

# NEW KITAMURA HELPS RELIEVE T

Article & Photos by *Sean Buur*



Jun Yang, a CNC programmer has been with SC Hydraulics for 9 years and does all the programming for the Kitamura HX400G

**S**C Hydraulic Engineering is a leading manufacturer and designer of an ever growing line of high pressure, air-driven liquid pumps, as well as air and gas boosters which are being used in a variety of industries and applications. Founded in 1953 by Bob Vedder and Willie Mohler, SC Hydraulics originally only had a few core pump products. SC Hydraulic was built off their knowledge and expertise in air driven liquid pumps, but their product line has expanded now to include an extensive collection of air and gas boosters, power units, systems and selected high pressure valves. "We are continually developing new products to meet a never-ending stream of newly emerging applications," says Lorenzo Martinez, SC's sales manager. "We continue to meet tougher, more demanding requirements that our domestic and international list of customers require."

Today, SC Hydraulic is in its third generation of management. Bob's daughter Donna Perez and granddaughter Christina Verbeek oversee the 65,000 sq.ft. manufacturing facility in Brea, California. SC has come a long way in a short half a century with high pressure liquid pumps capable of producing 65,000 psig of outlet pressure. For the past 30 years SC has been updating their CNC equipment and manufacturing pro-



The ABD-5 is a double-acting, single stage air booster with 5:1 pressure ratio. It can supply equipment with added air pressure when plant supplies are depleted due to overuse or undersizing. The flow available from the booster is ample for most equipment applications or units can be paralleled for additional capacity.

Applications: Engine air starter systems, Top off high pressure tires, Release spring actuated brakes, Increase maximum torque on small air tools, Top off and maintain pressure in die cushions, Increase marginal air pressure to valve actuators, Extra force for small air clamps, roll tensioners, assembly machines and air presses

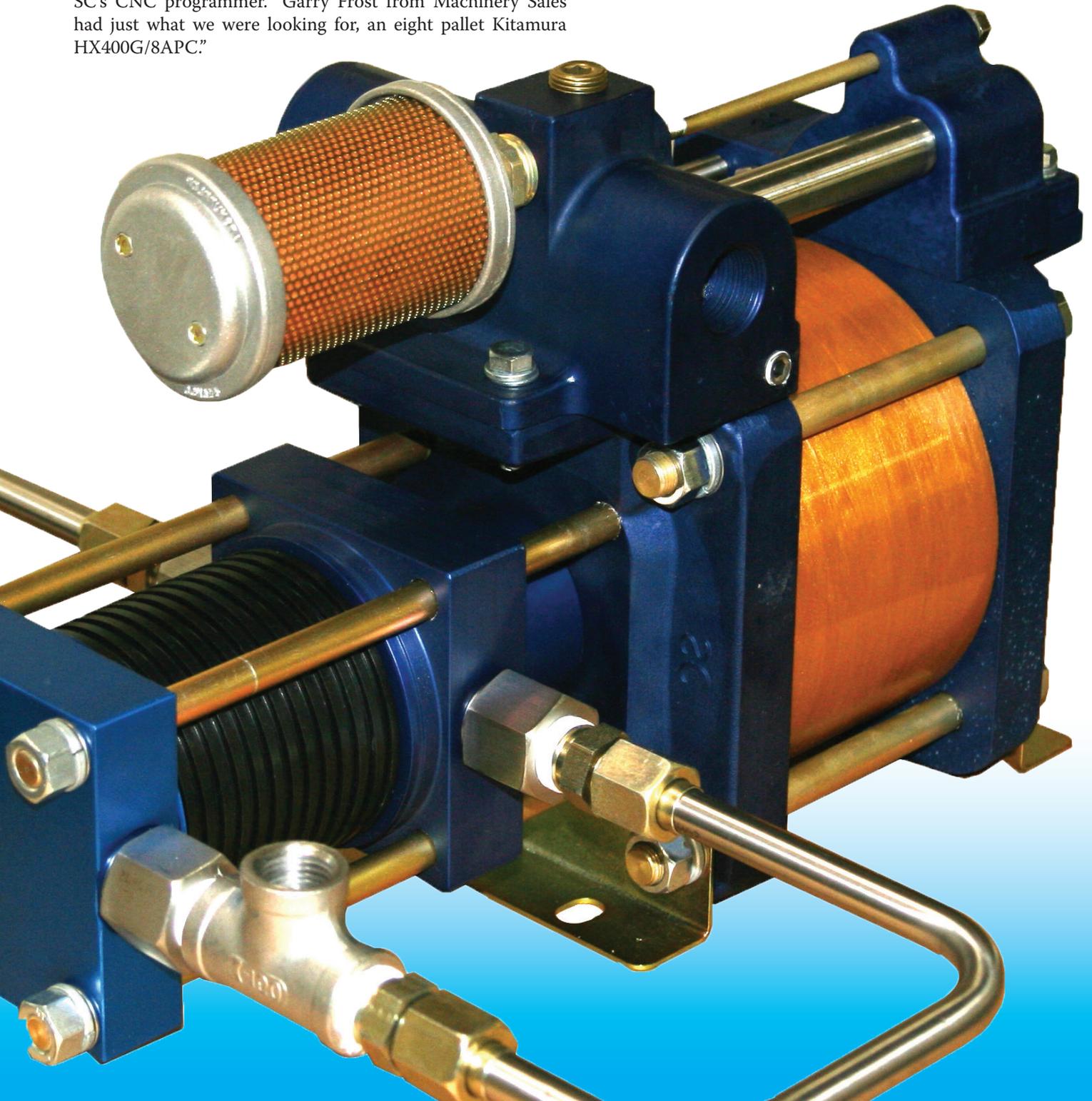
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# THE PRESSURE AT SC HYDRAULICS

cess. From its initiation every pump is engineered, prototyped, manufactured, assembled, tested, and marketed at SC Hydraulic. As the technology and product sales increased, so has the complexity of the internal parts. With those advancements came a need for a new machining center that could handle the added demand.

“With 50 employees running nearly round the clock it was important for us to get a machining center that could meet our tougher, more demanding requirements,” explains Jun Yang SC’s CNC programmer. “Garry Frost from Machinery Sales had just what we were looking for, an eight pallet Kitamura HX400G/8APC.”

“We have 30 or so products, with a variety of options,” describes Jun Yang. “Pumps are different sizes, made from different materials of construction and all have different pressure rating depending on their usage. We had to rethink some production techniques to better utilize the benefits of the new machine.” SC has hundreds of part numbers that require thousands of pieces to be made. The Kitamura was designed with high production capabilities in mind. The factory installed



8 pallets allows operator Thien Nguyen to have as many as 20 parts set up and ready to go at one time. Most of SC Hydraulic's parts can now be machined in one op.



pallet change systems provide for fully automatic operation, consistent cycle time and  $\pm 0.001$ " positioning accuracy. Speed and accuracy are key elements to SC's precision made pumps. With 8 pallets and 200 tools they can set up 15-20 parts at a time and be ready to go. Most of the parts can now be run in one operation thanks in part to the 24" of travel in directions of X, Y, and Z axis. The Kitamura's dual contact spindle design provides for optimum machining rigidity, higher cutting accuracy, and improved surface finish. Yang continues to tell how the new machine has allowed them to skip a few stages in production on some parts because the raw cut is much cleaner. Fewer steps in manufacturing means they can get parts to the assembly and testing departments much quicker.

Quality control is a big part of each and every pump SC Hydraulic makes. Over the last few years they have put a high priority of expanding QC Department as they expand their manufacturing capabilities. With a customer base that includes testing laboratories, fire departments and the oil industry, each pump is tested for 100% approval in the SC advanced testing center. Testing, honing, and boring practices are SC's standard requirements for our

state of the art products manufactured with a mirrored like honed finishes of 4.

As pioneers in the field of hydraulic engineering in 1953, SC Hydraulic continues to pace the field through more than half a century of innovation. As the

world wide demands of the industry grow so do they. Investing in people and technology keeps SC Hydraulic at the forefront of a global market and primed for another century of prosperity.

The 65,000 sq.ft. manufacturing facility in Brea, Ca is home to design, manufacturing, assembly and testing for all SC Hydraulic's pumps.



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