Innovative White Goods Clamp With Optimal Clamp Force Distribution

APPLICATIONS
Designed for the warehousing, beverage, white goods, appliance and electronics industries, the WG Model clamps allow palletless handling, which improves warehouse space utilization. The WG model features and a variety of options result in improved productivity and less product damage.

FEATURES
- Efficient hydraulic system which minimizes energy consumption and maximizes performance.
  - Clamp and backhand protection.
  - Flow divider for equal arm movement.
  - Top-mounted hydraulic cartridges and test port for ease of access.
  - Sideshift circuit relief optimizes sideshift speed.
- Rugged design for optimal strength, durability and performance.
  - High strength steel frame.
  - Lubrication-free, full length UHMW bearings.
  - High strength steel castings.
- Efficient arm design.
  - Thin arm profile for manipulating tight loads between stacks.
  - Rubber-faced aluminum contact pads for secure handling of loads.
  - Patented multi-support design for optimal clamp force distribution.
  - Patented Adjusta-Block on arms offers six adjustment points for optimal clamp force distribution. (WGF model).
- Designed for convenience and performance.
  - Integrated true centering key for precise and secure installation.
  - Available in two pressure offerings to match attachment to truck hydraulic system.

MODELS
- Two arm configurations available:
  - WGF: Flexipad, both arms single articulated.
  - WGS: Both arms single articulation.

OPTIONS
- Custom opening ranges and frame widths.
- Custom arm lengths, heights and pad surfaces. Application specific contact pads (sizes & surfaces).
- Load bumper for extra protection when handling loose loads.
- Load backrest and arm extensions for extended tier handling.
- Various ISO mounting options including class III and quick-disconnect features.
- External sideshift mounting.
- Alternate valve configurations for left hand or right hand third and fourth function hydraulic installation.
- Application-specific customization.

Shown with optional VFC
J-SERIES WG MODEL CLAMPS

WGF - Single Articulating Arms Flexipads with Adjusta-Block

Low Pressure - For trucks delivering up to 2,760 psi of operating pressure.

<table>
<thead>
<tr>
<th>Catalog Order No.</th>
<th>Capacity@Load Center</th>
<th>Frame Width</th>
<th>Opening Range</th>
<th>Mitg. Class</th>
<th>Hook Spread</th>
<th>Weight</th>
<th>Effective Thickness</th>
<th>Vertical Ctr. of Gravity</th>
<th>Overall Attachment/Arm Height</th>
<th>Useable Arm Length</th>
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</table>

High Pressure - For trucks delivering over 2,760 psi of operating pressure consult Cascade.

A shim adjusted left single arm and double articulating right arm with Adjusta-Block model (WGE) is also available.

All models include an integrated sideshift circuit.
Standard valve configuration is with clamp ports on the right and sideshunt on the left. Reverse valve configuration optional.
Can easily be converted to non-sideshifting by plugging ports on the valve. Clamp requires only 1 auxiliary valve.
Attachment capacity should be matched to the derated truck capacity with the attachment installed for most efficient application.
External Sideshift Available: Consult Cascade
Class 2 External sideshift = ET + 25 mm (1.0")
Class 3 External sideshift = ET + 38 mm (1.5")

Front lower leading edge pad wear can be addressed by periodic replacement of the factory installed wear tiles. Contact Cascade Parts Department at 888-CASCADE (227-2233) for service kits. Cascade recommends using tilt control with all Carton Clamps.

Class II Bolt-On mounting is standard. Class III and Quick-Disconnect mounting also available at no charge.
Minimum truck carriage width equals hook spread (E).

Published opening range limits are nominal clamp dimensions only and clamp may not accommodate loads with same or similar dimension. Consult Cascade for further assistance.

All trucks delivering up to 2,760 psi of operating pressure consult Cascade.
## WGS - Single Articulating Arms - Shim adjustable

### Low Pressure - For trucks delivering up to 2,760 psi of operating pressure.

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<th>Weight</th>
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<th>Vertical Ctr. of Gravity</th>
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- Class II Bolt-On mounting is standard. Class III and Quick-Disconnect mounting also available at no charge.
- Minimum truck carriage width equals hook spread (E).
- Published opening range limits are nominal clamp dimensions only and clamp may not accommodate loads with same or similar dimension. Consult Cascade for further assistance.
- All models include an integrated sideshift circuit.
- Standard valve configuration is with clamp ports on the right and sideshift on the left. Reverse valve configuration optional.
- Can easily be converted to non-sideshifting by plugging ports on the valve. Clamp requires only 1 auxiliary valve.
- Attachment capacity should be matched to the derated truck capacity with the attachment installed for most efficient application.
- External Sideshift Available: Consult Cascade
  - Class 2 External sideshift = ET + 25 mm (1.0")
  - Class 3 External sideshift = ET + 38 mm (1.5")

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- Front lower leading edge pad wear can be addressed by periodic replacement of the factory installed wear tiles. Contact Cascade Parts Department at 888-CASCADE (227-2233) for service kits. Cascade recommends using tilt control with all Carton Clamps.
**DAMAGE REDUCTION OPTIONS**

**Load Cushion™**
Hoist System Accumulator that absorbs shocks and reduces the clamp force required to handle the load. Available in 475 ml (1 pt) and 950 ml (1 qt) sizes.

**4-Point Force Distribution Tester**
Portable design measures clamp force in 4 quadrants of the contact pad for a reliable measurement. Calibration bar included to ensure equal sensor arm lengths and accurate pressure measurements.

**Tilt Control**
Automatically controls the angle of the mast and attachment, aligning pad with the load.

**TFC™- Touch Force Control System**
TFC™ is an interactive and easy-to-use touch screen system that works in applications where regulating clamp force and pressure control is required.

**Volumetric Force Control (VFC)**
VFC system automatically adjusts clamping pressure based on volume of the load. This option is designed to reduce damage caused by excessive force, the VFC calculates the size of load and will clamp with the least amount of force. The operator does not need to judge the clamping force with manual controls, it is completely automatic.

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**Hydraulic Flow & Pressure – Hydraulic Functions**

<table>
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<tr>
<th>Model</th>
<th>Maximum Attachment Operating Pressure psi/bar</th>
<th>Maximum Deliverable Truck Pressure psi/bar</th>
<th>Attachment Pressure Protected Yes/No?</th>
<th>Min-Rec-Max Function 3 (sideshift) gpm</th>
<th>Min-Rec-Max Function 4 (clamp) gpm</th>
<th>Attachment Number of Functions</th>
<th>Truck Auxiliary Valves Required</th>
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If the maximum deliverable truck pressure exceeds maximum clamp or rotate operating pressure and the attachment is not pressure protected, then auxiliary pressure protection is required.

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**Hydraulic Functions**
Optional Non-Sideshifting models

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The models above are available without sideshifting, impacting the number of functions as follows.