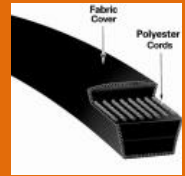




Motor Power Transmission Flat Belting and Rubber V Belts



Made in India
Manufactured by HIC INTERNATIONAL CO INC



Technical Specifications



Optimum Production Solutions

Textile
Machine High
Speed Nylon
Sandwich

Gangsaw
Flywheel
Leather
Nylon

Crusher
Drive
Banded

Flourmill Line
Shaft Rubber
Transmission

Tangential
Drive Nylon
Traction Core

Electric
Motor Drive
Classic
Cogged

Oilfields
Motors
Notched
Metric

Textile
Looms
Wedge

Agricultural
Harvester
Combine

Automotive
Fan
Narrow

Tractor
Fan

FHP
Utility

Rolling-mill
Drive Raw
Edge

Blower Drive
Wrapped

Rice
Milling
Double

and more.....

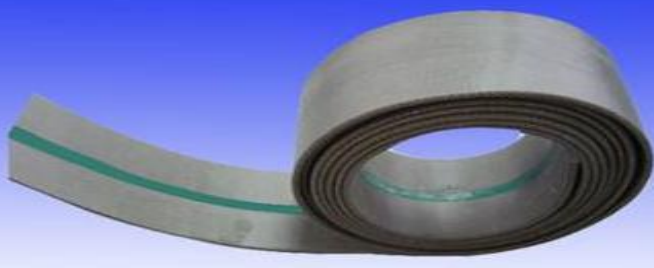
About HIC

HIC International Co Inc, formed in 1988 manufacturing industrial rubber and steel products ISO 9001 certified producer of Conveyor belt roller idler, Power Transmission belts coupling pulley, Hydraulic hose valve, Safety rubber sheet mat quality exporters of HIC Universal brand to industrial traders distributors of USA, Australia, UAE, Singapore, China, South Africa, UK, Germany, Taiwan having manufacturing factories in Delhi and Ghaziabad UP of India.

Total Quality Management principles are followed and True Performance is thus assured.



Export Excellence Award
during Feb 1997



Run Line Shaft Speedily !

Why HIC Universal Flat Transmission Belts?



Energy Efficient

Nylon Core Reduces Power Consumption

High Breaking Strength

Fabric Plies Ensures Longer life

High Friction Rubber

Allows Extreme Power Transmission

Oil Resistant, Super Grip

Chrome Leather Ensures Flexibility

Minimal Elongation Drive

High Speed Flat Belting Solution

Electric motors and engines flywheel high speed effective power transmission using leather nylon belting made in India by HIC Universal.

HIC Universal Leather transmission belting and flat rubber transmission belts are Original Choice by ~~textile machinery and flour mill machines~~ manufacturers in India, USA, China, Italy, Canada, Germany, Japan, Austria, Belgium, Spain, South Africa, Taiwan, UK, South Korea, Peru, Australia, Philippines, Thailand, Indonesia, Bangladesh, Pakistan and other Asian countries.



Energy Efficient

Stretch Less

Anti-Static

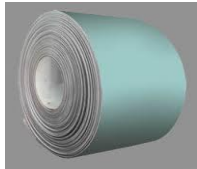
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Quality Rubber Leather Belting

Manufacturing RANGE and SIZES

Conforming IS 1370, IS 6538, BS 3790, ISO 4184 quality standards

*Classified under **HS Code** 4010 for rubber, 4204 for leather*



Tangential Belt TA Series



Leather Transmission Belting



Rubberized Nylon Sandwich Belt



Rubber Transmission Belt Cotton Hard Duck



Balata Belting



Treadmill Belt

❖ **Rubber Nylon FR** sandwich flat textile machinery belt 1.25mm thick green black colour up to 300 mm Width.

❖ **Tangential** rubber nylon textile mills belts TA 1.25~2.8mm thick green yellow colour up to 300 mm W.

❖ **Leather** belting cone drum drive LL 3~8mm thick off white chrome leather up to 300 mm W.

❖ **Leather nylon** paper mills line shaft drive belting LF 2.5~5.5mm thick up to 300 mm W.

❖ **Nylon** elastomer friction coating circular looms power transmission belts FF 1mm thick up to 300 mm W.

❖ **PVC Nylon DB** motorized tread mill and jogger machine belts 1.3~2.5mm thick up to 2000 mm W.

❖ **Rubberized Nylon XRT** textile carding drive motors belts 2~3.9mm thick up to 900 mm W.

❖ **Spindle Tapes ST** folder and carrier belts.

❖ **Friction surface train lighting** belting 3~5 ply 31-34 oz duck up to 1050 mm W.

❖ **Canvas Rubber agricultural** machinery drive belts 4~5 ply 28-31 oz quality up to 1050 mm W.

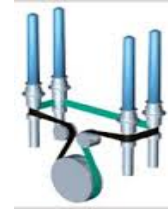
❖ **Transmission Rubber belts** stone crushers, balata, flour mills motor drive 4~10 ply 37-34-31 oz up to 1050 mm W.

Vendor Data: www.hic-india.com | Customers List: www.universaldelhi.org | Catalogue: www.rubber-steel-industrial-products.com



Nomenclature of Nylon Sandwich Flat Belt

Thickness, Colour and Tensile Strength for Power Transmission: Technical Data



Type	Total thickness (mm)					Weight (Kg/sq. mtr) Approx					Min. Pulley dia (mm)					Pull for 1% Elongation (kg/cm)					Tensile Strength (kgs/cm)					Top Surface				Driving Surface				Max. temp. resistance (oc)			
							Col.	Mat.	COF	Col.	Mat.	COF								Col.	Mat.	COF	Col.	Mat.	COF												
LEATHER NYLON BELTINGS													RUBBER NYLON BELTINGS																								
LL-3	3.6	3.4	20	2	60	W	L	0.4	W	L	0.4	80	AR-1	2.4	3.0	40	4	120	G	NR	0.7	G	NR	0.7	100												
LL-6	4.0	3.7	40	4	120	W	L	0.4	W	L	0.4	80	AR-2	2.6	3.3	80	8	240	G	NR	0.7	G	NR	0.7	100												
LL-10	4.4	4.2	80	8	240	W	L	0.4	W	L	0.4	80	AR-3	2.9	3.6	100	10	330	G	NR	0.7	G	NR	0.7	100												
LL-12	5.0	4.6	100	10	330	W	L	0.4	W	L	0.4	80	AR3/6	6.0	6.7	100	10	330	G	NR	0.7	G	NR	0.7	100												
LL-20	6.5	5.5	160	16	480	W	L	0.4	W	L	0.4	80	AR-4	3.3	4.2	160	16	480	G	NR	0.7	G	NR	0.7	100												
LL-30	7.5	6.7	240	24	720	W	L	0.4	W	L	0.4	80	AR-5	3.9	4.6	220	19	570	G	NR	0.7	G	NR	0.7	100												
LL-40	8.0	7.8	320	32	960	W	L	0.4	W	L	0.4	80	ARS-1	2.4	3.0	40	4	120	G	NR	0.7	Y	NR	0.7	100												
LL-50	10	8.9	400	40	1200	W	L	0.4	W	L	0.4	80	ARS-2	2.6	3.3	80	8	240	G	NR	0.7	Y	NR	0.7	100												
LF-3	2.2	2.0	20	2	60	R	F	0.3	W	L	0.4	80	ARS-3	2.9	3.6	100	10	330	G	NR	0.7	Y	NR	0.7	100												
LF-6	2.4	2.3	40	4	120	R	F	0.3	W	L	0.4	80	ARS-4	3.3	4.2	160	16	480	G	NR	0.7	Y	NR	0.7	100												
LF-10	3.1	2.8	80	8	240	R	F	0.3	W	L	0.4	80	TANGENTIAL BELTS																								
LF-12	3.4	3.5	100	10	330	R	F	0.3	W	L	0.4	80	TA 15M	1.8	2.0	50	5	150	PG	NR	0.7	B	NR	0.7	100												
LF-20	4.8	4.0	160	16	480	R	F	0.3	W	L	0.4	80	TA 16M	1.8	2.1	50	5	150	PG	NR	0.7	B	NR	0.7	100												
LF-30	6.0	4.5	240	24	720	R	F	0.3	W	L	0.4	80	TA 24M	2.4	3.0	100	10	300	PG	NR	0.7	B	NR	0.7	100												

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True Performance Rubbers

LF-30	7.3	6.3	320	32	960	R	F	0.3	W	L	0.4	80	TA 24MS	3.0	3.7	100	10	300	PG	NR	0.7	B	NR	0.7	100
LF-50	8.5	7.3	400	40	1200	R	F	0.3	W	L	0.4	80	TA 29HX	3.2	3.9	150	15	450	PG	NR	0.7	B	NR	0.7	100
L-6	2.0	2.2	40	4	120	T	PS	0.2	W	L	0.4	80	TA 29HXS	4.0	5.1	150	15	450	PG	NR	0.7	B	NR	0.7	100
L-12	2.8	2.8	100	10	330	T	PS	0.2	W	L	0.4	80	SPINDLE TAPES												
L-16	3.9	3.4	160	16	480	T	PS	0.2	W	L	0.4	80	ST-0	0.7	0.5	10	0.5	20	B	F	0.20	W	F	0.20	80
LR-6	5.7	6.6	40	4	120	G	NR	0.7	W	L	0.4	80	ST-3	0.8	0.6	10	1	30	B	F	0.20	W	F	0.20	80
LR-10	4.2	4.1	80	8	240	G	NR	0.7	W	L	0.4	80	ST-6	0.9	0.7	20	2	60	B	F	0.20	W	F	0.20	80
LR-12	4.5	4.5	100	10	330	G	NR	0.7	W	L	0.4	80	WW-3	0.7	0.55	10	1	30	W	F	0.20	W	F	0.20	80
FABRIC NYLON BELTING													WW-6	0.8	0.65	20	2	60	W	F	0.20	W	F	0.20	80
FF-0	0.6	0.4	10	0.5	20	R	F	0.25	R	F	0.25	80	WW-6	1.5	1.05	20	2	60	W	F	0.20	W	F	0.20	80
FF-3	0.8	0.6	20	2	60	R	F	0.25	R	F	0.25	80	WW-8	1.0	0.9	40	4	120	W	F	0.20	W	F	0.20	80
FF-6	1.0	0.9	40	4	120	R	F	0.25	R	F	0.25	80	CONDENSOR TAPES												
FF-10	1.5	1.4	80	8	240	R	F	0.25	R	F	0.25	80	Astra	3.2	2.8	40	4	120	BR	L	0.4	BR	L	0.4	80
FRI	1.6	1.4	50	4	120	R	F	0.25	G	F	0.7	80	Coriatex	3.2	3.2	40	4	120	BR	L	0.4	BR	L	0.4	80

DISCRIPTION

Col - Colour
MAT - Material
COF - Coefficient of friction
W - White
R - Red
T - Transparent
G - Green
PG - Parrot Green

B - Black
BR - Brown
Y - Yellow
L - Leather
F - Fabric
PS - Polyamide Strip
NR - Nitrile Rubber

Tolerance
Length
500 - 5000 mm $\pm 0.5\%$
5001 - 15000 mm $\pm 0.3\%$
150001 & Abv $\pm 0.2\%$
Width
Up to 50 mm ± 1 mm
51 - 100 mm ± 2 mm

101 - 500 mm 3 mm
501 - 750 mm 10 mm
751 - 950 mm 15 mm
Thickness
Rubber Series 0.15 mm
Leather Series 0.3 mm
ST/FF Series 0.05 mm

BASIC STRUCTURE



Nomenclature of Rubber Transmission Belting

Friction Surface Hard Cotton Duck Fabric Superseding BS:351 and IS:1370



Rubber Belt Quality Type	Belting Industrial Brands	#Drive Belt Edge Construction	~Transmission Belting Widths (mm)	*Belts Colour	~Belting Ply	App. Wt. Per 25mm=1" per ply per meter
1. 28oz light duty	Universal Super	Cut	25, 31, 37, 50, 62, 75, 88, 100	light grey With blue sides	3,4,5	0.037
2. 31oz medium duty	i) Universal Kinetic ii) Tor Steel iii) Tusker Super Deluxe	Cut	25, 31, 37, 50, 62, 75, 88, 100, 125, 150, 175, 200	do	3,4,5,6	0.038
3. 34oz heavy duty	i) Universal Oak ii) Dynapower iii) Cannon	Cut	37, 50, 62, 75, 88, 100, 125, 150, 175, 200, 225, 250 150, 175, 200, 250, 300	do	4,5,6 8	0.040
4. 37oz extra heavy duty exclusively mfd. to our standards	i) Universal Brute ii) Rhino (super tough quality)	Cut	75, 100, 125, 150, 200, 250, 300, 350, 400	do	4,5,6, 8,10,12	0.045
5. 31oz Black medium to high duty	i) Universal Black Belt ii) Black Stone (with 0.4 mm app. thick black rubber coating on face & bottom frictioned)	Cut	75, 100, 125, 150	black	4	0.045

Round edge construction with red stripe in middle are also manufactured in **28oz, 31oz duck quality**, types subject to min. quantity of orders are placed as required at higher charges than cut edge for which please refer to us.

* **Other colours** are also manufactured, like orange (TBS) with red sides or light green with green sides on little extra charges subject to min. quantities of orders are placed.

~**Widths and piles** not listed above can be manufactured to order ranging sizes from # 25mm to 1050mm widths & 2 ply to 14 ply. Tolerance in width of +, - 3mm shall be applicable up to 125mm; +, - 4mm above 125mm up to 300mm; +, - 5mm above 300mm & up to 500mm; +, - 10mm above 500 & up to 750 ; +, - 15mm above 750 mm & up to 1050 mm widths.



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Pulley Diameter Recommendations

Minimum Suggested Flat Pulley Diam of Rubber Belting

Belting Number of Plies	Belt speed (mtrs/sec.)				
	10	15	20	25	30
3					
4	90	100	112	140	180
5	140	160	180	200	250
6	200	225	250	315	355
7	250	315	355	400	450
8	355	400	450	500	560
10	450	500	560	630	710
	630	710	800	900	1000



Belt Width	Pulley to be wider than the belt width by
Up to and including 125 mm	15mm
From 125 mm up to& incl. 250 mm	25mm
From 250 mm up to& incl. 375 mm	40mm
From 375 mm up to& incl. 500 mm	50mm

Disclaimer: Information's, written and verbal are provided by HIC, relative to its products which it determines to be reliable & no liabilities of whatsoever nature in regards to its uses. The purchaser of UNIVERSAL brand industrial products should determine for itself the suitability of such products.

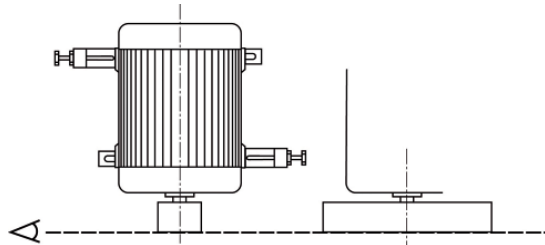
Installation Method of Flat Transmission Belt

Efficient Power Transmission, HIC High Speed Drive Tips

The following recommendations apply to the first installation of endless belts.

Proceed as follows:

1. Make sure that the **tensioning device** is in the innermost position.
2. Check that the **shafts** are parallel and the pulleys aligned perpendicular to the belt running axis.



3. The running **surfaces of the pulleys** must be clean and free from grease, soil and dust.
4. Before installing, **trace small measuring marks** at a distance of e.g. 1000 mm (recommendation) on the un-tensioned belt. Use a ball-point pen and mark as accurately as possible! Do not place the measuring distance over the joining area.



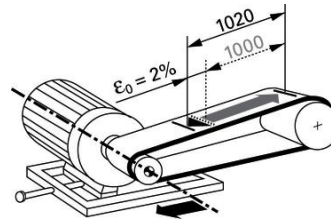
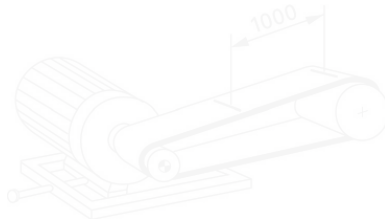
For short belts or if the control distance on the machine is shorter, choose a shorter measuring mark distance, e.g. 500 mm.

The longer the distance between the measuring marks, the higher the tensioning accuracy.

5. Install the belt **carefully**. Lay it first on the small pulley, then on the large pulley. Do not force the belt over the pulley edges. Do not use unsuitable tools such as screwdrivers, hammers, etc.

Special care has to be taken when installing belts with an aramide traction layer (TF-belts). These belts are sensitive to twisting and buckling.

6. **Tension** flat belt by enlarging the center distance until the distance between the measuring marks has increased by the value of the required (calculated) initial elongation (Δl)



7. **Rotate** the belt once or twice by hand. The flat belt must not drift or run off even when the direction of rotation is changed.
8. Check the **distance of the measuring marks** again. If necessary, tension the belt to the required initial elongation.
9. Fix the **screws** of the tensioning device.
10. Secure the **original protective casing** before starting the motor.
11. Make sure that the **belt data** (type, dimensions, quoted initial elongation, date of installation and maintenance instructions are stored near the machine, e.g. in a self-adhesive envelope stuck on the machine).

Purchase Enquiry Info

Rubber or Leather Flat Transmission Belting Min. **Information to Be Sent**

(Email at: belts@universaldelhi.org ; universal@hic-india.com or Call +91 11 2874 5120)

HIC ships transmission leather nylon belting conforming IS 1370 tailor-made to buyer's order specifications to different countries including India. Please send following information in English to quote prices:

1. Belt **Width** size mm
2. **Thick** mm and or **Ply**
3. Belting quality grade **Type**, leather transmission or nylon sandwich or rubber- cotton fabric duck or tangential twister drive
4. **Color** – grey or **green** or blue or black
5. **Quantity** - Open Ends roll lengths in meter or Endless loop length





Why HIC Universal Rubber V Belts?



Superb Heat and Fatigue Resistant

Neoprene Jacketed

Match Free

Sizes Eases Replacement and Fitment

Super Flexing

to Withstand High Shock Loads

Antistatic and Minimal Elongation

Drive Belt Solution

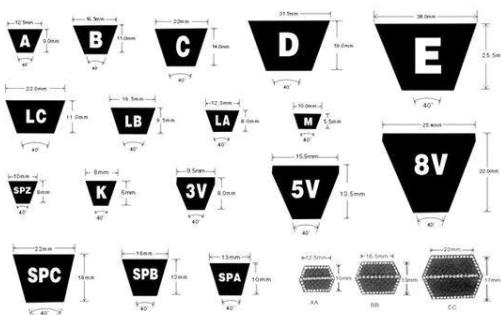
Machinery drive motors effective power transmission achieved using polyester cord neoprene jacketed anti-static v belts made in India by HIC Universal.

HIC Universal Banded v belts and cogged v-belts are Original Choice by industrial electric motors and textile ring frame manufacturers in India, Germany, Taiwan, China, Japan, South Korea, United States of America USA, Singapore, Canada, Australia, UK, South Africa, Russia, Uzbekistan, Philippines, Indonesia, Pakistan and other Asian countries.

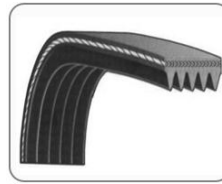
Manufacturing RANGE and SIZES

Conforming IS 2494, DIN 7753, BS 3790, RMA IP22, ISO 4184, EN 853 2ST quality standards

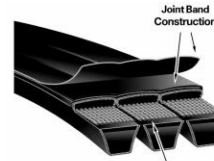
Classified under **HS Code 4010**



Classical, Wedge, Hex, Narrow V Belts Section Profile



Poly V Belt



Banded V Belt



FRAS V Belt Cogged Type

- ❖ Classical Sections A(13mm), B(17), C(22) up to 450 inches ; D(32),E(38) up to 600"; F(9.5), M(10), O(10), Z(10), K(8), FM(10.2) up to 150" ; 2L(6.5) , 3L(10) up to 50" ; 4L(13.2) up to 400".
- ❖ Wedge Space Saver sections SPZ(10), SPA(13), SPB(17) up to 490" ; SPC(22) up to 675".
- ❖ Double Hexagonal V Belts AA(12.7), BB(17), CC(22) up to 360".
- ❖ Narrow Size Hi-Power V Belts 3V(9.5), 5V(15.9), 8V(25.4) up to 470" ; 9N(9), 10N(10), 15N(15), 25N(25) up to 575".
- ❖ Raw Edge Cogged v belts AX(13), BX(17), CX(22) up to 120" ;3VX(9.5), 5VX(16.5) up to 70" ; XPZ(9.7), XPA(12.7), XPB(16.3),XPC(22) up to 120".
- ❖ Multiple Banded belts 2 to 6 bands cross sections RA(13), RB(17),RC(22), RD(32) up to 8890 mm.
- ❖ Narrow V Banded belts 2 to 8 bands sizes R3V(9.5), R5V(16.9),R8V(25.4), SPZ(10), SPA(13), SPB(17), SPC(22) up to 8000 mm.
- ❖ Poly V belts sizes 3PK, 4PK, 5PK, 6PK, 7PK, 8PK up to 2500 mm length.
- ❖ Wrapped and Cogged Combine Harvester belts 19X, 25X, 28X, 32X, 36X, 38X, 40X, 45X, 50X, 55X, 60X up to 4000 mm.
- ❖ Variable Speed Wrapped and Cogged belts sections HI(25), HJ(36),HK(40), HL(45), HM(50), HN(55) up to 180" ; VK(15), VM(20),VA(25), VB(31), VC(41), VD(52), VE(66), VF(76), VG(87) up to 105".

Vendor Data: www.hic-india.com | Customers List: www.universaldelhi.org | Catalogue: www.rubber-steel-industrial-products.com



Stretch-Free

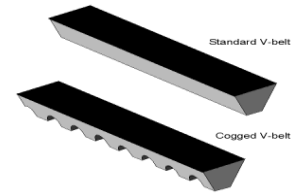
Super-Power

Anti-Static

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Nomenclature of V Belts

Cross Section Profile and Length Sizes: Technical Data



Classical V-Belt: Technical Data									
Section	8	Z/M	A	B	20	C	25	D	E
Top Width (mm)	8.0	10	13	17	20	22	25	32	38
Thickness (mm)	5.0	6.0	8.0	11.0	12.5	14.0	16.0	19.0	23.0
Angle (°)	40	40	40	40	40	40	40	40	40
Size-Range (mm)	350/ 1200	350/ 3800	380/ 8500	480/ 1400	1600/ 5000	800/ 14000	1600/ 12500	1120/ 15200	3550/ 17750

Wedge V-Belts: Technical Data					
Section	SPZ	SPA	SPB	19	SPC
Top Width (mm)	10	13	17	19	22
Thickness (mm)	8.0	10	14	15	18
Angle (°)	40	40	40	40	40
Size-Range (mm)	380/3550	750/4500	1250/10,000	1800/8000	2000/12500

Narrow V-Belt: Technical Data			
Section	3V	5V	8V
Top Width (mm)	9.7	15.8	25.4
Thickness (mm)	8.0	13.5	23.0
Angle(°)	40	40	40
Size-Range (mm)	380/3550	1950/10000	1750/12500

Auto Cogged Belt: Technical Data		
Section	AVX10	AVX13
Top Width (mm)	9.5	12.5
Thickness (mm)	8.0	10.0
Angle (°)	40	40
Size-Range (mm)	380 / 3500	750 / 4500



Industrial Cogged Belt (Classical Section): Technical Data							
Section	Dimensions		Angle (Deg)	Range		Min. Rec. Pulley dia. De (mm)	Nominal Length (Inches)
	Top Width (mm)	Thickness (mm)		Min (Inches)	Max (Inches)		
ZX	10	6	36	23	200	40	Inside Length in Inches
AX	13	8	36	22	200	60	
BX	17	11	36	21	200	100	
CX	22	14	36	21	200	160	

Vendor Data: www.hic-india.com | Customers List: www.universaldelhi.org | Catalogue: www.rubber-steel-industrial-products.com





Stretch-Free

Super-Power

Anti-Static

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Industrial Cogged Belt (Narrow Section) : Technical Data

Section	Dimensions		Angle (Deg)	Range		Min. Rec. Pulley dia. De (mm)	Nominal Lenth (Inches)
	Top Width (mm)	Thickness (mm)		Min (Inches)	Max (Inches)		
3VX	9.7	8.0	36	24	202	54	Belt No. ÷ 10 = Outside Length
5VX	16.0	14.0	36	24	203	112	
8VX	25.0	23.0	36	24	200	254	

Industrial Cogged Belt (Wedge Section) : Technical Data

Section	Dimensions		Angle (Deg)	Range		Min. Rec. Pulley dia. De (mm)	Nominal Lenth (Inches)
	Top Width (mm)	Thickness (mm)		Min (Inches)	Max (Inches)		
XPZ	10	8	36	590	5117	54	Pitch Length Lp in mm
XPA	13	10	36	590	5125	80	
XPB	17	14	36	600	5140	128	
XPC	22	18	36	600	5163	180	



Poly V-Belt: Technical Data

Section	Dimensions		Max Belt Speed (m/sec)	Range		Min. Rec. Pulley dia. De (mm)	Nominal Length
	Top Width (mm)	Thickness (mm)		Min (mm)	Max (mm)		
PH	2.90	1.60	60	600	2600	13	Effective Length (Le)
PJ	3.80	2.34	60	600	2600	20	
PK	5.80	3.56	60	600	2600	50	
PL	7.60	4.70	60	600	2600	75	
PM	13.30	9.40	60	600	2600	180	



Hexagonal (Notch) V-Belt: Technical Data

Section	AA	BB	CC
Top Width (mm)	13	17	22
Thickness (mm)	10	14	17
Angle(°)	40	40	40
Size-Range (mm)	1750 / 6000	1750 / 6000	1750 / 6000

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Stretch-Free

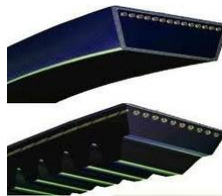
Super-Power

Anti-Static

HIC
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 True Performance Rubbers

Plain: Technical Data

Section	Dimensions		Angle (Deg)	Range		Min. Rec. Pulley dia. De (mm)	Pitch Between Two Belts (e) mm
	Top Width (mm)	Thickness (mm)		Min (mm)	Max (mm)		
HA	13.0	10.0	40	838 Li	7112	80 de	15.9
HB	17.0	13.0	40	1041Li	12700	130 de	19.0
HC	22.0	16.0	40	1168 LI	16713	210 de	25.5
HD	32.0	21.5	40	2286 Li	16713	370 de	37.0
HE	38.0	27.0	40	2286 Li	16713	500 de	44.5
HSPZ	10.0	10.0	40	1168 Lp	9042	67 dp	12.0
HSPA	13.0	12.0	40	914 Lp	3912	100 dp	15.0
HSPB	17.0	16.0	40	1778 Lp	9144	160 dp	19.0
HSPC	22.0	20.0	40	2235 Lp	16688	224 dp	25.5
H3V	9.7	10.0	40	851 La	4521	67 de	10.3
H5V	15.8	16.0	40	1219 La	9144	180 de	17.5
H8V	25.4	25.0	40	2489 La	16866	315 de	28.6



Cogged: Technical Data

Section	Dimensions		Angle (Deg)	Range		Pitch Between Two Belts (e) mm
	Top Width (mm)	Thickness (mm)		Min (mm)	Max (mm)	
HAX	13.0	10.0	36	600 Li	2540	15.9
HBX	17.0	13.0	36	600 Li	2540	19.0
HCX	22.0	16.0	36	600 LI	2540	25.5
HXPZ	10.0	10.0	36	600 Li	2540	12.0
HXPA	13.0	12.0	36	600 Lp	2540	15.0
HXPB	17.0	16.0	36	600 Lp	2540	19.0
HXPC	22.0	20.0	36	600 Lp	2540	25.5
H3VX	9.7	10.0	36	600 La	2540	10.3
H5VX	15.8	16.0	36	600 La	2540	17.5
HAVX-10	10.0	8.0	36	600 La	2540	12.6
HAVX-13	13.0	10.0	36	600 La	2540	16.0



Harvester Combine Belt (Plain & Cogged) : Technical Data

Section	55	50	45	40	40	38	36	32	28	25
Top Width (mm)	55	50	45	40	40	38	36	32	28	25
Thickness (mm)	22	22	20	20	18	18	14	15	13	13
Angle (°)	30	30	30	30	30	30	30	30	30	30
Length (mm)	1800 / 4000	1800 / 4100	1800 / 4500	1800 / 4500	1750 / 4500	1800 / 4000	1100 / 4000	1700 / 4000	1700 / 4000	2400 / 6000

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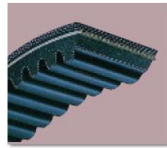




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Cogged Vari-Speed Belt: Technical Data

Section	19	25	32	36	38	40	45	50	55
Top Width (mm)	19	25	32	36	38	40	45	50	55
Thickness (mm)	11	13	16	14	18	20	20	20	22
Angle (°)	30	30	30	30	30	30	30	30	30

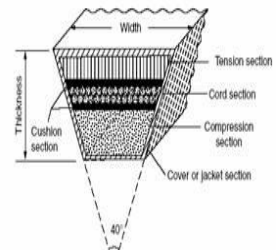


Cable Cord Flat Belt: Technical Data

Section	30F	50F	75F	80F	100F	120F	130F	140F	150F
Top Width (mm)	30	50	75	80	100	120	130	140	150
Thickness (mm)	6	6	6	6	6	6	6	6	6
Size Range (mm)	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000	1900 / 5000

Cross Section

Power Transmission V belt H. P. And Speed: Technical Specifications



Normal Horse Power H.P.	Speed of Faster Shaft i.e. Motor Speed RPM			
	720 and below	900	1200	1800
½ to 1½	A	A	A	A
2 to 3	A or B	A or B	A or B	A or B
5	A or B	A or B	A or B	A or B
10	A or B	A or B	A or B	A or B
15	C	B or C	B or C	B
20	C	C	C	B or C
25 to 30	C	C	C	C
40	D	C or D	C or D	C
50	D	C or D	C or D	C or D
60	D	C or D	C or D	C or D
75	D	C or D	C or D	C or D

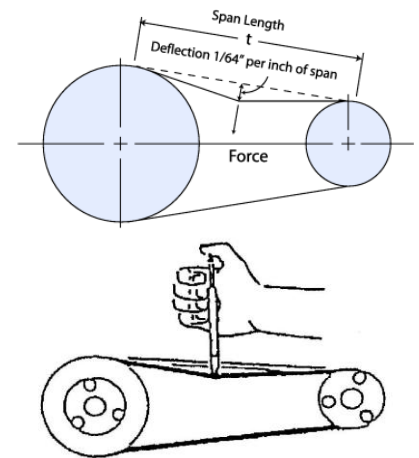
$$1 \text{ KW} = \text{H.P.} \times 0.746$$

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Tension Forces

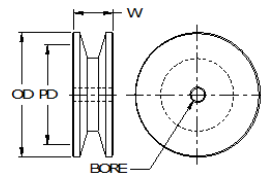
Force Required to deflect Belt 1.6 mm per 100 mm of Span: Technical Specifications

Section	Force (N)	Deflection 0.0115 PER mm of Span
SPZ	67 to 95	10 to 1.5
	100 to 140	1.5 to 2.5
SPA	100 to 132	1.5 to 2.5
	140 to 200	1.5 to 2.5
SPB	160 to 224	1.5 to 2.5
	236 to 315	1.5 to 2.5
SPC	224 to 355	1.5 to 2.5
	375 to 560	1.5 to 2.5
A	80 to 140	1.5 to 2.5
B	125 to 200	1.5 to 2.5
C	200 to 400	1.5 to 2.5
D	355 to 600	1.5 to 2.5
E	600 to 900	1.5 to 2.5



Sectional Dimensions and Recommended Min Pulley Diameters

V Belt Groove Angle, Width in MM: Technical Specifications



Section	Top (w) Width	Thickness mm	Angle	Range of Pitch Length mm (LW/L)	Difference in length			Absolute Min. Pulley		
					L1 to LP Add(+)	LP to LA Add(+)	L1 to LA Add(+)	(Dia)	Depth	Groove Angle
SPZ	9.5	8.0	40	380-3550	37	13	50	63	11.0	38+1.0
SPA	12.5	10.0	40	750-4500	45	18	63	90	12.8	38+1.0
SPB	16.0	13.0	40	1250-8000	60	28	88	140	17.5	38+1.0
SPC	22.0	18.0	40	2000-9500	83	30	113	224	23.8	38+1.0
A	13.0	8.0	40	380-8500	36	14	50	75	11.0	38+1.0
B	17.0	11.0	40	480+1400	43	26	69	125	14.0	38+1.0
C	22.0	14.0	40	925-1400	56	32	88	200	18.5	38+1.0
D	32.0	19.0	40	1120-15190	79	40	119	355	25.0	38+1.0
E	38.0	23.0	40	3550-17750	92	53	145	450	30.0	38+1.0
O/Z/M	10.0	6.0	40	350-3800	22	16	38	60	8.5	38+1.0
SP 20	20.0	2.5	40	1600-5000	60	28	88	150	16.0	38+1.0
SP 25	25.0	16.0	40	1600-12000	65	35	100	225	20.0	38+1.0
3V	9.7	8.0	40	380- 3500	37	13	50	63	10.0	38+1.0
5V	16.0	13.5	40	1960-12000	60	25	85	140	17.5	38+1.0
8V	25.4	23.0	40	1750-12500	92	53	145	250	28.0	38+1.0
AA	13.0	10.0	40	1650-5000	31	31	62	75	13.0	38±1.0
BB	17.0	14.0	40	1650-6000	44	44	88	125	17.0	38±1.0
CC	22.0	18.0	40	1850-8000	56	56	112	200	21.0	38±1.0



Harvester Vari-Speed Belts Sectional Dimensions

SECTION	55	50	45	40	40	38	36	32	28	25
TOP WIDTH W	55	50	45	40	40	38	36	32	28	25
THICKNESS T	22	22	20	20	13	18	14	15	13	13
ANGLE	30	30	30	30	30	30	30	30	30	30
LENGTH	1800/ 4000	1800/ 4000	1800/ 4000	1800/ 4000	1750/ 4000	1750/ 4000	1100/ 4000	1650/ 4500	1650/ 4000	1400/ 6500
LI TO LP	90	90	81	81	53	73	56	61	53	53
LP TO LA	48	48	44	44	29	40	32	33	29	29
LI TO LA	138	138	125	125	82	113	88	94	82	82
PULLEY	V.S. Pulley	V.S. Pulley	V.S. Pulley	V.S. Pulley	V.S. Pulley	V.S. Pulley	V.S. Pulley	V.S. Pulley 350 mm DIA	V.S. Pulley	V.S. Pulley

Raw Edge Cogged RECOMMENDED STANDARD PULLEY DIAMETERS 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	112	200
50	80	106	160	63	80	125	224
56	90	112	180	71	90	132	250
63	95	116	200	80	100	140	280
71	100	125	224	85	112	150	315
80	106	132	250	90	118	160	335
90	112	140	280	95	125	180	355
100	118	160	315	100	140	200	400
112	125	180	335	112	160	224	450
	132	190	355	125	180	250	500
	140	200	400	140	200	280	630
	150	212	450	160	224	315	710
	160	224	500	180	250	355	
	180	250	630	200	280	400	
		280					

Design Formulae

Drive V Belt Size Calculation: Technical Specifications

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

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

Where

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

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

$$\text{Number of belts, } N = \frac{P \times F_s}{R \times F_l \times F_c}$$

where

L = Belt Pitch Length mm

C = Centre Distance mm

D = Pitch dia of large pulley mm

d = Pitch dia of small pulley mm

R = Power Rating per belt KW

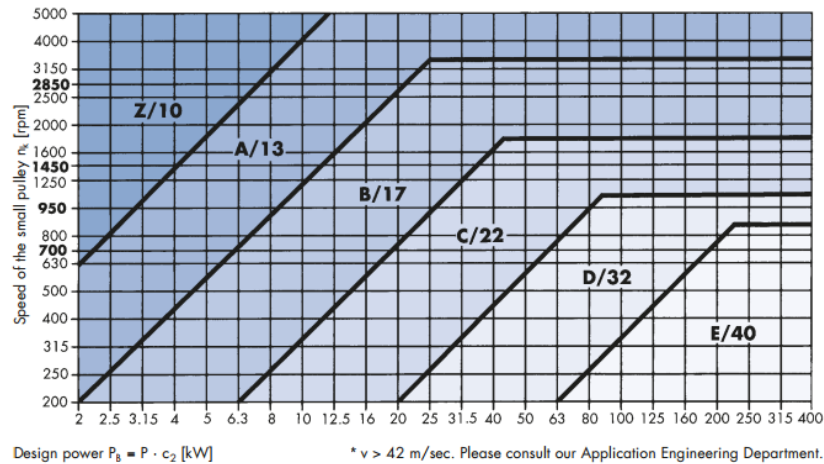
F_l = Belt Length Connection factor

F_c = Arc of contact correction Factor

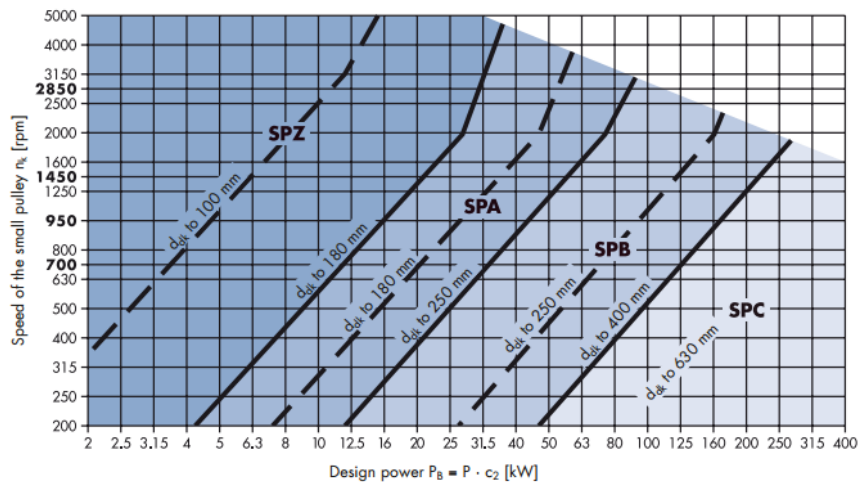
F_s = Service Factor

P = Drive Power in KW

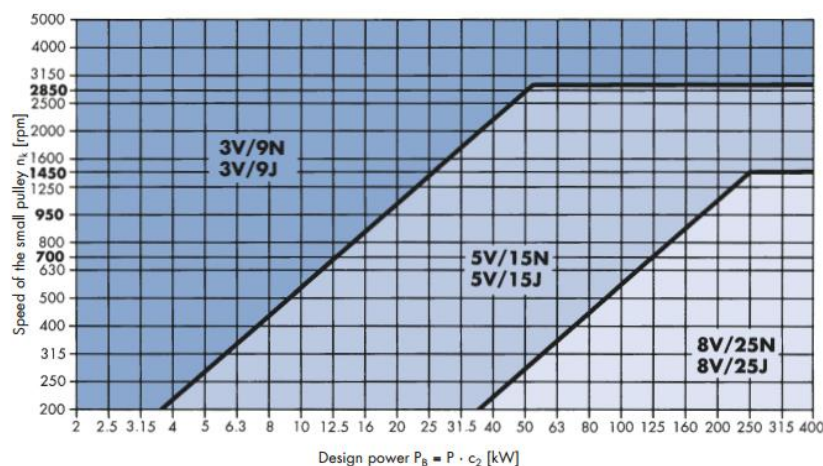
Cross Section Selection of V Belts (CLASSICAL): Diagram 1



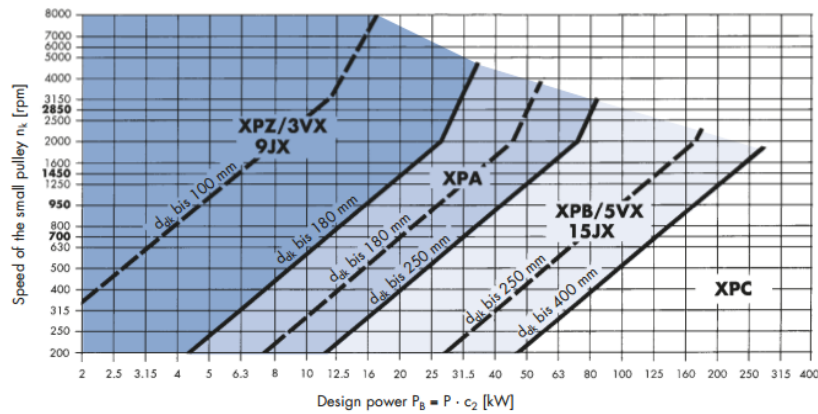
Cross Section Selection of V Belts (WEDGE): Diagram 2



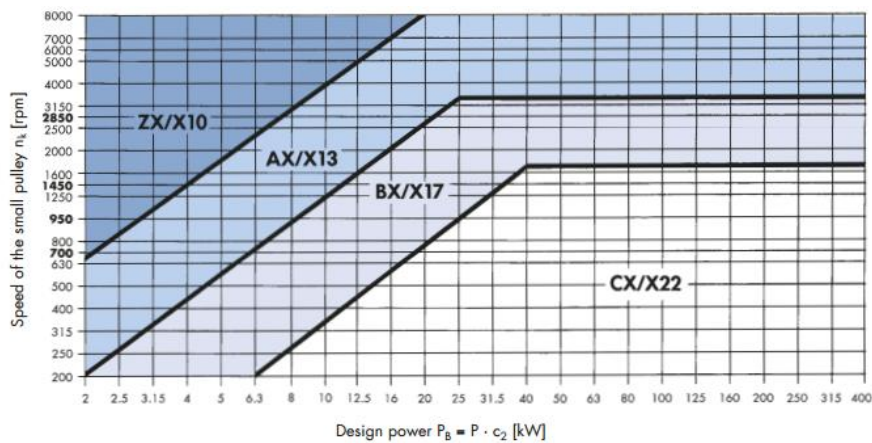
Cross Section Selection of V Belts (NARROW): Diagram 3



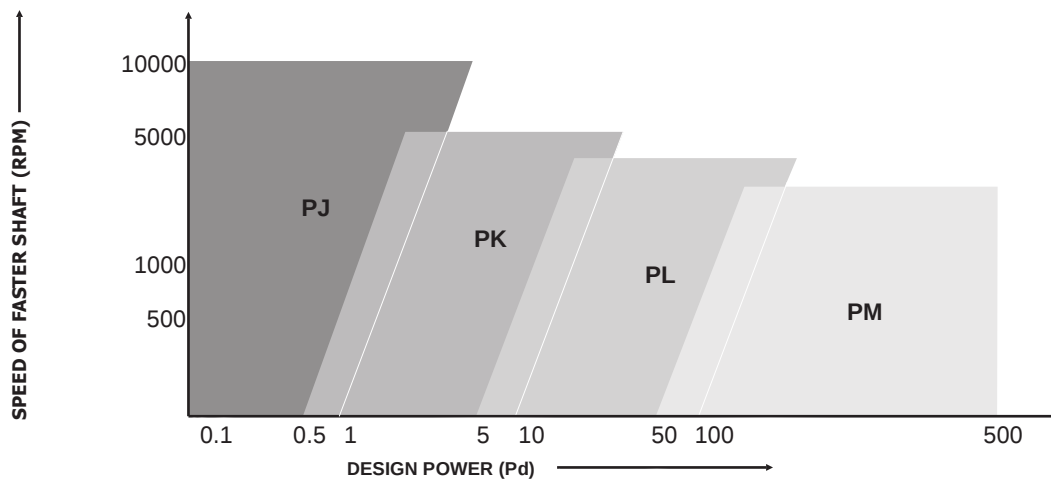
Cross Section Selection of V Belts (COGGED WEDGE): Diagram 4



Cross Section Selection of V Belts (COGGED CLASSICAL): Diagram 5



Cross Section Selection of V Belts (POLY/MULTIRIBBED): Diagram 6





Service Factors

Horse Power Rating For Type of Driven Machines: Technical Specifications

Speed Increasing Drives -Multiply SF by SR Factor	TYPES OF PRIME MOVE					
SR Factor Speed Ratio. 1.00 to 1.24 -Nil Speed Ratio. 1.25 to 1.74 -1.05 Speed Ratio. 1.75 to 2.49 - 1.11 Speed Ratio. 2.50 to 3.49 -1.18 Speed Ratio. 3.50 to over -1 .25	Soft Start Electric Motor AC-Star Delta Start DC-Shunt would I.C. Engines with 4 or more cylinders All prime movers fitted with soft starters. Centrifugal clutch. Fluid powder coupling.			Heavy Start Electric Motor AC-Direct on line start DC-Series & compound wound I.C. Engines with less than 4 cylinders.		
Types of Driven Machines	Hours per Day Duty Up to 10 Over 10 to 16 Over 16			Hours per Day Duty Up to 10 Over 10 to 16 Over 16		
LIGHT DUTY Conveyors (uniform load) Exhaust Fans (max 7.5 kw) Blowers, Pumps, Compressors (Centrifugal) Generators. Shifters (Light), Agitators (Liquid)	1.0	1.1	1.2	1.2	1.2	1.3
MEDIUM DUTY Agitators & Mixers, Compressors (with 3, or more cylinders) Rotary pumps, Conveyors (non-uniform load). Washing Machine, Line Shafts, Printing Machines & Screens.	1.1	1.2	1.3	1.3	1.3	1.4
HEAVY DUTY Pumps, Compressor, (Reciprocating) Bucket Elevator, Rotary Pumps, Conveyors, Hammer Mills, Rubber Mixers. Pulverisers, Vibrating Screens, Textile Machinery.	1.2	1.3	1.4	1.4	1.5	1.6
EXTRA HEAVY DUTY Crushers (Gyratory, Jaw, Roll) Mills (Ball, Rod, Tube).	1.3	1.4	1.5	1.5	1.7	1.8

ARC OF CONTACT POWER CORRECTION FACTORS For V Belts

D-d/C	Arc of Contact on Smaller Pulley (Degrees)	Correction Factor i.e. Proportion of 180° Rating (Fc)
0.00	180	1.00
0.05	177	0.99
0.10	174	0.99
0.15	171	0.98
0.20	169	0.97
0.25	166	0.97
0.30	163	0.96
0.35	160	0.95
0.40	157	0.94
0.45	154	0.93
0.50	151	0.93
0.55	148	0.92
0.60	145	0.91
0.65	142	0.90
0.70	139	0.89
0.75	136	0.88
0.80	133	0.87
0.85	130	0.86
0.90	127	0.85
0.95	123	0.83
1.00	120	0.82



POWER CORRECTION FACTORS FOR BELT PITCH LENGTH FOR V BELTS

Power						Belt Pitch Length					
Correction			V-belts						Wedge belts		
Z, ZX	A, AX	B, BX	20, C,	D	E	SPZ, 3V	SPA, XPA	SPB, 5V	SPC, XPC	8V	
Factors				25, CX			XPZ, 3VX		XPB, 5VX		
0.80		630									
0.81			930								
0.82		700		1550	2740			800			
0.83			1000				630				
0.84		790		1760				900			
0.85			1100				710	1250			
0.86	405	890			3130			1000		2000	
0.87			1210	1950	3330		800		1400		2540
0.88		990						1120		2240	
0.89							900		1600		3000
0.90	475	1100	1370	2190	3730			1250		2500	
0.91				2340					1800	2800	3350
0.92	530		1560	2490	4080		1000	1400			
0.93		1250							2090	3150	
0.94				2720	4620	5334	1120	1600			4060
0.95	625		1760	2800					2240	3550	
0.96		1430		3080		6045	1250	1800	2500		
0.97			1950		5400					4000	5080
0.98	700	1550		3310			1400	2000	2800	4500	
0.99		1640	2180	3520		6807					6000
1.00	780	1750	2300		6100		1600	2240	3150	5000	
1.02		1940	2500	4060		7569	1800	2500	3550	5600	7100
1.03					6840	8331					8000
1.04	920	2050	2700				2000	2800	4090	6300	
1.05		2200	2850	4600	7620	9093				7100	9000
1.06		2300						3150	4500		
1.07	1080				8410	9855	2240			8000	10160
1.08		2480	3200	5380				3550	5000		
1.09		2570			9140	10617	2500		6000	9000	11430
1.10		2700	3600					4000			12700
1.11				6100			2800		6300	10000	
1.12		2910			10700	12141		4500		11200	
1.13		3080	4060				3150		7100		
1.14		3290		6860		13665				12500	
1.15			4430				3550		7880		
1.16		3540	4820	7600	12200	15189					
1.18			5000		13700						
1.19			5370			16713					
1.20			6070		15200						
1.21				9100							
1.24				10700							

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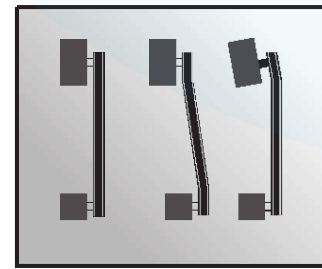
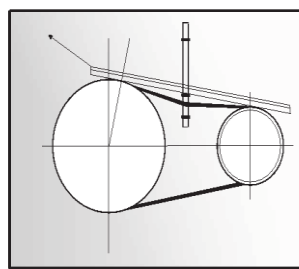
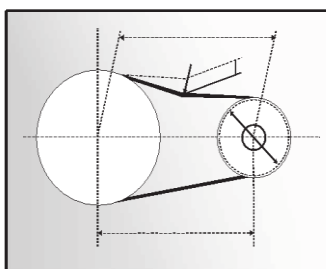


Installation Method of V Belts

Effective Power Transmission, HIC Rev Up Motor Power Tips

- Alignment of pulley sheaves must be ok and grooves burrs-free else drive v-belts shall fail pre-maturely.
- Pulley Size must be *OK* & grooves not worn out or sharp edged else slippage or breakage problem can happen. Suggest to *use* UNIVERSAL *Quick Fit Taper Lock* Bush Pulley for no problem drive and *min.* pitch *Diameter* (mm) 95 for A, 145 for B, 225 for C, 350 for D, 63 for SPZ, 90 for SPA, 160 for SPB & 224 for SPC section.
- Excessive Belt Stretch can be avoided by keeping pulley *Alignment OK* using string that will also prevent belts turning over in groove. Ensure drive is not under-rated.
- Complete New Set of V-belts be put *properly seated* in the pulley by Hand only moving motor towards the driven unit & not with screw drivers or other levers else belt cords may get damaged. *Mixing of new & used* belts to make a set must *not be done*.
- Section Selection roughly may be done choosing A/SPA *up to 3 HP* motor *speed*, SPZ up to *7.5 HP*, B/SPB up to *10 HP*, C/SPC up to *40 HP*, D *above 40 HP*, though *design drive* factors be considered.
- Tensioning must be *OK* so that V belts feel alive by applying force to *cause deflection* of 16mm per 1mtr of span at centre distance.
- Ventilation must be kept *proper* and never use belt dressing.
- Wedge SPZ, SPA, SPB, SPC section belts have 2 times *more power* transmitting *capacity* than classical A B C D E belts.
- Flat Belts are useful for running at *high speeds* up to 100mtr/sec.

Size Variation (+2%, -1% Length; +, -1mm section Dimension) as per mfg tolerance should be acceptable.



Right Incorrect



Stretch-Free

Super-Power

Anti-Static

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UNIVERSAL

Quality Rubber V Belts

Purchase Enquiry Info

Wrapped or Raw Edge or Cogged Rubber V Belt Min. *Information* to Be Sent(Email at: belts@universaldelhi.org ; universal@hic-india.com or Call +91 11 2874 5120)

HIC ships v banded cogged industrial belts conforming IS 2494 tailor-made to buyer's order specifications to different countries including India. Please send following information in English to quote prices:

1. V-belt **Section** size or Top Width and belt Thickness mm
2. **Length-Li**, inside length or **La**, outside length inches or **Lp**, pitch length mm
3. **Quantity**- numbers



Quality Assurance Plan

HIC Transmission Belts & Rubber V Belt Testing Parameters

Quality **Transmission Belts** and **Rubber V belts** manufactured in ISO 9001 certified HIC factories in India with Production Supervisors conducting routine pre-manufacture checks and post-manufacture tests as to:

- 100% Physical checks with respect to dimensions,
- 100% Chemical checks w.r.t. MOC,
- 20% Random physical tests

Note: Test Certificate of HIC's Lab forwarded along-with supplies. Fully geared up to provide Third Party Inspection at buyer's cost.

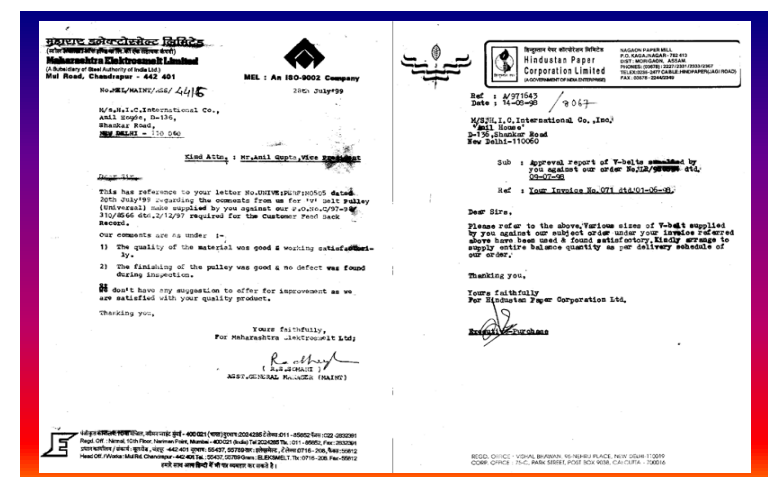
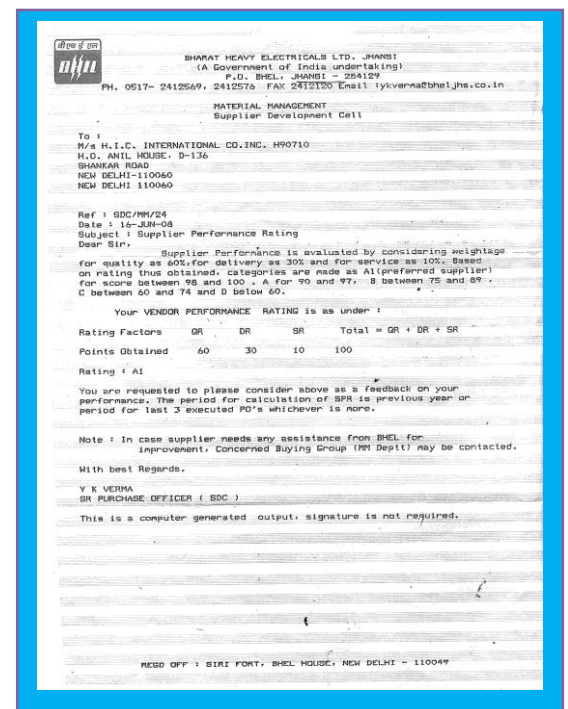
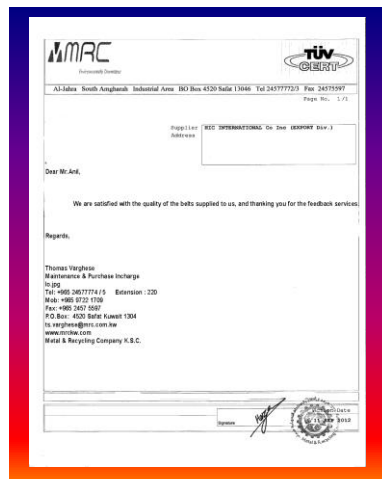
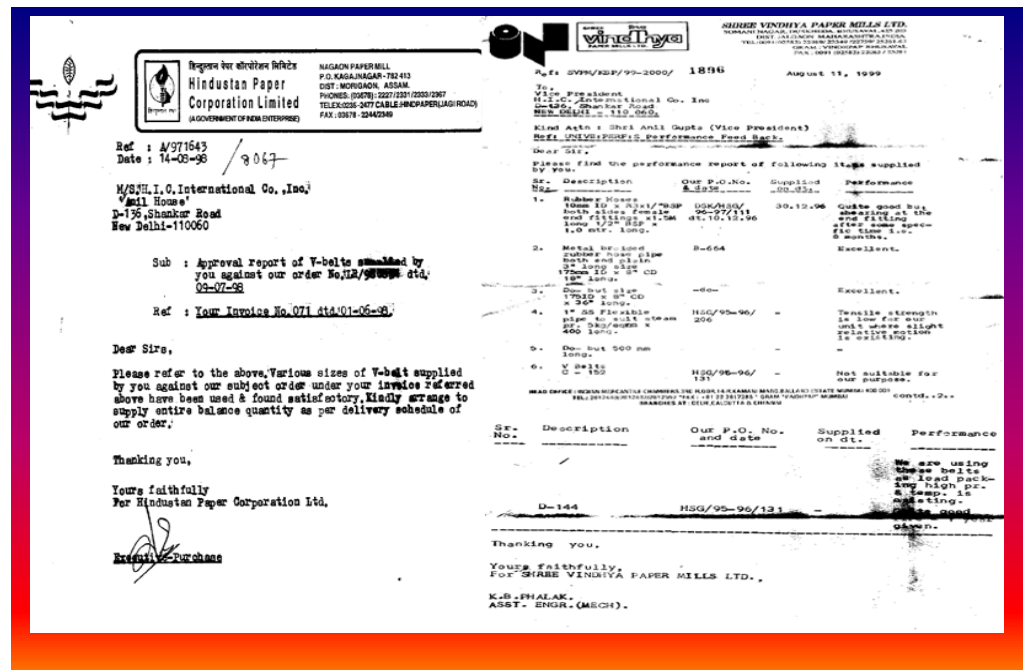
Production Capacity of Machinery Drive Products

	Approximate Qty. per annum
1. Nylon Sandwich Belt, Leather Transmission Belting, Flat Rubber Transmission Belt http://www.rubber-steel-industrial-products.com/rubber-belting-manufacturer/index.htm	60,000 mts.
2. Classical V Belts, Cogged Belts, Wedge Belt, Poly v Belt, Banded Belt, Harvester Combine Belt , Narrow Section Belt http://www.rubber-steel-industrial-products.com/v-belts-manufacturer/index.htm	2,50,000 nos.
3. V Belt Pulley Sheaves, Timing Pulley, Taper Bush Pulley, Weld on Hubs http://www.rubber-steel-industrial-products.com/belt-pulley-manufacturer/index.htm	5,000 nos.
4. Spider Jaw Couplings, Rubber Tyre Coupling, Flexible Gear Coupling, Pin Bush Coupling Taper Bush System http://www.rubber-steel-industrial-products.com/motor-coupling-manufacturer/index.htm http://www.rubber-steel-industrial-products.com/shaft-coupling-manufacturer/index.htm http://www.rubber-steel-industrial-products.com/gear-coupling-manufacturer/index.htm http://www.rubber-steel-industrial-products.com/bush-coupling-manufacturer/index.htm	75,000 nos.

Vendor Data: www.hic-india.com | Customers List: www.universaldelhi.org | Catalogue: www.rubber-steel-industrial-products.com



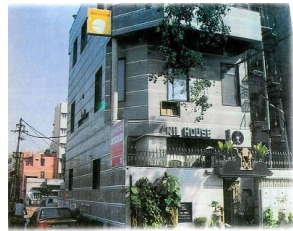
Performance Certificates



Total Quality Management Principles Followed

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NO MORE **DRIVES** POWER TRANSMISSION STOPPAGE !



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