

## CONVEYOR IDLER SELECTION GUIDE



## Steel Rollers

[RMB Knovatech Pvt Ltd](#) carry a large range of rollers to suit most conveying applications. This enables the customer to receive the most cost-effective solution. Installations include coal, Aggregate, Iron ore, copper mines, ship loading terminals and long high capacity conveyors. The centrifugal self-cleaning action of the seals ensure that bearings are able to achieve the design life. The grease-free sealing system results in much lower friction values than conventional designs.

Steel Roller Series	Roller Diameter (mm)	Shell Wall Thickness (mm)	Nominal Shaft Diameter (mm)	Bearing	
				Designation	Dynamic load Rating (N)
20	89	3	20	6204-2RS	12,700
	101	3.5			
	108	4			
25	101	3.5	25	6205-2RS	14,000
	127	3.8/5			
	133	4			
	152	4			
	159	4			
25	127	3.8/5	25	6305-2RS	22,500
	152	4			
	159	4			
30	127	3.5/3.8	30	6206-2RS	19,500
	133	4			
	152	4/6			
	159	4			
	178	6			
30	127	3.8/5	30	6306-2RS	28,100
	152	4/6			
	159	4			
	178	6			
35	127	3.8/5	35	6207-2RS	25,500
	152	4/6			
	159	4			
	178	6			
40	152	6	40	6308-2RS	41,000
	178	6			
	219	6			
45	152	6	45	6309-2RS	52,700
	178	6			
	219	6			
50	152	6	50	6310-2RS	61,800
	178	6			
	219	6			
60	219	6/8	60	6312-2RS	81,900

Precision E.R.W. Conveyor tube

Full M.I.G weld protected from belt wear

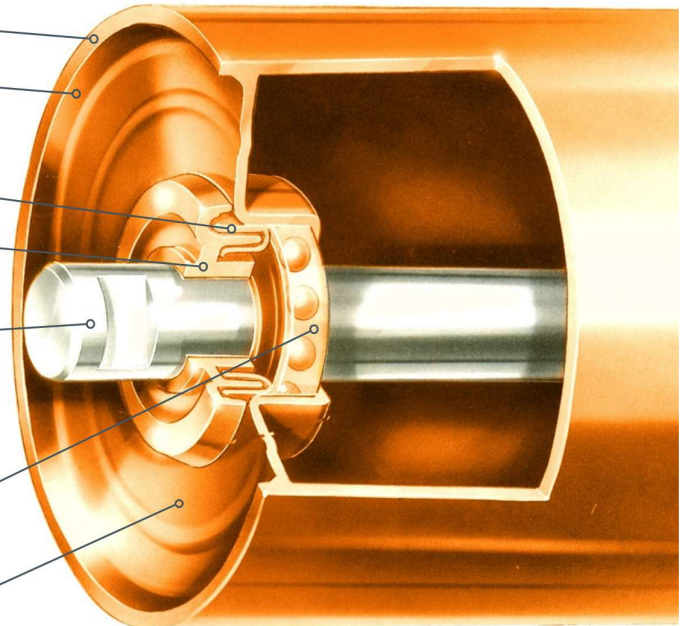
Rotating electroplated metal seals expels dirt centrifugally and drains water away

Durable, high-impact resistance outer seal

Solid steel shaft with bearing seat

preparation by a proprietary technique

Quality sealed deep grooved ball bearings greased and sealed by bearing manufacturers. No relubrication necessary because contamination stays outside and the grease stays inside



## Bearings

Deep grooved double sealed bearings of tolerance class C3 and C4 are used. This allows for a larger amount of angular misalignment at the bearing than other bearing designs and classes.

## Steel Tube

Only high-quality tube specially manufactured for conveyor rollers is used and conforms to SABS 657/3 (1980). Shell ends are machined to prevent belt wear.

## Steel Shaft

Manufactured from EN8 steel. The shaft diameter tolerance is as recommended by bearing manufacturers and ensures a js6 fit. Shaft end slots are machined to customer standards.

## Bearing Housing

Manufactured from deep drawing material. Housing are pressed and MIG-welded to the inside of the tube.

## Corrosion Protection

External coat of self-etch primer unless otherwise specified. Internal corrosion protection available on request.

## Circular Movement Tolerance (TIR):

Roller Face Length (mm)	TIR	
	D ≤ 127	D > 127
Up to 536	.5	.6
586 to 965	.7	.9
994 to 1,450	1.3	1.6
1,602 to 2,518	1.9	2.3

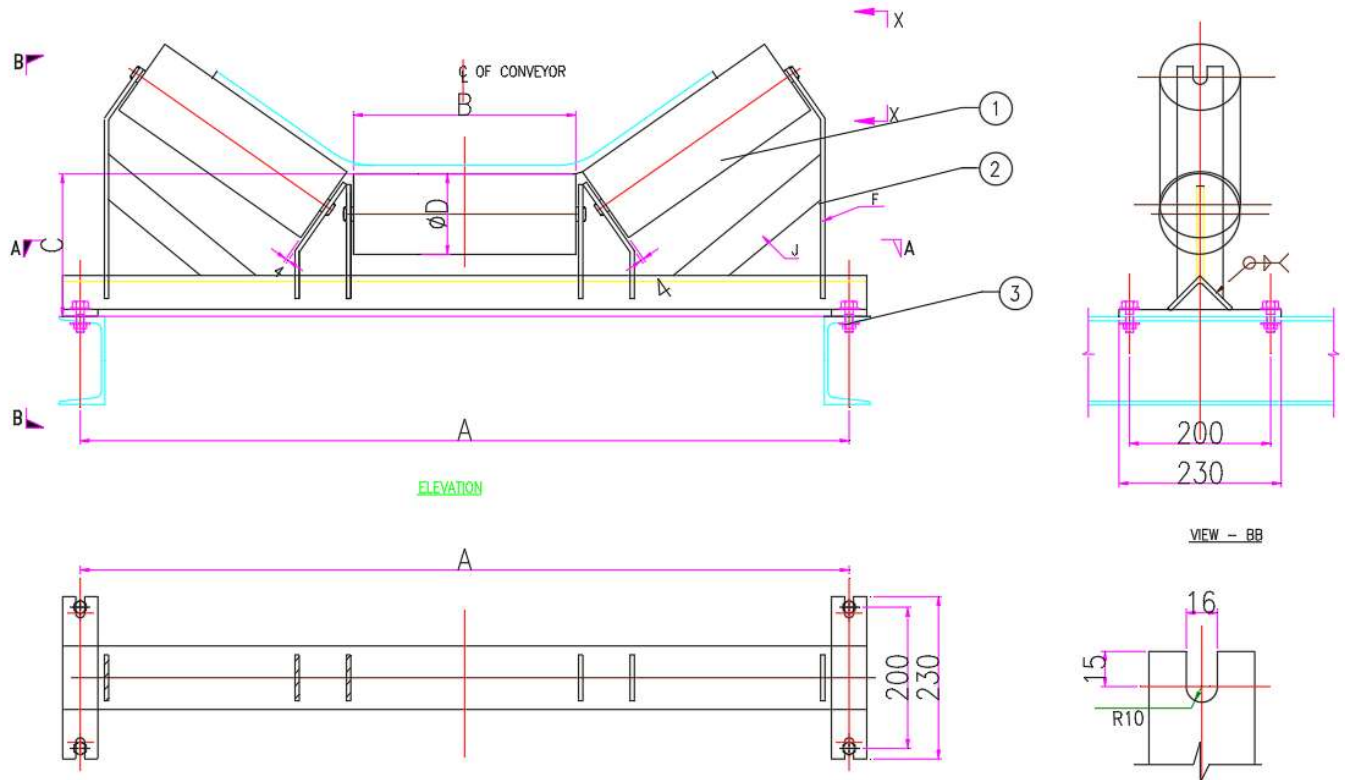
TIR does not exceed 0.5mm measured at a distance of 25mm from the roller end face.

## Maximum Frictional Force:

Roller DIA (mm)	Frictional Force* (N)
89	1.7
101	1.5
127	1.4
152	1.3
178	1.2
219	1

\*Figures for a rotational speed of 650 rpm and a radially applied load of 250N.

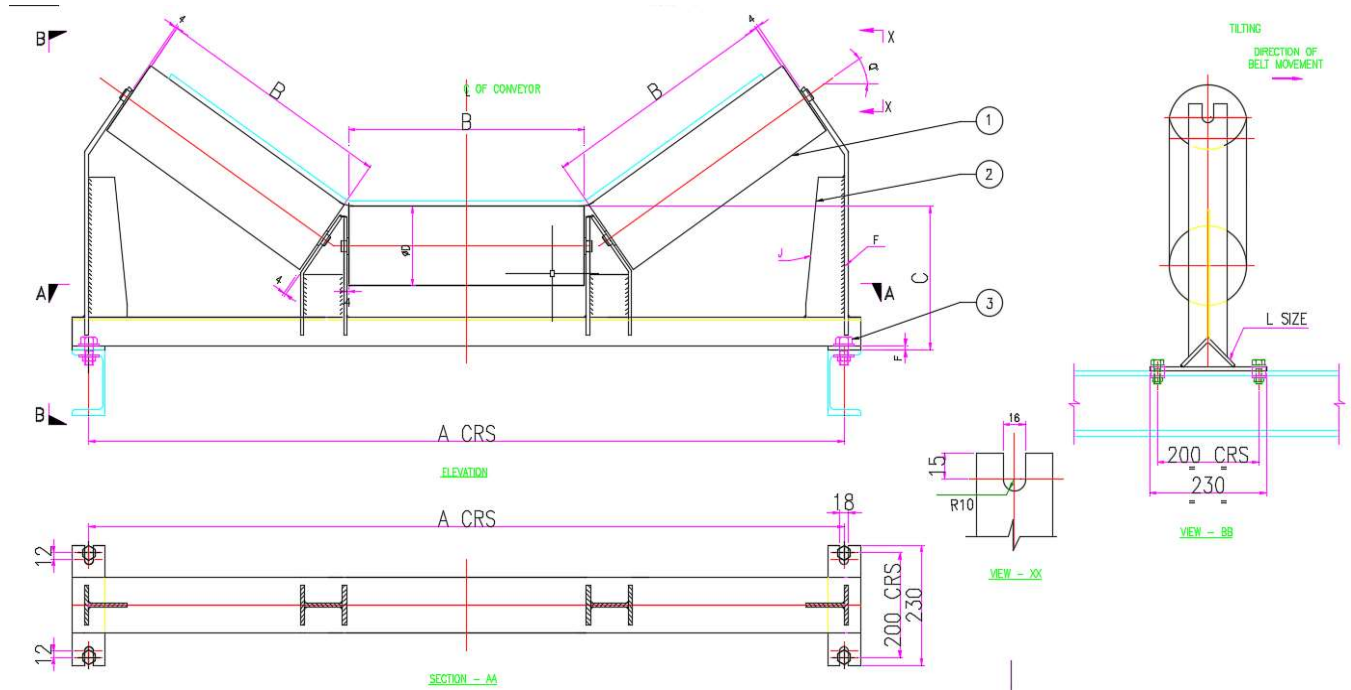
## CARRYING IDLER SET



BELT WIDTH	A	B	PIPE THK	D	BRG. DIA	SHAFT DIA	IDLER BRG.	L SIZE	F	Q°	J	QTY
500	790	200	4	88.9	20	20.3	420204/6204	L 50 x 50 x 6	FLAT 50 x 6 THK.	0	0	
650	940	250	4	88.9	20	20.3	420204/6204	L 50 x 50 x 6	FLAT 50 x 6 THK.	0	0	
800	1090	315	4.5	114.3	20	20.3	420204/6204	L 65 x 65 x 6	FLAT 65 x 6 THK.	0	0	
1000	1290	380	4.5	114.3	20	20.3	420204/6204	L 65 x 65 x 6	FLAT 65 x 6 THK.	0	0	

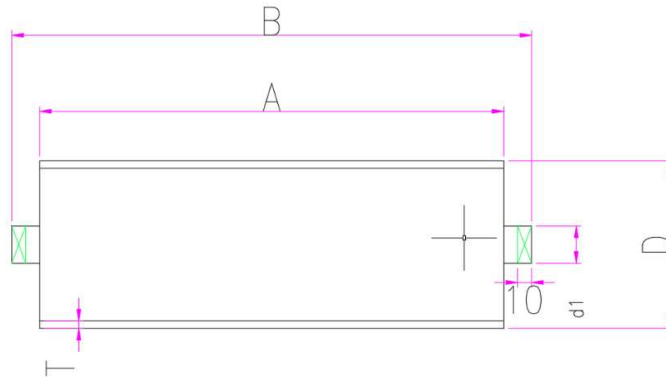


## CARRYING IDLER SET



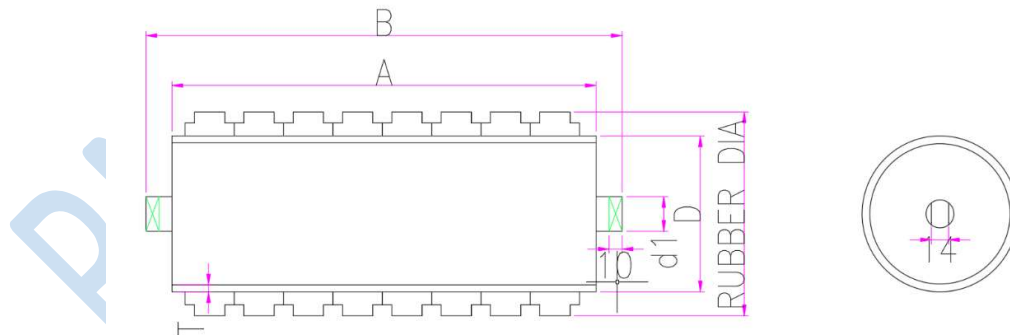
BELT WIDTH	A	B	C	D	BRG. DIA	SHAFT DIA	IDLER BRG.	L SIZE	F	J	Q <sup>o</sup>
1000	1290	380	200/225/225/225	88.9/114.3/127/139.7	25	28	420205/6205	L 75 x 75 x 8	75 x 8 THK.	75 x 6 THK.	20/25/30/35
1000	1290	380	275	152.4	25	28	420205/6205	L 75 x 75 x 8	75 x 8 THK.	75 x 6 THK.	20/25/30/35
1200	1490	465	225	114.3/127/139.7	25	28	420205/6205	L 75 x 75 x 8	75 x 8 THK.	75 x 8 THK.	20/25/30/35
1200	1490	465	275	152.4	25	28	420205/6205	L 75 x 75 x 8	75 x 8 THK.	75 x 8 THK.	20/25/30/35
1400	1690	535	250	114.3/127/139.7	30	35	420206/6206	L 90 x 90 x 8	90 x 8 THK.	90 x 8 THK.	20/25/30/35
1400	1690	535	275	152.4	30	35	420206/6206	L 90 x 90 x 8	90 x 8 THK.	90 x 8 THK.	20/25/30/35
1500	1790	565	275	159	35	38	420207/6207	L 100 x 100 x 8	100 x 8 THK.	100 x 8 THK.	20/25/30/35
2000	2290	750	275	159	35	38	420207/6207	L 150 x 150 x 10	100 x 8 THK.	100 x 8 THK.	20/25/30/35

## CARRYING IDLER ROLLER



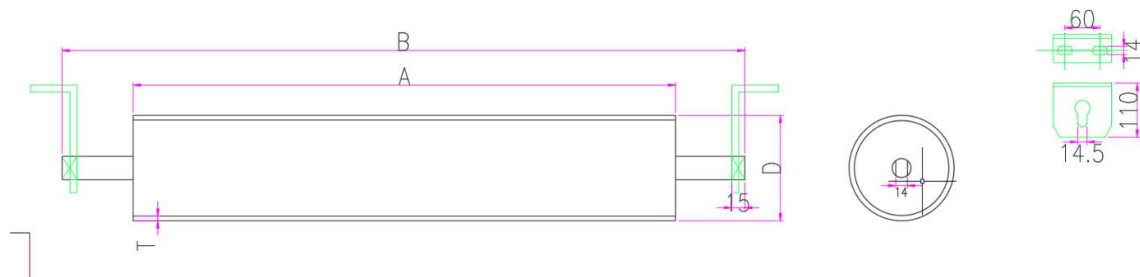
BELT WIDTH	A	B	T	D	BRG. DIA	SHAFT DIA	IDLER BRG.
500	200	230	4	88.9	20	20.3	420204/6204
650	250	280	4	88.9	20	20.3	420204/6204
800	315	345	4.5	114.3	20	20.3	420204/6204
1000	380	410	4.5	114.3	20	20.3	420204/6204

## IMPACT IDLER ROLLER



BELT WIDTH	A	B	T	D	BRG. DIA	RUBBER DIA	IDLER BRG.
500	200	230	3	60	20	88.9	420204/6204
650	250	280	3	60	20	88.9	420204/6204
800	315	345	4	89	20	114.3	420204/6204
1000	380	410	4	89	20	114.3	420204/6204

## RETURN IDLER ROLLER



BELT WIDTH	A	B	T	D	BRG. DIA	SHAFT DIA	IDLER BRG.
500	600	770	3.7	76	20	20.3	420204/6204
650	800	970	3.7	76	20	20.3	420204/6204
800	950	1120	4	89	20	20.3	420204/6204
1000	1150	1320	4	89	20	20.3	420204/6204



**STEEL CARRIER**



**HDPE CARRIER**



**TRANSITION CARRIER**



**SELF ALIGNING CARRIER**



**IMPACT ROLLER**



**WEIGH ROLLER**



**GARLAND CARRIER**



**FLAT RETURN**



**RUBBER DISC RETURN**



**SPIRAL RETURN**



**V RETURN**