



CUT DRY-END COSTS
2 SIMPLE STEPS: ONE SUREFIRE RESULT





Even a fraction of a percent can cost you \$600,000 a year

You spend a lot of money to make that paper. A few wrong moves at the dry end and you can easily lose \$600,000 a year.

We're talking about the way you work.

Like most mills, you're still playing hit and miss each time you estimate jumbo roll size or do the turn-up. That kind of guessing may have worked 30 years ago. But it's not enough for today's bigger and faster paper machines. One small mistake and your costs go up.

Chances are you won't even notice. That's because your reporting system isn't designed to give you all the details. Producing paper has become a low-cost game. Measure it or you'll lose it.

Our **JumboMaster®** system will help you work smarter and more efficiently. And you'll start to see results. *Right away.* Just ask our customers. The **JumboMaster®** helped most of them reduce dry-end and shipping costs by about 1% last year. It was so easy, they said. *The JumboMaster® did most of the work.*

The **JumboMaster®** optimizes, manages and tracks your paper in each step of the production process; from the moment it is wound at the paper machine until it leaves the winder. We've used our two-step solution to cut dry-end costs on more than 85 paper machines on a whole range of grades from LWC to coated board. In the following pages, we'll show you how we do it.

STEP 1

AUTOMATE

There's a lot of talk about the operator's job and most of the time, it's negative.

The truth is most people don't know what he's up against.

Zero percent. That's his margin of error to estimate jumbo roll diameter and do the turn-up. It's also the absolute limit he faces each time he stops the winder. Bypass zero and your costs go up.

Your operator would like to work at 0%. But he can't. His tools and methods are just too outdated.

Process variability. Paper compression. Bad paper. Paper machine breaks. Pack all that into an operator's day and there's no doubt about it. *He has to work smart. He has to be precise.*

The **JumboMaster®** gives him the right tools to do a perfect job *all the time*. Our complex algorithms track real-time and historical data from key variables at the reel and winder. Mathematical models of the dry-end process. These designs are so intricate we can predict the exact size of the next jumbo roll with *more precision* than any operator. Turn-ups and winder stops. We automate these time-critical operations to reduce variability. This makes the mathematical models even more reliable and precise. Your operator now has *more control* of the production process.



STEP 2

MEASURE IT OR LOSE IT

If you're going to reduce your dry-end costs, you have to know exactly where they are.

Picture this scenario. Your market conditions have started to slide. Your team has been asked to squeeze one more cent out of the dry end. This means you'll have to spend days on the production floor just gathering data. You'll need several days to sift through it and find a solution. Then you'll have to try that solution. And once you're finished, you'll have to see if it works by looking at your data again.

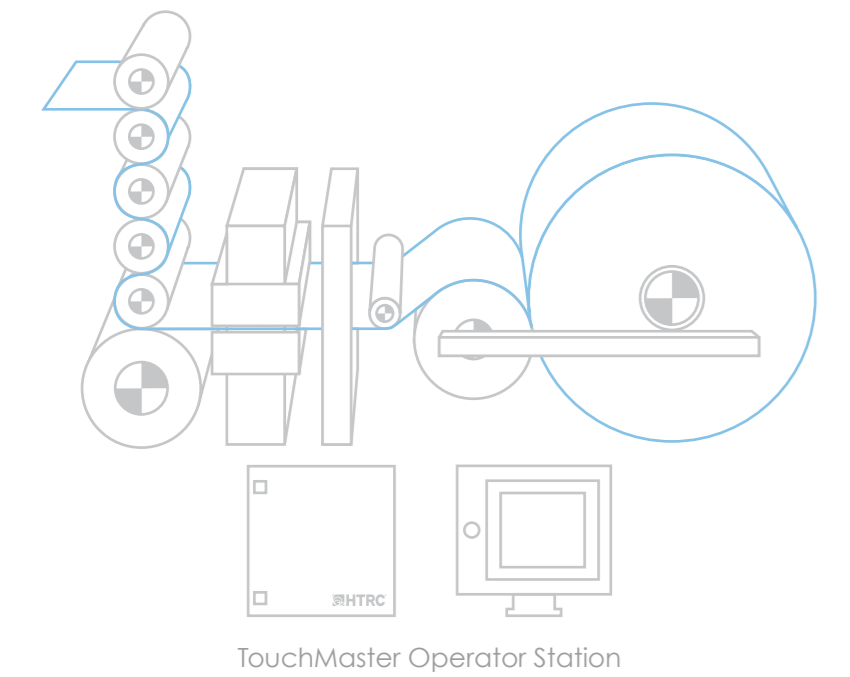
Here's a better solution: By using our **JumboMaster® Optimization Service**, you already have all the detailed information - *in real time* - at your fingertips. You know exactly what your costs are and *where* they are. In fact, you've been tracking and eliminating most of them as fast as they appeared. But some costs are harder to manage. You'll need to take bigger steps to reduce them. But that's okay. You already have your project list.

Managing those details means big money. And no one knows this better than our customers. One mill was losing 0.6% in jumbo top slab off. We showed them they could take it down to 0.2%. The next day, they took the right measures and they reduced it to 0.2%. And it stayed that way. **With our help this mill now saves more than \$325,000 a year.**

Here's how the **JumboMaster®** works

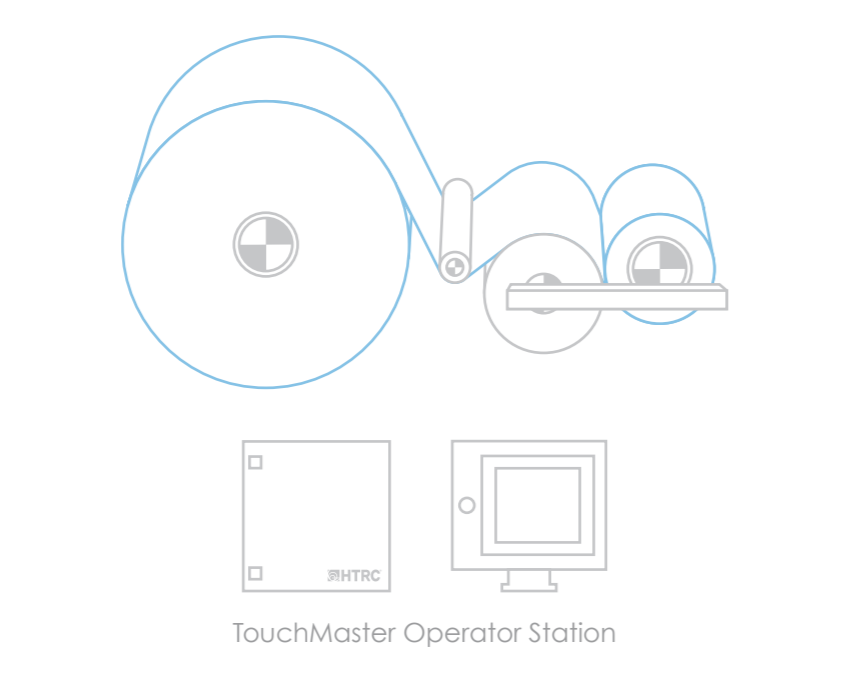
REEL

1. The operator punches in the list of sets he wants to produce and the necessary parameters (diameter, length, core diameter, bad paper, fill-up, top, etc.).
2. He relies on the current floor inventory to reduce overruns and underruns.
3. Our system uses special algorithms to calculate the optimal turn-up size by accounting for parameters such as compression, grade history and spool diameter.
4. We automatically trigger the turn-up.



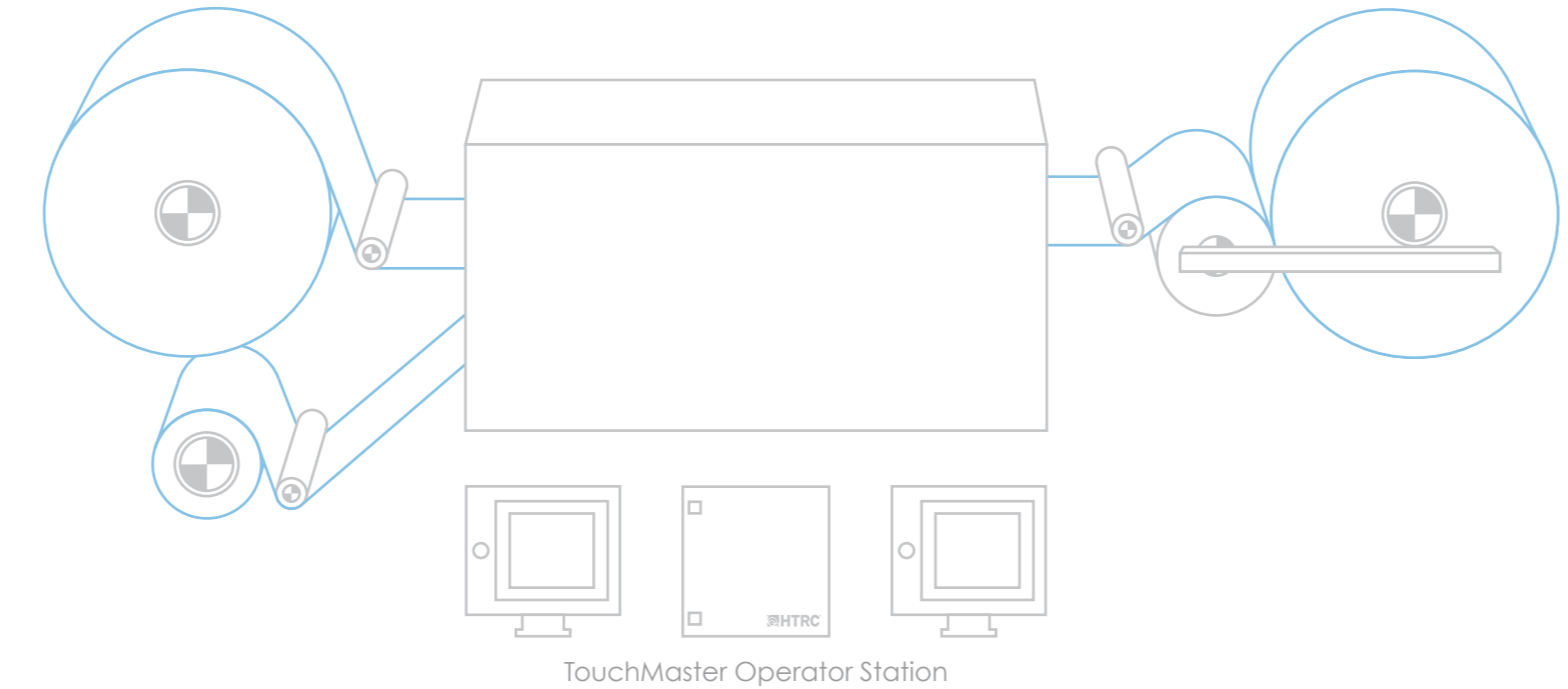
RE-REELERS

1. The operator uses the information provided by the **JumboMaster®** to manage automatic stops, paper slabs and patches.
2. Our system will initiate a quick and precise stop or slow down when required.
3. Save time with our fast and accurate Automatic Stop on Defects (ADTS).



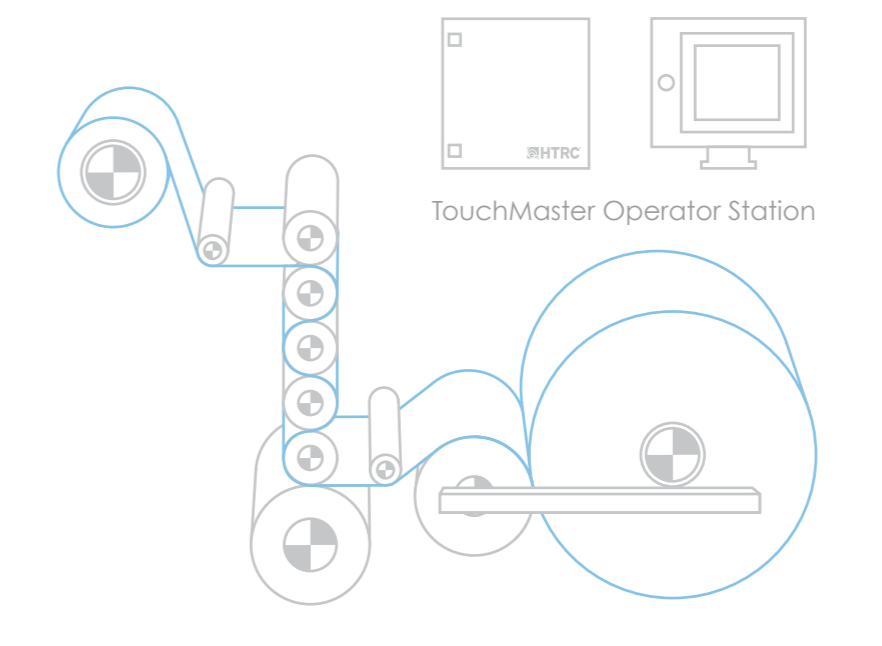
COATER

1. The operator uses information from the **JumboMaster®** to confirm the automatic turn-up/splicing sequence.
2. Precise splice tracking reduces losses during jumbo change. We trigger the turn-up/splicing process when required.



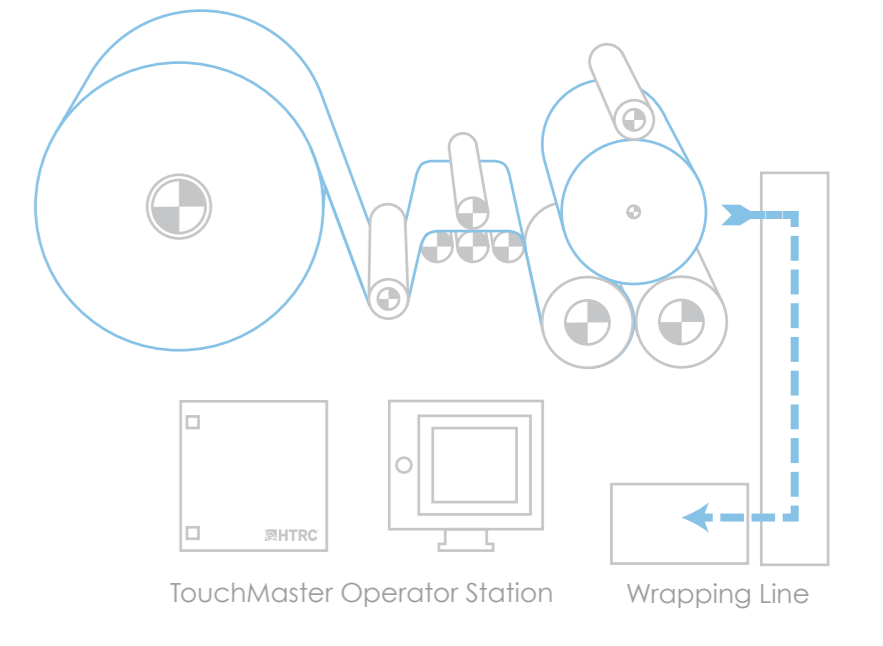
SUPERCALENDERS

1. Using the data provided by the **JumboMaster®**, the operator manages automatic stops, paper removal and patches.
2. The operator can track and manage paper compression and reduce process variability.
3. Our system will initiate a quick and precise stop or slow down when required.
4. Save time with our fast and accurate Automatic Stop on Defects (ADTS).



WINDERS

1. The operator uses information provided by the **JumboMaster®** to manage automatic stops, paper slabs and patches.
2. Our Roll Set Estimator Tool helps the operator make the right decisions about jumbo rolls at the winder.
3. Our system will initiate a quick and precise stop or slow down when required.



LINKS

- QCS
- Defect Detectors
- Wrapping Line
- PI
- Drives (Analog or Digital)
- Mill-Wide
- SAP
- Lab Systems

AUTOMATED PRODUCTION TRACKING AND OPTIMIZATION

- All jumbos are automatically identified and tracked with RF ID tags.
- All production data is indexed in great detail by RF ID tags and jumbo roll numbers.
- Our system will automatically identify all paper slabbed or patched in a roll without operator intervention.

SERVER

- The central server collates and combines all dry-end production information. *Includes all drives (analog or digital), DCS, QCS, defect detectors, mill-wide, SAP, lab systems and wrapping line.*
- Get easy access to all dry-end data from anywhere in the mill.

VISUALIZATION STATIONS

The diagram shows three computer monitors, each with a keyboard and mouse, representing visualization stations.

WHAT'S IN IT FOR YOU?

HERE ARE SOME TYPICAL RESULTS:

<i>Payback</i>	
Tons/Year	250,000
Dry-End Cost per Ton	\$200
Dry-End Cost Reduction (%)	0.8%
Dry-End Cost Reduction (\$)	\$1.60
Transportation & Wrapping Costs per Ton	\$80
Transportation & Wrapping Cost Reduction (%)	1%
Transportation & Wrapping Cost Reduction (\$)	\$0.80
Cost Per Ton Reduction	\$2.40
Total Profits Per Year	\$600,000

- 1 The dry-end cost per ton is what it costs to reprocess the good paper that goes back to the pulper. Your gains will be much higher if you calculate the marginal profit.
- 2 Your transportation and wrapping costs will decrease because your roll diameters will be more precise and more consistent. Each shipment will contain more tons of paper and fewer rolls per ton.
- 3 Other indirect financial benefits include:
 - Higher productivity with reduced production bottlenecks
 - Higher customer satisfaction



FIND OUT FOR FREE

Don't take our word for it. **We'll show you how much you can save.** Let us run our blind study at your mill for 30 days. Our device will evaluate paper losses at your winder and it won't cost you a cent.

A HISTORY OF RELIABILITY AND PERFORMANCE

We've been in business since 1984. Our **JumboMaster®** system has been installed on more than 85 paper machines across North America. Newspaper, LWC, coated board, fine paper and specialties producers have all reaped the benefits of our systems.

Each mill has its own set of production challenges. But each installation delivers the same results: lower production and shipping costs year after year.

The JumboMaster® system is compatible with any paper grade and any paper machine vendor.

How will the JumboMaster[®] cut dry-end costs in your mill?

With Automation and the Right Tools

COST REDUCTION

- Save up to \$600,000 a year
- ROI in less than 5 months
- See results immediately



FLOOR OPERATIONS

- Our high-performance tools predict jumbo roll size precisely, every time.
- No more guessing. Our system does the complex calculations. We account for factors such as losses, paper grades and paper compression.
- Reduce overruns and underruns by getting a complete picture of the production floor.
- Our real-time trending of KPIs makes your operators perform better and faster.
- Get consistent and precise turn-ups with our turn-up trigger and countdown signals.
- Manage complete or partial jumbo rolls at the winder with our Roll Set Estimator tool.
- Stop or slow down precisely on defects.

TECHNICAL STAFF

- Fast data mining with *instant* results.
- Save time and money troubleshooting using our powerful trend change correlation system.
- We warn you immediately about abnormal trend changes and variables.
- Benchmark production data to identify problems and solve them right away.
- All dry-end information is integrated in our analysis with free links to other systems. Includes all drives (analog or digital), DCS, QCS, defect detectors, mill-wide, SAP, lab systems and wrapping line.
- Reduce your bottlenecks with our expert productivity tools.

MANAGERS

- Stay ahead of your objectives.
- Evaluate your teams' performances to see if more training is needed at the dry end.
- Quarterly reports give you complete information about your dry-end operations.
- You can finally trust your production floor information for better management. Our automated tracking system provides precise, detailed and reliable information *without* operator intervention.

PRESSROOMS & TRANSFORMERS

- Reduce customer waste with bigger and fewer rolls.
- Reduce roll damage with more precise and consistent roll diameters.
- Use TAPPI roll numbers to track roll quality.
- Improve your rating and reputation with your customers.

85 DIFFERENT INSTALLATIONS. ONE CONSISTENT RESULT.

THAT'S THE TRUTH. AND WE CAN PROVE IT.



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