

CASE STUDY

WHY SMART CONTRACTORS ARE SWITCHING TO “CUSTOM EQUIPMENT” FOR BLAST CONTROL SYSTEM

A Case Study on How Customized Modular Blasting and Recovery Systems Improve Operational Flexibility, Productivity and Adaptability Across Diverse Projects



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Figure 1: Custom Equipment for Blast Control System



Figure 2: Blast Control System Solutions



MODULAR
DESIGN



FLEXIBLE
DEPLOYMENT



FASTER
SETUP



HIGHER
PRODUCTIVITY



LOWER
OPERATIONAL
COSTS



QUICKER
DEPLOYMENT

Reduces setup and
breakup time at
job sites.



IMPROVED
WORKFORCE
EFFICIENCY

Simplifies operations
and increases
productivity.



GREATER
ADAPTABILITY

Works in various site
conditions and project
requirements.



LOWER
INVESTMENT
COST

Minimizes long-term
cost with modular
expansion.



FUTURE
EXPANSION
READY

Easily add modules
as per project
demand.



International Journal of
Recent Technology Science & Management



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Why Smart Contractors are Switching to “Custom Equipment” for Blast Control System



Figure 1: Custom Equipment for Blast Control System

1. Overview

A blasting contractor working on various projects, including infrastructure, industrial, and marine, requires unique and flexible abrasive blasting and recovery equipment to support the

diverse needs of each job site. The traditional equipment often struggled to adapt to the unique access restrictions and remote locations of confined-space projects.

The contractor adopted custom-based configured blasting and reclaim systems to enhance operational performance, ensuring they met the needs of standard equipment components.

This case study was to create the more adoptable solution that would support a range of projects while improving the efficiency as well as reducing downtime.

2. Problem

The contractor experienced several issues, which were chronic at the time of managing projects in different environments.

Several problems that impacted project performance include:

- Access restrictions arrive at job sites.
- The increased setup and breakup time affects the project.
- Difficulty in equipment movement
- Limited scalability when it comes to larger projects
- Higher operational cost
- Equipment utilization efficiencies

The company required a solution that would easily adapt to unusual site conditions without having to require multiple equipment systems.

3. Challenges

The contractor was looking for the challenges, which include technical ones as well as logistical ones.

The major challenges incorporated

- Restriction in site access.
- Availability in limited lifting equipment requirements

- Different production capacities
- Fast deployment expectations
- Needed flexible future system expansion

The major challenge was to create a system that could offer portability along with high production performance. The contractor also needed equipment that could operate in both an integrated system and separate modules, depending upon the project requirements.

4. Solution



Figure 2: Blast Control System Solutions

The contractor implemented a customized equipment strategy that utilizes standard equipment components to create modular blasting and recovering units.

4.1 Modular equipment configuration

The system was designed to operate independently, or they are connected together as part of the complete blasting solution.

The system provided the following solutions:

- Eased in transportation
- Site accessibility got improved.
- Setting up efficiency became faster.
- Improvement in flexibility

4.2 Flexible deployment options

Modules could be configured depending upon the project requirements and site conditions.

Configuration options incorporated

- Standalone skid units
- Stacked arrangements
- Side-by-side layouts.

4.3 Future expansion capability

The modular design was meant to support the additional modules via specialized modules, which include

- Abrasive storage systems
- Additional recovery units
- Blast pot modules
- Chemical injection systems

5. Outcome

The new equipment strategy delivered the measurable benefits across the blasting projects' range.

The contractor achieved

- Quicker deployment time
- Improvisation in workforce efficiency
- Greater adaptability across projects
- Long-term investment cost is lower.

6. Key takeaways

Modern blasting projects usually need equipment that can easily adapt to the changing side solutions' production demands as well as access limitations. Modular blasting equipment often provides a practical way to improve the performance without having to rely on fully customized equipment.

Key takeaway 1: This case study reflects how customized equipment design can improve the operational flexibility, simplify the deployment process, and support business growth in the long term.

Key takeaway 2: By utilizing the right equipment strategies, the contractors can achieve safer operations, improved productivity, and maximum return on investment.

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