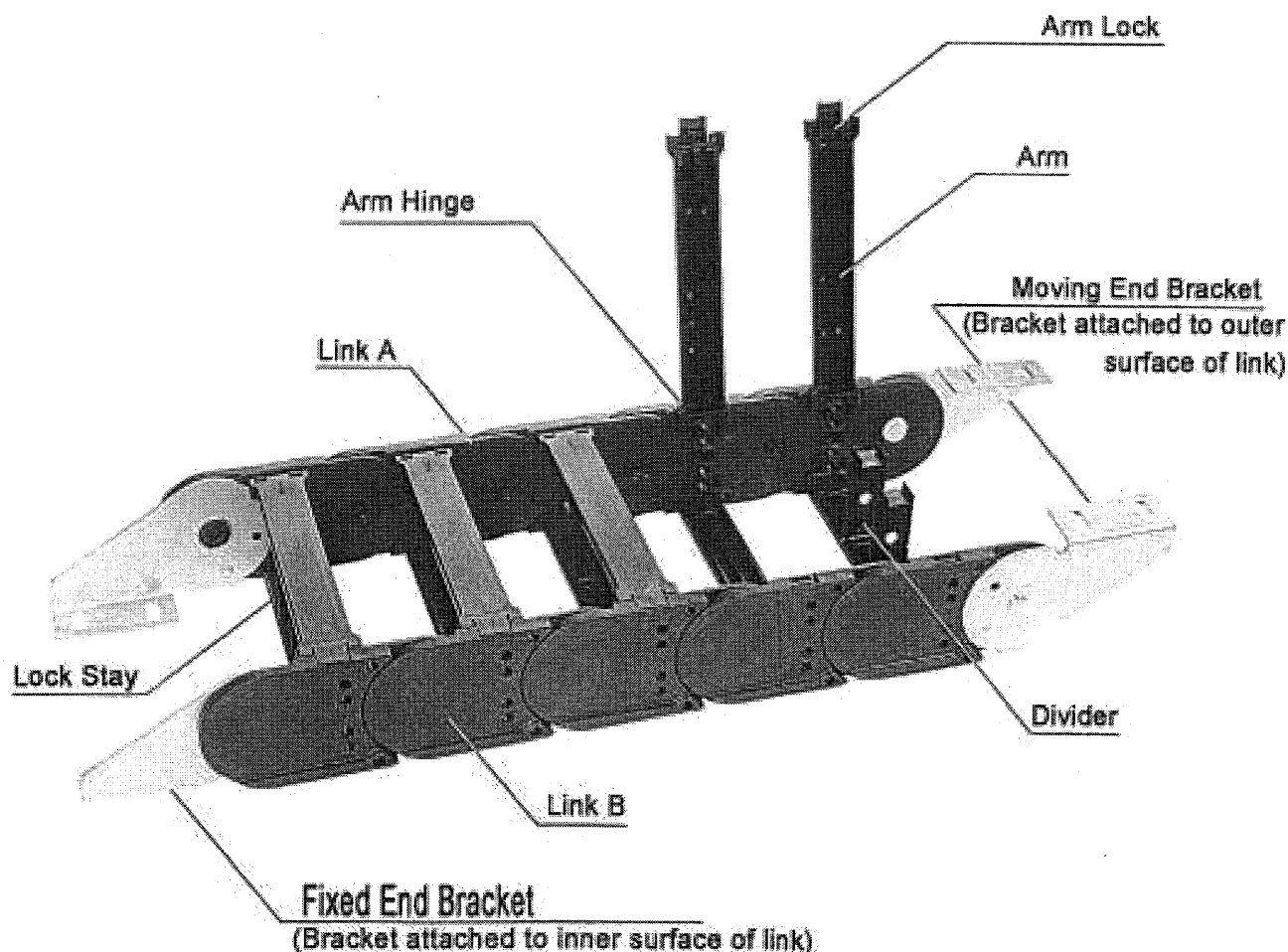


Tsubaki Plastic Cableveyor TKP Instruction Manual

Thank you for your purchase of a Tsubaki Cableveyor. This instruction manual discusses important points from delivery to machine installation, and should be read thoroughly before proceeding.

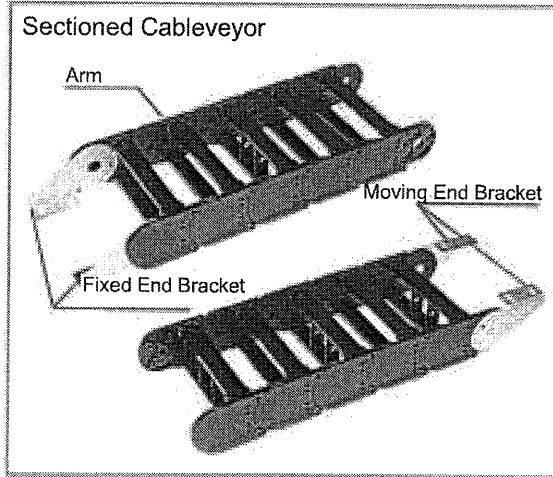
TKP62H34 • TKP90H50 • TKP125H74
(TKP0625W • TKP0900 • TKP1250)

1 Construction/Naming



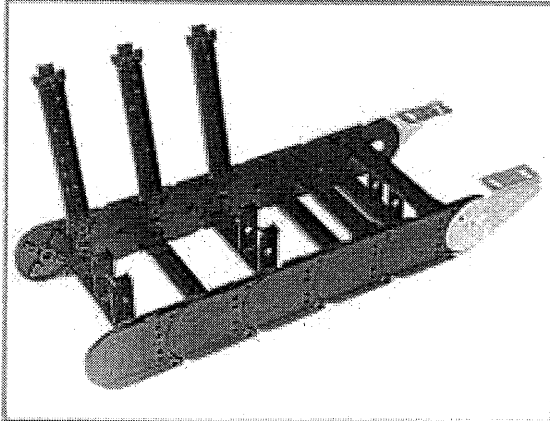
2 Delivery

- 1) Cableveyor and moving end bracket are shipped assembled, while the fixed end bracket and dividers are shipped individually.
- 2) Long formation cableveyors (over 4m) are in principle shipped in sections.



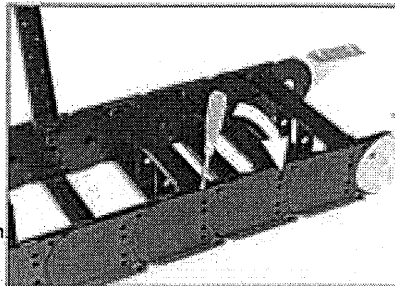
3 Connecting Cableveyor

- 3-1 Open the Arm
Open the arms on three links.

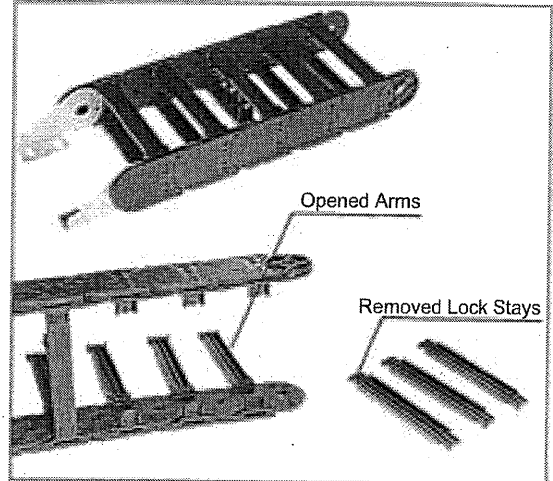


- 1) There is a slot mark on the arm locking area. Insert a flathead screwdriver into this mark and open the arm.

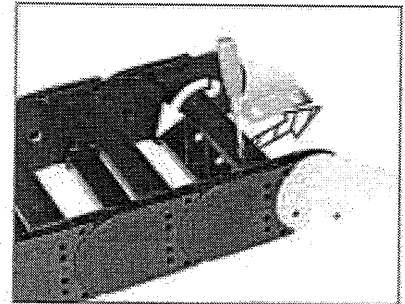
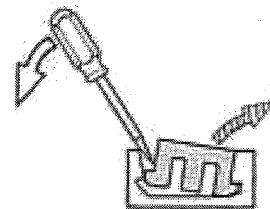
Note: Screwdriver head sizes should be less than 5.5mm for TKP0625, 9.0mm for TKP0900, and 10mm for TKP1250. Open the arm 90° and pull to remove arm.



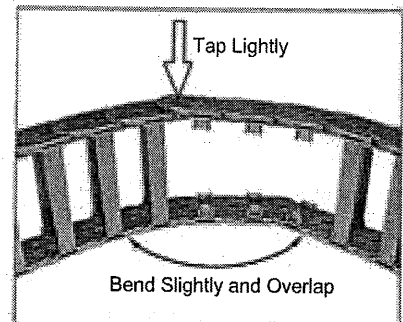
- 3-2 Removing the lock stay
Remove 3 lock stays from where the moving end side of where the cableveyor will be connected.



Insert a flathead screwdriver into the groove with the lock stay slot mark and pull screwdriver head down in the direction of the arrow. The lock stay will pop out in the opposite direction.



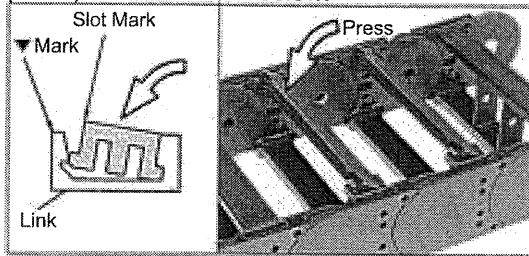
- 3-3 Connecting Link Plates



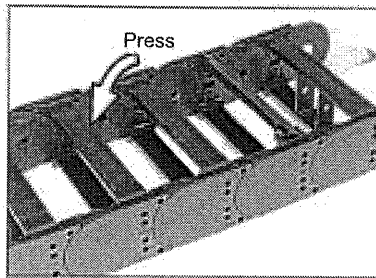
- 1) Align the pin, hole, and stopper nodule, press the link hard by hand, or tap lightly with a rubber hammer, to connect. (Support the reverse side.)
- 2) Bend the cableveyor slightly along its bending radius (approx. 5°) and align the stopper nodules.

3-4 Connecting Lock Stays

Insert the lock stay into links A and B at the same time and rotate along direction of arrow (down) to fix as shown below.



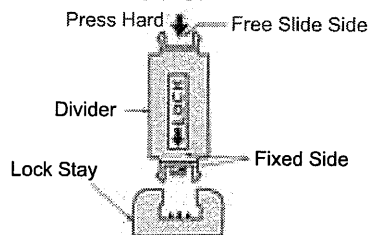
This means aligning both ends of the lock stay with links A and B at the same time.
Note: Connect so that the lock stay slot mark and ▼ on the cableveyor align.



4 Inserting (Setting) Cables/Hoses

4-1 Open the arms.
See 3.1.

4-2 Install the dividers.



1) There are two ways to attach the dividers to the lock stay:

A. When fixed

With the LOCK→ mark on the divider facing down, you can fix the connected lock stay in the predetermined position. Divider fix position can be changed in 5mm pitches.

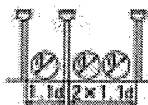
B. When freely sliding

Facing the LOCK→ mark on the divider in the opposite direction as above (up) will allow it to freely slide in the lock stay groove.

2) Align the lock stay in the groove and press hard by hand to attach. Determine position by cable/hose size and attach.

Note: It is convenient to make the guide mark on the lock stays easy to see.

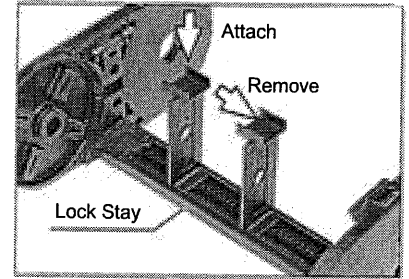
Note: Attach dividers so there is a clearance of more than 1.1x that of the cable/hose diameter (d).



3) Attaching the divider

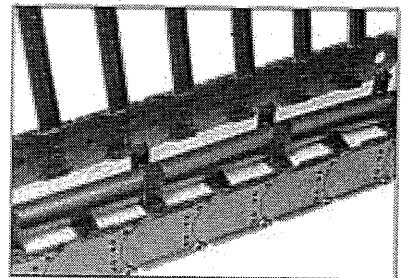
Dividers are in principle attached every two links.

4) To remove the lock stay from the divider, push the divider down laterally.



4-3 Insert cable/hose (See 7.3.)

Insert cables/hoses in the predetermined position.

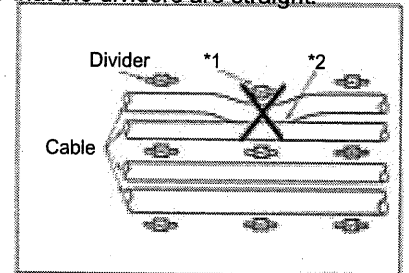


*1: Ensure that cables or hoses are not stacked (As on the right in the diagram below.)

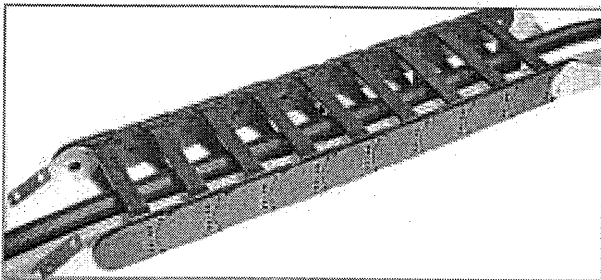
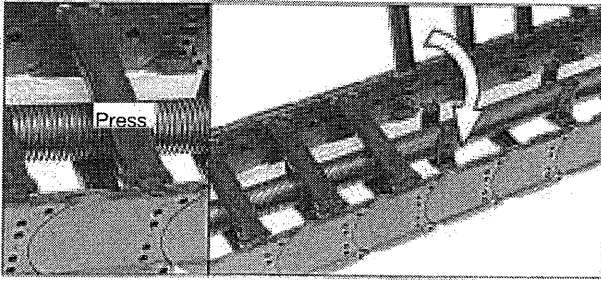


*2: Insert dividers so that they do not press against the cables/hoses.

*3: Ensure that the dividers are straight.

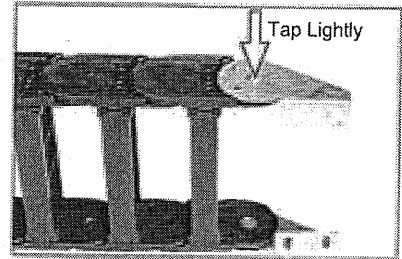


4-4 Close the arm.



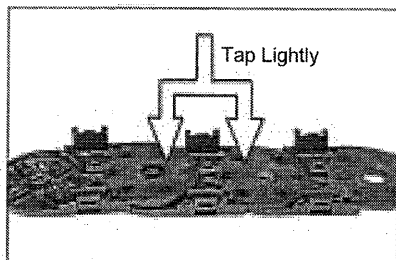
Cable/hose inserted (set) into cableveyor.

- 5-4 Connect the extending link to the lock stay.
See 3.4.
- 5-5 Connect the dividers and arms.
See 4.2., 4.4.
- 5-6 Attach the moving end bracket.
Tap lightly with a rubber hammer.

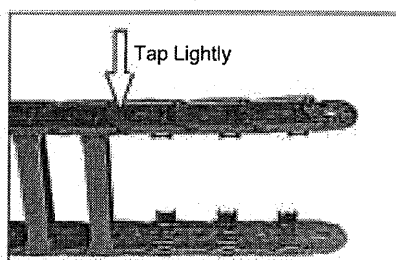


5 Extending the Links (Not usually necessary)

- 5-1 Remove moving end brackets
Insert a flathead screwdriver between the link and bracket to remove. Or, remove the first link.
- 5-2 Connect the extending links
First, lightly tap each of the A and B links to connect to the moving end brackets.

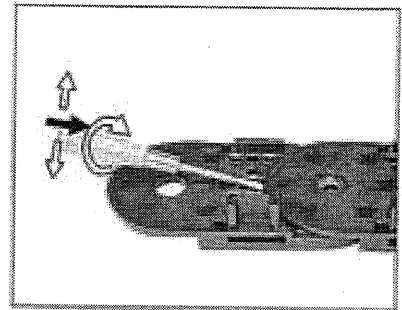


5-3 Connect the extending links to the finished section.

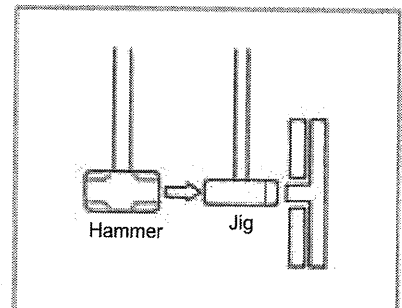


6 Shortening the Links (Not usually necessary)

- 6-1 Remove the arms from the moving end bracket.
See 3.1.
- 6-2 Remove the lock stays.
See 3.2.
- 6-3 Remove the links.
Insert a flathead screwdriver between the links to separate.



Or, place a jig against the link pin and tap lightly with a hammer.



- 6-4 Remove the bracket
Insert a flathead screwdriver between the link and bracket to remove bracket.
- 6-5 Attach a moving end bracket.

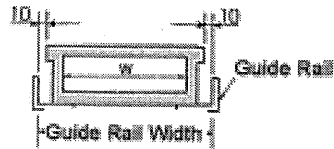
7 Installing on the Equipment

7-1 Run a pre-installation check (test).

Is the cableveyor guide rail long and wide enough?

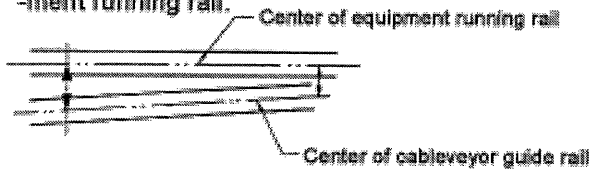
Length: A length sufficient enough to support the cableveyor. (Approx. S/2)

Width:



Model Number	Guide Rail Width
TKP62H34 W150 W200	W + 42
TKP90H50 W100 W150 W300	W + 50
TKP125H74 W150 W250 W350	W + 60

2) The guide rail should be parallel to the equipment running rail.



3) Ensure left and right cableveyor rails are horizontal. Failing to do so may result in cableveyor twisting and other problems.



4) Bracket installation height should be at a predetermined height.



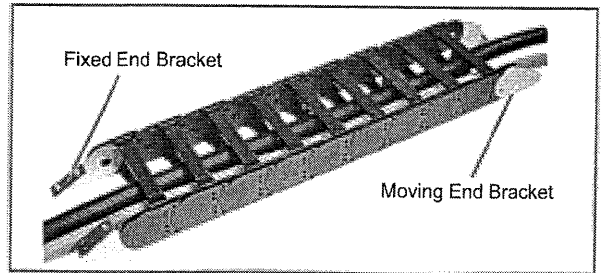
*Bracket mounting height (H')
 $H' = H + (10 - 30)$

5) Ensure there is enough space between equipment.

$$h = H + 100 \quad X = \text{Over } 50$$

7-2 Install the cableveyor on the equipment

Connect moving end bracket from the outer side of the link. Connect fixed end bracket from the inner side of the link.

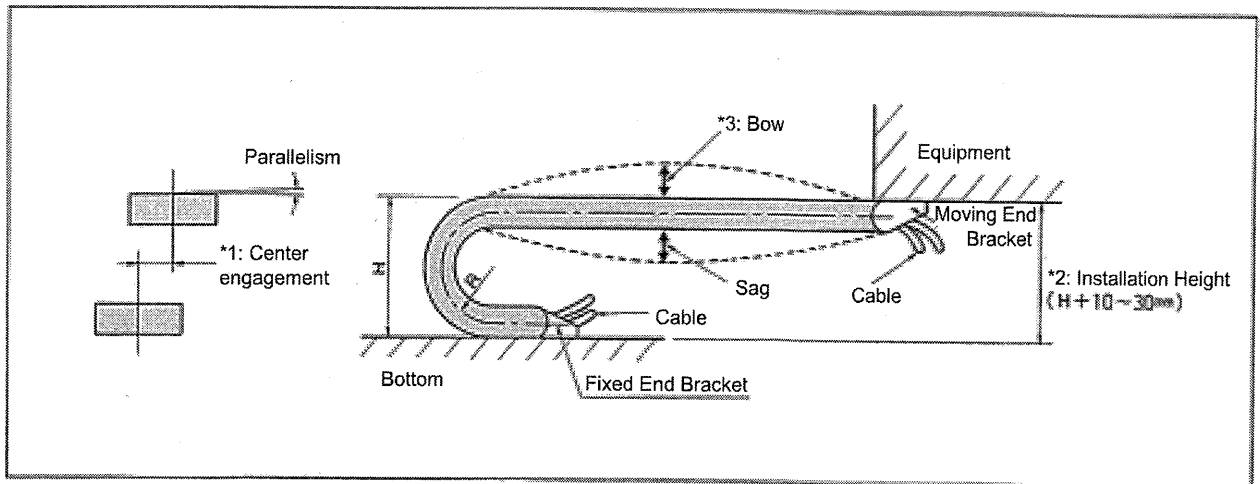


1) Align cableveyor with the center of the cableveyor guide rail. (Inner circumference should face up.)

2) Temporarily attach the fixed end bracket to the bottom (cableveyor guide rail side) by bolt.

3) Temporarily attach the moving end bracket to the equipment (upper side) by bolt.

4) Ensure bracket parallelism, squareness, and that the cableveyor return is aligned with center before tightening securely.



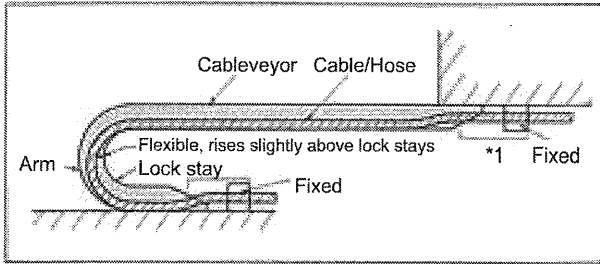
*1: Bracket center of engagement should be less than 6mm.

*2: Bracket installation height (H+10 - 30mm). Do not force the cableveyor to a particular height

*3: Cableveyor is made to bow slightly. There will be some creep due to temperature changes, and slight bowing and sagging due to the mass of the cables or hoses, but these present no problems in operation.

7-3 Points on Installing Cables/Hoses

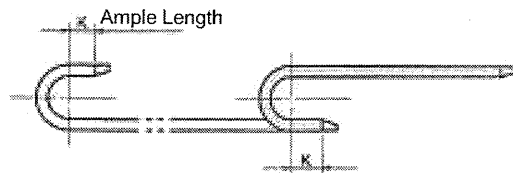
- 1) Cables and hoses should be longer than the cableveyor, and should have some slack at bending points. (They should rise slightly above the lock stays.)



*1: Fix both ends of the cables/hoses and ensure its length within the cableveyor is stable.

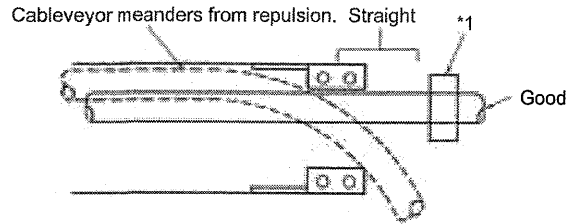
7-4 Checkpoints after Installation

- 1) Ensure there is no foreign matter on the cableveyor guide rail surface. Foreign matter will cause cableveyor meandering, which may lead to damage.
- 2) Ensure that the cableveyor moves along the full stroke and there is ample length.



- 3) Ensure no foreign matter is drawn into the cables/hoses. See 7.3.

- 2) Ensure cables/hoses are straight when mounting in the cableveyor.



- 3) Ensure there is no twisting in the cables and hoses when fixing.
- 4) The cables and hoses should have a high degree of flexibility and resistance to wear.

8 Maintenance and Inspection

- 1) It is unnecessary to lube cableveyors.
- 2) Avoid allowing people stand atop cableveyors, or placing heavy objects on cableveyors, to avoid damage.
- 3) Ensure no foreign matter falls or accumulates on the cableveyor guide rail surface.
- 4) Check that the cableveyor has smooth back and forth motion, and that the cables/hoses are not under excessive tension.
- 5) Check that there are no cracks on the cableveyor, and that the outer surface does not suffer from excessive wear.

Plastic Cableveyor Specifications

Cableveyor			Pitch (mm)	Max. Free Span (m)	Max. Moving Stroke (m)			Max. Cable/Hose Outer Dia. (mm)	Max. Load Weight (kg/m)	Weight (kg/m)
Model	Std Bend Radius R (mm)	Inner Width W (mm)			Support Roller (None)	Support Roller (1)	Support Roller (2)			
TKP62H34 (TKP6625)	75-90	150	62.5	2.25	4.4	—	—	31	12	1.8
	125-200	200								2.1
TKP90H50 (TKP9900)	130-200	100	90	2.7	5.2	—	—	44	18	2.8
	250-300	150								2.9
		200								3.1
TKP125H74 (TKP1250)	185-250	150	125	3.7	7.2	—	—	67	45	4.5
		250								5.1
		350								5.7

*Usage Range

1. Movement Speed (MAX): 90m/min
2. Usage Temp.: -10 - 80°C
3. Do not use in acidic or alkaline environments.

*Material

1. Main Cableveyor: Strengthened engineering plastic (Black)
2. Installation Brackets: Steel (Zinc plating)