



## RUSSELL CONVEYOR & EQUIPMENT

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**Russell Conveyor & Equipment** manufactures pre-engineered MDR Conveyors (Motor Driven Roller Conveyors) for their clients and partners. They can provide you with the exact material handling solution that fits your needs. After many years of designing conveyors and conveyor systems, they have the experience to match the right conveyor to the right application.

### Why MDR?

Why MDR, a better question might be “Why Not MDR”?

If we said we could accomplish the following for you, what kind of response would you have?

- Reduce workplace injuries by providing cleaner, safer equipment, (no heavy sprockets, no chains and no grease or oil lying around everywhere)
- Reduce power consumption by 50-75% utilizing “Run On Demand” Technology
- Reduce noise by 75-80%
- Reduce maintenance costs
- Reduce spare parts costs and inventories
- Reduce single point of failure areas within your conveyor system
- Increase versatility
- Increase Reuse & Resale values
- Reduce overall operating costs



So how does MDR do all these things? Let's look at them one at a time but let's start out by explaining what MDR is.

### What is MDR?

Motor Driven Roller or MDR refers to a conveyor roller where the drive system is housed completely inside the roller. These Motors are small, fitting inside a 1.9" standard conveyor roller and are powered with a control card that runs off of 24VDC power. There are no external 480VAC drives that power belts with bulky chains and sprockets.

## Reduce Workplace Injuries

The MDR rollers carry enough torque to move some heavy loads, but because of the way they are powered, they do not carry enough torque to hurt someone if they were to accidentally get their hand trapped between rollers. You also have much fewer pinch points than you do with conventional conveyor systems. The lack of heavy chains and sprockets also reduces the opportunity for workplace injury. With MDR conveyor systems, there is nothing to grease or oil, so there will be fewer slips and falls from spilled lubricant.

## Reduce Power Consumption

MDR Run on Demand technology typically sees 25% – 50% run time vs. conventional belt conveyor systems. If there isn't a part on the system to convey, the MDR doesn't run. Comparing the cost of the conventional belt conveyor with the MDR conveyor, running 24/7 six days a week, the conventional conveyors annual cost would be around \$17,905 vs. \$6,960 for a 500' MDR conveyor – a \$10,945 savings.

## Reduce Noise

This is simple. If your conveyor doesn't run all the time, it is not going to be making as much noise. Couple that with the fact that when the MDR is running, it is significantly quieter than a conventional conveyor, so you see a huge overall noise reduction.

## Reduce Spare Parts and Inventories

There is no need to maintain a large of spare parts inventory. Most of the time, a 500' conveyor system only needs a recommended spare parts list of less than \$1,500 compared to \$15-\$20k for a conventional conveyor system.



Belted MDR Conveyor

## Single Point of Failure

Anyone that has spent any time working in the conveyor business has heard this term used frequently. Single points of failure within a system are those parts that if they go down, they take the entire system down. It could be something like one brake metering belt prior to a sorter. This is a big problem with conventional conveyor systems but because of the MDR conveyor design, it limits these areas and significantly reduces the amount of time it takes to perform repairs in these areas.

## Increase Versatility

Need to speed up or decrease speed on one short section of your conventional conveyor? Do you have one long carton that you seldom run on your conventional conveyor system but when you do, it wreaks havoc throughout your system? Would you like to increase capacity on your system by utilizing your inclines and declines to accumulate product? All of these are big costly problems for conventional conveyor systems but no problem at all for MDR. These are just a few of the ways the MDR conveyor is much more versatile than the conventional conveyor.

## Increase Reuse or Resale Values

Have you ever heard a maintenance technician refer to the “boneyard”? Typically this is the area where all old conveyors and equipment are stored in a facility and the maintenance team just goes back for the next several years and uses the old equipment as their very own parts room. Have you ever thought about what caused the boneyard to begin with? It is usually when the conveyor is pulled out and reconfigured in some way and the boneyard is where they take the parts or units that can no longer be used. What causes conveyor to be unusable? Think about it for a minute. If you have 100’ of conveyor and that conveyor is removed and reused in a 15’ configuration then you have 85’ leftover. The drive has been re-used in the 15’ configuration so there is no drive left for the 85’ so these old parts become scrap metal in the end. With MDR, this WILL NEVER happen! Because of the MDR design, if you remove 100’ of MDR and only use 15’ in a new configuration, you still have 85’ of conveyor left that is 100% fully functional that you can reuse or sell.

## Reduce Overall Operating Costs

With all the items listed above, there is no way that you will *NOT* reduce your overall operating costs utilizing MDR conveyor technology. Actual operating costs will vary by the client depending on actual run times etc. However each topic discussed here represents a significant individual savings. When all these items are combined, it represents savings that just cannot be ignored for companies looking to add a new conveyor system or replace an existing one.



Carton and Tote Conveyor

Want to learn more about Russell Conveyor and Equipment? Please visit their web site at: [www.russellconveyor.com](http://www.russellconveyor.com). Or contact Jack Dixon at 704-895-6805, [jackdixon@dixoneng.com](mailto:jackdixon@dixoneng.com) or Brian Barefoot at 704-655-0411, [brianbarefoot@dixoneng.com](mailto:brianbarefoot@dixoneng.com). We would be happy to visit you at your facility to discuss a project. We look forward to working with you on your next project.