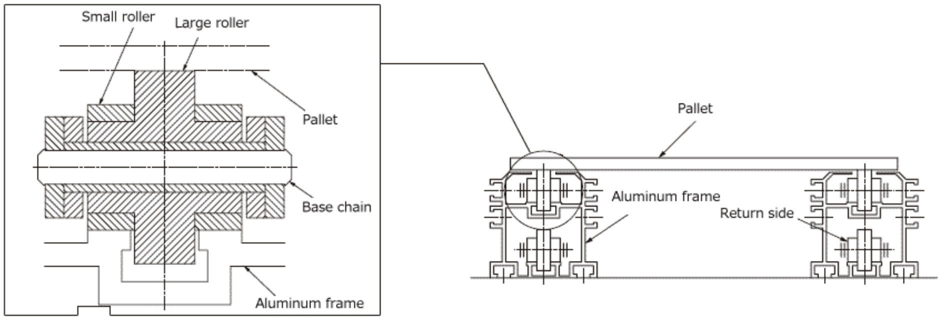
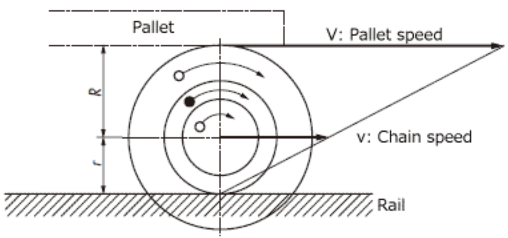
TSUBAKI Innovation in Motion

Double Plus Chain Principle



Conveyance



・Chain speed : ν
・Pallet speed : V
・Small roller radius : r
・Large roller radius : R

Frictional force between the large roller (O) and the small roller (●) causes the rollers to rotate simultaneously. The difference in diameters of the rollers causes the speed of the conveyed object to be 2.5 times that of the chain.

When the chain runs at speed v, the circumferential speed on the periphery of the small roller (rolling speed on the rail running face) becomes v.
Since the large and small rollers now rotate at the same angular speed, the circumferential speed on the periphery of the large roller is calculated as below, based on the ratio of the radii (R/r) x v.

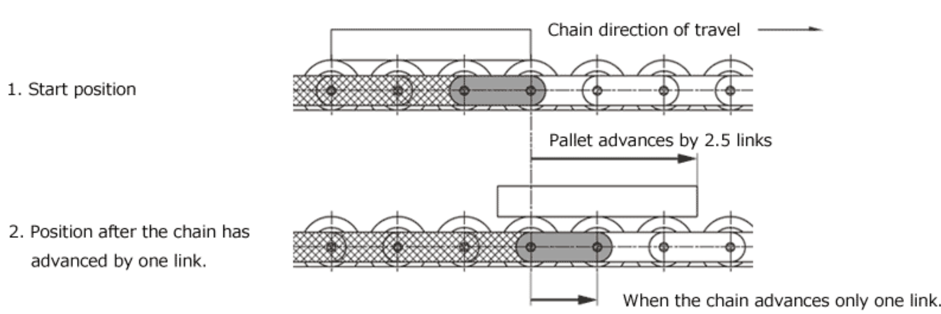
Consequently, the conveying speed V is the sum of the circumferential speed $(R/r)\times\nu$ and chain speed v.

$V=(R/r)\times\nu+\nu$
$V=(R/r+1)\times\nu$

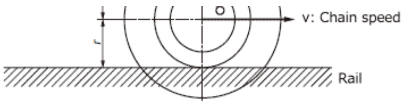
From the ratio of radii $(R/r)\fallingdotseq 1.5$

$V\fallingdotseq(1.5+1)$
$\nu\fallingdotseq 2.5\nu$

Position of chain and pallet during conveyance



When accumulating



Product contents

- Product Info
- Applications
- Selection Guide
- Sizing
- Technical Data
- Substitute third-party model no.
- Search previous model No.

Download

- Catalogs
- Instruction Manuals
- Download Drawings

Useful contents

- Examples of Use by Industry
- Tsubaki products maintenance / handling pages

Customer Support

- Q&A
- Troubleshooting
- Information Requests
- Contact by product

Privacy Policy Terms of Use Sitemap