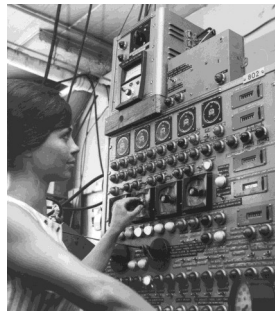




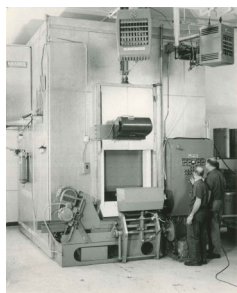
740 N Washington Ave. in Minneapolis



Arnold Kadue



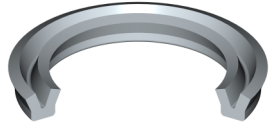
Early Horizontal Injection Press



The New Pangborn



- 1955 ● Precision Associates is incorporated in April of 1955 by Arnold Kadue and Wells Hoveroid. The original location is in 4 small bays of a large warehouse building at 740 N Washington Ave in Minneapolis. The name Precision Associates was chosen to reflect Arnold's vision of a team of "associates" working together to produce only "Top Quality" precision molded rubber goods.
- Wells had a background in rubber molding, having worked at two rubber firms in the twin cities, while Arnold's background was hardware manufacturing. Arnold and a third party provided the finance. Wells had an idea for a new way to manufacture rubber products and convinced the others to invest in his plan. As it turns out, Wells' idea was a flop, but Arnold provides a second plan, using his experience in metal die casting to invent a new style of vertical injection molding that PAI still uses today. Rubber molds were purchased from the Standard Machine Company in Minneapolis.
- Among the first custom items manufactured is a rubber washer that incorporates an O-Ring shape within. The seal was used in a Honeywell ventilation system damper. PAI continues to manufacture this washer until 1998 when the damper is finally phased out of use.
- Again from his experience in the hardware industry, Arnold had been exposed to the comparatively new sealing device called an O-Ring. Relatively little used prior to World War II, military sealing requirements during the war provided lots of useful applications for this simple seal. After the war, designers began to utilize these O-Rings in plumbing, fluid power and many other types of applications. Arnold remembers how relatively expensive these O-Rings were at that time and believes it will be a lucrative business to cultivate.
- Resultantly, the company chooses to add O-Rings as its first line of standard products. By 1957 Precision Associates has a catalog consisting of the first 15 sizes of the original AN 6227 O-Ring specification. Arnold finally feels he can hit the road, proudly showing his nice line of available O-Rings, *plus* the company's custom shape capability. A [price list](#) from that year shows that Buna N O-Rings were available in 4 durometers, with pricing not too much lower than today's.
- 1957 ●
- 1960 ● The 1960's bring growth and change to the company. Wells Hoveroid is bought out, and Arnold develops a more efficient, horizontal version of his injection press. Additional areas of the 740 building are annexed, cleaned, painted and added to the manufacturing space.
- 1964 ● In 1964 Arnold invents and patents the Multiseal[®], a low friction dynamic seal suitable for use in O-Ring grooves. The company now has a second line to add to its catalog. Shortly afterward, the company creates its first logo, incorporating the Multiseal[®] design.
- The mid 60's also bring the purchase of a Pangborn, our first cryogenic deflashing machine for the then princely some of \$65,000. Some thought Arnold crazy for spending so much on one machine, but it was not the last time PAI would invest in a new and sometimes as yet unproven technology.
- 1966 ● Our first of many materials is certified by an outside agency. PAI compound 5747 is approved by UL in 1966. Our organization has had 5 UL listed materials over the years.
- 1968 ● A company Profit Sharing plan is instituted in 1968. It has been modified over the years, but the original plan of sharing profits with the team that produces the profits continues today.



Paul Kadue



- 1970 ● About 1970, Charlie Bimba, founder of the Bimba Cylinder Company convinces Arnold that he could do well manufacturing rubber U-Cups for the pneumatic actuator industry. In addition to tooling up for those items Bimba uses, Arnold surveys a number of companies to determine which sizes are the most popular. Soon PAI has a third line of catalog items to offer. Today PAI is a major supplier of rubber U-Cups (and other seals) to most of the leading pneumatic valve and actuator manufacturers.
- 1983 ● Paul Arnold Kadue, Arnold's youngest son, an engineer by training, joins the company. Although Paul and his two older brothers have all worked at PAI off and on, Paul is the second member of the family to become a permanent full time Associate.
- 1985 ● Our first centerless grinder is purchased, giving us the ability to grind rubber balls - nice and round, without a parting line. Another addition to the catalog.
- 1988 ● In 1988 two major developments take place almost simultaneously. First we purchase Standard Machine, our mold supplier, renaming the entity Standard Machine Mold. Standard Machine Mold provides PAI with all of our mold requirements as well as supplying molds to others in the rubber industry. Secondly, we purchase our first enterprise wide computer and software system - a Wang minicomputer utilizing 4th generation software, which facilitates quick and easy customization of our business programs. We continue to use a descendant of this software system today.
- 1990 ● All-the-while we continue to add product lines to our catalog, including Kurv-Bak™ back-up rings, Hol-Mask™ masking plugs, V-Rings and several style of wipers. By the 1990's the entire 740 building - all 130,000 square feet - is required for our expanded manufacturing requirements. In the late nineties, X-Rings, another low friction sealing family were added to our catalog of seals. A new logo is also unveiled, featuring five number 5 O-Rings from the original AN 6227 O-Ring specification.
- 1993 ● Original certification of several PAI compounds to the 3-A Sanitary standards is achieved in 1993. In 2005 we recertified them and others under the newly revised standards. Currently 42 PAI compounds hold this certification.
- 1997 ● Paul Kadue succeeds Arnold Kadue as President of Precision Associates, Inc.
- 1998 ● Our first fully automated production inspection machine, a Basler, manufactured in Germany, is purchased in 1998 and installed in 1999.
- 2000 ● In 2000 we purchase an interest in Sil-Pro, a relatively young silicone molding company producing custom products manufactured in class 7 clean rooms for the medical industry. We continued to expand our ownership of the company until becoming primary owner in 2005. Precision Associates achieves certification to ISO 9001.
- 2005 ● Bradley Arnold Kadue, son of Quality Manager Richard Kadue and grandson of founder Arnold joins the company, starting at our Sil-Pro division.



Certified to
NSF/ANSI 61



Brad Kadue

2006

In 2006 our mold shop, Standard Machine Mold, moves from South Minneapolis into our facility at 740 N Washington to facilitate faster deliveries and better communication between molders and mold makers. Our current logo is released, recognizing that many of our employees and customers refer to us as PA or PAI. It also highlights our decision to consider ourselves a “seal” company as opposed to a rubber company

Also in 2006, compound 23761 is certified by the National Sanitation Foundation for compliance to NSF/ANSI 61 for use with Drinking Water System Components.

2008

In 2008 a class 7 clean room is added to our 740 facility in order to produce medical grade catalog and custom items in both silicone and non-silicone polymers. The first of many medical grade materials is added to our family of compounds

2011

A multiyear project culminates in 2011 as we move the contents of the 740 plant to our new home at 3800 Washington. Extensive preparation and planning allows the move to take place without interruption of deliveries. Our usual 99% On-Time delivery does slip to 98% during this time however.

2012

We purchase our first laser used for individually marking rubber parts. Now batch numbers, cure dates, expiration dates - even serial numbers can be engraved into non-critical areas of rubber seals.

2013

Due to our involvement in the Oil and Gas industry, PAI begins machining close tolerance high performance plastics in 2013.

O-Rings, our original catalog item, exceeds 2,500 different sizes, including the World’s Smallest O-Ring, our 4-4.

We begin using our Z-APT™ process to modify the surface of rubber parts to reduce friction without a lubricant.

2015

2015 brings the first certifications of high performance materials suitable for Oil and Gas applications. PAI has compounds certified for Norsok M-710 / ISO 23926-2, and later NACE TM0192-2012, and API 6A / ISO 10423:2009.

2018

Brad Kadue succeeds Paul as the 3rd family member to lead the company.

The first of six planned fully automated screw injection molding machines is added to our line of rubber presses.



- 2019 ● After a twenty-year successful involvement with our subsidiary company, Sil-Pro is sold. Under our ownership the company grew 10 fold.
- 2021 ● The Manufacturers Alliance names Precision Associates their Medium Sized Manufacturer of the Year.
- 2022 ● The Clean Room is expanded to 13,000 square feet doubling it's former size.
- 2022 ● The company begins molding Liquid Silicone Rubber in the new Clean Room to expand the medical device business.
- 2023 ● The facility achieves ISO 13485:2016 Certification that details the requirements for a quality management system specific to the medical device industry. There are a total of 6 LSR machines. 2 Horizontal, 1 Vertical and 2 Vertical/Horizontal Arburg presses.