

Home Appliances Damage Prevention Systems

The most advanced technology
in hydraulics, electronics and laser sensors
for damage prevention and clamping force control



Pressure control

Four-Stage Pressure-Relief Valve (manually controlled)

Manually controlled four-stage pressure relief valve. Specially recommended to be used in combination with , carton clamps and sensitive loads. Adjustable pressure settings with the possibility to configure 3 different pressure stages plus the bypass pressure from the truck.



Four-Stage Pressure-Relief Valve (electrically controlled)

Electrically controlled four-stage pressure relief valve. Easy clamping pressure selection from the lift truck cabin. Specially recommended to be used in combination with carton clamps and sensitive loads. Adjustable pressure settings with the possibility to configure 3 different pressure stages plus the bypass pressure from the truck.



Pressure-Control Lights

To be used in combination with electrically controlled four-stage pressure relief valve.

Lights in the light tower indicate the selected pressure setting.



Easy-FORCE-C (Force control System)

The Bolzoni Easy-FORCE-C clamping force control system is the ideal solution in the white goods applications and specifically for big logistic services handling several types of loads and volumes that require different clamping forces.

The Easy-FORCE-C system enables the truck driver to easily select the clamping force according to the load category, type and configuration. Through a touch screen the driver selects the handling load and the pressure parameters are automatically set into the clamp to generate the correct clamping force.

Product handling configuration

On the 7" touch screen monitor the truck driver selects the product type icon, in a very intuitive way, and the product configuration, that is how the load is composed.

As the device has got all information by the operator, it enters into action setting the correct pressure in the clamp. After the load has been safely positioned and the handling is finished, the truck driver opens the clamp arms. It is now possible to quickly reselect the same product handling configuration, or to restart the selection process for a new load configuration.

Remote handling data management

This device is very helpful to fleet managers as well, as it enables to access the load handling data in remote.

In facts, thanks to a web-server interface, it enables to access, via smartphone, tablet or pc in real time the handling data: GPS geolocalization, data tracking. All data are accessible to the fleet manager, and can be stored in a database, with cripted access (https).

E-mail or sms notifications can be set for warnings or for maintenance schedule management.



Easy-MOVE Laser Sensors System

In the white goods industry the handling problems caused by the use of incorrect clamping force can create serious risks of products damaging: insufficient pressure results in the product being dropped, while too much pressure can crush or damage the package and its content.

Bolzoni integrates standard technical features of the KS-C model carton clamp with the most advanced technology in hydraulics, electronics and laser sensors for clamping force controlling.

The new intelligent system is an electronic control of the clamping force, driven by the number and dimensions of the unit loads which have to be handled. The laser sensors and the electronic micro-control allow the system to detect the load and input the correct clamping pressure through a proportional pressure relief valve.

The micro-control can be managed by a Bolzoni configuration tablet. Through an easy procedure (touchscreen based) the operator can adjust the handling load parameters, recalibrate the sensors if necessary, associate the opening ranges to the required pressure levels. It is also possible to recalibrate the pressure levels in case of introduction of new loading schemes and finally to switch to single pressure manual mode.

Bolzoni Easy-MOVE system is providing outstanding **benefits** to all the operators of the logistic chain in white goods (end users, 3PLs, forklift truck providers):

- Completely **automatic system** with no responsibility left to truck drivers for wrong pressure choice; the truck drivers are not even allowed to interfere with clamp parameters that are factory set and – only if necessary – modified by forklift trucks provider and/or end user's logistic experts;
- The clamp can be used as a conventional clamp with **no need of further training for truck drivers** or additional truck driving operations;
- **User friendly set up** interface thanks to easy software graphics and possibility to use Bolzoni set up tablet: it is easy to load new configuration schemes;
- **Very low TCO** (total cost of ownership) due to complete clamp and laser sensors protection: the sensors are located behind the load encapsulated in the chassis design and they are never touched or hit by the load
- Very **easy electrical connection** to truck ports thanks to spiral cable included in the package;
- In case of any type of clamp emergency the software allows easy switch to manual mode avoiding all possible stops in handling procedures.



ForceBalance Pad

The new Bolzoni ForceBalance System allows perfect distribution of the clamping force over the pads' surface thanks to the user friendly registration of 4 thread screws that impact on the arm camber. Positioned in the 4 corners of the arm carrier the screws can be easily adjusted to make the clamp perfectly suitable for all specific handling configurations. The ForceBalance Pad aligning system provides a completely damage free solution for the load.

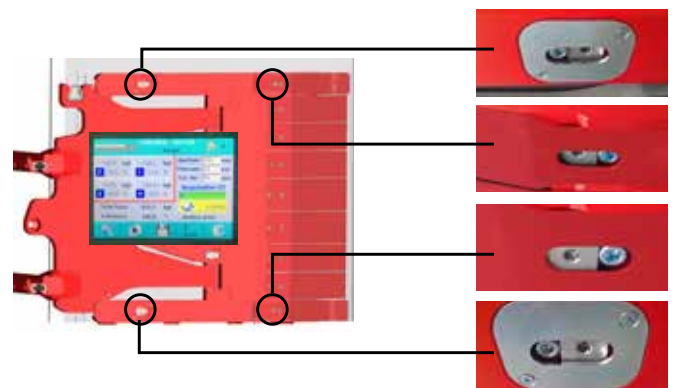
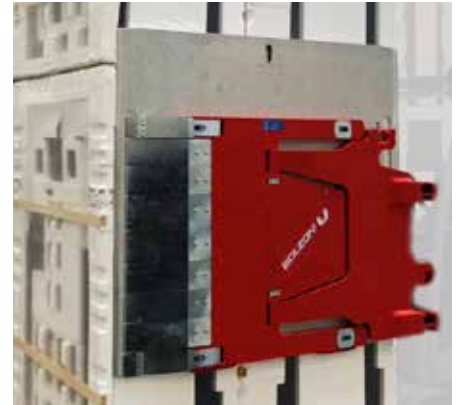
The system is designed to keep the very thin arm profile with tapered leading edge of the conventional clamps adding the ease of the force distribution control. Thanks to the front elastic elements no gap and additional arm thickness is created while adjusting and regulating the screws. By adjusting the four screws, the elastic elements are deformed. This enables to reach the perfect panel protrusion to match the load handling application.

This innovative and intuitive mechanical device makes life easier for every truck driver who wants to grant optimum clamping force every time and ensures the following technical advantages.

ForceBalance Pad main features:

- Extremely fast operation
- No need of special tools for the operation of regulation
- No need of additional shims to impact on the force distribution
- No additional arm thickness
- Always correct approach to the load for a damage free handling
- No gap between arm carrier and aluminium panel

The ForceBalance pad regulation system is an international patent of Bolzoni.



4 Point Clamping Force Tester: Easy MEASURE

Bolzoni, as primary expert of the industry sector, with 75 years experience and know-how of the specific handling procedures in white goods, enlarges its proposal with a complete service back up and check for correct clamp configuration.

Bolzoni 4 Point clamping force tester – based on load cell technology - is able to measure the single force acting on each point, to calculate the total clamping force developed on the whole pad surface and to detail the exact percentage of force acting on each point. The device can be adapted to various pad dimensions as the positions of the measuring points are adjustable.

The user friendly LCD interface of Bolzoni 4-Point tester allows the saving of the current values and the acquisition of all the data on a USB memory stick.



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