Right-Gauging Your Shrink Packaging

Tips for Achieving Sustainable Shrink Film Savings...Without Sacrificing Packaging Quality, Throughput and Protection

Today's retailers and consumers are demanding more sustainable packages, made from fewer resources and less material.

One way many consumer products companies are responding is to pursue thinner, lighter packaging materials, sometimes referred to as "down-gauging."

Reducing shrink film gauges can begin with good intentions but can quickly become a game of diminishing returns, especially if the package rips, leaks, causes problems on the packaging line or doesn't meet consumer expectations. Any sustainability and cost gains are quickly lost in the face of system-wide waste.

That's why the real goal for any packager becomes **"right gauging"**—choosing the film thickness (gauge), strength and performance attributes best suited for your package.

Typically, there are two packaging tracks that invite right-gauging opportunities:

1. Material replacement or new package configuration.
Do you have a new product application or are you entering a marketplace like e-commerce? Does your current package have multiple packaging components like sleeves that could be reduced or eliminated? Are your shipping costs or product view issues driving you to consider corrugate replacement? A packaging evaluation can not only help you determine the best film and gauge but possibly reduce or totally replace package components.

2. Evaluating existing shrink films.
If you are running the same gauge film you've run for the last five years, it's worth evaluating possible alternatives with your packaging distributor. As a rule of thumb, Clysar end-users typically find that they can reduce their package anywhere from 10%-25%—some, reducing materials as much as 50% when replacing materials like PE.

SOME OF THE IMPORTANT QUESTIONS YOUR DISTRIBUTOR WILL HELP YOU ADDRESS:

- What shrink film technologies, gauges and formulations should you consider and test?
- Will the package still protect your product adequately—resisting rips and bursts during transit and on shelf?
- Does the package still look good, offering sparkling clarity and strong shelf appeal?
- Does the film still "clean up," shrinking uniformly to create a beautiful display package?
- Does the package meet your targeted processing requirements for speed, throughput?
- What other sustainability or continuous improvement drivers do you have?

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Here are 8 tips to do right-gauging right:

1 Bring in the Experts—EARLY!

If you want to evaluate right-gauging and material reduction, bring in Clysar and your packaging distributor right from the start. Our shrink experts help you consider the total cost and sustainability implications throughout the package's life cycle, not just the upfront roll price savings.

Most distributors have helped brand owners right-gauge and retool packaging for a wide range of products and equipment. They have the expertise to guide you through the many "unseen" considerations and avoid common mishaps.

2 Think Application, Application, Application

Successful right-gauging solutions begin with the needs of your shrink application.

Your packaging distributor will not only look at your current film but also consider every stage of the packaging life cycle. They'll evaluate the product you are wrapping; the equipment you're wrapping it on; distribution challenges; and how your package needs to perform on shelf.

A multi-pack application with voids such as toilet cleaner, for example, will demand films that still deliver memory and puncture resistance—quite different needs than a multi-pack of breakfast cereal, which has four flat supported sides. An e-commerce package for liquid detergent needs a rugged solution that provides protection.

Your shrinkwrapping operation and type of equipment will also impact your best film options, depending on if you have multiple lines running 24/7 or rely on hand operations with multiple changeouts.

Distribution and merchandising concerns complete the considerations. Are your products exposed to extremes of hot or cold during warehousing or transport? Are they pre-boxed in retail-ready tray systems or do they stand alone on the shelf?

Using these considerations, your distributor will recommend a number of film options for testing.

3 Target the Right Shrink Film for Your Application

Advances in material technology—from resin blends to manufacturing processes—have made thinner, stronger shrink films a viable solution for more applications than ever. These next-generation films are not just able to do less with more—they're engineered for targeted performance attributes and product applications.

Before you evaluate gauge, determine the most effective shrink technology for your application. Here are two popular right-gauging solutions from Clysar:

The Clysar® EVO™ family of recyclable films.
These films, preapproved for the Store Drop-Off Label by **How2Recycle®**—offer the recycle-ready solution many brands seek in all-purpose, high-speed or confidential (opaque) options.

Clysar® PHOENIX™ premium performance film.
This high-performance, high-strength, ultra-clear film has become a go-to for many right-gauging projects because it delivers strength, protection and shrink characteristics even in lighter gauges.

4 Evaluate Multiple Options and Gauges

Now's the time to put your shrink film candidates to the test. Experiment with alternative gauges and film properties, pushing the envelope to find the tipping point of cost/performance.

Try both your current film and options. Customers using a 60-gauge all-purpose film like HP Gold have found switching to 45-gauge PHOENIX™ shrink film has achieved significant savings at a consistently superior level of performance. Others requiring a high level of protection using 100-gauge film have found that a 75-gauge will achieve the performance they need.

You may find by switching shrink films that you are able to improve physical characteristics for your application as well as on-line performance.

Your distributor can provide a statistical testing process and "scorecard" that will help you document your findings in pursuing the lowest total cost alternative.

5 Test Shelf Appeal and Protection with Packaging Mockups

To judge the critical combination of eye appeal and protection on shelf, start by evaluating your products wrapped in actual film. Ask your packaging distributor to provide packaging mockups, wrapping your products in different gauges or shrink film products.

You'll discover shrink film's display properties can vary widely, even with films of same gauge made by different manufacturers. Look for:

- **SUSTAINABLE CONTENT.** Is the film truly recyclable and approved for the Store Drop-Off logo by the **How2Recycle®** program? Some films claim to be recyclable but do not meet the standards for post-consumer processing set by the Association of Plastic Recyclers.
- **SUPERIOR FILM STRENGTH.** Film must provide sufficient impact resistance and tear strength for product protection. It should not tear, rip or create a shopworn appearance after handling. Test through packout, shipping or transport when looking at lower gauges. Not all film strength is equal, especially in approaching lower gauges.
- **BEST CLARITY/SHINE.** Look for superior haze, sparkling clarity and gloss for dazzling shelf appeal. While shelf appeal can often be viewed with the naked eye, your distributor can provide a summary of properties that documents and compares each film's clarity. Some films, like Clysar® AFG, offer unique options like 1-hour anti-fog for respiring produce.
- **CRISP CLEANUP.** Does the film wrap cleanly and evenly around the product for a taut, crisp fit? Some thin films do not have the true balanced shrink characteristics in low gauges to create the cleanup and fit you require.

6 Put the Film on Your Line to Determine Operating Implications

The shrink line is often where the cost of quality reveals itself.

Film candidates must run flawlessly on your equipment so you get greater productivity, less waste and the lowest cost across your entire operation.

To determine savings, first document the performance parameters of your current shrink film as a baseline. Then test the various candidates.

As you evaluate new or lower gauge films, you will find you may need to adjust your processing parameters to maximum throughput and savings, including heat, time, temperature and air velocity in the shrink tunnel.

Start with properly maintained equipment. No matter what type of shrink equipment you use, clean and maintained shrink equipment set to correct parameters will make a difference in package output, shrink performance and cleanup.

Rely on Clysar field technicians for support during your field trials. They can evaluate your baseline shrink equipment and quickly establish the best operating window for the film you are trialing based on your equipment and application.

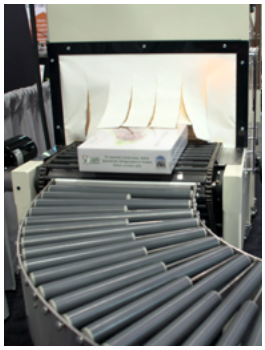
Here are some of the considerations your distributor will help you look for:

- **SHRINK LINE SPEEDS.** Make sure your material savings aren't sacrificed by slower line speeds—throughput can be affected by gauge! Remember, film brands all run differently. LTC film, for example, will run, on average, 15% faster than competitive thin-gauge products, which can add up quickly once you're in production.
- **OPERATING WINDOWS.** Choose products with the widest possible operating window to accelerate productivity and gain consistent quality packages. A finicky film is an expensive film in terms of machine and operator time.

- **CHANGEOVERS.** Evaluate how many times you need to change rolls of shrink film and the downtime involved. Often thinner films provide more feet per roll, which means operational savings in labor, uptime and inventory space.
- **SEAL STRENGTH.** While thinner gauges do NOT mean thinner seals, you will still need to verify the integrity of the seal area. Check to make sure your film forms strong, clean seals for the product profile and weight.
- **REJECTS, REWRAPS AND WASTE.** True film yield and actual cost depend on the amount of commercial packages you gain from every roll. A right-gauged film should not require higher rewraps or rejects. Butt rolls also indicate unnecessary, unusable film waste.
- **AVAILABLE SHRINK AND BETTER BALANCED SHRINK.** Thinner films should still clean up beautifully in the shrink tunnel. Sometimes lower gauges exhibit poorer overall shrink performance in this heat-driven process. Watch for problems like dog-ears, wrinkles, fish-eyes or burn-through. The loss in appearance is most likely not worth the cost.

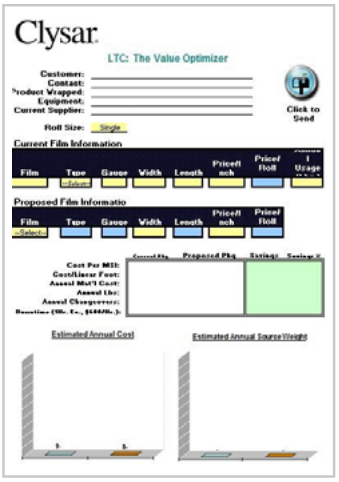
7 Run the Numbers

Sustainable savings are not just about roll price. The Clysar team has developed a value calculator that allows your packaging distributor to perform cost calculations that consider all factors of the right-gauged shrink material.



This methodical approach provides application-specific data that compares the cost impact of current and proposed films, including material cost, annual material savings, weight savings, and changeovers and downtime.

Even a 5% improvement may deliver a viable reason to right-gauge over the course of a year.



Clysar can also run a packaging Life Cycle Analysis to determine the potential environmental impacts of your improvements.

8 Consider Value-Added Options

Right-gauging is the tip of the iceberg in terms of additional cost solutions your distributor can bring to the table.

Ask your distributor about other tactics you may not have considered, including items like double rolls for high-volume operations; sustainable roll packaging; changing from folded to flat film; printed film that eliminates labels and sleeves; or equipment modifications that save labor or enhance cleanup.

We'll Help You Realize Your Right-Gauging Goals

Are you interested in evaluating savings and sustainability for your next package? Your shrink packaging experts can bring together the right films and equipment to right-gauge and optimize YOUR packaging application. Give us a call for an expert analysis.

REAL RIGHT-GAUGING APPLICATIONS

60% Material Reduction

A manufacturer of pre-cut hardwood boards replaced cloudy, thick 110-gauge polyethylene packaging with clear 45-gauge PHOENIX™ polyolefin shrink film. The company reduced packaging material by nearly 60%, and saved on energy with 15% lower tunnel temperatures.

Sustainable Improvements

A U.S. tea light manufacturer replaced 75-gauge shrink film (purchased offshore) with U.S.-made 60-gauge PHOENIX™ shrink film, enjoying 20% source reduction and a lower carbon footprint in supply logistics.

Performance RX

A leader in the lottery and game industry overcame chronic maintenance issues and cost in its shrink packaging operation with PHOENIX™ 45-gauge high-performance film. The strong, easy-to-run film replaced an economy thin-gauge shrink film that left sticky burned residue on the shrink equipment, causing excessive downtime.

2021-12