

# MANUFACTURING PROCESS

Leather, a natural product, can be an intimidating material in comparison with man-made textiles. With more than 50 years of experience in the industry, we have compiled here images and specific details for your easy reference to the steps of our leather manufacturing process.

## RAW MATERIAL SORTING DEPARTMENT

### Q: WHAT IS THE ORIGIN OF TOWNSEND LEATHER'S RAW MATERIAL?

- West European Bulls: South and North Country
- Calfskin: France
- Double Butt Split Suede: Domestic/European/Canadian
- Lambskin: Canada
- Goatskin: India

### Q: WHAT ARE THE ADVANTAGES IN SOURCING EUROPEAN HIDES VS. SOUTH AND NORTH AMERICAN?

There are far less bug infestations due to moderate climate leading to less grub holes (flesh) and parasite bites (healed, circular grain defects).

The size of the hides are dramatically larger and not branded.

The selection of hides is much better due to grazing/environment/husbandry practices difference, ex. no barbed wire fences.

### Q: WHAT ARE THE ADVANTAGES IN BULLS OVER COWS?

Life span 18 months vs. 5-10 years leads to less defects.

Grain is more uniform and fine in structure due to not procreating and lactating as is the case with cows.

The level of veins are less severe.

### Q: WHAT TYPE OF HIDES ARE PRIMARILY PURCHASED?

The hides purchased are primarily in natural, pearl white crust form - also in wet blue and colored crust. Uniformity of crust color, thickness, and grain structure are critical.

### Q: WHAT IS THE SUBSTANCE/THICKNESS?

Upholstery standard is 0.9 - 1.1 mm for optimum strength and usability.

### Q: WHAT IS THE SELECTION PROCESS?

Selection is agreed upon tolerances for surface defects, such as scars, pits, opens, neck wrinkles, holes, grain variation, and veins.

Visual inspections and documentation to report to suppliers on performance to command consistency.

### Q: WHAT ARE THE AREA REQUIREMENTS?

Average and minimum sizes are required for each raw material.

Area is measured for accuracy.

The proper trim of hides ensures yield.



## RAW MATERIAL SORTING DEPARTMENT (CONT'D)

### **Q: WHAT REPETITIVE PROCESSES TAKE PLACE HERE TO PREPARE FOR THE NEXT PROCESS, MOISTURE, AND TEMPERATURE CONTROL?**

Appropriate grades are selected by product and customer specifications.

Products and their processes lend themselves to properly blending defects to make all grades received yield excellent utilization.

Classic, Taj (Classic with pearlized finish), and Nubuck Cowhides are 3 of Townsend's most popular products and demand the best hides; to fulfill the demand of these products, it is necessary to have a diverse product range utilizing processes such as buffing, stuccoing, embossing, and finishing to make use of C's and D's.

### **Q: WHAT ARE THE QUALITY CONTROL STANDARDS?**

Strict quality control specifications required for fat + chrome content, stitch tear strength, light fastness, heat aging, and pH levels, as well as area, thickness, and selection criteria mentioned above.

All hides received in a shipment from a supplier are stamped in order to identify and control the batch (sequential delivery by specific supplier) and are not mixed with other batches or suppliers.

Process tickets are devised for all products and variations of products to standardize outcomes. The ticket follows the load throughout the production process and is signed off by all machine operators and department Production Leaders at various



## COLORING DEPARTMENT

### **Q: WHAT IS COLORING?**

It is the actual dyeing of the hides in preparation for the finished product.

Formulas are developed for the coloring process and maintained for each order.

There are strict quality controls on all dyes for compatibility with process and all other chemicals used.

### **Q: CAN RE-TANNING AND FLAMEPROOFING BE DONE DURING THE COLOR PROCESS?**

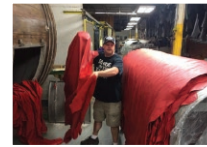
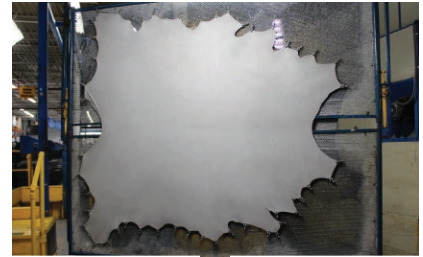
Yes. Veg re-tans and fat liquors are used to enhance the feel, grain, and embossing capability.



## CRUST DRY STAGE PROCESSING

### Q: WHAT IS TOWNSEND'S SELECTION CRITERIA FOR EACH PRODUCT?

- Toggling - Stretching and drying of hides.
- Stucco - Hand application to fill small defects.
- Staking - Softening and relaxing fibers.
- Buffing - For Nubucks, to create nap and to lightly correct hides with greater defects.
- Polishing - Smooths and heats the wax on Mesa and Manchester.
- Milling - For softening, control moisture level, and creating grain.



## EMBOSSING DEPARTMENT

### Q: WHAT IS FLAT BED PRESS EMBOSSING?

This process "stamps" the leather using a magnesium plate with a design or grain texture under very high pressure and heat.

### Q: WHAT IS GAUFRAGE CALENDAR ROLLER EMBOSSING?

This method of embossing is where the design impression is transferred to the leather by an engraved roller under high heat and low pressure for a soft, natural hand without pattern match lines.

This unique process creates upholstery leather of exceptional softness and beauty and is offered in Center Cut hides, averaging 40-45 SF, or Cowhide Sides, averaging 25 SF, which maximizes cutting yield and greatly minimizes the need for excess seams during upholstery.

### Q: WHAT IS ROLLER PRESS EMBOSSING?

This process allows for whole hides to be embossed without match lines with grain textures using high heat and low pressure for a soft, natural hand.

This not only upgrades hides but is also a more efficient method of embossing and giving natural looking grain to leather.

### Q: HOW DO I CHOOSE MY EMBOSSING DESIGN?

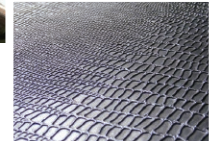
Townsend has the largest collection of embossing plate patterns for leather in the U.S., with over 900 embossing plates, 140 calendar rolls, and grain texture rolls to choose from.

We can work from design sketches or photographs to develop virtual renderings and customized tooling of embossing plates.

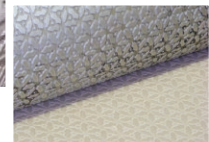
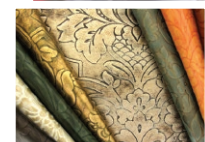
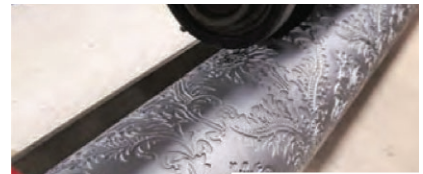
We have internal graphic design capabilities that allow us to create custom embossing designs in unprecedented turn around times.

Most of Townsend Leather's product lines can be embossed and is highly customized and therefore we treat every product as unique.

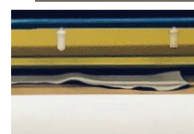
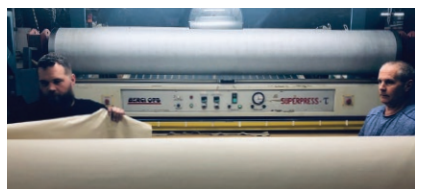
### FLAT BED PRESS



### GAUFRAGE CALENDAR ROLLER



### ROLLER PRESS



## FINISH DEPARTMENT

### Q: WHAT IS FINISHING?

The process of applying color-matched water-based finishes to the grain to achieve the best color match most consistently throughout an order; additionally topcoats are applied for performance, feel and/or sheen.

All pigments are tested to meet capability with all production processes and to meet or exceed industry standards in regard to performance.

### Q: WHY IS FINISHING IMPORTANT?

Finish protects the leather itself and gives it the properties to meet normal to high wear in regard to upholstery applications.

Colors can be matched to customer specifications. Lighting is very important to color judgment.

### Q: WHEN IT COMES TO COLOR, WHAT CAN TOWNSEND MATCH?

Townsend is capable of matching anything from leather to fabric, paint chips to pieces of fruit or other tangible items. You name it and we can match it!

### Q: HOW IS TOWNSEND ABLE TO MATCH ANY COLOR?

Townsend uses an x-rite Spectrophotometer which accurately measures solid colors to ensure a color quality audit trail across multiple devices and locations throughout the production process to ensure consistent color and brand integrity.

This tool provides the following capabilities:

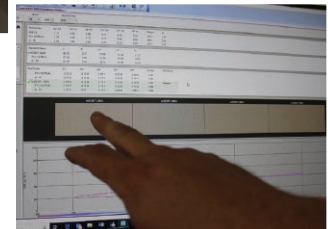
- Test against the data color computers in the Finish department and the results are within a thousandth of a point difference, if any difference at all.
- Allow operators to initiate hands-free measurement with a remote and display a pass/fail result in the software program within seconds.
- The Sample Department is able to read incoming samples to compare to their masters.
- Store the information to build a database for fast access to existing data when performing future color checks.

### Q: WHAT TECHNOLOGICAL ADVANCEMENTS DOES THE FINISH DEPARTMENT HAVE?

There are many advancements in this department, such as, a new spray line, computers, roller coater, spectrophotometer, along with, efficient, environment-friendly machinery.

### Q: WHAT EFFECTS CAN FINISHING PROVIDE?

- Sheen variations
- Pearlized effects
- Metallic effects
- Antique effects
- Waxes
- Effect coats



## TIPPING DEPARTMENT

### Q: WHAT IS TIPPING?

Tipping is a unique finish application where pigment (color) is applied by hand, often done on the high raised points of texture.

### Q: WHAT ARE THE OUTCOMES IN TIPPING?

For Tipping, variation in color and overall effect.

For Hand Rubs, the natural characteristics are highlighted.

### Q: WHAT ARE SPECIALTY TIPPINGS?

Double tipping, hand rubs, Handiworks (rub-off - example Galuchat embossed product) are all examples of Specialty Tippings.



## FINISH DRY STAGE

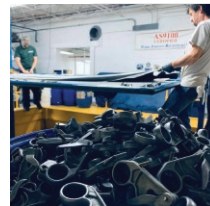
### Q: WHAT ARE THE PROCESSES IN THE FINISH DRY STAGE?

There are three processes in this stage: Milling, Toggling and Staking.

Milling - Control moisture content and final hand.

Toggling - Drying and stretching of the hides.

Staking - Relaxing of leather fibers.

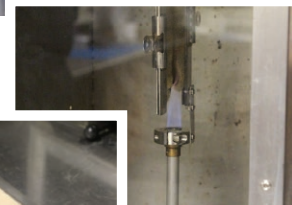


## QUALITY CONTROL DEPARTMENT

### Q: WHY IS QUALITY CONTROL SIGNIFICANT AT TOWNSEND?

Townsend Leather's Quality Control department assures that all products and dye lots meet strict industry and Townsend standards. For example, flame retardancy, finish and dye performance, accelerated aging of many others, batch testing, and so on.

Townsend Leather has achieved AS9100 Certification for our leather production with quality control over every step and process.

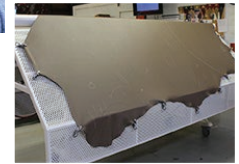


## FINAL INSPECTION DEPARTMENT

### Q: WHAT IS THE ROLE OF THIS DEPARTMENT?

The overall grading and inspection of final product based upon Townsend product and customer criteria.

Each and every hide is looked at closely and small imperfections are touched up, as well as any trimming, if needed.



## QUILTING DEPARTMENT

### Q: WHAT TYPE OF RESULTS WILL I GET WITH QUILTING AND PERFORATING?

These processes provide great results for precise and visually decorative patterns. With state-of-the-art machinery to create standard and one-of-a-kind pattern seat inserts and panels.

### Q: WHAT TOWNSEND PRODUCT CAN I USE?

Quilted leathers can be produced on any one of Townsend's In-Stock, standard, or custom colored leathers with standard patterns to choose from.

Thread and leather colors can be selected from Townsend's library.

Digital renderings can be requested to see different leather, thread color, and quilting pattern options.

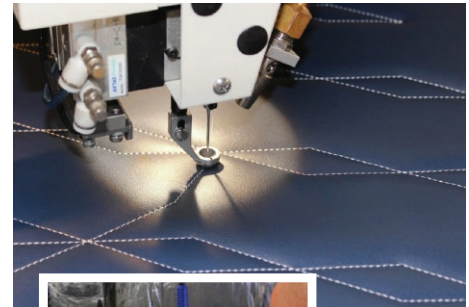
### Q: WHERE DOES THE QUILTING TAKE PLACE?

The whole process is completed in Townsend's Upstate New York facility with quick turn times and attention to detail.

### Q: WHAT PANEL SIZES ARE AVAILABLE?

Available panel sizes are: 28"x28" and 38"x28".

Maximum quilting area varies based on the pattern chosen.



## MEASURING & SHIPPING DEPARTMENTS

### Q: WHEN ARE PRODUCTS AVAILABLE TO SHIP?

Townsend's products are shipped under the highest quality standards and with a true passion for great work and the best possible leather.

### Q: HOW IS THE LEATHER PACKAGED?

All orders are measured, packaged, and delivered to the customer's requirements for receiving.

### Q: WHAT DELIVERY OPTIONS ARE AVAILABLE?

Townsend Leather offers a variety of delivery options - split deliveries, special boxes, rolled or folded in a special way, etc. The customer is always welcome to ask for special requests and Townsend will work to meet their requirements.



## SAMPLE DEPARTMENT

### Q: WHAT CAN I EXPECT WHEN REQUESTING SAMPLES FROM TOWNSEND LEATHER?

Townsend has a fully-dedicated building housing our samples with a staff dedicated each day to producing and providing sampling tools of numerous varieties to fit our customers' specific needs.



### Q: WHAT SAMPLING TOOLS CAN TOWNSEND LEATHER PROVIDE ME WITH?

We know each order begins with a sample and we are equipped to support our customers with unparalleled sampling tools and memos upfront, whether for customer presentations, showroom drawers, or travel kits for the road.



### Q: WHAT IS TYPE OF SAMPLES ARE AVAILABLE TO PICK FROM?

With more than a thousand standard skus and an archive of more than 20,000 custom samples from our last two decades of production, sample support from Townsend is reliable, timely, and an added value resource.

### Q: DOES TOWNSEND LEATHER HAVE AN ONLINE SAMPLE STORE?

You can search our database of approximately 1,000 (and growing) colors, textures, and qualities from our online catalog of in-stock and standard leathers.

Go to [www.townsendleather.com](http://www.townsendleather.com) for more information, to make sample selections or to keep up with what's new at Townsend Leather on our blog,



## CUTTING & STOCK DEPARTMENTS

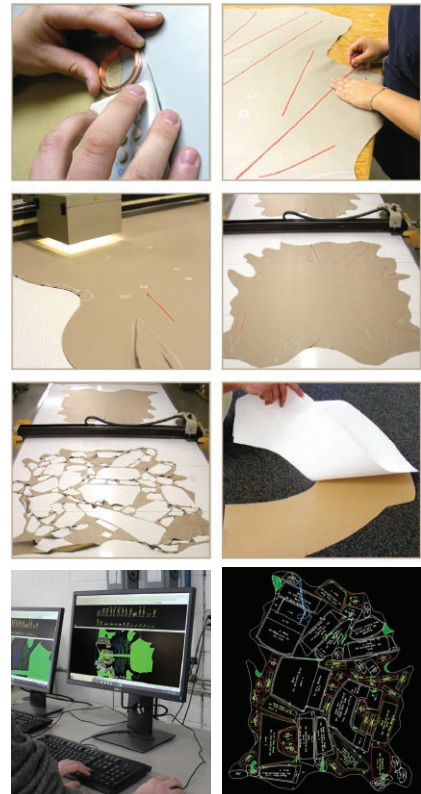
### Q: WHAT DOES THE CUTTING PROGRAM OFFER?

This program allows us to produce orders to customers' exact size specifications, which reduces waste and increases effectiveness and efficiency.

### Q: WHAT IS INCLUDED IN THE STOCK PROGRAM?

Our stock program includes in-stock, quick-ship, and color base stock programs, and can be utilized as a resource for rush orders.

### CUTTING PROGRAM



### FINISH STOCK



## CONTACT US

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