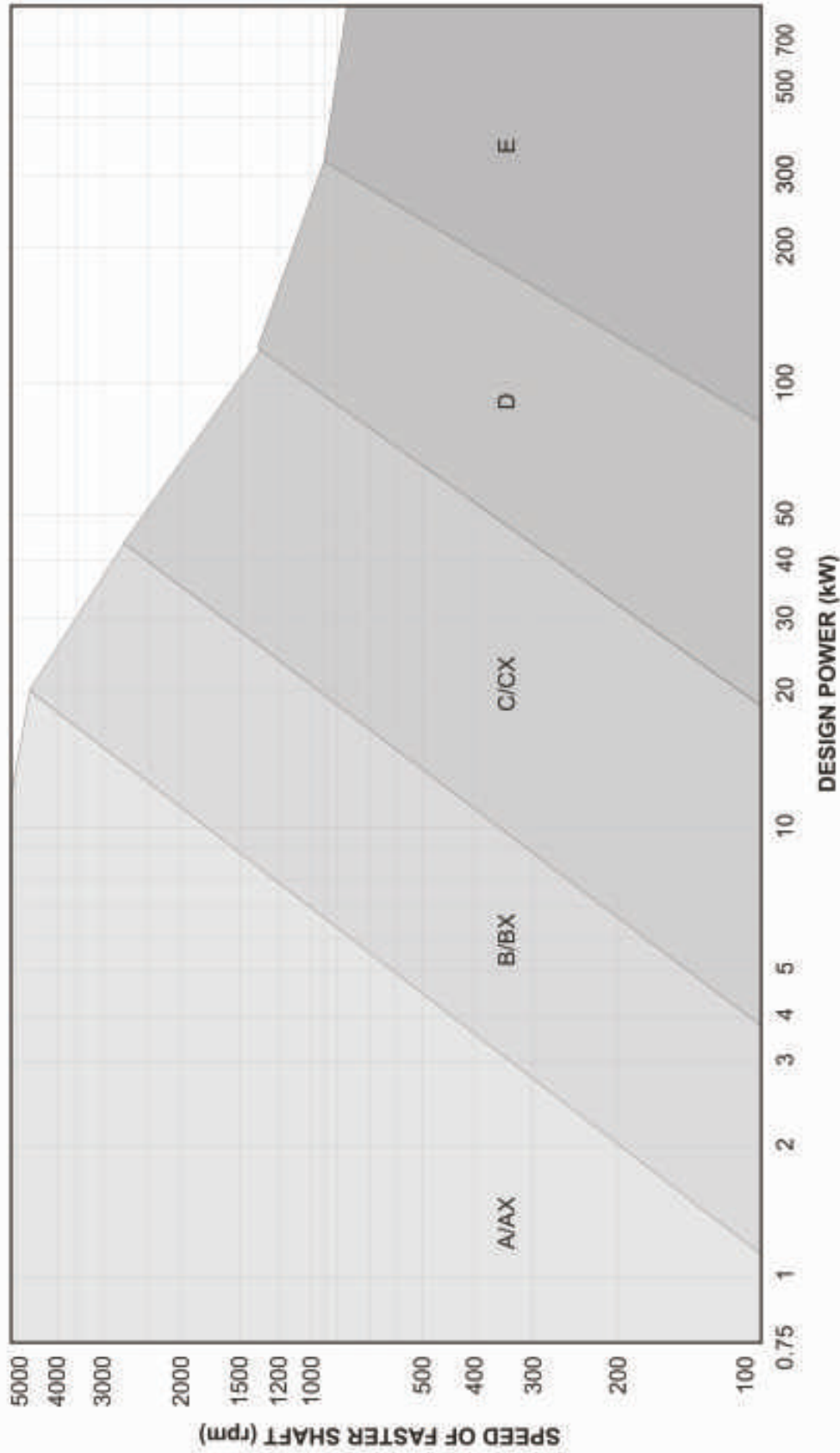
### Special Conditions

- 1) For reversing drives, except where high torque is not present on starting, add 20% to the factors
- 2) Idler pulley on slack side (internal), no addition to the factors.
- 3) Idler pulley on tight side (internal), add 0.1 to the factors.

**Note 1:** The service factors in Table 1 do not apply to light duty drives using Z or Y section belts.

In such cases, PIX Technical Services department should be consulted.

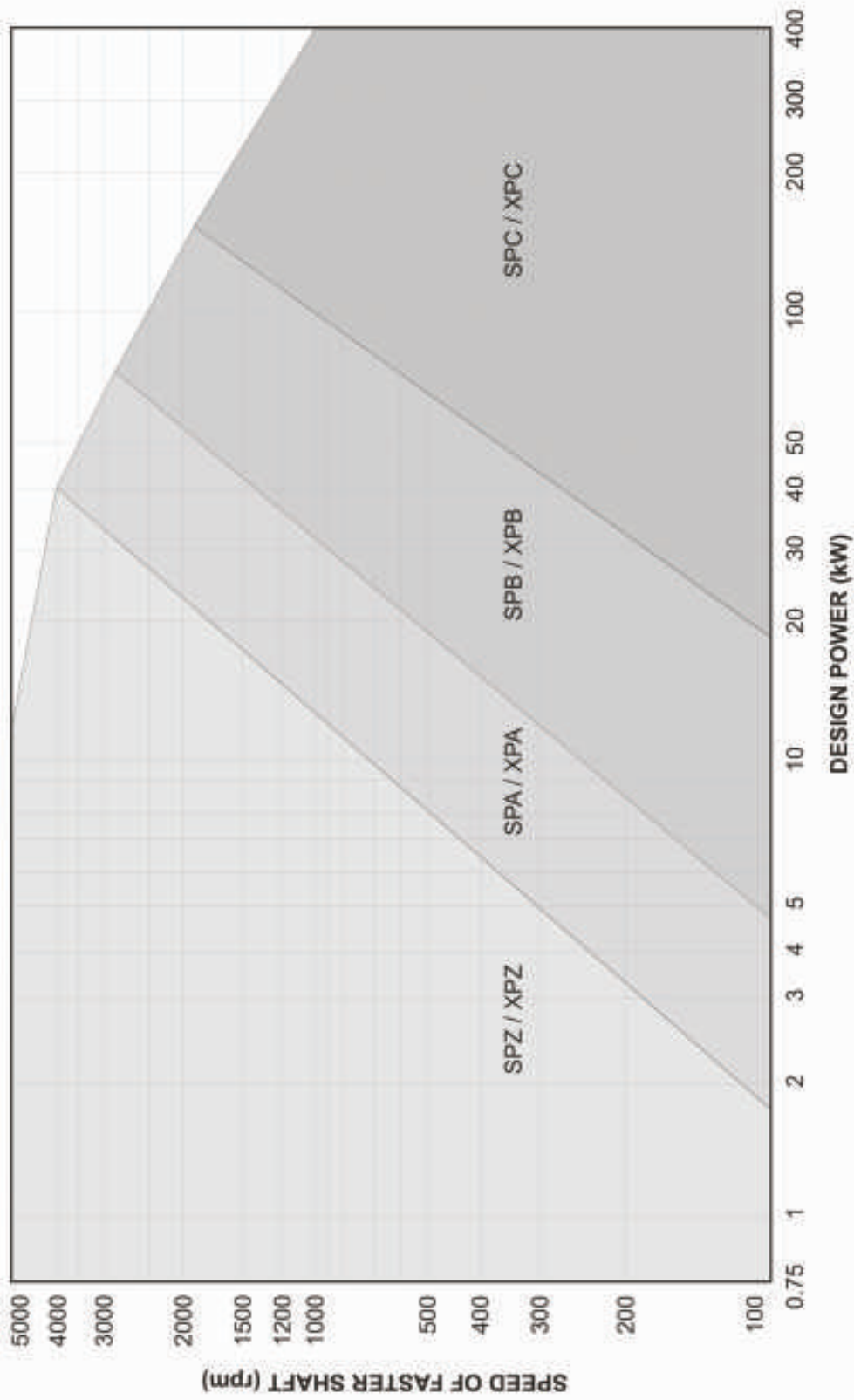
**Note 2:** The use of an idler pulley on the outside of belt is not recommended.



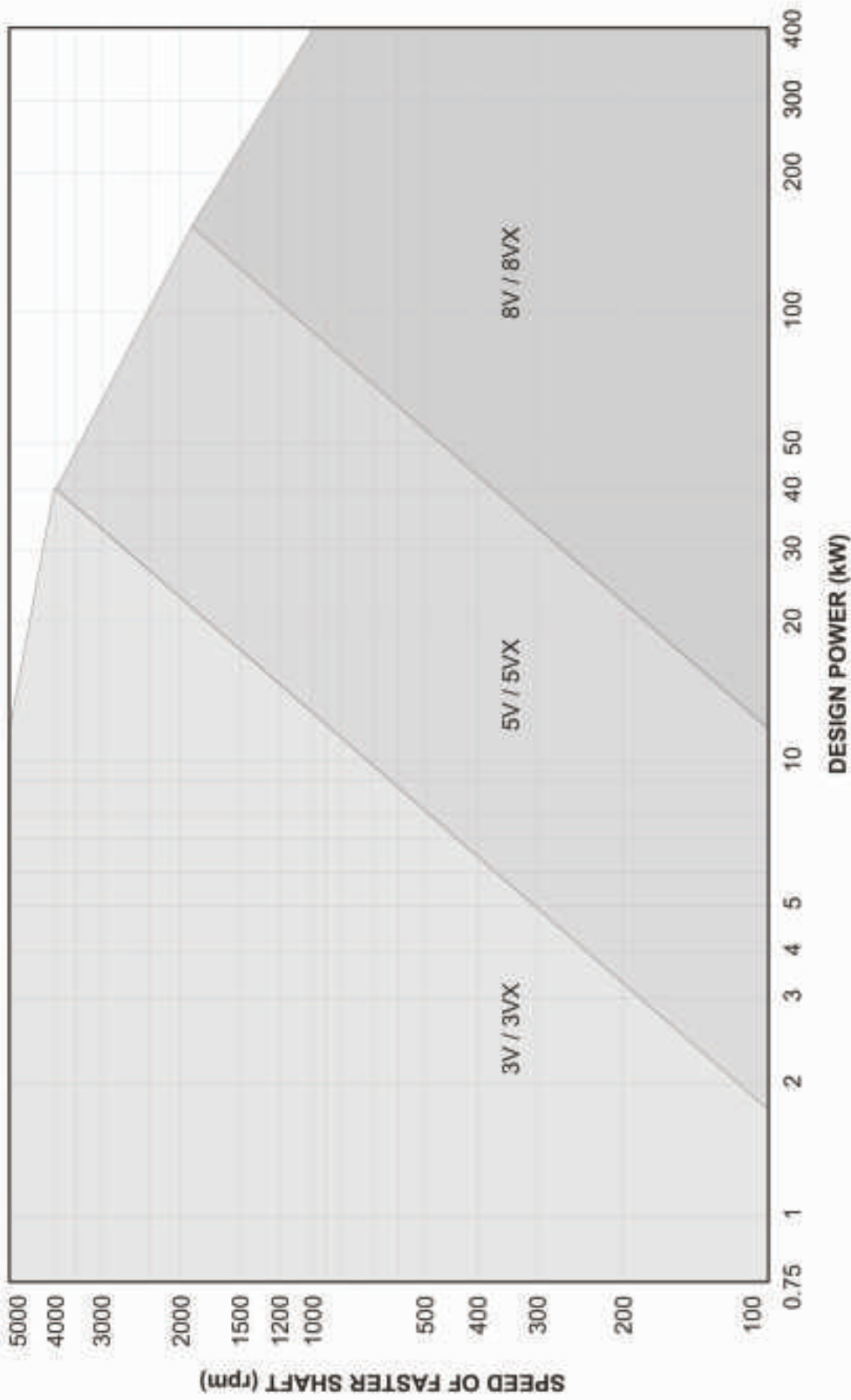
Note: Z section belts should be used for low power, small pulley diameter applications and should be selected only when pulley diameters are smaller than the recommended minimum for A section belts.

**CHART I : SELECTION OF V-BELTS CROSS SECTION**





**CHART II : SELECTION OF V-BELTS CROSS SECTION**



**CHART III : SELECTION OF V-BELTS CROSS SECTION**



**Table 2:**  
**Standard Pulley Pitch Diameters for Faster Shaft**

B	Z	A	B	20	C	25	D	E	SPZ/3V	SPA	SPB/5V	19	SPC	8V
40	50	71	112	160	180	250	355	500	63	90	140	180	224	335
45	53	75	118	180	190	280	375	560	67	95	150	200	236	355
50	56	80	125	200	200	315	400	630	71	100	160	224	250	375
56	60	85	132	224	212	355	425	670	75	106	170	236	265	400
63	63	90	140	236	224	400	450	710	80	112	180	250	280	425
71	67	95	150	250	236	450	475	750	85	118	190	280	300	450
80	71	100	160	280	250	500	500	800	90	125	200	315	315	475
90	75	106	170	315	265	560	530	860	95	132	212	355	335	500
	80	112	180	355	280	630	560	900	100	140	224	375	355	530
	85	118	190	400	300	710	600	950	106	150	236	400	375	560
	90	125	200	450	315	800	630	1000	112	160	250	450	400	600
	95	132	212	500	335		670	1120	118	170	265	500	450	630
	100	140	224		355		710	1250	125	180	280	560	500	670
	112	150	236		375		750	1400	132	190	315	630	560	710
		160	250		400		800	1600	140	200	355		630	750
		180	280		450		900		150	224	375		710	800
							1000		160	250	400			
									180	280				
									200	315				

**Table 3:**  
**Standard Pulley Pitch Diameter for Faster Shaft**

ZX	AX	BX	CX	XPZ/3VX	XPA	XPB/5VX	XPC
40	63	90	140	56	71	112	180
45	71	100	150	60	75	118	190
50	80	106	160	63	80	125	200
56	90	112	180	71	85	132	212
63	95	118	200	80	90	140	224
71	100	125	224	85	95	150	236
80	106	132	250	90	100	160	250
90	112	140	280	95	106	170	265
100	118	160	315	100	112	180	280
112	125	180	335	112	118	190	315
	132	190	355	125	125	200	335
	140	200	400	140	132	212	355
	150	212	450	160	140	224	400
	160	224	500	180	150	236	450
	180	250	630	200	160	250	500
		280			170	280	560
					180	315	630
					190	355	710
					200	400	
					224		
					250		
					280		



**Table 4:**  
**Section 8: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)									Additional Power (kW) per belt for speed ratio			
	35	40	45	50	56	63	71	80	90	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.39	0.44	0.00	0.01	0.01	0.01
950	0.15	0.18	0.22	0.26	0.31	0.36	0.43	0.49	0.56	0.00	0.01	0.02	0.02
1450	0.19	0.25	0.30	0.36	0.43	0.50	0.59	0.68	0.68	0.00	0.02	0.03	0.03
2050	0.28	0.37	0.47	0.57	0.68	0.81	0.95	1.10	1.26	0.01	0.03	0.05	0.06
100	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.00	0.00	0.00	0.00
200	0.04	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.00	0.00	0.00	0.00
300	0.06	0.07	0.09	0.10	0.12	0.14	0.17	0.19	0.22	0.00	0.01	0.01	0.01
400	0.08	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.28	0.00	0.01	0.01	0.01
500	0.09	0.11	0.14	0.16	0.19	0.22	0.25	0.29	0.34	0.00	0.01	0.01	0.01
600	0.10	0.13	0.16	0.18	0.22	0.25	0.30	0.34	0.39	0.00	0.01	0.01	0.01
700	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.39	0.44	0.00	0.01	0.01	0.01
800	0.13	0.16	0.20	0.23	0.27	0.32	0.37	0.43	0.49	0.00	0.01	0.01	0.02
900	0.14	0.18	0.21	0.25	0.30	0.35	0.41	0.47	0.54	0.00	0.02	0.02	0.02
1000	0.15	0.19	0.23	0.27	0.32	0.38	0.44	0.51	0.59	0.00	0.02	0.02	0.02
1100	0.16	0.20	0.25	0.29	0.35	0.41	0.48	0.55	0.63	0.00	0.02	0.02	0.02
1200	0.17	0.22	0.27	0.31	0.37	0.44	0.51	0.59	0.68	0.00	0.02	0.02	0.02
1300	0.18	0.23	0.28	0.33	0.39	0.46	0.54	0.63	0.72	0.00	0.02	0.02	0.03
1400	0.19	0.24	0.30	0.35	0.42	0.49	0.57	0.66	0.76	0.00	0.03	0.03	0.03
1500	0.20	0.25	0.31	0.37	0.44	0.52	0.60	0.70	0.80	0.00	0.03	0.03	0.03
1600	0.20	0.25	0.33	0.39	0.46	0.54	0.63	0.73	0.84	0.00	0.03	0.03	0.03
1700	0.21	0.27	0.34	0.40	0.48	0.57	0.66	0.77	0.88	0.00	0.03	0.03	0.04
1800	0.22	0.28	0.35	0.42	0.50	0.59	0.69	0.80	0.92	0.00	0.03	0.03	0.04
1900	0.23	0.29	0.37	0.44	0.52	0.61	0.72	0.83	0.95	0.00	0.04	0.04	0.04
2000	0.23	0.30	0.38	0.45	0.54	0.63	0.74	0.86	0.99	0.00	0.04	0.04	0.04
2100	0.24	0.31	0.39	0.47	0.56	0.66	0.77	0.89	1.02	0.01	0.04	0.04	0.04
2200	0.25	0.32	0.40	0.48	0.57	0.68	0.80	0.92	1.05	0.01	0.04	0.04	0.05
2300	0.25	0.33	0.41	0.50	0.59	0.70	0.82	0.95	1.09	0.01	0.04	0.04	0.05
2400	0.26	0.34	0.43	0.51	0.61	0.72	0.84	0.98	1.12	0.01	0.04	0.04	0.05
2500	0.26	0.35	0.44	0.52	0.63	0.74	0.87	1.01	1.16	0.01	0.05	0.05	0.05
2600	0.27	0.36	0.45	0.54	0.64	0.76	0.89	1.03	1.19	0.01	0.05	0.05	0.05
2700	0.28	0.36	0.46	0.55	0.66	0.78	0.92	1.07	1.22	0.01	0.05	0.05	0.06
2800	0.28	0.37	0.47	0.56	0.67	0.80	0.94	1.09	1.25	0.01	0.05	0.05	0.06
2900	0.28	0.38	0.48	0.58	0.69	0.82	0.96	1.11	1.28	0.01	0.05	0.05	0.06
3000	0.29	0.38	0.49	0.59	0.70	0.84	0.98	1.14	1.30	0.01	0.06	0.06	0.06
3100	0.29	0.38	0.50	0.60	0.72	0.86	1.00	1.16	1.33	0.01	0.06	0.06	0.06
3200	0.30	0.40	0.51	0.61	0.73	0.87	1.02	1.19	1.36	0.01	0.06	0.06	0.07
3300	0.30	0.40	0.52	0.62	0.75	0.89	1.04	1.21	1.38	0.01	0.06	0.06	0.07
3400	0.31	0.41	0.52	0.63	0.76	0.90	1.06	1.23	1.41	0.01	0.06	0.06	0.07
3500	0.31	0.42	0.53	0.64	0.77	0.92	1.08	1.25	1.43	0.01	0.06	0.06	0.07
3600	0.31	0.42	0.54	0.65	0.79	0.94	1.10	1.27	1.46	0.01	0.07	0.07	0.07
3700	0.32	0.43	0.55	0.67	0.80	0.96	1.12	1.30	1.48	0.01	0.07	0.07	0.08
3800	0.32	0.43	0.56	0.68	0.81	0.97	1.14	1.32	1.50	0.01	0.07	0.07	0.08
3900	0.32	0.44	0.56	0.68	0.82	0.98	1.15	1.34	1.52	0.01	0.07	0.07	0.08
4000	0.33	0.44	0.57	0.69	0.84	1.00	1.17	1.35	1.55	0.01	0.07	0.07	0.08
4100	0.33	0.45	0.58	0.70	0.85	1.01	1.19	1.37	1.57	0.01	0.08	0.08	0.09
4200	0.33	0.45	0.59	0.71	0.86	1.02	1.20	1.39	1.59	0.01	0.08	0.08	0.09
4300	0.33	0.46	0.59	0.72	0.87	1.04	1.22	1.41	1.61	0.01	0.08	0.08	0.09
4400	0.34	0.46	0.60	0.73	0.88	1.05	1.23	1.43	1.62	0.01	0.08	0.08	0.09
4500	0.34	0.47	0.61	0.74	0.89	1.06	1.25	1.44	1.64	0.01	0.08	0.08	0.09
4600	0.34	0.47	0.61	0.75	0.90	1.08	1.26	1.46	1.66	0.01	0.08	0.09	0.10
4700	0.34	0.47	0.62	0.75	0.91	1.09	1.28	1.47	1.67	0.01	0.09	0.09	0.10
4800	0.34	0.48	0.62	0.76	0.92	1.10	1.29	1.49	1.69	0.01	0.09	0.09	0.10
4900	0.35	0.48	0.63	0.77	0.93	1.11	1.30	1.50	1.70	0.01	0.09	0.09	0.10
5000	0.36	0.49	0.63	0.78	0.94	1.12	1.31	1.52	1.72	0.01	0.09	0.09	0.10
5100	0.35	0.49	0.64	0.78	0.95	1.13	1.33	1.53	1.73	0.01	0.09	0.09	0.11
5200	0.35	0.49	0.64	0.79	0.96	1.14	1.34	1.54	1.74	0.01	0.10	0.10	0.11
5300	0.35	0.49	0.65	0.80	0.97	1.15	1.35	1.55	1.76	0.01	0.10	0.10	0.11
5400	0.35	0.50	0.65	0.80	0.97	1.16	1.36	1.56	1.77	0.01	0.10	0.10	0.11
5500	0.35	0.50	0.66	0.81	0.98	1.17	1.37	1.57	1.78	0.01	0.10	0.10	0.11
5600	0.35	0.50	0.66	0.81	0.99	1.18	1.38	1.59	1.79	0.01	0.10	0.11	0.12
5700	0.35	0.51	0.67	0.82	1.00	1.19	1.39	1.59	1.80	0.01	0.11	0.11	0.12
5800	0.35	0.51	0.67	0.83	1.00	1.20	1.40	1.60	1.80	0.01	0.11	0.11	0.12
5900	0.35	0.51	0.67	0.83	1.01	1.20	1.41	1.61	1.81	0.01	0.11	0.11	0.12
6000	0.35	0.51	0.68	0.84	1.02	1.21	1.41	1.62	1.82	0.01	0.11	0.11	0.12
6200	0.35	0.51	0.68	0.84	1.03	1.22	1.43	1.63	1.83	0.01	0.11	0.12	0.13
6400	0.35	0.52	0.69	0.85	1.04	1.24	1.44	1.65	1.83	0.01	0.12	0.12	0.13
6600	0.35	0.52	0.70	0.86	1.05	1.25	1.45	1.65	1.84	0.02	0.12	0.13	0.14
6800	0.35	0.52	0.70	0.87	1.06	1.26	1.46	1.66	1.84	0.02	0.13	0.13	0.14
7000	0.35	0.52	0.70	0.87	1.06	1.27	1.47	1.67	1.84	0.02	0.13	0.13	0.15
7200	0.35	0.52	0.71	0.88	1.07	1.27	1.48	1.67	1.83	0.02	0.13	0.14	0.15
7400	0.35	0.52	0.71	0.88	1.08	1.28	1.48	1.67	1.82	0.02	0.14	0.14	0.15
7600	0.34	0.52	0.71	0.89	1.08	1.28	1.48	1.68	1.81	0.02	0.14	0.14	0.16
7800	0.34	0.52	0.71	0.89	1.08	1.28	1.48	1.68	1.79	0.02	0.09	0.15	0.16
8000	0.33	0.52	0.71	0.89	1.08	1.29	1.48	1.65	1.77	0.02	0.09	0.15	0.17



**Table 5: Section Z: Power Rating P(kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)									Additional Power (kW) per belt for speed ratio			
	45	50	56	63	71	80	90	100	112	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.19	0.23	0.29	0.36	0.43	0.51	0.60	0.69	0.79	0.00	0.02	0.03	0.03
950	0.22	0.29	0.36	0.44	0.54	0.64	0.76	0.88	1.00	0.00	0.02	0.04	0.04
1450	0.29	0.38	0.49	0.61	0.75	0.90	1.07	1.22	1.42	0.01	0.03	0.06	0.06
2850	0.42	0.58	0.77	0.99	1.23	1.47	1.77	2.07	2.34	0.01	0.07	0.11	0.12
100	0.04	0.05	0.06	0.07	0.08	0.10	0.11	0.13	0.15	0.00	0.00	0.00	0.00
200	0.08	0.10	0.12	0.14	0.16	0.20	0.22	0.26	0.30	0.00	0.00	0.01	0.01
300	0.09	0.15	0.18	0.21	0.24	0.30	0.33	0.39	0.45	0.00	0.01	0.01	0.01
400	0.12	0.15	0.18	0.22	0.26	0.31	0.37	0.42	0.48	0.00	0.01	0.02	0.02
500	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.53	0.60	0.00	0.01	0.02	0.02
600	0.16	0.20	0.25	0.30	0.37	0.44	0.51	0.59	0.68	0.00	0.01	0.03	0.03
700	0.19	0.23	0.29	0.35	0.43	0.51	0.60	0.69	0.79	0.00	0.02	0.03	0.03
800	0.19	0.27	0.33	0.40	0.49	0.59	0.68	0.79	0.91	0.00	0.02	0.03	0.03
900	0.21	0.27	0.34	0.42	0.51	0.61	0.72	0.83	0.96	0.00	0.02	0.04	0.04
950	0.22	0.29	0.36	0.44	0.54	0.64	0.76	0.88	1.00	0.00	0.02	0.04	0.04
1000	0.23	0.30	0.38	0.47	0.57	0.68	0.80	0.92	1.06	0.00	0.02	0.04	0.04
1100	0.24	0.31	0.39	0.49	0.60	0.72	0.85	0.97	1.12	0.01	0.03	0.05	0.05
1200	0.26	0.34	0.43	0.54	0.66	0.79	0.93	1.06	1.22	0.01	0.03	0.05	0.05
1300	0.27	0.37	0.46	0.58	0.71	0.85	1.01	1.15	1.32	0.01	0.03	0.05	0.06
1400	0.28	0.37	0.47	0.59	0.72	0.87	1.03	1.18	1.37	0.01	0.03	0.06	0.06
1450	0.29	0.38	0.49	0.61	0.75	0.90	1.07	1.22	1.42	0.01	0.03	0.06	0.06
1500	0.30	0.40	0.50	0.63	0.77	0.93	1.10	1.26	1.47	0.01	0.04	0.06	0.06
1600	0.31	0.40	0.52	0.65	0.80	0.96	1.14	1.31	1.52	0.01	0.04	0.07	0.07
1700	0.32	0.43	0.55	0.69	0.85	1.02	1.21	1.39	1.62	0.01	0.04	0.07	0.07
1800	0.33	0.45	0.59	0.73	0.90	1.08	1.28	1.47	1.71	0.01	0.04	0.07	0.08
1900	0.34	0.45	0.59	0.74	0.91	1.10	1.30	1.50	1.73	0.01	0.05	0.08	0.08
2000	0.36	0.47	0.62	0.79	0.96	1.16	1.37	1.58	1.82	0.01	0.05	0.08	0.09
2100	0.36	0.48	0.63	0.79	0.98	1.18	1.40	1.62	1.87	0.01	0.05	0.08	0.09
2200	0.38	0.50	0.66	0.83	1.03	1.24	1.47	1.70	1.96	0.01	0.05	0.09	0.10
2300	0.39	0.52	0.69	0.87	1.07	1.29	1.53	1.77	2.05	0.01	0.06	0.09	0.10
2400	0.39	0.52	0.69	0.87	1.08	1.30	1.55	1.79	2.06	0.01	0.06	0.10	0.10
2500	0.39	0.54	0.72	0.91	1.13	1.35	1.62	1.87	2.15	0.01	0.06	0.10	0.11
2600	0.40	0.55	0.72	0.92	1.14	1.38	1.64	1.89	2.18	0.01	0.06	0.10	0.11
2700	0.42	0.57	0.75	0.96	1.18	1.43	1.70	1.96	2.26	0.01	0.06	0.11	0.12
2800	0.42	0.58	0.77	0.99	1.23	1.46	1.77	2.04	2.33	0.01	0.07	0.11	0.12
2850	0.42	0.58	0.77	0.99	1.23	1.47	1.77	2.07	2.34	0.01	0.07	0.11	0.12
2900	0.42	0.59	0.77	0.99	1.23	1.48	1.77	2.07	2.35	0.01	0.07	0.12	0.13
3000	0.43	0.61	0.80	1.02	1.27	1.54	1.83	2.11	2.43	0.01	0.07	0.12	0.13
3100	0.44	0.61	0.81	1.03	1.29	1.56	1.85	2.14	2.46	0.02	0.07	0.12	0.13
3200	0.45	0.63	0.84	1.06	1.33	1.61	1.91	2.21	2.48	0.02	0.08	0.13	0.14
3300	0.46	0.65	0.86	1.10	1.37	1.65	1.97	2.26	2.50	0.02	0.08	0.13	0.14
3400	0.46	0.66	0.87	1.10	1.37	1.66	2.03	2.27	2.60	0.02	0.08	0.13	0.15
3500	0.47	0.66	0.88	1.13	1.41	1.71	2.03	2.34	2.68	0.02	0.08	0.14	0.15
3600	0.47	0.68	0.88	1.14	1.42	1.72	2.04	2.35	2.69	0.02	0.09	0.14	0.16
3700	0.48	0.68	0.90	1.17	1.45	1.77	2.10	2.42	2.77	0.02	0.09	0.15	0.16
3800	0.48	0.68	0.92	1.19	1.46	1.81	2.15	2.45	2.80	0.02	0.09	0.15	0.16
3900	0.48	0.68	0.92	1.19	1.49	1.81	2.16	2.46	2.81	0.02	0.09	0.15	0.17
4000	0.48	0.70	0.94	1.22	1.53	1.86	2.20	2.52	2.88	0.02	0.10	0.16	0.17
4100	0.49	0.70	0.95	1.22	1.53	1.86	2.20	2.53	2.89	0.02	0.10	0.16	0.18
4200	0.49	0.71	0.97	1.25	1.57	1.91	2.25	2.59	2.96	0.02	0.10	0.17	0.18
4300	0.50	0.71	1.00	1.27	1.58	1.92	2.29	2.65	2.97	0.02	0.10	0.17	0.19
4400	0.50	0.72	1.00	1.27	1.59	1.93	2.29	2.65	2.98	0.02	0.11	0.17	0.19
4500	0.50	0.73	1.00	1.30	1.63	1.97	2.34	2.65	2.99	0.02	0.11	0.18	0.19
4600	0.50	0.73	1.00	1.30	1.63	1.98	2.34	2.67	2.99	0.02	0.11	0.18	0.20
4700	0.50	0.75	1.02	1.33	1.66	2.02	2.39	2.73	3.00	0.02	0.11	0.18	0.20
4800	0.51	0.75	1.02	1.34	1.67	2.03	2.40	2.74	3.00	0.02	0.12	0.19	0.21
4900	0.52	0.75	1.03	1.34	1.68	2.04	2.41	2.75	3.10	0.02	0.12	0.19	0.21
5000	0.52	0.76	1.05	1.37	1.71	2.05	2.42	2.76	3.13	0.02	0.12	0.20	0.22
5100	0.52	0.76	1.05	1.37	1.71	2.08	2.45	2.79	3.14	0.02	0.12	0.20	0.22
5200	0.52	0.78	1.07	1.40	1.74	2.12	2.50	2.80	3.15	0.03	0.13	0.20	0.23
5300	0.52	0.78	1.07	1.40	1.75	2.13	2.50	2.82	3.16	0.03	0.13	0.21	0.23
5400	0.52	0.78	1.07	1.40	1.76	2.13	2.50	2.83	3.17	0.03	0.13	0.21	0.23
5500	0.52	0.78	1.08	1.42	1.77	2.15	2.53	2.85	3.18	0.03	0.13	0.22	0.24
5600	0.52	0.78	1.08	1.42	1.78	2.16	2.53	2.86	3.19	0.03	0.13	0.22	0.24
5800	0.53	0.81	1.11	1.47	1.83	2.21	2.54	2.88	3.19	0.03	0.14	0.23	0.25
6000	0.53	0.84	1.11	1.47	1.83	2.21	2.54	2.89	3.19	0.03	0.14	0.24	0.26
6200	0.51	0.79	1.11	1.47	1.84	2.22	2.59	2.90	3.18	0.03	0.15	0.25	0.27
6400	0.51	0.79	1.12	1.47	1.85	2.23	2.60	2.89	3.15	0.03	0.15	0.25	0.28
6600	0.51	0.79	1.12	1.49	1.86	2.24	2.60	2.88	3.12	0.03	0.16	0.26	0.29
6800	0.50	0.79	1.13	1.50	1.87	2.25	2.60	2.87	3.08	0.03	0.16	0.27	0.29
7000	0.50	0.79	1.13	1.50	1.87	2.25	2.59	2.85	3.03	0.03	0.17	0.28	0.30
7200	0.48	0.79	1.13	1.50	1.88	2.25	2.58	2.82	2.97	0.03	0.17	0.28	0.31
7400	0.48	0.80	1.13	1.50	1.88	2.24	2.58	2.79	2.90	0.04	0.18	0.29	0.32
7600	0.46	0.77	1.12	1.50	1.88	2.23	2.53			0.04	0.18	0.30	0.33
7800	0.46	0.77	1.12	1.49	1.87	2.22	2.50			0.04	0.19	0.31	0.34
8000	0.44	0.76	1.11	1.49	1.86	2.20	2.47			0.04	0.19	0.31	0.35
8200	0.44	0.75	1.11	1.48	1.85	2.17				0.04	0.20	0.32	0.35
8400	0.43	0.74	1.10	1.47	1.83	2.15				0.04	0.20	0.32	0.36



**Table 6:**  
**Section A: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio:			
	71	80	90	95	100	106	112	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.55	0.77	1.00	1.13	1.25	1.39	1.53	0.02	0.06	0.12	0.14
950	0.64	0.93	1.25	1.39	1.55	1.73	1.92	0.02	0.10	0.16	0.18
1450	0.82	1.23	1.69	1.91	2.12	2.38	2.64	0.03	0.16	0.25	0.28
2850	1.06	1.81	2.63	2.96	3.39	3.76	4.26	0.06	0.31	0.49	0.55
100	0.12	0.16	0.20	0.22	0.24	0.26	0.29	0.00	0.01	0.02	0.02
200	0.24	0.32	0.40	0.44	0.48	0.52	0.58	0.00	0.02	0.03	0.04
300	0.36	0.48	0.60	0.66	0.72	0.78	0.87	0.01	0.03	0.05	0.06
400	0.35	0.48	0.63	0.70	0.77	0.85	0.94	0.01	0.04	0.07	0.08
500	0.44	0.60	0.79	0.88	0.96	1.06	1.18	0.01	0.05	0.09	0.10
600	0.47	0.66	0.86	0.97	1.07	1.19	1.31	0.01	0.06	0.10	0.12
700	0.55	0.77	1.00	1.13	1.25	1.39	1.53	0.02	0.08	0.12	0.14
800	0.61	0.88	1.15	1.29	1.43	1.59	1.75	0.02	0.09	0.14	0.16
900	0.61	0.88	1.18	1.32	1.47	1.64	1.82	0.02	0.10	0.16	0.18
950	0.64	0.93	1.25	1.39	1.55	1.73	1.92	0.02	0.10	0.16	0.18
1000	0.68	0.98	1.31	1.47	1.63	1.82	2.02	0.02	0.11	0.17	0.19
1100	0.69	1.01	1.37	1.54	1.71	1.92	2.13	0.02	0.12	0.19	0.21
1200	0.75	1.10	1.50	1.68	1.87	2.09	2.32	0.03	0.13	0.21	0.23
1300	0.76	1.19	1.62	1.82	2.02	2.27	2.52	0.03	0.14	0.22	0.25
1400	0.79	1.19	1.63	1.84	2.05	2.30	2.55	0.03	0.15	0.24	0.27
1450	0.82	1.23	1.69	1.91	2.12	2.38	2.64	0.03	0.16	0.25	0.28
1500	0.85	1.28	1.75	1.97	2.20	2.46	2.73	0.03	0.16	0.26	0.29
1600	0.85	1.39	1.78	2.02	2.26	2.54	2.82	0.03	0.17	0.28	0.31
1700	0.90	1.39	1.89	2.15	2.40	2.70	3.00	0.04	0.18	0.29	0.33
1800	0.91	1.43	2.00	2.27	2.54	2.86	3.17	0.04	0.19	0.31	0.35
1900	0.92	1.44	2.00	2.27	2.54	2.87	3.19	0.04	0.21	0.33	0.37
2000	0.95	1.52	2.11	2.39	2.67	3.02	3.36	0.04	0.22	0.35	0.39
2100	0.96	1.52	2.12	2.42	2.72	3.06	3.41	0.05	0.23	0.36	0.41
2200	0.98	1.59	2.22	2.54	2.85	3.21	3.57	0.05	0.24	0.38	0.43
2300	0.99	1.61	2.30	2.62	2.95	3.33	3.74	0.05	0.25	0.40	0.45
2400	1.00	1.62	2.30	2.63	2.95	3.33	3.80	0.05	0.26	0.42	0.47
2500	1.01	1.68	2.40	2.74	3.07	3.47	3.87	0.05	0.27	0.43	0.49
2600	1.02	1.68	2.40	2.75	3.09	3.50	3.89	0.06	0.28	0.45	0.51
2700	1.06	1.75	2.49	2.86	3.21	3.64	4.04	0.06	0.28	0.47	0.53
2800	1.06	1.81	2.59	2.96	3.33	3.76	4.19	0.06	0.30	0.48	0.54
2850	1.06	1.81	2.63	2.96	3.33	3.76	4.26	0.06	0.31	0.49	0.55
2900	1.06	1.82	2.63	2.96	3.36	3.76	4.26	0.06	0.31	0.50	0.56
3000	1.06	1.82	2.64	3.00	3.38	3.83	4.27	0.06	0.32	0.52	0.58
3100	1.06	1.82	2.64	3.00	3.38	3.83	4.27	0.07	0.34	0.54	0.60
3200	1.06	1.86	2.69	3.10	3.49	3.95	4.41	0.07	0.35	0.55	0.62
3300	1.05	1.86	2.70	3.10	3.55	4.08	4.41	0.07	0.36	0.57	0.64
3400	1.05	1.86	2.70	3.10	3.58	4.08	4.43	0.07	0.37	0.59	0.66
3500	1.05	1.86	2.72	3.15	3.58	4.10	4.56	0.08	0.38	0.61	0.68
3600	1.05	1.87	2.74	3.17	3.58	4.10	4.56	0.08	0.39	0.62	0.70
3700	1.05	1.91	2.82	3.26	3.68	4.17	4.65	0.08	0.40	0.64	0.72
3800	1.04	1.93	2.89	3.35	3.77	4.19	4.71	0.08	0.41	0.66	0.74
3900	0.99	1.93	2.89	3.35	3.77	4.22	4.72	0.08	0.42	0.67	0.76
4000	0.99	1.92	2.89	3.38	3.77	4.26	4.74	0.09	0.43	0.69	0.78
4100	0.98	1.96	2.88	3.36	3.78	4.28	4.75	0.09	0.44	0.71	0.80
4200	0.98	1.85	2.88	3.36	3.78	4.28	4.76	0.09	0.45	0.73	0.82
4300	0.97	1.85	2.85	3.36	3.87	4.38	4.88	0.09	0.46	0.74	0.84
4400	0.95	1.84	2.81	3.26	3.87	4.40	4.86	0.10	0.48	0.76	0.86
4500	0.92	1.83	2.77	3.23	3.88	4.40	4.66	0.10	0.49	0.78	0.88
4600	0.85	1.81	2.77	3.23	3.88	4.18	4.64	0.10	0.50	0.80	0.89
4700	0.85	1.81	2.75	3.23	3.77	4.17	4.64	0.10	0.51	0.81	0.91
4800	0.85	1.80	2.71	3.23	3.75	4.16	4.54	0.10	0.52	0.83	0.93
4900	0.77	1.75	2.70	3.22	3.64	4.12	4.54	0.11	0.53	0.85	0.95
5000	0.77	1.75	2.70	3.22	3.61	4.10	4.53	0.11	0.54	0.87	0.97
5100	0.75	1.69	2.69	3.15	3.58	4.06	4.48	0.11	0.55	0.88	0.99
5200	0.74	1.62	2.64	3.13	3.55	4.04	4.47	0.11	0.56	0.90	1.01
5300	0.73	1.62	2.64	3.12	3.52	4.02	4.46	0.11	0.57	0.92	1.03
5400	0.58	1.59	2.59	3.04	3.46	3.91	4.44	0.12	0.58	0.93	1.05
5500	0.58	1.58	2.54	3.03	3.42	3.90	4.31	0.12	0.59	0.95	1.07
5600	0.55	1.55	2.51	2.95	3.36	3.79		0.12	0.61	0.97	1.09
5700	0.54	1.54	2.50	2.94	3.32	3.76		0.12	0.62	0.99	1.11
5800	0.49	1.52	2.40	2.93	3.30	3.73		0.13	0.63	1.00	1.13
5900	0.40	1.51	2.30	2.90	3.29	3.72		0.13	0.64	1.02	1.15
6000	0.35	1.45	2.20	2.90	3.20	3.71		0.13	0.65	1.04	1.17

**Table 6:**  
**Section A: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	118	125	132	140	150	160	180	1.01 to 1.05	1.06 to 1.20	1.21 to 1.57	For > 1.57
700	1.67	1.83	2.00	2.17	2.40	2.63	3.07	0.02	0.08	0.12	0.14
950	2.10	2.30	2.51	2.74	3.04	3.33	3.90	0.02	0.10	0.16	0.18
1450	2.90	3.20	3.49	3.82	4.23	4.63	5.41	0.03	0.16	0.25	0.28
2850	4.69	5.10	5.65	6.16	6.88	7.28	8.48	0.06	0.31	0.49	0.55
100	0.31	0.34	0.37	0.40	0.44	0.48	0.55	0.00	0.01	0.02	0.02
200	0.62	0.68	0.74	0.80	0.88	0.96	1.10	0.00	0.02	0.03	0.04
300	0.93	1.02	1.11	1.20	1.32	1.44	1.65	0.01	0.03	0.05	0.06
400	1.02	1.12	1.21	1.32	1.46	1.59	1.86	0.01	0.04	0.07	0.08
500	1.28	1.40	1.51	1.65	1.83	1.99	2.33	0.01	0.05	0.09	0.10
600	1.43	1.57	1.71	1.86	2.06	2.25	2.63	0.01	0.06	0.10	0.12
700	1.67	1.83	2.00	2.17	2.40	2.63	3.07	0.02	0.08	0.12	0.14
800	1.91	2.09	2.28	2.48	2.75	3.00	3.51	0.02	0.09	0.14	0.16
900	1.99	2.18	2.38	2.60	2.88	3.15	3.69	0.02	0.10	0.16	0.18
950	2.10	2.30	2.51	2.74	3.04	3.33	3.90	0.02	0.10	0.16	0.18
1000	2.21	2.42	2.64	2.89	3.20	3.50	4.10	0.02	0.11	0.17	0.19
1100	2.33	2.56	2.79	3.06	3.38	3.70	4.33	0.02	0.12	0.19	0.21
1200	2.54	2.79	3.04	3.34	3.69	4.04	4.72	0.03	0.13	0.21	0.23
1300	2.75	3.03	3.30	3.62	3.99	4.37	5.12	0.03	0.14	0.22	0.25
1400	2.80	3.09	3.37	3.69	4.08	4.47	5.22	0.03	0.15	0.24	0.27
1450	2.90	3.20	3.49	3.82	4.23	4.63	5.41	0.03	0.16	0.25	0.28
1500	3.00	3.31	3.61	3.95	4.37	4.79	5.59	0.03	0.16	0.26	0.29
1600	3.10	3.41	3.73	4.08	4.51	4.94	5.76	0.03	0.17	0.28	0.31
1700	3.29	3.62	3.96	4.34	4.79	5.25	6.12	0.04	0.18	0.29	0.33
1800	3.49	3.84	4.20	4.59	5.07	5.56	6.48	0.04	0.19	0.31	0.35
1900	3.50	3.85	4.22	4.62	5.10	5.58	6.49	0.04	0.21	0.33	0.37
2000	3.68	4.05	4.44	4.86	5.37	5.87	6.83	0.04	0.22	0.35	0.39
2100	3.75	4.13	4.51	4.94	5.46	5.95	6.91	0.05	0.23	0.36	0.41
2200	3.93	4.33	4.73	5.18	5.72	6.24	7.24	0.05	0.24	0.38	0.43
2300	4.02	4.50	4.91	5.41	5.93	6.53	7.57	0.05	0.25	0.40	0.45
2400	4.08	4.50	4.91	5.41	5.93	6.63	7.67	0.05	0.26	0.42	0.47
2500	4.25	4.69	5.12	5.59	6.18	6.73	7.76	0.05	0.27	0.43	0.49
2600	4.28	4.72	5.15	5.62	6.20	6.74	7.76	0.06	0.28	0.45	0.51
2700	4.45	4.90	5.35	5.84	6.44	7.00	8.04	0.06	0.28	0.47	0.53
2800	4.61	5.00	5.55	6.05	6.68	7.26	8.34	0.06	0.30	0.48	0.54
2850	4.69	5.10	5.65	6.16	6.88	7.28	8.48	0.06	0.31	0.49	0.55
2900	4.69	5.10	5.65	6.16	6.78	7.28	8.48	0.06	0.31	0.50	0.56
3000	4.70	5.14	5.66	6.17	6.78	7.32	8.35	0.06	0.32	0.52	0.58
3100	4.70	5.17	5.66	6.17	6.79	7.33	8.33	0.07	0.34	0.54	0.60
3200	4.84	5.34	5.80	6.32	6.93	7.49	8.33	0.07	0.35	0.55	0.62
3300	4.89	5.50	5.88	6.32	7.14	7.73	8.29	0.07	0.36	0.57	0.64
3400	4.89	5.50	5.88	6.32	7.14	7.54	8.25	0.07	0.37	0.59	0.66
3500	4.96	5.52	5.99	6.41	7.15	7.49	8.20	0.08	0.38	0.61	0.68
3600	4.96	5.55	5.99	6.41	7.15	7.48		0.08	0.39	0.62	0.70
3700	5.10	5.60	6.08	6.59	7.17	7.48		0.08	0.40	0.64	0.72
3800	5.24	5.75	6.20	6.59	7.37	7.46		0.08	0.41	0.66	0.74
3900	5.26	5.75	6.20	6.48	7.19	7.45		0.08	0.42	0.67	0.76
4000	5.29	5.79	6.18	6.48	7.19	7.41		0.09	0.43	0.69	0.78
4100	5.29	5.58	6.17	6.47	6.97	7.37		0.09	0.44	0.71	0.80
4200	5.31	5.56	6.17	6.47	6.97			0.09	0.45	0.73	0.82
4300	5.34	5.52	6.08	6.43	6.88			0.09	0.46	0.74	0.84
4400	5.33	5.52	5.98	6.43	6.88			0.10	0.48	0.76	0.86
4500	5.22	5.49	5.97	6.42	6.54			0.10	0.49	0.78	0.88
4600	5.17	5.41	5.90					0.10	0.50	0.80	0.89
4700	5.17	5.41	5.89					0.10	0.51	0.81	0.91
4800	5.16	5.30	5.87					0.10	0.52	0.83	0.93
4900	4.97	5.20	5.85					0.11	0.53	0.85	0.95
5000	4.97	5.10	5.85					0.11	0.54	0.87	0.97
5100	4.86							0.11	0.55	0.88	0.99
5200	4.86							0.11	0.56	0.90	1.01
5300	4.85							0.11	0.57	0.92	1.03
5400	4.83							0.12	0.58	0.93	1.05
5500	4.80							0.12	0.59	0.95	1.07



**Table 7:**  
**Section B: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	112	125	132	140	150	160	170	180	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	1.55	2.03	2.29	2.58	2.94	3.55	3.65	4.01	0.03	0.17	0.27	0.30
950	1.94	2.48	2.82	3.19	3.65	4.12	4.57	5.14	0.05	0.23	0.37	0.41
1450	2.49	3.29	3.76	4.29	4.94	5.58	6.21	6.98	0.07	0.35	0.56	0.63
2850	3.27	4.71	5.46	5.99	6.89	7.89	8.62	9.22	0.14	0.69	1.10	1.24
100	0.33	0.41	0.48	0.51	0.57	0.63	0.69	0.75	0.00	0.02	0.04	0.04
200	0.66	0.82	0.92	1.02	1.14	1.26	1.38	1.50	0.01	0.05	0.08	0.09
300	0.79	1.23	1.38	1.53	1.71	1.89	2.07	2.25	0.01	0.07	0.12	0.13
400	1.05	1.27	1.43	1.60	1.82	2.03	2.25	2.46	0.02	0.10	0.15	0.17
500	1.32	1.59	1.79	2.00	2.28	2.54	2.81	3.08	0.02	0.12	0.19	0.22
600	1.33	1.74	1.96	2.21	2.52	3.05	3.13	3.44	0.03	0.14	0.23	0.26
700	1.55	2.03	2.29	2.58	2.94	3.55	3.65	4.01	0.03	0.17	0.27	0.30
800	1.63	2.32	2.61	2.95	3.36	3.90	4.17	4.33	0.04	0.19	0.31	0.35
900	1.83	2.35	2.67	3.02	3.46	3.90	4.33	4.67	0.04	0.22	0.35	0.39
950	1.94	2.48	2.82	3.19	3.65	4.12	4.57	5.14	0.05	0.23	0.37	0.41
1000	2.04	2.61	2.97	3.36	3.84	4.33	4.81	5.41	0.05	0.24	0.39	0.43
1100	2.10	2.71	3.08	3.50	4.02	4.53	5.04	5.54	0.05	0.27	0.42	0.48
1200	2.19	2.96	3.36	3.82	4.39	4.94	5.50	6.04	0.06	0.29	0.46	0.52
1300	2.38	3.20	3.50	4.14	4.75	5.35	5.96	6.26	0.06	0.31	0.50	0.56
1400	2.45	3.25	3.63	4.14	4.77	5.39	6.00	6.74	0.07	0.34	0.54	0.61
1450	2.49	3.29	3.76	4.29	4.94	5.58	6.21	6.98	0.07	0.35	0.56	0.63
1500	2.50	3.41	3.89	4.44	5.11	5.78	6.43	7.22	0.07	0.38	0.58	0.65
1600	2.50	3.45	3.95	4.52	5.21	5.89	6.56	7.40	0.08	0.39	0.62	0.69
1700	2.66	3.67	4.20	4.80	5.54	6.26	6.97	7.66	0.08	0.41	0.66	0.74
1800	2.81	3.72	4.36	5.09	5.78	6.54	7.27	7.79	0.09	0.43	0.70	0.78
1900	2.82	3.79	4.36	5.15	5.78	6.54	7.27	8.22	0.09	0.46	0.73	0.82
2000	2.82	3.89	4.59	5.26	6.08	6.86	7.65	8.32	0.10	0.48	0.77	0.87
2100	2.82	3.98	4.59	5.27	6.09	6.90	7.67	8.42	0.10	0.51	0.81	0.91
2200	2.95	4.17	4.81	5.52	6.38	7.23	8.04	8.76	0.11	0.53	0.85	0.96
2300	2.95	4.20	4.86	5.59	6.47	7.32	8.40	8.76	0.11	0.56	0.89	1.00
2400	2.96	4.20	4.88	5.59	6.47	7.32	8.40	9.11	0.12	0.58	0.95	1.04
2500	2.98	4.30	4.98	5.74	6.65	7.52	8.40	9.11	0.12	0.60	0.97	1.09
2600	2.98	4.30	4.98	5.74	6.65	7.52	8.44	9.11	0.13	0.63	1.00	1.13
2700	3.10	4.47	5.17	5.96	6.77	7.81	8.61	9.18	0.13	0.65	1.04	1.17
2800	3.21	4.63	5.36	5.98	6.77	7.89	8.61	9.21	0.14	0.68	1.08	1.22
2850	3.27	4.71	5.46	5.99	6.89	7.89	8.62	9.22	0.14	0.69	1.10	1.24
2900	3.30	4.72	5.46	5.99	7.01	7.91	8.77	9.25	0.14	0.70	1.12	1.26
3000	3.20	4.72	5.46	6.00	7.01	7.96	8.99	9.25	0.14	0.72	1.16	1.30
3100	3.10	4.73	5.46	6.00	7.05	7.96	8.99	9.22	0.15	0.75	1.20	1.35
3200	3.05	4.74	5.45	6.10	7.06	7.96	9.01	9.22	0.15	0.77	1.24	1.39
3300	3.03	4.67	5.45	6.29	7.28	7.99	9.05	9.21	0.16	0.80	1.27	1.43
3400	2.98	4.66	5.45	6.30	6.99	7.89	8.55	9.19	0.16	0.82	1.31	1.48
3500	2.93	4.45	5.21	6.32	6.97	7.81	8.55	9.18	0.17	0.84	1.35	1.52
3600	2.89	4.34	4.99	6.35	6.84	7.56	8.39		0.17	0.87	1.39	1.56
3700	2.87	4.34	4.99	6.37	6.81	7.34	8.32		0.18	0.89	1.43	1.61
3800	2.85	4.29	4.95	6.54	6.81	7.24	7.96		0.18	0.92	1.47	1.65
3900	2.59	4.22	4.93	6.89	6.59	7.24	7.95		0.19	0.94	1.51	1.69
4000	2.57	4.21	4.92	6.60	6.45	7.23	7.90		0.19	0.97	1.55	1.74
4100	2.40	3.89	4.59	5.35	5.99				0.20	0.99	1.58	1.78
4200	2.37	3.87	4.59	5.32	5.98				0.20	1.01	1.62	1.82
4300	2.35	3.84	4.30	4.86	5.56				0.21	1.04	1.66	1.87
4400	1.99	3.50	4.29	4.82	5.55				0.21	1.06	1.70	1.91
4500	1.98	3.45	4.28	4.82	5.48				0.22	1.09	1.74	1.95
4600	1.87	3.10	3.60						0.22	1.11	1.78	2.00
4700	1.71	3.10	3.73						0.23	1.13	1.82	2.04
4800	1.60	2.80	3.28						0.23	1.16	1.86	2.08
4900	1.49	2.71	3.28						0.24	1.18	1.89	2.13
5000	1.40	2.70	3.27						0.24	1.21	1.93	2.17

**Table 7:**  
**Section B: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	190	200	212	224	236	250	280	1.01 to 1.05	1.06 to 1.25	1.27 to 1.57	For > 1.57
700	4.36	4.70	5.12	5.53	5.94	6.41	7.40	0.03	0.17	0.27	0.30
950	5.46	5.90	6.43	6.94	7.45	8.03	9.26	0.05	0.23	0.37	0.41
1450	7.44	8.04	8.73	9.42	10.09	10.84	12.73	0.07	0.35	0.56	0.63
2850	9.89	10.99	11.45	11.88	12.28			0.14	0.69	1.10	1.24
100	0.81	0.87	0.94	1.01	1.08	1.17	1.34	0.00	0.02	0.04	0.04
200	1.62	1.74	1.88	2.02	2.16	2.34	2.68	0.01	0.05	0.08	0.09
300	2.43	2.61	2.82	3.03	3.24	3.51	4.02	0.01	0.07	0.12	0.13
400	2.67	2.88	3.13	3.37	3.62	3.91	4.51	0.02	0.10	0.15	0.17
500	3.34	3.60	3.91	4.21	4.53	4.89	5.64	0.02	0.12	0.19	0.22
600	3.74	4.03	4.39	4.74	5.09	5.49	6.34	0.03	0.14	0.23	0.26
700	4.36	4.70	5.12	5.53	5.94	6.41	7.40	0.03	0.17	0.27	0.30
800	4.99	5.37	5.85	6.32	6.79	7.32	8.45	0.04	0.19	0.31	0.35
900	5.17	5.59	6.09	6.57	7.06	7.61	8.77	0.04	0.22	0.35	0.39
950	5.48	5.90	6.43	6.94	7.45	8.03	9.26	0.05	0.23	0.37	0.41
1000	5.74	6.21	6.77	7.30	7.84	8.46	9.74	0.05	0.24	0.39	0.43
1100	6.03	6.52	7.10	7.66	8.22	8.86	10.18	0.05	0.27	0.42	0.46
1200	6.58	7.11	7.75	8.38	8.97	9.67	11.11	0.06	0.29	0.46	0.52
1300	7.13	7.71	8.39	9.05	9.75	10.47	11.41	0.06	0.31	0.50	0.56
1400	7.18	7.76	8.43	9.09	9.74	10.47	12.29	0.07	0.34	0.54	0.61
1450	7.44	8.04	8.73	9.42	10.09	10.84	12.73	0.07	0.35	0.56	0.63
1500	7.69	8.31	9.03	9.74	10.44	11.22	12.77	0.07	0.36	0.58	0.65
1600	7.85	8.47	9.20	9.90	10.58	11.35	12.88	0.08	0.39	0.62	0.69
1700	8.34	9.00	9.78	10.52	11.24	12.06	13.59	0.08	0.41	0.66	0.74
1800	8.69	9.53	10.35	10.88	11.53	12.36	13.59	0.09	0.43	0.70	0.78
1900	8.69	9.70	10.45	10.88	11.73	12.36	13.85	0.09	0.46	0.73	0.82
2000	9.14	9.83	10.62	11.38	12.00	13.01	14.06	0.10	0.48	0.77	0.87
2100	9.14	9.83	10.62	11.36	12.06	13.01	14.19	0.10	0.51	0.81	0.91
2200	9.58	10.30	11.13	11.90	12.63	13.06	14.26	0.11	0.53	0.85	0.96
2300	9.63	10.32	11.20	12.44	12.45	13.06	14.26	0.11	0.56	0.89	1.00
2400	9.63	10.32	11.20	12.44	12.45	13.63	14.88	0.12	0.58	0.95	1.04
2500	9.83	10.51	11.25	12.30	12.45	14.20	15.50	0.12	0.60	0.97	1.09
2600	9.83	10.51	11.25	11.90	12.45			0.13	0.63	1.00	1.13
2700	9.85	10.91	11.25	11.90	12.31			0.13	0.65	1.04	1.17
2800	9.89	10.98	11.25	11.88	12.31			0.14	0.68	1.08	1.22
2850	9.89	10.99	11.45	11.88	12.28			0.14	0.69	1.10	1.24
2900	9.93	10.99	11.65	11.87	12.27			0.14	0.70	1.12	1.26
3000	9.85	10.91	12.05	11.84	12.20			0.14	0.72	1.16	1.30
3100	9.85	10.41						0.15	0.75	1.20	1.35
3200	9.78	10.41						0.15	0.77	1.24	1.39
3300	9.65	10.12						0.16	0.80	1.27	1.43
3400	9.64	10.12						0.16	0.82	1.31	1.48
3500	9.63	10.10						0.17	0.84	1.35	1.52
3600								0.17	0.87	1.39	1.56
3700								0.18	0.89	1.43	1.61
3800								0.18	0.92	1.47	1.65
3900								0.19	0.94	1.51	1.69
4000								0.19	0.97	1.55	1.74



**Table 8:**  
**Section 20: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)													Additional Power (kW) per belt for speed ratio			
	140	160	180	200	224	236	250	280	315	355	400	450	500	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	2.83	3.60	4.34	5.06	5.93	6.34	6.83	7.83	8.96	10.20	12.43	14.04	16.42	0.04	0.18	0.29	0.32
950	3.46	4.43	5.38	6.31	7.35	7.87	8.47	9.69	11.03	12.45	15.27	17.03	19.05	0.05	0.24	0.39	0.44
1450	4.41	5.72	6.98	8.16	9.49	10.13	10.83	12.21	13.62	14.91	18.65			0.07	0.37	0.59	0.67
2050	5.02	6.61	7.87	8.81	9.45									0.16	0.73	1.17	1.31
50	0.36	0.43	0.52	0.59	0.68	0.72	0.78	0.89	1.02	1.16	1.60	2.04	3.67	0.00	0.01	0.02	0.02
100	0.64	0.78	0.93	1.07	1.23	1.32	1.41	1.61	1.85	2.11	2.45	2.93	4.52	0.01	0.03	0.04	0.05
150	0.89	1.09	1.30	1.50	1.73	1.85	1.99	2.28	2.60	2.97	3.06	3.68	5.61	0.01	0.04	0.06	0.07
200	1.11	1.36	1.64	1.90	2.20	2.35	2.53	2.89	3.32	3.79	4.35	4.98	6.75	0.01	0.05	0.08	0.09
250	1.33	1.64	1.97	2.28	2.65	2.83	3.03	3.48	3.99	4.56	5.24	6.00	7.88	0.01	0.06	0.10	0.12
300	1.52	1.90	2.27	2.64	3.07	3.27	3.52	4.04	4.63	5.29	6.14	7.02	8.97	0.02	0.08	0.12	0.14
350	1.72	2.14	2.56	2.98	3.47	3.72	3.99	4.58	5.25	5.99	6.99	7.99	10.15	0.02	0.09	0.14	0.16
400	1.89	2.38	2.85	3.32	3.86	4.13	4.44	5.10	5.84	6.67	7.90	9.06	11.13	0.02	0.10	0.16	0.18
450	2.06	2.59	3.12	3.63	4.23	4.53	4.87	5.59	6.42	7.32	8.70	9.93	12.22	0.02	0.12	0.18	0.21
500	2.22	2.81	3.38	3.94	4.59	4.91	5.29	6.07	6.97	7.95	9.57	10.91	13.09	0.03	0.13	0.21	0.23
550	2.39	3.00	3.63	4.23	4.95	5.29	5.69	6.53	7.48	8.54	10.29	11.70	14.05	0.03	0.14	0.23	0.25
600	2.54	3.22	3.88	4.53	5.28	5.66	6.05	6.99	8.00	9.12	11.05	12.54	14.84	0.03	0.15	0.25	0.28
650	2.69	3.41	4.11	4.81	5.61	6.11	6.46	7.41	8.49	9.67	11.74	13.29	15.63	0.03	0.17	0.27	0.30
700	2.83	3.60	4.34	5.06	5.93	6.34	6.83	7.83	8.96	10.20	12.43	14.04	16.42	0.04	0.18	0.29	0.32
750	2.96	3.77	4.56	5.34	6.23	6.67	7.18	8.23	9.41	10.69	13.11	14.79	17.21	0.04	0.19	0.31	0.35
800	3.09	3.94	4.77	5.58	6.52	6.99	7.52	8.62	9.84	11.17	13.80	15.54	17.67	0.04	0.21	0.33	0.37
850	3.22	4.11	4.98	5.83	6.81	7.29	7.84	8.97	10.26	11.62	14.29	16.04	18.13	0.04	0.22	0.35	0.39
900	3.34	4.28	5.18	6.07	7.10	7.59	8.16	9.34	10.65	12.05	14.76	16.53	18.69	0.05	0.23	0.37	0.42
950	3.46	4.43	5.38	6.31	7.35	7.87	8.47	9.69	11.03	12.45	15.27	17.03	19.05	0.05	0.24	0.39	0.44
1000	3.57	4.59	5.56	6.51	7.61	8.15	8.76	10.01	11.38	12.82	15.78	17.53	19.51	0.05	0.26	0.41	0.46
1050	3.68	4.73	5.75	6.73	7.86	8.41	9.04	10.31	11.72	13.18	16.24	18.02	19.97	0.05	0.27	0.43	0.48
1100	3.78	4.87	5.92	6.93	8.10	8.66	9.31	10.62	12.03	13.49	16.73	18.52	20.43	0.06	0.28	0.45	0.51
1150	3.89	5.01	6.09	7.14	8.33	8.91	9.56	10.89	12.32	13.78	17.22	19.01	20.89	0.06	0.29	0.47	0.53
1200	3.99	5.14	6.25	7.32	8.55	9.14	9.81	11.16	12.59	14.05	17.71	19.51		0.06	0.31	0.49	0.55
1250	4.07	5.27	6.42	7.51	8.76	9.35	10.03	11.40	12.84	14.28	17.90			0.06	0.32	0.51	0.58
1300	4.16	5.39	6.56	7.68	8.95	9.57	10.25	11.63	13.07	14.48	18.09			0.07	0.33	0.53	0.60
1350	4.24	5.51	6.71	7.85	9.15	9.76	10.45	11.85	13.27	14.66	18.27			0.07	0.35	0.55	0.62
1400	4.33	5.62	6.85	8.00	9.33	9.95	10.65	12.04	13.48	14.80	18.48			0.07	0.36	0.57	0.65
1450	4.41	5.72	6.98	8.16	9.49	10.13	10.83	12.21	13.62	14.91	18.65			0.07	0.37	0.59	0.67
1500	4.48	5.82	7.10	8.31	9.66	10.29	10.99	12.38	13.75	14.99	18.84			0.08	0.38	0.62	0.69
1550	4.55	5.92	7.21	8.43	9.81	10.44	11.15	12.52	13.86	15.03	19.02			0.08	0.40	0.64	0.71
1600	4.61	6.02	7.33	8.56	9.94	10.58	11.29	12.65	13.94	15.03	19.21			0.08	0.41	0.66	0.74
1650	4.68	6.10	7.43	8.68	10.07	10.74	11.40	12.74	14.01	15.01				0.08	0.42	0.68	0.76
1700	4.73	6.18	7.54	8.79	10.18	10.82	11.51	12.83	14.04	14.95				0.08	0.44	0.70	0.78
1750	4.80	6.25	7.62	8.90	10.28	10.92	11.61	12.90	14.04	14.84				0.09	0.45	0.72	0.81
1800	4.84	6.33	7.71	9.00	10.38	11.02	11.71	12.95	14.02	14.71				0.09	0.46	0.74	0.83
1850	4.89	6.39	7.80	9.08	10.47	11.09	11.78	12.97	13.98	14.53				0.09	0.47	0.76	0.85
1900	4.94	6.46	7.86	9.16	10.53	11.16	11.82	12.97	13.90	14.31				0.10	0.49	0.78	0.88
1950	4.97	6.51	7.94	9.22	10.59	11.22	11.85	12.96	13.79	14.05				0.10	0.50	0.80	0.90
2000	5.01	6.57	7.99	9.28	10.64	11.24	11.86	12.93	13.65	13.76				0.10	0.51	0.82	0.92
2050	5.04	6.61	8.05	9.33	10.68	11.26	11.87	12.86	13.49					0.11	0.53	0.84	0.95
2100	5.07	6.65	8.09	9.37	10.70	11.26	11.85	12.79	13.29					0.11	0.54	0.86	0.97
2150	5.09	6.69	8.13	9.41	10.71	11.26	11.82	12.68	13.06					0.11	0.55	0.88	0.99
2200	5.11	6.72	8.16	9.43	10.71	11.24	11.77	12.55	12.80					0.11	0.56	0.90	1.01
2250	5.13	6.74	8.19	9.44	10.69	11.21	11.71	12.40	12.51					0.12	0.58	0.92	1.04
2300	5.14	6.76	8.20	9.45	10.67	11.16	11.63	12.23						0.12	0.59	0.94	1.06
2350	5.15	6.77	8.21	9.44	10.63	11.08	11.52	12.03						0.12	0.60	0.96	1.08
2400	5.15	6.78	8.21	9.43	10.57	11.02	11.40	11.80						0.12	0.62	0.98	1.11
2450	5.15	6.78	8.21	9.40	10.51	10.92	11.28	11.56						0.13	0.63	1.01	1.13
2500	5.15	6.78	8.19	9.36	10.42	10.81	11.12	11.29						0.13	0.64	1.03	1.15
2550	5.14	6.77	8.18	9.31	10.32	10.68								0.13	0.65	1.05	1.18
2600	5.13	6.76	8.14	9.26	10.22	10.53								0.13	0.67	1.07	1.20
2650	5.11	6.74	8.10	9.19	10.10	10.37								0.14	0.68	1.09	1.22
2700	5.09	6.71	8.06	9.12	9.96	10.21								0.14	0.69	1.11	1.25
2750	5.07	6.67	8.00	9.02	9.81	10.02								0.14	0.71	1.13	1.27
2800	5.03	6.64	7.94	8.92	9.63									0.14	0.72	1.15	1.29
2850	5.02	6.61	7.87	8.81	9.45									0.15	0.73	1.17	1.31
2900	4.96	6.54	7.80	8.68	9.26									0.15	0.74	1.19	1.34
2950	4.92	6.49	7.71	8.55	9.04									0.15	0.76	1.21	1.36
3000	4.87	6.43	7.61	8.41	8.80									0.15	0.77	1.23	1.38



**Table 9:**  
**Section C: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	180	200	212	224	236	250	265	280	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	4.51	5.66	6.35	7.02	7.69	8.47	9.28	10.09	0.08	0.40	0.63	0.71
950	5.90	7.08	7.95	8.81	9.67	10.64	11.67	12.69	0.11	0.54	0.86	0.97
1450	7.23	9.24	10.42	11.79	12.67	14.21	15.59	16.85	0.16	0.82	1.31	1.48
2850	7.54	10.13	11.11	12.34					0.32	1.61	2.58	2.90
50	0.53	0.84	0.70	0.76	0.83	0.90	0.98	1.06	0.01	0.03	0.05	0.05
100	1.06	1.28	1.40	1.52	1.66	1.80	1.98	2.12	0.01	0.06	0.09	0.10
150	1.59	1.92	2.10	2.28	2.49	2.70	2.94	3.16	0.02	0.08	0.14	0.15
200	1.69	2.07	2.30	2.52	2.75	3.00	3.28	3.55	0.02	0.11	0.18	0.20
250	2.11	2.59	2.88	3.15	3.44	3.75	4.10	4.44	0.03	0.14	0.23	0.25
300	2.35	2.90	3.22	3.54	3.87	4.24	4.64	5.03	0.03	0.17	0.27	0.31
350	2.74	3.38	3.76	4.13	4.52	4.95	5.41	5.87	0.04	0.20	0.32	0.36
400	3.13	3.87	4.29	4.72	5.16	5.65	6.19	6.71	0.05	0.23	0.36	0.41
450	3.23	4.02	4.48	4.95	5.41	5.94	6.51	7.07	0.05	0.25	0.41	0.46
500	3.59	4.47	4.98	5.50	6.01	6.60	7.23	7.86	0.06	0.28	0.45	0.51
550	3.77	4.71	5.26	5.81	6.36	6.99	7.67	8.33	0.06	0.31	0.50	0.56
600	4.11	5.14	5.74	6.34	6.94	7.63	8.37	9.09	0.07	0.34	0.54	0.61
650	4.46	5.57	6.22	6.87	7.52	8.26	9.06	9.84	0.07	0.37	0.59	0.66
700	4.51	5.66	6.35	7.02	7.69	8.47	9.28	10.09	0.08	0.40	0.63	0.71
750	4.83	6.06	6.80	7.52	8.24	9.08	9.94	10.81	0.08	0.42	0.68	0.76
800	4.97	6.26	7.02	7.77	8.52	9.38	10.29	11.18	0.09	0.45	0.72	0.81
850	5.28	6.65	7.46	8.26	9.05	9.97	10.93	11.88	0.10	0.48	0.77	0.87
900	5.59	7.04	7.90	8.74	9.59	10.55	11.58	12.58	0.10	0.51	0.81	0.92
950	5.80	7.08	7.95	8.81	9.67	10.64	11.67	12.69	0.11	0.54	0.86	0.97
1000	5.90	7.45	8.37	9.27	10.18	11.20	12.28	13.36	0.11	0.57	0.91	1.02
1050	5.98	7.58	8.52	9.45	10.37	11.42	12.52	13.60	0.12	0.59	0.95	1.07
1100	6.27	7.94	8.93	9.90	10.86	11.96	13.12	14.25	0.12	0.62	1.00	1.12
1150	6.50	8.27	9.31	10.31	11.31	12.51	13.71	14.99	0.13	0.65	1.04	1.17
1200	6.50	8.27	9.31	10.33	11.33	12.69	13.79	14.83	0.14	0.68	1.09	1.22
1250	6.77	8.61	9.70	10.76	11.80	12.99	14.24	15.45	0.14	0.71	1.13	1.27
1300	6.81	8.89	9.79	10.86	11.91	13.10	14.35	15.56	0.15	0.74	1.18	1.32
1350	7.07	9.02	10.16	11.28	12.37	13.60	14.90	16.16	0.15	0.76	1.22	1.37
1400	7.21	9.22	10.41	11.70	12.63	14.11	15.45	16.76	0.16	0.79	1.27	1.42
1450	7.23	9.24	10.42	11.79	12.67	14.21	15.59	16.85	0.16	0.82	1.31	1.48
1500	7.41	9.56	10.78	11.96	13.11	14.41	15.77	17.06	0.17	0.85	1.36	1.53
1550	7.45	9.57	10.78	11.97	13.11	14.41	15.79	17.08	0.18	0.88	1.40	1.58
1600	7.69	9.86	11.13	12.38	13.53	14.88	16.24	17.55	0.18	0.91	1.45	1.63
1650	7.71	10.19	11.48	12.74	13.99	15.34	16.29	17.59	0.19	0.93	1.49	1.68
1700	7.77	10.19	11.49	12.75	13.66	15.41	16.33	17.60	0.19	0.96	1.54	1.73
1750	7.91	10.27	11.58	12.85	14.06	15.43	16.81	17.87	0.20	0.99	1.58	1.78
1800	7.93	10.28	11.59	12.89	14.09	15.56	16.89	17.88	0.20	1.02	1.63	1.83
1850	8.11	10.48	11.82	13.01	14.69	15.70	17.09	18.38	0.21	1.05	1.67	1.88
1900	8.11	10.49	11.89	13.03	14.73	15.75	17.10	18.87	0.22	1.07	1.72	1.93
1950	8.12	10.50	11.99	13.06	14.75	15.85	17.11	18.69	0.22	1.10	1.77	1.98
2000	8.19	10.55	12.08	13.40	14.84	15.99	17.33	18.56	0.23	1.13	1.81	2.04
2050	8.20	10.56	12.09	13.42	14.40	16.06	17.35	18.12	0.23	1.16	1.86	2.09
2100	8.40	10.84	12.21	13.62	14.39	16.08	17.38	18.11	0.24	1.19	1.90	2.14
2150	8.41	11.10	12.25	13.84	14.37	16.47	17.80	18.03	0.24	1.22	1.95	2.19
2200	8.42	11.88	12.26	13.81	14.35	16.00	16.90	18.02	0.25	1.24	1.99	2.24
2250	8.43	11.89	12.29	13.58	14.29	16.00	16.89	18.01	0.25	1.27	2.04	2.29
2300	8.44	11.90	12.29	13.56	14.28	15.98	16.73		0.26	1.30	2.08	2.34
2350	8.45	11.91	12.30	13.55	14.21	15.94	16.73		0.27	1.33	2.13	2.39
2400	8.61	11.34	12.54	13.49	14.19	15.41	16.45		0.27	1.36	2.20	2.44
2450	8.45	10.83	11.91	13.45	14.18	15.39	16.41		0.28	1.39	2.22	2.49
2500	8.35	10.82	11.89	13.37	14.15	15.01	16.40		0.28	1.41	2.26	2.54
2550	8.25	10.70	11.76	13.23	13.94				0.29	1.44	2.31	2.60
2600	8.24	10.89	11.75	13.16	13.91				0.29	1.47	2.35	2.65
2650	8.21	10.85	11.65	13.12	13.81				0.30	1.50	2.40	2.70
2700	7.86	10.20	11.42	12.49	13.59				0.31	1.53	2.44	2.75
2750	7.75	10.19	11.41	12.45	13.49				0.31	1.56	2.49	2.80
2800	7.66	10.14	11.12	12.42					0.32	1.58	2.53	2.85
2850	7.54	10.13	11.11	12.34					0.32	1.61	2.58	2.90
2900	7.51	10.10	10.75	11.91					0.33	1.64	2.63	2.95
2950	7.40	9.47	10.73	11.87					0.33	1.67	2.67	3.00
3000	7.40	9.39	10.55	11.86					0.34	1.70	2.72	3.05
3050	6.98	9.23							0.35	1.73	2.76	3.10
3100	6.75	9.23							0.35	1.75	2.81	3.15
3150	6.63	8.62							0.36	1.78	2.85	3.21
3200	6.61	8.61							0.36	1.81	2.90	3.26
3250	6.52	8.59							0.37	1.84	2.94	3.31



**Table 9:**  
**Section C: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	300	315	335	355	375	400	450	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	11.13	11.94	12.98	14.00	15.79	16.22	18.58	0.08	0.40	0.63	0.71
950	14.01	14.98	16.24	17.47	18.66	20.13	22.79	0.11	0.54	0.86	0.97
1450	18.59	19.63	20.62	22.68	23.13	24.48	26.56	0.16	0.82	1.31	1.48
2850								0.32	1.61	2.58	2.90
50	1.16	1.24	1.34	1.44	1.54	1.67	1.92	0.01	0.03	0.05	0.05
100	2.32	2.48	2.68	2.88	3.08	3.34	3.84	0.01	0.06	0.09	0.10
150	3.48	3.72	4.02	4.32	4.62	5.01	5.76	0.02	0.08	0.14	0.15
200	3.92	4.19	4.55	4.91	5.26	5.70	6.57	0.02	0.11	0.18	0.20
250	4.00	5.24	5.69	6.14	6.58	7.13	8.21	0.03	0.14	0.23	0.25
300	5.55	5.94	6.45	6.97	7.47	8.10	9.34	0.03	0.17	0.27	0.31
360	6.48	6.93	7.53	8.13	8.72	9.45	10.90	0.04	0.20	0.32	0.36
400	7.40	7.92	8.60	9.29	9.96	10.80	12.45	0.05	0.23	0.36	0.41
450	7.81	8.36	9.09	10.45	11.20	11.41	13.14	0.05	0.25	0.41	0.46
500	8.68	9.29	10.10	11.55	12.36	12.68	14.60	0.06	0.28	0.45	0.51
550	9.21	9.86	10.72	11.57	12.41	13.44	15.46	0.06	0.31	0.50	0.56
600	10.05	10.76	11.69	12.62	13.54	14.66	16.87	0.07	0.34	0.54	0.61
650	10.88	11.65	12.67	13.67	14.67	15.88	18.27	0.07	0.37	0.59	0.66
700	11.13	11.94	12.98	14.00	15.79	16.22	18.58	0.08	0.40	0.63	0.71
750	11.83	12.79	13.91	15.00	16.32	17.38	19.91	0.08	0.42	0.68	0.76
800	12.36	13.23	14.36	15.47	16.56	17.69	20.42	0.09	0.45	0.72	0.81
850	13.13	14.06	15.26	16.44	17.60	19.01	21.70	0.10	0.48	0.77	0.87
900	13.91	14.88	16.16	17.40	18.63	20.13	22.69	0.10	0.51	0.81	0.92
950	14.01	14.98	16.24	17.47	18.66	20.13	22.79	0.11	0.54	0.86	0.97
1000	14.75	15.77	17.10	18.39	19.64	21.16	23.99	0.11	0.57	0.91	1.02
1050	15.01	16.03	17.36	18.64	19.88	21.36	24.07	0.12	0.59	0.95	1.07
1100	15.73	16.79	18.19	19.53	20.63	22.38	24.62	0.12	0.62	1.00	1.12
1150	16.44	17.56	18.36	20.42	20.94	22.48	25.11	0.13	0.65	1.04	1.17
1200	16.49	17.61	18.82	20.60	21.42	22.90	25.53	0.14	0.68	1.09	1.22
1250	17.02	18.15	19.60	20.99	22.31	23.30	25.88	0.14	0.71	1.13	1.27
1300	17.11	18.22	19.64	20.98	22.33	23.69	26.17	0.15	0.74	1.18	1.32
1350	17.77	18.92	20.40	21.79	22.66	23.98	26.37	0.15	0.76	1.22	1.37
1400	18.43	19.62	20.60	22.59	22.67	24.26	26.48	0.16	0.79	1.27	1.42
1450	18.59	19.63	20.62	22.68	23.13	24.48	26.56	0.16	0.82	1.31	1.46
1500	18.70	19.66	21.33	22.69	23.00	25.10	26.54	0.17	0.85	1.36	1.53
1550	18.79	19.71	21.36	22.36	23.48	24.70	26.43	0.18	0.88	1.40	1.58
1600	19.20	20.35	21.39	22.50	23.44	24.69	26.24	0.18	0.91	1.45	1.63
1650	19.80	20.98	21.49	22.61	23.43	24.69	25.96	0.19	0.93	1.49	1.68
1700	19.81	20.97	21.54	22.67	24.36	24.59	25.59	0.19	0.96	1.54	1.73
1750	19.86	20.96	22.89	22.66	23.33	24.42	25.13	0.20	0.99	1.58	1.78
1800	19.89	20.95	22.59	22.65				0.20	1.02	1.63	1.83
1850	19.94	20.92	22.55	22.59				0.21	1.05	1.67	1.88
1900	20.48	20.47	21.57	22.44				0.22	1.07	1.72	1.93
1950	19.52	20.47	21.56	22.39				0.22	1.10	1.77	1.98
2000	19.51	20.44	21.32	22.02				0.23	1.13	1.81	2.04
2050	19.44							0.23	1.16	1.86	2.09
2100	19.43							0.24	1.19	1.90	2.14
2150	19.23							0.24	1.22	1.95	2.19
2200	19.21							0.25	1.24	1.99	2.24
2250	19.20							0.25	1.27	2.04	2.29

**Table 10:**  
**Section 25: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)													Additional Power (kW) per belt for speed ratio			
	224	236	250	280	315	355	400	450	500	560	630	710	800	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	6.08	6.91	7.89	9.93	12.24	14.81	17.57	20.49	23.25	26.33	31.16	34.53	37.65	0.12	0.61	0.97	1.09
950	7.34	8.40	9.62	12.17	15.01	18.08	21.29	24.54	27.42	30.36				0.16	0.82	1.32	1.48
1450	8.72	10.09	11.63	14.73	17.99	21.15	23.97	26.07						0.25	1.26	2.01	2.26
50	0.75	0.83	0.92	1.11	1.34	1.59	1.88	2.19	2.50	2.88	3.56	4.35	5.23	0.01	0.04	0.07	0.08
100	1.35	1.50	1.67	2.03	2.46	2.94	3.48	4.07	4.65	5.34	6.18	7.05	8.09	0.02	0.09	0.14	0.16
150	1.88	2.10	2.34	2.88	3.50	4.19	4.96	5.81	6.68	7.65	8.78	10.05	11.46	0.03	0.13	0.21	0.23
200	2.36	2.65	2.97	3.67	4.46	5.37	6.37	7.47	8.55	9.83	11.39	13.05	14.83	0.03	0.17	0.28	0.31
250	2.84	3.18	3.57	4.42	5.39	6.49	7.71	9.04	10.36	11.91	13.76	15.74	17.86	0.04	0.22	0.35	0.39
300	3.26	3.67	4.14	5.14	6.28	7.56	9.00	10.56	12.09	13.90	16.12	18.42	20.93	0.05	0.26	0.42	0.47
350	3.68	4.14	4.68	5.82	7.13	8.60	10.23	12.01	13.75	15.79	18.27	20.84	23.64	0.06	0.30	0.49	0.55
400	4.07	4.59	5.20	6.47	7.95	9.60	11.43	13.41	15.33	17.59	20.42	23.25	26.35	0.07	0.36	0.56	0.62
450	4.44	5.02	5.69	7.12	8.74	10.56	12.56	14.73	16.85	19.30	22.36	25.41	28.84	0.08	0.39	0.62	0.70
500	4.80	5.44	6.17	7.73	9.50	11.48	13.66	16.02	18.29	20.92	24.30	27.56	30.92	0.09	0.43	0.69	0.78
550	5.15	5.83	6.62	8.30	10.23	12.37	14.71	17.23	19.68	22.44	26.00	29.37	32.80	0.10	0.48	0.76	0.86
600	5.47	6.21	7.06	8.87	10.92	13.21	15.72	18.38	20.94	23.85	27.70	31.18	34.88	0.10	0.52	0.83	0.94
650	5.78	6.57	7.49	9.41	11.60	14.03	16.67	19.47	22.14	25.15	29.43	32.85	36.17	0.11	0.56	0.90	1.01
700	6.08	6.91	7.89	9.93	12.24	14.81	17.57	20.49	23.25	26.33	31.16	34.53	37.65	0.12	0.61	0.97	1.09
750	6.36	7.24	8.27	10.42	12.86	15.54	18.43	21.45	24.28	27.40	32.89	36.20	39.14	0.13	0.65	1.04	1.17
800	6.63	7.55	8.63	10.89	13.44	16.24	19.23	22.34	25.22	28.34				0.14	0.69	1.11	1.25
850	6.88	7.85	8.99	11.34	14.00	16.90	19.97	23.14	26.05	29.15				0.15	0.74	1.18	1.33
900	7.12	8.13	9.31	11.77	14.52	17.51	20.68	23.88	26.79	29.82				0.16	0.79	1.25	1.40
950	7.34	8.40	9.62	12.17	15.01	18.08	21.29	24.54	27.42	30.36				0.16	0.82	1.32	1.48
1000	7.54	8.65	9.91	12.54	15.47	18.61	21.86	25.11	27.94	30.73				0.17	0.87	1.39	1.56
1050	7.74	8.88	10.19	12.89	15.89	19.09	22.37	25.61	28.34	30.96				0.18	0.91	1.46	1.64
1100	7.92	9.10	10.44	13.23	16.29	19.53	22.82	26.00	28.63	31.01				0.18	0.95	1.53	1.72
1150	8.08	9.30	10.67	13.52	16.64	19.91	23.20	26.31	28.80	30.90				0.20	1.00	1.60	1.79
1200	8.23	9.58	10.88	13.79	16.96	20.26	23.51	26.53	28.85	30.61				0.21	1.04	1.66	1.87
1250	8.36	9.63	11.07	14.04	17.24	20.54	23.75	26.64	28.75	30.14				0.22	1.08	1.73	1.95
1300	8.47	9.77	11.25	14.26	17.48	20.78	23.93	26.65						0.23	1.13	1.80	2.03
1350	8.57	9.90	11.40	14.45	17.69	20.96	24.01	26.67						0.23	1.17	1.87	2.10
1400	8.66	10.00	11.52	14.61	17.88	21.08	24.03	26.36						0.24	1.21	1.94	2.18
1450	8.72	10.09	11.63	14.73	17.99	21.15	23.97	26.07						0.25	1.26	2.01	2.26
1500	8.77	10.15	11.72	14.84	18.06	21.16	23.82	25.64						0.26	1.30	2.08	2.34
1550	8.80	10.21	11.78	14.91	18.10	21.11								0.27	1.34	2.15	2.42
1600	8.82	10.23	11.81	14.94	18.09	20.89								0.28	1.38	2.22	2.49
1650	8.81	10.24	11.82	14.94	18.04	20.82								0.29	1.43	2.29	2.57
1700	8.78	10.22	11.81	14.92	17.94	20.68								0.29	1.47	2.36	2.65
1750	8.74	10.19	11.77	14.84	17.80	20.27								0.30	1.52	2.43	2.73
1800	8.68	10.12	11.71	14.74	17.60									0.31	1.58	2.50	2.81
1850	8.60	10.05	11.62	14.61	17.37									0.32	1.60	2.57	2.88
1900	8.50	9.94	11.50	14.43	17.07									0.33	1.65	2.64	2.96
1950	8.38	9.81	11.36	14.22	16.71									0.34	1.69	2.70	3.04
2000	8.24	9.66	11.19	13.97	16.32									0.35	1.73	2.77	3.12
2050	8.08	9.48	10.99	13.69										0.36	1.78	2.84	3.20
2100	7.89	9.28	10.75	13.36										0.36	1.82	2.91	3.27
2150	7.68	9.05	10.50	12.99										0.37	1.86	2.98	3.35
2200	7.46	8.81	10.21	12.58										0.38	1.91	3.05	3.43
2250	7.20	8.53	9.89	12.13										0.39	1.95	3.12	3.51
2300	6.93	8.22	9.53											0.40	1.99	3.19	3.59
2350	6.63	7.89	9.16											0.41	2.04	3.26	3.66
2400	6.31	7.53	8.74											0.42	2.08	3.33	3.74
2450	5.97	7.15	8.29											0.42	2.12	3.40	3.82
2500	5.60	6.73	7.81											0.43	2.17	3.47	3.90



**Table 11:**  
**Section D: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)										Additional Power (kW) per belt for speed ratio			
	315	335	355	375	400	425	450	475	500	530	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	16.05	17.41	20.12	22.10	24.53	26.89	29.20	30.36	33.65	34.92	0.23	1.14	1.82	2.05
950	19.43	21.38	24.35	26.71	29.56	32.28	34.88	35.92	39.69	40.72	0.31	1.54	2.47	2.78
20	0.83	0.98	1.01	1.09	1.20	1.30	1.41	1.52	1.62	1.75	0.01	0.03	0.05	0.08
40	1.53	1.76	1.86	2.02	2.22	2.42	2.61	2.84	3.01	3.33	0.01	0.06	0.10	0.12
60	2.18	2.47	2.65	2.89	3.17	3.47	3.76	4.07	4.33	4.72	0.02	0.10	0.16	0.18
80	2.79	3.05	3.40	3.71	4.08	4.46	4.84	5.09	5.59	5.91	0.03	0.13	0.21	0.23
100	3.38	3.63	4.13	4.50	4.97	5.43	5.89	6.12	6.80	7.11	0.03	0.16	0.26	0.29
120	3.95	4.21	4.83	5.27	5.82	6.36	6.91	7.15	7.98	8.31	0.04	0.19	0.31	0.35
140	4.49	4.79	5.51	6.02	6.65	7.28	7.90	8.17	9.14	9.50	0.05	0.23	0.36	0.41
160	5.03	5.37	6.17	6.75	7.47	8.17	8.87	9.20	10.26	10.70	0.06	0.26	0.42	0.47
180	5.54	5.95	6.83	7.47	8.25	9.04	9.82	10.22	11.36	11.89	0.06	0.29	0.47	0.53
200	6.05	6.53	7.47	8.16	9.03	9.89	10.75	11.25	12.44	13.09	0.06	0.32	0.52	0.58
220	6.55	7.05	8.09	8.85	9.80	10.73	11.67	12.18	13.51	14.14	0.07	0.36	0.57	0.64
240	7.04	7.56	8.69	9.51	10.54	11.55	12.56	13.11	14.55	15.19	0.08	0.39	0.62	0.70
260	7.51	8.08	9.29	10.17	11.28	12.36	13.44	14.03	15.57	16.25	0.08	0.42	0.68	0.76
280	7.98	8.59	9.86	10.83	11.99	13.16	14.30	14.93	16.58	17.30	0.09	0.45	0.73	0.82
300	8.43	9.11	10.46	11.46	12.71	13.93	15.15	15.89	17.57	18.35	0.10	0.48	0.76	0.88
320	8.88	9.58	11.03	12.09	13.40	14.70	15.99	16.73	18.53	19.33	0.10	0.52	0.83	0.94
340	9.32	10.04	11.58	12.71	14.08	15.48	16.81	17.58	19.49	20.31	0.11	0.55	0.88	0.99
360	9.77	10.51	12.14	13.30	14.75	16.19	17.62	18.42	20.42	21.26	0.12	0.58	0.94	1.05
380	10.19	10.97	12.67	13.90	15.41	16.93	18.41	19.27	21.34	22.28	0.12	0.62	0.99	1.11
400	10.61	11.44	13.20	14.48	16.07	17.64	19.19	20.11	22.24	23.24	0.13	0.65	1.04	1.17
420	11.01	11.88	13.72	15.06	16.71	18.31	19.96	20.87	23.13	24.11	0.14	0.68	1.09	1.23
440	11.42	12.32	14.24	15.62	17.34	19.04	20.71	21.62	23.99	24.99	0.14	0.71	1.14	1.29
460	11.82	12.75	14.74	16.18	17.96	19.71	21.45	22.38	24.84	25.86	0.15	0.75	1.20	1.34
480	12.21	13.19	15.24	16.73	18.58	20.38	22.18	23.13	25.68	26.74	0.16	0.78	1.25	1.40
500	12.59	13.63	15.72	17.28	19.18	21.03	22.88	23.89	26.49	27.61	0.16	0.81	1.30	1.46
520	12.97	14.03	16.20	17.79	19.75	21.68	23.58	24.54	27.29	28.40	0.17	0.84	1.35	1.52
540	13.35	14.44	16.67	18.30	20.33	22.31	24.27	25.19	28.08	29.19	0.18	0.88	1.40	1.58
560	13.70	14.84	17.14	18.82	20.88	22.92	24.93	25.84	28.83	29.97	0.18	0.91	1.46	1.64
580	14.06	15.25	17.59	19.31	21.44	23.53	25.59	26.49	29.58	30.76	0.19	0.94	1.51	1.69
600	14.41	15.65	18.03	19.80	21.98	24.13	26.23	27.34	30.30	31.55	0.19	0.97	1.56	1.75
620	14.75	16.00	18.47	20.29	22.51	24.71	26.85	27.94	31.02	32.22	0.20	1.01	1.61	1.81
640	15.09	16.35	18.89	20.75	23.04	25.27	27.46	28.55	31.70	32.90	0.21	1.04	1.66	1.87
660	15.42	16.71	19.31	21.21	23.54	25.82	28.06	29.15	32.37	33.57	0.21	1.07	1.72	1.93
680	15.74	17.06	19.72	21.66	24.03	26.37	28.63	29.76	33.02	34.25	0.22	1.10	1.77	1.99
700	16.05	17.41	20.12	22.10	24.53	26.89	29.20	30.36	33.65	34.92	0.23	1.14	1.82	2.05
720	16.37	17.79	20.52	22.53	25.00	27.41	29.76	30.86	34.25	35.49	0.23	1.17	1.87	2.10
740	16.67	18.04	20.90	22.95	25.48	27.91	30.28	31.36	34.84	36.05	0.24	1.20	1.92	2.16
760	16.97	18.33	21.27	23.36	25.90	28.39	30.81	31.86	35.41	36.62	0.25	1.23	1.98	2.22
780	17.25	18.41	21.63	23.76	26.14	28.86	31.31	32.36	35.95	37.18	0.25	1.27	2.03	2.28
800	17.54	18.63	21.98	24.15	26.78	29.33	31.79	32.86	36.48	37.75	0.26	1.30	2.08	2.34
820	17.81	19.09	22.33	24.53	27.18	29.77	32.26	33.31	36.98	38.18	0.27	1.33	2.13	2.40
840	18.08	19.28	22.67	24.89	27.58	30.20	32.71	33.46	37.46	38.61	0.27	1.36	2.18	2.45
860	18.34	19.67	23.00	25.24	27.97	30.61	33.15	34.02	37.92	39.03	0.28	1.40	2.24	2.51
880	18.60	19.89	23.32	25.59	28.35	31.01	33.46	34.57	38.36	39.46	0.29	1.43	2.29	2.57
900	18.84	20.04	23.63	25.92	28.71	31.40	33.96	35.12	38.77	39.89	0.29	1.46	2.34	2.63
920	19.08	20.44	23.93	26.25	29.06	31.78	34.35	35.45	39.15	40.20	0.30	1.49	2.39	2.69
940	19.31	21.31	24.21	26.57	29.40	32.11	34.70	35.77	39.59	40.51	0.31	1.53	2.44	2.75
960	19.53	21.43	24.50	26.86	29.72	32.45	35.05	36.10	39.86	40.83	0.31	1.56	2.50	2.81
980	19.75	21.54	24.76	27.15	30.03	32.77	35.37	36.42	40.16	41.14	0.32	1.59	2.55	2.86
1000	19.96	22.04	25.02	27.43	30.32	33.08	35.69	36.75	40.46	41.45	0.32	1.62	2.60	2.92
1020	20.16	22.14	25.28	27.69	30.60	33.36	35.97	36.97	40.72	41.61	0.33	1.66	2.65	2.98
1040	20.36	22.31	25.50	27.95	30.87	33.63	36.24	37.19	40.95	41.77	0.34	1.69	2.70	3.04
1060	20.54	22.69	25.74	28.19	31.12	33.88	36.49	37.41	41.16	41.92	0.34	1.72	2.76	3.10
1080	20.72	22.81	25.95	28.41	31.35	34.13	36.72	37.63	41.35	42.06	0.35	1.75	2.81	3.16
1100	20.90	23.98	26.16	28.63	31.57	34.35	36.93	37.85	41.51	42.24	0.36	1.79	2.86	3.21
1120	21.00	24.12	26.36	28.83	31.78	34.55	37.12	37.96	41.63	42.26	0.36	1.82	2.91	3.27
1140	21.10	24.21	26.53	29.03	31.97	34.73	37.28	38.08	41.74	42.29	0.37	1.85	2.96	3.33
1160	21.36	24.36	26.71	29.21	32.14	34.89	37.42	38.19	41.80	42.31	0.38	1.88	3.02	3.39
1180	21.49	24.44	26.87	29.37	32.32	35.04	37.55	38.31	41.85	42.34	0.38	1.92	3.07	3.45
1200	21.62	24.98	27.02	29.53	32.48	35.18	37.65	38.42	41.86	42.36	0.39	1.95	3.12	3.51
1220	21.75	25.06	27.15	29.66	32.59	35.28	37.73	38.41	41.84	42.31	0.40	1.98	3.17	3.56
1240	21.85	25.44	27.29	29.79	32.71	35.37	37.79	38.40	41.80	42.18	0.40	2.01	3.22	3.62
1260	21.96	25.54	27.39	29.89	32.80	35.45	37.82	38.38	41.73	41.82	0.41	2.05	3.28	3.68
1280	22.05	25.61	27.50	30.01	32.88	35.51	37.83	38.37	41.62	41.64	0.42	2.08	3.33	3.74
1300	22.14	25.78	27.59	30.08	32.95	35.53	37.82	38.36	41.49	41.46	0.42	2.11	3.38	3.80
1320	22.22	25.81	27.67	30.15	32.99	35.54	37.79	38.22	41.14	41.12	0.43	2.14	3.43	3.86
1340	22.29	25.89	27.74	30.20	33.02	35.53	37.74	38.08	40.22	40.78	0.44	2.18	3.48	3.92
1360	22.34	25.98	27.79	30.24	33.03	35.51	37.65	37.93	39.94	40.43	0.44	2.21	3.53	3.97
1380	22.40	26.09	27.84	30.27	33.03	35.48	37.55	37.79	39.04	40.09	0.45	2.24	3.59	4.03
1400	22.44	26.09	27.86	30.29	33.23	35.39	37.41	37.65	38.09	39.75	0.45	2.27	3.64	4.09



**Table 11:**  
**Section D: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)									Additional Power (kW) per belt for speed ratio			
	560	600	630	670	710	750	800	900	1000	1.01 to 1.05	1.06 to 1.25	1.27 to 1.57	For > 1.57
700	38.65	40.35	44.01	46.81	49.43	51.85	54.57	58.95		0.23	1.14	1.82	2.05
950	44.72	45.72	49.48	51.61						0.31	1.54	2.47	2.78
20	1.86	1.99	2.15	2.31	2.48	2.64	2.84	3.23	3.94	0.01	0.03	0.05	0.06
40	3.49	3.98	4.02	4.34	4.84	4.96	5.32	6.07	6.53	0.01	0.08	0.10	0.12
60	5.01	5.55	5.80	6.24	6.68	7.12	7.67	8.76	8.06	0.02	0.10	0.16	0.18
80	6.47	6.93	7.49	8.06	8.64	9.22	9.82	11.34	10.35	0.03	0.13	0.21	0.23
100	7.89	8.32	9.14	9.84	10.54	11.25	12.11	13.83	12.63	0.03	0.16	0.26	0.29
120	9.26	9.71	10.73	11.56	12.39	13.22	14.24	16.25	14.92	0.04	0.19	0.31	0.35
140	10.61	11.09	12.30	13.25	14.20	15.14	16.31	18.62	17.02	0.05	0.23	0.36	0.41
160	11.92	12.48	13.82	14.89	15.96	17.01	18.39	20.92	19.12	0.06	0.26	0.42	0.47
180	13.20	13.86	15.31	16.50	17.68	18.85	20.30	23.16	21.22	0.06	0.29	0.47	0.53
200	14.46	15.25	16.77	18.07	19.36	20.64	22.23	25.35	23.20	0.06	0.32	0.52	0.58
220	15.70	16.51	18.20	19.61	21.01	22.40	24.12	27.49	25.17	0.07	0.38	0.57	0.64
240	16.91	17.77	19.60	21.13	22.63	24.12	25.96	29.57	27.15	0.08	0.39	0.62	0.70
260	18.09	19.02	20.98	22.61	24.21	25.80	27.76	31.59	28.98	0.08	0.42	0.68	0.76
280	19.26	20.26	22.33	24.06	25.76	27.44	29.52	33.56	30.81	0.09	0.45	0.73	0.82
300	20.41	21.54	23.66	25.47	27.27	29.04	31.23	35.47	32.64	0.10	0.49	0.78	0.86
320	21.54	22.68	24.95	26.86	28.75	30.61	32.90	37.32	34.33	0.10	0.52	0.83	0.94
340	22.64	23.83	26.22	28.22	30.20	32.13	34.51	39.11	36.03	0.11	0.55	0.88	0.99
360	23.72	24.97	27.48	29.55	31.61	33.62	36.09	40.85	37.72	0.12	0.58	0.94	1.05
380	24.78	26.12	29.68	30.85	32.98	35.06	37.61	42.51	39.48	0.12	0.62	0.99	1.11
400	25.82	27.26	29.86	32.11	34.31	36.47	39.09	44.11	41.24	0.13	0.65	1.04	1.17
420	26.84	28.27	31.02	33.34	35.62	37.83	40.53	45.65	42.99	0.14	0.68	1.09	1.23
440	27.83	29.27	32.05	34.55	36.88	39.14	41.91	47.11	44.75	0.14	0.71	1.14	1.29
460	28.80	30.28	33.25	35.71	38.09	40.43	43.23	48.51	46.51	0.15	0.75	1.20	1.34
480	29.76	31.28	34.32	36.83	39.28	41.65	44.50	49.84	47.86	0.16	0.78	1.25	1.40
500	30.68	32.29	35.36	37.94	40.43	42.83	45.73	51.09	49.21	0.16	0.81	1.30	1.46
520	31.59	33.16	36.37	39.00	41.53	43.96	46.88	52.26	50.56	0.17	0.84	1.35	1.52
540	32.48	34.03	37.36	40.02	42.59	45.06	48.00	53.35	51.91	0.18	0.88	1.40	1.58
560	33.34	34.90	38.30	41.00	43.61	46.08	49.04	54.37	53.26	0.18	0.91	1.46	1.64
580	34.00	35.77	39.22	41.98	44.57	47.07	50.02	55.29	54.13	0.19	0.94	1.51	1.69
600	34.98	36.64	40.11	42.87	45.51	48.01	50.95	56.13	55.00	0.19	0.97	1.56	1.75
620	35.76	37.38	40.95	43.74	46.39	48.89	51.89	56.89	55.86	0.20	1.01	1.61	1.81
640	36.53	38.12	41.77	44.57	47.22	49.71	52.59	57.55	56.75	0.21	1.04	1.66	1.87
660	37.26	38.87	42.55	45.36	48.01	50.48	53.33	58.13	57.62	0.21	1.07	1.72	1.93
680	37.97	39.61	43.29	46.11	48.74	51.19	53.98	58.60		0.22	1.10	1.77	1.99
700	38.68	40.35	44.01	46.81	49.43	51.85	54.57	58.98		0.23	1.14	1.82	2.05
720	39.30	40.93	44.68	47.47	50.06	52.44	55.09	59.25		0.23	1.17	1.87	2.10
740	39.93	41.51	45.31	48.09	50.64	52.97	55.53	59.43		0.24	1.20	1.92	2.16
760	40.53	42.10	45.91	48.68	51.18	53.45	55.90	59.50		0.25	1.23	1.96	2.22
780	41.10	42.68	46.45	49.18	51.65	53.84	55.90	59.50		0.25	1.27	2.03	2.28
800	41.64	43.26	46.97	49.65	52.07	54.19	56.41	59.33		0.26	1.30	2.08	2.34
820	42.16	43.66	47.45	50.09	52.43	54.46				0.27	1.33	2.13	2.40
840	42.63	44.06	47.88	50.46	52.73	54.66				0.27	1.36	2.18	2.45
860	43.08	44.45	48.27	50.79	52.97	54.80				0.28	1.40	2.24	2.51
880	43.50	44.85	48.62	51.06	53.15	54.86				0.29	1.43	2.29	2.57
900	43.89	45.25	48.92	51.29	53.28	54.86				0.29	1.46	2.34	2.63
920	44.25	45.46	49.17	51.48						0.30	1.49	2.39	2.69
940	44.56	45.68	49.38	51.58						0.31	1.53	2.44	2.75
960	44.86	45.89	49.55	51.63						0.31	1.56	2.50	2.81
980	45.11	46.11	49.67	51.64						0.32	1.59	2.55	2.86
1000	45.33	46.32	49.74	51.59						0.32	1.62	2.60	2.92
1020	45.52	46.35	49.76							0.33	1.66	2.65	2.98
1040	45.66	46.39	49.73							0.34	1.69	2.70	3.04
1060	45.78	46.42	49.64							0.34	1.72	2.76	3.10
1080	45.85	46.46	49.52							0.35	1.75	2.81	3.16
1100	45.89	46.49	49.33							0.36	1.79	2.86	3.21
1120	45.90	46.26								0.36	1.82	2.91	3.27
1140	45.85	46.04								0.37	1.85	2.96	3.33
1160	45.78	45.81								0.38	1.88	3.02	3.39
1180	45.65	45.59								0.38	1.92	3.07	3.45
1200	45.50	45.36								0.39	1.95	3.12	3.51



**Table 12:**  
**Section E: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)									Additional Power (kW) per belt for speed ratio			
	400	500	560	630	670	710	750	800	860	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	28.03	33.59	39.81	46.41	49.82	52.97	55.83	59.00	61.69	0.38	1.92	3.07	3.45
950	31.56	37.41	43.40	48.63						0.52	2.60	4.16	4.68
20	1.55	1.82	2.14	2.51	2.71	2.93	3.13	3.39	3.65	0.01	0.05	0.09	0.10
40	2.85	3.36	3.96	4.65	5.06	5.45	5.83	6.32	6.81	0.02	0.11	0.18	0.20
60	4.05	4.79	5.66	6.67	7.24	7.80	8.37	9.07	9.77	0.03	0.16	0.26	0.30
80	5.18	6.14	7.27	8.59	9.33	10.06	10.80	11.70	12.61	0.04	0.22	0.35	0.39
100	6.28	7.44	8.83	10.43	11.34	12.24	13.13	14.25	15.35	0.05	0.27	0.44	0.49
120	7.32	8.70	10.34	12.22	13.26	14.34	15.40	16.71	18.00	0.07	0.33	0.53	0.59
140	8.33	9.92	11.80	13.96	15.18	16.40	17.60	19.09	20.57	0.08	0.38	0.61	0.69
160	9.32	11.10	13.22	15.65	17.02	18.38	19.74	21.41	23.08	0.09	0.44	0.70	0.79
180	10.27	12.25	14.60	17.30	18.82	20.33	21.83	23.68	25.51	0.10	0.49	0.79	0.89
200	11.20	13.38	15.95	18.90	20.56	22.22	23.85	25.87	27.88	0.11	0.55	0.88	0.98
220	12.12	14.48	17.27	20.47	22.27	24.06	25.83	28.02	30.18	0.12	0.60	0.98	1.08
240	13.00	15.55	18.55	22.01	23.96	25.96	27.76	30.10	32.40	0.13	0.66	1.05	1.18
260	13.86	16.59	19.81	23.48	25.57	27.81	29.63	32.12	34.58	0.14	0.71	1.14	1.28
280	14.71	17.62	21.04	24.95	27.15	29.32	31.45	34.09	36.68	0.15	0.77	1.23	1.38
300	15.53	18.61	22.24	26.37	28.69	30.97	33.22	35.99	38.70	0.16	0.82	1.31	1.48
320	16.33	19.59	23.40	27.75	30.19	32.58	34.94	37.83	40.66	0.18	0.88	1.40	1.58
340	17.12	20.54	24.55	29.11	31.65	34.15	36.60	39.61	42.55	0.19	0.93	1.49	1.67
360	17.89	21.47	25.66	30.41	33.06	35.67	38.21	41.33	44.36	0.20	0.99	1.58	1.77
380	18.65	22.38	26.74	31.68	34.44	37.13	39.77	42.98	46.10	0.21	1.04	1.66	1.87
400	19.37	23.26	27.79	32.92	35.76	38.55	41.27	44.56	47.76	0.22	1.09	1.75	1.97
420	20.08	24.12	28.92	34.12	37.06	39.92	42.71	46.08	49.34	0.23	1.15	1.84	2.07
440	20.78	24.95	29.92	35.28	38.30	41.22	44.09	47.53	50.84	0.24	1.20	1.93	2.17
460	21.44	25.77	30.78	36.40	39.49	42.48	45.40	48.90	52.26	0.25	1.26	2.02	2.27
480	22.10	26.55	31.72	37.47	40.63	43.69	46.65	50.20	53.58	0.26	1.31	2.10	2.36
500	22.74	27.32	32.62	38.51	41.73	44.85	47.84	51.42	54.82	0.27	1.37	2.19	2.46
520	23.36	28.06	33.48	39.51	42.78	45.94	48.97	52.58	55.97	0.28	1.42	2.28	2.56
540	23.96	28.84	34.33	40.45	43.78	46.97	50.02	53.64	57.02	0.30	1.48	2.37	2.66
560	24.54	29.47	35.14	41.36	44.73	47.94	51.01	54.62	57.97	0.31	1.53	2.45	2.76
580	25.09	30.14	35.91	42.22	45.62	48.86	51.93	55.51	58.82	0.32	1.59	2.54	2.86
600	25.63	30.78	36.64	43.04	46.46	49.70	52.77	56.33	59.57	0.33	1.64	2.63	2.95
620	26.15	31.40	37.35	43.81	47.24	50.50	53.54	57.05	60.22	0.34	1.70	2.72	3.05
640	26.65	31.99	38.02	44.53	47.98	51.21	54.23	57.69	60.76	0.35	1.75	2.80	3.15
660	27.14	32.55	38.66	45.21	48.65	51.87	54.84	58.22	61.18	0.36	1.81	2.89	3.25
680	27.59	33.08	39.25	45.82	49.26	52.45	55.37	58.66	61.50	0.37	1.86	2.98	3.35
700	28.03	33.59	39.81	46.41	49.82	52.97	55.83	59.00	61.69	0.38	1.92	3.07	3.45
720	28.44	34.07	40.34	46.93	50.31	53.40	56.20	59.24		0.39	1.97	3.15	3.55
740	28.83	34.52	40.82	47.39	50.74	53.77	56.48	59.38		0.41	2.03	3.24	3.64
760	29.20	34.95	41.27	47.81	51.10	54.06	56.68	59.42		0.42	2.08	3.33	3.74
780	29.55	35.34	41.67	48.17	51.40	54.28	56.78	59.35		0.43	2.14	3.42	3.84
800	29.88	35.70	42.04	48.46	51.63	54.42	56.79	59.17		0.44	2.19	3.50	3.94
820	30.18	36.03	42.36	48.71	51.80	54.47				0.45	2.24	3.59	4.04
840	30.46	36.34	42.64	48.90	51.90	54.45				0.46	2.30	3.68	4.14
860	30.72	36.60	42.88	49.03	51.92	54.35				0.47	2.35	3.77	4.24
880	30.94	36.84	43.08	49.09	51.88	54.16				0.48	2.41	3.86	4.33
900	31.15	37.05	43.23	49.10	51.76	53.87				0.49	2.46	3.94	4.43
920	31.33	37.22	43.33	49.04						0.50	2.52	4.03	4.53
940	31.49	37.35	43.39	48.92						0.51	2.57	4.12	4.63
960	31.62	37.46	43.40	48.73						0.53	2.63	4.21	4.73
980	31.73	37.52	43.38	48.47						0.54	2.68	4.29	4.83
1000	31.80	37.56	43.29	48.16						0.55	2.74	4.38	4.92
1020	31.85	37.56	43.14	47.78						0.56	2.79	4.47	5.02
1040	31.87	37.51	42.96	47.31						0.57	2.85	4.56	5.12
1060	31.87	37.44	42.73	46.78						0.58	2.90	4.64	5.22
1080	31.84	37.33	42.44	46.17						0.59	2.96	4.73	5.32
1100	31.78	37.17	42.11	45.50						0.60	3.01	4.82	5.42
1120	31.69	36.98	41.71							0.61	3.07	4.91	5.52
1140	31.58	36.76	41.27							0.62	3.12	4.99	5.61
1160	31.43	36.49	40.78							0.64	3.18	5.08	5.71
1180	31.25	36.18	40.21							0.65	3.23	5.17	5.81
1200	31.04	35.83	39.59							0.66	3.28	5.26	5.91
1220	30.83	35.44								0.67	3.34	5.34	6.01
1240	30.53	35.12								0.68	3.39	5.43	6.11
1260	30.22	34.52								0.69	3.45	5.52	6.21
1280	29.89	34.14								0.70	3.50	5.61	6.30
1300	29.52	33.44								0.71	3.56	5.70	6.40

**Table 12:**  
**Section E: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	900	950	1000	1120	1250	1400	1600	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	63.88	65.54						0.38	1.92	3.07	3.45
950								0.52	2.60	4.16	4.68
20	3.90	4.16	4.41	5.26	5.91	6.71	7.74	0.01	0.05	0.09	0.10
40	7.28	7.76	8.24	8.58	9.69	10.98	12.67	0.02	0.11	0.18	0.20
60	10.46	11.16	11.84	11.90	13.47	15.24	17.69	0.03	0.16	0.26	0.30
80	13.52	14.41	15.30	15.24	17.25	19.62	22.61	0.04	0.22	0.35	0.39
100	16.45	17.53	18.62	18.57	21.03	23.81	27.42	0.06	0.27	0.44	0.49
120	19.29	20.56	21.84	21.91	24.81	28.09	32.34	0.07	0.33	0.53	0.59
140	22.05	23.50	24.95	24.95	28.24	31.95	36.75	0.08	0.38	0.61	0.69
160	24.73	26.35	27.97	28.01	31.67	35.81	41.16	0.09	0.44	0.70	0.79
180	27.33	29.13	30.90	31.05	35.10	39.67	45.57	0.10	0.49	0.79	0.89
200	29.85	31.91	33.74	33.96	38.23	43.13	49.41	0.11	0.55	0.88	0.99
220	32.31	34.41	36.49	36.65	41.35	46.60	53.25	0.12	0.60	0.98	1.08
240	34.68	36.93	39.14	39.45	44.48	50.06	57.09	0.13	0.66	1.05	1.18
260	36.98	39.36	41.89	41.97	47.25	53.07	60.33	0.14	0.71	1.14	1.28
280	39.21	41.70	44.15	44.45	50.01	56.07	63.58	0.15	0.77	1.23	1.38
300	41.36	43.96	46.50	47.00	52.78	59.08	66.80	0.16	0.82	1.31	1.48
320	43.43	46.13	48.78	49.24	55.20	61.61	69.38	0.18	0.88	1.40	1.58
340	45.41	48.20	50.91	51.48	57.63	64.15	71.92	0.19	0.93	1.49	1.67
360	47.31	50.17	52.95	53.72	60.05	66.68	74.48	0.20	0.99	1.58	1.77
380	49.12	52.05	54.87	55.67	62.05	68.67	76.23	0.21	1.04	1.66	1.87
400	50.85	53.82	56.67	57.63	64.05	70.66	77.98	0.22	1.09	1.75	1.97
420	52.48	55.48	58.35	59.58	66.05	72.65	79.73	0.23	1.15	1.84	2.07
440	54.01	57.03	59.90	61.19	67.60	74.06	80.61	0.24	1.20	1.93	2.17
460	55.45	58.47	61.33	62.79	69.14	75.35	81.49	0.25	1.26	2.02	2.27
480	56.78	59.79	62.61	64.40	70.69	76.71	82.37	0.26	1.31	2.10	2.36
500	58.01	61.20	63.77	65.64	71.76	77.39		0.27	1.37	2.19	2.46
520	59.14	62.07	64.78	66.89	72.93	78.09		0.28	1.42	2.28	2.56
540	60.14	63.03	65.64	68.12	73.90	78.78		0.30	1.48	2.37	2.66
560	61.05	63.84	66.35	68.97	74.42			0.31	1.53	2.45	2.76
580	61.83	64.52	66.89	69.83	74.95			0.32	1.59	2.54	2.86
600	62.49	65.08	67.28	70.68	75.47			0.33	1.64	2.63	2.95
620	63.03	65.47						0.34	1.70	2.72	3.05
640	63.44	65.71						0.35	1.75	2.80	3.15
660	63.72	65.80						0.36	1.81	2.89	3.25
680	63.87	65.75						0.37	1.86	2.98	3.35
700	63.88	65.54						0.38	1.92	3.07	3.45



**Table 13:**  
**Section SPZ/3V: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	63	71	80	85	90	95	100	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.49	0.68	0.88	0.99	1.10	1.22	1.32	0.01	0.06	0.09	0.11
950	0.61	0.85	1.12	1.26	1.41	1.56	1.69	0.01	0.09	0.12	0.15
1450	0.85	1.20	1.59	1.81	2.02	2.24	2.45	0.02	0.13	0.19	0.23
2850	1.37	2.01	2.73	3.11	3.48	3.87	4.24	0.04	0.26	0.37	0.46
100	0.10	0.13	0.16	0.18	0.20	0.22	0.24	0.00	0.01	0.01	0.02
200	0.17	0.23	0.29	0.32	0.36	0.40	0.44	0.00	0.02	0.03	0.03
300	0.24	0.32	0.40	0.45	0.51	0.56	0.62	0.00	0.03	0.04	0.05
400	0.29	0.40	0.50	0.57	0.64	0.71	0.79	0.01	0.04	0.05	0.06
500	0.34	0.47	0.60	0.68	0.77	0.86	0.95	0.01	0.05	0.07	0.08
600	0.44	0.60	0.78	0.87	0.97	1.07	1.16	0.01	0.06	0.08	0.10
700	0.49	0.68	0.88	0.99	1.10	1.22	1.32	0.01	0.06	0.09	0.11
800	0.54	0.75	0.98	1.10	1.23	1.36	1.47	0.01	0.07	0.11	0.13
900	0.59	0.82	1.08	1.20	1.35	1.49	1.62	0.01	0.08	0.12	0.15
950	0.61	0.85	1.12	1.26	1.41	1.56	1.69	0.01	0.09	0.12	0.15
1000	0.63	0.88	1.17	1.31	1.47	1.62	1.77	0.01	0.09	0.13	0.16
1100	0.71	0.98	1.29	1.46	1.63	1.80	1.97	0.02	0.10	0.14	0.18
1200	0.75	1.05	1.38	1.56	1.75	1.93	2.11	0.02	0.11	0.16	0.19
1300	0.79	1.11	1.47	1.66	1.86	2.06	2.25	0.02	0.12	0.17	0.21
1400	0.83	1.17	1.55	1.76	1.97	2.18	2.39	0.02	0.13	0.18	0.23
1450	0.85	1.20	1.59	1.81	2.02	2.24	2.45	0.02	0.13	0.19	0.23
1500	0.87	1.23	1.63	1.85	2.08	2.30	2.52	0.02	0.14	0.20	0.24
1600	0.93	1.32	1.76	2.00	2.23	2.47	2.70	0.02	0.15	0.21	0.26
1700	0.97	1.38	1.84	2.09	2.34	2.59	2.83	0.02	0.16	0.22	0.27
1800	1.00	1.43	1.92	2.18	2.44	2.70	2.96	0.03	0.17	0.24	0.29
1900	1.03	1.49	2.00	2.27	2.54	2.81	3.08	0.03	0.18	0.25	0.31
2000	1.07	1.54	2.07	2.36	2.63	2.92	3.20	0.03	0.19	0.26	0.32
2100	1.13	1.63	2.18	2.48	2.73	3.08	3.37	0.03	0.19	0.28	0.34
2200	1.16	1.68	2.25	2.56	2.82	3.19	3.49	0.03	0.19	0.28	0.34
2300	1.19	1.73	2.32	2.64	2.91	3.29	3.60	0.03	0.21	0.30	0.37
2400	1.22	1.78	2.39	2.72	3.00	3.39	3.71	0.03	0.22	0.32	0.39
2500	1.24	1.82	2.46	2.80	3.09	3.49	3.82	0.04	0.23	0.33	0.40
2600	1.31	1.90	2.57	2.93	3.28	3.64	3.99	0.04	0.24	0.34	0.42
2700	1.34	1.94	2.63	3.00	3.36	3.73	4.09	0.04	0.25	0.35	0.44
2800	1.36	1.99	2.70	3.08	3.45	3.82	4.19	0.04	0.26	0.36	0.45
2850	1.37	2.01	2.73	3.11	3.48	3.87	4.24	0.04	0.26	0.37	0.46
2900	1.38	2.03	2.76	3.15	3.52	3.91	4.29	0.04	0.27	0.38	0.47
3000	1.41	2.07	2.81	3.21	3.60	4.00	4.38	0.04	0.28	0.39	0.48
3100	1.45	2.15	2.91	3.33	3.74	4.14	4.54	0.04	0.29	0.41	0.50
3200	1.47	2.19	2.97	3.39	3.81	4.22	4.63	0.05	0.30	0.42	0.52
3300	1.49	2.22	3.02	3.46	3.88	4.30	4.71	0.05	0.31	0.43	0.53
3400	1.51	2.26	3.07	3.52	3.95	4.37	4.79	0.05	0.31	0.45	0.55
3500	1.52	2.29	3.12	3.57	4.01	4.44	4.87	0.05	0.32	0.46	0.56
3600	1.58	2.38	3.22	3.68	4.14	4.59	5.03	0.05	0.33	0.47	0.58
3700	1.60	2.39	3.27	3.73	4.20	4.66	5.10	0.05	0.34	0.49	0.60
3800	1.61	2.42	3.31	3.78	4.26	4.72	5.17	0.05	0.35	0.50	0.61
3900	1.62	2.45	3.35	3.83	4.31	4.78	5.24	0.06	0.36	0.51	0.63
4000	1.63	2.47	3.39	3.88	4.36	4.84	5.30	0.06	0.37	0.53	0.64
4100	1.68	2.55	3.49	4.00	4.49	4.97	5.45	0.06	0.38	0.54	0.66
4200	1.69	2.57	3.53	4.04	4.54	5.02	5.51	0.06	0.39	0.55	0.68
4300	1.70	2.60	3.56	4.08	4.58	5.07	5.56	0.06	0.40	0.57	0.69
4400	1.71	2.61	3.59	4.12	4.62	5.11	5.60	0.06	0.41	0.58	0.71
4500	1.71	2.63	3.62	4.15	4.66	5.16	5.65	0.06	0.42	0.59	0.73
4600	1.76	2.70	3.71	4.26	4.73	5.30	5.79	0.06	0.42	0.59	0.73
4700	1.76	2.72	3.74	4.29	4.76	5.34	5.83	0.07	0.44	0.62	0.76
4800	1.77	2.73	3.76	4.32	4.79	5.37	5.86	0.07	0.44	0.63	0.77
4900	1.77	2.74	3.78	4.34	4.82	5.40	5.89	0.07	0.45	0.64	0.79
5000	1.77	2.75	3.80	4.36	4.84	5.42	6.01	0.07	0.46	0.66	0.81
5100	1.81	2.82	3.89	4.47	5.02	5.55	6.03	0.07	0.47	0.67	0.82
5200	1.81	2.83	3.91	4.49	5.04	5.57	6.05	0.07	0.48	0.68	0.84
5300	1.81	2.83	3.92	4.50	5.05	5.58	6.10	0.08	0.49	0.70	0.85
5400	1.82	2.84	3.93	4.51	5.07	5.66	6.11	0.08	0.50	0.71	0.87
5500	1.82	2.84	3.93	4.52	5.07	5.67	6.11	0.08	0.51	0.72	0.89
5600	1.84	2.90	4.03	4.62	5.18	5.72	6.23	0.08	0.52	0.74	0.90
5800	1.84	2.90	4.03	4.62	5.18	5.72	6.23	0.08	0.54	0.76	0.93
6000	1.84	2.91	4.03	4.70	5.27	5.80	6.23	0.09	0.56	0.79	0.97
6200	1.84	2.92	4.08	4.71	5.24	5.80	6.32	0.09	0.59	0.84	1.03
6400	1.83	2.93	4.10	4.73	5.24	5.81	6.30	0.09	0.61	0.87	1.06
6600	1.81	2.96	4.14	4.74	5.24	5.82	6.30	0.10	0.63	0.89	1.10
6800	1.77	2.92	4.09	4.70	5.23	5.76	6.21	0.10	0.65	0.92	1.13
7000	1.74	2.92	4.09	4.70	5.23	5.76	6.21	0.10	0.67	0.95	1.16
7200	1.74	2.91	4.06	4.69	5.23	5.83	6.06	0.11	0.69	0.97	1.19
7400	1.68	2.85	4.02	4.60	5.11	5.60	6.05	0.11	0.70	1.00	1.22
7600	1.66	2.85	4.02	4.60	5.11	5.56	5.85	0.11	0.72	1.03	1.26
7800	1.59	2.77	3.91	4.47	4.96	5.38	5.82	0.11	0.74	1.05	1.29
8000	1.57	2.76	3.91	4.46	4.94	5.34	5.67	0.11	0.76	1.08	1.32
8200	1.48	2.66	3.78	4.30	4.75	5.11	5.40	0.12	0.78	1.10	1.35
8400	1.39	2.55	3.63	4.13	4.54	4.86	5.10	0.14	0.79	1.13	1.38



**Table 13:**  
**Section SPZ/3V: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	112	125	132	140	150	160	180	200	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	1.58	1.87	2.02	2.19	2.41	2.61	3.04	3.45	0.01	0.06	0.09	0.11
950	2.04	2.41	2.61	2.83	3.11	3.38	3.93	4.45	0.01	0.09	0.12	0.15
1450	2.96	3.49	3.78	4.10	4.50	4.80	5.66	6.41	0.02	0.13	0.19	0.23
2050	5.11	6.01	6.48	7.01	7.65	8.25	9.39	10.52	0.04	0.26	0.37	0.46
100	0.26	0.33	0.35	0.38	0.42	0.45	0.52	0.59	0.00	0.01	0.01	0.02
200	0.51	0.61	0.64	0.70	0.77	0.83	0.96	1.09	0.00	0.02	0.03	0.03
300	0.72	0.86	0.91	0.99	1.10	1.18	1.37	1.56	0.00	0.03	0.04	0.05
400	0.92	1.10	1.17	1.27	1.42	1.52	1.76	2.01	0.01	0.04	0.05	0.06
500	1.12	1.33	1.41	1.54	1.72	1.84	2.14	2.43	0.01	0.05	0.07	0.08
600	1.39	1.64	1.77	1.92	2.11	2.29	2.66	3.02	0.01	0.06	0.08	0.10
700	1.58	1.87	2.02	2.19	2.41	2.61	3.04	3.45	0.01	0.06	0.09	0.11
800	1.77	2.09	2.26	2.45	2.70	2.93	3.40	3.86	0.01	0.07	0.11	0.13
900	1.95	2.31	2.49	2.71	2.98	3.23	3.75	4.26	0.01	0.08	0.12	0.15
950	2.04	2.41	2.61	2.83	3.11	3.38	3.93	4.45	0.01	0.09	0.12	0.15
1000	2.13	2.52	2.72	2.95	3.25	3.53	4.10	4.65	0.01	0.09	0.13	0.16
1100	2.37	2.79	3.02	3.28	3.60	3.92	4.54	5.16	0.02	0.10	0.14	0.18
1200	2.54	3.00	3.24	3.52	3.87	4.21	4.87	5.53	0.02	0.11	0.16	0.19
1300	2.71	3.20	3.46	3.76	4.13	4.49	5.20	5.90	0.02	0.12	0.17	0.21
1400	2.88	3.39	3.67	3.99	4.38	4.76	5.51	6.25	0.02	0.13	0.18	0.23
1450	2.96	3.49	3.78	4.10	4.50	4.80	5.66	6.41	0.02	0.13	0.19	0.23
1500	3.04	3.58	3.88	4.21	4.62	5.03	5.81	6.58	0.02	0.14	0.20	0.24
1600	3.20	3.85	4.16	4.52	4.95	5.39	6.23	7.05	0.02	0.15	0.21	0.26
1700	3.42	4.04	4.36	4.74	5.19	5.65	6.52	7.37	0.02	0.16	0.22	0.27
1800	3.57	4.22	4.56	4.95	5.42	5.89	6.80	7.67	0.03	0.17	0.24	0.29
1900	3.72	4.39	4.74	5.15	5.64	6.13	7.06	7.96	0.03	0.18	0.25	0.31
2000	3.87	4.56	4.93	5.35	5.85	6.36	7.31	8.23	0.03	0.19	0.26	0.32
2100	4.07	4.81	5.20	5.64	6.17	6.70	7.72	8.68	0.03	0.19	0.28	0.34
2200	4.21	4.98	5.38	5.83	6.37	6.92	7.96	8.93	0.03	0.19	0.28	0.34
2300	4.35	5.13	5.55	6.01	6.57	7.12	8.18	9.26	0.03	0.21	0.30	0.37
2400	4.48	5.29	5.71	6.19	6.76	7.32	8.39	9.48	0.03	0.22	0.32	0.39
2500	4.61	5.44	5.87	6.36	6.94	7.51	8.59	9.68	0.04	0.23	0.33	0.40
2600	4.81	5.67	6.12	6.63	7.25	7.84	8.97	10.01	0.04	0.24	0.34	0.42
2700	4.93	5.81	6.27	6.79	7.42	8.01	9.15	10.18	0.04	0.25	0.35	0.44
2800	5.05	5.95	6.41	6.94	7.58	8.18	9.31	10.45	0.04	0.26	0.36	0.45
2850	5.11	6.01	6.48	7.01	7.65	8.25	9.39	10.52	0.04	0.26	0.37	0.46
2900	5.17	6.08	6.55	7.08	7.73	8.33	9.46	10.59	0.04	0.27	0.38	0.47
3000	5.28	6.20	6.68	7.22	7.87	8.47	9.59	10.70	0.04	0.28	0.39	0.48
3100	5.47	6.43	6.93	7.49	8.16	8.79	9.96	10.99	0.04	0.29	0.41	0.50
3200	5.57	6.55	7.06	7.61	8.29	8.91	10.07	11.07	0.05	0.30	0.42	0.52
3300	5.67	6.66	7.16	7.73	8.40	9.03	10.16	11.27	0.05	0.31	0.43	0.53
3400	5.77	6.76	7.27	7.84	8.51	9.13	10.24	11.31	0.05	0.31	0.45	0.55
3500	5.86	6.86	7.37	7.94	8.60	9.21	10.30	11.32	0.05	0.32	0.46	0.56
3600	6.04	7.08	7.61	8.20	8.88	9.52	10.65	11.56	0.05	0.33	0.47	0.58
3700	6.12	7.17	7.70	8.29	8.96	9.59	10.68	11.56	0.05	0.34	0.49	0.60
3800	6.20	7.25	7.78	8.36	9.12	9.64	10.83	11.67	0.05	0.35	0.50	0.61
3900	6.27	7.32	7.85	8.43	9.18	9.68	10.83	11.67	0.06	0.36	0.51	0.63
4000	6.34	7.51	7.91	8.49	9.23	9.71	10.85	11.68	0.06	0.37	0.53	0.64
4100	6.53	7.57	8.15	8.73	9.41	10.01	11.00	11.88	0.06	0.38	0.54	0.66
4200	6.59	7.63	8.20	8.77	9.44	10.02	11.01	11.53	0.06	0.39	0.55	0.68
4300	6.64	7.78	8.24	8.81	9.55	10.13	11.03	11.36	0.06	0.40	0.57	0.69
4400	6.69	7.82	8.28	8.87	9.55	10.15	11.02	11.30	0.06	0.41	0.58	0.71
4500	6.73	7.86	8.30	8.89	9.55	10.20	11.00	11.29	0.06	0.42	0.59	0.73
4600	6.91	8.00	8.53	9.09	9.70	10.23	10.97		0.06	0.42	0.59	0.73
4700	6.94	8.02	8.54	9.09	9.70	10.23	10.85		0.07	0.44	0.62	0.76
4800	6.97	8.04	8.54	9.17	9.71	10.22	10.85		0.07	0.44	0.63	0.77
4900	6.99	8.16	8.54	9.17	9.71	10.22	10.65		0.07	0.45	0.64	0.79
5000	7.01	8.16	8.71	9.18	9.73	10.16	10.43		0.07	0.46	0.66	0.81
5100	7.18	8.20	8.71	9.18	9.75	10.15			0.07	0.47	0.67	0.82
5200	7.19	8.24	8.73	9.18	9.86	10.01			0.07	0.48	0.68	0.84
5300	7.19	8.24	8.75	9.21	9.86	9.85			0.08	0.49	0.70	0.85
5400	7.22	8.26	8.77	9.22	9.86	9.68			0.08	0.50	0.71	0.87
5500	7.25	8.30	8.76	9.16	9.53				0.08	0.51	0.72	0.89
5600	7.33	8.30	8.75	9.16	9.53				0.08	0.52	0.74	0.90
5800	7.33	8.32	8.71	9.07	9.19				0.08	0.54	0.76	0.93
6000	7.36	8.26	8.62	8.93					0.09	0.56	0.79	0.97
6200	7.33	8.07	8.37	8.76					0.09	0.59	0.84	1.03
6400	7.31	8.07	8.35	8.37					0.09	0.61	0.87	1.06
6600	7.25	7.81							0.10	0.62	0.89	1.10
6800	7.06	7.78							0.10	0.62	0.92	1.13
7000	7.05	7.43							0.10	0.67	0.95	1.16
7200	6.92	7.04							0.11	0.69	0.97	1.19
7400	6.76								0.11	0.70	1.00	1.22
7600	6.58								0.11	0.72	1.03	1.26
7800	6.37								0.11	0.74	1.05	1.29
8000	6.00								0.11	0.76	1.08	1.32



**Table 14: Section SPA: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	90	100	112	118	125	132	140	150	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	1.17	1.55	1.99	2.21	2.47	2.72	3.01	3.37	0.02	0.15	0.21	0.26
950	1.45	1.96	2.52	2.81	3.15	3.48	3.85	4.32	0.03	0.20	0.29	0.36
1450	2.01	2.74	3.58	4.01	4.50	4.98	5.53	6.20	0.05	0.31	0.44	0.54
2850	3.13	4.39	5.87	6.59	7.40	8.21	9.11	10.19	0.09	0.61	0.87	1.07
100	0.23	0.30	0.37	0.40	0.45	0.49	0.54	0.60	0.00	0.02	0.03	0.04
200	0.40	0.53	0.66	0.72	0.81	0.89	0.98	1.09	0.01	0.04	0.06	0.07
300	0.54	0.73	0.92	1.00	1.14	1.25	1.38	1.55	0.01	0.06	0.09	0.11
400	0.75	0.97	1.24	1.37	1.52	1.67	1.85	2.06	0.01	0.09	0.12	0.15
500	0.89	1.15	1.49	1.64	1.83	2.01	2.23	2.49	0.02	0.11	0.15	0.19
600	1.01	1.33	1.72	1.90	2.12	2.33	2.59	2.89	0.02	0.13	0.18	0.22
700	1.17	1.55	1.99	2.21	2.47	2.72	3.01	3.37	0.02	0.15	0.21	0.26
800	1.29	1.71	2.21	2.46	2.75	3.03	3.36	3.76	0.03	0.17	0.24	0.30
900	1.40	1.87	2.42	2.69	3.02	3.33	3.69	4.14	0.03	0.19	0.27	0.34
950	1.45	1.96	2.52	2.81	3.15	3.48	3.85	4.32	0.03	0.20	0.29	0.36
1000	1.55	2.06	2.63	2.86	3.34	3.69	4.09	4.58	0.03	0.22	0.31	0.37
1100	1.65	2.21	2.83	3.21	3.60	3.98	4.41	4.94	0.04	0.24	0.34	0.41
1200	1.75	2.35	3.01	3.42	3.85	4.25	4.72	5.29	0.04	0.26	0.37	0.45
1300	1.88	2.54	3.31	3.70	4.15	4.59	5.09	5.71	0.04	0.28	0.40	0.49
1400	1.97	2.67	3.49	3.91	4.39	4.85	5.38	6.04	0.05	0.30	0.43	0.52
1450	2.01	2.74	3.58	4.01	4.50	4.98	5.53	6.20	0.05	0.31	0.44	0.54
1500	2.06	2.80	3.67	4.11	4.61	5.11	5.67	6.36	0.05	0.32	0.46	0.56
1600	2.19	2.97	3.91	4.37	4.90	5.43	6.02	6.76	0.05	0.34	0.49	0.60
1700	2.27	3.09	4.08	4.58	5.12	5.67	6.29	7.06	0.06	0.37	0.52	0.64
1800	2.35	3.21	4.24	4.74	5.32	5.90	6.55	7.35	0.06	0.39	0.55	0.67
1900	2.46	3.37	4.45	4.98	5.60	6.20	6.89	7.73	0.06	0.41	0.58	0.71
2000	2.53	3.48	4.60	5.15	5.80	6.42	7.13	8.00	0.07	0.43	0.61	0.75
2100	2.60	3.58	4.75	5.32	5.96	6.62	7.36	8.26	0.07	0.45	0.64	0.79
2200	2.70	3.74	4.96	5.55	6.24	6.82	7.68	8.61	0.07	0.47	0.67	0.82
2300	2.76	3.84	5.08	5.70	6.41	7.11	7.89	8.85	0.08	0.49	0.70	0.86
2400	2.81	3.92	5.21	5.85	6.58	7.30	8.09	9.07	0.08	0.52	0.73	0.90
2500	2.92	4.07	5.41	6.07	6.82	7.56	8.39	9.41	0.08	0.54	0.76	0.94
2600	2.97	4.15	5.53	6.20	6.97	7.73	8.57	9.61	0.09	0.56	0.79	0.97
2700	3.01	4.23	5.64	6.33	7.11	7.88	8.74	9.79	0.09	0.58	0.82	1.01
2800	3.11	4.36	5.82	6.53	7.34	8.14	9.03	10.11	0.09	0.60	0.86	1.05
2850	3.13	4.39	5.87	6.59	7.40	8.21	9.11	10.19	0.09	0.61	0.87	1.07
2900	3.15	4.43	5.92	6.64	7.47	8.28	9.18	10.27	0.10	0.62	0.89	1.09
3000	3.18	4.48	6.01	6.74	7.58	8.40	9.31	10.41	0.10	0.65	0.92	1.12
3100	3.26	4.61	6.18	6.94	7.80	8.64	9.58	10.70	0.10	0.67	0.95	1.16
3200	3.29	4.66	6.26	7.03	7.90	8.75	9.69	10.82	0.11	0.69	0.98	1.20
3300	3.31	4.71	6.33	7.11	7.99	8.84	9.79	10.91	0.11	0.71	1.01	1.24
3400	3.39	4.83	6.49	7.29	8.19	9.07	10.05	11.18	0.11	0.73	1.04	1.27
3500	3.40	4.87	6.56	7.36	8.26	9.14	10.10	11.25	0.12	0.75	1.07	1.31
3600	3.41	4.90	6.60	7.41	8.32	9.21	10.16	11.30	0.12	0.77	1.10	1.35
3700	3.49	5.01	6.74	7.57	8.51	9.41	10.39	11.55	0.12	0.80	1.13	1.39
3800	3.49	5.03	6.78	7.61	8.55	9.45	10.42	11.57	0.13	0.82	1.16	1.42
3900	3.49	5.04	6.80	7.64	8.58	9.48	10.44	11.57	0.13	0.84	1.19	1.46
4000	3.55	5.14	6.94	7.79	8.75	9.66	10.54	11.65	0.13	0.86	1.22	1.50
4100	3.56	5.14	6.95	7.80	8.76	9.66	10.60	11.70	0.14	0.88	1.25	1.54
4200	3.57	5.14	6.95	7.80	8.76	9.77	10.61	11.70	0.14	0.90	1.28	1.57
4300	3.58	5.23	7.00	7.95	8.85	9.82	10.79	11.89	0.14	0.93	1.31	1.61
4400	3.55	5.23	7.02	7.95	8.89	9.85	10.79	11.89	0.15	0.95	1.34	1.65
4500	3.52	5.24	7.04	7.95	8.95	9.86	10.80	11.75	0.15	0.97	1.37	1.69
4600	3.52	5.27	7.06	8.03	8.99	9.88	10.82	11.71	0.15	0.99	1.41	1.72
4700	3.52	5.28	7.06	8.03	8.99	9.90	10.81	11.71	0.16	1.01	1.44	1.76
4800	3.50	5.29	7.08	8.04	8.98	9.89	10.80	11.71	0.16	1.03	1.47	1.80
4900	3.45	5.29	7.08	8.05	8.97	9.88	10.72	11.67	0.16	1.05	1.50	1.84
5000	3.45	5.21	7.09	7.95	8.87	9.85	10.58	11.46	0.17	1.08	1.53	1.87
5100	3.41	5.14	7.09	7.86	8.76	9.80	10.49	11.22	0.17	1.10	1.56	1.91
5200	3.41	5.11	7.10	7.85	8.75	9.75	10.39	11.10	0.17	1.12	1.59	1.95
5300	3.38	5.10	7.00	7.84	8.72	9.68	10.28	11.04	0.18	1.14	1.62	1.99
5400	3.35	5.06	6.90	7.79	8.57	9.55	10.05	10.74	0.18	1.16	1.65	2.02
5500	3.33	5.02	6.89	7.79	8.55	9.41	10.00	10.60	0.18	1.18	1.68	2.06
5600	3.24	5.00	6.83	7.64	8.37	9.19	9.86	10.46	0.19	1.21	1.71	2.10
5700	3.16	4.90	6.70	7.48	8.17	8.96	9.57	10.09	0.19	1.23	1.74	2.13
5800	3.15	4.89	6.70	7.48	8.15	8.90	9.55	10.00	0.19	1.25	1.77	2.17
5900	3.07	4.81	6.59	7.36	8.12	8.74	9.29	9.70	0.20	1.27	1.80	2.21
6000	2.97	4.79	6.42	7.16	7.95	8.55	8.94	9.25	0.20	1.29	1.83	2.25
6100	2.96	4.70	6.40	7.16	7.92	8.49	8.90	9.20	0.20	1.31	1.86	2.28
6200	2.94	4.58	6.27	6.97	7.85	8.17	8.60	9.20	0.21	1.33	1.89	2.32
6300	2.90	4.52	6.07	6.75	7.37	7.83	8.16	9.20	0.21	1.36	1.92	2.36
6400	2.71	4.42	6.04	6.75	7.37	7.70	8.14	9.20	0.21	1.38	1.96	2.40
6500	2.57	4.25	5.87	6.49	7.07	7.46	7.68	9.20	0.22	1.40	1.99	2.43
6600	2.52	4.07	5.63	6.21	6.73	7.20	7.40	9.20	0.22	1.42	2.02	2.47
6700	2.42	4.07	5.62	6.21	6.72	7.20	7.40	9.20	0.22	1.44	2.05	2.51
6800	2.26	3.87	5.36	5.91	6.36	6.86	7.20	9.20	0.23	1.46	2.08	2.55
6900	2.09	3.67	5.08	5.59	5.97	6.46	6.86	9.20	0.23	1.48	2.11	2.58
7000	2.07	3.66	5.07	5.56	5.94	6.46	6.86	9.20	0.23	1.51	2.14	2.62

**Table 14:**  
**Section SPA: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	160	180	200	224	250	280	315	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	3.73	4.44	5.14	5.97	6.85	7.86	9.01	0.02	0.15	0.21	0.26
950	4.79	5.71	6.61	7.67	8.79	10.06	11.49	0.03	0.20	0.29	0.36
1450	6.88	8.19	9.46	10.93	12.47	14.17	16.01	0.05	0.31	0.44	0.54
2850	11.22	13.17	14.92	16.10	18.30	19.67	20.41	0.09	0.61	0.87	1.07
150	0.85	0.77	0.89	1.03	1.18	1.35	1.55	0.00	0.02	0.03	0.04
200	1.19	1.41	1.64	1.90	2.18	2.50	2.87	0.01	0.04	0.06	0.07
300	1.68	2.00	2.33	2.71	3.11	3.57	4.10	0.01	0.06	0.09	0.11
400	2.28	2.70	3.12	3.63	4.16	4.78	5.49	0.01	0.09	0.12	0.15
500	2.75	3.27	3.78	4.40	5.04	5.79	6.65	0.02	0.11	0.15	0.19
600	3.21	3.81	4.41	5.14	5.89	6.76	7.76	0.02	0.13	0.18	0.22
700	3.73	4.44	5.14	5.97	6.85	7.86	9.01	0.02	0.15	0.21	0.26
800	4.16	4.96	5.74	6.67	7.65	8.77	10.04	0.03	0.17	0.24	0.30
900	4.58	5.46	6.33	7.34	8.42	9.64	11.02	0.03	0.19	0.27	0.34
950	4.79	5.71	6.61	7.67	8.79	10.06	11.49	0.03	0.20	0.29	0.36
1000	5.07	6.04	7.00	8.12	9.32	10.66	12.18	0.03	0.22	0.31	0.37
1100	5.47	6.52	7.55	8.75	10.04	11.46	13.07	0.04	0.24	0.34	0.41
1200	5.86	6.98	8.08	9.36	10.72	12.22	13.90	0.04	0.26	0.37	0.45
1300	6.33	7.54	8.72	10.10	11.55	13.17	14.96	0.04	0.28	0.40	0.49
1400	6.70	7.98	9.22	10.66	12.17	13.85	15.68	0.05	0.30	0.43	0.52
1450	6.88	8.19	9.46	10.93	12.47	14.17	16.01	0.05	0.31	0.44	0.54
1500	7.05	8.39	9.69	11.20	12.76	14.48	16.33	0.05	0.32	0.46	0.56
1600	7.49	8.91	10.29	11.89	13.54	15.34	17.29	0.05	0.34	0.49	0.60
1700	7.82	9.30	10.73	12.37	14.06	15.88	17.81	0.06	0.37	0.52	0.64
1800	8.14	9.67	11.14	12.83	14.54	16.35	18.26	0.06	0.39	0.55	0.67
1900	8.56	10.17	11.71	13.47	15.75	17.14	19.10	0.06	0.41	0.58	0.71
2000	8.86	10.51	12.08	13.87	16.18	17.51	19.40	0.07	0.43	0.61	0.75
2100	9.14	10.83	12.43	14.23	16.55	17.82	19.60	0.07	0.45	0.64	0.79
2200	9.53	11.29	12.95	14.81	16.65	18.52	20.32	0.07	0.47	0.67	0.82
2300	9.79	11.57	13.25	15.11	16.92	18.71	20.36	0.08	0.49	0.70	0.86
2400	10.02	11.84	13.52	15.36	17.13	18.82	20.50	0.08	0.52	0.73	0.90
2500	10.39	12.26	14.00	15.90	17.70	19.41	20.87	0.08	0.54	0.76	0.94
2600	10.60	12.48	14.22	16.09	17.82	19.55	20.82	0.09	0.56	0.79	0.97
2700	10.79	12.68	14.41	16.09	17.87	19.65	20.60	0.09	0.58	0.82	1.01
2800	11.14	13.09	14.85	16.10	18.20	19.78	20.58	0.09	0.60	0.86	1.05
2850	11.22	13.17	14.92	16.10	18.30	19.67	20.41	0.09	0.61	0.87	1.07
2900	11.30	13.25	14.98	16.11	18.40	19.53	20.10	0.10	0.62	0.89	1.09
3000	11.45	13.38	15.08	16.11	18.50	19.19		0.10	0.65	0.92	1.12
3100	11.77	13.74	15.47	17.20	19.60			0.10	0.67	0.95	1.16
3200	11.88	13.83	15.51	17.25	19.37			0.11	0.69	0.98	1.20
3300	11.97	13.88	15.60	17.30	19.06			0.11	0.71	1.01	1.24
3400	12.26	14.21	15.70	17.35	19.00			0.11	0.73	1.04	1.27
3500	12.32	14.22	15.80	17.14	17.95			0.12	0.75	1.07	1.31
3600	12.35	14.30	15.90	16.87				0.12	0.77	1.10	1.35
3700	12.62	14.40	15.95	16.80				0.12	0.80	1.13	1.39
3800	12.62	14.45	15.77	16.78				0.13	0.82	1.16	1.42
3900	12.70	14.50	15.60	16.36				0.13	0.84	1.19	1.46
4000	12.82	14.55	15.55	16.30				0.13	0.86	1.22	1.50
4100	12.83	14.39	15.48					0.14	0.88	1.25	1.54
4200	12.84	14.38	15.40					0.14	0.90	1.28	1.57
4300	12.98	14.37	15.30					0.14	0.93	1.31	1.61
4400	12.73	14.25	14.87					0.15	0.95	1.34	1.65
4500	12.57	13.84	14.39					0.15	0.97	1.37	1.69
4600	12.57	13.80						0.15	0.99	1.41	1.72
4700	12.53	13.63						0.16	1.01	1.44	1.76
4800	12.29	13.40						0.16	1.03	1.47	1.80
4900	12.25	13.33						0.16	1.05	1.50	1.84
5000	12.15	12.87						0.17	1.08	1.53	1.87
5100	11.84							0.17	1.10	1.56	1.91
5200	11.70							0.17	1.12	1.59	1.95
5300	11.56							0.18	1.14	1.62	1.99
5400	11.17							0.18	1.16	1.65	2.02
5500	11.00							0.18	1.18	1.68	2.06
5600								0.19	1.21	1.71	2.10
5700								0.19	1.23	1.74	2.13
5800								0.19	1.25	1.77	2.17
5900								0.20	1.27	1.80	2.21
6000								0.20	1.29	1.83	2.25



**Table 15:**  
**Section SPB/5V: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	140	150	160	180	190	200	212	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	3.43	4.00	4.62	5.77	6.34	6.91	7.58	0.05	0.33	0.47	0.58
950	4.36	5.13	5.84	7.33	8.06	8.79	9.67	0.07	0.45	0.64	0.78
1450	6.07	7.13	8.22	10.35	11.40	12.42	13.63	0.11	0.69	0.97	1.20
2950	9.03	10.79	12.49	15.64	17.11	18.49	20.10	0.21	1.35	1.92	2.35
100	0.68	0.76	0.85	1.04	1.14	1.23	1.36	0.01	0.05	0.07	0.08
200	1.16	1.35	1.52	1.88	2.07	2.23	2.48	0.01	0.09	0.13	0.16
300	1.71	1.97	2.12	2.64	2.91	3.15	3.48	0.02	0.14	0.20	0.25
400	2.15	2.48	2.87	3.56	3.91	4.25	4.66	0.03	0.19	0.27	0.33
500	2.55	2.96	3.44	4.28	4.71	5.12	5.62	0.04	0.24	0.34	0.41
600	3.05	3.55	3.97	4.96	5.46	5.95	6.53	0.04	0.28	0.40	0.49
700	3.43	4.00	4.62	5.77	6.34	6.91	7.58	0.05	0.33	0.47	0.58
800	3.85	4.51	5.12	6.41	7.05	7.69	8.46	0.06	0.38	0.54	0.66
900	4.20	4.93	5.60	7.03	7.73	8.43	9.27	0.07	0.43	0.61	0.74
950	4.36	5.13	5.84	7.33	8.06	8.79	9.67	0.07	0.45	0.64	0.78
1000	4.52	5.32	6.20	7.78	8.56	9.33	10.25	0.07	0.47	0.67	0.82
1100	4.85	5.83	6.85	8.36	9.20	10.03	11.02	0.08	0.52	0.74	0.91
1200	5.25	6.20	7.08	8.91	9.80	10.69	11.74	0.09	0.57	0.81	0.99
1300	5.54	6.63	7.63	9.60	10.57	11.52	12.65	0.10	0.62	0.87	1.07
1400	5.94	6.97	8.03	10.11	11.13	12.13	13.31	0.10	0.66	0.94	1.15
1450	6.07	7.13	8.22	10.35	11.40	12.42	13.63	0.11	0.69	0.97	1.20
1500	6.20	7.29	8.40	10.59	11.68	12.70	13.94	0.11	0.71	1.01	1.24
1600	6.54	7.73	8.92	11.23	12.36	13.48	14.79	0.12	0.78	1.08	1.32
1700	6.78	8.02	9.26	11.66	12.83	13.99	15.34	0.12	0.81	1.14	1.40
1800	7.08	8.40	9.58	12.07	13.27	14.47	15.85	0.13	0.85	1.21	1.48
1900	7.29	8.68	10.05	12.67	13.93	15.18	16.63	0.14	0.90	1.28	1.57
2000	7.48	8.89	10.33	13.02	14.31	15.59	17.06	0.15	0.95	1.34	1.65
2100	7.81	9.25	10.59	13.34	14.65	15.95	17.44	0.15	0.99	1.41	1.73
2200	7.97	9.48	11.03	13.89	15.26	16.59	18.14	0.16	1.04	1.48	1.81
2300	8.22	9.79	11.24	14.15	15.54	16.88	18.43	0.17	1.09	1.55	1.90
2400	8.41	9.95	11.43	14.38	15.77	17.12	18.68	0.18	1.14	1.61	1.98
2500	8.58	10.09	11.83	14.88	16.32	17.70	19.29	0.18	1.18	1.68	2.05
2600	8.74	10.42	11.97	15.05	16.48	17.86	19.43	0.19	1.23	1.75	2.14
2700	8.82	10.52	12.09	15.17	16.60	17.96	19.50	0.20	1.28	1.82	2.23
2800	9.01	10.76	12.45	15.61	17.08	18.48	20.05	0.21	1.33	1.88	2.31
2850	9.03	10.79	12.49	15.64	17.11	18.49	20.10	0.21	1.35	1.92	2.35
2900	9.05	10.82	12.52	15.67	17.12	18.49	20.15	0.21	1.37	1.95	2.39
3000	9.07	10.85	12.55	15.68	17.20	18.79	20.20	0.22	1.42	2.02	2.47
3100	9.30	11.12	12.65	15.72	17.30	18.88	20.37	0.23	1.47	2.08	2.56
3200	9.32	11.13	12.75	15.74	17.40	18.93	20.30	0.23	1.52	2.15	2.64
3300	9.33	11.14	12.79	15.84	17.50	18.93	20.25	0.24	1.56	2.22	2.72
3400	9.35	11.18	12.80	15.90	17.63	18.89	20.22	0.25	1.61	2.29	2.80
3500	9.40	11.27	12.82	16.05	17.39	18.58	20.06	0.26	1.66	2.35	2.89
3600	9.45	11.33	12.82	16.06	17.36	18.50	19.84	0.26	1.71	2.42	2.97
3700	9.42	11.25	13.04	16.08	17.36	18.47	19.57	0.27	1.75	2.49	3.05
3800	9.38	11.19	12.84	15.76	16.96	17.97	18.94	0.28	1.80	2.55	3.13
3900	9.21	11.05	12.77	15.58	16.75	17.67	18.63	0.29	1.85	2.62	3.21
4000	9.13	11.00	12.59	15.39	16.68	17.58	18.36	0.29	1.89	2.69	3.30
4100	9.02	10.97	12.48	15.12	16.11	16.99		0.30	1.94	2.76	3.38
4200	8.89	10.69	12.23	14.71	16.00	16.71		0.31	1.99	2.82	3.46
4300	8.86	10.65	12.11	14.60	15.58	16.19		0.32	2.04	2.89	3.54
4400	8.57	10.30	11.81	14.09	14.83	15.29		0.32	2.08	2.96	3.63
4500	8.30	9.99	11.42	13.45	14.60	14.30		0.33	2.13	3.03	3.71
4600	8.25	9.92	11.35	13.41				0.34	2.18	3.09	3.79
4700	7.93	9.55	10.89	12.67				0.34	2.23	3.16	3.87
4800	7.82	9.41	10.31	12.38				0.35	2.27	3.23	3.95
4900	7.39	8.90	10.31	11.79				0.36	2.32	3.29	4.04
5000	6.93	8.35	9.65	10.82				0.37	2.37	3.36	4.12
5100	6.92	8.33	8.94					0.37	2.42	3.43	4.20
5200	6.92	7.71	8.89					0.38	2.46	3.50	4.29
5300	6.91	7.46	8.10					0.39	2.51	3.56	4.37
5400	5.79	6.77	7.26					0.40	2.56	3.63	4.45
5500	5.18	6.03	7.14					0.40	2.61	3.70	4.53

**Table 15:**  
**Section SPB/5V: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	224	236	250	280	315	355	375	400	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	8.26	8.92	9.70	11.33	13.21	15.30	16.33	17.99	0.05	0.33	0.47	0.58
950	10.52	11.36	12.35	14.41	16.74	19.29	20.53	22.02	0.07	0.45	0.64	0.78
1450	14.83	16.00	17.33	20.09	23.09	26.22	27.66	29.35	0.11	0.69	0.97	1.20
2850	21.57	22.85	24.06	26.20	27.41				0.21	1.35	1.92	2.35
100	1.48	1.57	1.70	1.98	2.30	2.66	2.84	3.07	0.01	0.05	0.07	0.08
200	2.67	2.87	3.12	3.64	4.24	4.91	5.25	5.68	0.01	0.09	0.13	0.16
300	3.77	4.07	4.42	5.17	6.03	6.99	7.47	8.09	0.02	0.14	0.20	0.25
400	5.06	5.47	5.94	6.93	8.08	9.38	10.03	10.82	0.03	0.19	0.27	0.33
500	6.10	6.60	7.17	8.37	9.76	11.33	12.11	13.06	0.04	0.24	0.34	0.41
600	7.10	7.68	8.35	9.75	11.36	13.18	14.08	15.16	0.04	0.28	0.40	0.49
700	8.26	8.92	9.70	11.33	13.21	15.30	16.33	17.69	0.05	0.33	0.47	0.58
800	9.20	9.93	10.80	12.61	14.69	16.98	18.11	19.48	0.06	0.38	0.54	0.66
900	10.09	10.90	11.85	13.82	16.08	18.55	19.76	21.21	0.07	0.43	0.61	0.74
950	10.52	11.36	12.35	14.41	16.74	19.29	20.53	22.02	0.07	0.45	0.64	0.78
1000	11.16	12.06	13.10	15.28	17.75	20.47	21.79	23.39	0.07	0.47	0.67	0.82
1100	11.99	12.96	14.07	16.39	18.99	21.84	23.21	24.85	0.08	0.52	0.74	0.91
1200	12.78	13.80	14.96	17.42	20.14	23.07	24.47	26.13	0.09	0.57	0.81	0.99
1300	13.77	14.87	16.13	18.76	21.67	24.79	26.26	28.02	0.10	0.62	0.87	1.07
1400	14.49	15.63	16.95	19.67	22.64	25.78	27.24	28.96	0.10	0.66	0.94	1.15
1450	14.83	16.00	17.33	20.09	23.09	26.22	27.66	29.35	0.11	0.69	0.97	1.20
1500	15.16	16.35	17.70	20.49	23.50	26.62	28.03	30.35	0.11	0.71	1.01	1.24
1600	16.07	17.33	18.76	21.89	24.86	28.11	29.58	31.26	0.12	0.76	1.08	1.32
1700	16.66	17.95	19.40	22.36	25.51	28.66	30.04	31.57	0.12	0.81	1.14	1.40
1800	17.19	18.51	19.98	22.94	26.03	29.68	31.04	32.53	0.13	0.85	1.21	1.48
1900	18.04	19.40	20.94	24.02	27.20	30.25	31.53	32.86	0.14	0.90	1.28	1.57
2000	18.48	19.85	21.39	24.43	27.48	30.28	31.84	32.99	0.15	0.95	1.34	1.65
2100	18.87	20.24	21.76	24.73	28.24	30.94	31.96	32.89	0.15	0.99	1.41	1.73
2200	19.62	21.04	22.61	25.65	28.58	31.05	31.90	32.57	0.16	1.04	1.48	1.81
2300	19.90	21.31	22.84	25.76	28.70	30.98	31.63		0.17	1.09	1.55	1.90
2400	20.12	21.50	22.99	26.31	28.91	30.74	31.16		0.18	1.14	1.61	1.98
2500	20.79	22.20	23.72	26.50	28.88	30.31			0.18	1.18	1.68	2.06
2600	20.89	22.26	23.72	26.55	28.71				0.19	1.23	1.75	2.14
2700	20.93	22.60	23.85	26.60	28.41				0.20	1.28	1.82	2.23
2800	21.50	22.82	23.99	26.49	27.96				0.21	1.33	1.88	2.31
2850	21.57	22.85	24.06	26.20	27.41				0.21	1.35	1.92	2.35
2900	21.60	22.90	24.08	26.00	26.82				0.21	1.37	1.95	2.39
3000	21.65	22.91	24.13	25.96					0.22	1.42	2.02	2.47
3100	21.70	22.85	23.98						0.23	1.47	2.08	2.56
3200	21.65	22.65	23.40						0.23	1.52	2.15	2.64
3300	21.45	22.52	23.30						0.24	1.56	2.22	2.72
3400	21.35	22.25	23.01						0.25	1.61	2.29	2.80
3500	20.61	21.55	22.11						0.26	1.66	2.35	2.89
3600	20.78								0.26	1.71	2.42	2.97
3700	20.40								0.27	1.75	2.49	3.05
3800	19.60								0.28	1.80	2.55	3.13
3900	19.41								0.29	1.85	2.62	3.21
4000	18.81								0.29	1.89	2.69	3.30







**Table 17:**  
**Section SPC: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW per belt for speed ratio			
	224	250	280	300	315	335	355	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	10.35	12.99	15.98	17.95	19.41	21.33	23.23	0.14	0.90	1.28	1.57
950	13.22	16.63	20.50	23.01	24.87	27.30	29.69	0.19	1.22	1.73	2.13
1450	17.63	22.28	27.35	30.63	32.97	33.82	38.81	0.29	1.66	2.65	3.25
2950	20.63	25.52	29.58					0.57	3.67	5.20	6.38
50	1.08	1.31	1.58	1.75	1.89	2.06	2.23	0.01	0.06	0.09	0.11
100	1.94	2.37	2.88	3.20	3.46	3.78	4.10	0.02	0.13	0.18	0.22
200	3.42	4.23	5.19	5.78	6.28	6.88	7.47	0.04	0.26	0.37	0.45
300	5.16	6.40	7.81	8.75	9.44	10.37	11.29	0.06	0.39	0.55	0.67
350	5.84	7.26	8.88	9.95	10.74	11.81	12.86	0.07	0.45	0.64	0.78
400	6.49	8.09	9.91	11.12	12.00	13.20	14.38	0.08	0.51	0.73	0.90
450	7.28	9.07	11.11	12.46	13.47	14.80	16.12	0.09	0.58	0.82	1.01
500	7.90	9.86	12.10	13.57	14.66	16.13	17.57	0.10	0.64	0.91	1.12
550	8.50	10.63	13.05	14.65	15.85	17.42	18.97	0.11	0.71	1.00	1.23
600	9.23	11.55	14.19	15.93	17.22	18.93	20.62	0.12	0.77	1.10	1.34
650	9.80	12.28	15.10	16.98	18.33	20.15	21.95	0.13	0.84	1.19	1.45
700	10.35	12.99	15.98	17.95	19.41	21.33	23.23	0.14	0.90	1.28	1.57
750	11.05	13.87	17.06	19.16	20.72	22.77	24.80	0.15	0.96	1.37	1.68
800	11.57	14.54	17.90	20.10	21.74	23.88	26.00	0.16	1.03	1.46	1.79
850	12.08	15.19	18.70	21.01	22.71	24.95	27.15	0.17	1.09	1.55	1.90
900	12.74	16.02	19.74	22.16	23.86	26.31	28.63	0.18	1.16	1.64	2.01
950	13.22	16.63	20.50	23.01	24.87	27.30	29.69	0.19	1.22	1.73	2.13
1000	13.67	17.22	21.23	23.82	25.74	28.24	30.70	0.20	1.29	1.83	2.24
1050	14.30	18.02	22.20	24.91	26.92	29.53	32.09	0.21	1.35	1.92	2.35
1100	14.73	18.57	22.88	25.68	27.72	30.39	33.00	0.22	1.41	2.01	2.46
1150	15.13	19.09	23.52	26.37	28.47	31.19	33.85	0.23	1.48	2.10	2.57
1200	15.72	19.84	24.44	27.41	29.58	32.41	35.15	0.24	1.54	2.19	2.69
1250	16.09	20.32	25.03	28.05	30.26	32.55	35.89	0.25	1.61	2.28	2.80
1300	16.45	20.78	25.57	28.65	30.89	32.70	36.57	0.26	1.67	2.37	2.91
1350	17.01	21.49	26.41	29.62	31.93	32.91	37.77	0.27	1.74	2.46	3.02
1400	17.33	21.90	26.90	30.15	32.46	33.39	38.33	0.28	1.80	2.56	3.13
1450	17.63	22.28	27.35	30.63	32.97	33.82	38.81	0.29	1.86	2.65	3.25
1500	18.16	22.94	28.20	31.53	33.93	37.00	39.92	0.30	1.93	2.74	3.36
1550	18.42	23.27	28.58	31.93	34.33	37.39	40.28	0.31	1.99	2.83	3.47
1600	18.66	23.57	28.93	32.28	34.68	37.71	41.07	0.32	2.06	2.92	3.58
1650	19.16	24.20	29.68	33.11	35.56	38.66	41.56	0.33	2.12	3.01	3.69
1700	19.36	24.45	29.85	33.38	35.81	38.86	41.70	0.34	2.19	3.10	3.80
1750	19.54	24.67	30.18	33.59	35.99	39.00	42.35	0.35	2.25	3.19	3.92
1800	19.99	25.25	30.88	34.35	36.80	39.85	42.64	0.36	2.31	3.29	4.03
1850	20.13	25.41	31.03	34.47	36.88	39.86	42.68	0.37	2.38	3.38	4.14
1900	20.24	25.54	31.40	34.53	36.90	40.37	42.70	0.38	2.44	3.47	4.25
1950	20.86	26.07	31.77	35.00	37.61	40.54	42.75	0.39	2.51	3.56	4.36
2000	20.73	26.14	31.80	35.62	37.79	40.65	42.79	0.40	2.57	3.65	4.48
2050	20.77	26.17	32.00	35.65	37.91	40.69	43.11	0.41	2.64	3.74	4.59
2100	21.20	26.60	32.34	35.69	37.97	40.68	42.99	0.42	2.70	3.83	4.70
2150	21.30	26.63	32.40	35.72	37.99	40.50	42.60	0.43	2.77	3.92	4.81
2200	21.40	26.66	32.50	35.73	37.95	40.46	42.51	0.44	2.83	4.02	4.92
2250	21.46	26.68	32.56	35.75	37.85	40.25	42.16	0.45	2.89	4.11	5.04
2300	21.49	26.66	32.58	35.65	37.60	39.97	41.26	0.46	2.96	4.20	5.15
2350	21.53	26.99	32.50	35.54	37.49	39.63	41.21	0.47	3.02	4.29	5.26
2400	21.57	27.05	32.41	35.36	37.22	39.21	40.81	0.48	3.08	4.38	5.37
2450	21.56	26.90	32.20	34.90	36.51	38.28	39.41	0.49	3.15	4.47	5.48
2500	21.53	26.88	32.10	34.84	36.50	38.16	39.16	0.50	3.22	4.56	5.60
2550	21.48	26.84	31.88	34.50	36.05			0.51	3.28	4.66	5.71
2600	21.23	26.48	31.31	33.74	35.12			0.52	3.34	4.75	5.82
2650	21.20	26.40	31.30	33.65	34.40			0.53	3.41	4.84	5.93
2700	21.17	26.33	30.94	33.14	34.30			0.54	3.47	4.93	6.04
2750	20.83	25.85	30.20	32.17	33.69			0.55	3.54	5.02	6.16
2800	20.73	25.65	30.08					0.56	3.60	5.11	6.27
2850	20.63	25.52	29.58					0.57	3.67	5.20	6.38
2900	20.20	24.91	28.66					0.58	3.73	5.29	6.49
2950	19.80	24.80	28.42					0.59	3.79	5.39	6.60
3000	19.66	24.38	27.77					0.60	3.86	5.48	6.70
3050	19.33	23.83	26.66					0.61	3.92	5.57	6.83
3100	19.00	23.43	26.30					0.62	3.99	5.66	6.94
3150	18.84	22.90	25.49					0.63	4.06	5.75	7.05
3200	18.21	22.01	24.19					0.64	4.12	5.84	7.16
3250	17.73	21.72	23.69					0.65	4.18	5.93	7.27
3300	17.56	21.07						0.66	4.24	6.02	7.39
3350	16.82	20.03						0.67	4.31	6.12	7.50
3400	16.56	19.65						0.68	4.37	6.21	7.61
3450	16.02	18.87						0.69	4.44	6.30	7.72
3500	15.17	17.68						0.70	4.50	6.39	7.83



**Table 17:**  
**Section SPC: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	375	400	450	500	560	630	710	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	25.11	27.42	31.92	36.24	41.70	47.28	53.19	0.14	0.90	1.28	1.57
950	32.03	34.88	40.32	45.42	51.02	56.77	62.33	0.19	1.22	1.73	2.13
1450	41.52	44.66	50.94	55.51	59.36	61.37		0.29	1.86	2.65	3.25
2850								0.57	3.67	5.20	6.38
50	2.41	2.62	3.05	3.48	3.99	4.58	5.25	0.01	0.06	0.09	0.11
100	4.44	4.84	5.64	6.45	7.41	8.52	9.78	0.02	0.13	0.18	0.22
200	8.11	8.84	10.35	11.85	13.63	15.67	18.02	0.04	0.26	0.37	0.45
300	12.21	13.34	15.60	17.83	20.47	23.50	26.90	0.06	0.39	0.55	0.67
350	13.91	15.20	17.78	20.32	23.31	26.73	30.57	0.07	0.45	0.64	0.78
400	15.56	17.00	19.88	22.71	26.03	29.81	34.05	0.08	0.51	0.73	0.90
450	17.44	19.07	22.28	25.44	29.15	33.37	38.04	0.09	0.58	0.82	1.01
500	19.01	20.78	24.27	27.69	31.68	36.20	41.18	0.10	0.64	0.91	1.12
550	20.52	22.43	26.18	29.83	34.08	38.85	44.66	0.11	0.71	1.00	1.23
600	22.30	24.37	28.44	32.39	36.99	42.13	47.70	0.12	0.77	1.10	1.34
650	23.73	25.93	30.22	34.37	39.17	44.48	50.21	0.13	0.84	1.19	1.45
700	25.11	27.42	31.92	36.24	41.70	47.28	53.19	0.14	0.90	1.28	1.57
750	26.80	29.26	34.04	38.64	43.89	49.62	55.61	0.15	0.96	1.37	1.68
800	28.09	30.65	35.59	40.32	45.66	51.41	57.36	0.16	1.03	1.46	1.79
850	29.31	31.96	37.05	41.88	47.89	53.80	59.77	0.17	1.09	1.55	1.90
900	30.90	33.68	39.03	44.08	49.71	55.63	61.47	0.18	1.16	1.64	2.01
950	32.03	34.88	40.32	45.42	51.02	56.77	62.33	0.19	1.22	1.73	2.13
1000	33.09	35.99	41.51	47.21	52.92	58.71	64.08	0.20	1.29	1.83	2.24
1050	34.58	37.61	43.34	48.62	54.30	59.94	64.95	0.21	1.35	1.92	2.35
1100	35.53	38.60	44.34	49.57	55.07	60.34	65.50	0.22	1.41	2.01	2.46
1150	36.41	39.50	45.81	51.10	56.61	61.76	65.79	0.23	1.48	2.10	2.57
1200	37.80	40.99	46.90	52.16	57.52	62.33	65.72	0.24	1.54	2.19	2.69
1250	38.55	41.74	47.58	52.67	57.69	62.55	65.31	0.25	1.61	2.28	2.80
1300	39.23	42.40	48.82	53.90	58.81	62.73		0.26	1.67	2.37	2.91
1350	40.52	43.77	49.63	54.58	59.19	62.55		0.27	1.74	2.46	3.02
1400	41.06	44.27	49.95	54.61	59.37	62.16		0.28	1.80	2.56	3.13
1450	41.52	44.66	50.94	55.51	59.36	61.37		0.29	1.86	2.65	3.25
1500	42.68	44.95	51.44	55.76	59.15			0.30	1.93	2.74	3.36
1550	42.99	45.14	51.84	55.86				0.31	1.99	2.83	3.47
1600	43.79	46.90	52.10	55.81				0.32	2.06	2.92	3.58
1650	44.24	47.29	52.25	55.59				0.33	2.12	3.01	3.69
1700	44.29	47.50	52.75	54.51				0.34	2.19	3.10	3.80
1750	44.93	47.79	52.19	54.50				0.35	2.25	3.19	3.92
1800	45.16	47.91	51.97					0.36	2.31	3.29	4.03
1850	45.25	47.94	51.62					0.37	2.38	3.38	4.14
1900	45.39	47.87	51.14					0.38	2.44	3.47	4.25
1950	45.39	47.70	50.52					0.39	2.51	3.56	4.36
2000	45.88	47.44	49.76					0.40	2.57	3.65	4.48
2050	45.13	47.07						0.41	2.64	3.74	4.59
2100	44.87	46.60						0.42	2.70	3.83	4.70
2150	44.50	45.45						0.43	2.77	3.92	4.81
2200	44.08	45.33						0.44	2.83	4.02	4.92
2250	43.55	44.53						0.45	2.89	4.11	5.04

**Table 18:**  
**Section 8V: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)													Additional Power (kW) per belt for speed ratio			
	335	355	375	425	450	475	500	530	560	600	630	710	800	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	25.53	28.45	31.34	38.40	41.84	45.21	48.52	52.40	56.18	61.06	64.59	74.10	82.35	0.28	1.83	2.60	3.18
950	32.09	35.77	39.37	48.03	52.17	56.17	60.03	64.47	68.68	73.95	77.62	86.13	93.33	0.38	2.48	3.52	4.32
1450	40.16	44.55	48.70	57.96	61.97	66.25	69.44	72.63	75.10		77.79			0.59	3.79	5.38	6.60
50	2.03	2.89	3.16	3.82	4.15	4.48	4.80	5.19	5.58	6.10	6.48	7.51	8.65	0.02	0.13	0.19	0.23
100	4.75	5.24	5.75	6.99	7.61	8.23	8.83	9.57	10.30	11.28	11.98	13.82	16.05	0.04	0.26	0.37	0.45
150	6.67	7.38	8.11	9.91	10.80	11.70	12.56	13.62	14.67	16.07	17.70	20.53	23.68	0.06	0.39	0.56	0.68
200	8.97	9.94	10.91	13.31	14.51	15.89	16.88	18.29	19.69	21.56	22.94	26.61	30.68	0.08	0.52	0.74	0.91
250	10.78	11.97	13.15	16.07	17.54	18.97	20.42	22.13	23.83	26.09	27.76	32.19	37.07	0.10	0.65	0.93	1.14
300	12.51	13.90	15.29	18.72	20.43	22.10	23.79	25.79	27.77	30.40	32.34	38.90	43.84	0.12	0.78	1.11	1.36
350	14.54	16.16	17.78	21.77	23.74	25.71	27.66	29.98	32.28	35.32	37.57	43.49	49.98	0.14	0.91	1.30	1.59
400	16.17	17.98	19.80	24.26	26.46	28.66	30.83	33.41	35.96	39.32	41.81	48.31	55.37	0.16	1.05	1.48	1.82
450	17.72	19.73	21.73	26.85	29.06	31.47	33.95	36.67	39.97	43.69	46.44	53.59	61.33	0.18	1.18	1.67	2.05
500	19.61	21.83	24.04	29.48	32.16	34.81	37.43	40.54	43.60	47.62	50.59	58.27	66.50	0.20	1.31	1.86	2.27
550	21.07	23.47	25.85	31.71	34.58	37.42	40.22	43.53	46.78	51.03	54.18	62.19	70.87	0.22	1.44	2.04	2.50
600	22.47	25.04	27.58	33.82	36.88	39.89	42.85	46.34	50.41	54.95	58.28	66.79	75.70	0.24	1.57	2.23	2.73
650	24.23	27.00	29.74	36.46	39.75	42.98	46.16	49.91	53.57	58.33	61.80	70.61	79.69	0.26	1.70	2.41	2.96
700	25.53	28.45	31.34	38.40	41.84	45.21	48.52	52.40	56.18	61.06	64.59	74.10	82.35	0.28	1.83	2.60	3.18
750	26.76	29.82	32.85	40.22	44.32	47.29	51.35	55.42	59.88	64.46	68.13	77.26	86.31	0.30	1.96	2.78	3.41
800	28.40	31.66	34.87	42.67	46.45	50.14	53.74	57.94	62.01	67.20	70.92	80.06	88.88	0.32	2.09	2.97	3.64
850	29.62	32.91	36.24	44.29	48.17	51.94	55.61	59.86	63.95	69.12	73.44	82.49	90.92	0.34	2.22	3.15	3.87
900	30.57	34.07	37.51	46.34	50.38	54.29	58.09	62.47	66.67	71.96	75.67	84.52	92.42	0.36	2.35	3.34	4.09
950	32.09	35.77	39.37	48.03	52.17	56.17	60.03	64.47	68.68	73.95	77.62	86.13	93.33	0.38	2.48	3.52	4.32
1000	33.02	36.79	40.48	49.29	53.47	57.49	61.34	65.73	70.48	75.68	79.25	87.31	93.83	0.40	2.61	3.71	4.55
1050	33.86	37.73	41.48	51.09	55.38	59.49	63.42	67.87	72.04	77.95	80.56	88.04	93.28	0.42	2.74	3.90	4.78
1100	35.27	39.29	43.19	52.45	56.70	60.93	64.85	69.27	73.36	78.28	81.53	88.30	92.28	0.44	2.88	4.08	5.00
1150	35.98	40.07	44.01	53.31	57.62	61.70	65.53	70.46	74.44	79.13	82.16	88.06	90.56	0.46	3.01	4.27	5.23
1200	36.61	41.28	45.33	54.82	59.20	63.32	67.17	71.42	75.25	79.66	82.42	87.31	88.14	0.49	3.14	4.45	5.46
1250	37.90	42.16	46.27	55.82	60.19	64.27	68.04	72.16	75.80	79.87	82.31	86.03		0.51	3.27	4.64	5.69
1300	38.38	42.67	46.78	56.23	60.50	65.04	68.71	72.65	76.06	79.74	81.80			0.53	3.40	4.82	5.91
1350	38.77	43.06	47.88	57.44	61.71	65.63	69.17	72.90	76.04	79.25	80.89			0.55	3.53	5.01	6.14
1400	39.93	44.34	48.54	58.04	62.24	66.04	69.42	72.90	75.72		79.56			0.57	3.66	5.19	6.37
1450	40.16	44.56	48.70	58.51	62.80	66.25	69.44	72.63	75.10		77.79			0.58	3.79	5.38	6.60
1500	40.93	45.37	49.56	58.84	62.80	66.27	69.24							0.61	3.92	5.57	6.82
1550	41.31	45.75	49.91	59.01	62.81	66.08	68.80							0.63	4.05	5.75	7.05
1600	41.82	45.64	50.10	59.10	62.65	65.69	68.11							0.65	4.18	5.94	7.28
1650	41.85	46.24	50.30	59.20	62.31	65.08	67.18							0.67	4.31	6.12	7.51
1700	41.99	46.34	50.33	58.61	61.77	64.25	65.99							0.69	4.44	6.31	7.73
1750	42.05	46.20	50.24	58.15	61.05	63.19	64.54							0.71	4.57	6.49	7.96
1800	42.03	46.10	50.04	57.52	60.12									0.73	4.70	6.68	8.19
1850	41.92	46.05	49.71	56.72	58.98									0.75	4.84	6.86	8.42
1900	41.42	45.52	49.26	55.75	57.64									0.77	4.97	7.05	8.64
1950	41.26	45.32	48.69	54.58	56.08									0.79	5.10	7.23	8.87
2000	41.04	44.79	47.93	53.23	54.31									0.81	5.23	7.42	9.10
2050	40.04	43.55	46.39											0.83	5.36	7.61	9.33
2100	39.97	43.40	46.16											0.85	5.49	7.79	9.55
2150	39.29	42.52	45.05											0.87	5.62	7.98	9.78
2200	38.50	41.53	43.79											0.89	5.75	8.16	10.01
2250	37.62	40.41	42.40											0.91	5.88	8.35	10.23



**Table 19:**  
**Section ZX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)										Additional Power (kW) per belt for speed ratio			
	40	45	50	56	63	71	80	90	100	112	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.21	0.27	0.32	0.36	0.43	0.50	0.58	0.68	0.75	0.84	0.00	0.02	0.03	0.04
950	0.27	0.37	0.39	0.48	0.54	0.63	0.73	0.84	0.95	1.08	0.01	0.02	0.04	0.05
1450	0.35	0.45	0.57	0.63	0.74	0.87	1.01	1.17	1.31	1.49	0.01	0.04	0.05	0.08
2850	0.53	0.69	0.83	1.00	1.19	1.40	1.63	1.87	2.11	2.38	0.02	0.07	0.11	0.16
100	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.00	0.00	0.00	0.01
200	0.09	0.11	0.13	0.13	0.15	0.18	0.20	0.23	0.26	0.30	0.00	0.01	0.01	0.01
300	0.11	0.17	0.15	0.18	0.21	0.25	0.29	0.33	0.37	0.42	0.00	0.01	0.01	0.02
400	0.14	0.23	0.22	0.23	0.27	0.32	0.37	0.42	0.47	0.53	0.00	0.01	0.01	0.02
500	0.16	0.29	0.24	0.28	0.33	0.38	0.44	0.50	0.57	0.64	0.00	0.01	0.02	0.03
600	0.19	0.30	0.27	0.32	0.38	0.44	0.51	0.59	0.66	0.75	0.00	0.02	0.02	0.03
700	0.21	0.30	0.32	0.36	0.43	0.50	0.58	0.68	0.75	0.84	0.00	0.02	0.03	0.04
800	0.23	0.31	0.34	0.40	0.47	0.55	0.64	0.74	0.83	0.94	0.01	0.02	0.03	0.05
900	0.25	0.35	0.36	0.44	0.52	0.61	0.70	0.81	0.91	1.03	0.01	0.02	0.03	0.05
950	0.27	0.37	0.39	0.48	0.54	0.63	0.73	0.84	0.95	1.08	0.01	0.02	0.04	0.05
1000	0.29	0.39	0.42	0.51	0.56	0.66	0.76	0.88	0.99	1.12	0.01	0.03	0.04	0.06
1100	0.29	0.39	0.45	0.55	0.61	0.71	0.82	0.94	1.06	1.20	0.01	0.03	0.04	0.06
1200	0.31	0.39	0.48	0.55	0.65	0.76	0.88	1.01	1.14	1.29	0.01	0.03	0.04	0.07
1300	0.34	0.43	0.51	0.58	0.69	0.80	0.93	1.07	1.21	1.37	0.01	0.03	0.05	0.07
1400	0.35	0.44	0.55	0.61	0.73	0.85	0.99	1.13	1.28	1.45	0.01	0.04	0.05	0.08
1450	0.35	0.45	0.57	0.63	0.74	0.87	1.01	1.17	1.31	1.49	0.01	0.04	0.05	0.08
1500	0.36	0.46	0.59	0.64	0.76	0.89	1.04	1.19	1.35	1.52	0.01	0.04	0.06	0.09
1600	0.38	0.47	0.61	0.68	0.80	0.94	1.09	1.25	1.41	1.60	0.01	0.04	0.06	0.09
1700	0.39	0.50	0.63	0.70	0.84	0.98	1.14	1.31	1.48	1.67	0.01	0.04	0.06	0.10
1800	0.41	0.53	0.66	0.73	0.87	1.02	1.19	1.37	1.54	1.74	0.01	0.05	0.07	0.10
1900	0.42	0.55	0.66	0.76	0.90	1.06	1.23	1.42	1.60	1.81	0.01	0.05	0.07	0.11
2000	0.43	0.55	0.66	0.76	0.94	1.10	1.28	1.47	1.66	1.88	0.01	0.05	0.07	0.11
2100	0.45	0.56	0.68	0.82	0.97	1.14	1.33	1.52	1.72	1.94	0.02	0.05	0.08	0.12
2200	0.46	0.57	0.71	0.84	1.00	1.18	1.37	1.58	1.77	2.00	0.02	0.06	0.08	0.13
2300	0.48	0.58	0.72	0.87	1.03	1.21	1.41	1.62	1.83	2.07	0.02	0.06	0.08	0.13
2400	0.47	0.60	0.73	0.89	1.06	1.25	1.45	1.67	1.88	2.13	0.02	0.06	0.08	0.14
2500	0.48	0.62	0.76	0.92	1.09	1.28	1.49	1.72	1.94	2.18	0.02	0.06	0.09	0.14
2600	0.50	0.64	0.78	0.94	1.12	1.32	1.53	1.77	1.99	2.24	0.02	0.07	0.10	0.15
2700	0.52	0.67	0.80	0.96	1.15	1.35	1.57	1.81	2.04	2.30	0.02	0.07	0.10	0.15
2800	0.53	0.69	0.82	0.98	1.17	1.38	1.61	1.85	2.08	2.35	0.02	0.07	0.10	0.16
2950	0.53	0.69	0.83	1.00	1.19	1.40	1.63	1.87	2.11	2.38	0.02	0.07	0.11	0.16
2900	0.54	0.70	0.85	1.01	1.20	1.42	1.65	1.90	2.13	2.40	0.02	0.07	0.11	0.17
3000	0.54	0.71	0.87	1.03	1.23	1.45	1.69	1.94	2.18	2.45	0.02	0.08	0.11	0.17
3100	0.55	0.71	0.88	1.05	1.25	1.48	1.72	1.98	2.22	2.50	0.02	0.08	0.11	0.18
3200	0.56	0.73	0.90	1.07	1.28	1.51	1.76	2.02	2.27	2.55	0.02	0.08	0.12	0.18
3300	0.56	0.74	0.92	1.09	1.30	1.54	1.79	2.06	2.31	2.59	0.02	0.08	0.12	0.19
3400	0.57	0.75	0.93	1.11	1.33	1.56	1.82	2.08	2.35	2.64	0.02	0.09	0.13	0.19
3500	0.58	0.76	0.93	1.13	1.35	1.59	1.85	2.13	2.39	2.68	0.02	0.09	0.13	0.20
3600	0.59	0.77	0.94	1.15	1.37	1.62	1.88	2.16	2.43	2.72	0.02	0.09	0.13	0.21
3700	0.61	0.79	0.96	1.16	1.39	1.65	1.92	2.20	2.48	2.76	0.03	0.09	0.14	0.21
3800	0.61	0.79	0.97	1.18	1.42	1.67	1.94	2.23	2.50	2.80	0.03	0.10	0.14	0.22
3900	0.62	0.81	0.99	1.20	1.44	1.70	1.97	2.26	2.53	2.83	0.03	0.10	0.14	0.22
4000	0.62	0.81	1.00	1.22	1.46	1.72	2.00	2.29	2.57	2.87	0.03	0.10	0.15	0.23
4100	0.63	0.82	1.01	1.23	1.48	1.74	2.03	2.32	2.60	2.90	0.03	0.10	0.15	0.23
4200	0.63	0.84	1.02	1.25	1.50	1.77	2.06	2.35	2.63	2.93	0.03	0.11	0.15	0.24
4300	0.64	0.85	1.04	1.26	1.52	1.79	2.08	2.38	2.66	2.96	0.03	0.11	0.16	0.25
4400	0.64	0.86	1.05	1.28	1.53	1.81	2.11	2.41	2.69	2.99	0.03	0.11	0.16	0.25
4500	0.65	0.86	1.06	1.29	1.55	1.83	2.13	2.43	2.71	3.01	0.03	0.12	0.17	0.26
4600	0.65	0.86	1.07	1.31	1.57	1.85	2.15	2.46	2.74	3.04	0.03	0.12	0.17	0.26
4700	0.65	0.87	1.08	1.32	1.59	1.87	2.17	2.48	2.76	3.06	0.03	0.12	0.17	0.27
4800	0.66	0.87	1.09	1.33	1.60	1.89	2.20	2.51	2.79	3.08	0.03	0.12	0.18	0.27
4900	0.67	0.88	1.10	1.35	1.62	1.91	2.22	2.53	2.81	3.10	0.03	0.13	0.18	0.28
5000	0.67	0.88	1.11	1.36	1.63	1.93	2.24	2.55	2.83	3.12	0.03	0.13	0.18	0.29
5100	0.67	0.90	1.12	1.37	1.65	1.95	2.26	2.57	2.85	3.13	0.03	0.13	0.19	0.29
5200	0.68	0.90	1.13	1.38	1.66	1.96	2.27	2.59	2.86	3.15	0.04	0.13	0.19	0.30
5300	0.68	0.91	1.14	1.39	1.68	1.98	2.29	2.60	2.88	3.16	0.04	0.14	0.20	0.30
5400	0.68	0.91	1.14	1.40	1.69	1.99	2.31	2.62	2.90	3.17	0.04	0.14	0.20	0.31
5500	0.69	0.92	1.15	1.41	1.70	2.01	2.32	2.64	2.91	3.18	0.04	0.14	0.20	0.31
5600	0.69	0.93	1.16	1.42	1.71	2.02	2.34	2.65	2.92	3.19	0.04	0.14	0.21	0.32
5800	0.69	0.94	1.17	1.44	1.74	2.05	2.37	2.68	2.94	3.20	0.04	0.15	0.21	0.33
6000	0.70	0.94	1.19	1.46	1.76	2.07	2.39	2.70	2.96	3.20	0.04	0.15	0.22	0.34
6200	0.70	0.95	1.20	1.48	1.78	2.09	2.41	2.71	2.96	3.19	0.04	0.16	0.23	0.35
6400	0.70	0.96	1.21	1.49	1.80	2.11	2.43	2.73	2.97	3.17	0.04	0.16	0.24	0.35
6600	0.70	0.97	1.22	1.50	1.81	2.13	2.44	2.73	2.96	3.15	0.04	0.17	0.24	0.36
6800	0.70	0.97	1.23	1.51	1.82	2.14	2.45	2.74	2.95	3.12	0.05	0.17	0.25	0.36
7000	0.70	0.97	1.23	1.52	1.83	2.15	2.46	2.73	2.94	3.08	0.05	0.18	0.26	0.40
7200	0.70	0.97	1.24	1.53	1.84	2.16	2.46	2.73	2.92	3.03	0.05	0.18	0.27	0.41
7400	0.69	0.97	1.24	1.54	1.85	2.16	2.46	2.72	2.89	2.98	0.05	0.19	0.27	0.42
7600	0.69	0.98	1.24	1.54	1.85	2.17	2.46	2.70			0.05	0.19	0.28	0.43
7800	0.69	0.97	1.25	1.54	1.86	2.17	2.45	2.68			0.05	0.20	0.29	0.45
8000	0.68	0.97	1.25	1.55	1.86	2.16	2.44	2.65			0.05	0.20	0.30	0.46
8200	0.68	0.97	1.24	1.55	1.86	2.16	2.42				0.06	0.21	0.30	0.47
8400	0.67	0.97	1.24	1.54	1.85	2.15	2.40				0.06	0.21	0.31	0.48



**Table 20:**  
**Section AX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)															Additional Power (kW) per belt for speed ratio			
	63	71	80	90	95	100	106	112	118	125	132	140	150	160	180	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.67	0.86	1.07	1.29	1.40	1.51	1.64	1.77	1.90	2.04	2.19	2.35	2.56	2.76	3.15	0.02	0.06	0.12	0.16
950	0.82	1.05	1.32	1.63	1.80	1.92	2.05	2.25	2.40	2.60	2.70	3.05	3.10	3.45	3.98	0.03	0.11	0.16	0.24
1450	1.10	1.45	1.83	2.24	2.44	2.64	2.89	3.12	3.36	3.63	3.88	4.18	4.54	4.90	5.59	0.04	0.17	0.24	0.37
2850	1.39	1.98	2.60	3.27	3.58	3.90	4.27	4.62	4.97	5.35	5.73	6.10	6.58	7.11	7.88	0.09	0.33	0.47	0.73
100	0.16	0.19	0.23	0.28	0.30	0.32	0.34	0.37	0.39	0.42	0.45	0.48	0.52	0.58	0.63	0.00	0.01	0.02	0.03
200	0.32	0.38	0.46	0.56	0.60	0.64	0.68	0.74	0.78	0.84	0.90	0.96	1.04	1.12	1.26	0.01	0.02	0.03	0.05
300	0.37	0.46	0.56	0.67	0.73	0.78	0.84	0.91	0.97	1.04	1.11	1.20	1.30	1.40	1.59	0.01	0.03	0.05	0.08
400	0.49	0.61	0.75	0.89	0.97	1.04	1.12	1.21	1.29	1.39	1.48	1.60	1.73	1.87	2.12	0.01	0.05	0.07	0.10
500	0.62	0.77	0.93	1.12	1.22	1.30	1.40	1.52	1.62	1.73	1.85	2.00	2.17	2.33	2.65	0.02	0.06	0.08	0.13
600	0.64	0.84	1.04	1.25	1.30	1.45	1.50	1.68	1.80	1.90	2.00	2.20	2.37	2.50	2.95	0.02	0.07	0.10	0.15
700	0.67	0.86	1.07	1.29	1.40	1.51	1.64	1.77	1.90	2.04	2.19	2.35	2.56	2.76	3.15	0.02	0.08	0.12	0.18
800	0.77	0.98	1.22	1.47	1.60	1.73	1.87	2.02	2.17	2.33	2.50	2.69	2.76	3.15	3.45	0.02	0.09	0.13	0.21
900	0.80	0.99	1.28	1.60	1.70	1.83	1.95	2.20	2.30	2.50	2.60	3.02	2.88	3.30	3.75	0.03	0.10	0.15	0.23
950	0.82	1.05	1.32	1.63	1.80	1.92	2.05	2.25	2.40	2.60	2.70	3.05	3.10	3.45	3.98	0.03	0.11	0.16	0.24
1000	0.85	1.10	1.44	1.67	1.82	1.97	2.14	2.31	2.48	2.68	2.87	3.09	3.36	3.62	4.14	0.03	0.11	0.17	0.26
1100	0.94	1.21	1.51	1.84	2.00	2.17	2.35	2.54	2.73	2.95	3.16	3.40	3.70	3.98	4.55	0.03	0.13	0.18	0.28
1200	0.96	1.28	1.64	2.00	2.18	2.36	2.57	2.77	2.98	3.22	3.44	3.71	4.03	4.34	4.97	0.04	0.14	0.20	0.31
1300	0.99	1.30	1.64	2.01	2.19	2.37	2.59	2.80	3.01	3.25	3.48	3.75	4.07	4.39	5.01	0.04	0.15	0.22	0.33
1400	1.07	1.40	1.77	2.17	2.36	2.55	2.79	3.02	3.24	3.50	3.75	4.04	4.38	4.73	5.40	0.04	0.16	0.23	0.36
1450	1.10	1.45	1.83	2.24	2.44	2.64	2.89	3.12	3.36	3.63	3.88	4.18	4.54	4.90	5.59	0.04	0.17	0.24	0.37
1500	1.10	1.48	1.85	2.32	2.48	2.73	2.99	3.23	3.47	3.75	4.02	4.33	4.70	5.07	5.78	0.05	0.17	0.25	0.38
1600	1.10	1.47	1.87	2.35	2.52	2.74	2.99	3.23	3.47	3.75	4.03	4.33	4.71	5.07	5.78	0.05	0.18	0.26	0.41
1700	1.17	1.58	1.99	2.45	2.68	2.91	3.18	3.43	3.69	3.98	4.28	4.60	5.00	5.38	6.14	0.05	0.20	0.28	0.44
1800	1.22	1.60	2.06	2.50	2.80	2.98	3.36	3.55	3.79	4.10	4.40	4.70	5.10	5.50	6.30	0.05	0.21	0.30	0.46
1900	1.24	1.62	2.08	2.58	2.82	3.06	3.44	3.62	3.89	4.21	4.51	4.85	5.27	5.67	6.44	0.06	0.22	0.31	0.49
2000	1.26	1.71	2.19	2.72	2.97	3.22	3.52	3.81	4.10	4.43	4.75	5.11	5.45	5.80	6.74	0.06	0.23	0.33	0.51
2100	1.32	1.73	2.22	2.80	3.06	3.30	3.60	3.90	4.20	4.58	4.85	5.21	5.65	6.00	6.95	0.06	0.24	0.35	0.54
2200	1.32	1.75	2.26	2.81	3.08	3.35	3.66	3.97	4.27	4.61	4.94	5.31	5.76	6.19	7.00	0.07	0.25	0.36	0.56
2300	1.33	1.83	2.36	2.94	3.22	3.50	3.83	4.15	4.40	4.70	5.16	5.56	6.02	6.40	7.15	0.07	0.26	0.38	0.59
2400	1.34	1.84	2.40	3.00	3.29	3.55	3.99	4.20	4.50	4.80	5.22	5.65	6.10	6.51	7.30	0.07	0.28	0.40	0.62
2500	1.34	1.85	2.42	3.02	3.32	3.60	4.05	4.27	4.59	4.96	5.32	5.71	6.18	6.63	7.45	0.08	0.29	0.41	0.64
2600	1.35	1.92	2.52	3.14	3.40	3.74	4.10	4.30	4.68	5.16	5.53	5.94	6.33	6.78	7.57	0.08	0.30	0.43	0.67
2700	1.37	1.93	2.53	3.16	3.48	3.80	4.15	4.40	4.77	5.20	5.60	5.94	6.43	6.88	7.68	0.08	0.31	0.45	0.69
2800	1.38	1.94	2.55	3.21	3.52	3.83	4.18	4.54	4.88	5.26	5.63	6.04	6.52	6.98	7.79	0.09	0.32	0.47	0.73
2850	1.39	1.98	2.60	3.27	3.58	3.90	4.27	4.62	4.97	5.35	5.73	6.10	6.58	7.11	7.88	0.09	0.33	0.46	0.72
2900	1.40	2.01	2.64	3.33	3.65	3.97	4.34	4.70	5.05	5.40	5.83	6.18	6.64	7.15	7.95	0.09	0.33	0.48	0.74
3000	1.40	2.01	2.65	3.44	3.68	4.00	4.38	4.72	5.12	5.45	5.87	6.25	6.71	7.20	7.95	0.09	0.34	0.50	0.77
3100	1.41	2.02	2.67	3.45	3.70	4.02	4.40	4.77	5.20	5.52	5.90	6.31	6.79	7.24	8.01	0.09	0.36	0.51	0.80
3200	1.41	2.03	2.74	3.47	3.75	4.10	4.45	4.80	5.23	5.60	6.00	6.35	6.85	7.34	8.06	0.10	0.37	0.53	0.82
3300	1.42	2.05	2.75	3.48	3.80	4.15	4.50	4.82	5.25	5.65	6.05	6.43	6.90	7.40	8.09	0.10	0.40	0.55	0.85
3400	1.42	2.07	2.76	3.49	3.84	4.18	4.57	4.85	5.31	5.72	6.10	6.51	6.98	7.41	8.11	0.10	0.39	0.56	0.87
3500	1.43	2.10	2.80	3.59	3.90	4.20	4.65	4.90	5.35	5.75	6.15	6.55	7.02	7.43	8.15	0.11	0.40	0.58	0.90
3600	1.43	2.11	2.82	3.59	3.95	4.25	4.68	5.00	5.40	5.80	6.20	6.60	7.05	7.46		0.11	0.41	0.60	0.92
3700	1.44	2.11	2.84	3.60	3.96	4.31	4.71	5.10	5.46	5.87	6.24	6.64	7.09	7.48		0.11	0.42	0.61	0.95
3800	1.44	2.12	2.86	3.62	4.00	4.35	4.75	5.15	5.50	5.90	6.28	6.68	7.09	7.48		0.12	0.44	0.63	0.98
3900	1.44	2.13	2.88	3.64	4.02	4.38	4.80	5.18	5.55	5.93	6.30	6.69	7.10	7.47		0.12	0.45	0.65	1.00
4000	1.43	2.14	2.89	3.68	4.05	4.40	4.81	5.20	5.58	5.98	6.32	6.70	7.11	7.45		0.12	0.46	0.66	1.03
4100	1.43	2.14	2.90	3.70	4.08	4.42	4.83	5.22	5.58	5.97	6.34	6.70	7.10			0.12	0.47	0.68	1.05
4200	1.42	2.15	2.91	3.70	4.10	4.45	4.85	5.24	5.59	5.98	6.34	6.70	7.07			0.13	0.48	0.70	1.08
4300	1.41	2.15	2.93	3.73	4.11	4.47	4.88	5.26	5.61	6.00	6.34	6.68	7.04			0.13	0.49	0.71	1.10
4400	1.37	2.15	2.94	3.73	4.12	4.48	4.89	5.26	5.74	6.00	6.33	6.66	7.00			0.13	0.51	0.73	1.13
4500	1.36	2.14	2.94	3.74	4.12	4.48	4.89	5.27	5.87	6.14	6.31	6.63	6.94			0.14	0.52	0.74	1.15
4600	1.35	2.14	2.94	3.76	4.13	4.49	4.90	5.27	5.80	5.97	6.24	6.59	6.89			0.14	0.53	0.76	1.18
4700	1.35	2.13	2.95	3.76	4.13	4.59	5.01	5.38	5.73	5.95	6.25					0.14	0.54	0.78	1.21
4800	1.35	2.12	2.95	3.76	4.13	4.55	4.95	5.37	5.60	5.92	6.21					0.15	0.55	0.79	1.23
4900	1.33	2.11	2.96	3.76	4.13	4.52	4.88	5.36	5.56	5.89	6.16					0.15	0.56	0.81	1.26
5000	1.32	2.09	2.99	3.75	4.12	4.50	4.86	5.35	5.50	5.85	6.11					0.15	0.57	0.83	1.28
5100	1.30	2.08	2.99	3.74	4.11	4.48	4.84	5.25	5.48							0.16	0.58	0.84	1.31
5200	1.27	2.07	2.98	3.73	4.10	4.45	4.82	5.16	5.46							0.16	0.60	0.86	1.33
5300	1.26	2.05	2.96	3.70	4.08	4.42	4.78	5.10	5.41							0.16	0.61	0.88	1.36
5400	1.25	2.03	2.90	3.68	4.05	4.40	4.76	5.08	5.35							0.16	0.62	0.89	1.39
5500	1.20	2.01	2.85	3.67	4.03	4.37	4.72	5.03	5.29							0.17	0.63	0.91	1.41
5600	1.18	2.00	2.85	3.67	4.00	4.30	4.65									0.17	0.64	0.93	1.44
5700	1.16	1.99	2.80	3.66	3.98	4.28	4.60									0.17	0.65	0.94	1.46
5800	1.11	1.94	2.78	3.65	3.90	4.25	4.58									0.18	0.67	0.96	1.48
5900	1.08	1.93	2.75	3.64	3.89	4.20	4.52									0.18	0.68	0.98	1.51
6000	1.05	1.90	2.72	3.60	3.85	4.15	4.45									0.18	0.69	0.99	1.54



**Table 21:**  
**Section BX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)																	Additional Power (kW) per belt for speed ratio			
	90	100	106	112	118	125	132	140	160	180	190	200	212	224	250	280	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57	
700	1.70	2.01	2.20	2.38	2.56	2.77	2.98	3.21	3.79	4.35	4.63	4.90	5.23	5.55	6.22	6.98	0.03	0.12	0.18	0.28	
950	2.18	2.60	2.85	3.10	3.34	3.76	3.85	4.36	5.14	5.71	6.28	6.43	6.85	7.53	8.44	8.91	0.04	0.17	0.24	0.37	
1450	2.93	3.51	3.85	4.18	4.52	4.90	5.28	5.70	6.74	7.74	8.22	8.70	9.25	9.79	10.73	12.16	0.07	0.26	0.37	0.57	
2850	4.19	5.11	5.64	6.16	6.60	7.23	7.78	8.38	9.90	10.99	11.54	12.03	12.57	13.03	13.77		0.13	0.5	0.72	1.12	
100	0.37	0.42	0.46	0.49	0.53	0.57	0.61	0.65	0.76	0.87	0.93	0.98	1.04	1.11	1.24	1.40	0.00	0.02	0.03	0.04	
200	0.74	0.84	0.92	0.98	1.06	1.14	1.22	1.30	1.52	1.74	1.86	1.96	2.08	2.22	2.48	2.80	0.01	0.04	0.05	0.08	
300	1.11	1.26	1.36	1.47	1.59	1.71	1.83	1.95	2.28	2.61	2.79	2.94	3.12	3.33	3.72	4.20	0.01	0.05	0.08	0.12	
400	1.11	1.31	1.42	1.54	1.65	1.78	1.91	2.06	2.43	2.78	2.96	3.13	3.34	3.54	3.98	4.47	0.02	0.07	0.1	0.16	
500	1.39	1.64	1.75	1.93	2.06	2.23	2.39	2.58	3.04	3.48	3.70	3.91	4.18	4.43	4.98	5.59	0.02	0.09	0.13	0.20	
600	1.67	1.70	2.13	2.31	2.48	2.67	2.87	3.09	3.65	4.17	4.44	4.70	5.01	5.31	5.97	6.19	0.03	0.11	0.15	0.24	
700	1.70	2.01	2.20	2.38	2.56	2.77	2.98	3.21	3.79	4.35	4.63	4.90	5.23	5.55	6.22	6.98	0.03	0.12	0.18	0.28	
800	1.94	2.30	2.51	2.72	2.93	3.17	3.41	3.67	4.33	4.97	5.29	5.60	5.98	6.34	7.11	7.98	0.04	0.14	0.2	0.32	
900	2.09	2.58	2.83	3.06	3.29	3.56	3.83	4.13	4.87	5.59	5.95	6.30	6.72	7.14	8.00	8.44	0.04	0.16	0.23	0.35	
950	2.18	2.60	2.85	3.10	3.34	3.76	3.85	4.36	5.14	5.71	6.28	6.43	6.85	7.53	8.44	8.91	0.04	0.17	0.24	0.37	
1000	2.19	2.61	2.86	3.11	3.35	3.78	3.91	4.44	5.25	5.72	6.29	6.44	6.86	7.54	8.45	9.12	0.05	0.18	0.25	0.39	
1100	2.41	2.87	3.15	3.42	3.69	3.99	4.30	4.64	5.48	6.29	6.70	7.08	7.55	8.01	8.97	10.03	0.05	0.19	0.28	0.43	
1200	2.63	3.13	3.43	3.73	4.02	4.36	4.69	5.06	5.96	6.86	7.31	7.73	8.23	8.74	9.78	10.34	0.06	0.21	0.31	0.47	
1300	2.63	3.15	3.45	3.75	4.05	4.39	4.73	5.11	6.04	6.94	7.37	7.80	8.29	8.78	9.80	10.90	0.06	0.23	0.33	0.51	
1400	2.83	3.39	3.72	4.04	4.36	4.73	5.09	5.50	6.50	7.47	7.94	8.40	8.93	9.46	10.56	11.74	0.07	0.25	0.36	0.55	
1450	2.93	3.51	3.85	4.18	4.52	4.90	5.28	5.70	6.74	7.74	8.22	8.70	9.25	9.79	10.73	12.16	0.07	0.26	0.37	0.57	
1500	3.00	3.63	3.98	4.33	4.67	5.07	5.46	5.90	6.97	8.00	8.50	9.00	9.57	10.06	10.74	12.20	0.07	0.26	0.38	0.59	
1600	3.10	3.64	3.98	4.34	4.68	5.08	5.47	5.91	6.98	8.00	8.51	9.10	9.58	10.07	11.17	12.33	0.07	0.28	0.41	0.63	
1700	3.20	3.85	4.23	4.57	4.97	5.40	5.81	6.28	7.42	8.50	9.02	9.53	10.13	10.70	11.87	13.08	0.08	0.30	0.43	0.67	
1800	3.34	4.07	4.44	4.84	5.27	5.68	6.12	6.65	7.85	8.91	9.55	9.96	10.72	10.80	11.92	13.10	0.08	0.32	0.46	0.71	
1900	3.35	4.08	4.45	4.85	5.28	5.69	6.13	6.66	7.91	8.92	9.56	9.97	10.73	11.12	12.25	13.38	0.09	0.33	0.48	0.75	
2000	3.53	4.25	4.68	5.11	5.52	5.99	6.45	6.97	8.22	9.39	9.95	10.50	11.12	11.71	12.80	13.86	0.09	0.35	0.51	0.79	
2100	3.70	4.47	4.85	5.36	5.72	6.22	6.70	7.32	8.63	9.70	10.44	10.77	11.13	11.72	12.80	14.02	0.10	0.37	0.53	0.83	
2200	3.79	4.48	4.86	5.37	5.73	6.23	6.71	7.33	8.82	9.70	10.45	10.78	11.38	11.94	13.02	14.08	0.10	0.39	0.56	0.87	
2300	3.81	4.61	5.08	5.54	5.99	6.51	7.02	7.58	8.91	10.14	10.72	11.27	11.60	12.34	13.34	14.19	0.11	0.41	0.58	0.91	
2400	3.97	4.81	5.30	5.78	6.25	6.80	7.32	7.91	9.29	10.58	11.19	11.32	11.75	12.35	13.35	14.20	0.11	0.42	0.61	0.95	
2500	3.98	4.82	5.31	5.79	6.26	6.81	7.33	7.92	9.39	10.59	11.19	11.40	11.89	12.51	13.46	14.21	0.12	0.44	0.64	0.99	
2600	4.08	4.93	5.44	5.93	6.42	6.97	7.50	8.09	9.49	10.74	11.32	11.70	12.24	13.01	13.52		0.13	0.48	0.66	1.02	
2700	4.11	5.01	5.53	6.16	6.66	7.10	7.76	8.20	9.65	10.79	11.33	11.71	12.25	13.01	13.55		0.13	0.48	0.69	1.08	
2800	4.12	5.02	5.54	6.16	6.66	7.10	7.77	8.23	9.90	10.80	11.34	11.82	12.35	13.02	13.63		0.14	0.49	0.71	1.10	
2850	4.19	5.11	5.64	6.16	6.68	7.23	7.78	8.38	9.90	10.99	11.54	12.03	12.57	13.03	13.77		0.14	0.50	0.72	1.12	
2900	4.27	5.20	5.74	6.27	6.77	7.35	7.91	8.52	9.94	11.01	11.55	12.04	12.58	13.26	13.47		0.13	0.51	0.74	1.14	
3000	4.41	5.38	5.80	6.48	6.85	7.61	7.92	8.82	9.95	11.03	11.55	12.05	12.45	12.84	13.37		0.14	0.53	0.76	1.18	
3100	4.42	5.39	5.81	6.49	6.86	7.65	7.99	8.93	9.96	11.11	11.60	12.06					0.15	0.55	0.79	1.22	
3200	4.45	5.43	6.00	6.54	7.08	7.67	8.25	8.87	10.28	11.21	11.65	12.42					0.15	0.56	0.81	1.26	
3300	4.45	5.44	6.19	6.65	7.10	7.91	8.49	8.88	10.58	11.22	11.66	12.37					0.15	0.58	0.84	1.30	
3400	4.46	5.45	6.20	6.66	7.11	7.92	8.50	8.89	10.59	11.24	11.68	12.38					0.16	0.60	0.86	1.34	
3500	4.59	5.61	6.21	6.72	7.32	7.93	8.50	9.01	10.60	11.57	12.00	12.35					0.16	0.62	0.89	1.38	
3600	4.60	5.62	6.25	6.73	7.53	7.95	8.62	9.02	10.39	11.23							0.17	0.63	0.92	1.42	
3700	4.63	5.63	6.26	6.75	7.54	7.96	8.65	9.03	10.28	11.19							0.17	0.65	0.94	1.46	
3800	4.64	5.75	6.36	6.93	7.55	7.98	8.67	9.27	10.27	11.18							0.18	0.67	0.97	1.50	
3900	4.64	5.90	6.52	7.00	7.68	7.99	8.90	9.52	10.26	11.05							0.18	0.69	0.99	1.54	
4000	4.65	5.92	6.53	7.01	7.69	7.99	8.95	9.09	10.20	10.94							0.19	0.71	1.02	1.58	
4100	4.77	5.93	6.55	7.04	7.70	8.19	8.96	9.08	10.20								0.19	0.72	1.04	1.62	
4200	4.88	5.98	6.63	7.21	7.78	8.39	8.96	9.07	10.11								0.20	0.74	1.07	1.65	
4300	4.79	5.99	6.63	6.93	7.79	8.40	8.75	9.06	10.02								0.20	0.78	1.09	1.69	
4400	4.83	5.99	6.52	6.93	7.80	8.21	8.74	9.05	10.00								0.21	0.78	1.12	1.73	
4500	4.84	6.04	6.51	6.93	7.81	8.20	8.73	8.97	10.00								0.21	0.79	1.14	1.77	
4600	4.83	5.78	6.37	6.93	7.75	7.97	8.65										0.22	0.81	1.17	1.81	
4700	4.80	5.77	6.36	6.92	7.60	7.96	8.63										0.22	0.83	1.19	1.85	
4800	4.79	5.76	6.35	6.91	7.59	7.94	8.44										0.22	0.85	1.23	1.89	
4900	4.86	5.74	6.32	6.86	7.34	7.84	8.26										0.23	0.86	1.25	1.93	
5000	4.85	5.72	6.31	6.85	7.33	7.83	8.23										0.23	0.88	1.27	1.97	







**Table 23: Section XPZ/3VX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)															Additional Power (kW) per belt for speed ratio			
	56	60	63	71	80	85	90	95	100	112	125	140	160	180	200	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.63	0.73	0.80	0.99	1.21	1.33	1.45	1.57	1.69	1.97	2.27	2.61	3.07	3.51	3.94	0.01	0.06	0.08	0.10
950	0.77	0.91	1.00	1.25	1.53	1.69	1.84	2.00	2.15	2.52	2.90	3.34	3.93	4.50	5.05	0.01	0.08	0.11	0.13
1450	1.08	1.27	1.41	1.78	2.19	2.42	2.64	2.87	3.10	3.62	4.19	4.82	5.65	6.46	7.24	0.02	0.12	0.16	0.20
2850	1.76	2.10	2.36	3.04	3.78	4.18	4.59	4.98	5.37	6.29	7.24	8.31	9.65	10.90	12.06	0.04	0.23	0.32	0.40
100	0.13	0.14	0.16	0.19	0.23	0.25	0.27	0.29	0.31	0.36	0.41	0.47	0.55	0.63	0.70	0.00	0.01	0.01	0.01
200	0.22	0.24	0.28	0.33	0.41	0.45	0.48	0.52	0.56	0.65	0.74	0.85	1.00	1.14	1.27	0.00	0.02	0.02	0.03
300	0.30	0.33	0.38	0.46	0.57	0.62	0.67	0.72	0.78	0.91	1.04	1.20	1.40	1.61	1.79	0.00	0.02	0.03	0.04
400	0.38	0.41	0.48	0.58	0.71	0.78	0.85	0.91	0.98	1.15	1.32	1.52	1.79	2.05	2.28	0.00	0.03	0.05	0.06
500	0.44	0.48	0.56	0.68	0.85	0.93	1.01	1.09	1.17	1.38	1.58	1.82	2.15	2.47	2.74	0.01	0.04	0.06	0.07
600	0.56	0.65	0.71	0.88	1.07	1.18	1.28	1.39	1.49	1.74	2.00	2.30	2.70	3.09	3.47	0.01	0.05	0.07	0.08
700	0.63	0.73	0.80	0.99	1.21	1.33	1.45	1.57	1.69	1.97	2.27	2.61	3.07	3.51	3.94	0.01	0.06	0.08	0.10
800	0.69	0.80	0.88	1.10	1.34	1.48	1.61	1.75	1.88	2.20	2.53	2.91	3.42	3.92	4.40	0.01	0.06	0.09	0.11
900	0.74	0.87	0.96	1.20	1.47	1.62	1.76	1.92	2.06	2.41	2.78	3.20	3.76	4.31	4.83	0.01	0.07	0.10	0.13
950	0.77	0.91	1.00	1.25	1.53	1.69	1.84	2.00	2.15	2.52	2.90	3.34	3.93	4.50	5.05	0.01	0.08	0.11	0.13
1000	0.80	0.94	1.03	1.30	1.59	1.76	1.92	2.09	2.24	2.63	3.02	3.48	4.10	4.69	5.26	0.01	0.08	0.11	0.14
1100	0.90	1.05	1.16	1.45	1.78	1.96	2.14	2.32	2.50	2.92	3.37	3.88	4.55	5.21	5.85	0.01	0.09	0.12	0.15
1200	0.95	1.12	1.23	1.55	1.90	2.10	2.29	2.48	2.68	3.13	3.61	4.16	4.88	5.58	6.26	0.01	0.10	0.14	0.17
1300	1.01	1.18	1.31	1.64	2.02	2.23	2.43	2.64	2.85	3.33	3.85	4.43	5.19	5.94	6.66	0.02	0.10	0.15	0.18
1400	1.06	1.24	1.38	1.73	2.14	2.36	2.58	2.80	3.02	3.53	4.07	4.69	5.50	6.29	7.05	0.02	0.11	0.16	0.19
1450	1.08	1.27	1.41	1.78	2.19	2.42	2.64	2.87	3.10	3.62	4.19	4.82	5.65	6.46	7.24	0.02	0.12	0.16	0.20
1500	1.10	1.30	1.44	1.82	2.25	2.48	2.71	2.95	3.18	3.72	4.30	4.95	5.80	6.63	7.43	0.02	0.12	0.17	0.21
1600	1.19	1.40	1.55	1.96	2.42	2.67	2.92	3.17	3.42	4.00	4.62	5.32	6.23	7.12	7.98	0.02	0.13	0.18	0.22
1700	1.24	1.46	1.62	2.05	2.53	2.79	3.06	3.32	3.58	4.19	4.84	5.57	6.52	7.45	8.34	0.02	0.14	0.19	0.24
1800	1.28	1.51	1.68	2.13	2.64	2.91	3.19	3.46	3.74	4.37	5.05	5.82	6.80	7.76	8.69	0.02	0.14	0.20	0.25
1900	1.33	1.57	1.74	2.21	2.74	3.03	3.32	3.60	3.89	4.55	5.26	6.05	7.08	8.07	9.02	0.02	0.15	0.22	0.26
2000	1.37	1.62	1.80	2.29	2.85	3.14	3.44	3.74	4.04	4.73	5.46	6.28	7.34	8.37	9.34	0.02	0.16	0.23	0.28
2100	1.44	1.71	1.91	2.43	3.01	3.33	3.64	3.95	4.26	4.99	5.76	6.63	7.75	8.83	9.87	0.03	0.17	0.24	0.29
2200	1.48	1.76	1.97	2.51	3.11	3.44	3.76	4.09	4.41	5.16	5.96	6.85	8.01	9.11	10.17	0.03	0.18	0.25	0.31
2300	1.52	1.81	2.03	2.59	3.21	3.55	3.89	4.22	4.55	5.33	6.15	7.07	8.25	9.38	10.46	0.03	0.18	0.26	0.32
2400	1.56	1.86	2.08	2.66	3.31	3.66	4.00	4.35	4.69	5.49	6.34	7.28	8.49	9.64	10.74	0.03	0.19	0.27	0.33
2500	1.59	1.90	2.14	2.73	3.40	3.77	4.12	4.47	4.83	5.65	6.52	7.49	8.72	9.89	10.99	0.03	0.20	0.28	0.35
2600	1.67	1.99	2.23	2.86	3.55	3.93	4.31	4.68	5.04	5.91	6.81	7.83	9.12	10.34	11.49	0.03	0.21	0.30	0.36
2700	1.71	2.04	2.28	2.93	3.64	4.03	4.42	4.80	5.17	6.07	6.99	8.03	9.34	10.57	11.73	0.03	0.22	0.31	0.38
2800	1.74	2.08	2.33	3.00	3.73	4.13	4.53	4.92	5.30	6.22	7.16	8.22	9.55	10.79	11.95	0.03	0.22	0.32	0.39
2850	1.76	2.10	2.36	3.04	3.78	4.18	4.59	4.98	5.37	6.29	7.24	8.31	9.65	10.90	12.06	0.04	0.23	0.32	0.40
2900	1.77	2.12	2.38	3.07	3.82	4.23	4.64	5.04	5.43	6.36	7.32	8.40	9.75	11.00	12.16	0.04	0.23	0.33	0.40
3000	1.80	2.16	2.43	3.14	3.90	4.33	4.75	5.16	5.55	6.51	7.48	8.58	9.94	11.20	12.35	0.04	0.24	0.34	0.42
3100	1.88	2.25	2.53	3.25	4.05	4.49	4.92	5.34	5.76	6.74	7.77	8.90	10.32	11.63	12.82	0.04	0.25	0.35	0.43
3200	1.91	2.29	2.58	3.31	4.13	4.58	5.02	5.45	5.88	6.88	7.92	9.07	10.50	11.81	12.99	0.04	0.26	0.36	0.45
3300	1.94	2.33	2.62	3.38	4.21	4.67	5.12	5.56	6.00	7.01	8.07	9.23	10.67	11.97	13.13	0.04	0.26	0.37	0.46
3400	1.97	2.37	2.67	3.44	4.29	4.76	5.22	5.66	6.11	7.14	8.22	9.38	10.83	12.12	13.26	0.04	0.27	0.39	0.47
3500	2.00	2.40	2.71	3.50	4.37	4.85	5.31	5.77	6.22	7.27	8.35	9.53	10.98	12.26	13.38	0.04	0.28	0.40	0.49
3600	2.06	2.48	2.80	3.62	4.52	5.01	5.49	5.96	6.42	7.51	8.62	9.84	11.34	12.67	13.84	0.04	0.29	0.41	0.50
3700	2.09	2.52	2.84	3.68	4.60	5.09	5.58	6.06	6.53	7.63	8.75	9.98	11.47	12.79	13.92	0.05	0.30	0.42	0.52
3800	2.11	2.55	2.88	3.73	4.67	5.17	5.67	6.15	6.63	7.75	8.88	10.11	11.60	12.89	13.99	0.05	0.30	0.43	0.53
3900	2.14	2.58	2.92	3.79	4.74	5.25	5.76	6.25	6.73	7.86	8.99	10.23	11.71	12.98	14.03	0.05	0.31	0.44	0.54
4000	2.16	2.61	2.96	3.84	4.81	5.33	5.84	6.34	6.82	7.96	9.11	10.34	11.81	13.05	14.40	0.05	0.32	0.45	0.56
4100	2.23	2.70	3.04	3.95	4.94	5.48	6.00	6.52	7.02	8.19	9.38	10.55	12.16	13.45	14.50	0.05	0.33	0.47	0.57
4200	2.25	2.73	3.08	4.00	5.01	5.55	6.08	6.61	7.11	8.29	9.49	10.65	12.25	13.50	14.59	0.05	0.34	0.48	0.58
4300	2.27	2.76	3.11	4.05	5.07	5.62	6.16	6.69	7.20	8.39	9.58	10.74	12.32	13.53	14.66	0.05	0.34	0.49	0.60
4400	2.29	2.79	3.15	4.10	5.13	5.69	6.23	6.77	7.28	8.48	9.68	10.83	12.38	13.55	14.71	0.05	0.35	0.50	0.61
4500	2.31	2.82	3.18	4.14	5.19	5.76	6.30	6.84	7.36	8.56	9.76	10.90	12.43	13.87	14.75	0.06	0.36	0.51	0.63
4600	2.37	2.89	3.26	4.25	5.33	5.90	6.47	7.02	7.55	8.78	10.02	11.30	12.77	13.94		0.06	0.37	0.52	0.64
4700	2.39	2.92	3.29	4.29	5.39	5.96	6.54	7.09	7.63	8.86	10.10	11.37	12.80	13.98		0.06	0.38	0.53	0.65
4800	2.41	2.94	3.32	4.34	5.44	6.02	6.60	7.16	7.70	8.93	10.17	11.42	12.82	14.05		0.06	0.38	0.54	0.67
4900	2.42	2.96	3.35	4.38	5.49	6.08	6.67	7.23	7.77	9.00	10.23	11.47	12.83	14.08		0.06	0.39	0.56	0.68
5000	2.44	2.99	3.38	4.42	5.55	6.14	6.73	7.29	7.83	9.07	10.29	11.51	12.89	14.10		0.06	0.40	0.57	0.70
5100	2.50	3.05	3.46	4.53	5.67	6.28	6.88	7.46	8.02	9.29	10.54	11.80	13.16			0.06	0.41	0.58	0.71
5200	2.51	3.07	3.49	4.57	5.72	6.33	6.94	7.52	8.08	9.35	10.59	11.83	13.20			0.06	0.42	0.59	0.72
5300	2.53	3.09	3.51	4.60	5.76	6.38	6.99	7.57	8.14	9.40	10.63	11.84	13.24			0.07	0.42	0.60	0.74
5400	2.54	3.11	3.53	4.64	5.81	6.43	7.04	7.62	8.19	9.45	10.66	11.85	13.27			0.07	0.43	0.61	0.75
5500	2.55	3.13	3.55	4.67	5.85	6.47	7.08	7.67	8.23	9.49	10.69	11.85	13.28			0.07	0.44	0.62	0.77
5600	2.61	3.20	3.64	4.77	5.98	6.62	7.24	7.84	8.42	9.70	10.93	12.12				0.07	0.45	0.64	0.78
5800	2.63	3.23	3.68	4.83	6.05	6.70	7.32	7.92	8.50	9.76	10.96	12.20				0.07	0.46	0.66	0.81
6000	2.68	3.30	3.76	4.94	6.19	6.85	7.49	8.10	8.68	9.96	11.15	12.25				0.			



**Table 24: Section XPA: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	71	75	80	90	100	112	118	125	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	0.98	1.13	1.33	1.75	2.15	2.63	2.87	3.10	0.02	0.13	0.19	0.23
950	1.20	1.41	1.69	2.23	2.76	3.40	3.72	4.09	0.03	0.18	0.26	0.31
1450	1.71	2.03	2.44	3.23	4.03	4.97	5.43	5.96	0.04	0.27	0.39	0.48
2850	2.85	3.45	4.19	5.66	7.10	8.79	9.62	10.58	0.08	0.54	0.77	0.94
100	0.19	0.21	0.25	0.31	0.38	0.46	0.49	0.54	0.00	0.02	0.03	0.03
200	0.33	0.37	0.44	0.56	0.69	0.84	0.90	0.99	0.01	0.04	0.05	0.07
300	0.45	0.51	0.62	0.78	0.97	1.19	1.27	1.41	0.01	0.06	0.08	0.10
400	0.56	0.63	0.78	0.99	1.24	1.52	1.63	1.81	0.01	0.08	0.11	0.13
500	0.66	0.74	0.92	1.18	1.49	1.84	1.97	2.19	0.01	0.09	0.13	0.16
600	0.86	1.00	1.18	1.54	1.89	2.31	2.52	2.77	0.02	0.11	0.16	0.20
700	0.96	1.13	1.33	1.75	2.15	2.63	2.87	3.16	0.02	0.13	0.19	0.23
800	1.06	1.24	1.48	1.95	2.40	2.94	3.22	3.54	0.02	0.15	0.22	0.26
900	1.16	1.36	1.62	2.14	2.64	3.25	3.55	3.91	0.03	0.17	0.24	0.30
950	1.20	1.41	1.69	2.23	2.76	3.40	3.72	4.09	0.03	0.18	0.26	0.31
1000	1.25	1.47	1.75	2.33	2.88	3.55	3.88	4.27	0.03	0.19	0.27	0.33
1100	1.41	1.66	1.98	2.60	3.23	3.97	4.33	4.76	0.03	0.21	0.30	0.36
1200	1.50	1.77	2.12	2.79	3.47	4.27	4.65	5.12	0.04	0.23	0.32	0.40
1300	1.58	1.88	2.25	2.97	3.70	4.55	4.97	5.47	0.04	0.25	0.35	0.43
1400	1.67	1.98	2.37	3.14	3.92	4.84	5.28	5.81	0.04	0.27	0.38	0.46
1450	1.71	2.03	2.44	3.23	4.03	4.97	5.43	5.98	0.04	0.27	0.39	0.48
1500	1.75	2.06	2.50	3.31	4.14	5.11	5.58	6.14	0.04	0.28	0.40	0.49
1600	1.88	2.25	2.69	3.58	4.46	5.50	6.01	6.61	0.05	0.30	0.43	0.53
1700	1.97	2.35	2.81	3.75	4.68	5.77	6.31	6.94	0.05	0.32	0.46	0.56
1800	2.04	2.44	2.93	3.92	4.89	6.04	6.60	7.26	0.05	0.34	0.48	0.59
1900	2.12	2.53	3.04	4.08	5.10	6.30	6.89	7.58	0.06	0.36	0.51	0.63
2000	2.18	2.62	3.16	4.24	5.30	6.55	7.16	7.88	0.06	0.38	0.54	0.66
2100	2.32	2.78	3.35	4.48	5.60	6.92	7.57	8.33	0.06	0.40	0.56	0.69
2200	2.39	2.87	3.46	4.64	5.80	7.17	7.84	8.63	0.06	0.42	0.59	0.73
2300	2.45	2.95	3.57	4.79	5.99	7.41	8.11	8.92	0.07	0.44	0.62	0.76
2400	2.52	3.03	3.67	4.93	6.18	7.65	8.37	9.21	0.07	0.45	0.65	0.79
2500	2.58	3.11	3.77	5.08	6.37	7.88	8.62	9.48	0.07	0.47	0.67	0.82
2600	2.71	3.26	3.96	5.32	6.66	8.24	9.02	9.92	0.08	0.49	0.70	0.86
2700	2.77	3.34	4.05	5.46	6.84	8.46	9.27	10.19	0.08	0.51	0.73	0.89
2800	2.83	3.41	4.14	5.60	7.02	8.68	9.50	10.45	0.08	0.53	0.75	0.92
2850	2.85	3.45	4.19	5.66	7.10	8.79	9.62	10.58	0.08	0.54	0.77	0.94
2900	2.88	3.48	4.24	5.73	7.19	8.89	9.73	10.70	0.08	0.55	0.78	0.96
3000	2.93	3.55	4.32	5.86	7.35	9.10	9.96	10.95	0.09	0.57	0.81	0.99
3100	3.06	3.70	4.50	6.09	7.64	9.45	10.34	11.36	0.09	0.59	0.83	1.02
3200	3.10	3.77	4.59	6.22	7.80	9.66	10.56	11.59	0.09	0.61	0.86	1.05
3300	3.15	3.83	4.67	6.34	7.96	9.84	10.76	11.90	0.10	0.63	0.89	1.09
3400	3.19	3.89	4.75	6.45	8.11	10.02	10.96	12.12	0.10	0.64	0.91	1.12
3500	3.23	3.95	4.83	6.57	8.25	10.20	11.16	12.33	0.10	0.66	0.94	1.15
3600	3.25	4.00	5.00	6.79	8.53	10.55	11.53	12.68	0.11	0.68	0.97	1.19
3700	3.39	4.15	5.07	6.90	8.67	10.72	11.71	12.86	0.11	0.70	0.99	1.22
3800	3.43	4.20	5.14	7.00	8.80	10.88	11.97	13.13	0.11	0.72	1.02	1.25
3900	3.46	4.25	5.21	7.10	8.93	11.04	12.14	13.31	0.11	0.74	1.05	1.29
4000	3.50	4.30	5.28	7.20	9.05	11.19	12.30	13.48	0.12	0.76	1.08	1.32
4100	3.62	4.43	5.44	7.41	9.32	11.52	12.58	13.78	0.12	0.78	1.10	1.35
4200	3.65	4.47	5.50	7.50	9.44	11.66	12.73	13.93	0.12	0.80	1.13	1.38
4300	3.68	4.52	5.56	7.64	9.61	11.87	12.95	14.18	0.13	0.81	1.16	1.42
4400	3.70	4.55	5.61	7.72	9.72	12.00	13.08	14.32	0.13	0.83	1.18	1.45
4500	3.73	4.59	5.66	7.80	9.82	12.11	13.20	14.44	0.13	0.85	1.21	1.48
4600	3.83	4.73	5.82	7.96	10.01	12.35	13.47	14.72	0.13	0.87	1.24	1.52
4700	3.85	4.76	5.87	8.03	10.10	12.45	13.58	14.83	0.14	0.89	1.26	1.55
4800	3.87	4.79	5.91	8.16	10.26	12.64	13.78	15.05	0.14	0.91	1.29	1.58
4900	3.88	4.82	5.95	8.22	10.34	12.73	13.87	15.14	0.14	0.93	1.32	1.62
5000	3.89	4.84	5.99	8.28	10.41	12.81	13.95	15.21	0.15	0.95	1.34	1.65
5100	4.00	4.97	6.15	8.43	10.60	13.04	14.19	15.47	0.15	0.97	1.37	1.68
5200	4.01	4.99	6.18	8.48	10.66	13.11	14.25	15.53	0.15	0.98	1.40	1.71
5300	4.04	5.01	6.21	8.59	10.80	13.27	14.42	15.70	0.16	1.00	1.42	1.75
5400	4.06	5.02	6.24	8.63	10.85	13.32	14.47	15.74	0.16	1.02	1.45	1.78
5500	4.09	5.03	6.28	8.67	10.90	13.36	14.50	15.76	0.16	1.04	1.48	1.81
5600	4.13	5.15	6.41	8.81	11.06	13.56	14.72	15.99	0.16	1.06	1.51	1.85
5700	4.13	5.16	6.43	8.84	11.09	13.59	14.74	15.99	0.17	1.08	1.53	1.88
5800	4.14	5.16	6.44	8.93	11.22	13.73	14.88	16.14	0.17	1.10	1.56	1.91
5900	4.15	5.18	6.45	8.95	11.24	13.74	14.88	16.15	0.17	1.12	1.59	1.94
6000	4.16	5.19	6.45	8.97	11.26	13.74	14.90	16.20	0.18	1.14	1.61	1.98
6100	4.18	5.26	6.59	9.09	11.41	13.90	15.06	16.23	0.18	1.16	1.64	2.01
6200	4.19	5.28	6.59	9.10	11.41	13.90	15.10	16.23	0.18	1.17	1.67	2.04
6300	4.20	5.28	6.60	9.18	11.51	13.96	15.14	16.25	0.18	1.19	1.69	2.08
6400	4.20	5.30	6.62	9.18	11.55	13.98	15.16	16.26	0.19	1.21	1.72	2.11
6500	4.21	5.32	6.64	9.26	11.58	13.98	15.18	16.30	0.19	1.23	1.75	2.14
6600	4.22	5.33	6.69	9.28	11.60	14.09	15.19	16.33	0.19	1.25	1.77	2.18
6700	4.22	5.34	6.69	9.30	11.62	14.11	15.19	16.29	0.20	1.27	1.80	2.21
6800	4.22	5.36	6.74	9.32	11.66	14.11	15.17	16.28	0.20	1.29	1.83	2.24
6900	4.21	5.36	6.75	9.34	11.67	14.08	15.15	16.20	0.20	1.31	1.86	2.27
7000	4.20	5.36	6.75	9.35	11.68	14.06	15.12	16.18	0.21	1.33	1.88	2.31



**Table 24:**  
**Section XPA: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	140	160	180	200	224	250	280	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	3.76	4.54	5.32	6.13	7.05	8.04	9.17	0.02	0.13	0.19	0.23
950	4.88	5.98	7.00	7.97	9.16	10.44	12.02	0.03	0.18	0.26	0.31
1450	7.13	8.71	10.19	11.66	13.37	15.16	17.17	0.04	0.27	0.39	0.48
2850	12.56	15.20	17.61	19.88	22.37	24.78	27.33	0.08	0.54	0.77	0.94
100	0.84	0.76	0.89	1.02	1.17	1.33	1.51	0.00	0.02	0.03	0.03
200	1.18	1.41	1.65	1.90	2.18	2.48	2.82	0.01	0.04	0.05	0.07
300	1.69	2.01	2.40	2.72	3.13	3.57	4.05	0.01	0.06	0.08	0.10
400	2.16	2.59	3.17	3.67	4.22	4.82	5.49	0.01	0.08	0.11	0.13
500	2.62	3.14	3.86	4.47	5.14	5.87	6.69	0.01	0.09	0.13	0.16
600	3.29	3.97	4.65	5.24	6.03	6.89	7.84	0.02	0.11	0.16	0.20
700	3.76	4.54	5.32	6.13	7.05	8.04	9.17	0.02	0.13	0.19	0.23
800	4.21	5.16	6.04	6.88	7.91	9.02	10.28	0.02	0.15	0.22	0.26
900	4.66	5.71	6.68	7.61	8.75	9.97	11.49	0.03	0.17	0.24	0.30
950	4.88	5.98	7.00	7.97	9.16	10.44	12.02	0.03	0.18	0.26	0.31
1000	5.09	6.24	7.31	8.46	9.73	11.08	12.81	0.03	0.19	0.27	0.33
1100	5.67	6.86	8.04	9.17	10.54	11.99	13.63	0.03	0.21	0.30	0.36
1200	6.10	7.36	8.65	9.86	11.32	12.88	14.82	0.04	0.23	0.32	0.40
1300	6.52	7.96	9.32	10.67	12.25	13.92	15.80	0.04	0.25	0.35	0.43
1400	6.93	8.46	9.90	11.33	13.00	14.76	16.72	0.04	0.27	0.38	0.46
1450	7.13	8.71	10.19	11.66	13.37	15.16	17.17	0.04	0.27	0.39	0.48
1500	7.33	8.95	10.47	11.98	13.73	15.56	17.61	0.04	0.28	0.40	0.49
1600	7.88	9.54	11.16	12.75	14.61	16.56	18.73	0.05	0.30	0.43	0.53
1700	8.27	10.01	11.71	13.36	15.30	17.31	19.54	0.05	0.32	0.46	0.56
1800	8.66	10.55	12.33	13.96	15.96	18.03	20.30	0.05	0.34	0.48	0.59
1900	9.03	11.00	12.85	14.71	16.81	18.98	21.35	0.06	0.36	0.51	0.63
2000	9.40	11.44	13.35	15.27	17.43	19.64	22.03	0.06	0.38	0.54	0.66
2100	9.92	11.99	14.00	15.81	18.01	20.25	22.86	0.06	0.40	0.56	0.69
2200	10.28	12.41	14.48	16.53	18.81	21.15	23.64	0.06	0.42	0.59	0.73
2300	10.62	12.91	15.05	17.03	19.35	21.70	24.17	0.07	0.44	0.62	0.76
2400	10.96	13.31	15.50	17.51	19.85	22.21	24.65	0.07	0.45	0.65	0.79
2500	11.28	13.69	15.92	18.19	20.62	23.04	25.55	0.07	0.47	0.67	0.82
2600	11.60	14.22	16.52	18.63	21.07	23.47	25.92	0.08	0.49	0.70	0.86
2700	12.11	14.58	16.92	19.04	21.48	23.85	26.22	0.08	0.51	0.73	0.89
2800	12.42	15.03	17.43	19.69	22.19	24.62	27.03	0.08	0.53	0.75	0.92
2850	12.56	15.20	17.61	19.88	22.37	24.78	27.33	0.08	0.54	0.77	0.94
2900	12.71	15.37	17.79	20.06	22.54	24.92	27.22	0.08	0.55	0.78	0.96
3000	12.99	15.69	18.13	20.40	22.86	25.17	27.33	0.09	0.57	0.81	0.99
3100	13.49	16.18	18.69	21.01	23.52	25.87		0.09	0.59	0.83	1.02
3200	13.76	16.48	19.00	21.30	23.77	26.00		0.09	0.61	0.86	1.05
3300	14.11	16.88	19.44	21.57	23.97	26.13		0.10	0.63	0.89	1.09
3400	14.36	17.15	19.71	22.14	24.58	26.75		0.10	0.64	0.91	1.12
3500	14.59	17.40	19.85	22.35	24.71	26.75		0.10	0.66	0.94	1.15
3600	14.97	17.84	20.45	22.53	24.80			0.11	0.68	0.97	1.19
3700	15.19	18.06	20.65	23.05	25.80			0.11	0.70	0.99	1.22
3800	15.50	18.42	21.03	23.17	25.81			0.11	0.72	1.02	1.25
3900	15.69	18.61	21.19	23.26	25.82			0.11	0.74	1.05	1.29
4000	15.87	18.78	21.31	23.74	25.82			0.12	0.76	1.08	1.32
4100	16.23	19.18	21.76	23.77				0.12	0.78	1.10	1.35
4200	16.39	19.32	21.84	23.90				0.12	0.80	1.13	1.38
4300	16.66	19.62	22.15	24.19				0.13	0.81	1.16	1.42
4400	16.79	19.72	22.18	24.12				0.13	0.83	1.18	1.45
4500	16.91	19.80	22.19	24.00				0.13	0.85	1.21	1.48
4600	17.23	20.16	22.58					0.13	0.87	1.24	1.52
4700	17.32	20.20	22.60					0.14	0.89	1.26	1.55
4800	17.56	20.44	22.73					0.14	0.91	1.29	1.58
4900	17.63	20.44	22.63					0.14	0.93	1.32	1.62
5000	17.88	20.60	22.49					0.15	0.95	1.34	1.65
5100	17.97	20.70						0.15	0.97	1.37	1.68
5200	17.99	20.80						0.15	0.98	1.40	1.71
5300	18.18	20.85						0.16	1.00	1.42	1.75
5400	18.18	20.85						0.16	1.02	1.45	1.78
5500	18.22	20.62						0.16	1.04	1.48	1.81
5600	18.30							0.16	1.06	1.51	1.85
5700	18.35							0.17	1.08	1.53	1.88
5800	18.49							0.17	1.10	1.56	1.91
5900	18.50							0.17	1.12	1.59	1.94
6000	18.40							0.18	1.14	1.61	1.98
6100	18.35							0.18	1.16	1.64	2.01
6200	18.32							0.18	1.17	1.67	2.04
6300	18.31							0.18	1.19	1.69	2.08
6400	18.30							0.19	1.21	1.72	2.11
6500	18.25							0.19	1.23	1.75	2.14

**Table 25:**  
**Section XPB/5VX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)								Additional Power (kW) per belt for speed ratio			
	112	118	125	132	140	150	160	180	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	2.87	3.26	3.71	4.16	4.66	5.32	5.96	7.24	0.04	0.29	0.41	0.50
950	3.75	4.27	4.87	5.47	6.16	7.01	7.86	9.56	0.06	0.39	0.55	0.68
1450	5.51	6.28	7.17	8.07	9.09	10.36	11.61	14.11	0.09	0.59	0.84	1.03
2850	9.73	11.14	12.76	14.37	16.18	18.39	20.57	24.77	0.18	1.17	1.65	2.03
100	0.48	0.54	0.61	0.67	0.75	0.85	0.95	1.14	0.01	0.04	0.06	0.07
200	0.90	1.01	1.15	1.27	1.42	1.62	1.81	2.18	0.01	0.08	0.12	0.14
300	1.29	1.46	1.66	1.84	2.06	2.36	2.64	3.18	0.02	0.12	0.17	0.21
400	1.72	1.95	2.21	2.47	2.78	3.15	3.53	4.27	0.03	0.16	0.23	0.28
500	2.10	2.38	2.70	3.03	3.41	3.87	4.34	5.25	0.03	0.20	0.29	0.36
600	2.47	2.81	3.19	3.57	4.03	4.57	5.13	6.21	0.04	0.25	0.35	0.43
700	2.87	3.26	3.71	4.16	4.66	5.32	5.96	7.24	0.04	0.29	0.41	0.50
800	3.23	3.67	4.18	4.69	5.28	6.01	6.73	8.18	0.05	0.33	0.46	0.57
900	3.58	4.07	4.64	5.21	5.87	6.68	7.49	9.10	0.06	0.37	0.52	0.64
950	3.75	4.27	4.87	5.47	6.16	7.01	7.86	9.56	0.06	0.39	0.55	0.68
1000	3.97	4.51	5.15	5.78	6.51	7.41	8.30	10.09	0.06	0.41	0.58	0.71
1100	4.31	4.90	5.60	6.29	7.09	8.07	9.04	10.99	0.07	0.45	0.64	0.78
1200	4.65	5.29	6.04	6.79	7.65	8.71	9.76	11.87	0.08	0.49	0.70	0.85
1300	5.02	5.72	6.53	7.34	8.27	9.42	10.56	12.83	0.08	0.53	0.75	0.93
1400	5.35	6.10	6.96	7.83	8.82	10.06	11.27	13.68	0.09	0.57	0.81	1.00
1450	5.51	6.28	7.17	8.07	9.09	10.36	11.61	14.11	0.09	0.59	0.84	1.03
1500	5.67	6.46	7.38	8.31	9.36	10.67	11.96	14.52	0.09	0.61	0.87	1.07
1600	6.02	6.87	7.86	8.84	9.98	11.35	12.73	15.45	0.10	0.65	0.93	1.14
1700	6.33	7.23	8.27	9.30	10.48	11.85	13.40	16.26	0.11	0.70	0.99	1.21
1800	6.63	7.58	8.67	9.76	11.00	12.63	14.05	17.04	0.11	0.74	1.05	1.28
1900	6.99	7.98	9.14	10.28	11.58	13.20	14.79	17.94	0.12	0.78	1.10	1.35
2000	7.28	8.32	9.53	10.72	12.08	13.76	15.42	18.69	0.13	0.82	1.16	1.42
2100	7.57	8.65	9.91	11.15	12.56	14.31	16.03	19.42	0.13	0.86	1.22	1.50
2200	7.91	9.04	10.35	11.66	13.13	14.96	16.76	20.29	0.14	0.90	1.28	1.57
2300	8.19	9.36	10.72	12.07	13.60	15.49	17.35	20.98	0.15	0.94	1.34	1.64
2400	8.45	9.67	11.07	12.48	14.05	16.00	17.91	21.65	0.15	0.98	1.39	1.71
2500	8.78	10.05	11.51	12.96	14.60	16.62	18.61	22.48	0.16	1.02	1.45	1.78
2600	9.04	10.35	11.85	13.34	15.03	17.11	19.15	23.10	0.16	1.06	1.51	1.85
2700	9.29	10.64	12.18	13.72	15.45	17.58	19.66	23.70	0.17	1.10	1.57	1.92
2800	9.61	11.00	12.60	14.19	15.98	18.17	20.33	24.40	0.18	1.15	1.63	1.99
2850	9.73	11.14	12.76	14.37	16.18	18.39	20.57	24.77	0.18	1.17	1.65	2.03
2900	9.85	11.27	12.91	14.54	16.37	18.61	20.81	25.04	0.18	1.19	1.68	2.06
3000	10.08	11.54	13.22	14.88	16.75	19.03	21.27	25.56	0.19	1.23	1.74	2.14
3100	10.38	11.89	13.62	15.33	17.26	19.61	21.91	26.32	0.20	1.27	1.80	2.21
3200	10.60	12.14	13.91	15.65	17.61	20.00	22.33	26.79	0.20	1.31	1.86	2.28
3300	10.80	12.38	14.18	15.95	17.95	20.38	22.74	27.22	0.21	1.35	1.92	2.35
3400	11.09	12.71	14.57	16.39	18.44	20.93	23.35	27.93	0.22	1.39	1.97	2.42
3500	11.28	12.93	14.82	16.67	18.75	21.27	23.71	28.31	0.22	1.43	2.03	2.49
3600	11.46	13.14	15.07	16.94	19.05	21.58	24.05	28.65	0.23	1.47	2.09	2.56
3700	11.75	13.47	15.43	17.36	19.51	22.12	24.62	29.32	0.23	1.51	2.15	2.63
3800	11.92	13.66	15.65	17.60	19.78	22.40	24.91	29.60	0.24	1.55	2.21	2.71
3900	12.07	13.85	15.86	17.83	20.02	22.67	25.18	29.85	0.25	1.60	2.26	2.78
4000	12.34	14.15	16.21	18.21	20.46	23.16	25.73	30.47	0.25	1.64	2.32	2.85
4100	12.48	14.31	16.39	18.43	20.68	23.38	25.95	30.65	0.26	1.68	2.38	2.92
4200	12.61	14.46	16.56	18.62	20.87	23.58	26.14	30.70	0.27	1.72	2.44	2.99
4300	12.87	14.75	16.90	18.99	21.29	24.04	26.64	31.37	0.27	1.76	2.50	3.06
4400	12.98	14.88	17.05	19.15	21.45	24.20	26.78	31.44	0.28	1.80	2.56	3.13
4500	13.08	15.00	17.18	19.29	21.59	24.33	26.89	31.47	0.28	1.84	2.61	3.20
4600	13.32	15.28	17.49	19.63	21.96	24.76	27.36	31.67	0.29	1.88	2.67	3.28
4700	13.40	15.38	17.60	19.74	22.09	24.85	27.42	31.77	0.30	1.92	2.73	3.35
4800	13.47	15.46	17.68	19.83	22.17	24.91	27.45	31.84	0.30	1.96	2.79	3.42
4900	13.70	15.71	17.98	20.16	22.53	25.31	27.80	32.30	0.31	2.00	2.85	3.49
5000	13.75	15.77	18.04	20.22	22.58	25.33	27.85	32.13	0.32	2.05	2.90	3.56
5100	13.79	15.81	18.09	20.26	22.60	25.46	27.90		0.32	2.09	2.96	3.63
5200	14.00	16.06	18.36	20.56	22.93	25.53	28.17		0.33	2.13	3.02	3.70
5300	14.02	16.08	18.38	20.57	23.03	25.62	28.20		0.34	2.17	3.08	3.77
5400	14.02	16.09	18.38	20.70	23.11	25.72	28.23		0.34	2.21	3.14	3.84
5500	14.10	16.30	18.63	20.83	23.17	25.86	28.22		0.35	2.25	3.19	3.92
5600	14.20	16.35	18.65	20.88	23.22				0.35	2.29	3.25	3.99
5700	14.22	16.40	18.70	20.93	23.24				0.36	2.33	3.31	4.06
5800	14.34	16.45	18.77	20.95	23.25				0.37	2.37	3.37	4.13
5900	14.37	16.47	18.80	20.96	23.24				0.37	2.41	3.43	4.20
6000	14.38	16.49	18.80	20.95	23.20				0.38	2.45	3.48	4.27



**Table 25:**  
**Section XPB/5VX: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)						Additional Power (kW) per belt for speed ratio				
	200	224	250	280	315	355	400	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	8.50	10.01	11.64	13.50	15.65	18.07	20.76	0.04	0.29	0.41	0.50
950	11.22	13.21	15.35	17.77	20.55	23.65	27.05	0.06	0.39	0.55	0.68
1450	16.56	19.44	22.49	25.93	29.80	34.02	38.48	0.09	0.59	0.84	1.03
2850	28.75	33.20	37.61	42.08	46.37			0.18	1.17	1.65	2.03
100	1.34	1.57	1.82	2.11	2.45	2.83	3.26	0.01	0.04	0.06	0.07
200	2.57	3.01	3.50	4.06	4.72	5.46	6.29	0.01	0.08	0.12	0.14
300	3.75	4.41	5.12	5.95	6.92	8.00	9.21	0.02	0.12	0.17	0.21
400	5.01	5.90	6.86	7.96	9.23	10.66	12.30	0.03	0.16	0.23	0.28
500	6.16	7.26	8.45	9.80	11.36	13.14	15.12	0.03	0.20	0.29	0.36
600	7.30	8.60	10.00	11.60	13.44	15.53	17.86	0.04	0.25	0.35	0.43
700	8.50	10.01	11.64	13.50	15.65	18.07	20.76	0.04	0.29	0.41	0.50
800	9.60	11.31	13.15	15.24	17.65	20.36	23.35	0.05	0.33	0.46	0.57
900	10.69	12.58	14.62	16.94	19.60	22.57	25.84	0.06	0.37	0.52	0.64
950	11.22	13.21	15.35	17.77	20.55	23.65	27.05	0.06	0.39	0.55	0.68
1000	11.85	13.95	16.20	18.76	21.70	24.99	28.59	0.06	0.41	0.58	0.71
1100	12.90	15.18	17.62	20.39	23.55	27.07	30.89	0.07	0.45	0.64	0.78
1200	13.93	16.39	19.00	21.96	25.33	29.06	33.07	0.08	0.49	0.70	0.85
1300	15.06	17.71	20.53	23.72	27.34	31.33	35.63	0.08	0.53	0.75	0.93
1400	16.06	18.87	21.85	25.21	29.00	33.15	37.57	0.09	0.57	0.81	1.00
1450	16.56	19.44	22.49	25.93	29.80	34.02	38.48	0.09	0.59	0.84	1.03
1500	17.03	19.99	23.13	26.64	30.58	34.86	39.35	0.09	0.61	0.87	1.07
1600	18.12	21.27	24.59	28.31	32.48	36.96	41.70	0.10	0.65	0.93	1.14
1700	19.05	22.34	25.79	29.64	33.92	38.48	43.20	0.11	0.70	0.99	1.21
1800	19.96	23.38	26.95	30.90	35.27	39.86	45.12	0.11	0.74	1.05	1.28
1900	21.01	24.60	28.35	32.49	37.03	41.82	46.61	0.12	0.78	1.10	1.35
2000	21.87	25.57	29.42	33.63	38.21	42.96	47.58	0.13	0.82	1.16	1.42
2100	22.70	26.50	30.43	34.70	39.28	44.52	49.16	0.13	0.86	1.22	1.50
2200	23.71	27.67	31.75	36.18	40.91	45.69	50.18	0.14	0.90	1.28	1.57
2300	24.49	28.53	32.67	37.11	41.79	46.40		0.15	0.94	1.34	1.64
2400	25.23	29.35	33.52	37.96	43.08	47.69		0.15	0.98	1.39	1.71
2500	26.20	30.45	34.78	39.32	44.02	48.49		0.16	1.02	1.45	1.78
2600	26.89	31.18	35.50	40.01	44.56			0.16	1.06	1.51	1.85
2700	27.54	31.87	36.18	41.08	45.62			0.17	1.10	1.57	1.92
2800	28.45	32.90	37.32	41.85	46.27			0.18	1.15	1.63	1.99
2850	28.75	33.20	37.61	42.08	46.37			0.18	1.17	1.65	2.03
2900	29.04	33.49	37.87	42.28	46.43			0.18	1.19	1.68	2.06
3000	29.58	34.03	38.35	43.17				0.19	1.23	1.74	2.14
3100	30.45	35.00	39.40					0.20	1.27	1.80	2.21
3200	30.93	35.44	39.74					0.20	1.31	1.86	2.28
3300	31.38	35.82	40.49					0.21	1.35	1.92	2.35
3400	32.16	36.72	40.94					0.22	1.38	1.97	2.42
3500	32.52	36.99	41.05					0.22	1.43	2.03	2.49
3600	32.83	37.20						0.23	1.47	2.09	2.56
3700	33.57	38.00						0.23	1.51	2.15	2.63
3800	33.80	38.30						0.24	1.55	2.21	2.71
3900	33.97	38.50						0.25	1.60	2.26	2.78
4000	34.85	38.94						0.25	1.64	2.32	2.85
4100	34.74							0.26	1.68	2.38	2.92
4200	34.77							0.27	1.72	2.44	2.99
4300	35.38							0.27	1.78	2.50	3.06
4400	35.54							0.28	1.80	2.56	3.13
4500	35.66							0.28	1.84	2.61	3.20

**Table 26:**  
**Section XPC: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW per belt for speed ratio			
	180	200	224	250	280	315	335	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	9.37	11.25	13.49	15.89	18.65	21.84	23.64	0.08	0.49	0.70	0.85
950	12.53	15.04	18.01	21.21	24.84	29.02	31.37	0.10	0.67	0.95	1.16
1450	18.48	22.12	26.43	30.97	36.06	41.77	44.91	0.16	1.02	1.44	1.77
2850	31.78	37.48	43.75	49.78	55.81			0.31	2.00	2.84	3.48
50	0.73	0.87	1.04	1.23	1.44	1.69	1.83	0.01	0.04	0.05	0.06
100	1.42	1.70	2.03	2.41	2.82	3.31	3.59	0.01	0.07	0.10	0.12
150	2.10	2.51	3.00	3.56	4.17	4.90	5.31	0.02	0.11	0.15	0.18
200	2.81	3.36	4.03	4.74	5.57	6.53	7.06	0.02	0.14	0.20	0.24
250	3.48	4.16	5.00	5.88	6.91	8.10	8.78	0.03	0.18	0.25	0.31
300	4.14	4.96	5.95	7.00	8.23	9.66	10.47	0.03	0.21	0.30	0.37
350	4.82	5.78	6.93	8.17	9.60	11.26	12.20	0.04	0.25	0.35	0.43
400	5.47	6.57	7.87	9.28	10.91	12.79	13.86	0.04	0.28	0.40	0.49
450	6.12	7.35	8.81	10.39	12.21	14.31	15.50	0.05	0.32	0.45	0.55
500	6.80	8.16	9.78	11.53	13.55	15.88	17.21	0.05	0.35	0.50	0.61
550	7.44	8.93	10.71	12.62	14.83	17.37	18.82	0.06	0.39	0.55	0.67
600	8.08	9.70	11.62	13.70	16.09	18.85	20.42	0.07	0.42	0.60	0.73
650	8.74	10.49	12.58	14.83	17.41	20.39	22.06	0.07	0.46	0.65	0.79
700	9.37	11.25	13.49	15.89	18.65	21.84	23.64	0.08	0.49	0.70	0.85
750	9.99	12.00	14.38	16.95	19.88	23.26	25.17	0.08	0.53	0.75	0.92
800	10.66	12.79	15.33	18.06	21.18	24.78	26.81	0.09	0.56	0.80	0.98
850	11.28	13.53	16.21	19.10	22.38	26.17	28.30	0.09	0.60	0.85	1.04
900	11.89	14.26	17.09	20.12	23.57	27.54	29.77	0.10	0.63	0.90	1.10
950	12.53	15.04	18.01	21.21	24.84	29.02	31.37	0.10	0.67	0.95	1.16
1000	13.13	15.78	18.87	22.21	26.00	30.35	32.79	0.11	0.70	1.00	1.22
1050	13.73	16.48	19.72	23.20	27.14	31.65	34.18	0.11	0.74	1.05	1.28
1100	14.37	17.24	20.64	24.27	28.39	33.10	35.73	0.12	0.77	1.10	1.34
1150	14.96	17.94	21.47	25.24	29.50	34.38	37.06	0.12	0.81	1.15	1.40
1200	15.54	18.63	22.29	26.18	30.58	35.59	38.36	0.13	0.84	1.20	1.47
1250	16.17	19.38	23.19	27.23	31.81	36.99	39.88	0.14	0.88	1.25	1.53
1300	16.74	20.06	23.99	28.15	32.88	38.17	41.12	0.14	0.91	1.29	1.59
1350	17.31	20.73	24.78	29.06	33.89	39.31	42.32	0.15	0.95	1.34	1.65
1400	17.93	21.47	25.66	30.09	35.07	40.68	43.78	0.15	0.98	1.39	1.71
1450	18.48	22.12	26.43	30.97	36.06	41.77	44.91	0.16	1.02	1.44	1.77
1500	19.03	22.77	27.18	31.83	37.02	42.82	46.00	0.16	1.05	1.49	1.83
1550	19.64	23.50	28.04	32.84	38.18	44.14	47.41	0.17	1.09	1.54	1.89
1600	20.17	24.13	28.77	33.67	39.10	45.13	48.42	0.17	1.12	1.59	1.95
1650	20.70	24.75	29.49	34.48	39.99	46.08	49.39	0.18	1.16	1.64	2.02
1700	21.29	25.46	30.34	35.45	41.11	47.38	50.74	0.18	1.19	1.69	2.08
1750	21.80	26.06	31.03	36.22	41.95	48.24	51.63	0.19	1.23	1.74	2.14
1800	22.81	26.65	31.71	36.98	42.76	49.08	52.48	0.20	1.30	1.79	2.20
1850	22.90	27.35	32.53	37.93	43.86	50.30	53.75	0.20	1.33	1.84	2.26
1900	23.39	27.92	33.18	38.64	44.81	51.07	54.50	0.21	1.37	1.89	2.32
1950	23.87	28.48	33.81	39.34	45.54	51.79	55.19	0.21	1.40	1.94	2.38
2000	24.44	29.16	34.61	40.26	46.38	52.95	56.40	0.22	1.44	1.99	2.44
2050	24.90	29.70	35.21	40.91	47.05	53.59	57.00	0.22	1.47	2.04	2.50
2100	25.38	30.22	35.80	41.54	47.69	54.18	57.53	0.23	1.51	2.09	2.56
2150	25.93	30.88	36.58	42.42	48.69	55.29	58.68	0.23	1.54	2.14	2.63
2200	26.37	31.38	37.13	43.00	49.27	55.88	59.12	0.24	1.58	2.19	2.69
2250	26.80	31.87	37.67	43.56	49.81	56.25	59.49	0.24	1.61	2.24	2.75
2300	27.35	32.52	38.42	44.42	50.76	57.29	60.56	0.25	1.65	2.29	2.81
2350	27.76	32.98	38.92	44.93	51.23	57.65	60.82	0.26	1.68	2.34	2.87
2400	28.16	33.43	39.40	45.41	51.67	57.98	61.57	0.26	1.72	2.39	2.93
2450	28.69	34.08	40.14	46.24	52.58	58.93	62.00	0.27	1.75	2.44	2.99
2500	29.07	34.48	40.59	46.67	52.95	59.14	62.08	0.27	1.79	2.49	3.05
2550	29.44	34.89	41.01	47.08	53.27	59.29		0.28	1.82	2.54	3.11
2600	29.97	35.95	41.71	47.86	54.13	60.18		0.28	1.86	2.59	3.18
2650	30.32	36.34	42.10	48.21	54.38	60.23		0.29	1.89	2.64	3.24
2700	30.66	36.71	42.46	48.53	54.59	60.80		0.29	1.93	2.69	3.30
2750	31.16	36.83	43.13	49.28	55.39	61.04		0.30	1.96	2.74	3.36
2800	31.48	37.17	43.45	49.55	55.52			0.30	2.00	2.79	3.42
2850	31.78	37.48	43.75	49.78	55.81			0.31	2.04	2.84	3.48
2900	32.28	38.05	44.40	50.48	56.35			0.31	2.06	2.89	3.54
2950	32.56	38.34	44.66	50.65	56.35			0.32	2.07	2.94	3.60
3000	32.83	38.61	44.89	50.79	56.31			0.33	2.11	2.99	3.66
3050	33.31	38.16	45.50	51.45				0.33	2.14	3.04	3.72
3100	33.66	38.40	45.69	51.53				0.34	2.18	3.09	3.79
3150	33.79	38.62	45.85	51.57				0.34	2.21	3.14	3.85
3200	34.24	40.14	46.43	52.19				0.35	2.25	3.19	3.91
3250	34.45	40.33	46.55	52.17				0.35	2.28	3.24	3.97
3300	34.64	40.49	46.63					0.36	2.32	3.29	4.03
3350	35.08	40.99	47.19					0.36	2.35	3.34	4.09
3400	35.26	41.12	47.23					0.37	2.39	3.39	4.15
3450	35.41	41.24	47.24					0.37	2.42	3.44	4.21
3500	35.83	41.71	47.75					0.38	2.46	3.49	4.27



**Table 26:**  
**Section XPC: Power Rating P (kW) for Arc of Contact 180°**

n (rpm)	Pitch diameter of the smaller pulley (mm)							Additional Power (kW) per belt for speed ratio			
	355	400	450	500	560	630	710	1.01 to 1.05	1.06 to 1.26	1.27 to 1.57	For > 1.57
700	25.43	29.41	33.75	37.99	42.94	48.49	54.54	0.08	0.49	0.70	0.85
950	33.69	38.80	44.30	49.57	55.56	62.08	68.76	0.10	0.67	0.95	1.16
1450	47.95	54.42	60.95	66.69	72.42	78.01		0.16	1.02	1.44	1.77
2850								0.31	2.00	2.84	3.48
90	1.97	2.28	2.64	2.99	3.40	3.89	4.45	0.01	0.04	0.05	0.06
100	3.86	4.47	5.18	5.87	6.67	7.63	8.73	0.01	0.07	0.10	0.12
150	5.72	6.62	7.67	8.69	9.89	11.31	12.93	0.02	0.11	0.15	0.18
200	7.63	8.86	10.22	11.58	13.21	15.09	17.24	0.02	0.14	0.20	0.24
250	9.46	10.99	12.67	14.35	16.37	18.68	21.33	0.03	0.18	0.25	0.31
300	11.28	13.09	15.09	17.09	19.47	22.21	25.33	0.03	0.21	0.30	0.37
350	13.15	15.26	17.59	19.91	22.67	25.86	29.47	0.04	0.25	0.35	0.43
400	14.94	17.33	19.96	22.58	25.69	29.27	33.30	0.04	0.28	0.40	0.49
450	16.70	19.37	22.30	25.20	28.64	32.59	37.01	0.05	0.32	0.45	0.55
500	18.53	21.48	24.73	27.94	31.75	36.10	40.97	0.05	0.35	0.50	0.61
550	20.26	23.47	27.00	30.48	34.59	39.29	44.45	0.06	0.39	0.55	0.67
600	21.97	25.43	29.23	32.95	37.34	42.30	47.77	0.07	0.42	0.60	0.73
650	23.76	27.51	31.60	35.62	40.33	45.66	51.52	0.07	0.46	0.65	0.79
700	25.43	29.41	33.75	37.99	42.94	48.49	54.54	0.08	0.49	0.70	0.85
750	27.07	31.28	35.84	40.29	45.45	51.19	57.90	0.08	0.53	0.75	0.92
800	28.62	33.29	38.14	42.85	48.31	54.39	60.86	0.09	0.56	0.80	0.98
850	30.41	35.09	40.14	45.02	50.84	56.82	63.33	0.09	0.60	0.85	1.04
900	31.97	36.84	42.08	47.11	52.80	59.63	66.31	0.10	0.63	0.90	1.10
950	33.69	38.80	44.30	49.57	55.56	62.08	68.76	0.10	0.67	0.95	1.16
1000	35.19	40.47	46.13	51.50	57.56	64.04	70.56	0.11	0.70	1.00	1.22
1050	36.66	42.10	47.88	53.34	59.93	66.53	73.09	0.11	0.74	1.05	1.28
1100	38.32	43.99	50.00	55.67	61.97	68.55	74.95	0.12	0.77	1.10	1.34
1150	39.72	45.52	51.63	57.33	63.59	69.99	75.99	0.12	0.81	1.15	1.40
1200	41.09	47.00	53.17	58.89	65.70	71.21	78.00	0.13	0.84	1.20	1.47
1250	42.70	48.82	55.19	61.07	67.39	73.66	79.17	0.14	0.88	1.25	1.53
1300	43.99	50.19	56.59	62.42	68.58	74.49		0.14	0.91	1.29	1.59
1350	45.24	51.50	57.90	64.24	70.41	76.21		0.15	0.95	1.34	1.65
1400	46.79	53.23	59.80	65.68	71.72	77.21		0.15	0.98	1.39	1.71
1450	47.95	54.42	60.95	66.69	72.42	78.01		0.16	1.02	1.44	1.77
1500	49.07	55.55	62.52	68.28	72.94			0.16	1.05	1.49	1.83
1550	50.55	57.19	63.77	69.42				0.17	1.09	1.54	1.89
1600	51.57	58.19	64.64	70.04				0.17	1.12	1.59	1.95
1650	52.55	59.10	66.03	71.38				0.18	1.16	1.64	2.02
1700	53.97	60.65	67.03	72.19				0.18	1.19	1.69	2.08
1750	54.84	61.43	67.59	72.39				0.19	1.23	1.74	2.14
1800	55.66	62.12	68.78					0.20	1.30	1.79	2.20
1850	57.00	63.67	69.52					0.20	1.33	1.84	2.26
1900	57.71	64.11	69.75					0.21	1.37	1.89	2.32
1950	58.35	65.18	70.72					0.21	1.40	1.94	2.38
2000	59.61	65.89	71.17					0.22	1.44	1.99	2.44
2050	60.14	66.18						0.22	1.47	2.04	2.50
2100	61.11	67.08						0.23	1.51	2.09	2.56
2150	61.78	67.57						0.23	1.54	2.14	2.63
2200	62.12	67.99						0.24	1.58	2.19	2.69
2250	62.96	68.31						0.24	1.61	2.24	2.75

**Table 27:  
Arc of Contact Factors (Fc)**

$\frac{D-d}{C}$	Arc of Contact on Smaller Pulley (Degrees)	Correction Factor i.e. Proportion of 180° Rating
0.00	180°	1.00
0.05	177°	1.00
0.10	174°	1.00
0.15	171°	1.00
0.20	168°	0.99
0.25	165°	0.99
0.30	162°	0.99
0.35	160°	0.99
0.40	156°	0.99
0.45	153°	0.98
0.50	150°	0.98
0.55	147°	0.98
0.60	144°	0.98
0.65	141°	0.97
0.70	139°	0.97
0.75	136°	0.97
0.80	133°	0.96
0.85	130°	0.96
0.90	126°	0.96
0.95	123°	0.95
1.00	119°	0.94
1.05	115°	0.94
1.10	112°	0.93
1.15	109°	0.93
1.20	106°	0.92
1.25	103°	0.91
1.30	100°	0.91
1.35	96°	0.90
1.40	92°	0.88
1.45	88°	0.87
1.50	84°	0.86
1.55	80°	0.84
1.60	77°	0.83



**Table 28:**  
**Pitch Length Correction Factors (Fd)**

Section: Z/ZX		Section: A/AX		Section: B/BX		Section: C/CX	
Pitch Length (mm)	Fd	Pitch Length (mm)	Fd	Pitch Length (mm)	Fd	Pitch Length (mm)	Fd
422	0.86	860	0.80	900	0.81	1458	0.80
447	0.87	740	0.82	990	0.83	1558	0.81
472	0.88	780	0.83	1040	0.84	1658	0.83
497	0.89	830	0.85	1100	0.85	1858	0.85
522	0.90	880	0.86	1140	0.85	1958	0.86
552	0.92	930	0.87	1220	0.87	2058	0.87
582	0.93	980	0.88	1290	0.88	2178	0.88
622	0.94	1030	0.89	1360	0.89	2298	0.89
652	0.95	1090	0.90	1440	0.90	2418	0.90
692	0.96	1150	0.91	1540	0.92	2558	0.92
732	0.98	1210	0.92	1640	0.93	2708	0.93
822	1.00	1280	0.94	1740	0.94	2858	0.94
847	1.01	1350	0.95	1840	0.95	3058	0.95
887	1.02	1430	0.96	1940	0.97	3208	0.96
922	1.02	1530	0.97	2040	0.98	3608	0.99
947	1.03	1630	0.99	2160	0.99	3808	1.00
997	1.04	1730	1.00	2280	1.00	4058	1.01
1022	1.05	1830	1.01	2400	1.01	4308	1.03
1082	1.06	1930	1.02	2500	1.03	4558	1.04
1142	1.07	2030	1.03	2690	1.04	4808	1.05
1172	1.08	2150	1.05	2840	1.05	5058	1.06
1202	1.08	2270	1.06	3040	1.06	5358	1.07
1272	1.10	2390	1.07	3190	1.07	5658	1.09
1342	1.11	2530	1.08	3390	1.09	6058	1.10
1422	1.12	2680	1.10	3590	1.10	6358	1.11
1522	1.14	2830	1.11	3790	1.11	6758	1.13
1622	1.15	3030	1.12	4040	1.13	7158	1.14
		3180	1.14	4290	1.14	7558	1.15
		3380	1.15	4540	1.15	8058	1.17
		3780	1.17	4790	1.17	8658	1.19
		4030	1.19	5040	1.18	10058	1.22
		4530	1.22	5340	1.19		
		5030	1.24	5640	1.20		
				6040	1.22		
				6340	1.23		

Section: D		Section: E		Section: SPZ/XPZ	
Pitch Length (mm)	Fd	Pitch Length (mm)	Fd	Pitch Length (mm)	Fd
3225	0.86	4830	0.90	635	0.83
3425	0.87	5080	0.93	675	0.84
3625	0.88	5380	0.94	715	0.85
3825	0.89	5680	0.95	755	0.86
4075	0.91	6080	0.96	805	0.87
4325	0.92	6390	0.97	855	0.88
4575	0.93	6780	0.99	905	0.89
4825	0.94	7180	1.00	955	0.90
5075	0.95	7590	1.01	1005	0.91
5375	0.96	8090	1.03	1065	0.92
5675	0.98	8580	1.04	1125	0.93
6075	0.99	9080	1.05	1185	0.94
6375	1.00	9590	1.06	1255	0.95
6775	1.01	10090	1.07	1325	0.96
7175	1.03	10680	1.09	1405	0.98
7575	1.04	11280	1.10	1505	0.99
8075	1.05	11880	1.11	1605	1.00
8575	1.06	12580	1.12	1705	1.01
9075	1.08	13280	1.14	1805	1.02
9575	1.09	14080	1.15	1905	1.03
10075	1.10	15080	1.17	2005	1.04
10675	1.11	16080	1.18	2125	1.05
11275	1.13			2245	1.06
11875	1.14			2365	1.07
12575	1.15			2505	1.08
13275	1.16			2655	1.09
14075	1.18			2805	1.10
15075	1.19			3005	1.11
16075	1.21			3155	1.12
				3355	1.13
				3555	1.15
				3755	1.16
				4005	1.17
				4255	1.18
				4505	1.19

**Table 28:**  
**Pitch Length Correction Factors (Fd)**

**Section: SPA/XPA**

Pitch Length (mm)	Fd
805	0.81
855	0.82
905	0.83
955	0.84
1005	0.85
1065	0.86
1125	0.88
1185	0.87
1255	0.88
1325	0.89
1405	0.90
1505	0.91
1605	0.92
1705	0.93
1805	0.94
1905	0.95
2005	0.96
2125	0.97
2245	0.98
2365	0.99
2505	1.00
2655	1.01
2805	1.02
3005	1.03
3155	1.04
3355	1.05
3555	1.06
3755	1.07
4005	1.08
4255	1.09
4505	1.10
4755	1.11
5005	1.12
5305	1.13
5605	1.14
6005	1.15

**Section: SPB/XPB**

Pitch Length (mm)	Fd
1255	0.83
1325	0.84
1405	0.85
1505	0.86
1605	0.87
1705	0.88
1805	0.89
1905	0.90
2005	0.91
2125	0.92
2245	0.93
2365	0.93
2505	0.94
2655	0.95
2805	0.96
3005	0.97
3155	0.98
3355	0.99
3555	1.00
3755	1.01
4005	1.02
4255	1.03
4505	1.04
4705	1.04
5005	1.05
5305	1.06
5605	1.07
6005	1.08
6305	1.09
6705	1.10
7105	1.11
7505	1.12
8005	1.13
8505	1.14
9005	1.15
9505	1.16
10000	1.17

**Section: SPC/XPC**

Pitch Length (mm)	Fd
2005	0.85
2125	0.86
2245	0.86
2365	0.87
2505	0.88
2655	0.89
2805	0.90
3005	0.91
3155	0.91
3355	0.92
3555	0.93
3755	0.94
4005	0.95
4255	0.96
4505	0.97
4755	0.98
5005	0.98
5305	0.99
5605	1.00
6005	1.01
6305	1.02
6705	1.03
7105	1.04
7505	1.04
8005	1.05
8505	1.06
9005	1.07
9505	1.08
10005	1.09
10605	1.09
11205	1.10
11805	1.11
12505	1.12
13205	1.13
14005	1.14
15005	1.15

**Section: 3V/3VX**

Belt Reference	Outside Length (mm)	Fd
3V 270	686	0.84
3V 285	724	0.85
3V 305	775	0.86
3V 320	813	0.87
3V 340	864	0.88
3V 360	914	0.90
3V 380	965	0.91
3V 405	1029	0.92
3V 430	1082	0.93
3V 455	1156	0.94
3V 480	1219	0.95
3V 505	1283	0.96
3V 535	1359	0.97
3V 565	1435	0.98
3V 605	1537	0.99
3V 635	1613	1.00
3V 675	1715	1.01
3V 715	1816	1.02
3V 755	1918	1.03
3V 805	2045	1.04
3V 855	2172	1.05
3V 905	2299	1.07
3V 955	2426	1.07
3V 1005	2553	1.08
3V 1065	2705	1.09
3V 1125	2858	1.11
3V 1185	3010	1.11
3V 1255	3188	1.13
3V 1325	3366	1.14
3V 1405	3569	1.15
3V 1505	3823	1.16
3V 1605	4077	1.17
3V 1705	4331	1.18
3V 1805	4585	1.19
3V 1905	4839	1.20
3V 2005	5093	1.21

**Section: 5V/5VX**

Belt Reference	Outside Length (mm)	Fd	Belt Reference	Outside Length (mm)	Fd
5V 505	1283	0.84	5V 1505	3823	1.01
5V 535	1359	0.85	5V 1605	4077	1.02
5V 565	1435	0.85	5V 1705	4331	1.03
5V 605	1537	0.87	5V 1805	4585	1.04
5V 635	1613	0.87	5V 1905	4839	1.05
5V 675	1715	0.88	5V 2005	5093	1.06
5V 715	1816	0.89	5V 2125	5398	1.07
5V 755	1918	0.90	5V 2245	5702	1.07
5V 805	2045	0.91	5V 2365	6007	1.08
5V 855	2172	0.92	5V 2505	6363	1.09
5V 905	2299	0.93	5V 2655	6744	1.10
5V 955	2426	0.94	5V 2805	7125	1.11
5V 1005	2553	0.95	5V 3005	7633	1.12
5V 1065	2705	0.96	5V 3155	8014	1.13
5V 1125	2858	0.96	5V 3355	8522	1.14
5V 1185	3010	0.97	5V 3555	9030	1.15
5V 1255	3188	0.98	5V 3755	9538	1.16
5V 1325	3366	0.99	5V 4005	10173	1.17
5V 1405	3569	1.00			

**Section: 8V**

Belt Reference	Outside Length (mm)	Fd	Belt Reference	Outside Length (mm)	Fd
8V 1005	2553	0.87	8V 2655	6744	1.01
8V 1065	2705	0.87	8V 2805	7125	1.02
8V 1125	2858	0.88	8V 3005	7633	1.03
8V 1185	3010	0.89	8V 3155	8014	1.03
8V 1255	3188	0.90	8V 3355	8522	1.04
8V 1325	3366	0.91	8V 3555	9030	1.05
8V 1405	3569	0.92	8V 3755	9538	1.06
8V 1505	3823	0.93	8V 4005	10173	1.07
8V 1605	4077	0.93	8V 4255	10808	1.08
8V 1705	4331	0.94	8V 4505	11443	1.09
8V 1805	4585	0.95	8V 4755	12078	1.09
8V 1905	4839	0.96	8V 5005	12713	1.10
8V 2005	5093	0.97	8V 5305	13475	1.11
8V 2125	5398	0.98	8V 5605	14237	1.12
8V 2245	5702	0.98	8V 6005	15253	1.13
8V 2365	6007	0.99	8V 6305	16015	1.13
8V 2505	6363	1.00			



**Table 29:**  
**Installation & Take-up Allowances**

Pitch Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)								
		8	Z/ZX	A/AX	B/BX	20	C/CX	25	D	E
200	5	-	-	-	-	-	-	-	-	-
>200 ≤ 250	5	-	-	-	-	-	-	-	-	-
>250 ≤ 315	5	10	10	-	-	-	-	-	-	-
>315 ≤ 670	10	10	10	10	10	-	-	-	-	-
>670 ≤ 1000	15	10	15	15	15	-	-	-	-	-
>1000 ≤ 1250	20	15	15	15	15	20	20	-	-	-
>1250 ≤ 1800	25	15	20	20	20	20	25	25	-	-
>1800 ≤ 2240	25	20	20	20	20	25	25	30	35	-
>2240 ≤ 3000	35	-	20	20	20	25	30	30	35	40
>3000 ≤ 4000	45	-	20	20	20	25	30	30	35	40
>4000 ≤ 5000	55	-	20	20	20	30	30	30	35	40
>5000 ≤ 6300	70	-	-	20	25	35	35	35	40	45
>6300 ≤ 8000	85	-	-	20	25	40	40	40	45	50
>8000 ≤ 10000	110	-	-	25	25	40	45	45	45	50
>10000 ≤ 12500	135	-	-	-	30	40	45	45	50	55
>12500 ≤ 15000	150	-	-	-	40	50	55	55	60	65
>15000 ≤ 18000	190	-	-	-	40	50	55	55	60	65

Pitch Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)			
		SPZ / XPZ	SPA / XPA	SPB / XPB	SPC / XPC
487 ≤ 670	10	10	10	-	-
>670 ≤ 1000	15	15	15	-	-
>1000 ≤ 1250	20	15	15	-	-
>1250 ≤ 1800	25	20	20	20	-
>1800 ≤ 2240	25	20	20	20	25
>2240 ≤ 3000	35	20	20	20	30
>3000 ≤ 4000	45	20	20	20	30
>4000 ≤ 5000	55	20	20	25	30
>5000 ≤ 6300	70	25	25	30	35
>6300 ≤ 8000	85	25	25	35	40
>8000 ≤ 10000	110	30	30	35	45
>10000 ≤ 12500	135	-	-	35	45
>12500 ≤ 15000	150	-	-	45	55
>15000 ≤ 18000	190	-	-	45	55

Length Designation	Outside Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)		
			3V/3VX	5V/5VX	8V
>265 ≤ 400	>673 ≤ 1016	15	15	-	-
>400 ≤ 475	>1016 ≤ 1206	20	15	-	-
>475 ≤ 710	>1206 ≤ 1803	25	20	20	-
>710 ≤ 850	>1803 ≤ 2159	25	20	20	-
>850 ≤ 1180	>2159 ≤ 2997	35	20	20	40
>1180 ≤ 1600	>2997 ≤ 4064	45	20	20	40
>1600 ≤ 2000	>4064 ≤ 5080	55	20	25	40
>2000 ≤ 2500	>5080 ≤ 6350	70	-	30	45
>2500 ≤ 3150	>6350 ≤ 8001	85	-	35	45
>3150 ≤ 4000	>8001 ≤ 10160	110	-	35	50
>4000 ≤ 5000	>10160 ≤ 12700	135	-	35	50
>5000 ≤ 6000	>12700 ≤ 15240	150	-	45	60
>6000 ≤ 7100	>15240 ≤ 18034	190	-	45	60

**Table 29:**  
**Installation & Take-up Allowances for Banded Belts**

Length Designation	Outside Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)		
			3V	5V	8V
475 ≤ 710	1206 ≤ 1803	25	35	40	-
>710 ≤ 850	>1803 ≤ 2159	25	35	40	-
>850 ≤ 1180	>2159 ≤ 2997	35	35	40	80
>1180 ≤ 1600	>2997 ≤ 4064	45	35	40	80
>1600 ≤ 2000	>4064 ≤ 5080	55	40	45	85
>2000 ≤ 2500	>5080 ≤ 6350	70	45	50	85
>2500 ≤ 3150	>6350 ≤ 8001	85	50	55	95
>3150 ≤ 4000	>8001 ≤ 10160	110	50	55	95
>4000 ≤ 5000	>10160 ≤ 12700	135	-	60	95
>5000 ≤ 6000	>12700 ≤ 15240	150	-	70	105
>6000 ≤ 7100	>15240 ≤ 18034	190	-	85	120

Pitch Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)		
		SPZ	SPA/SPB	SPC
1176 ≤ 1773	25	35	40	-
>1773 ≤ 2129	25	35	40	-
>2129 ≤ 2967	35	35	40	-
>2967 ≤ 4034	45	35	40	80
>4034 ≤ 5050	55	40	45	85
>5050 ≤ 6320	70	45	50	85
>6320 ≤ 7971	85	50	55	95
>7971 ≤ 10130	110	50	55	95
>10130 ≤ 12670	135	-	60	95
>12670 ≤ 15210	150	-	70	105
>15210 ≤ 18004	190	-	85	120

Pitch Length (mm)	Minimum Take-up Allowance x (mm)	Installation Allowance y (mm)			
		A/HA	B/HB	C/HC	D/HD
1200 ≤ 1800	25	30	35	-	-
>1800 ≤ 2240	25	30	35	-	-
>2240 ≤ 3000	35	30	35	50	85
>3000 ≤ 4000	45	30	35	50	85
>4000 ≤ 5000	55	30	40	55	90
>5000 ≤ 6300	70	35	45	60	90
>6300 ≤ 8000	85	45	55	65	100
>8000 ≤ 10000	110	45	55	65	100
>10000 ≤ 12500	135	50	60	75	100
>12500 ≤ 15000	150	60	70	85	110
>15000 ≤ 18000	190	70	85	95	125

**Note:** For Raw Edge Banded Belts, the same x/y values to be referred.



## Idlers / Tension Pulleys

Idlers are basically no loaded wheels that are used in a drive system under the following conditions,

- 1) Fixed centre distance, so as to provide the required installation & take-up allowances.
- 2) On long & unsupported spans, as dampers & guides where the chances of vibrations are more.
- 3) As outside idlers when the arc of contact on one of the drive pulleys is too low. Also helps in reducing the slippage & the need to increase the number of required belts.
- 4) As guide idlers where the drive system pulleys are not in the same plane.
- 5) To guide the belts past obstructions.
- 6) As pneumatically, or spring loaded idlers to maintain the constant tension in the drive.
- 7) As clutches where the driven pulley can be engaged or disengaged.

The usage of idlers should be as far as possible avoided as they generate additional bending stresses in the belt, leading to drastic reduction in the belt life. However, under the conditions listed above where it may be absolutely essential to use the idlers the following criteria must be observed when designing drive.

1. Idler configuration
2. Position of idler in the belt span
3. Shape of idler
4. Allowance for idler travel
5. Correction of power rating

### Idler Configuration

Principally idlers can be used internally or externally depending on the drive conditions. However, unless the drive requirement calls for an outside idler, possibly inside idler should be used. The inside idler can be either flat or grooved pulley depending on the type of belt used in the drive system. It is suggested that the flat inside idler be used only when classical section is used while in all other cases a grooved pulley be used. However the usage of inside idler reduces the arc of contact on the loaded wheels and with it consequently the arc of contact correction factor. Hence when designing the drive with inside idler the arc of contact correction factor should be selected for the position of the idler at the point of maximum belt stretch.

Refer to table on Page 71

Outside idlers should always be flat one because they run on the back of the belt. Outside idlers invariably increase the arc of contact. Care should however be taken to see that the maximum belt stretch is achieved and the contact with the opposite side of the span is avoided. The reverse bending caused because of the usage of the outside idler reduces the life of the belt.

We suggest the usage of special construction PIX belts on these drives. Please contact our Technical Services Dept.

### Idler Positioning

Practice has shown that the placement of idler, whether it is an inside idler or an outside idler, should be on the slack side of the drive. This helps in significant reduction in the tension idler force.

In the case of inside idlers, grooved pulley can be placed anywhere in the entire span length on the slack side of the drive. However to obtain the best from your drive it is suggested that wherever possible the arc of contact on both the drive pulleys should be brought as close as possible to each other when the idler reaches its limit position.

Flat pulleys, used as inside or outside idlers are to be placed as far as possible away from the grooved pulley on which the belt runs next. This will avoid any alignment errors between the idler, the pulley and the resultant sideways movement of the belts on the pulley. Refer figures below.

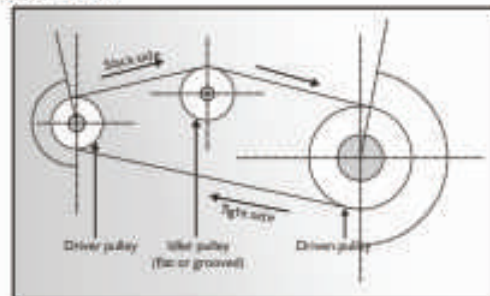
On drives where inside idler are used to break long spans, it is suggested that a grooved pulley be used because the usage of flat idler can result in transverse vibrations leading to the belt turnover.

### Minimum diameter recommended for idlers.

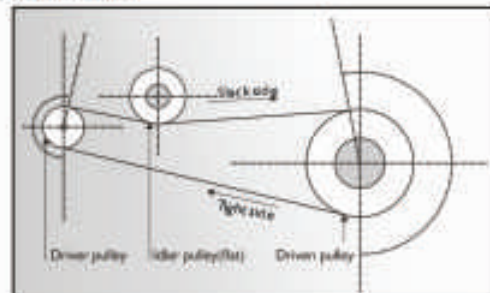
Inside Idler > smallest loaded pulley in the drive system or smallest permissible pulley diameter for section used.

Outside Idler > 1.5 times the smallest pulley in the drive system.

### Inside Idler



### Outside Idler





## Idler Design

Grooved idlers should have the standard groove dimensions for optimum results. In case of long spans and the drives with severe vibrations, however, deep grooved pulleys are recommended. Flat pulleys on the other hand should always be cylindrical and not crowned. Wherever idlers are used as belt guides, it is suggested that a flanged pulley be used with sharp corners to avoid the running over of the belt over the flange causing turnover.

The distance between two flanges is governed by the following formula :

$$b = b_2 + m$$

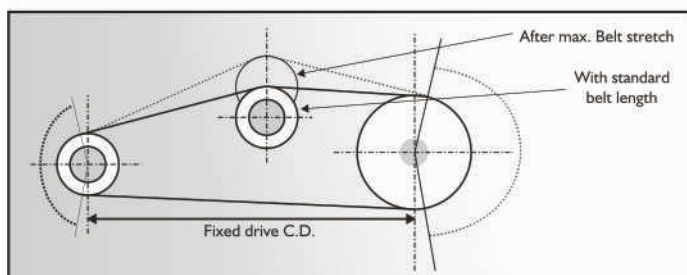
where  $b$  = required face width (mm)  
 $b_2$  = face width of grooved pulley (mm)  
 $m$  = additional value (mm)

Section	m (mm)
SPZ / XPZ / 3V / 3VX / Z / ZX	15
SPA / XPA / A / AX	20
SPB / XPB / 5V / 5VX / B / BX	25
SPC / XPC / C / CX	30
8V / 8VX	35
D	40
E	45

## Number of belts required

The usage of idlers invariably decreases the service life of belts. To avoid a reduction in the belt service life, idler correction factor is also to be considered while calculating the number of belts required.

Arc of contact correction factor C1					
Angle (degree)	C1	Angle (degree)	C1	Angle (degree)	C1
75	0.82	140	0.96	195	1.01
80	0.84	145	0.97	200	1.01
85	0.86	150	0.97	205	1.01
90	0.88	155	0.98	210	1.01
95	0.90	160	0.98	215	1.01
100	0.91	165	0.99	220	1.01
105	0.92	170	0.99	225	1.01
110	0.93	175	0.99	230	1.01
115	0.94	180	1.00	240	1.02
125	0.95	185	1.00	250	1.02
130	0.96	190	1.00		



## Drive Calculations:

The calculations for the length required is same as for the drive with two pulleys. However the following details are required to be noted when designing the same.

- 1) The required belt length is calculated using the standard procedure. ( $L_p$ )
- 2) If the belt has to be used with fixed centre distance, then double the installation allowance be added to the pitch length calculated above, i.e.,  $L_{p1} = L_p + 2y$  where,  $L_{p1}$  is the length considering installation allowances.  
 $L_p$  is the pitch length calculated in step 1.  
 $y$  is the installation allowance (see table no.29)
- 3) The next largest standard length  $L_p$  (standard) is to be chosen near to  $L_{p1}$ , however care be taken to check that the belt can be adequately tensioned with the idler in the outermost position. Length of the belt for idler in the end position can be calculated as follows:  
 $L_d(f) = L_p(\text{standard}) + 2x$   
 where,  $L_d(f)$  is the length for idler end position that is after max. belt stretch (final).  $L_p(\text{standard})$  is the standard length selected as above.

$x$  is the take-up allowance (see table no.29)

No. of idlers	C4
0	1.00
1	0.91
2	0.86
3	0.81

No. of required belts :

$$N = \frac{P \times c_2}{p \times c_1 \times c_3 \times c_4}$$

$N$  = No. of required belts

$P$  = Power in kW

$p$  = Power rating of the belt

$c_1$  = From above table

$c_2$  = Service factor

$c_3$  = Belt length factor

$c_4$  = Idler correction factor as above



## V-Flat Drives

The V - flat drive comprises of one grooved pulley & one flat pulley. V - flat drives are generally used where, under certain conditions intermittent loading & large moment of inertia have to be considered. The conversion from a flat drive to a V - flat drive is a relatively low cost exercise because of the presence of the existing flat pulley.

### Pre-requisites for a V-flat drive:

- 1) The smaller pulley should always be V - grooved pulley.
- 2) When using single belts, only classical belts are to be used because of higher top width to height ratio (1.6:1).
- 3) Wedge belts should never be used on these drives because of their lower top width to height ratio ( 1.2 : 1), which makes these belts more vulnerable to turning on their sides.
- 4) PIX banded belts are more justifiable on these drives. The reinforced band over the belts provides the required lateral rigidity preventing the belt from turning over even under the extreme adverse conditions.
- 5) V-flat drives are economical when K lies between 0.5 & 1.15,

$$\text{where } K = \frac{(D_a - d_g / d_g)}{a}$$

$D_a$  = outside diameter of flat pulley (mm)

$d_d$  = pitch diameter of grooved pulley (mm)

$d_a$  = outside diameter of grooved pulley (mm)

$a$  = centre distance (mm)

The ideal drive is achieved when  $K = 0.85$

The design procedure for V - flat drive is similar to that of normal V-belt drives, except that the arc of contact correction factor has to be modified.

$K = \frac{(D_a - d_g / d_g)}{a}$	B (degree)	$c_s$
0.00	180	0.75
0.07	176	0.76
0.15	170	0.77
0.22	167	0.79
0.29	163	0.79
0.35	160	0.80
0.40	156	0.81
0.45	153	0.81
0.50	150	0.82
0.57	146	0.83
0.64	143	0.84
0.70	140	0.85
0.75	137	0.85
0.80	134	0.86
0.85	130	0.86
0.92	125	0.84
1.00	120	0.82
1.07	115	0.80
1.15	110	0.78
1.21	106	0.77
1.30	100	0.73
1.36	96	0.72
1.45	90	0.70

## Classical V-belts

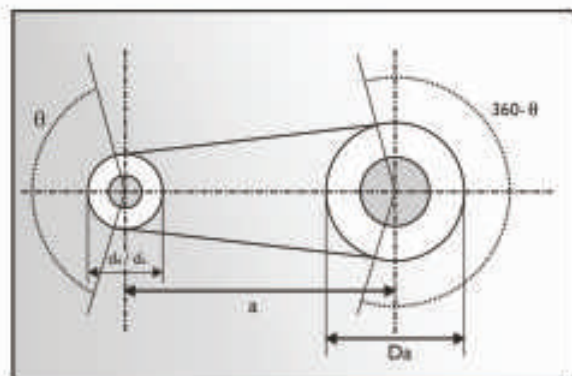
Section	Z	A	B	C	D	E
Dz	7	10	13	18	23	25

## Banded belts

Section	SPZ/3V	SPA	SPB/5V	SPC	8V
Dz	13	18	23	36	41

## Calculation of Pitch Length

$$L_p = 2a + 1.57 (d_g + D_g + D_g) + \frac{(D_g + D_g - d_g)^2}{4a}$$



## Calculation of outside length for banded belt:

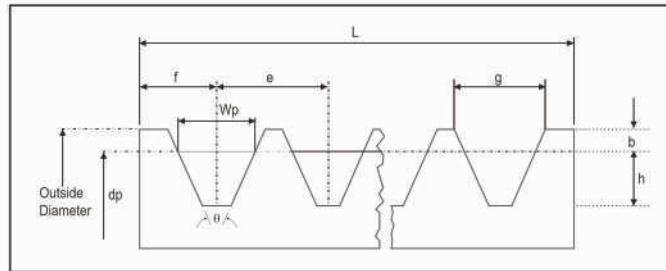
$$L_a = 2a + 1.57 (d_g + D_g + D_g) + \frac{(D_g + D_g - d_g)^2}{4a}$$

Based on above, the following recommendations are made to obtain the best from your V-flat drive.

	V-Belts	Banded Belts
Speed Ratio	$r = \frac{D_a}{d_a} \geq 3$	$r = \frac{D_a}{d_a} \geq 3$
Drive Centre Distance	$a = \frac{D_a - d_a}{0.85}$	$a = \frac{D_a - d_a}{0.85}$
"K" - Factor	$K = \frac{D_a - d_a}{a}$	$K = \frac{D_a - d_a}{a}$
$0.5 \leq K \leq 1.15$		

## Standard V-Grooved Pulleys

The maximum distance 'L' between the outside edges of the pulley, i.e. the face width is equal to  $(x-1)e + 2f$  (where x is the number of grooves).



## Multi Grooved Pulley Cross Section

Cross Section Symbol	Groove Pitch Width (Wp)	Minimum Distance From Outside Diameter To Pitch Diameter (b) mm	Minimum Groove Depth Below Pitch Diameter (Note 4) (h) mm	Centre to Centre of Groove (see Note 2) (e) mm	Edge of Pulley to 1st Groove Centre (see Note 3) (f) mm	Pitch Diameter (dp) mm	Groove Angle (θ) mm	Minimum Top Width of Groove (g) mm
Z, SPZ, ZX, XPZ	8.5	2.0	9.0	12 ± 0.3	8.0 ± 1.0	Up to 80 Over 80	34 ± 0.5 38 ± 0.5	9.7 9.9
A, SPA, AX, XPA	11.0	2.75	11.0	15 ± 0.3	10.0 + 2.0 - 1.0	Up to 118 Over 118	34 ± 0.5 38 ± 0.5	12.7 12.9
B, SPB, BX, XPB	14.0	3.5	14.0	19 ± 0.4	12.5 + 2.0 - 1.0	Up to 190 Over 190	34 ± 0.5 38 ± 0.5	16.1 16.4
C, SPC, CX, XPC	19.0	4.8	19.0	25.5 ± 0.5	17.0 + 2.0 - 1.0	Up to 315 Over 315	34 ± 0.5 38 ± 0.5	21.9 22.3
D	27.0	8.1	19.9	37 ± 0.6	24.0 + 3.0 - 1.0	Up to 475 475 & over	36 ± 0.5 38 ± 0.5	32.3 32.6
E	32.0	9.6	23.4	44.5 ± 0.7	29.0 + 4.0 - 1.0	Up to 610 Over 610	36 ± 0.5 38 ± 0.5	38.8 39.3
3V, 3VX		0.64	8.0	10.3 ± 0.4	8.7 + 2.0 - 0.8	Up to 88 88 to 152 152 to 305 above 305	36 ± 0.5 38 ± 0.5 40 ± 0.5 42 ± 0.5	8.9
5V, 5VX		1.27	13.7	17.5 ± 0.4	12.7 + 3.0 - 1.0	Up to 254 254 to 406 above 406	38 ± 0.5 40 ± 0.5 42 ± 0.5	15.2
8V, 8VX		2.54	22.6	28.6 ± 0.4	19.0 + 6.0 - 1.5	Up to 406 406 to 569	38 ± 0.5 40 ± 0.5	25.4

### Note:

- 1) See figure for symbol.
- 2) The tolerance on dimension apply to the distance between the centre of any two grooves whether adjacent or not.
- 3) It is recommended that the tolerance on dimension should be taken into account in the alignment of the pulleys.
- 4) When the pulleys are to be used for V-Belts Z, A, B, C only, dimension 'h' may be reduced by 20 %.
- 5) Only above dimension pulleys should be used for Banded belts except for 'A' section, where  $e = 15.9$  mm. The tolerance for side wobble and for run out (eccentricity), in mm per millimetre of pulley diameter shall be as follows :
  - Pulley diameter < 500 mm ± 0.001 mm
  - 500 mm < Pulley diameter < 1500 mm ± 0.0015 mm
  - Pulley diameter > 1500 mm ± 0.002 mm



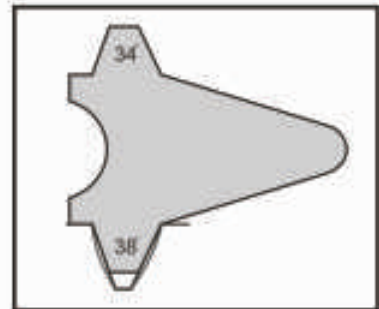
## Service Equipments

### PIX Pulley Gauges

PIX Pulley Gauges are specially designed for checking the profiles of the grooves of various conventional and dual section pulleys.

### Groove Checking Procedure

1. Identify the pulley gauge to be used according to section and its diameter.
2. Measure the groove by inserting the gauge. Identify if any clearance lies between the side wall of groove & the gauge.
3. Measure the present clearance using the Feeler Gauge.



### PIX Length Finder

PIX Length Finder is used for checking the length where size on the belt is not clearly visible. It can also be used to confirm the size of the belt.

PIX has two types of Length finders

- Conventional
- Poly-V

The maximum belt length which can be measured with these length finders is 120 inches.

### Belt length measurement procedure

1. Place the belt on the upper half of the pulley which is fixed.
2. Slide down the lower half of pulley with the belt along the scale till the belt gets sufficiently stretched.
3. Marker at the lower position of the bottom half will show the reading in mm / inches.  
Note down the reading and compare this value with the belt size mentioned on the belt.



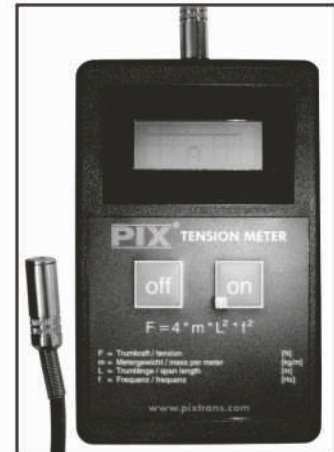
## Service Equipments

### PIX Digital Tension Meter

PIX Digital Tension Meter is used for the measurement of belt-tension in a drive. This digital version helps in correct tensioning of the drive resulting into optimum power transmission. It helps in reading the exact value of tension on the belts, thus helping the users to correct the tension, if it is not proper. This equipment works on frequency measurement phenomenon.

#### Advantages:

- Non-contact measurement with repeated accuracy
- Large range of measurement from 10Hz to 600Hz
- High level of accuracy
- Evaluation of the quality of measurement results
- Suppression of background noises
- Universal measuring head for convenient measurement
- Detachable measuring sensor for narrow spaces.



#### Technical Data:

<b>Range of Measurement:</b>	10 - 600 Hz
<b>Measuring Precision:</b>	10 - 400 Hz $\pm 1\%$ 400 - 600 Hz $\pm 2\%$ $\pm 1$ digit
<b>Measuring Method:</b>	Non contact acoustic with background noise suppression
<b>Voltage Supply:</b>	2*1, 5V Mignon (LR06) AA
<b>Power Consumption:</b>	< 25mA
<b>Display:</b>	LCD 2 lines of 8 characters
<b>Working Temperature:</b>	0 <sup>0</sup> to +50 <sup>0</sup> C
<b>Storage Temperature:</b>	-20 to +60 <sup>0</sup> C

### PIX V-Belts Tension Tester

Proper belt tension is essential for optimum power transmission and also for the life of the belt. To ensure optimum V-belt drive operation, it is recommended to check the tension in the belts by measuring the deflection force value (N) with the help of a tension measuring device.

Belt tension in most of the drives can be checked with adequate reliability by means of PIX V-Belts Tension Tester.

#### Tension Measurement Procedure

1. Measure the span-length of the belt in mm. (refer sketch on the next page)
2. Tie a string or a thread on the two pulleys along with the length of the belt and mark the centre of the span on the belt.



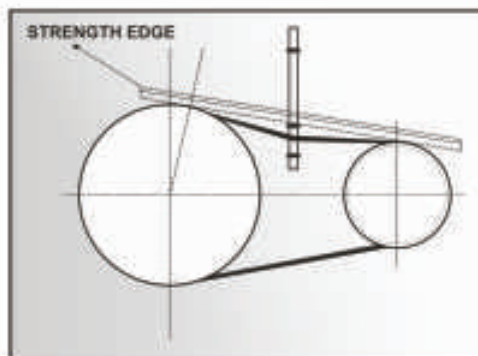
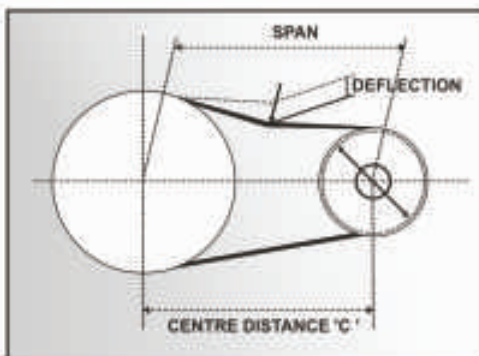


## Service Equipments

3. Calculate 1.5% of the span (say  $x$ ) for belt length less than 1000 mm and 1.0% of the span for belt length more than 1000 mm. Adjust lower ring on the tension tester on the millimeter scale to coincide, " $x$ " mm with the lower side of the ring. Adjust lower side of the upper ring at 0.00 N.
4. Place tension tester at the centre of the span of the belt. Apply force with the help of tension tester perpendicular to the span till the lower surface of the lower ring touches the string.
5. Read the deflection force value (N) on the Newton scale by taking reading at the lower side of the upper ring.
6. Compare the deflection force value (N) with the values given in the Table 'A'. The deflection force value (N) should lie between the minimum and maximum values given in the Table 'A'.
7. Deflection force less than the minimum recommended value in the range indicates an under-tensioned drive & deflection force higher than the maximum recommended value indicates an over-tensioned drive.

### Important:

- 1) For new belts the deflection force value (N) should be kept at maximum.
- 2) Maximum deflection force value (N) is recommended for pulsating & shock loads.
- 3) It is recommended to re-check the belt tension after approximately 24 hours of running and adjust the tension, if necessary.



## Table A

### Deflection Force Required for Measuring Tension in V-Belt Drives

Cross Section	Smaller Pulley Diameter (mm)	Condition 1 Deflection @ 1.0% of span, if span length is more than 1000 mm			Condition 2 Deflection @ 1.5% of span, if span length is less than 1000 mm		
		Required deflection force F at the centre of span for belt speed			Required deflection force F at the centre of span for belt speed		
		0 m/s to 10 m/s Range (N)	10 m/s to 20 m/s Range (N)	20 m/s to 30 m/s Range (N)	0 m/s to 10 m/s Range (N)	10 m/s to 20 m/s Range (N)	20 m/s to 30 m/s Range (N)
<b>WRAPPED BELTS</b>							
<b>CLASSICAL BELTS</b>							
Z	50-100 100 & above	4-6 6-9	4-5 6-7	3-4 5-6	5-8 8-12	5-7 8-9	4-5 7-8
A	71-140 140 & above	8-12 12-18	7-10 10-14	6-8 8-12	11-16 16-24	9-13 13-19	8-11 11-16
B	112-200 200 & above	16-24 24-35	13-19 19-29	10-16 16-24	21-32 32-47	17-25 25-39	13-21 21-32
C	180-400 400 & above	31-46 46-70	26-38 38-58	20-31 31-46	41-61 61-93	35-51 51-77	27-41 41-61
D	315-600 600 & above	62-90 90-134	52-76 76-115	42-62 62-90	83-120 120-179	69-101 101-153	56-83 83-120
E	450-915 915 & above	108-160 160-240	90-137 137-205	73-109 109-160	144-213 213-320	120-183 183-273	97-145 145-213
<b>WEDGE / NARROW BELTS</b>							
SPZ / 3V	63-95 95 & above	8-12 12-17	7-10 10-16	6-9 9-14	11-16 16-23	9-13 13-21	8-12 12-19
SPA	90-140 140 & above	14-20 20-31	12-17 17-26	10-14 14-22	19-27 27-41	16-23 23-35	13-19 19-29
SPB / 5V	140-265 265 & above	25-36 36-46	20-32 32-41	18-27 27-37	33-48 48-61	27-43 43-55	24-36 36-49
SPC	224-355 355 & above	46-66 66-85	38-58 58-76	32-52 52-70	61-88 88-113	51-77 77-101	43-69 69-93
8V	335-520 520 & above	81-107 107-167	68-90 90-140	56-73 73-113	108-143 143-223	91-120 120-187	75-97 97-151
<b>CUT EDGE BELTS</b>							
<b>CLASSICAL V-BELTS</b>							
ZX	40-100 100 & above	5-7 7-10	5-6 7-8	3-5 6-7	6-9 9-14	6-8 9-11	5-6 8-9
AX	63-140 140 & above	9-14 14-21	8-12 12-16	7-9 9-14	12-18 18-28	11-15 15-21	9-12 12-18
BX	90-200 200 & above	18-28 28-40	15-22 22-33	12-18 18-28	25-37 37-54	20-29 29-44	15-25 25-37
CX	140-400 400 & above	36-53 53-81	30-44 44-67	23-36 36-53	48-71 71-107	40-58 58-89	31-48 48-71
<b>WEDGE / NARROW V-BELTS</b>							
XPZ / 3VX	56-95 95 & above	9-14 14-20	8-12 12-18	7-10 10-16	12-18 18-26	11-15 15-25	9-14 14-21
XPA	71-140 140 & above	16-23 23-36	14-20 20-30	12-16 16-25	21-31 31-48	18-26 26-40	15-21 21-34
XPB / 5VX	112-265 265 & above	29-41 41-53	23-37 37-47	21-31 31-43	38-55 55-71	31-49 49-63	28-41 41-57
XPC	180-355 355 & above	53-76 76-98	44-67 67-87	37-60 60-81	71-101 101-130	58-89 89-117	49-80 80-107





## Drive Design Software

PIX drive design software can offer drive solutions for wedge, narrow and classical V-belts in wrap and cut edge constructions. The main interface is divided in two parts namely:

### Calculations:

There is a provision for calculating parameters viz: centre distance, pitch length, tensioning and power rating with minimum required input values.

### PIX Wrapped and Cut edge Belts:

The compact screen has a provision for required input values to offer detailed calculations for new drive design and existing drive.

#### 1. Section selection:

The user has a choice to select from various sections or keep it unmarked to provide the scope for software to offer results for eligible sections.

#### 2. Design parameters:

Design ID – The software provides a unique identity for each drive calculations.

Also we can choose from the various records saved earlier. There are two more fields which are not mandatory.

#### 3. Existing drive parameters:

This field is for verification of requirements of an existing drive.

#### 4. Design conditions:

It has provision for entering power, service factor and centre distance.

#### 5. Driver pulley and driven pulley:

The motor and follower rpm can be entered. The diameters can either be entered or selected from the range available.

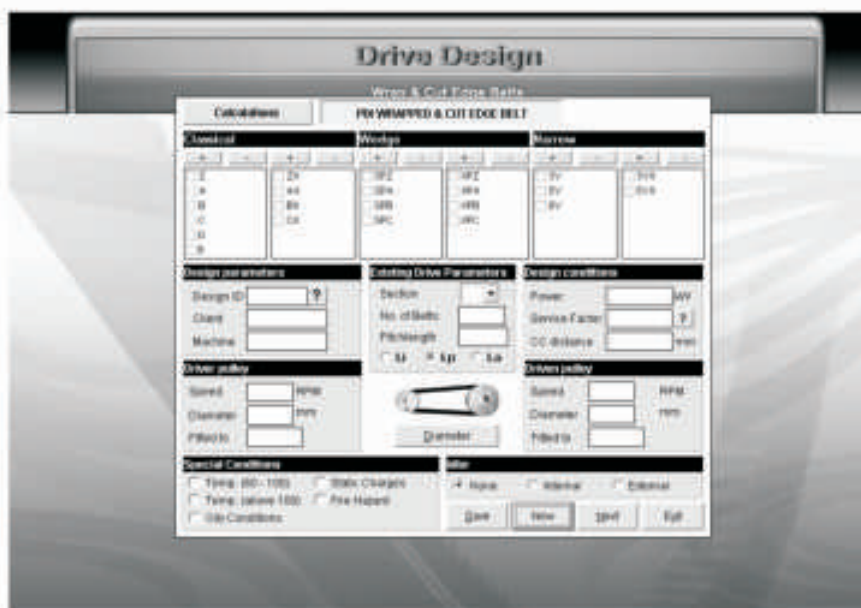
#### 6. Special Conditions:

This field is to mention working temperature and conditions to offer suitable special construction belts.

#### 7. Idler:

The user can specify the idler position.

The recorded input data sheet can be saved and retrieved from the field "Design ID". The next button is to go for detailed calculation sheet. The type of customer can be selected from the drop down window and a specific record number can be allocated to get in final print sheet for easy identification. Also, there is a provision to get the center distance for user specified pitch length. The desired section results can be printed by ticking it. The main menu of the software in the beginning is shown as below.



The final output shall be available in the form of following report.

<b>Drive Design Report</b>			
Report No.: PT/N/TS/ Name of Customer:		Print Date: Type of Customer:	
<b>Design Input :</b>			
Sr. No.	Design Input Parameters	Values	Unit
1	Motor Power		kW
2	Driver Speed		rpm
3	Driven Speed		rpm
4	Driver Pulley Dia		mm
5	Driven Pulley Dia		mm
6	Nominal Centre Distance		mm
7	Theoretical Pitch Length		mm
8	Drive application		
9	Special Condition		
10	Idler		
<b>Design Output :</b>			
1	Design Power (Pd)		kW
2	Service Factor (K)		
3	Speed Ratio (Sr)		
4	Linear Speed (v)		m/s
5	Belt Section Selected		
6	Pitch Length of Standard Belt (Lp)		mm
7	Centre distance with standard Belts (C.D.)		mm
8	Power Rating (P)		kW
9	Arc of Contact Correction Factor (Fc)		
10	Length Correction Factor (Fd)		
11	Calculated no. of Belts (N)		
12	No. of Belts Considered (N)		
13	Centre Distance for Belt Stretch		mm
14	Centre Distance for Belt Installation		mm
15	Span Length		mm
16	Weight per meter		Kg/m
17	Dynamic Shaft Loading		Newton
18	Belt Reference		
19	Pulley Section		
<b>Calculation for First Installation :</b>			
20	Static Belt Tension :		Newton
21	Frequency		Hz
22	Static Shaft Loading		Newton
23	Belt Deflection at the center of span length		mm
24	Deflection force required for measuring tension.		Newton
<b>Calculation for Re-tensioning :</b>			
25	Static Belt Tension		Newton
26	Frequency		Hz
27	Static Shaft Loading		Newton
28	Belt Deflection at the center of span length		mm
29	Deflection force required for measuring tension		Newton
PIX Drive Design Version 1.2.1			



## Maintenance of V-Belts

### General guidelines for tensioning of V-Belt:

- 1) Ideal tension is the lowest tension at which the belt will not slip under peak load conditions.
- 2) Check tension frequently during the first two days of operation.
- 3) Over tensioning shortens belt and bearing life.
- 4) Keep belts free from foreign material which may cause slip.
- 5) Make V-drive inspection on a periodic basis.
- 6) Adjust tension when slipping. Never apply belt dressing as this will damage the belt and cause early failure.

#### Idlers:

An idler used in V-Belt drives is a wheel that is not 'loaded' and may be grooved/flat pulley used for various reasons such as:

- a) To provide take up for fixed centre drives.
- b) To clear obstruction.
- c) To break up long spans where belt vibrations may be a problem.
- d. To maintain tension to act as a clutching device.

#### Note:

Diameter of outside idler should be one and half times that of smaller pulley diameter or more and diameter of inside idler should be approximately same as that of smaller pulley diameter or more.

#### Installation & Take-up Allowance:

The limiting values for adjustment of centres for the two transmissions pulley shall be as follows:

#### Lower Limiting Value:

Nominal centre distance minus 1.5% Lp

#### Higher Limiting Value:

Nominal centre distance plus 3% Lp. Where Lp is the Pitch Length of the belt.

#### Storage of V-belts:

Maintaining the proper storage conditions at the users place as well as at the manufacturers place is an important parameter which requires

due attention from the concerned. Under favourable storage conditions, PIX belts retain their initial serviceability and dimensions. Good storage facilities and practices will allow the users to achieve the best value from belts.

PIX V-belt should be stored in a cool & dry place with no direct sunlight. When stacked on shelves the stacks should be small enough to avoid excess weight on the bottom belts which may cause distortion. When stored in containers the container size & contents should be sufficiently limited to avoid distortion.

#### Don'ts:

Do not store the belts on floor unless a suitable container is provided. Belts may be exposed to moisture.

Do not store belts near windows which may permit exposure to sunlight or moisture. Do not store belts near radiators or heater.

Do not store belts in the vicinity of transformers & electrical motors. These devices may generate ozone. Do not store belts in heavy bent condition.

#### Methods of Storage:

The common method of storing the V-belts is to hang them in crescent shaped pegs or pin racks.

Long V-belt should be coiled for easy distortion free storage.

Variable speed belts are more sensitive to distortion. It is recommended that these belts should never be stored on pegs. These belts should be always stored on shelves.

#### Effects of Storage:

The shelf life of 6 years can be obtained if proper storage conditions are maintained i.e., ambient temperature not more than 30°C & relative humidity not more than 70%. If the storage temperature increases then the service expectancy from the belts gets reduced. Under rough estimates it can be said that for an increase of 20°C temperature above the standard temperature range the belt life will be reduced by 50%.

It is always recommended that if a drive is out of use for a prolonged period, then the belt tension should be relaxed & the necessary tension be provided when the drive is to be restarted.

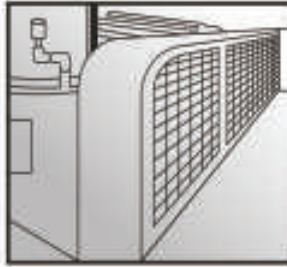


## DO'S AND DON'TS

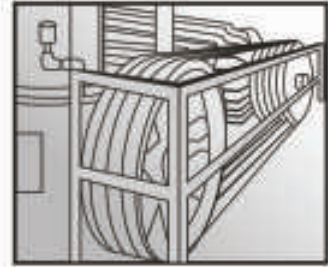


1. Ensure perfect alignment of pulleys.

### LIKE THIS



### NOT THIS



2. The grooves should be free from burrs, sharp edges, rust, oil and grease. The guard should be provided to prevent this,



3. Belts used in multiple drive should be of same manufacturer.



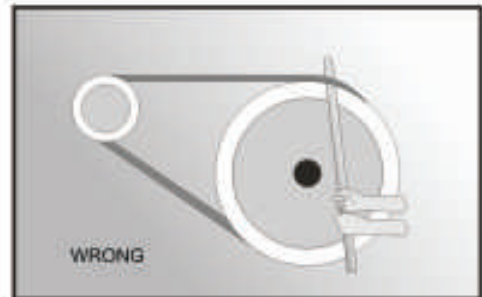
4. For multiple drive, use as many V-belts required for better service life and low maintenance cost. For best results one should use Matched Set belts. The whole set should be replaced if one belt fails. PIX belts should not be lubricated.



5. A change in ride out indicates uneven belt wear or worn sheaves. Change belt/sheave with new set.



6. Pulley should be checked whether it is manufactured as per international standards or not, and should also be checked for worn out sheaves. Bearings should also be checked for lubrication.



7. Do not pry or roll V-belts into the pulley grooves, if done so, the belts get damaged internally as a result of which belt life is affected. Use drive take-up and installation allowances to enable the belts easily mounted on the pulleys.

8. If the groove angle is too large, the canvas cover is quickly worn out along the lower side walls and if possible, the upper canvas gets worn out.

### PLEASE REMEMBER

1. Belt dressing should never be done.
2. Proper ventilation of belts driving unit is a must.
3. Tensioning should be checked from time to time.

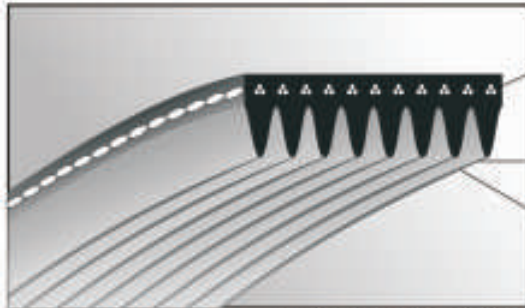


## Trouble shooting (V-Belts)

PROBLEMS	CAUSES	REMEDIES
<b>Belt Turn Over in Pulleys</b>	<ul style="list-style-type: none"> <li>a) Poor drive alignment</li> <li>b) Incorrect pulley groove or excessive wear in grooves</li> <li>c) Excessive belt flap</li> <li>d) Low belt tension</li> <li>e) Worn out belt</li> <li>f) Ingress of foreign material</li> </ul>	<ul style="list-style-type: none"> <li>a) Realign</li> <li>b) Modify or replace pulleys.</li> <li>c) Use an inside idler on slack side</li> <li>d) Re-tension</li> <li>e) Replace with new belts</li> <li>f) Use more effective drive guard</li> </ul>
<b>Excessive Wear</b>	<ul style="list-style-type: none"> <li>a) Incorrect pulley section</li> <li>b) Excessive wear in pulley groove</li> <li>c) Poor drive alignment</li> <li>d) Small pulley diameter below the recommended value</li> <li>e) Belt catching or protruding parts</li> </ul>	<ul style="list-style-type: none"> <li>a) Modify or replace pulleys</li> <li>b) Modify or replace pulleys</li> <li>c) Re-align</li> <li>d) Re-design using correct pulley diameter</li> <li>e) Remove protrusion or move drive away</li> </ul>
<b>Excessive Noise</b>	<ul style="list-style-type: none"> <li>a) Poor drive alignment</li> <li>b) Incorrect belt tension</li> <li>c) Overloaded drive</li> <li>d) Unbalanced pulleys</li> </ul>	<ul style="list-style-type: none"> <li>a) Re-align</li> <li>b) Re-tension</li> <li>c) Check drive details &amp; re-design</li> <li>d) Re-design, if necessary balance the pulleys</li> </ul>
<b>Belt Swelling or Softening</b>	Contamination by oil or other chemicals	Protect drive from contamination. Clean pulley grooves with petrol or alcohol before fitting new belts.
<b>Un-usual Belt Stretch</b>	<ul style="list-style-type: none"> <li>a) Worn out badly damaged grooves</li> <li>b) Used belts with new belts on drive</li> <li>c) Belts from different manufacturers</li> </ul>	<ul style="list-style-type: none"> <li>a) Modify or replace pulleys</li> <li>b) Replace with completely new set of belts</li> <li>c) For a set, belts must be from one manufacturer</li> </ul>
<b>Belt Breaking after Fitment</b>	<ul style="list-style-type: none"> <li>a) Forcing belt over pulley when fitting, damaging cord &amp; cover.</li> <li>b) Ingress of a foreign material</li> <li>c) Insufficient belts or wrong section for drive</li> <li>d) Drive stalled</li> </ul>	<ul style="list-style-type: none"> <li>a) Reduce drive centre distance to fit the belt</li> <li>b) Fit an effective guard</li> <li>c) Check drive design &amp; fit correct no. or section of belts</li> <li>d) Ascertain cause &amp; rectify</li> </ul>
<b>Cuts &amp; Splits in the base</b>	<ul style="list-style-type: none"> <li>a) Outside idler pulley in use</li> <li>b) Pulley diameter too small</li> <li>c) Ambient temperature too high</li> <li>d) Ambient temperature too low</li> <li>e) Abnormal belt slip</li> <li>f) Contamination by oil or chemical</li> </ul>	<ul style="list-style-type: none"> <li>a) Replace with inside idler pulley on the slack side of drive</li> <li>b) Re-design using recommended minimum pulley pitch diameters</li> <li>c) Ensure good ventilation and protect the belts from direct heat. Contact us for better solution.</li> <li>d) Warm surrounding drive area</li> <li>e) Check drive design to ensure correct no. of belts, redesign if necessary, check drive tension</li> <li>f) Protect drive from contamination</li> </ul>
<b>Severe Belt Vibration</b>	<ul style="list-style-type: none"> <li>a) Drive has sufficient belts</li> <li>b) Centre distance more than recommended</li> <li>c) High shock loading</li> <li>d) Too low belt tension</li> <li>e) Un-balanced pulleys</li> </ul>	<ul style="list-style-type: none"> <li>a) Check drive design &amp; modify if necessary</li> <li>b) Shorten centre distance, use an inside idler in the drive slack side</li> <li>c) Use Banded belts or an inside idler pulley in the slack side</li> <li>d) Re-tension the belt</li> <li>e) Balance the pulleys</li> </ul>
<b>Cannot be retensioned</b>	<ul style="list-style-type: none"> <li>a) Insufficient allowance for stretch in drive design</li> <li>b) Excessive stretch caused by insufficient belts or wrong belt section for drive</li> <li>c) Incorrect belt length</li> <li>d) Belt from different manufacturers used on the same drive</li> </ul>	<ul style="list-style-type: none"> <li>a) Get sufficient allowance for take-up</li> <li>b) Review drive design and modify if necessary</li> <li>c) Use belt of proper length</li> <li>d) For use in a set, belts must be from same manufacturer</li> </ul>

## Ribbed Belts (RMA/MPTA IP-26)

V-ribbed belts, also termed as Poly V-belts, can be described as flat cord-reinforced transmissions belts with length wise running triangular-shaped ribs with a top angle of 40°. This construction leads to good support for all cords in the reinforcement and therefore an even load distribution is achieved.



(cross sectional view)

- High tensile tension member across full width of belt for maximum utilisation of face width.
- Ribbed driving surface for maximum area of contact and reduced face pressure
- Special rubber compound for high frictional grip and maximum tractive effort.

### Applications:

The smallest profile PH is used in miniature drives and the next larger PJ in household equipment drives. The profile PK is mainly used in automotive applications and also used in industrial applications, while the larger profiles PL and PM are used in industrial and agricultural applications.

The applications include:

### House Keeping Electrical Appliances:

Dryers, Health keeping equipments.

### Work Tools:

Harvester combines, Power driven sprayers and Engines for work tools.

### Machine Tools:

N C lathes, Milling machines, Drilling machines and Grinding machines.

### Industrial Machines:

High speed Printing Machines, Flour Grinders, Agitators, Air blowers, Generators, P U Compressors.

### Others:

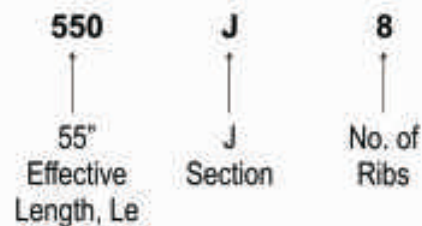
Broadcasting Equipment Drives & Hovercrafts.

### Characteristics:

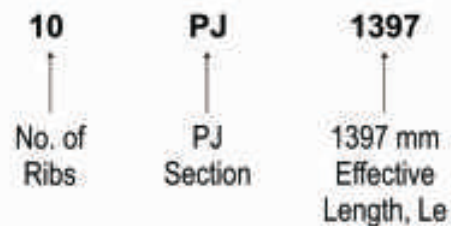
- Good flexibility with high power carrying capacity per unit width.
- Low stretch
- Temperature up to +100°C
- Speed ratios over 1 : 30 are possible
- High maximum belt speed up to 50m/s.
- Only five sections cover the large power range from 0.1 kW up to more than 600 kW.
- Combines the advantages of flat belts with those of V-belts.
- Antistatic, Oil and Heat resistant
- ATEX certified FRAS belts are also available

### Size Designation:

#### Size: 550 J 8



#### Size: 10 PJ 1397

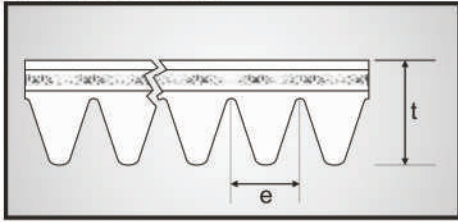


**Note:** All PIX Ribbed Belts are Noise Free.



## Standard Product Range

### PIX-X'ceed® Industrial Belts

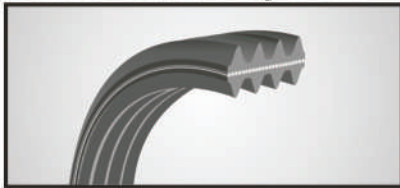


### PIX-X'ceed® FORCE Automotive Belts



## SPECIAL CONSTRUCTION BELTS

### PIX-X'ceed® DS Double Sided Poly Belts



### PIX-X'ceed® EL Elasticated Belt (PJ)



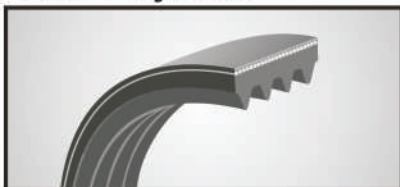
#### Construction:

**Top Layer:** Transversely aligned fibres filled CR

**Tension Member:** Treated nylon cord

**Base Rubber:** Special CR compound

### PIX-X'ceed® EPDM Poly Belts



#### Range:

Section	Belt Thickness (mm) t	Rib Pitch (mm) e	Recommended Min Pulley Diameter (mm)	Range (mm)		
				No. of Ribs	Effective Length (mm)	
					Min	Max
PH	2.9	1.60	13	2 to 280	280	5080
PJ	3.8	2.34	20	2 to 220	280	5080
PK	5.8	3.56	50	2 to 145	280	5080
PL	7.6	4.70	75	2 to 96	280	5080
PM	13.3	9.40	180	2 to 45	280	5080

#### Range:

Section	Belt Thickness (mm) t	Rib Pitch (mm) e	Recommended Min Pulley Diameter (mm)	Range (mm)		
				No. of Ribs	Effective Length (mm)	
					Min	Max
PK	4.5	3.56	50	2 to 145	280	5080
PK*	4.8	3.56	50	2 to 145	280	5080

\* In EPDM construction.

#### Range:

Section	No. of Ribs	Size (Effective Length)	
		Min (mm)	Max (mm)
DPK	2 to 13	1195	3105
DPL	2 to 11	1200	3105

- Absolutely flexible
- Used on drive with pulleys rotating in both clockwise and anticlockwise directions
- Transmits the power from both the sides.

#### Range:

Section	No. of Ribs	Size	
		Min (mm)	Max (mm)
EL nPJ	2 to 20	600	3105

Specially designed poly belts of PJ section for washing machines. These belts are with elastic properties which are useful in certain applications like washing machines.

- Working Temperature up to 130°C
- Abrasion & Flex cracking resistance is very high
- Longer service life as compared to regular
- Dimensional stability is good
- Higher power transmission

**Applications:** Automobiles, High Speed Engines

## Drive Design Procedure for Ribbed Belts

This Design Manual should be used for industrial drive calculation with two standard pulleys only. Please contact us to know about more complex drive designs.

### STEP 1

#### Application Data

1. Type of machine to be driven
2. Nominal Power (kW), P
3. Type & nominal speed of motor
4. Driven Shaft speed
5. Duty cycle category
6. Approximate centre distance

### STEP 2

#### Determine the service factor & the design power

1. To determine the service factor (K) refer table 30 on page no.87
2. Design power :  $P_d = P \times K$

### STEP 3

#### Select the Ribbed Belt Section

Refer to the cross section selection chart IV on page 87

### STEP 4

#### Select the effective diameter of the small pulley (de)

Refer table 31 on page 89

### STEP 5

#### Determine the speed ratio

$$SR = R / r$$

R = speed of faster shaft

r = speed of slower shaft

### STEP 6

#### Calculate the Large pulley effective diameter (De)

$$dp = de + (2 \times h), \text{ for } h \text{ refer page 89}$$

$$Dp = dp \times SR$$

$$De = Dp - (2 \times h)$$

Select the nearest pulley diameter from table 32 on page 90

Dp = Pitch Diameter of large pulley in mm

### STEP 7

#### Calculate the belt linear speed

$$v = \frac{\pi \times dp \times n}{60000} \text{ m/s}$$

where,

dp: Pitch Diameter of smaller pulley in mm

n: Speed of faster shaft (rpm)

### STEP 8

#### Calculate the effective belt length

$$Le = 2C + \left[ \frac{\pi}{2} \times (De+de) \right] + \frac{(De-de)^2}{4C}$$

### STEP 9

#### Calculate the centre distance corresponding to the standard effective length

$$C = \frac{X}{4} + \left[ \frac{1}{2} \times \sqrt{\frac{X^2 - (De-de)^2}{2}} \right]$$

$$\text{where } X = Le - \left[ \frac{\pi}{2} \times (De+de) \right]$$

### STEP 10

#### Calculate the number of belt ribs

1. Determine the length correction factor, Cl
2. Determine the arc of contact on the small pulley

$$a = 180 - \left[ \frac{60 \times (De - de)}{C} \right]$$

3. Determine the arc of contact correction factor, Ca
4. Determine the speed ratio correction factor, Cr
5. Determine the basic power rating per rib (BPR)  
(Please refer appropriate tables for BPR)

6. Calculate the corrected power rating per rib (CPR)  
 $CPR = (BPR \times Cr) \times Cl \times Ca$

7. Calculate the number of belt ribs

$$\text{Number} = \frac{\text{Design power}}{\text{CPR}}$$

(If the no. of Ribs comes in fraction, use next whole no.)



## Drive Design Example for Ribbed Belts

This Design Manual should be used for industrial drive calculation with two standard pulleys only. Please contact us to know about more complex drive designs.

### STEP 1

#### Application Data

1. Type of driven machine: Printing Machine
2. Nominal Power P: 20 kW
3. Type & nominal speed of motor: DC Motor, 1450 rpm
4. Driven Shaft speed: 884 rpm
5. Duty cycle category: Continuous, 24 hrs / day
6. Approximate centre distance: 500 mm

### STEP 2

#### Determine the service factor & the design power

1. To determine the service factor (K) refer table 30 on Page no. 87  $K=1.5$
2. Design power:  $P_d = P \times K$   
 $P_d = 20 \times 1.5$   
 $P_d = 30 \text{ kW}$

### STEP 3

#### Select Ribbed Belt Section

Section selected from the chart IV on page 87 is PL ( $P_d=30 \text{ kW}$ ,  $n=1450$ )

### STEP 4

#### Select the effective diameter of the small pulley ( $d_e$ )

Refer to table 31 on page 89  $d_e = 140 \text{ mm}$

### STEP 5

#### Determine the speed ratio

$SR = n/N$   $SR = 1450 / 884$   
 $n = \text{speed of faster shaft}$   $SR = 1.64$   
 $N = \text{speed of slower shaft}$

### STEP 6

#### Calculate the large pulley effective diameter ( $D_e$ )

$d_p = d_e + (2 \times h)$   $d_p = 140 + (2 \times 2.3)$   
 for h refer Page no. 89  $d_p = 144.6 \text{ mm}$   
 $D_p = d_p \times SR$   $D_p = 144.6 \times 1.64$   
 $D_p = 237.14 \text{ mm}$   
 $D_e = D_p - (2 \times h)$   $D_e = 237.14 - (2 \times 2.3)$   
 $D_e = 232.54 \text{ mm}$

Select the nearest pulley diameter from table 32 on page no. 90

Recommended standard pulley diameter  $D_e = 236 \text{ mm}$

### STEP 7

#### Calculate the belt linear speed

$$V = \frac{\pi \times d_p \times n}{60000} \text{ m/s}$$

$$V = 3.14 \times 144.60 \times 1450 / 60000$$

$$V = 10.97 \text{ m/s}$$

### STEP 8

#### Calculate the effective belt length

$$L_e = 2C + \frac{\pi}{2} \times (D_e + d_e) + \frac{(D_e - d_e)^2}{4C}$$

$$L_e = 2 \times 500 + \left[ 1.57 (236 + 140) \right] + \frac{(236 - 140)^2}{4 \times 500}$$

$$L_e = 1594.92 \text{ mm}$$

Standard effective length,  $L_e = 1595 \text{ mm}$

### STEP 9

#### Calculate the centre distance corresponding to the standard effective length

$$C = \frac{X}{4} + \left[ \frac{1}{2} \times \sqrt{\frac{X^2}{4} - \frac{(D_e - d_e)^2}{2}} \right]$$

$$\text{where } X = L_e - \left[ \frac{\pi}{2} \times (D_e + d_e) \right]$$

$$X = 1595 - [1.57 \times (236 + 140)]$$

$$X = 1004.68$$

$$C = \frac{1004.68}{4} + \left[ 0.5 \times \sqrt{\frac{(1004.68)^2}{4} - \frac{(236 - 140)^2}{2}} \right]$$

$$C = 500 \text{ mm}$$

### STEP 10

#### Calculate the number of ribs

1. Determine the length correction factor from table 43, page no. 96  $C_l = 0.95$

2. Determine the arc of contact on the small pulley

$$a = 180 - \left[ \frac{60 \times (D_e - d_e)}{C} \right]$$

$$a = 180 - \left[ \frac{60 (236 - 140)}{500} \right]$$

$$a = 168.50^\circ$$

3. Determine the arc of contact correction factor from table 44, page no. 96  $C_a = 0.96$

4. Determine the speed ratio correction factor from table 42, page no. 96  $C_r = 0.120$

5. Determine the basic power rating per rib (BPR) from table 41, page no. 95 = 2.291 kW

6. Calculate the corrected power rating per rib (CPR)

$$CPR = (BPR \times C_r) \times C_l \times C_a = (2.291 \times 0.12) \times 0.95 \times 0.96$$

$$CPR = 2.199 \text{ kW / rib}$$

7. Calculate the number of belt ribs

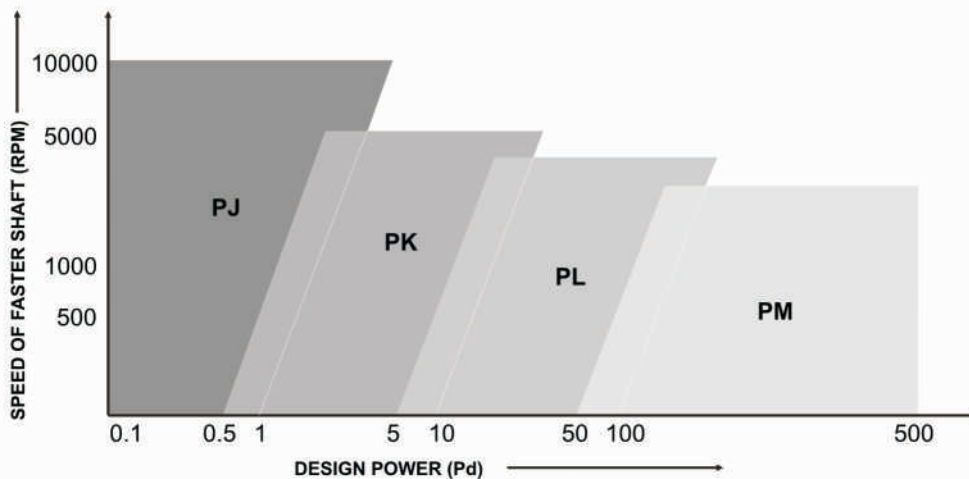
$$\text{Number} = \text{Design power} / \text{Corrected Power Rating}$$

$$= 30 / 2.199 = 13.64, \quad \text{Standard no. of ribs} = 14$$

**Table 30: Service Factor Selection**

Driven Machine  Motor Class	Class A			Class B		
	D.C. Motors Shunt wound A.C. Motors Normal Torque Synchronous or Asynchronous DC Brushless Motors IC Engines Speed > 700 rpm Turbines			DC Motors Compound & Series wound AC Motors High Torque Vector Control Reluctance motors IC engines single cylinder Speed < 700 rpm Line shafts, clutches		
DUTY CYCLE CLASS	< 10H	10 - 16H	> 16 H	< 10 H	10 - 16 H	> 16 H
<b>CLASS 1 : LOW EVEN TORQUE</b> Vacuum Cleaners, liquid agitators, belt-conveyors, blowers, centrifugal fans, light conveyors	1.0	1.1	1.2	1.1	1.2	1.3
<b>CLASS 2 : MEDIUM EVEN TORQUE</b> Food agitators, mixers, laundry machines, generators, machine tools, blenders	1.1	1.2	1.3	1.2	1.3	1.4
<b>CLASS 3 : TORQUE</b> Bakery & woodwork m/c, brick m/c, rotary-compressors, pumps, heavy duty conveyors, exciters, printing m/c, spraying m/c, axial fan	1.2	1.3	1.4	1.3	1.4	1.5
<b>CLASS 4 : VERY UNEVEN TORQUE</b> Hammer mills, cement works, piston compressors, bucket elevators, hoists, flour mills, piston pumps, winches, paper mills	1.4	1.5	1.6	1.5	1.6	1.8
<b>CLASS 5 : VERY UNEVEN TORQUE WITH OVERLOADS</b> Crushers, grinder m/c, ball grinders, dredging m/c, agricultural m/c, industrial rubber machinery (Calenders, extruders, mixers)	1.6	1.7	1.8	1.7	1.8	2.0

**Chart IV - Cross Section Selection**





## Pulley Groove Dimensions - Millimeters

Cross Section	Minimum Recommended Outer Diameter	Groove Angle $\pm 0.25$ Degrees	$S_g$	$r_t$ +0.15 -0.00	2a	$r_b$	$h_g$ Minimum	$d_B$ $\pm 0.001$	$S_e$
H / PH	13	40	1.60 $\pm 0.03$	0.15	0.58	0.30 +0.00 -0.15	1.04	1.00	2.0 +0.5 -0.3
J / PJ	20	40	2.34 $\pm 0.03$	0.20	0.76	0.40 +0.00 -0.15	1.77	1.50	3.0 +0.8 -0.4
K / PK	40	40	3.56 $\pm 0.05$	0.25	0.96	0.50 +0.00 -0.15	3.16	3.00	3.0 +1.5 -0.0
L / PL	75	40	4.70 $\pm 0.05$	0.40	1.54	0.40 +0.00 -0.15	4.63	4.00	10.0 +2.0 -1.0
M / PM	180	40	9.40 $\pm 0.08$	0.75	2.88	0.75 +0.00 -0.25	9.74	7.00	13.0 +3.0 -1.0

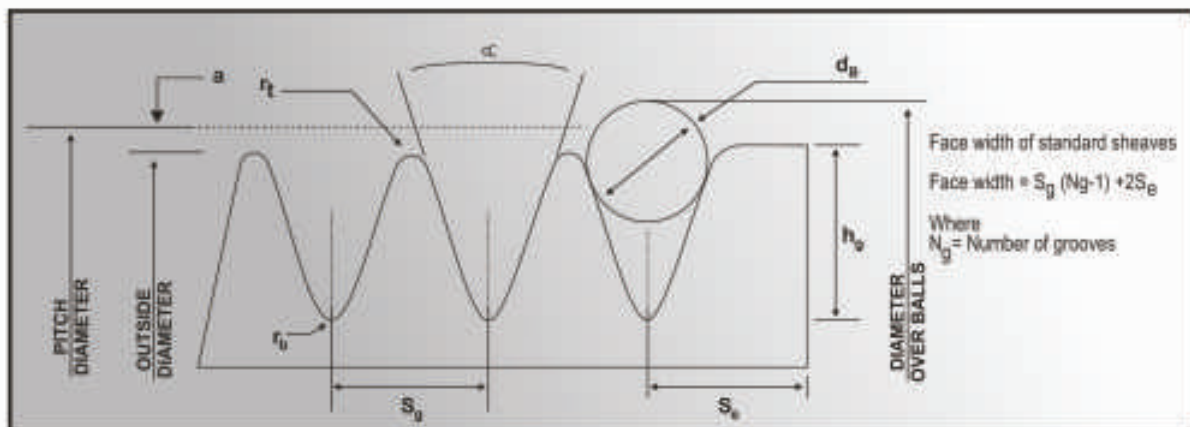


Figure : Standard groove dimensions

## Definition of Small Pulley Effective Diameter (mm)

$$\text{Pitch Diameter (mm)} = \text{Effective Diameter (mm)} + (2 \times h)$$

Belt Section	PJ	PK	PL	PM
h (mm)	1.05	1.6	2.3	2.6

**Table 31**  
Determination of Small Pulley effective diameter (de)

n(rpm)	Design Power (kW)															
	0.25	0.5	1	2	4	7	10	20	30	50	75	100	125	150	175	200
<b>100</b>	45	60	75	95	125	160	180	224	250	315	355	400	450	500	500	500
<b>300</b>	40	50	63	80	106	125	140	180	212	250	280	315	355	355	400	400
<b>500</b>	35	45	60	75	95	112	125	160	180	224	250	280	315	315	355	355
<b>750</b>	35	45	56	67	85	106	118	150	170	200	224	250	280	280	315	315
<b>1000</b>	30	40	50	63	80	95	106	132	150	190	200	224	250	250	280	280
<b>1500</b>	30	35	45	60	71	85	95	125	140	170	180	200	212	224	236	250
<b>2000</b>	30	35	45	56	67	80	90	112	125	150	170	180	200	212	224	224
<b>3000</b>	25	30	40	50	60	71	80	100	112	132	150	160	170	180	190	200
<b>4000</b>	25	30	35	45	56	67	71	90	100	118	132	140	150	160	170	180
<b>5000</b>	20	30	35	40	50	60	67	80	95	106	125	132	140	150		
<b>6000</b>	20	25	30	40	50	56	63	75	85	100	112	125				
<b>7000</b>	20	25	30	40	45	56	60	75	85	95	106	118				
<b>8000</b>	20	25	30	35	45	50	56	71	80	90	100	112				
<b>9000</b>	20	20	30	35	40	50	56	67	75	85	95					
<b>10000</b>	20	20	30	35	40	45	50	63	75	80	90					



**Table 32: Standard Pulleys**

Effective Diameter (mm)	SECTION PJ no. of ribs 4,8,12,16,20	SECTION PK no. of ribs 6,8,10,12,16,20	SECTION PL no. of ribs 6,8,10,12,16,20	SECTION PM no. of ribs 6,10,16,20
20	●			
25	●			
30	●			
35	●			
40	●			
45	●			
50	●			
56	●	●		
60	●	●		
63	●	●		
67	●	●		
71	●	●		
75	●	●	●	
80	●	●	●	
85	●	●	●	
90	●	●	●	
95	●	●	●	
100	●	●	●	
106	●	●	●	
112	●	●	●	
118	●	●	●	
125	●	●	●	
132	●	●	●	
140	●	●	●	
150		●	●	
160	●	●	●	
170		●	●	
180	●	●	●	●
190		●	●	●
200	●	●	●	●
212		●	●	●
224	●	●	●	●
236		●	●	
250	●	●	●	●
280	●	●	●	●
315	●	●	●	●
355	●	●	●	●
400	●	●	●	●
450		●	●	●
500		●	●	●
560				●
630			●	●
710				●
800			●	





Table 33: Section PJ: Basic Power Rating Per Rib (kW) for Small Pulley Effective Diameter (mm)

Table with 20 columns (20-400) and 1000 rows (100-1000) showing power ratings for different pulley diameters. The table is organized into sections for diameters 100-200, 200-300, 300-400, and 400-500.

s p e e d o f t h e s m a l l p u l l e y r i p m



**Table 34:**  
**SECTION PJ:Speed Ratio Correction Factor (Cr)**

Speed Ratio	1.00 to 1.01	1.02 to 1.04	1.05 to 1.09	1.10 to 1.16	1.17 to 1.26	1.27 to 1.40	1.41 to 1.65	above 1.66
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
560	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
700	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
720	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
800	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
900	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
960	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
1000	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
1200	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
1400	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
1440	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
1600	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
1800	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
2000	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02
2200	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02
2400	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02
2600	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02
2800	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03
2880	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03
3000	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03
3200	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03
3400	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03
3600	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03
3800	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04
4000	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04
4200	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04
4400	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04
4500	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04
4600	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04
4800	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05
5000	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05
5200	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05
5400	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05
5500	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05
5600	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.05
5800	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06
6000	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06
6200	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06
6400	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06
6600	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06
6800	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06
7000	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
7200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
7400	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
7400	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
7600	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
7800	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07
8000	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.08
8200	0.00	0.01	0.02	0.03	0.04	0.06	0.06	0.08
8400	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08
8600	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08
8800	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08
9000	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09
9200	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09
9400	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09
9600	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09
9800	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09
10000	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.10

**Table 35:**  
**Length Correction Factor (Cl)**

Effective Length	Correction Factor
Up to 200	0.80
200 - 350	0.80
350 - 500	0.85
500 - 700	0.90
700 - 900	0.95
900 - 1200	1.00
1200 - 1500	1.05
1500 - 2000	1.10
2000 - 2500	1.15
above 2500	1.20

**Table 36:**  
**Arc of Contact Correction Factor (Ca)**

Arc of Contact on Small Pulley	Correction Factor
100	0.72
110	0.76
120	0.80
130	0.84
140	0.88
150	0.91
160	0.94
170	0.97
180	1.00
190	1.02
200	1.05
210	1.07
220	1.09
230	1.11



**Table 37:**  
**Section PK: Basic Power Rating Per Rib (kW) for Small Pulley Effective Diameter (mm)**

Speed of the small pulley rpm	46	50	56	60	65	67	71	75	80	85	90	95	100	108	112	118	125	132	140	150	160	180	200	224	250	280	315	355	400	450	500	560	630							
100	0.022	0.031	0.034	0.037	0.041	0.047	0.051	0.057	0.064	0.068	0.074	0.080	0.085	0.097	0.094	0.101	0.107	0.114	0.125	0.144	0.167	0.191	0.215	0.244	0.275	0.314	0.354	0.401	0.454	0.504	0.564	0.607	0.636							
200	0.044	0.056	0.064	0.074	0.082	0.091	0.100	0.110	0.120	0.132	0.144	0.155	0.167	0.184	0.182	0.202	0.207	0.221	0.240	0.281	0.325	0.365	0.414	0.470	0.531	0.602	0.684	0.774	0.874	0.975	1.091	1.225								
300	0.066	0.084	0.094	0.104	0.112	0.122	0.132	0.142	0.152	0.162	0.172	0.182	0.192	0.210	0.208	0.234	0.240	0.254	0.274	0.325	0.375	0.425	0.485	0.550	0.620	0.700	0.790	0.890	1.000	1.110	1.230	1.360	1.500	1.650	1.790					
400	0.081	0.106	0.115	0.128	0.138	0.148	0.158	0.168	0.178	0.188	0.198	0.208	0.218	0.238	0.236	0.264	0.270	0.284	0.304	0.365	0.420	0.475	0.540	0.615	0.700	0.795	0.900	1.015	1.140	1.275	1.420	1.575	1.740	1.910	2.085	2.270				
500	0.100	0.132	0.145	0.158	0.170	0.180	0.190	0.200	0.210	0.220	0.230	0.240	0.250	0.260	0.258	0.294	0.300	0.314	0.334	0.405	0.465	0.525	0.595	0.675	0.765	0.865	0.975	1.100	1.240	1.395	1.565	1.745	1.935	2.135	2.345	2.565	2.795			
600	0.110	0.147	0.160	0.175	0.188	0.198	0.208	0.218	0.228	0.238	0.248	0.258	0.268	0.278	0.276	0.312	0.318	0.332	0.352	0.430	0.495	0.565	0.640	0.725	0.820	0.925	1.040	1.175	1.325	1.490	1.670	1.860	2.060	2.270	2.490	2.720	2.960	3.210		
700	0.118	0.155	0.168	0.185	0.200	0.210	0.220	0.230	0.240	0.250	0.260	0.270	0.280	0.288	0.324	0.330	0.344	0.364	0.445	0.515	0.590	0.670	0.760	0.860	0.970	1.090	1.230	1.385	1.555	1.740	1.940	2.150	2.370	2.600	2.840	3.090	3.350	3.610		
800	0.124	0.168	0.182	0.200	0.215	0.225	0.235	0.245	0.255	0.265	0.275	0.285	0.295	0.305	0.341	0.347	0.361	0.381	0.465	0.540	0.620	0.710	0.810	0.920	1.040	1.170	1.315	1.475	1.650	1.840	2.040	2.250	2.470	2.700	2.940	3.190	3.450	3.710		
900	0.130	0.175	0.190	0.208	0.225	0.235	0.245	0.255	0.265	0.275	0.285	0.295	0.305	0.315	0.351	0.357	0.371	0.391	0.475	0.555	0.640	0.740	0.850	0.970	1.100	1.240	1.395	1.565	1.750	1.950	2.160	2.380	2.610	2.850	3.100	3.360	3.630	3.910		
1000	0.136	0.185	0.200	0.218	0.235	0.245	0.255	0.265	0.275	0.285	0.295	0.305	0.315	0.325	0.361	0.367	0.381	0.401	0.485	0.570	0.665	0.770	0.890	1.020	1.160	1.315	1.485	1.670	1.870	2.080	2.300	2.530	2.770	3.020	3.280	3.550	3.830			
1100	0.140	0.190	0.205	0.225	0.240	0.250	0.260	0.270	0.280	0.290	0.300	0.310	0.320	0.330	0.365	0.371	0.385	0.405	0.490	0.580	0.680	0.795	0.925	1.070	1.220	1.380	1.550	1.740	1.950	2.170	2.400	2.640	2.890	3.150	3.420	3.700	3.990			
1200	0.144	0.195	0.210	0.230	0.245	0.255	0.265	0.275	0.285	0.295	0.305	0.315	0.325	0.335	0.370	0.376	0.390	0.410	0.495	0.590	0.700	0.830	0.980	1.140	1.300	1.470	1.650	1.850	2.070	2.300	2.540	2.790	3.050	3.320	3.600	3.890				
1300	0.148	0.200	0.215	0.235	0.250	0.260	0.270	0.280	0.290	0.300	0.310	0.320	0.330	0.340	0.375	0.381	0.395	0.415	0.500	0.600	0.715	0.855	1.010	1.175	1.350	1.530	1.720	1.930	2.160	2.400	2.650	2.910	3.180	3.460	3.750	4.050				
1400	0.152	0.205	0.220	0.240	0.255	0.265	0.275	0.285	0.295	0.305	0.315	0.325	0.335	0.345	0.380	0.386	0.400	0.420	0.505	0.610	0.730	0.880	1.045	1.220	1.405	1.600	1.800	2.010	2.240	2.490	2.750	3.020	3.300	3.590	3.890	4.200				
1500	0.156	0.210	0.225	0.245	0.260	0.270	0.280	0.290	0.300	0.310	0.320	0.330	0.340	0.350	0.385	0.391	0.405	0.425	0.510	0.620	0.745	0.900	1.070	1.255	1.450	1.650	1.860	2.080	2.320	2.570	2.830	3.100	3.380	3.670	3.970	4.280				
1600	0.160	0.215	0.230	0.250	0.265	0.275	0.285	0.295	0.305	0.315	0.325	0.335	0.345	0.355	0.390	0.396	0.410	0.430	0.515	0.630	0.760	0.925	1.100	1.290	1.490	1.700	1.920	2.150	2.400	2.660	2.930	3.210	3.500	3.800	4.110	4.430				
1700	0.164	0.220	0.235	0.255	0.270	0.280	0.290	0.300	0.310	0.320	0.330	0.340	0.350	0.360	0.395	0.401	0.415	0.435	0.520	0.640	0.775	0.950	1.135	1.335	1.545	1.765	1.990	2.230	2.490	2.760	3.040	3.330	3.630	3.940	4.260					
1800	0.168	0.225	0.240	0.260	0.275	0.285	0.295	0.305	0.315	0.325	0.335	0.345	0.355	0.365	0.400	0.406	0.420	0.440	0.525	0.650	0.790	0.975	1.170	1.380	1.600	1.830	2.070	2.330	2.600	2.880	3.170	3.470	3.780	4.100	4.430					
1900	0.172	0.230	0.245	0.265	0.280	0.290	0.300	0.310	0.320	0.330	0.340	0.350	0.360	0.370	0.405	0.411	0.425	0.445	0.530	0.660	0.805	0.995	1.200	1.415	1.645	1.885	2.130	2.390	2.670	2.960	3.260	3.570	3.890	4.220	4.560					
2000	0.176	0.235	0.250	0.270	0.285	0.295	0.305	0.315	0.325	0.335	0.345	0.355	0.365	0.375	0.410	0.416	0.430	0.450	0.535	0.670	0.820	1.015	1.225	1.445	1.675	1.920	2.170	2.440	2.720	3.010	3.310	3.620	3.940	4.280	4.630					
2200	0.184	0.245	0.260	0.280	0.295	0.305	0.315	0.325	0.335	0.345	0.355	0.365	0.375	0.385	0.420	0.426	0.440	0.460	0.545	0.685	0.840	1.040	1.260	1.490	1.730	2.000	2.280	2.570	2.870	3.180	3.500	3.830	4.170	4.520	4.880					
2400	0.192	0.255	0.270	0.290	0.305	0.315	0.325	0.335	0.345	0.355	0.365	0.375	0.385	0.395	0.430	0.436	0.450	0.470	0.555	0.700	0.860	1.060	1.290	1.530	1.780	2.050	2.340	2.640	2.950	3.270	3.600	3.940	4.290	4.650	5.020					
2600	0.200	0.265	0.280	0.300	0.315	0.325	0.335	0.345	0.355	0.365	0.375	0.385	0.395	0.405	0.440	0.446	0.460	0.480	0.565	0.715	0.880	1.090	1.330	1.580	1.840	2.110	2.400	2.710	3.030	3.360	3.700	4.050	4.410	4.780	5.160					
2800	0.208	0.275	0.290	0.310	0.325	0.335	0.345	0.355	0.365	0.375	0.385	0.395	0.405	0.415	0.450	0.456	0.470	0.490	0.575	0.730	0.900	1.110	1.360	1.620	1.890	2.170	2.460	2.770	3.090	3.430	3.780	4.140	4.510	4.890	5.280					
3000	0.216	0.285	0.300	0.320	0.335	0.345	0.355	0.365	0.375	0.385	0.395	0.405	0.415	0.425	0.460	0.466	0.480	0.500	0.585	0.745	0.920	1.130	1.390	1.660	1.940	2.230	2.530	2.840	3.160	3.500	3.850	4.210	4.580	4.960	5.350					
3200	0.224	0.295	0.310	0.330	0.345	0.355	0.365	0.375	0.385	0.395	0.405	0.415	0.425	0.435	0.470	0.476	0.490	0.510	0.595	0.760	0.945	1.160	1.430	1.710	2.000	2.300	2.610	2.930	3.270	3.620	3.980	4.350	4.730	5.120						
3400	0.232	0.305	0.320	0.340	0.355	0.365	0.375	0.385	0.395	0.405	0.415	0.425	0.435	0.445	0.480	0.486	0.500	0.520	0.605	0.775	0.970	1.190	1.470	1.760	2.060	2.370	2.690	3.020	3.370	3.730	4.100	4.480	4.870	5.270						
3600	0.240	0.315	0.330	0.350	0.365	0.375	0.385	0.395	0.405	0.415	0.425	0.435	0.445	0.455	0.490	0.496	0.510	0.530	0.615	0.790	0.995	1.220	1.510	1.810	2.110	2.420	2.740	3.070	3.420	3.780	4.150	4.530	4.920	5.320						
3800	0.248	0.325	0.340	0.360	0.375	0.385	0.395	0.405	0.415	0.425	0.435	0.445	0.455	0.465	0.500	0.5																								



**Table 38:**  
**SECTION PK:Speed Ratio Correction Factor (Cr)**

Speed Ratio	1.00 to 1.03	1.04 to 1.08	1.09 to 1.15	1.16 to 1.24	1.25 to 1.48	1.49 to 2.00	2.01 to 2.75	above 2.76
100	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
200	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02
300	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02
400	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03
500	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04
580	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.05
600	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.05
700	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06
720	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06
800	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.06
900	0.00	0.01	0.02	0.04	0.05	0.06	0.06	0.07
960	0.00	0.01	0.03	0.04	0.05	0.06	0.07	0.08
1000	0.00	0.01	0.03	0.04	0.05	0.06	0.07	0.08
1200	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.10
1400	0.00	0.02	0.04	0.06	0.08	0.09	0.10	0.11
1440	0.00	0.02	0.04	0.06	0.08	0.09	0.10	0.12
1600	0.00	0.02	0.04	0.06	0.09	0.10	0.11	0.13
1800	0.00	0.02	0.05	0.07	0.10	0.12	0.13	0.15
2000	0.00	0.03	0.05	0.08	0.11	0.13	0.14	0.16
2200	0.00	0.03	0.06	0.09	0.12	0.14	0.16	0.18
2400	0.00	0.03	0.06	0.10	0.13	0.15	0.17	0.19
2600	0.00	0.04	0.07	0.11	0.14	0.17	0.18	0.21
2800	0.00	0.04	0.08	0.11	0.15	0.18	0.20	0.23
2880	0.00	0.04	0.08	0.12	0.16	0.18	0.20	0.23
3000	0.00	0.04	0.08	0.12	0.16	0.19	0.21	0.24
3200	0.00	0.04	0.09	0.13	0.17	0.21	0.23	0.26
3400	0.00	0.05	0.09	0.14	0.18	0.22	0.24	0.28
3600	0.00	0.05	0.10	0.15	0.19	0.23	0.26	0.29
3800	0.00	0.05	0.10	0.15	0.21	0.24	0.27	0.31
4000	0.00	0.05	0.11	0.16	0.22	0.26	0.28	0.32
4200	0.00	0.06	0.11	0.17	0.23	0.27	0.30	0.34
4400	0.00	0.06	0.12	0.18	0.24	0.28	0.31	0.36
4500	0.00	0.06	0.12	0.18	0.24	0.29	0.32	0.36
4600	0.00	0.06	0.12	0.19	0.25	0.29	0.33	0.37
4800	0.00	0.06	0.13	0.19	0.26	0.31	0.34	0.39
5000	0.00	0.07	0.14	0.20	0.27	0.32	0.35	0.41
5200	0.00	0.07	0.14	0.21	0.28	0.33	0.37	0.42
5400	0.00	0.07	0.15	0.22	0.29	0.35	0.38	0.44
5500	0.00	0.07	0.15	0.22	0.30	0.35	0.39	0.45
5600	0.00	0.08	0.15	0.23	0.30	0.36	0.40	0.45
5800	0.00	0.08	0.16	0.23	0.31	0.37	0.41	0.47
6000	0.00	0.08	0.16	0.24	0.32	0.38	0.43	0.49
6200	0.00	0.08	0.17	0.25	0.33	0.40	0.44	0.50
6400	0.00	0.09	0.17	0.26	0.35	0.41	0.45	0.52
6600	0.00	0.09	0.18	0.27	0.36	0.42	0.47	0.53
6800	0.00	0.09	0.18	0.28	0.37	0.44	0.48	0.55
7000	0.00	0.09	0.19	0.28	0.38	0.45	0.50	0.57
7200	0.00	0.10	0.19	0.29	0.39	0.46	0.51	0.58
7400	0.00	0.10	0.20	0.30	0.40	0.47	0.52	0.60
7600	0.00	0.10	0.21	0.31	0.41	0.49	0.54	0.62
7800	0.00	0.11	0.21	0.32	0.42	0.50	0.55	0.63
8000	0.00	0.11	0.22	0.32	0.43	0.51	0.57	0.65
8200	0.00	0.11	0.22	0.33	0.44	0.53	0.58	0.66
8400	0.00	0.11	0.23	0.34	0.45	0.54	0.60	0.68
8600	0.00	0.12	0.23	0.35	0.46	0.55	0.61	0.70
8800	0.00	0.12	0.24	0.36	0.48	0.56	0.62	0.71
9000	0.00	0.12	0.24	0.36	0.49	0.58	0.64	0.73
9200	0.00	0.12	0.25	0.37	0.50	0.59	0.65	0.75
9400	0.00	0.13	0.25	0.38	0.51	0.60	0.67	0.76
9600	0.00	0.13	0.26	0.39	0.52	0.62	0.68	0.78
9800	0.00	0.13	0.26	0.40	0.53	0.63	0.69	0.79
10000	0.00	0.14	0.27	0.41	0.54	0.64	0.71	0.81

**Table 39:**  
**Length Correction Factor (Cl)**

Effective Length	Correction Factor
Up to 1000	0.90
1000 - 1400	0.95
1400 - 2000	1.00
2000 - 2300	1.05
2300 - 2500	1.10
above 2500	1.15

**Table 40:**  
**Arc of Contact Correction Factor (Ca)**

Arc of Contact on Small Pulley	Correction Factor
100	0.72
110	0.76
120	0.80
130	0.84
140	0.88
150	0.91
160	0.94
170	0.97
180	1.00
190	1.02
200	1.05
210	1.07
220	1.09
230	1.11



**Table 41:**  
**Section PL: Basic Power Rating Per Rib (kW) for Small Pulley Effective Diameter (mm)**

speed of the small pulley rpm	75	80	85	90	95	100	106	112	118	125	132	140	150	160	170	180	190	200	212	224	236	250	260	315	355	400	450	500	560	630	800					
100	0.079	0.068	0.097	0.102	0.112	0.123	0.134	0.144	0.154	0.167	0.179	0.194	0.211	0.227	0.244	0.261	0.279	0.304	0.336	0.355	0.380	0.403	0.430	0.468	0.554	0.627	0.708	0.788	0.898	0.987	1.265					
200	0.145	0.168	0.248	0.291	0.319	0.344	0.372	0.401	0.432	0.466	0.501	0.541	0.588	0.640	0.695	0.754	0.815	0.880	0.958	1.049	1.091	1.185	1.290	1.371	1.563	1.761	1.967	2.212	2.474	2.784	3.509					
300	0.119	0.242	0.316	0.300	0.379	0.442	0.443	0.480	0.526	0.570	0.612	0.706	0.788	0.855	0.925	1.003	1.080	1.166	1.264	1.364	1.468	1.576	1.688	1.790	2.001	2.201	2.591	2.880	3.221	3.612	4.629					
400	0.204	0.316	0.300	0.379	0.442	0.443	0.480	0.526	0.570	0.612	0.706	0.788	0.855	0.925	1.003	1.080	1.166	1.264	1.364	1.468	1.576	1.688	1.790	2.001	2.201	2.591	2.880	3.221	3.612	4.629						
500	0.349	0.386	0.427	0.471	0.510	0.550	0.600	0.646	0.692	0.750	0.803	0.870	0.944	1.025	1.103	1.181	1.259	1.336	1.421	1.516	1.611	1.716	1.841	2.001	2.244	2.498	2.821	3.176	3.525	4.402	5.475					
600	0.385	0.428	0.472	0.520	0.563	0.607	0.662	0.710	0.770	0.831	0.892	0.970	1.052	1.139	1.223	1.311	1.399	1.481	1.568	1.668	1.768	1.904	2.056	2.242	2.462	2.750	3.126	3.515	3.901	4.346	4.854	6.000				
800	0.629	0.456	0.502	0.551	0.601	0.651	0.708	0.762	0.821	0.888	0.952	1.022	1.092	1.169	1.254	1.307	1.380	1.468	1.560	1.657	1.760	1.886	2.036	2.201	2.386	2.591	2.945	3.324	3.701	4.146	4.614	5.142	6.332			
1000	0.472	0.525	0.578	0.638	0.692	0.746	0.813	0.881	0.950	1.020	1.091	1.164	1.241	1.400	1.507	1.610	1.715	1.820	1.948	2.071	2.196	2.337	2.491	2.660	2.844	3.044	3.261	3.494	3.736	4.000	4.294	4.736	5.252	5.836	7.094	
1200	0.682	0.536	0.586	0.652	0.710	0.767	0.833	0.903	0.971	1.050	1.128	1.216	1.325	1.425	1.544	1.651	1.761	1.880	2.010	2.150	2.290	2.440	2.610	2.790	3.000	3.230	3.480	3.740	4.020	4.320	4.640	5.000	5.370	5.850	6.450	7.140
1400	0.879	0.588	0.658	0.720	0.782	0.844	0.909	0.983	1.059	1.136	1.214	1.302	1.400	1.498	1.581	1.703	1.820	1.937	2.068	2.200	2.340	2.479	2.638	2.801	3.070	3.310	3.510	3.740	4.218	4.738	5.288	5.812	6.403	7.032	8.270	
1600	0.979	0.657	0.730	0.801	0.873	0.940	1.025	1.090	1.161	1.238	1.314	1.402	1.500	1.598	1.681	1.820	1.944	2.061	2.181	2.304	2.444	2.581	2.738	2.910	3.141	3.341	3.510	3.740	4.218	4.738	5.288	5.812	6.403	7.032	8.270	
1800	0.985	0.719	0.793	0.864	0.936	1.000	1.083	1.173	1.266	1.363	1.463	1.561	1.722	1.868	2.009	2.149	2.288	2.427	2.564	2.720	2.820	2.921	3.120	3.302	3.565	3.800	4.000	4.210	4.688	5.200	5.711	6.342	6.919	8.154		
2000	1.120	1.328	1.482	1.623	1.771	1.913	2.056	2.202	2.352	2.421	2.615	2.809	3.025	3.262	3.554	3.816	4.052	4.315	4.551	4.838	5.111	5.379	5.679	6.021	6.400	6.814	7.104	7.691	8.191	8.918	9.534	10.364	11.314	12.384		
2200	1.468	1.446	1.604	1.762	1.922	2.078	2.281	2.446	2.619	2.836	3.041	3.276	3.562	3.841	4.112	4.381	4.642	4.900	5.196	5.478	5.705	5.959	6.250	6.580	6.950	7.350	7.780	8.240	8.730	9.240	9.770	10.320	10.890	11.480		
2400	1.895	1.597	1.728	1.888	2.045	2.208	2.433	2.633	2.824	3.010	3.238	3.516	3.820	4.115	4.400	4.662	4.955	5.217	5.522	5.814	6.090	6.356	6.690	7.050	7.440	7.850	8.280	8.730	9.200	9.690	10.200	10.730	11.280	11.840		
2600	1.478	1.653	1.649	2.027	2.211	2.380	2.600	2.810	3.014	3.251	3.484	3.746	4.062	4.375	4.672	4.960	5.245	5.510	5.770	6.089	6.376	6.637	6.921	7.230	7.570	7.930	8.310	8.710	9.130	9.570	10.030	10.510	11.010	11.520		
2800	1.570	1.767	1.943	2.157	2.350	2.530	2.761	2.953	3.205	3.448	3.682	3.966	4.295	4.610	4.890	5.250	5.510	5.770	6.089	6.376	6.637	6.921	7.230	7.570	7.930	8.310	8.710	9.130	9.570	10.030	10.510	11.010	11.520	12.040		
3000	1.608	1.805	2.010	2.200	2.402	2.585	2.826	3.050	3.270	3.522	3.771	4.051	4.367	4.713	5.071	5.321	5.580	5.878	6.185	6.467	6.728	7.000	7.284	7.580	7.880	8.190	8.510	8.840	9.190	9.560	9.940	10.330	10.730			
3200	1.963	1.969	2.077	2.262	2.464	2.681	2.880	3.100	3.376	3.633	3.889	4.176	4.515	4.847	5.165	5.461	5.749	6.016	6.279	6.529	6.767	7.011	7.259	7.510	7.770	8.030	8.290	8.560	8.840	9.130	9.430	9.740	10.060	10.390		
3400	1.835	2.062	2.203	2.515	2.710	2.923	3.210	3.480	3.703	3.962	4.256	4.566	4.913	5.252	5.571	5.888	6.145	6.398	6.671	6.900	7.122	7.338	7.550	7.760	7.970	8.190	8.410	8.640	8.880	9.130	9.380	9.640	9.900	10.170		
3600	1.915	2.156	2.292	2.623	2.810	3.083	3.349	3.600	3.850	4.146	4.422	4.720	5.069	5.376	5.678	5.981	6.221	6.468	6.671	6.900	7.122	7.338	7.550	7.760	7.970	8.190	8.410	8.640	8.880	9.130	9.380	9.640	9.900	10.170		
3800	1.994	2.200	2.400	2.730	2.972	3.200	3.478	3.743	4.008	4.292	4.575	4.864	5.205	5.491	5.771	6.041	6.291	6.541	6.811	7.031	7.251	7.466	7.676	7.886	8.100	8.310	8.520	8.740	8.960	9.190	9.420	9.660	9.900			
4000	2.065	2.329	2.585	2.938	3.251	3.521	3.821	4.146	4.436	4.721	5.020	5.369	5.768	6.117	6.417	6.717	7.017	7.317	7.617	7.917	8.217	8.517	8.817	9.117	9.417	9.717	10.017	10.317	10.617	10.917	11.217	11.517	11.817	12.117		
4200	2.140	2.412	2.678	2.953	3.189	3.432	3.719	4.000	4.285	4.563	4.858	5.198	5.583	5.913	6.193	6.473	6.753	7.033	7.313	7.593	7.873	8.153	8.433	8.713	8.993	9.273	9.553	9.833	10.113	10.393	10.673	10.953	11.233	11.513		
4400	2.210	2.490	2.762	3.028	3.266	3.508	3.831	4.109	4.389	4.684	4.985	5.272	5.617	5.923	6.199	6.475	6.751	7.027	7.303	7.579	7.855	8.131	8.407	8.683	8.959	9.235	9.511	9.787	10.063	10.339	10.615	10.891	11.167	11.443		
4600	2.245	2.529	2.800	3.071	3.312	3.557	3.883	4.165	4.445	4.730	5.021	5.321	5.644	5.944	6.219	6.494	6.769	7.044	7.319	7.594	7.869	8.144	8.419	8.694	8.969	9.244	9.519	9.794	10.069	10.344	10.619	10.894	11.169	11.444		
4800	2.280	2.565	2.842	3.110	3.360	3.609	3.935	4.210	4.490	4.789	5.070	5.370	5.704	5.988	6.263	6.538	6.813	7.088	7.363	7.638	7.913	8.188	8.463	8.738	9.013	9.288	9.563	9.838	10.113	10.388	10.663	10.938	11.213	11.488		
5000	2.300	2.598	2.872	3.140	3.390	3.640	4.000	4.315	4.586	4.862	5.149	5.450	5.769	6.038	6.307	6.576	6.845	7.114	7.383	7.652	7.921	8.190	8.459	8.728	8.997	9.266	9.535	9.804	10.073	10.342	10.611	10.880	11.149	11.418		
5200	2.410	2.688	3.001	3.270	3.554	3.811	4.112	4.401	4.670	4.946	5.233	5.512	5.812	6.059	6.346	6.633	6.920	7.207	7.494	7.781	8.068	8.355	8.642	8.929	9.216	9.503	9.790	10.077	10.364	10.651	10.938	11.225	11.512			
5400	2.462	2.770	3.083	3.351	3.628	3.891	4.195	4.479	4.748	5.022	5.294	5.566	5.868	6.091	6.314	6.537	6.760	6.983	7.206	7.429	7.652	7.875	8.098	8.321	8.544	8.767	8.990	9.213	9.436	9.659	9.882	10.105	10.328	10.551		
5600	2.515	2.828	3.127	3.420	3.696	3.962	4.294	4.546	4.810	5.080	5.341	5.588	5.841	6.094	6.347	6.600	6.853	7.106	7.359	7.612	7.865	8.118	8.371	8.624	8.877	9.130	9.383	9.636	9.							



**Table 42:**  
**SECTION PL:Speed Ratio Correction Factor (Cr)**

Speed Ratio	1.00 to 1.02	1.03 to 1.06	1.07 to 1.08	1.09 to 1.16	1.17 to 1.26	1.27 to 1.40	1.41 to 1.74	above 1.75
100	0.000	0.000	0.000	0.000	0.010	0.010	0.010	0.010
200	0.000	0.000	0.010	0.010	0.010	0.010	0.020	0.020
300	0.000	0.000	0.010	0.010	0.020	0.020	0.020	0.030
400	0.000	0.010	0.010	0.020	0.020	0.030	0.030	0.040
500	0.000	0.010	0.010	0.020	0.030	0.030	0.040	0.050
560	0.000	0.010	0.020	0.020	0.030	0.040	0.050	0.050
600	0.000	0.010	0.020	0.020	0.030	0.040	0.050	0.060
700	0.000	0.010	0.020	0.030	0.040	0.050	0.060	0.070
720	0.000	0.010	0.020	0.030	0.040	0.050	0.060	0.070
800	0.000	0.010	0.020	0.030	0.040	0.050	0.060	0.080
900	0.000	0.010	0.020	0.040	0.050	0.060	0.070	0.090
960	0.000	0.010	0.030	0.040	0.050	0.060	0.080	0.090
1000	0.000	0.010	0.030	0.040	0.050	0.070	0.080	0.090
1200	0.000	0.020	0.030	0.050	0.060	0.080	0.100	0.110
1400	0.000	0.020	0.040	0.060	0.080	0.090	0.110	0.130
1440	0.000	0.020	0.040	0.060	0.080	0.100	0.120	0.140
1600	0.000	0.020	0.040	0.060	0.090	0.110	0.130	0.150
1800	0.000	0.020	0.050	0.070	0.100	0.120	0.150	0.170
2000	0.000	0.030	0.050	0.080	0.110	0.140	0.160	0.190
2200	0.000	0.030	0.060	0.090	0.120	0.150	0.180	0.210
2400	0.000	0.030	0.060	0.100	0.130	0.160	0.190	0.230
2600	0.000	0.040	0.070	0.110	0.140	0.180	0.210	0.250
2800	0.000	0.040	0.080	0.110	0.150	0.190	0.230	0.260
2880	0.000	0.040	0.080	0.120	0.160	0.190	0.230	0.270
3000	0.000	0.040	0.080	0.120	0.160	0.200	0.240	0.280
3200	0.000	0.040	0.090	0.130	0.170	0.220	0.260	0.300
3400	0.000	0.050	0.090	0.140	0.180	0.230	0.280	0.320
3600	0.000	0.050	0.100	0.150	0.190	0.240	0.290	0.340
3800	0.000	0.050	0.100	0.150	0.210	0.260	0.310	0.360
4000	0.000	0.050	0.110	0.160	0.220	0.270	0.320	0.380
4200	0.000	0.060	0.110	0.170	0.230	0.280	0.340	0.400
4400	0.000	0.060	0.120	0.180	0.240	0.300	0.360	0.420
4500	0.000	0.060	0.120	0.180	0.240	0.300	0.360	0.430
4600	0.000	0.060	0.120	0.190	0.250	0.310	0.370	0.430
4800	0.000	0.060	0.130	0.190	0.260	0.320	0.390	0.450
5000	0.000	0.070	0.140	0.200	0.270	0.340	0.410	0.470
5200	0.000	0.070	0.140	0.210	0.280	0.350	0.420	0.490
5400	0.000	0.070	0.150	0.220	0.290	0.360	0.440	0.510
5500	0.000	0.070	0.150	0.220	0.300	0.370	0.450	0.520
5600	0.000	0.080	0.150	0.230	0.300	0.380	0.450	0.530
5800	0.000	0.080	0.160	0.230	0.310	0.390	0.470	0.550
6000	0.000	0.080	0.160	0.240	0.320	0.410	0.490	0.570
6200	0.000	0.080	0.170	0.250	0.330	0.420	0.500	0.590
6400	0.000	0.090	0.170	0.260	0.350	0.430	0.520	0.600
6600	0.000	0.090	0.180	0.270	0.360	0.450	0.530	0.620
6800	0.000	0.090	0.180	0.280	0.370	0.460	0.550	0.640
7000	0.000	0.090	0.190	0.280	0.380	0.470	0.570	0.660
7200	0.000	0.100	0.190	0.290	0.390	0.490	0.580	0.680
7400	0.000	0.100	0.200	0.300	0.400	0.500	0.600	0.700
7600	0.000	0.100	0.210	0.310	0.410	0.510	0.620	0.720
7800	0.000	0.110	0.210	0.320	0.420	0.530	0.630	0.740
8000	0.000	0.110	0.220	0.320	0.430	0.540	0.650	0.760
8200	0.000	0.110	0.220	0.330	0.440	0.550	0.660	0.770
8400	0.000	0.110	0.230	0.340	0.450	0.570	0.680	0.790
8600	0.000	0.120	0.230	0.350	0.460	0.580	0.700	0.810
8800	0.000	0.120	0.240	0.360	0.480	0.590	0.710	0.830
9000	0.000	0.120	0.240	0.360	0.490	0.610	0.730	0.850
9200	0.000	0.120	0.250	0.370	0.500	0.620	0.750	0.870
9400	0.000	0.130	0.250	0.380	0.510	0.630	0.760	0.890
9600	0.000	0.130	0.260	0.390	0.520	0.650	0.780	0.910
9800	0.000	0.130	0.260	0.400	0.530	0.660	0.790	0.930
10000	0.000	0.140	0.270	0.410	0.540	0.680	0.810	0.950

**Table 43: Length Correction Factor (CI)**

Effective Length	Correction Factor
Up to 1300	0.90
1300 - 1750	0.95
1750 - 2500	1.00
2500 - 3750	1.05
3750 - 4500	1.10
4500 - 5250	1.15
above 5250	1.20

**Table 44: Arc of Contact Correction Factor (Ca)**

Arc of Contact on Small Pulley	Correction Factor
100	0.72
110	0.76
120	0.80
130	0.84
140	0.88
150	0.91
160	0.94
170	0.97
180	1.00
190	1.02
200	1.05
210	1.07
220	1.09
230	1.11

**Table 45:**  
**Section PM: Basic Power Rating Per Rib (kW) for Small Pulley Effective Diameter (mm)**

de	180	190	200	212	224	250	280	315	355	400	450	500	560	630	700
s	0.631	0.687	0.741	0.807	0.871	1.012	1.174	1.354	1.568	1.810	2.071	2.330	2.641	3.000	3.353
p	1.187	1.293	1.397	1.524	1.648	1.920	2.228	2.574	2.981	3.445	3.945	4.441	5.032	5.711	6.381
e	1.712	1.867	2.021	2.204	2.384	2.781	3.232	3.740	4.332	5.004	5.730	6.443	7.291	8.267	9.225
e	2.217	2.417	2.620	2.860	3.099	3.614	4.200	4.861	5.631	6.500	7.435	8.352	9.440	10.677	11.878
d	2.705	2.953	3.198	3.495	3.784	4.418	5.136	5.944	6.880	7.940	9.064	10.172	11.466	12.930	14.340
o	2.990	3.265	3.536	3.865	4.190	4.890	5.685	6.574	7.610	8.774	10.010	11.212	12.621	14.195	15.702
f	3.177	3.471	3.760	4.110	4.455	5.200	6.044	6.991	8.086	9.312	10.620	11.890	13.363	15.006	16.565
t	3.637	3.973	4.308	4.708	5.104	5.955	6.924	8.001	9.242	10.630	12.091	13.501	15.114	16.885	18.530
h	4.084	4.464	4.840	5.290	5.735	6.104	7.096	8.200	9.466	10.885	12.375	13.808	15.444	17.236	18.884
e	4.519	4.937	5.354	5.855	6.344	6.690	7.772	8.971	10.349	11.878	13.472	14.992	16.705	18.549	20.202
s	4.774	5.216	5.660	6.185	6.705	7.400	8.590	9.905	11.400	13.052	14.753	16.352	18.126	19.969	21.547
m	4.940	5.400	5.857	6.402	6.941	8.084	9.377	10.795	12.396	14.150	15.932	17.105	18.882	20.693	22.182
a	5.748	6.284	6.811	7.443	8.061	9.381	10.847	12.440	14.208	16.090	17.933	19.548	21.154	22.519	22.531
i	6.504	7.108	7.704	8.411	9.101	10.561	12.171	13.885	15.744	17.645	19.405	20.810	21.154		
i	6.648	7.264	7.874	8.595	9.302	10.782	12.414	14.148	16.015	17.905	19.632	20.966			
p	7.207	7.871	8.527	9.299	10.052	11.625	13.330	15.109	16.971	18.771	20.276				
u	7.850	8.571	9.274	10.100	10.900	12.554	14.310	16.087	17.855	19.411					
l	8.435	9.198	9.940	10.808	11.641	13.338	15.094	16.792	18.356						
i	8.954	9.750	10.521	11.415	12.264	13.966	15.660	17.201							
e	9.401	10.221	11.011	11.912	12.762	14.421	15.995	17.283							
p	9.776	10.609	11.401	12.292	13.128	14.696	16.075								
u	10.071	10.903	11.667	12.555	13.345	14.772									
l	10.165	10.990	11.769	12.622	13.391	14.742									
e	10.281	11.101	11.855	12.682	13.412	14.641									
y	10.402	11.194	11.911	12.671	13.314										
r	10.433	11.180	11.840	12.511	13.044										
p	10.363	11.050	11.635	12.192											
m	10.188	10.796	11.290												
	9.905	10.422													



**Table 46:**  
**SECTION PM:Speed Ratio Correction Factor (Cr)**

Speed of small pulley in rpm	1.00 to 1.01	1.02 to 1.04	1.05 to 1.06	1.07 to 1.14	1.15 to 1.24	1.25 to 1.48	1.49 to 2.00	above 2.01
100	0.00	0.01	0.01	0.02	0.03	0.05	0.06	0.07
200	0.00	0.01	0.02	0.04	0.07	0.09	0.11	0.14
300	0.01	0.02	0.03	0.06	0.10	0.14	0.17	0.20
400	0.01	0.02	0.04	0.08	0.14	0.19	0.23	0.27
500	0.01	0.03	0.05	0.10	0.17	0.24	0.29	0.34
560	0.01	0.03	0.06	0.11	0.19	0.26	0.32	0.38
600	0.01	0.03	0.06	0.12	0.20	0.28	0.34	0.41
700	0.01	0.04	0.08	0.14	0.24	0.33	0.40	0.47
720	0.01	0.04	0.08	0.15	0.24	0.34	0.41	0.49
800	0.02	0.04	0.09	0.16	0.27	0.38	0.46	0.54
900	0.02	0.05	0.10	0.18	0.30	0.43	0.52	0.61
960	0.02	0.05	0.10	0.19	0.32	0.45	0.55	0.65
1000	0.02	0.05	0.11	0.20	0.34	0.47	0.57	0.68
1200	0.02	0.06	0.13	0.24	0.41	0.57	0.69	0.81
1400	0.03	0.08	0.15	0.28	0.47	0.66	0.80	0.95
1440	0.03	0.08	0.16	0.29	0.49	0.68	0.83	0.97
1600	0.03	0.09	0.17	0.32	0.54	0.76	0.92	1.08
1800	0.04	0.10	0.19	0.36	0.61	0.85	1.03	1.22
2000	0.04	0.11	0.22	0.41	0.68	0.95	1.15	1.35
2200	0.04	0.12	0.24	0.45	0.74	1.04	1.26	1.49
2400	0.05	0.13	0.26	0.49	0.81	1.13	1.38	1.62
2600	0.05	0.14	0.28	0.53	0.88	1.23	1.49	1.76
2800	0.06	0.15	0.30	0.57	0.95	1.32	1.61	1.89
2880	0.06	0.16	0.31	0.58	0.97	1.36	1.65	1.94
3000	0.06	0.16	0.32	0.61	1.01	1.42	1.72	2.03
3200	0.06	0.17	0.35	0.65	1.08	1.51	1.84	2.16
3400	0.07	0.18	0.37	0.69	1.15	1.61	1.95	2.30
3600	0.07	0.19	0.39	0.73	1.22	1.70	2.07	2.43
3800	0.08	0.21	0.41	0.77	1.28	1.80	2.18	2.57
4000	0.08	0.22	0.43	0.81	1.35	1.89	2.30	2.70

**Table 47: Length Correction Factor (Cl)**

Effective Length	Correction Factor
Up to 2750	0.95
2750 - 3750	1.00
3750 - 5000	1.05
5000 - 7000	1.10
7000 - 9000	1.15
above 9000	1.20

**Table 48: Arc of Contact Correction Factor (Cr)**

Arc of Contact on Small Pulley	Correction Factor
100	0.72
110	0.76
120	0.80
130	0.84
140	0.88
150	0.91
160	0.94
170	0.97
180	1.00
190	1.02
200	1.05
210	1.07
220	1.09
230	1.11

## Installation & Maintenance

- 1) Make sure that the power is off and machine stops completely before setting the belt or during maintenance.
- 2) Do not use excessive force to set the belt. Reduce centre distance by using the motor slide for smooth setting, when using the tension pulley the belt should be loosened beforehand.
- 3) Make sure that oil does not stick to the belt while setting the belt.
- 4) When the centre distance is long or when using PJ or PK type with small pitches make sure that you do not miss-set the belt by a ridge.
- 5) Tension the drive properly.
- 6) With multi belt system make sure that the pulley groove dimensions are perfect.
- 7) Check if the pulley groove is worn or damaged in operation if the pulley tip gets smaller (sharpened) replace the pulley, since it can cause shortened belt life.

## Installation Procedure

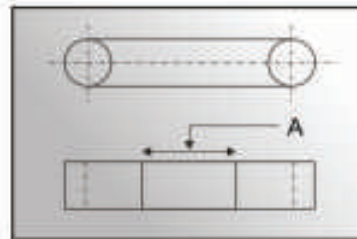
The following installation procedure should be strictly adhered to achieve the satisfactory performance from the ribbed belt drive.

- 1) Switch off the main supply before beginning with the exercise of installation.
- 2) Bring the pulleys closer to each other so that the belt can be removed easily.
- 3) Inspect the pulley grooves for any scores, sharp edges, dirt & rust. Clean them as required.
- 4) Ensure the alignment of pulleys. Make sure that the shafts are also properly aligned.
- 5) Mount the ribbed belt with no tension. Make sure that the ribs have been properly seated in the grooves.
- 6) Tension the ribbed belts as per the procedure given below.
- 7) Give some running time to the drive so that the belts are properly seated in the grooves.
- 8) Guard the drive properly.

## Tensioning Procedure

It is imperative that to achieve the best from your ribbed belt drive, a proper tension be maintained in the drive. Under or over tensioning can cause the ribbed belt to fail prematurely. The following steps should be worked out to ensure the proper tension in the drive.

- 1) Fit the belt on the pulleys with no tension.
- 2) Draw two perpendicular lines across the belt at about 80% of the belt span between the pulleys as shown in the figure. Say for example the lines are placed 1000 mm apart. (A).



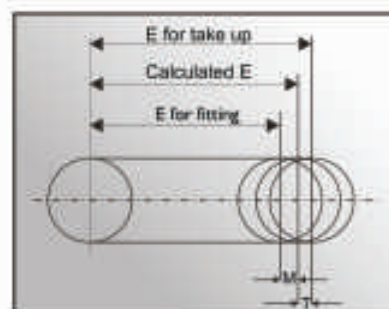
- 3) Increase the distance between two lines by 0.5 to 0.75% i.e. by 5 to 7.5 mm for an initial spacing of 1000 mm, so that the (A) now becomes 1007.5 mm.



- 4) Run the drive under load for about 10 minutes.
- 5) Check the tension of the belt (spacing between two lines) & readjust if necessary.

## Installation & Take-up allowances

L (mm)	PJ		PK		PL		PM	
	M	T	M	T	M	T	M	T
< 750	-10	+10	-11	+13				
750 to 1200	-10	+15	-12	+16	-15	+20		
1200 to 2000	-15	+20	-16	+22	-20	+20		
2000 to 3500	-20	+30	-23	+32	-30	+35	-40	+50
3500 to 5000					-40	+50	-50	+70





## How to Use the Idler Pulley

Be careful when you use the idler pulley since it might cause misalignment or shorten the belt service life through flex fatigue. The idler pulley is used when the pulley is fixed, when you want to reduce vibration, or to increase the contact angle of the small pulley. When you use an idler pulley, please follow the instructions given below. Please contact us if you use an outside idler, in particular, since it considerably reduces the belt service life.

### Instructions to Use the Idler Pulley

- Use the idler pulley on the slack side of the belt.
- Use the idler pulley at inside of the belt, rather than outside.
- Do not place the idler pulley close to other pulleys.
- The idler pulley should be flat, without any flanges.
- Do not use the belt for clutching device using idler.
- Correct the power transmission capacity if the contact angle might be changed.

### 1. When using the inside idler pulley

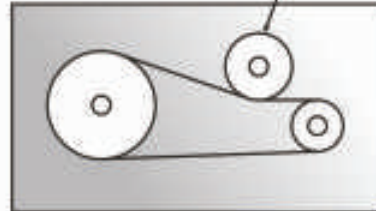
The idler pulley diameter should be larger than or equal to the smaller pulley diameter.



- Use an idler pulley with grooves.
- Position of the idler pulley should be near to the large pulley in order to maintain the contact angle of smaller pulley.

### 2. When using the outside idler pulley.

The idler pulley diameter should be 1.5 times or more than the smaller pulley diameter.



- Use the flat idler pulley without any crown.
- Position of the idler pulley should be near to the small pulley.
- Minimum idler pulley diameter is shown in the table below.

### Idler Pulley Minimum Diameter

Belt Type	J	PK	L	M
Minimum Diameter	50	90	150	300

## Trouble Shooting

PROBLEMS	CAUSES	REMEDIES
<b>Ribbed belt breaking after a short period of running</b>	<ul style="list-style-type: none"> <li>a) Forcing the belt over pulley during installation.</li> <li>b) Overloaded drive</li> <li>c) Ingress of foreign body</li> <li>d) Drive stalled</li> </ul>	<ul style="list-style-type: none"> <li>a) Use proper installation techniques</li> <li>b) Re-check the drive design</li> <li>c) Fit an effective guard</li> <li>d) Check for lubrication</li> </ul>
<b>Cuts and splits in the ribs</b>	<ul style="list-style-type: none"> <li>a) Pulley diameter too small</li> <li>b) Ambient temperature too high</li> <li>c) Abnormal belt slip</li> <li>d) Contamination by chemicals</li> </ul>	<ul style="list-style-type: none"> <li>a) Re-design using the min. recommended diameter.</li> <li>b) Ensure good ventilation</li> <li>c) Check drive tension</li> <li>d) Protect the drive</li> </ul>
<b>Severe belt vibrations</b>	<ul style="list-style-type: none"> <li>a) Overloaded drive</li> <li>b) Centre distance more than recommended</li> <li>c) High shock loading</li> <li>d) Too low belt tension</li> <li>e) Unbalanced pulleys</li> </ul>	<ul style="list-style-type: none"> <li>a) Redesigning drive may be necessary.</li> <li>b) Use an inside idler on the slack side.</li> <li>c) Use an inside idler on the slack side</li> <li>d) Re-tension the drive</li> <li>e) Balance the pulleys</li> </ul>
<b>Cannot be re-tensioned</b>	<ul style="list-style-type: none"> <li>a) Insufficient allowance for re-tensioning</li> <li>b) Excessive stretch caused by overloaded drive</li> <li>c) Incorrect belt length</li> </ul>	<ul style="list-style-type: none"> <li>a) Modify the drive</li> <li>b) Re-design the drive</li> <li>c) Use belt of proper length</li> </ul>
<b>Excessive wear or ribs</b>	<ul style="list-style-type: none"> <li>a) Starting torque too high</li> <li>b) Incorrect pulleys</li> <li>c) Excessive wear of grooves</li> <li>d) Poor drive alignment</li> <li>e) Smaller than recommended minimum pulley diameter</li> <li>f) Belt catching on protruding parts</li> <li>g) Wrong section of belt for pulleys</li> <li>h) Too low belt tension</li> </ul>	<ul style="list-style-type: none"> <li>a) Re-design the drive</li> <li>b) Re-machine the pulleys</li> <li>c) Re-machine pulleys</li> <li>d) Re-align the pulleys</li> <li>e) Re-design using correct pulley diameters</li> <li>f) Remove protrusions</li> <li>g) Correct the belt section</li> <li>h) Re-tension the drive</li> </ul>
<b>Excessive Noise</b>	<ul style="list-style-type: none"> <li>a) Contamination by oil, grease or chemicals</li> </ul>	<ul style="list-style-type: none"> <li>a) Protect the drive</li> </ul>



## Conversion Constants

### Length

Inches x 25.4	=	Millimetres
Inches x 0.0254	=	Metres
Feet x 0.3048	=	Metres

### Force

Kilogram Force (Kgf) x 9.81	=	Newton (N)
Pound Force (lbf) x 4.45	=	Newton (N)

### Torque

Kilogramforce metre (Kgf - m) x 9.81	=	Newton Metre (N-m)
Pound feet (lbf - ft) x 1.36	=	Newton Metre (N-m)
Pound Inches (lbf - in) x 0.113	=	Newton Metre (N-m)

### Power

Horse Power (HP) x 0.746	=	Kilowatt (kW)
Cheval-vapeur (CV) x 0.735	=	Kilowatt (kW)
Pferdestärke (PS) x 0.735	=	Kilowatt (kW)

### Speed

Feet/Minute (ft/min) x 0.00508	=	Meter/Sec. (m/s)
--------------------------------	---	------------------

### Mass

Kilogram (kg) x 2.205	=	Pound (lb)
Pound (lb) x 0.454	=	Kilogram (Kg)

### Useful Formulae:

Belt Speed (V) : V (m/s)	=	$5.236 \times d \times n \text{ (rev/min)} / 10^3$
Power (P) : P (kW)	=	$\frac{\text{Torque (N-M)} \times n \text{ (rev/min)}}{9550}$
	=	Belt effective tension (N) x V/105
Torque (T) (N-M)	=	$\frac{9550 P}{n}$
Belt effective tension (Te) : Te (N)	=	$\frac{2000 T}{d}$
Static tension (Ts) : Ts (N)	=	$32 \times F \times B$ Where F is the force required to deflect a belt 15 mm per meter of span, 'B' is no. of belts.
Centrifugal Tension (Tc) : Tc (N)	=	$2mV^2$
Dynamic tension (TD) : TD(N)	=	$T_s - T_c$

### Abbreviations:

Physical Quantity	Symbol	Unit
Power	P	Kilowatt (kW)
Torque	T	Newton-Metre (N-m)
Force	F	Newton (N)
Rotational speed	n	Rev / min
Pulley pitch diameter	d	Millimetre (mm)
Belt speed	V	Metre per second (m/s)

## Questionnaire

Dear Customer,  
Kindly fill in the below given form and mail it back to enable us to find an optimum solution for your drive.

### Details of Prime Mover

HP or kW rating	
Method of starting	
Type of drive machine	
Maximum HP or kW requirement	
Operation hours per day	
Driving pulley pitch dia.	<b>If, fly wheel is used, give its dimensions:</b>
Driven pulley pitch dia.	Whether drive is V-V / V-Flat type
Driving shaft r.p.m.	Whether drive is exposed to
Driven shaft r.p.m.	1) Heat    2) Moisture    3) Vibration
Centre distance between pulleys	4) Corrosive liquids    5) Hazardous vapours
Minimum	Maximum
(Tick where necessary)	

### Pulley Details (Driver)

### Pulley Details (Driven)

Top Width	
Groove depth	
Mean Groove Spacing	
Groove Angle	
No. of grooves	

### Details of previous belt used

### Idlers (Tick ✓ Where necessary)

Section & Size	Inside / Outside
Make	Flat / Grooved
Batch Code	Diameter of idlers
No. of belts used	On slack / on tight side
Service life	Tensioning - Spring tensioning / Screw tensioning
Expected life of belt	
Condition of drive	
Alignment - OK / Not OK	
Pulley worn out - Yes / No	
Tensioning - OK / Not OK	
Belt Installation method followed - Yes / No	
Nature of failure	

Signature & date:

Name & designation:

Name of the Company:

Address:

Phone :

Fax :

### FOR OFFICE USE ONLY

Attended by:

Remarks:





**PIX TRANSMISSIONS LIMITED**

J-7, M.I.D.C., Hingna Road,  
Nagpur - 440016, Maharashtra, India  
Tel.: +91-7104-237729  
Fax : +91-7104-236505/6  
E-mail : info@pixtrans.com  
Web Site : www.pixtrans.com



**PIX EUROPE LIMITED**

Unit 24, Farthing Road Industrial  
Estate, Sproughton,  
Ipswich IP1, 5AP, United Kingdom  
Tel.: +44 (0) 1473 744612  
Fax : +44 (0) 1473 744613/14  
E-mail : info@pixeuro.com  
Web Site : www.pixeuro.com



**PIX GERMANY GmbH**

Nikolaus - Otto - Str.2  
Borchen 33178, Germany  
Tel.: +49 (0) 5251 878 6003  
Fax : +49 (0) 5251 878 6009  
E-mail : info@pixgermany.com  
Web Site : www.pixeuro.com



**PIX-FLEXEQUIP HYDRAULICS**

Altona Road, Lisburn, Co. Antrim  
Northern Ireland BT27 5QB  
Tel.: +44 028 9267 7131  
Fax : +44 028 9260 7231  
E-mail : info@pixflexequip.com  
Web Site : www.pixflexequip.com



**PIX-FLEXEQUIP HYDRAULICS**

Unit B1, Ty Verlon Industrial Estate  
Cardiff Road, Barry,  
South Glamorgan, Wales. CF63 2BE  
Tel.: +44 (0) 1446 739747 / 739764  
Fax : +44 (0) 1446 739760  
E-mail : info@pixflexequip.com  
Web Site : www.pixflexequip.com



**PIX SOUTH AMERICA LIMITED**

Rua Felix Guilhem, 971 Lapa  
Sao Paulo - SP CEP: 05069-000, Brazil  
Tel.: +55 11 3611 9000  
Fax : +55 11 3611 3661  
E-mail : info@pixsam.com  
Web Site : www.pixsam.com



**PIX MIDDLE EAST FZC**

P. O. Box No. 54526,  
Technology Park, Shed No. 16/1-2  
Ras-Al-Khaimah Free Trade Zone,  
Ras-Al-Khaimah, UAE  
Telefax : +971 7 2444366  
E-mail : info@pixme.ae  
Web Site : www.pixme.ae



**PIX HYDRAULICS & TRANSMISSIONS  
(HANGZHOU) LTD**

Room 712, Guo Xing Building,  
515 YanAn Road, Hangzhou 310006, China  
Telefax : +86 571 8505 4690  
Fax : +86 571 8505 7080  
E-mail : info@pixqcs.com  
Web Site : www.pixqcs.com

**OTHER PRODUCTS**

Hydraulic Hose

Spiral Hose

Industrial Hose

Hose Assemblies

End Fittings

**AUTHORISED LOCAL DISTRIBUTOR**