

VERTICAL STEEL BLASTING



Vertical Blast Cleaning of Steel

The Blastrac-EBE blast cleaning machines for steel surfaces are designed for processing large areas on vertical or near vertical surfaces. The machines are suspended from either a crane or a rigging system and operate in an up or down direction to clean and profile steel tanks or ship hulls. They are remotely controlled from a mobile work station. The working principle of all Blastrac-EBE equipment is based on the laws of kinetic and mechanical energy. The cleaning operation is performed by steel abrasive being thrown at high velocity against the surface to be cleaned.

Throwing action is achieved through centrifugal force, where a wheel with blades located radially, is rotated at high speed. On to this revolving wheel, abrasive is fed in such a manner that it travels along the radial length of the blades and then is thrown off in a high velocity stream at the surface to be cleaned, efficiently blast cleaning the work surface.

After the abrasive has impacted the work surface, it rebounds back into the machine, taking the rust and old coating debris with it. Inside the machine the abrasive is separated from the dust and debris. The abrasive is returned to

the abrasive storage hopper to be re-used. The debris is transported by air flow into the dust collector, where it is collected to enable it to be packaged into containers for disposal. This process is an on-going and automatic continuous operation.

A system of especially designed magnets, specifically arranged and attached to the machine, pull against the steel work surface. By this means the machine is maintained in close contact with the work surface, thus ensuring that abrasive loss and dust emissions are kept at a minimum. This allows the machine to operate in close proximity to other process functions and follow on painting procedures can continue without loss of time.

Suspension Rigging Systems

The rigging systems are especially designed for the Blastrac-EBE 350 VH blast cleaning machine. The system is designed to fix to a tank or similar structure, and suspend the 350 VH machine by means of a winch. The winch can be operated in a strictly speed controlled manner, in an up or down direction, thus controlling the output of work, and the quality of surface finish produced by the machine. The winch is mounted on to a drive frame trolley that

can be moved from left to right or right to left, to enable the machine to be moved to its next operation track. All the suspension rigging system powered operations are controlled from a remote station from where the machine operator can control work output of the system as a whole.

The rigging system supplied by Blastrac-EBE are manufactured from several high grade components and can be assembled in position in a very short time.

The system consists of 5 main components:

- 1) The drive frame which allows the left and right movements.
- 2) Winch unit that controls the up and down movements.
- 3) Side support arm to ensure a constant distance from tank shell to the middle of the machine;
- 4) Hoist arm and pulley frame that controls the winch cable;
- 5) Turnbuckle as an extra safety guard.

To give vertical support, there are three types of rigging systems for the different types of storage tanks: cone, dome and floating roof tanks.



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