

Drum Handling System

Drum Handling System
DHS/1P/250/1800/180INV//90ROT/B

Drum Handling System Description

This Drum Handling System was designed to lift a 205 Litre drum to a height of 1800mm. Once at this height, the drum can be completely inverted and lowered into a docking station. The drum was fitted with a conical sealing funnel with a manual shut off valve at the end. Prior to lifting, the drum was clamped into the lifting frame using a sprung loaded safety mechanism. This safety mechanism included an electrical interlock that only allowed the Drum Handling System to be operated if the clamp is closed properly.

Once at the raised position, the drum could be inverted through 180 degrees. In addition to the vertical movement and the inversion of the drum, it was possible to manually swing the drum lifting arm through an angle of 90 degrees. Therefore once the drum is raised and inverted, it can either be swung over its docking station or, if the docking station is mobile, it can be moved beneath the inverted drum. In either instance once the inverted drum and receptacle were correctly aligned, the drum was lowered to dock with the receptacle. Once in this position, the manual valve on the drum funnel was opened to allow the contents of the drum to be discharged.



Single Column Drum Handling System

Call now on **01495 312 172**

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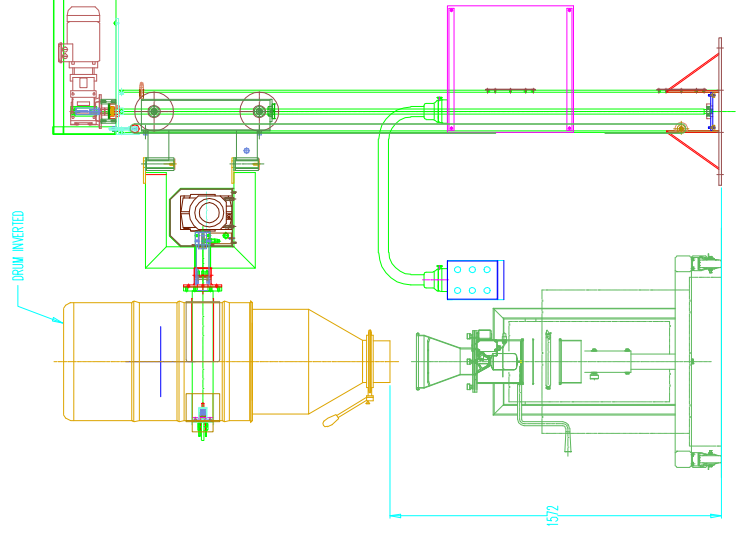
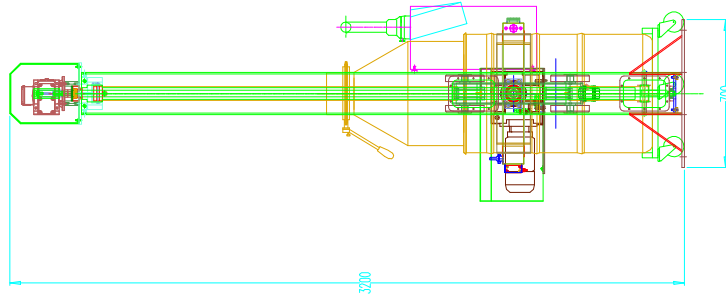
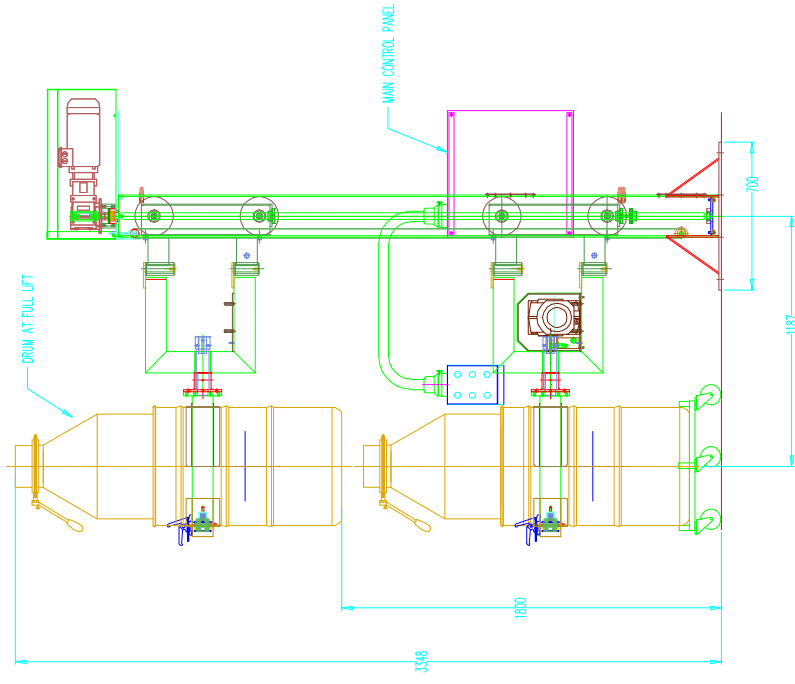
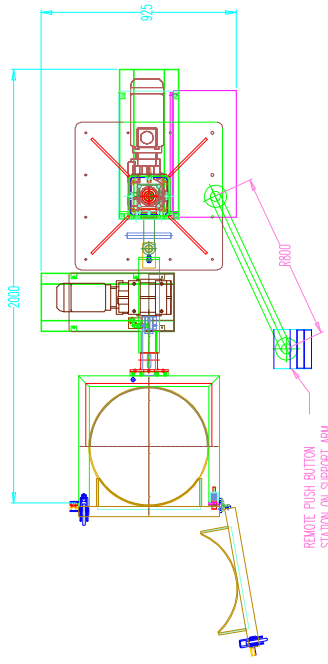
The Drum Handling System was constructed from Grade 304 stainless steel and was designed to be bolted to the floor. Lifting with the Drum Handling System was accomplished via a machined ball screw and lifting nut mounted within the lift column. The ball screw was rotated by an electrical motor gearbox that caused the lifting frame and drum to be raised and lowered. This raise and lower control was via dual 'dead man's handle' control. When the lift is at the full up position, the drum was inverted by an electrical motor gearbox drive once again via dual 'dead man's handle' control. The electrical control panel was a stainless steel enclosure mounted to the hoists main column. The operator push button station was mounted on a Rittal Support Arm System which was fixed to the top of the main control panel.

Drum Handling System Specification

DESCRIPTION	DRUM HANDLING SYSTEM
MODEL No.	DHS/1P/250/1800/180INV//90ROT/B
CAPACITY	250Kgs
LIFT HEIGHT	1800mm
OVERALL HEIGHT	3200mm
DRUM DISCHARGE HEIGHT	1572mm
INVERT ANGLE	180 DEGREES
ROTATION ANGLE	90 DEGREES EITHER WAY
CONTAINER DESCRIPTION	STAINLESS STEEL DRUM
BASE ARRANGEMENT	BOLTED TO THE FLOOR
CONTROL CIRCUIT	24Vac
ELECTRICAL RATING	IP65
ELECTRICAL CONTROL	DEAD MAN'S HANDLE PRINCIPLE
LIMIT SWITCHES	PROXIMITY SENSORS
LIFT MOTOR DETAIL	1.1Kw. 3 PHASE, 50 CYCLE, 415V
MOTOR BRAKE	415V SEPARATELY EXCITED
INVERT MOTOR DETAIL	0.37Kw, 3 PHASE, 50 CYCLE, 415V
MOTOR BRAKE	415V SEPARATELY EXCITED
LIFT SCREW	BALLSCREW
LIFT SPEED	+ 6.0 METERS/MINUTE

Drum Handling System Application Story

This Drum Handling System was manufactured for a Pharmaceutical Processor to handle drums of a stainless steel powder. The drums were lifted, inverted and rotated above a Comil milling machine. The drum spout was lowered to dock with the Comil and the powder discharged by opening a valve. Once all of the powder was discharged and milled, the empty drum was lowered back to its wheeled trolley to be replaced with a full drum.



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REMOVE ALL BURRS AND SHARP EDGES
TOLERANCES : UNLESS OTHERWISE STATED
FABRICATIONS : +/- 2.0mm
MACHINING : +/- 0.2mm
SHEET METAL WORK : +/- 1.0mm AND +/- 1.0 DEG

DRAWN	JPW	CHECKED	DATE
			02-10-06

DRAWING NUMBER

DRAWING TITLE

GENERAL ASSEMBLY OF DRUM HOIST

BP3077-1