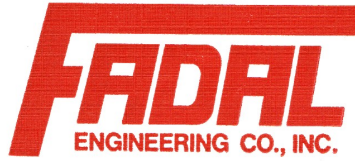


The History of Fadal Engineering

By Larry de Caussin

Our father, Francis de Caussin was a toolmaker trained in the automobile industry. Francis moved the family from Detroit Michigan to Van Nuys California in 1953. Francis always had a dream to own his own machine shop. Francis had a lot of skills but not a lot of money. But, this didn't stop him. He purchased some equipment on time payments. The first equipment he bought was a Shop Smith mainly for woodwork, but we used the Shop Smith's drill press for drilling metal pieces. Francis brought machining work home from the machine shop where he worked. The plant manager where Francis worked put a metal cutting lathe in our family garage. We had to pay him a percentage of any money earned from the use of his lathe. This was about in the year 1955. At this time, Francis' oldest son, Adrian, was married. David was still in High School and Larry was in Junior High School. Francis and David worked on the lathe, and Larry worked on the drill press. At this point, it was only part-time work. In the evenings and Saturdays Francis would work, and after schoolwork, David and Larry would put in some time. In the year 1957, the name Fadal was taken for the newly forming company. Fadal is an acronym made up of first letters of the names of Francis de Caussin and his three sons, Adrian, David, and Larry. The same year, our mother, Gladys, took a job at a mail-order desk. She did this to help us purchase our own equipment as we were working at home on the borrowed



One of the company's first logos.

lathe. Eventually, we purchased an 11 inch Logan lathe with a bed turret and a very small metal cutting mill called a Bench Master. The equipment was purchased from Montgomery & Wards, and paid for by Gladys, on time payments of course. We all learned a lot in our part-time garage business. We all learned the faster and more efficient we removed the metal in the manufacturing process, the more money we made. Even at that time, we began to customize the equipment that we had purchased, to improve its productivity. An example of this is when Francis added a riser block to our very small mill that allowed us to take bigger jobs. Another time, Larry added a temporary second motor to the main spindle of the lathe so that we could take the metal off faster when needed, and Dave made the handles longer so we could push harder. This was the start of a very interesting trend. The trend was to make a better and faster machine.

By 1961, Francis, David, and Larry were all working in the same machine shop for a company called Device Seals. And, Adrian was working in the aerospace industry. After the all the part-time experience in our garage shop, we made an unanimous decision that we should start our own

machine shop to work at it full time. The problem was the new business had to be started and sustained with the \$2000 cash we had on hand. We rented a 800 square foot industrial unit in North Hollywood California. Along with the new workspace, we bought a new Italian 12 inch Siamp metal cutting lathe on dad's good credit for \$3500. Now, our equipment list consisted of two lathes, one very small mill with riser block, a Sears drill press, and a one horsepower air compressor. With the little bit of cash on hand we had to start slowly. So, only Francis and Larry, who still lived at home, quit their jobs and worked full-time in the business. Gladys set up the books, and it was only a matter of weeks before David could come full-time, and another year or so before Adrian could come in.

We all worked very hard, Francis did the quoting and ran a machine. David and Larry did most of the machining. Adrian did some machining along with some office work. Gladys handled the finances and office work. Unfortunately, the business fell



Francis de Caussin, President of Fadal Engineering

Supplier ZD presentation based on few rejections

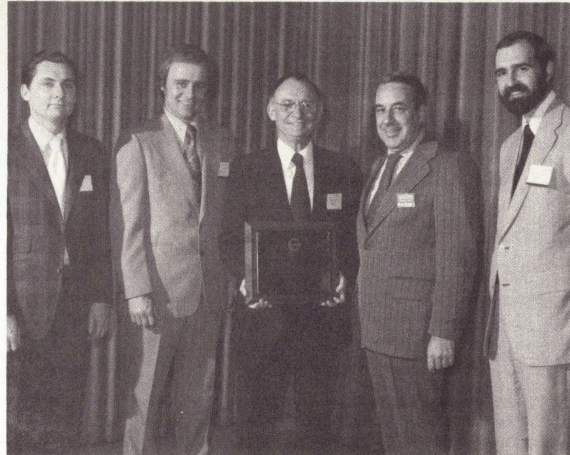
The division's annual Supplier Zero Defects Award has been presented to Fadal Engineering Company in recognition of outstanding work on complex precision machined parts.

"We appreciate this award very much because most of our business comes through Hughes. We'll give it the best display at the company," said Fadal President Francis de Caussin, who accepted the plaque from Vice President and Division Manager George McKaig.

Fadal was cited for its rejection rate of less than 5 per cent for all products submitted to Hughes Source Inspections. The percentage is exceptional, considering the difficult close tolerance dimensions that the company works to in production quantities, according to Georgia McQueen, Small Business administrator.

Fadal Engineering, which received nearly \$690,000 in business from ESMD last year, began 14 years ago as a father-son operation with a lathe and a milling machine. The company now has its own facility in North Hollywood and employs 43 persons.

Mr. de Caussin's three sons are equal partners in the company, which received its name from the initial letters of their names — Francis, Adrian, David, and Larry. The four de Caussins toured ESMD and were honored at a luncheon.



TOP SUPPLIER — Accepting the Supplier Zero Defects Award from Vice President and Division Manager George McKaig are the father and three sons who are equal partners in Fadal Engineering Company. Francis de Caussin, holding plaque, is joined by sons Larry, David, and Adrian.

Hughes Views, February 1975 / Page 3

February 1975, Hughes Aircraft awards Fadal with the Zero Defect Award because of the outstanding work performed on complex precision machined parts.

on hard times around 1965 or 1966. One of our largest customers went into chapter 11 owing us about \$17,000. Because of the hard times, Adrian decided to do some contract computer programming. He became busy programming for Signal Oil and Gas, which eventually won him a job offer in the Oil Industry. Adrian felt that it would be better for the company and him to take the offer. We were all sad because it took him and his family far away to Texas.

Meanwhile the shop began to pickup, we were doing a lot of work for the space projects like the Surveyor unmanned landing on the moon, Voyager, various satellites, aircraft landing gear, and eventually the Space Shuttle fuel systems. We would take any work that would fit our machines, and even some that really didn't. All of this aircraft work in Southern California required high-quality

precision machining, and we had in our job shop some of the world's most skilled machinists. All the jobs we received we were able to accomplish with our talented crew. Fadal delivered high quality machining at competitive prices and excellent customer service. Because of this, Francis and Gladys were called to Washington to receive the small vendor of the year award, which was very prestigious. In addition to this, Fadal's job shop won many quality awards from the aircraft industry. One award was Hughes aircraft annual Supplier Zero Defects Award.

In 1970, the bankruptcy debt owed to us from Summers Gyroscope was paid back in the form of the debtors stock. The chief executive officer of Summers Gyroscope advised us to hold onto the stock. We listened to the CEO and decided to keep the stock. About two weeks later, our insurance

agent advised us to sell the stock because the original \$17,000 in stock had already dropped to \$10,000. We sold the stock at a loss for \$10,000, but at least we were fortunate to get the \$10,000 because the stock within a few months went to zero. We decided to put the regained money to good use. With the \$10,000, we put a down payment on our own building at 7260 Atoll Avenue in North Hollywood California. From this new location Fadal began to grow. Eventually, at that North Hollywood location we leased one building after another. From 1980 to 1992, eight other buildings were leased and a parking lot. At our North Hollywood facility, we had roughly 50,000 square feet made up from nine different buildings. In 1993, we moved into our Chatsworth facility that had over 200,000 square feet under one roof. This helped tremendously giving us room to expand and

work efficiently.

Before we go into more history we need to clarify a rough timeline of events.

1955 Part-time machine work done in garage.

1957 Company name Fadal was chosen

1961 Fadal started a full-time operation doing contract machine work.

1963 First employees hired.

1969 Purchased our first NC milling machine.

1972 Began developing after-market tool changer.

1974 Took tool changer to market.

1976 Began development of a complete machining center including CNC control.

1980 Sale of first VMC 45 machining center.

1983 Design and sale of first 5

VMC 40 machining centers

1984 Fadal job shop closed.

1993 Moved to Chatsworth facility.

1995 Purchase of Fadal by Giddings & Lewis

1995 Over 10,000 Fadal vertical machining centers sold worldwide, in 10 years time.

The year 1969 was important in Fadal's history. That year is when we bought our first numerically controlled machine. It was a Bridgeport mill with a Superior Electric N.C. control and a Spindle Wizard third axis. Our new NC cost \$25,000, which at the time, was about the same price of a three-bedroom home in San Fernando Valley. This machine did not have an automatic tool changer, all the

tools had to be changed using a wrench by hand. We promptly designed a power draw bar, so that the tools could be taken in and out of the spindle without the use of a wrench. This made making tool changes much faster and easier. This set us to thinking how we might automate the whole tool changer process. We realized how valuable an aftermarket tool changer would be to all the small machine tool builders and their customers. Our goal was to manufacture an affordable tool changer that could be attached to a mill. Brother Dave was soon totally consumed with the designed, and manufacturing of a prototype. In about a year, we had a second generation tool changer that was essentially the mechanical design used for the finished product. We soon



HUGHESITES and subcontractor guests at Cape Canaveral, from left foreground, are Henry Blackstone, president, Servo; Larry DeCaussin, vice president, Fadal Engineering; Walt Stanton, vice president, Servo; Dick Provenza; Eric Johanson, president, Johanson Manufacturing; Sam Garcia, president, Hydraulic Research and Manufacturing; Sydney Topol, president, Scientific Atlanta; and Walt Votaw, president, Votaw Precision Tool. Standing from left are Mrs. Larry DeCaussin; Kendra and John Upton; Alan Smith, Works manager, British

Aircraft Corporation; Bill Edwards, president, Delevan, American Precision; Dick Holland, president, American Electronics; Russ Webb, executive vice president, U.S. Capacitor; Tom Carvey; Larry Thielen, president, Avantek; Clarence Schroeder, president, Shroeder Tool and Die; Mrs. Walt Votaw; Bill Scranton, president, MPB; Stephan Schafer, executive vice president, Fenwal Electronics; Mike Barchi, and Dick Bringuel. Not shown, Frank Singer, general manager, Malco, Microdot. Some of them also have their components on the Intelsat IV-A.

On May 22, 1975, Larry and Elsie de Caussin are guests at Cape Canaveral in Florida to see the launching of the Intelsat IV-A communications satellite. It was the first of six such satellites that would handle the demands of telephone, data, and television transmissions between the United States, Europe and West Africa.

realized that we needed some help with the electronics. Adrian, which was still in Texas working in the Oil industry, showed enthusiastic interest in the project. Even though he had no electronic experience, he began working on a logic board that could control the tool changer. His initial design was built on a cookie sheet and hand carried to California. We all decided that it was time for Adrian to return to the company full time to help with this project. In 1974, Adrian and his family packed up and left Texas to return California. Adrian and David brought the mechanical and the electrical together to make a successful reliable tool changer. After some time, we decided to go to market with the new tool changer. The tool changer was mounted on a milling machine and then loaded onto a flatbed truck. David and his wife Mert drove it to the 1974 machine tool show in Chicago. The tool changer was a big hit at the Chicago show. They met many potential distributors of our new product. We went on to make about 100 of these tool changers, with the Fadal name on them. Then a Company named Summit Engineering, out of Bozeman Montana, a division of Dana Corp. offered to buy the tool changer design and patents. Summit engineering was new in the business of building CNC controls. They had visions of packaging our tool changer with a in-



The first five VMC-45 in use in our machine shop.

expensive control to go with it. We decided it was a good opportunity for us to build operating capital. We negotiated a cash sale, and the rights to manufacture the mechanical assemblies. The deal was made with Summit Engineering. They named the tool changer the Bandit Quick

Draw. The reason behind calling it Quick Draw was because it was "quick" at drawing out a tool with its tool changing arm, and a "bandit" because it would steal the business away from the competition. Summit engineering used the Bandit name for their whole product line, which was very successful. We

went on to produce over 2000 of the mechanical assemblies for the new owner. The profits gained from the tool changer made it possible to start a new and bigger project, the designing of a complete machining center including the CNC control. The CNC control was started first. Adrian had a degree in mathematics, and had began programming computers as early as 1955 for Rocketdyne a division of Rockwell International. The experience Adrian had helped him have a clear picture of how the software, for the CNC control, should be laid out. Francis and Larry con-

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NORTH HOLLYWOOD, CA.
BY FADAL ENGINEERING CO., INC.**

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BUY DIRECT
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F.O.B. COMPLETE

VMC 45

**CALL NOW FOR A DEMONSTRATION
213-765-9838**

The Fadal VMC-45, less than 40 produced. The last one sold in 1983 before the introduction to the smaller and lower cost VMC-40.



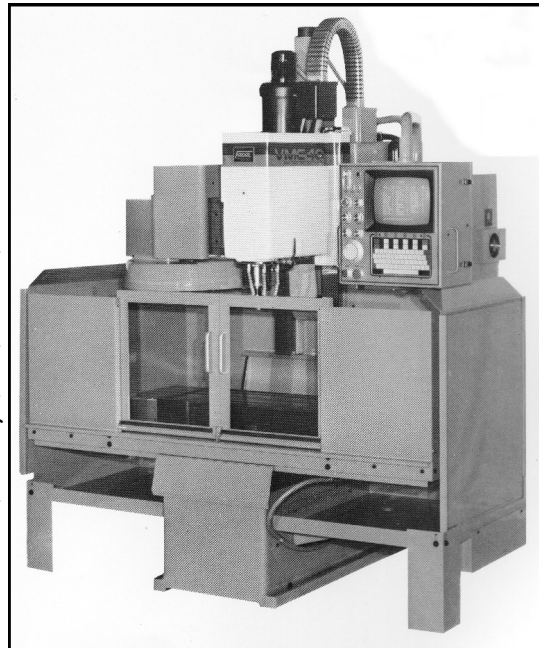
7260 Atoll Avenue, North Hollywood, California, Fadal's front office buildings in 1984.

centrated on running the job shop and manufacturing the tool changers for Summit Engineering. This helped free Adrian and David to concentrate on this massive project of designing, manufacturing and bringing to market a complete machining center. It took all we had but by the end of 1979 we were ready to go to market. We had been using the prototype-machining center, which we called the Fadal VMC 45 in our shop to do contract machining. We eventually had five VMC 45s in use in our job shop. David sold the first VMC 45 machining center in early 1980. Unfortunately, in the 1980s hard times came on the economy and especially the machine tool industry. We had an excellent price for our machining center, but when the hard times came every other machine tool, which sold for 40 percent more than ours suddenly, lowered their prices. A machine that had a price tag of \$160,000 was then selling for less than \$100,000. Foreign countries began dumping their extra machine tools into the U.S. market making it difficult for American machine tool builders to sell American made machining centers at a

profit. We sold 25 of our VMC 45 machining centers for about \$95,000. It took about three years to sell the 25 machines. Fortunately, The U.S. government stepped in to control the dumping of machine tools into the U.S. They did this because the dumping was destroying the machine tool industry. The machine tool industry is very important to national defense; therefore something had to be done to protect the United States machine tool industry. Machine tools dumped in the U.S. came mainly from the Pacific Rim countries. All importers of machine tools came to a "voluntary restraint agreement" which was called the VRA agreement. Machine tool importers agreed amongst themselves to limit how many machines each of them would ship into the United States each month. The only other option that foreign machine tool builders had was to set up manufacturing in the

United States; if they did that they had no limits. To sell over the VRA limits, foreign builders were required to have a very high percentage of their machine American made. The VRA agreement lasted for about 10 years starting in the early 1980s. Now looking back, we felt that the VRA didn't help us that much, because our product eventually faced competition.

When machine tool prices dropped in 1980, we could see that low prices were here to stay. In early 1983 it was time to re-group. We learned that there was strength in price, and that we had to make a complete machining center for half the price of our present one, or get out of the machine tool business. This seemingly impossible task was completed in less than nine months. We were ready to go to market with a new low cost machining center. In the last few months of 1983, we sold the



The Fadal VMC-40, first sold in 1983 and was the platform of all the Fadal models to come.



Fall 1993, Fadal moves into this new 220,000 square foot manufacturing facility located at 20701 Plummer St., Chatsworth, California.

first 5 machines. Everyone loved the price and the speed of the machine; we could not make them fast enough. Each year we sold more and more machines. This was all possible, thanks to the heavy contributions of all our family members, and the employees of Fadal. The company's performance was unequalled in the machine tool industry. Before Fadal revolutionized the way machining centers were made, there were some machine tool builders that built about one machining center per employee each year. Fadal, on the contrary, was building 10 machining centers per employee each year. By 1995, we had sold almost 10,000 machining centers.

It was a long process to go from a machine shop based in a family garage to the worlds leading vertical machining center manufacturer. The Fadal family business was now quite a manufacturing corporation. This large corporation being owned by only the founders of the company was now becoming an estate issue. Decisions to determine the

future of Fadal had to be discussed. In a family business estate planning is a must, in 1990 we began a special effort to plan how the partners of Fadal might retire, and the possibilities of transferring the company to the family. We called in outside advisers to enlighten us of all the different possibilities that were ours for the choosing. We would have loved to transfer our interests in Fadal to the family,

but the United States Federal and State tax laws are very anti-family business. In order to transfer the company over to the family, the partners of Fadal would have had to pay about a 55 percent gift tax, based on the value of the company. All of Fadal's cash was tied up in property, equipment, inventory, and accounts receivable. Therefore, the tax was too large to borrow enough to cover it. The tax would have had to be paid out of profits. Of which the profits are also taxed at approximately 50 percent. After paying these two very high taxes 1 dollar earned would now be about 25 cents in the pocket. With this heavy outflow of cash to cover the taxes, it was feared that it would make it impossible for Fadal to grow and possibly could have brought it to its demise. It would have taken another lifetime to make the transfer to the family. There are a num-

Larry deCaussin
FADAL, Engineering

Dear Larry,

Francis deCaussin would often tell this story about the early days at FADAL. When a tool broke and a new one was needed to complete the job, he would call the boys in the shop together. They would all dig into their pockets to come up with the money to purchase a new tool. Then, one of them would run around the corner to the local hardware store, that was us, and make the purchase. One time, they came up short. We offered them credit and so began a relationship between the two companies that is still going strong today.

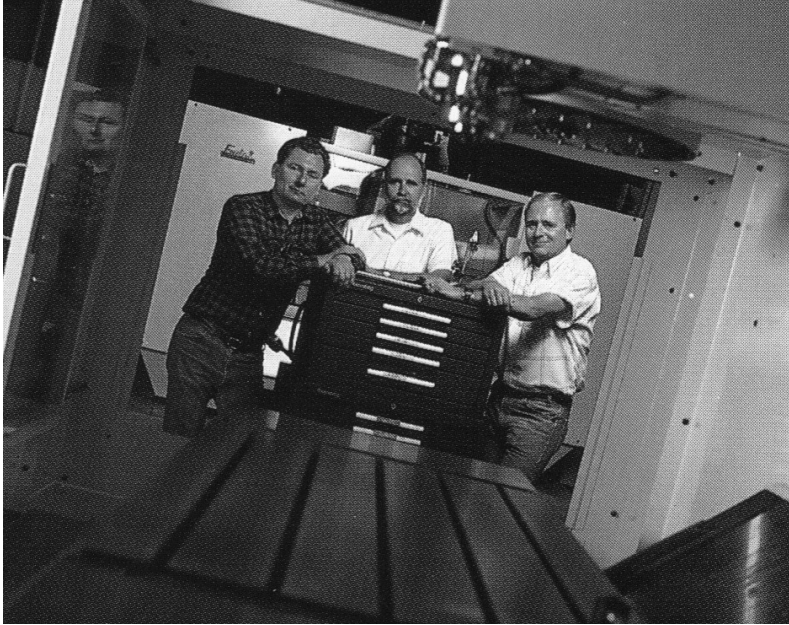
To say that FADAL has changed since the early days would be an understatement. To grow from a job shop to one of the leading manufacturers of VMC machines didn't occur overnight. It seems like only yesterday, Dave deCaussin was coming in to B&T to buy Black and Decker Impact wrenches for the power source on the FADAL tool changer for Bridgeport Mills. He would purchase five, then ten, and eventually fifty tools at a time. To a place like ours, that was great business. When the rights to the tool changer were sold, it didn't seem like anything could top it.

The VMC machine started out pretty much the same way. We supplied parts for a couple of machines a month, then a dozen, and finally up to the current levels. Where do they all go? There are hundreds of FADAL stories I could tell all day long. From the first tool changer to the fifteen thousandth VMC machine. B&T is proud to have had parts from our inventory in every piece of equipment with the FADAL name. I want you to know how much we appreciate FADAL's business. Thanks for letting us share in your success story. We hope our partnership will continue long into the future.

If you have questions, comments, suggestions, or even complaints, about our service or the products we supply FADAL, please contact me personally at (818) 982-3475. Thanks again for your support and the many friendships that have developed over the years.

Sincerely yours,
John Ball
John Ball
B&T Industrial Supply, Inc.

This is a 1997 letter from John Ball of B&T Industrial Supply to Larry de Caussin. He describes the relationship between his company and Fadal as Fadal grew from a small shop scraping to get by to the leading VMC manufacturer in the world.



Larry, David and Adrian de Caussin

ber of government-approved methods of making the transfer, but all they do is delay the misery, and government still want their taxes sooner or later. The option of taking the company public just did not fit what we wanted. So, after much careful thought it was decided that an outright sale would be best. Therefore, Fadal was sold to Giddings and Lewis in April of 1995.

The de Caussin family gave their complete confidence that Giddings & Lewis would continue to maintain Fadal's bright future.

Giddings & Lewis Welcomes Fadal Engineering to the Family

On April 24, 1995, Giddings & Lewis joined forces with Fadal Engineering Co., the leading producer of small vertical machining centers. In 1994, Fadal produced approximately 54% of all small vertical machining centers manufactured in the U.S. and 33% of those sold. Fadal has an installed base of over 9,500 machines and operates from a single facility in Chatsworth, California. Prior to this event, Giddings & Lewis did not compete in the small vertical machining center market.

Fadal has experienced impressive growth in recent years. Sales have increased every year for the last 10 years and have grown at an annual rate of 27% from 1991 to 1994. In 1994, Fadal's sales were approximately \$138 million, of which 11% were international. Fadal has been consistently profitable.

The combination of Fadal and Giddings & Lewis supports our strategies of expanding the product line and further penetrating worldwide markets. For Fadal, the financial strength and experience of Giddings & Lewis presents an opportunity to continue new product development and to further its rapid growth in the worldwide vertical machining center market. This will better position Giddings & Lewis to compete in the worldwide machine tool marketplace.

We welcome the Fadal employees and their families to Giddings & Lewis. We will profile the employees, products and business in the next issue of *Reaching Out*.



Fadal is now part of a large corporation.