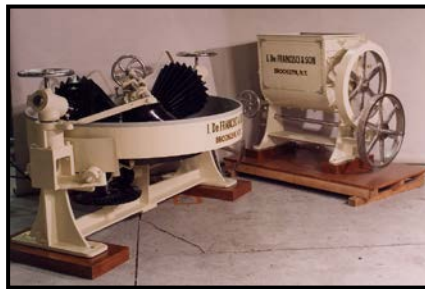


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The roots of DEMACO in West Melbourne surfaced through rebuilding of vintage pasta machines made by the company many years ago. DEMACO now builds fully automated industrial machines that produce up to 3,500 lbs/hr of pasta for the major food producers. The evolutionary path to get to that point begins with mechanical belt driven machines, considered state of the art at the time. The story starts with the founder of the company, Ignazio DeFrancisci and spans over a century of progress.



I. DeFrancisci & Son gramola (left), mixer (middle) and press (right) after refurbishment. The gramola and mixer were originally from Santoro Macaroni and later Bened Foods. The press was from V. LaRosa & Sons.

Soon after immigrating to the United States in 1905, Ignazio designed a machine to place buttons on shoes.¹ However, button shoes quickly faded out of style leaving Ignazio out of luck. Seeing a need to provide pasta to the increasing number of Italian immigrants, Ignazio entered the pasta industry. He built his first machine for Vincenzo LaRosa in 1914 under the name I. DeFrancisci & Son.² I. DeFrancisci & Son, under its current name of DEMACO remains today as the only industrial pasta machine manufacturer in America.

As an engineer in Italy, Ignazio built machines and designed food processing systems. In Sicily, he made machines to condense wine to reduce export tariffs and in Sardinia, he designed an ice house to make ice for refrigeration on ships transporting fresh produce to the Scandinavian countries.³ His mother's family owned a pasta manufacturing company in Palermo called Virga, so he became familiar with the pasta industry while in Italy.⁴

When pasta makers first industrialized production at the turn of the 20th Century, the manufacturing process consisted of three separate machines with each conducting a different operation: a mixer for mixing the flour and water into dough, a gramola for kneading the dough, and a press for extruding the dough through a die to form the shape. Pastaios⁵, or master pasta makers made discrete amounts of pasta in a batch process using each machine independently. After the



Gramola from Bened Foods before refurbishment.

Pictures compliments of DEMACO (taken by Evan Moore, Rob Downey & Leonard J. DeFrancisci)



I. DeFrancisci & Son crew from 1917 in Brooklyn. This crew originally built the mixer, gramola and press. Pictured here standing right to left: Joseph DeFrancisci (tall man - Ignazio's son), Ignazio DeFrancisci & Cosimo Alati. Joseph Bontempi - sitting with hand under chin. Notice the overhead pulley system on ceiling with belt connecting to machine on left.

completion of an operation, pastaios manually moved the product from one machine to the next. Today, pasta makers use a continuous process where a production line has all these machines integrated into one automated system. Ingredients go in one end of the line and finished product comes out the other.

In 1992, DEMACO, headquartered in Brooklyn, New York opened a satellite manufacturing facility in Melbourne, Florida to build dryers for their dry pasta lines.⁶ In 1998, DEMACO acquired a vintage 1920s I. DeFrancisci & Son mixer and a gramola from Bened Foods from the Bronx, New York and shipped these machines to the Melbourne facility. Bened used the old machines up until donating them to DEMACO. Coincidentally, Bened acquired this mixer and gramola from Santoro Macaroni of New York City, which was owned by Gaspare Santoro, the grandfather-in-law of the

president of DEMACO. Many years earlier, DEMACO acquired the first press built for LaRosa when LaRosa shut down their operations in Brooklyn. This press was also sent to the Melbourne facility. The I. DeFrancisci & Son mixer, gramola and press represented the state of the art in mechanical belt driven machines from almost 100 years ago. At the time, factories powered machines from an overhead pulley system using belts for power transmission.

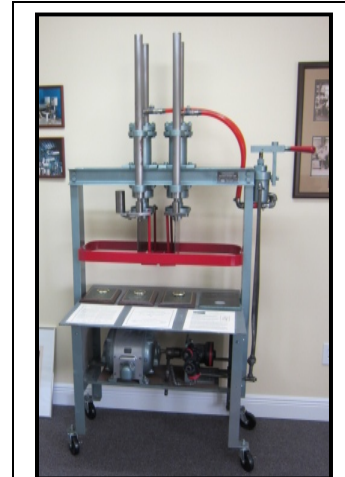
In 1998, the DEMACO Melbourne shop refurbished the vintage machines, having a complete set including a mixer, gramola and press. This effort took several weeks as the restoration crew led by DEMACO mechanics Evan Moore and Neil Murray from Melbourne entirely disassembled the machines and refurbished each part. DEMACO commissioned Joe Richardson from Melbourne to paint the artwork on the machines. Richardson was the perfect choice for this task because his father used to paint such artwork on machines many years ago and he had one of his old instructional books which he used as a guide. Fortunately, DEMACO had an old I. DeFrancisci & Son catalog of machinery from 1916, so Richardson painted the machines duplicating the artwork on the original machines. At the time, machine builders often painted ornate flourish and pin striping on the machines, making them works of art. The rebuild crew wanted to duplicate this important aspect of the machine for an authentic refurbishment.



Joe Richardson painting the mixer.

Also in 1998, DEMACO moved its headquarters into a new building in Melbourne on Fortune Place and placed the refurbished mixer and gramola on display in the lobby.⁷ The press went to Pasta Montana in Great Falls, a company started by Ignatius and Joseph, the grandson and great-grandson of Ignazio.⁸ In 2005, the DeFrancisci family donated the complete set of machines to the New York State Museum.

In 2011, Deseret Pasta Factory in Kearns, Utah gave a 1930s era Type HMC hydraulic cutter for package spaghetti and macaroni to DEMACO. The Church of Jesus Christ of Latter-Day Saints operated Deseret Pasta Factory to manufacture and donate pasta to the less fortunate. Salt Lake Macaroni Company used this hydraulic cutter for many years to trim pasta to the correct size for packaging. The Church of Jesus Christ of Latter-Day Saints purchased the Salt Lake Macaroni Company in 1963 and closed it in 1980 upon opening the Deseret Pasta Factory in Kearns. A mechanic at Deseret restored this machine in 2006 and it was sent to DEMACO in July 2011 for the opening of their new facility in West Melbourne, Florida.



Hydraulic spaghetti cutter in West Melbourne donated to DEMACO by Deseret Pasta Plant.

Consolidated Macaroni Machine Corporation built this Type HMC hydraulic cutter for package spaghetti and macaroni. I. DeFrancisci & Son became Consolidated Macaroni Machine Corporation in 1927 which later became DEMACO in 1952.⁹ For this machine, Consolidated developed an innovative method for cutting dry pasta by employing a hydraulic piston to push a cutting blade. This provided an improved way to perform this operation than the common approach used at the time – a wheel saw.¹⁰ The hydraulic system utilized less power and achieved a better cut than the saw. This machine also demonstrates the change from mechanical belt driven power transmission to hydraulic systems.

During World War II, Consolidated built tooling for the Norden bombsight and Worthington Pumps for the war effort.¹¹ After the war, the company made significant advances in automation, controls and sanitary equipment design.¹² DEMACO currently uses computer controls to optimize processing and efficiency. The DEMACO extruder also uses an auger screw to knead the dough and push it through the die. However, the core operations of mixing, kneading and extruding still remain essential to the

machine. Rebuilding the vintage pasta machines in Melbourne provided an opportunity to reflect on years of innovation.

Pasta Institute of Technology publishes occasional papers in the history series to preserve information and educate people on the history of pasta and the pasta industry. Pasta Institute of Technology also publishes a technical series to help people make better pasta. Pasta Institute of Technology maintains the Copyright for this paper and releases it under the license of Creative Commons Attribution Share Alike (CC BY-SA) with attribution to the Pasta Institute of Technology and the author.

¹ On June 18, 1905, Ignazio arrived at Ellis Island, New York on the S.S. Erny. On May 31, 1906, Ignazio filed for a U.S. Patent for “Machine for Conveying and Distributing Button-Blanks”, which was granted as number 833, 512 on October 16, 1906. He received five additional patents for buttons for shoes over the next few years and one for a pasta gramola in 1916.

² Leonard J. DeFrancisci interview of Ignatius Bontempi in 2000. Bontempi worked as an engineer at Consolidated Macaroni Machine Corporation and DEMACO for many years and his father Joseph worked at I. DeFrancisci & Son.

³ Leonard J. DeFrancisci interview of Gustave Alati in 1999. Alati worked as a field service technician at Consolidated Macaroni Machine Corporation and DEMACO for many years. His uncle Cosimo Alati served as an apprentice for Ignazio in Italy and worked for I. DeFrancisci & Son and Consolidated Macaroni Machine Corporation.

⁴ Leonard J. DeFrancisci interview with Ignatius DeFrancisci in 1998. Ignatius DeFrancisci was the grandson of Ignazio.

⁵ The pastaio was a tradesperson that faded from existence once pasta production became automated, like the cobbler in the shoe industry.

⁶ Tony Boylan. “N.Y. firm to branch out from Melbourne”, *Florida Today* (January 1993).

⁷ Melbourne and Palm Bay Chamber of Commerce. “Business Line” (November 1998).

⁸ L. Joshua Sosland. “Making a mark in Montana”, *Milling & Baking News*, vol. 77, no. 33, (October 13, 1998), pg. 30-31.

⁹ National Macaroni Manufacturers Association. “Announcement”, *The Macaroni Journal*, vol. VIII, no. 9 (Minneapolis, MN: January 15, 1927), pg. 20-21 and National Macaroni Manufacturers Association. “An open letter to our many friends in the macaroni-noodle industry”, *The Macaroni Journal*, vol. XXXIII, no. 11 (Minneapolis, MN: march 1952), p. 22.

¹⁰ Consolidated Macaroni Machine Corporation. Sheet G-109 “Type HMC Hydraulic Cutter for Package Spaghetti, Macaroni, Etc.” (Brooklyn, NY: circa 1930), pg. 3.

¹¹ DeFrancisci-Alati interview.

¹² National Macaroni Manufacturers Association. “Making Macaroni Equipment”, *The Macaroni Journal*, vol. XXXV, no. 12 (Minneapolis, MN: April 1954), p. 40.