

Upstream Robot Application

- Truck unloading
- Ingot handling
- Skimming
- Dipping wax trees
- Sand core shooting
- Sand core handling
- Sand core assembly/gluing
- Sand core dipping
- Handling of expanded polystyrene
- Gluing of expanded polystyrene

Manufacturing Robot Application

- Insert
- Spraying
- Extraction
- Ladling
- Induction Heating System tending
- Forging Press tending
- Forging Roll Press automation

Downstream Robot Applications

- Deburring/Deflashing
- Degating
- Premachining
- Machine tool tending
- Secondary deburring
- Dry-Ice Cleaning
- High pressure Waterjet washing
- Material handle for Heat treat
- X-Ray (Quality)
- Leakage test(Quality)
- Dimensional verification(Quality)
- Blasting (Surface Treatment)
- Painting (Surface Treatment)
- Corrosion protection
- Palletising

Since its founding in 1971, Stilexo Industry Ltd. has been located in the village of Skillingaryd in the picturesque southern Swedish countryside in the county of Småland.

The company's primary customers are high-tech companies, who demand high-quality total solutions and absolute accuracy in terms of delivery. Most of the products produced by Stilexo are spare parts for the telecommunications, electronics and motor vehicle industries.

Stilexo's production unit is a mixture of automated machine-tending robotic cells that are used for die-casting and cutting with multitask operating machines. Modern information technology is an important part in the process stream, found everywhere from the construction floor to the quality testing area.

A closer look

Light-metal die-casting is increasingly used in the vehicle and electronics industries. Light metals weigh less, of course, plus they are simple to use, are good temperature conductors while also providing long-lasting stiffness.

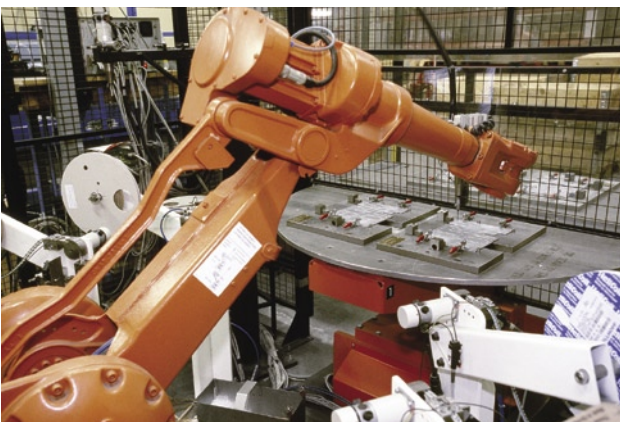
"We have a strong focus on making sure we are always ahead of the market needs when it comes to technical solutions, for



example the ennoblement of aluminium," says Krister Granber, manager for technical and customer projects at Stilexo. "We have to look very closely at the complete case to find possibilities for customizing in the most efficient way."

Cast goods undergo a long process before they become a finished product. The actual die-casting is only the beginning. Before the product can be considered finished, it has to undergo any number of other applications, including possibly degating, assembling, deflashing, deburring, premachining, surface treatments, quality checks and packing. All along the line, there are a lot of possibilities to define better and more efficient ways to do any of these processes.

To increase the volume of the cast goods it produces, Stilexo has invested in several different robotic solutions, which are part of complete production unit cells. The solutions are provided by Specma Automation Ltd. of Sweden.



High Pressure Die Casting

Case study: Complete solutions are Stilexo's business



Big benefits

One of the biggest advantages of using robots for die-casting is that they keep cycle-times to a minimum, and with fewer stoppages. Temperature changes are almost unknown with automated robotic solutions. Plus, workplaces with robots are much more attractive for employees. Programming, configuration and other tasks end up producing better results because they are demanding and interesting tasks, as opposed to the previous assembly line and hand work that employees have had to do that was often boring, dirty, repetitive and physically tiring.

Process technology know-how combined with balanced robot automation is the key for Stilexo's success.

Companies profit when they optimize an automation process, says Krister Granberg, using robots to get the highest profitability out of every die-casting machine and every robot solution. Small disturbances and problems have to be handled professionally, and avoiding making mistakes twice is important to being even more successful in the future, Granberg says, all things that robots are key to solving.

Facts about Stilexo:

Stilexo Industry Ltd.
Yearly Turnover: 150 MSEK
Employees: 100
Owner: Alteams Group
Certified ISO 9002, ISO 14001 and automotive industry QS9000

Facts about Specma Automation Ltd.:

Specma Automation Ltd., Laxå, Sweden
System integrator of manufacturing processes, mainly for the aluminium industry.
More than 300 robot installations in Sweden.

ABB and the Foundry Industry

Our wide range of foundry robots can handle more than 35 applications around foundry processes. Main manufacturing processes like Sand Casting, Die Casting, Precision Casting and Forging. ABB's high-performance robot technology provides lower production costs, scrap rates, increase up time and consistent with superior quality.

Completely sealed, equipped with a two-component high-resistance enamel surface and IP67 certified, ABB's Foundry Plus range of fully foundry adapted industrial robots can take more than just the heat. These robots are ready to meet the challenges of spits, sands and lubricants of modern high-performance foundries on a daily base.