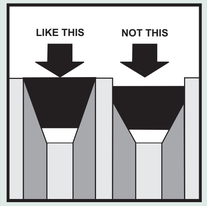
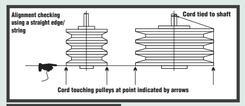
Preventive Maintenance Tips

Switch the mains off. Check the pulley for rust or wear, clean it if required.

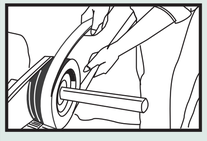


Inspect pulley grooves. Worn out grooves provide allowance for the belts to slip, leading to a premature failure of the belts. Use PIX pulley gauges to check the pulley grooves.

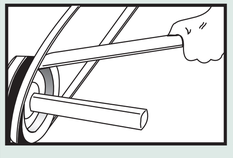


Check alignment. Proper alignment is a must for longer belt and pulley life. For satisfactory service, pulley misalignment should not exceed 1/3rd of the degree of the span.

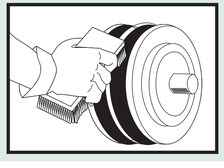
Do not mix the belts of various brands, types, used & new ones.



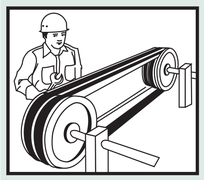
Always use installation allowance so the belts can be easily installed into the pulley grooves. Switch off the drive before changing the belts.



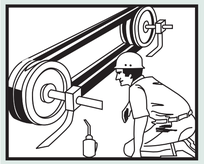
Never force belts into pulleys with a screw driver or a lever. It may lead to the rupture of envelope or the top cover. This may also break the cord line. A belt so fitted will turn over in the pulley.



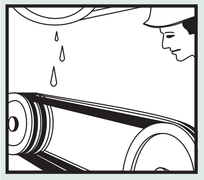
Clean the dirt regularly, dirt accelerates belt wear. Dirt reduces the coefficient of friction and hence the traction.



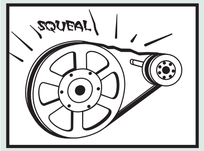
Always protect the drive with the help of an effective drive guard.



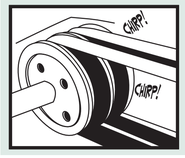
Look and listen for any unwanted happening and correct it.



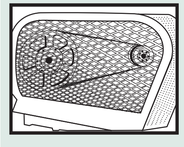
Do not expose the belts to oil, spray, liquid, paste or hazardous chemicals, which are incompatible with the belt material. It is recommended to use Special Construction Belts in such cases.



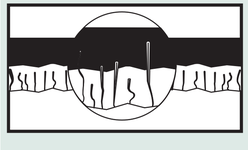
Squeal is a result of insufficient belt tension. If it persist, after all the belts have been checked, the drive should be examined for overloading. Correct the design if required.



The noise like chirping of birds occurs because of dust or dry bearings. Clean and lubricate the bearings regularly.

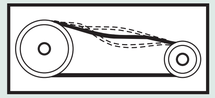


Belt guard is a must to ensure safety and cleanliness. Screened meshed or grilled guards are the best for heat dissipation. Select a proper mesh size which will prevent the entry human finger or any other object.

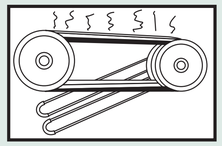


Check the belt for cracks at the bottom surface. Cracks can be avoided by using large-diameter pulleys and larger reverse bend idler pulleys.

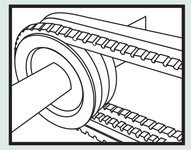
Do not use belt dressing under any circumstances.



Prevent the whipping of belts.



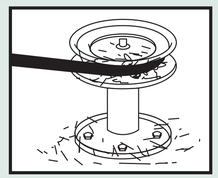
Belts operating at elevated temperatures above 70°C, should be checked periodically. Use special heat resistant belts to avoid this problem.



Belt turn over is due to misalignment, worn out pulleys or excessive vibrations.

Change in ride out/in indicates uneven belt wear or worn-out pulleys.

Do not allow belts to vibrate laterally.



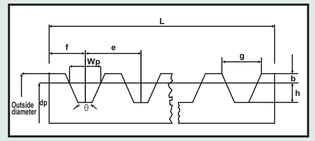
Presence of foreign material can result into the breakage of belt or its excessive wear.

Pulley Gauge

1. Identify the belt and pulley section.
2. Ensure that the pulley grooves are perfectly cleaned.
3. Select proper gauge from the set of Pulley Gauge.
4. Insert the gauge and check for the variation if any.

DIMENSIONS: STANDARD GROOVE PULLEY

Cross Section Symbol	Groove Pitch Width (Wp) mm	Min. Distance from Outside Diameter to Pitch Dia. (B) mm	Min. 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	Min. Top Width of Groove (g) mm
Z, SPZ ZX, XPZ	8.5	2.00	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	3.50	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	4.80	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	8.10	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	9.60	23.4	44.5±0.7	29.0+4.0 -1.0	Up to 610 Over 610	36±0.5 38±0.5	38.9 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	38±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+8.0 -1.5	Up to 406 406 to 569 above 569	38±0.5 40±0.5 42±0.5	25.4

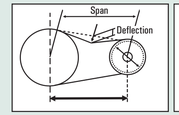


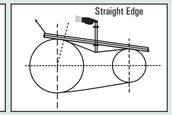
1. The tolerance on the dimensions apply to the distance between the center of any two grooves whether adjacent or not.
2. It is recommended that the tolerance on dimensions should be taken into account while aligning the pulleys.
3. When the pulleys are to be used for V-Belts Z, A, B, C sections only, the value of 'h' may be reduced by 20%.
4. Only above dimension pulleys should be used for Banded belts except for 'A' section, where e = 15.9 mm.

Belt Tension Tester (Analog)

1. Measure the length span of the belt in mm.
2. The deflection value is calculated as -
   a) For span < = 1000 mm it is (0.015 x span)
   b) For span > 1000 mm it is (0.01 x span)
3. Place the large 'O' ring on the scale of Tension Tester at the calculated deflection value.
4. Place the small 'O' ring at zero value.
5. Calculate the belt surface speed.
6. Refer the tensioning value table and select appropriate tensioning force mentioned as per the section.
7. Place the straight edge on the pulleys.
8. Place Tension Tester at the center of span & perpendicular to the straight edge.
9. Apply force on Tension Tester until the large 'O' ring is flush with the bottom edge of the straight edge.
10. Read the deflection value on the Tension Tester scale by small 'O' ring.
11. Compare the deflection force value as mentioned in the User's Guide table. (Refer User's Guide V-Belts)
12. Adjust the Tension if required.

Note : Re-tension the drive after 24-48 hours of initial run.





Digital Tension Meter

Technical Data:

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