

# Conveyor Roller Shafts / Mini-Rollers for Conveyors

# Roller Conveyors - Overview

**Conveyor Roller Shafts**

Type	Material	Surface Treatment
HRD	S45C Equivalent	-
HRDB		Black Oxide
HRDM		Electroless Nickel Plating
HRDS	SUS304	-

Applicable to Conveyor Rollers and Mini-Rollers on P.1163.  
 Hairpin cotter pins are not included.

Part Number	L	W	Q	d	l
Type	1mm Increment	Selection			
HRD	60-550	4	4	2.5	11
HRDB		5.8	4.5	2.5	12
HRDM		6	6	3	13
HRDS		10	8	3	13

**Ordering Example**

Part Number: HRD - D 6 - L 135 - W 4.5

Unit Price = Body Price + Shape Charge

Part Number	Body Price			Config. Price (Body Price +)			
	D	60-200	201-400	A	D	E	G
HRD	6						
HRDB	6						
HRDM	6						
HRDS	6						

**Example**

Combination of these app. examples can be selected on our website.  
 Details of Selection Procedure P.87

e-Catalog Search Keyword #MA692 [Search]

\* Enter the search keyword in the search box on e-Catalog. The search result will be shown in "Modular Assembler" area.

**Mini-Rollers for Conveyors**

Type	Material	Surface Treatment	Bearing
CNMR	Steel	Trivalent Chromate Plating	Machined Bearing
CNMRC		Hard Chrome Plating	
CNMRS	Stainless Steel	-	

Part Number	B	d	d1	W	Allowable Load (N)	Unit Price		
						CNMR	CNMRC	CNMRS
Type	15	6.1	10	17	294			
	25	6.1		27	392			
	50	6.2		52	490			
	100	6.2		102	490			

kgf=Nx0.101972  
 Use in combination with Conveyor Roller Shafts.

**Ordering Example**

Part Number: CNMRC20 - B 50

## Selection Method of Roller Conveyors

- Selection of Roller Width**  
 Select a roller width according to outer size of conveyed objects.  
 • Optimum width selection is "Object Width + 50mm or more".  
 • If the objects to be conveyed are on pallets, it is acceptable for the roller width to be narrower than the bottom surface width of the objects as long as the objects do not come into contact with the conveyor frame.

- Selection of roller pitch, material, and diameter**  
 Select a roller width according to the bottom surface of conveyed objects as shown below.

Bottom of Conveyed Object	Min. Pitch Required	Material, Diameter
When the conveyed objects have hard bottoms: (Steel, Plastic, etc.)	3 Pitches (4 Rollers)	Select material and outer diameter from Table 1 according to Condition Formula "Table 1 Strength x 4 ≥ Conveyed Object Weight"
When the conveyed objects have soft bottoms: (Cardboard, Rubber, etc.)	5 Pitches (6 Rollers)	Select material and outer diameter from Table 1 according to Condition Formula "Table 1 Strength x 6 ≥ Conveyed Object Weight"

When impact is generated while loading, impact load is 1.5~3 times larger than the usual load. Please select the conveyor with sufficient load capacity.

Table 1 : Strength per Roller

Roller Material	Roller Diameter	Roller Strength (N)				
		W113	W213	W313	W413	W513
Plastic	20mm	113	105	98	90	83
	30mm	162	154	147	139	132
	50mm	314	304	294	289	279
Steel	19.1mm	618	530	343	294	206
	28.6mm	1236	1059	687	588	412
	38.1mm	1342	1342	922	785	588

## Conveyed Object Weight and Self Rolling Incline

See Table 2 for the movements of conveyed objects by own weight (self rolling incline) on inclined conveyors.

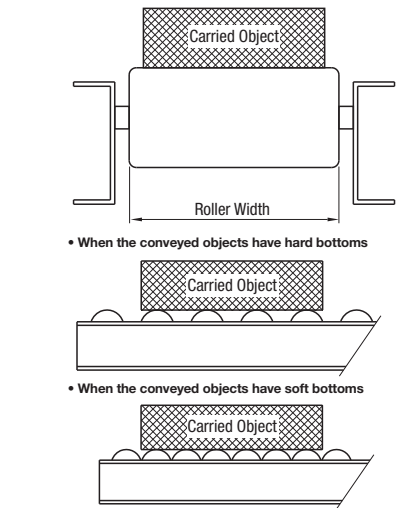
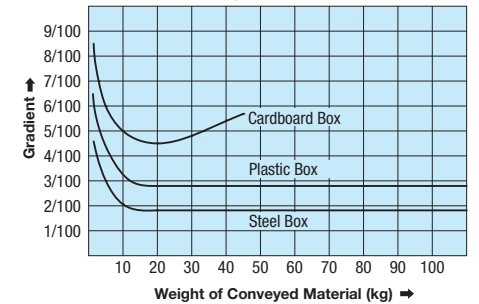
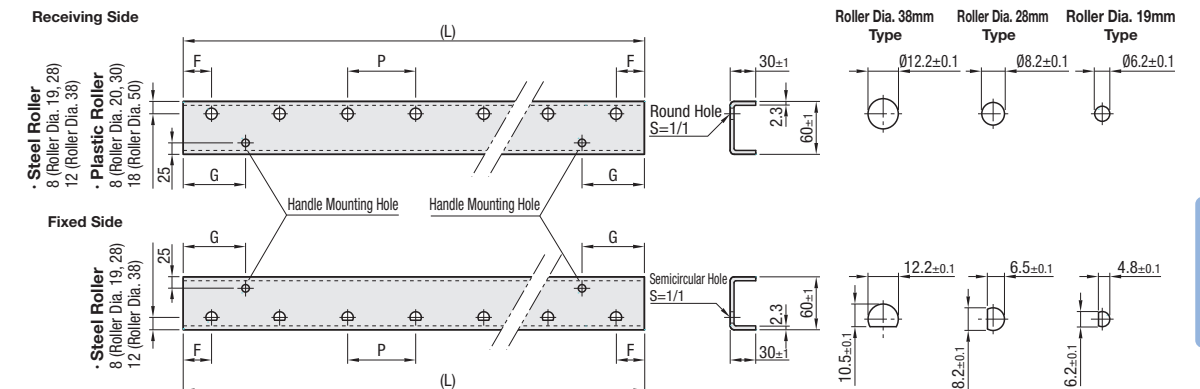


Table 2 : Self Rolling Incline



## [Frame Side View]



## Resin Roller Conveyor

For Resin Roller Conveyors, the receiving and fixed side holes are round.

Type	ROCOP				
	ROCOP	ROCON	ROCOM	ROCOG	ROCOE ROCOJ
Frame Size	Ø20xP25	Ø30xP40	Ø30xP50	Ø50xP75	Ø50xP100
(L)	F G	F G	F G	F G	F G
100-199	10	22	37	40	47.5
200-299					
300-399					
400-499					
500-599					
600-699					
700-799					
800-899					
900-1000					
1001-1100					
1101-1200					
1201-1300					

## Steel Roller Conveyor

Type	ROCO		ROCON		ROCOM		ROCOG		ROCOE ROCOJ		ROCOH	
	F	G	F	G	F	G	F	G	F	G	F	G
Frame Size	Ø19xP20		Ø19xP30		Ø28xP30		Ø28xP50		Ø38xP50		Ø38xP75	
(L)	F G		F G		F G		F G		F G		F G	
100-199	10	20	20	35	-	-	-	-	-	-	-	-
200-299												
300-399												
400-499												
500-599												
600-699												
700-799												
800-899												
900-1000												
1001-1100												
1101-1200												
1201-1300												

\* Holes for Roller Shafts are provided at 50mm pitch on Ø38 x P100 flames.