



CONVEYOR & TRANSMISSION LTD

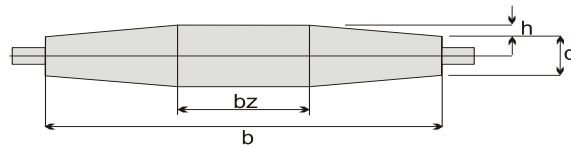
SPECIALISTS IN CONVEYOR AND TRANSMISSION PRODUCTS

DRUM DESIGN

*The perfect conveyor -
begins with the correct design*

Crowning Specifications

We suggest the following crowning be applied to conveyor drive drums to assist belt tracking



Step 1: Calculate crowning height (h)

Drum dia (mm)	<200	200-500	>500
Height h (mm)	1.0	1.5	2.0

Step 2: Calculate the cylindrical section (bz)

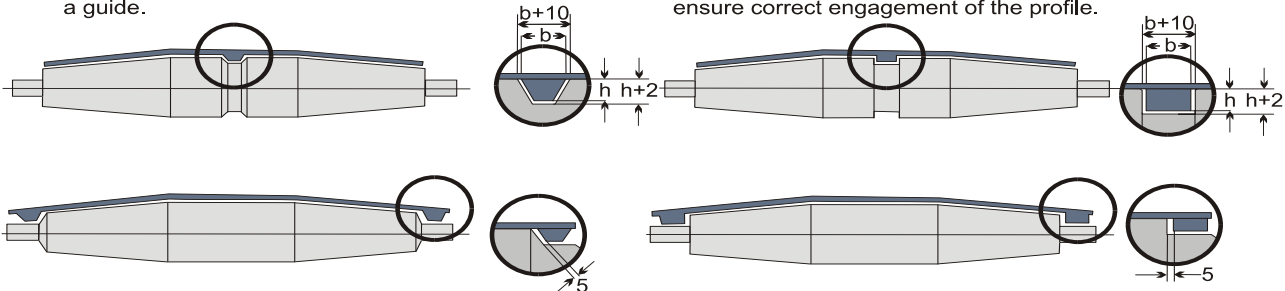
Width of drum b (mm)	<200	<1000	>1000
Cylindrical part bz	ISOR100	1/3 b	1/2 b

(ISO radius crown- refer Rydell Transmission brochure)

Design Criteria for Longitudinal Profiles

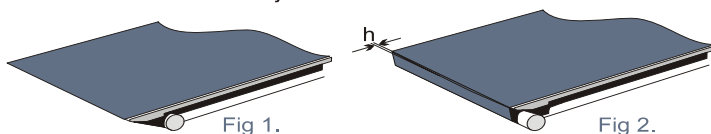
Longitudinal profiles can only absorb brief lateral forces. The tracking of the belt is influenced by the trapezoidal shape of the pulley. Note the clearances suggested as a guide.

The groove depth must be increased when working under high contamination conditions. As a rule, the groove width and depth in the deck should be less than the pulley to ensure correct engagement of the profile.



Nosebar Specifications

Knife edges that return on sharp angles experience increased tension and frictional heat. (Fig 1) For this we suggest rotating knife edges. The arc of contact of a knife edge should be as limited as possible. (Fig 2) Recommended radius should be 3-7 mm. Generally automatic tracking devices are employed on parallel knife edges. However, crowned knife edges have proven successful on shorter conveyors. (Fig 2) Crowned knife edges and automatic trackers should not be used in conjunction with each other.



Belt width (mm)	<500	501-1000	>1001
Dimension h (mm)	0.5	1.0	1.5

Useful Data

When you know..	Multiply by	To find..
millimeters	0.039	inches
meters	3.28	feet
grams	0.035	ounces
kilograms	2.202	pounds
celcius	1.8C + 32	fahrenheit
newtons	0.225	pound force
bar	14.5	psi
kilowatt	0.34	horsepower

Belt length Formula $2 \times C + [1.57 \times (D+d)] + \frac{(D-d)^2}{4 \times C}$

Belt Tolerances

Belt Lengths		Belt Widths	
Up to 500mm	+/- 2mm	Up to 100mm	+/- 1mm
501-1000mm	+/- 4mm	101-250mm	+/- 2mm
1001-2000mm	+/- 8mm	251-500mm	+/- 3mm
2001-4000mm	+/- 14mm	501-1000mm	+/- 4mm
4001-8000mm	+/- 22mm	1001-1500mm	+/- 5mm
8001-16000mm	+/- 34mm	1501-2000mm	+/- 6mm
exceeding 16000mm	+/- 0.25%	2001-3000mm	+/- 7mm
		exceeding 3000mm	+/- 0.3%

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