Hodge Clemco Scrapper Floor Full Recovery Shot Blast Room Installation

**Stock Code:** ST645S  
**Manufacturer:** Hodge Clemco  
**Model:** 7 Mtr shot blast room with scrapper floor recovery  
**Year of Manufacture:** 2009  
**Serial:** HC 9871  
**New or Used:** Used (Second Hand) 
**Work Envelope (WxDxH):** 7095 x 7000 x 4000 mm  
**Work Handling Method:** Manual blast room  
**Other Info:** Exceptional modern blast room facility  
**External Dimensions (WxDxH):** 8,400(+2000 ancilliary)x 7100 x 5500 mm

Hodge Clemco modular constructed shot blast installation

This superb example of a modern shot blast room installation is an ideal marriage of a Spraybake Insulated and armoured modular panelled blast room, coupled with a Hodge Clemco scrapper floor recovery system, bucket elevator, media storage and filter hopper feed unit, Clemco 2452SGV blast machine and a matching Nederman MJC158/66/38 reverse pulse dust collector.

Individual component descriptions:

Spraybake panelled room.

The Spraybake panelled booth has been designed to be modular and offer the flexibility to either extending or reconfiguring the footprint and height to suit any blast operation that might be required.
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The booths are designed for internal location and are manufactured from heavy gauge 50mm insulated coated steel double skin panels with stainless steel jointing and external goalpost structural frames. The smooth internal surfaces allow for easy cleaning and efficient grit recovery.

The internal exposed faces of the booth are lined with hard wearing shot blast quality rubber and the 4 blast room roller shutter doors are protected internally by hinged swing aside hard wearing shot blast quality rubber curtains.

The room provides an excellent working environment with easy access pedestrian doors, dust free air intake ventilation ducts and ample lighting with 14 independant units fitted with a total of 40 x 58W florescent tubes.

The room can be easily accessed through any of the paired front or rear 2700 x 3000 mm electrically operated roller shutter doors or through either of the pedestrian side doors. Each of the doors have been fitted with safety interlocks to inhibit any blasting if any of the doors are open.

Hodge Clemco scrapper floor recovery system

The scraper floor consists of a series of corridors fitted with pivoting blades in a submerged frame with a steel gridded top plate. The top plate allows a flush fitting so items can be easily rolled in and out without obstruction. The gridding also provides a slip free environment for the operator to work within.

A pneumatic cylinder drives the blades on a reciprocating forward and backward stroke across the width of the room conveying spent abrasive into the end cross section which then pushed the media towards a single collection point hopper.

Each corridor moves in a reciprocating back and forth motion, and because the distance between the scrapers is less than the distance of travel, each scraper moves abrasive forward, as the rubber flap in this direction is locked against the steel comb behind it, to the next in a shunting motion. On the reverse stroke the rubber scraper blade, unhindered in this direction by the steel comb, is free to pass over the previous scrapers deposit of abrasive.

The abrasive is pushed forward to a final corridor positioned at right angles to the booth where it conveys the abrasive to the elevator and is recycled.

The depth of the recovery channel is only 130mm ensuring that when a flush finish is required between the factory floor and the blast room, only a 325 mm minor excavation is required.

Hodge Clemco bucket elevator, scalping unit, magnetic separator, air wash and silo hopper unit.

Hodge Clemco’s Belt and Bucket Elevator recovery system is a tried and tested design and is specifically suited for heavy duty and high production applications.

The bucket elevator recovers the abrasive from the metering chute fed from the gravity hopper, scraper floor conveyor. The abrasive and contamination are then lifted by the buckets mounted onto an elevator belt where the media is discharged passed a magnetic separator and into the scalping unit which removes oversized contamination automatically.
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The dust is removed from the reusable abrasive via an air wash which is powered from the dust collector, the cleaned material then gravitates through to a silo storage hopper mounted above the Hodge Clemco 2452 blast machine.

Hodge Clemco 2452 blast machine

The 2452 blast machine is the largest model in the Clemco range. It has an expendable abrasive capacity of 300kg with overall dimensions of 1320mm high x 850mm x 960mm, making its use ideal on larger projects on this fixed blast room installation.

Nederman MJC158/66/38 reverse pulse dust collector.

Choice of the correct model of dust collector is integral to any closed blasting system. The removal of airborne particles from the environment of a blast chamber is essential to maintain efficient operation. Savings made by cutting costs at this point will only lead to reduced efficiency and early failure of the system which is why Hodge Clemco have opted for the premium Nederman MJC system.

The important factors to consider when choosing a shot blast dust collector are:

- **Air speeds** - The correct air speed through the blastroom prevents settlement of airborne particles in the work area.
- **Air Flow** - The direction in which the air flows through the blast room is critical to the process. Correctly sized and positioned air inlets and extraction duct work ensure that first class ventilation is achieved.
- **Filtration Area** - This is the surface area of filter material within the dust collector. It is essential that the ratio between filtration area and air volume is correct to prevent premature failure of the extraction system.

All of which are ideally suited to the MJC system extractor.

The reverse pulse cartridge dust collector incorporates cartridges rather than filter bags. The system is set so that at pre-determined intervals a short pulse of air causes the dust accumulated on the cartridges to fall into the collection bins below.

The filter cartridges are cleaned whilst the collector is in operation ensuring that the efficiency of the collector is maintained.

Reverse pulse dust collectors can be used with high specification filters on hazardous dust applications and can be operated in conjunction with secondary or HEPA filters for increased efficiency if required.

The MJC range of reverse jet tubular cartridge dust collectors was developed for continuous operation in industrial process filtration and dust collection applications; incorporating patented Nederman UniClean cartridge technology for maximum cleaning efficiency and extended life.

Air Volume Range: 10,000 CFM 17,000 m³/hr

Key features
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Wide standard filter range of available Robust weatherproof welded steel construction Space saving dual integral 11kW fans Independently tested with ATEX compliant features for St1, St2 and St3 dusts Integral pre-separation chamber, cross flow / down flow inlet air pattern

Services required

Electrical

415 Volts 3ph + N

Ventilation 415 V 21 Amps FLC per phase

Abrasive separator 0.25kW 1 Amps FLC per phase

Bucket elevator 0.75 2 Amps FLC per phase

Lighting 240 Volt 1ph + N 8 amps FLC

Total installed power = 36 amps per phase

Air requirements

Blast nozzle 8mm @ 100 psi = 196 cfm

Breathing helmet = 10 cfm

Dust collector cleaning pulse = 12 cfm

Scrapper floor 7 cylinders @ 6 cfm = 42 cfm

Total maximum recommended requirements = 260 cfm

This high grade systems is now being offered at a fraction of the price of a new similar installation, that was originally finalised by Hodge Clemco in 2009 by providing the scrapper floor recovery system with dust extractor at an original sales price of £78,000 alone excluding the civil's or blast room itself.

View Hodge Clemco Scrapper Floor Full Recovery Shot Blast Room Installation on our web site at http://www.rileysurfaceworld.co.uk/machines/25541.htm

PHOTOGRAPHS TAKEN PRIOR TO REFURBISHMENT.