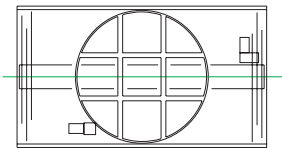


Load Rotation Device (LDR)

SPECIAL DUTY DEVICE



LDRs reorient unit loads on the conveyor by lifting the load above the conveyor and rotating 90 degrees.



PRODUCT DESCRIPTION

The Load Rotation Device (LDR) is a special device that reorients a unit load on the conveyor. The rotation device itself consists of the rotation means, the lift frame and its lifting mechanism, and a fixed frame. The LDR may act as part of a modular conveyor system, or as a stand alone unit that includes its own conveyor drive means.

The rotation means consists of a ring weldment with four cross members that support the load during rotation. The ring is supported and guided from the lift frame by a series of rollers. The ring is encircled by a power transmission chain that is pulled by a sprocket and gearmotor that are supported by the lift frame. The lift frame is supported by air actuators that raise the rotation device and in turn lift the load when compressed air is introduced. This lift mechanism is controlled during the lifting by a load stabilizing mechanism attached to the base frame that prevents uneven lifting.

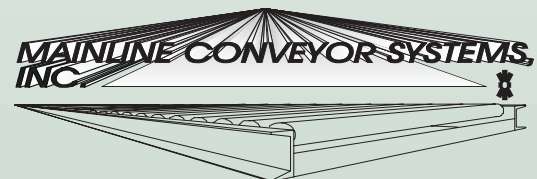
The fixed frame supports the load carrying rollers and the pressure rollers that support and engage the conveyor drive belt. The center rollers and full length rollers at either end of the device are driven by the belt and in turn move any loads along the conveyor when engaged.

APPLICATION

The LDR is often used as part of a unit banding operation, where it is necessary to reorient the load prior to applying cross straps. The addition of this device between the strapping machines allows rotation to be accomplished without occupying the strappers themselves and can greatly improve throughput in such an operation.

FEATURES

- Low profile, 12" TOR minimum.
- For use with New or existing Mainline conveyor or other center belt drive conveyor.
- Loads are fully supported around perimeter of the ring.
- Improved lift stabilizing mechanism greatly reduces uneven lifting thereby improving stability of load.
- 2 speed rotation drive decreases cycle time while improving position control.
- Alternate 1 HP variable frequency rotation drive also available.
- Rotates continuously in one direction without rerotate between loads.
- Units may be provided as a module of an overall conveyor or as a stand alone unit with a selfcontained conveyor.
- Motor disconnect switch and position limit switches are prewired for easy installation.

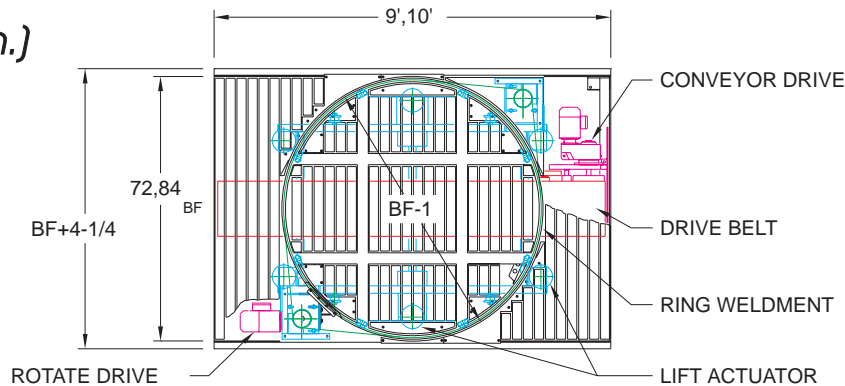


Special Duty Device

For Use With Accumulating and Nonaccumulating Conveyors

LOAD ROTATION DEVICE (LDR)

Dimensions (in.)



GENERAL SPECIFICATIONS

Nominal Conveyor Width	72" and 84" available
Nominal length; Module	7' and 8'
Selfcontained	9' and 10'
Nominal Ring O.D.	71" and 83"
Minimum Height	12" T.O.R.
Load Capacity	2,500 lbs.*
Rotation Speed, Rim	60 FPM
Conveyor Speed	40, 60FPM (other speeds upon request)

POWER REQUIREMENTS

Air Supply, Lift	16 CFM @ 90 PSIG to raise in 1sec.
Electrical Supply; Amperage (2 spd)	230-460V/3ph/60hz; 1.23 Amps (460V) @ full load
(VFD)	230-460V/3ph/60hz; 1.85 Amps (460V) @ full load
Rotate Gearmotor (2 spd)	.8/2 HP @ 60 FPM rim speed
(VFD)	1 HP @ 60FPM rim speed
Conveyor Drive Gearmotor	1 HP @ 40 or 60 FPM

CONSTRUCTION

Base Frame	Structural steel frame supports Integral conveyor and guides lift
Lift Frame	Structural frame mounted on 6 actuators, supports ring weldment and rotation means
Lift Levelling	Chain and sprocket assembly equalizes vertical motion at 4 locations
Lift Ring & Support	Structural steel weldment supported on 8 precision ball bearings and guided by multiple cam rollers
Rotate Drive	Gearmotor adjustably mounted to lift frame pulls ring by circumferential drive chain
Integral Conveyor	Standard Mainline belt powered conveyor; with or without drive

CONTROL OPTIONS *

Manual Operation	Pushbutton, operator actuated
Automatic Operation	Device position sensors combine with Load detecting sensors and control logic to position, and rotate a utilized load. Manual controls are included with automatic controls.
PC Controls	

* Contact Mainline Conveyor Systems, Inc. for additional control or capacity information.



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