Georgia Tech Enterprise Innovation Institute
Safety and Health Consultation Program

CONVEYOR SAFETY

Hazards Associated with Conveyors

In-running nip points
Shear points
Chains and sprockets
Rollers
Belts
Moving parts
Conveyor openings

Controls for Hazards Associated with Conveyors

Install guards for the following:

- Chains and sprockets
- In-running nip points
- Hazardous moving parts
- Shear points

Guard by distance or location – Ensure workers cannot access the hazard
Lockout/tagout conveyors when performing service or maintenance
Guard start buttons to prevent accidental start up
Guard underneath overhead conveyors to prevent falling material:

- Eliminate access to the area below the conveyors
- Provide something directly under the conveyor to catch falling material

Emergency stop cables provided along the entire length of the conveyor
Emergency stop buttons
Guard conveyor openings such as wall and floor openings and chutes and hoppers

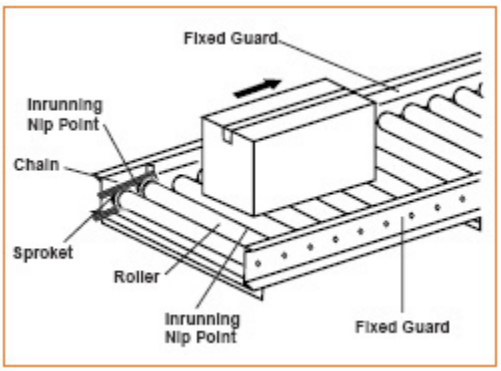
Other Considerations

- Train employees on safe operating procedures
- Do no walk on conveyors – provide crossovers where necessary
- Follow electrical safe work practices and ensure no energized wiring is accessible
- Provide adequate means of egress around conveyors
- Do not wear jewelry or loose clothing around conveyors
- Provide adequate number of emergency stop buttons based on the number of workers
- Perform preventative maintenance and inspections on conveyors
- Guards when installed should not allow access under, through, around or over the guard
- Provide audible devices, flashing lights and/or similar devices to warn personnel before the conveyor starts when it is controlled remotely or automatically
- Refer to *ASME B20.1-2012 – Safety Standards for Conveyors and Related Equipment* for a complete list of requirements

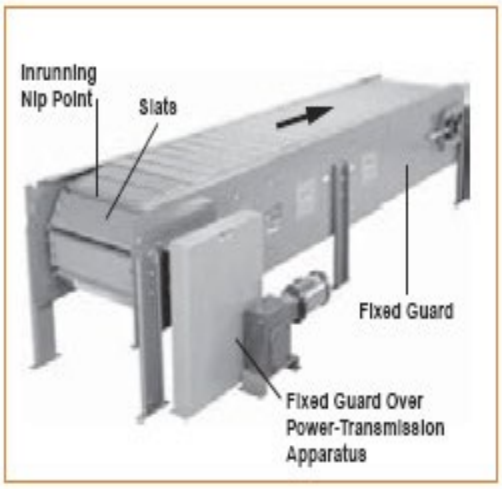
EXAMPLES OF CONVEYORS*

Belt Conveyor

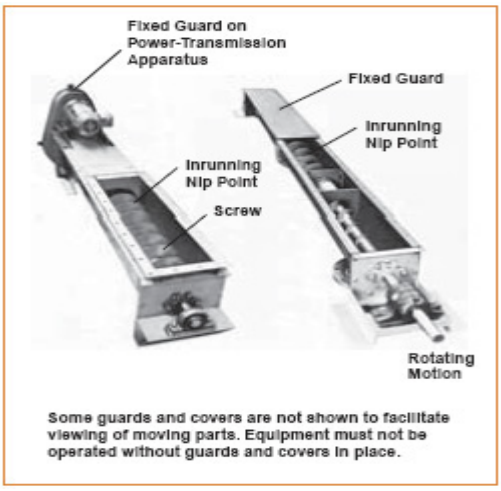
Chain Driven Live Roller



Slat Conveyor



Screw Conveyor



*Source: Pictures from OSHA's Safeguarding Equipment and Protecting Workers from Amputations Small Business Safety and Health Management Series (https://www.osha.gov/Publications/OSHA3170/osha3170.html)

RESOURCES

OSHA'S Safeguarding Equipment and Protecting Workers from Amputations Small Business Safety and Health Management Series:
https://www.osha.gov/Publications/OSHA3170/osha3170.html
OSHA'S Machine Guarding E-Tool – Motions and Actions:
https://www.osha.gov/SLTC/etools/machineguarding/motions_actions.html
OSHA's Machine Guarding E-Tool – General Requirements:
https://www.osha.gov/SLTC/etools/machineguarding/generalrequirements.html
OSHA's Machine Guarding E-Tool – Additional Safety Considerations:
https://www.osha.gov/SLTC/etools/machineguarding/additional_considerations.html
OSHA's General Industry Standards:
https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910
ASME B20.1-2012 – Safety Standards for Conveyors and Related Equipment