

Double Pillar Drum Lift

Double Pillar Drum Lift BTM/800/3800/B/G/SL

Double Pillar Drum Lift Description

This double pillar drum lift is designed to lift and tip a pair of 200 Litre Tomato Puree Drums at a discharge height of 3800mm into a 5000 Litre Stainless Steel Storage Tank. The double pillar drum lift was constructed from Grade 304 stainless steel and was designed to be bolted to the floor. Lifting with the double pillar drum lift is accomplished via chains driven by a motor gearbox mounted at the top of the one column with a crossover shaft to the other column. To make loading and unloading of the drums as efficient and easy as possible, the base of the lifting frame is fitted with gravity rollers. The drums can be fed directly off the gravity infeed roller track into the lifting frame. The drum entrance to the double pillar drum lift is guarded using a safety light barrier. Once in the lifting frame, the drums are clamped into the lifting carriage using an electrically interlocked sprung gate. If this gate is not closed and latched, it will automatically spring open preventing the double pillar drum lift from operating.



Double Pillar Drum Lift with 5000 Litre Storage Tank

Call now on **01495 312 172**

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Safety Guard to PD 5304:2005 Safety of Machinery

The safety guard is constructed from 40 x 40 x 3mm stainless steel box section and both 2mm stainless steel sheet and 3mm wire, 40mm aperture stainless steel weld mesh to meet the requirements of PD 5304:2005 Safety of Machinery. It encloses the double pillar drum lift to a height of 4745mm on all four sides with a safety light barrier guarding the drum entrance. There was also a hinged door at the front of the double pillar drum lift to allow the operator access to the clamp the drums into place and to retrieve the empty drums after tipping. The guard door is electrically and mechanically interlocked preventing the double pillar drum lift from operating with the door open. In addition, the guard door can only be opened when the lifting carriage is at the full down position. The double pillar drum lift control system has provision for a 'Call for Product' signal to be connected.

Double Pillar Drum Lift Specification

DESCRIPTION	DOUBLE PILLAR DRUM LIFT
MODEL No.	BTM/800/3800/B/G
CAPACITY	800Kgs
TIPPING HEIGHT	3800mm
TIPPING ANGLE	180 DEGREES
OVERALL HEIGHT	5350mm
MACHINE HANDING	LEFT OR RIGHT HAND AVAILABLE
TIPPING CHUTE	OPTIONAL
CONTAINER DESCRIPTION	570mm DIAMETER x 970mm HIGH STEEL DRUMS
BASE ARRANGEMENT	BOLTED TO THE FLOOR
CONTROL CIRCUIT	24Vac (STANDARD)
ELECTRICAL RATING	IP65
LIMIT SWITCHES	ADJUSTABLE ROD
MOTOR DETAIL	2.2kW, 415V, 3 PHASE, 50 CYCLE
MOTOR BRAKE	415V SEPARATELY EXCITED
GEARBOX DETAIL	FLENDER
LOAD CHAIN	1" SIMPLEX SEDIS DELTA Z
LIFT SPEED	ADJUSTABLE VIA AN INVERTER

Double Pillar Drum Lift Application Story

This Tomato Puree Handling System was required to handle drums of tomato puree from a pallet, into a double pillar drum lift and to be lifted and tipped into a storage tank. The system comprised of four distinct items as follows:-

Powered Roller Conveyor for Pallets of Tomato Puree Drums

This was a 3200mm long section of Powered Roller Conveyor that was loaded with 1200 Kgs Pallets containing 4 drums of Tomato Puree by a fork truck. The pallets were then indexed via dead man handle control to the outfeed end where the pallet was unloaded, two drums at a time. The roller track was 1200mm wide across the roller with a 100mm roller pitch. The whole conveyor was 400mm high and was supplied as a single length with a braked drive motor, a fork truck barrier and was manufactured from mild steel with a painted finish.

Drum Transfer System from Pallet Conveyor to Single Drum Gravity Conveyor

The Drum transfer was carried out via a pair of semi automatic drum clamp tongs suspended from a lifting frame attached to an overhead lifting gear. The pallet to be unloaded was driven towards the end of the powered roller track and the drum clamps lowered over the drums with a chain hoist. The drums were clamped securely and transferred onto a gravity roller track using the powered overhead hoist transfer. This whole system was a dead man handle operation via a push button control pendant. Once the first pair of drums were removed from the pallet and moved along the single lane roller track, the remaining pair of drums were transferred.

Full Drum Gravity Roller Track Infeed Conveyor

This gravity roller track conveyor allowed two drums to be stored in single file for loading into the double pillar drum lift. It was approximately 1600mm long, 650mm wide and 400mm high off the floor. Each drum was transferred along the roller track by simply pushing it. The roller track and rollers were manufactured from 304 stainless steel and were mounted on M12 adjustable feet. There were also side guides to prevent the drums from falling off the roller track. The drum lids and clamp rings were removed at this position and the bag pulled down over the rim of the drum.

Double Pillar Drum Lift

The double pillar drum lift was designed to lift and tip a pair of Tomato Puree drums into a 5 Tonne Stainless Steel storage vessel. The double pillar drum lift had a Safe Working Load of 800Kgs and tipped the drums through an angle of 180 degrees at a height of approximately 3800mm. The double pillar drum lift was constructed from Grade 304 stainless steel and was bolted to the floor. Lifting with the double pillar drum lift was accomplished via chains driven by a motor gearbox mounted at the top of the one column with a crossover shaft to the other column. The inner front face of the lift and safety guard were fitted with stainless steel sheet to allow any tomato puree from the bags to be easily washed away.

Having loaded a pair of drums or a single drum, the double pillar drum lift was operated by pressing the 'Start' button. The double pillar drum lift automatically raised to the full up position where the drums were inverted through 180 degrees. The double pillar drum lift paused at this position for an adjustable time period and then returned to the full down position.

Tomato Puree Storage Tank

The Tomato Puree Storage Tank was a 5000 Litre tank manufactured from 3mm Grade 316 Stainless Steel with a 5 Tonne storage capacity. It was 1900mm diameter with an overall height of 3680mm and stood on three adjustable feet. The top the tank was fitted with a rectangular hopper through which the drums were tipped as well as a manhole access and CIP Cleaning System. The hopper was fitted with a pneumatically operated lid which was interlocked with the double pillar drum lift.

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