



*Deliver up to ten perfect rolls at a time.*



## Single Tower Clamp



Single Tower Clamps come with equal length arms or long and short arms. The equal length arm design is used when the driver is moving rolls in general applications. The long and short arm configuration is best when tight stacking is required.

### FEATURES

- All Cascade Tower Clamps include a flow divider for equal arm movement
- Open tubular frame structure from high strength steel
- Thin profile arms and pads
- High visibility frame
- Routing of hydraulic tubes and hoses to maximize visibility
- Floor stands
- Pad protectors on lower arms

### OPTIONS

- Hydraulically extendable upper arms
- Contact pads: Flexipad, Bonded Rubber, Bonded UDP, Bolt-On Rubber
- AFC (Adaptive Force Control)
- Custom roll size ranges handled against the bumper
- Custom pad size and location modifications
- Integral sideshifter
- Integral mounting

### Top Arm Shut-Off

The top arms can be shut off to increase the efficiency of the clamp. For example—when handling just two rolls instead of four, shutting off the top arms allows the lower arms to clamp faster without waiting for the top arms to bottom out.

### Upper Arm Options



#### **Extendable Upper Arm** (shown above)

Allows the upper arms to be positioned to match the height of the load for optimized stabilization of the load.

#### **Fixed Upper Arm**

Ideal when stock sizes do not vary enough to benefit from an extendable upper arm.

# *Cascade Tower Clamps are built for the most demanding applications.*

Cascade has worked with the top paper companies and OEMs to develop the world's best Tower Clamps. Cascade Tower Clamps feature state-of-the-art hydraulics to control arm sequencing, and are available with the industry's best selection of contact pads. Driver friendly features are engineered into every clamp design to promote damage free handling with maximum control of clamp force and a good range of "against the bumper" handling.



## **Key Benefits**

### ***Fewer Handling Sequences***

When handling 2-10 rolls at one time, fewer runs in the warehouse are required.

### ***Fewer Lift Trucks and Drivers***

One driver and one lift truck accomplish the task of many single roll clamps.

### ***Quicker Loading and Unloading***

When the supply chain requires rapid response to moving large volumes of rolls in a short time frame the Tower Clamp is an excellent choice.

### ***Handling In a More Controlled Atmosphere***

The Tower Clamp allows the driver to move multiple rolls efficiently without the hectic pace that would be required of a single roll clamp to handle the same number of rolls.

### ***Reduced Handling Costs— Increased Profits***

Efficiency = Savings.



## Double Tower Clamp



Note the clean lines of the structure and hydraulic components, which maximize driver visibility.

### Upper Arm Options



#### **Extendable Upper Arm** (shown above)

Allows the upper arms to be positioned to match the height of the load for optimized stabilization of the load.

#### **Fixed Upper Arm**

Ideal when stock sizes do not vary enough to benefit from an extendable upper arm.

### FEATURES

- All Cascade Tower Clamps include a flow divider for equal arm movement
- Open tubular frame structure from high-strength steel
- Thin profile arms and pads
- Solid or Split center arm configurations
- High visibility frame
- Pivoting center arm standard
- Routing of hydraulic tubes and hoses to maximize visibility
- Floor stands
- Pad protectors on lower arms

### OPTIONS

- Hydraulically extendable upper arms
- Hydraulically positionable center arms
- Fixed center arm
- Contact pads: Flexipad, Bonded Rubber, Bonded UDP, Bolt-On Rubber
- AFC (Adaptive Force Control)
- Custom roll size ranges handled against the bumper
- Custom pad size and location modifications
- Integral sideshifter
- Integral mounting

### Top Arm Shut-Off



The top arms can be shut off to increase the efficiency of the clamp. For example—when handling just two rolls instead of four, shutting off the top arms allows the lower arms to clamp faster without waiting for the top arms to bottom out.

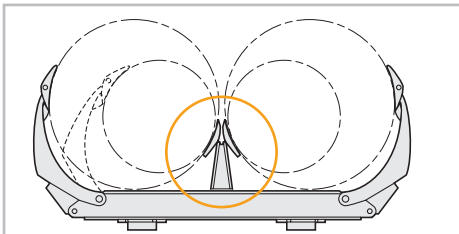
## Arm Sequencing Options for Double Tower Clamps



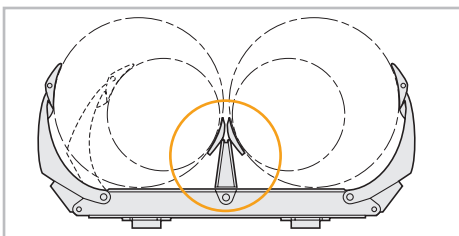
**Double Tower with Fixed or Pivoting Center Arms**

Arms sequence as follows:

- Outer long arms move equally when closing and opening.



**Fixed Center Arm**



**Pivoting Center Arm**  
(arm is spring loaded)



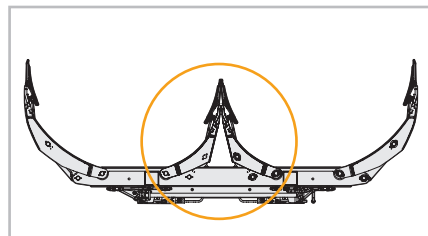
**Double Tower with Hydraulically Positionable Center Arms**

Arms sequence as follows:

- ① During closing, outer arms close first to contact roll.
- ② Center arm closes until contacting roll.
- ③ Clamp force increases after all roll pads have contacted the rolls.

### The benefits of Hydraulically Positionable Center Arms:

- Prevents rolls from being pushed across the floor
- Helps to prevent unwanted roll movement
- Arm movement is controlled by flow dividers to provide equal arm movement during opening and closing.



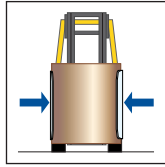
**Hydraulically Positionable Center Arms**

**Whatever the application, we can handle it.**

# Damage Reduction Options for Cascade Tower Clamps

## AFC

AFC (Adaptive Force Control) is a computer-controlled clamping system that automatically controls the clamp force in proportion to the load weight.



AFC is available for all configurations of both the Single and Double Tower Clamp. The system accurately applies the correct amount of clamp force to all arms, even when handling partial loads.

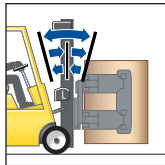
## Quick Change Mounting Kit

Increases versatility by allowing attachments to be easily interchanged.



## Tilt Control

Tilt Control automatically controls the angle of the mast and attachment, which automatically aligns pad to roll, and roll to floor.



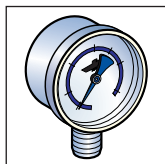
## Load Cushion™

Hoist system accumulator that absorbs shocks and reduces the clamp force required to handle the load.



## Pressure Gauge

To 345 bar.



## Laser Pointer

Cascade's Laser Pointer projects a sharp, red line on the paper roll, making it easy for the driver to see where to place the pads on the roll.



## Four Position Pressure Regulator

The pressure regulator with three pressure settings plus relief valve permits using the minimum hydraulic pressure required to satisfactorily clamp a load.



## Light Tower

The light tower shows the pressure setting in use when installed with the Four Position Pressure Regulator.



## Single Pressure Setting Relief Valve

Limits hydraulic pressure in 1 line to attachment. Two valves required per auxiliary function.



## Bi-Directional Pressure Relief Valve

Allows single valve to be used for each auxiliary function to limit hydraulic pressure to attachment.



## Clamp Force Indicator

Measuring device that shows the clamp force applied to the load. Used for clamp pressure calibration with systems using pressure relief valves.



## Portable Clamp Force Tester

Excessive clamp force is one of the leading causes of paper roll damage. Use Cascade's Clamp Force Tester to easily determine how much force the roll clamp applies to a roll.



## Electronic Pressure Regulator

Allows operator to select proper clamp force with control switch that can be mounted for maximum operator convenience.

