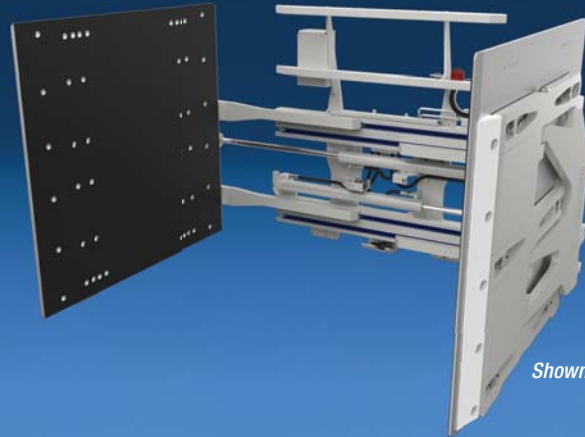
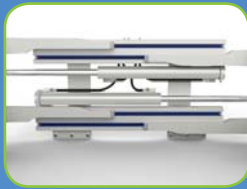


Innovative White Goods Clamp With Optimal Clamp Force Distribution



Shown with optional VFC



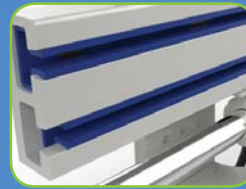
Industry leading visibility through frame and arms



Patented 3-Finger Arm design for optimal clamp force distribution



Optional Volumetric Force Control provides clamp force control without any driver input



Lube-free, full-width lip over UHMW bearings provide superior durability



Adjusta-Block mechanism provides easy method to properly adjust 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 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.

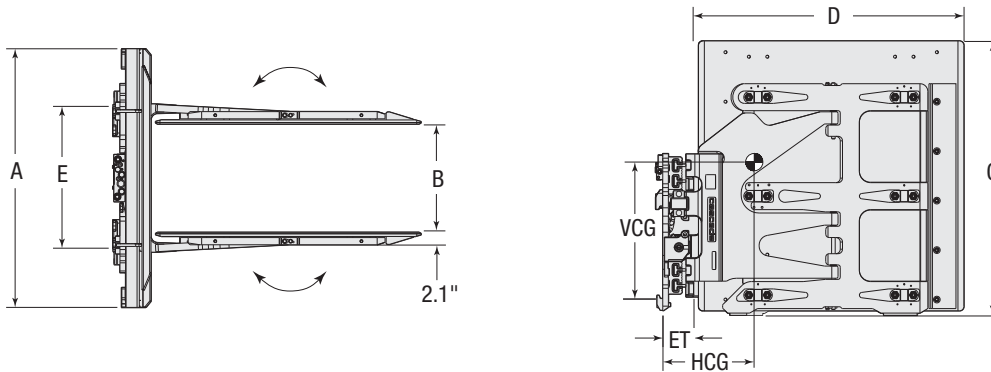
- Integrated true centering key for precise and secure installation.
- Available in two pressure offerings to match attachment to truck hydraulic system.

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.

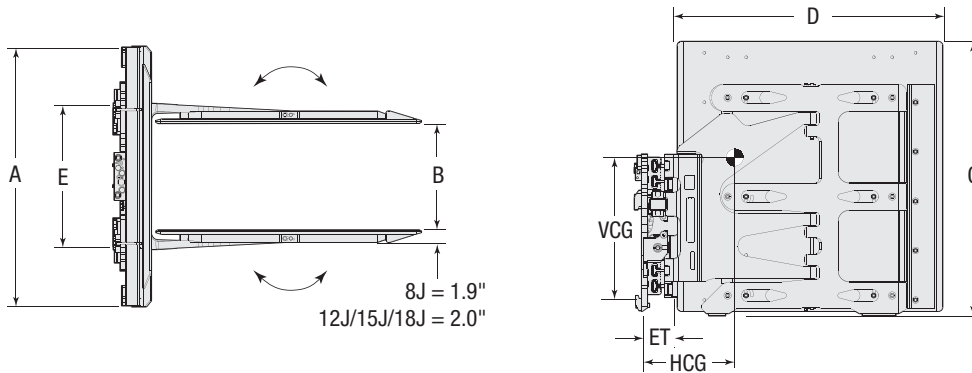


WGF - Single Articulating Arms Flexipads with Adjusta-Block

Catalog Order No.	Capacity @ Load Center		Frame Width		Opening Range ②	Mtg. Class	Hook Spread ①		Weight	Effective Thickness	Horizontal Ctr. of Gravity	Vertical Ctr. of Gravity	Overall Attachment/ Arm Height	Useable Arm Length
	lbs@in	kg@mm	A	B			E	lbs						
Low Pressure - For trucks delivering up to 2,760 psi of operating pressure.														
12J-WGF-2A-0080	2,300@27	1,051@685	55.1"	20.9"-84.7"	II	30.4"	1,764	802	5.4"	17.8"	16.4"	48.0"	54.0"	
12J-WGF-2A-0090	2,300@27	1,051@685	55.1"	20.9"-84.7"	II	30.4"	1,849	840	5.4"	18.1"	18.0"	54.0"	54.0"	
12J-WGF-2A-0100	2,100@30	945@762	55.1"	20.5"-84.3"	II	30.4"	1,872	851	5.4"	19.9"	16.5"	48.0"	60.0"	
12J-WGF-2A-0110	2,100@30	945@762	55.1"	20.5"-84.3"	II	30.4"	1,966	894	5.4"	20.3"	18.1"	54.0"	60.0"	
15J-WGF-2A-0120	2,900@27	1,314@685	55.1"	20.9"-84.7"	II	30.4"	1,774	807	5.4"	17.7"	16.4"	48.0"	54.0"	
15J-WGF-2A-0130	2,900@27	1,314@685	55.1"	20.9"-84.7"	II	30.4"	1,859	845	5.4"	18.0"	18.0"	54.0"	53.9"	
15J-WGF-2A-0140	2,600@30	1,181@762	55.1"	20.5"-84.3"	II	30.4"	1,883	856	5.4"	19.8"	16.5"	48.0"	60.0"	
15J-WGF-2A-0150	2,600@30	1,181@762	55.1"	20.5"-84.3"	II	30.4"	1,983	901	5.4"	20.2"	18.1"	54.0"	60.0"	
15J-WGF-2A-0160	2,900@27	1,314@685	63.0"	29.0"-101.9"	II	38.3"	1,860	846	5.4"	17.0"	16.2"	48.0"	54.0"	
15J-WGF-2A-0170	2,900@27	1,314@685	63.0"	29.0"-101.9"	II	38.3"	1,950	886	5.4"	17.4"	17.8"	54.0"	54.0"	
15J-WGF-2A-0180	2,600@30	1,181@762	63.0"	28.6"-101.5"	II	38.3"	1,968	894	5.4"	19.1"	16.4"	48.0"	60.0"	
15J-WGF-2A-0190	2,600@30	1,181@762	63.0"	28.6"-101.5"	II	38.3"	2,067	940	5.4"	19.5"	17.9"	54.0"	60.0"	
18J-WGF-2A-0160	3,475@27	1,577@685	63.0"	29.0"-102.0"	II	38.3"	1,886	857	5.6"	17.0"	16.2"	48.0"	54.0"	
18J-WGF-2A-0170	3,475@27	1,577@685	63.0"	29.0"-102.0"	II	38.3"	2,080	945	5.4"	19.6"	17.9"	54.0"	54.0"	
18J-WGF-2A-0180	3,100@30	1,417@762	63.0"	28.6"-101.5"	II	38.3"	1,994	906	5.6"	19.1"	16.3"	48.0"	60.0"	
18J-WGF-2A-0190	3,100@30	1,417@762	63.0"	28.6"-101.5"	II	38.3"	2,078	944	5.6"	19.4"	17.6"	54.0"	60.0"	
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.

- ① 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).**
- ② 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.
- ▶ 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.
- ▶ 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")


WGS - Single Articulating Arms - Shim adjustable

Catalog Order No.	Capacity@ Load Center		Frame Width A	Opening Range ② B	Mtg. Class	Hook Spread ① E	Weight		Effective Thickness ET	Horizontal Ctr. of Gravity HCG	Vertical Ctr. of Gravity VCG	Overall Attachment/ Arm Height C	Useable Arm Length D
	lbs@in	kg@mm					lbs	kg					
Low Pressure - For trucks delivering up to 2,760 psi of operating pressure.													
8J-WGS-2A-0010	1,750@17	800@432	49.2"	22.0"-84.3"	II	32.4"	1,381	628	4.9"	13.0"	16.4"	54.0"	34.0"
12J-WGS-2A-0100	2,600@24	1,180@610	55.1"	21.5"-85.2"	II	30.4"	1,684	766	5.4"	15.9"	16.3"	48.0"	48.0"
12J-WGS-2A-0110	2,300@27	1,051@685	55.1"	21.1"-84.8"	II	30.4"	1,884	856	5.4"	18.3"	18.0"	54.0"	54.0"
12J-WGS-2A-0120	2,075@30	945@762	55.1"	20.7"-84.4"	II	30.4"	1,996	907	5.4"	20.4"	18.1"	54.0"	60.0"
15J-WGS-2A-0120	2,900@27	1,314@685	55.1"	21.1"-84.8"	II	30.4"	1,884	857	5.4"	18.3"	18.0"	54.0"	53.9"
15J-WGS-2A-0130	2,600@30	1,181@762	55.1"	20.7"-84.4"	II	30.4"	1,996	907	5.4"	20.4"	18.1"	54.0"	60.0"
15J-WGS-2A-0140	2,900@27	1,314@685	63.0"	29.1"-102.1"	II	38.3"	1,968	895	5.4"	17.6"	17.7"	54.0"	54.0"
15J-WGS-2A-0150	2,600@30	1,181@762	63.0"	28.7"-101.7"	II	38.3"	2,080	945	5.4"	19.6"	17.9"	54.0"	60.0"
18J-WGS-2A-0160	3,475@27	1,577@685	63.0"	29.1"-102.1"	II	38.3"	1,994	906	5.6"	17.6"	17.7"	54.0"	54.0"
18J-WGS-2A-0170	3,100@30	1,417@762	63.0"	28.7"-101.7"	II	38.3"	2,106	957	5.6"	19.6"	17.8"	54.0"	60.0"
High Pressure - For trucks delivering over 2,760 psi of operating pressure consult Cascade.													

- ① 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).**
- ② 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.
- ▶ 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.

- ▶ 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")

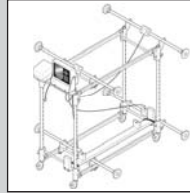
DAMAGE REDUCTION OPTIONS

Load Cushion™



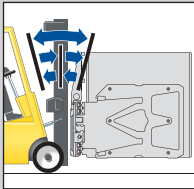
Hoist System Accumulator that absorbs shocks and reduces the clamp force required to handle the load. Available in 475 ml (1 pt) and 950 ml (1 qt) sizes.

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.

Two-Way Tilt Control

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.

Hydraulic Flow & Pressure – Hydraulic Functions

Model	Maximum Attachment Operating Pressure psi/bar	Maximum Deliverable Truck Pressure psi/bar	Attachment Pressure Protected Yes/No?	Min-Rec-Max Function 3 (sideshift) gpm	Min-Rec-Max Function 4 (clamp) gpm	Attachment Number of Functions	Truck Auxiliary Valves Required
(8J/12J/15J/18J) WG	2,250/155	2760/190	Yes	1-5-10	5-12-16	2	2

▶ 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.

Hydraulic Functions Optional Non-Sideshifting models

Model	Attachment Number of Functions	Truck Auxiliary Valves Required
8J/12J/15J/18J	1	1

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