



Brogoitti Construction sets a new standard in equipment layout and installation with Rugged Robotics.

THE PROJECT

→ Brogoitti Construction was hired by Composite Piping as the general contractor for a new manufacturing facility in Kilgore, Texas. This 44,000 square-foot facility features cutting-edge equipment with thousands of components shipped nearly 5,000 miles from the Netherlands by Selmers, a leading provider of industrial piping.

Before equipment installation could begin, Brogoitti Construction faced the challenge of creating a field layout for all of this precision equipment. A manual method of using reference points, tape and chalk would only provide basic outlines and “Xs” – not detailed equipment plates, bolt holes, part IDs and other details that would enable a smooth and accelerated installation. Recognizing the need for speed and precision over a large area without tying up internal resources, Brogoitti Construction reached out to Rugged Robotics to get the job done.

BROGOITTI CONSTRUCTION

Project:

COMPOSITE PIPING
MANUFACTURING FACILITY

Use Case:

EQUIPMENT
INSTALL LAYOUT

Project Size:

~44,000 SQUARE FEET

KEY BENEFITS OF AUTOMATED LAYOUT BY RUGGED

Project based outcomes that fit your needs

From prep to delivery, Rugged provided exactly what Brogoitti wanted and **ensured a successful outcome**—no trainings, dedicated personnel, or expensive leases required.

Detail enables error free installation

Rugged printed more than basic outlines and “Xs”—marking equipment plates, bolt holes and parts IDs that enabled equipment pre-staging and a build by number **approach to installation**.

Substantial time and dollar savings

Automated layout shaved 75% (6 weeks)—reducing the installation timeline from 8 weeks to 2 weeks and leading to hard dollars savings of **-50%**.

THE CHALLENGE

→ For a project of this size and type, Brogoitti Construction would typically require six to eight general crew members to manually measure and draw baseplate outlines throughout the site and then decipher paper equipment installation instructions—a process that would typically take at least 8 weeks.

With required tolerances of 3mm and complex installation processes, the risk of rework due to even the slightest manual error was incredibly high. Since components are interconnected, a mistake could wipe out a week's progress—causing cascading delays that push the plant opening date.



“ Without Rugged, we were looking at a long tedious process of pulling tape and popping chalk lines with an overlapping team responsible for the install. Rugged printed more detail, faster, and allowed our team to get the job started with a faster and smoother installation that enabled us to save 6 weeks on our schedule.”

CLINT BROGOITTI, OWNER/PARTNER -- BROGOITTI CONSTRUCTION

THE SOLUTION

→ Prior to arriving onsite, Rugged worked with Brogoitti Construction and Selmers to augment the initial basic 3D CAD file to include detailed equipment dimensions, and part numbers. Rugged's VDC engineers then created custom prints to optimize printing fully detailed geometry as efficiently as possible in the field.

After arriving on site, Rugged quickly added unmodeled obstacles and verified the model aligned with control points provided by a surveyor. Experienced Rugged operators then deployed two Mark1 robots to print over 3,000 marks, including part numbers, outlines, and labels for each base plate, spread over 44,000 square feet, in just 4 days. All with accuracy and precision that exceeded Brogoitti's expectations.

The Impact

Rugged's build-by-number approach to layout allowed Brogoitti to unload and pre-stage equipment by part number to allow fast, smooth, and build-by-number installation as soon as the layout of each section was finished. By partnering with Rugged, Brogoitti slashed its projected layout and installation timeline from eight weeks to under two weeks—a time savings of 75%. The hard dollar saving was ~50% to Brogoitti prior to accounting for additional savings from elimination of rework and delivering the facility to the owner faster.



AUTOMATE.
ACCELERATE.
DOMINATE.



Leave manual methods in the past and let Rugged Robotics modernize your layout processes. No more crawling around snapping lines—just pinpoint precision, detailed information, and expedited results.

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