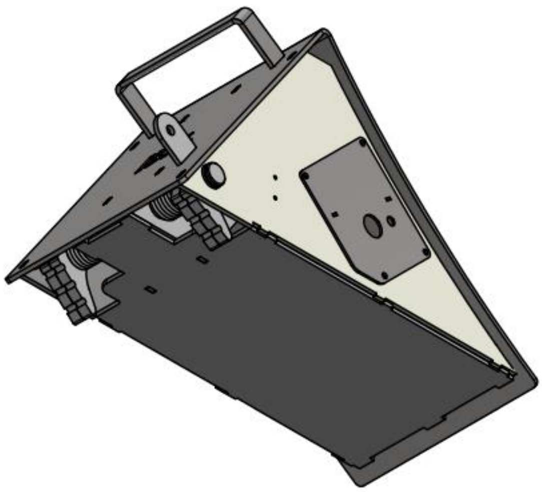
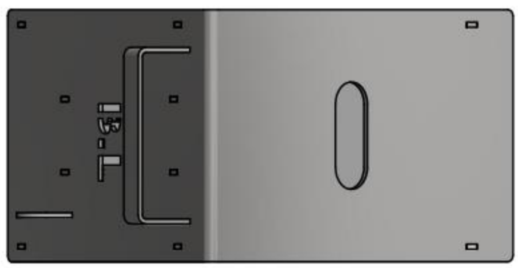
Technical Specification





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1. Basics Overview

Smart Wheel Chock Model BL: Elevating Dock Safety

In the realm of loading dock safety, the Smart Wheel Chock Model BL emerges as a silent guardian, combining robust construction with cutting-edge technology. Crafted from formidable 4mm steel plates, this wheel chock is not just a physical barrier; it's a steadfast defender of your vehicles and a sentinel of security.

Durable Construction: A Shield Built to Last The Model BL boasts a construction that stands the test of time. Fashioned from high-quality 4mm steel, it becomes an unwavering fortress in the face of industrial demands, ensuring the safety of your loading dock operations.

Ultrasonic Sensor Technology: Precision in Every Placement At the heart of this unassuming device lies advanced ultrasonic sensor technology. This innovation enables real-time monitoring of the vehicle's position, guaranteeing precise and responsive chocking to prevent any unintended movement.

Extra Strong Spiral Cable: Unyielding Tether of Security Enhancing its security features, the Model BL is equipped with an extra-strong spiral cable. This robust cable acts as a tether, connecting the wheel chock to the loading dock infrastructure, providing an additional layer of security against potential vehicle movement.

Unique Driver Inside with Gyroscopic Intelligence: Navigating Safety Setting it apart, the Model BL features a unique driver inside the wheel chock, incorporating **gyroscope technology**. This intelligent system assesses the vehicle's stability, making real-time adjustments for optimal chocking effectiveness. The gyroscopic intelligence adds a dynamic and responsive element to the safety equation.

Unparalleled Security: Beyond Traditional Wheel Chocks The Model BL transcends the limitations of traditional wheel chocks. It goes beyond preventing unintended movements; it actively contributes to a safer work environment. A comprehensive security solution for loading docks, it combines durability, ultrasonic sensor technology, extra-strong spiral cable, and a unique driver with gyroscope.

Adaptable for Various Industries: Versatility is at the core of the Model BL. Whether in manufacturing, logistics, or distribution, its seamless integration into diverse industrial landscapes makes it an ideal choice for businesses striving to enhance safety and efficiency in their loading dock operations.

Conclusion: A Future-Ready Safety Solution The Smart Wheel Chock Model BL is not merely a product; it's a commitment to enhanced safety and efficiency in loading dock operations. With its durable construction, ultrasonic sensor technology, extra-strong spiral cable, and unique driver with gyroscope, it stands as a beacon of innovation in industrial safety – where durability meets intelligence, and safety knows no compromise.

Experience the future of docking with Brite Lite's Smart Wheel Chocks – a comprehensive, forward-thinking solution that sets new standards in safety and efficiency.

2. Material Composition

Crafted for Endurance

The Smart Wheel Chock Model BL is meticulously engineered, and at the heart of its durability is the carefully chosen material composition. Crafted from high-quality 4mm steel plates, this wheel chock boasts a robust construction that stands as a testament to its enduring strength.

Steel Plates: The primary building blocks of the Model BL are the 4mm steel plates. These plates are chosen for their exceptional durability, providing a solid foundation for the wheel chock. The thickness of the steel plates ensures resilience in the face of heavy loads and challenging environmental conditions.

Zinc Coating: To enhance its longevity and resistance to environmental elements, the entire construction of the Smart Wheel Chock Model BL is fully covered in zinc. This zinc coating acts as a protective layer, shielding the steel plates from corrosion, rust, and wear. The result is a wheel chock that not only withstands the rigors of industrial use but also maintains its structural integrity over an extended lifespan.

Benefits of Zinc Coating:

Corrosion Resistance: The zinc coating creates a barrier that protects the steel from corrosive agents, ensuring a prolonged service life.

Weather Resistance: The Smart Wheel Chock Model BL, with its zinc-covered construction, is well-equipped to endure diverse weather conditions without compromising its effectiveness.

Aesthetic Appeal: The zinc coating not only serves a protective function but also contributes to the wheel chock's visual appeal, maintaining a sleek and professional appearance. By combining the strength of 4mm steel plates with the protective advantages of zinc coating, the Smart Wheel Chock Model BL offers a comprehensive solution that excels in both performance and durability.

This material composition ensures that the wheel chock not only meets but exceeds the demanding standards of industrial applications, providing users with a reliable and long-lasting safety solution for their loading docks.

3. Construction

Building a Stalwart Defender

The construction of the Smart Wheel Chock Model BL is a testament to its role as a stalwart defender of loading dock safety. Meticulously designed and crafted, this wheel chock goes beyond a mere accessory; it embodies robustness, reliability, and enduring strength.
Robust Framework: At its core, the Model BL features a robust framework, strategically engineered to handle the dynamic forces encountered in industrial settings. The construction prioritizes strength and stability, ensuring that the wheel chock provides a formidable barrier against unintentional vehicle movement.
Strategic Reinforcements: The design incorporates strategic reinforcements to critical areas, enhancing the wheel chock's structural integrity. This thoughtful approach to construction ensures that the Model BL can withstand the pressures and stresses inherent in loading dock operations.
Fully Zinc-Covered: One of the standout features defining the construction of the Model BL is its full zinc coverage. Every inch of the wheel chock is enveloped in a protective layer of zinc, serving as a shield against corrosion and environmental elements. This comprehensive zinc coating adds an extra layer of resilience, prolonging the life of the wheel chock and maintaining its effectiveness over time.
Welded Joints: The construction of the Model BL includes precisely welded joints, contributing to the overall stability and durability of the wheel chock. Welded joints eliminate weak points, ensuring a seamless and robust structure that can confidently withstand the demands of industrial applications.
Durable Finish: Beyond its structural elements, the Smart Wheel Chock Model BL features a durable finish that not only contributes to its visual appeal but also provides additional protection against wear and tear. The finish is carefully selected to complement the rugged nature of the construction, making the wheel chock a resilient and reliable safety solution.

4. Sensor Technology

Precision Redefined

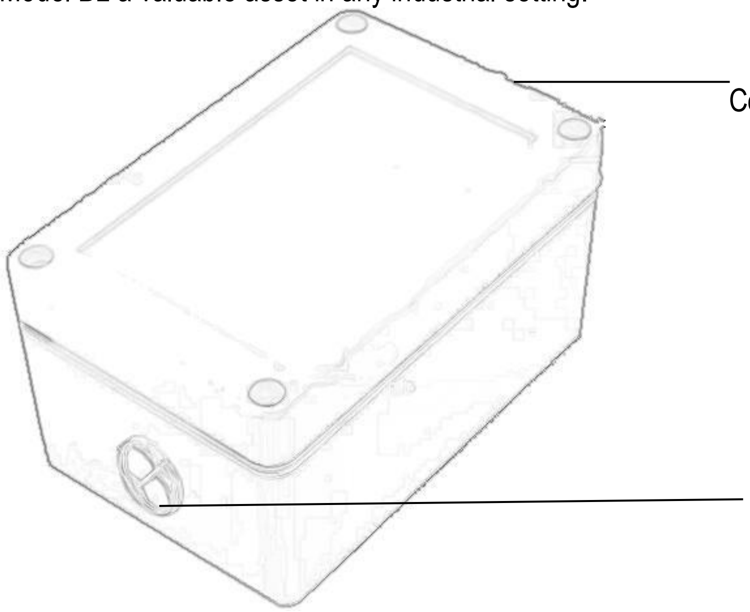
The Smart Wheel Chock Model BL transcends conventional wheel chocks through the integration of advanced sensor technology, bringing a new dimension of precision and safety to loading dock operations.

Ultrasonic Sensors: At the heart of the Model BL's sensor technology lies the integration of ultrasonic sensors. These sensors operate on the principle of ultrasonic waves, emitting and receiving signals to gauge the distance between the wheel chock and the vehicle's wheel. This real-time monitoring ensures precise and immediate adjustments, providing an added layer of security against unintended vehicle movements.

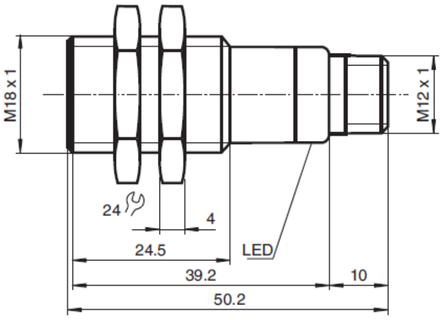
Real-time Monitoring: The ultrasonic sensor technology enables continuous, real-time monitoring of the vehicle's position. This ensures that the Model BL can adapt swiftly to changes, maintaining an optimal chocking position even in dynamic loading dock environments. The result is a wheel chock that actively responds to the nuances of each loading operation.

Enhanced Safety Measures: By incorporating ultrasonic sensors, the Model BL enhances safety measures by offering a level of accuracy that surpasses traditional wheel chocks. The sensors provide instant feedback on the proximity of the vehicle, allowing for proactive adjustments and minimizing the risk of accidents associated with loading and unloading procedures.

User-friendly Operation: The sensor technology in the Model BL is seamlessly integrated for user-friendly operation. Drivers and dock personnel can rely on the intelligent response of the wheel chock without complex manual interventions. This simplicity ensures efficient and safe utilization, making the Model BL a valuable asset in any industrial setting.

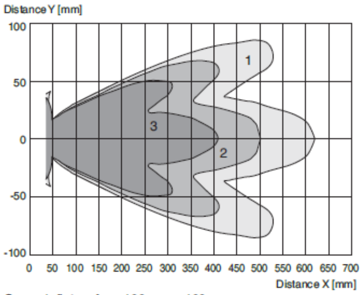


Dimensions



Characteristic Curve

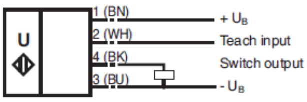
Characteristic response curve



Curve 1: flat surface 100 mm x 100 mm
Curve 2: flat surface 10 mm x 10 mm
Curve 3: round bar, Ø 25 mm

Connection

Standard symbol/Connections:
(version E5, pnp)



Core colours in accordance with EN 60947-5-2.

Technical Data

LED yellow		indication of the switching state flashing: program function object detected
LED red		solid red: Error red, flashing: program function, object not detected
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC , ripple 10 $\%_{SS}$
No-load supply current	I_0	≤ 20 mA
Input		
Input type		1 program input operating distance 1: $-U_B$ ... +1 V, operating distance 2: +6 V ... $+U_B$ input impedance: > 4,7 kΩ program pulse: ≥ 1 s
Output		
Output type		1 switching output E5, PNP NO/NC, programmable
Rated operating current	I_e	200 mA , short-circuit/overload protected
Default setting		Switch point A1: 50 mm Switch point A2: 300 mm
Voltage drop	U_d	≤ 3 V
Repeat accuracy		≤ 1 %
Switching frequency	f	≤ 13 Hz
Range hysteresis	H	1 % of the set operating distance
Temperature influence		± 1.5 % of full-scale value
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2:2020 IEC 60947-5-2:2019
Approvals and certificates		
UL approval		cULus Listed, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)

Technical Data

General specifications		
Sensing range		35 ... 300 mm
Adjustment range		50 ... 300 mm
Dead band		0 ... 35 mm
Standard target plate		100 mm x 100 mm
Transducer frequency		approx. 390 kHz
Response delay		approx. 50 ms
Indicators/operating means		
LED green		Power on

The sensor technology within the Smart Wheel Chock Model BL is not just about precision; it's about creating a seamless and secure loading dock experience. From its adaptive responsiveness and proactive security measures to its seamless integration with operations and user-centric design, the sensor technology in the Model BL orchestrates a symphony of precision that resonates with the core values of safety, efficiency, and innovation.

5. Spiral Cable Information

Unyielding Tether of Security

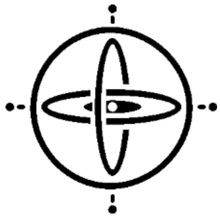
The Smart Wheel Chock Model BL doesn't just rely on its robust physical construction; it introduces an additional layer of security through its extra-strong spiral cable, creating an unyielding tether that reinforces its role as a guardian of loading dock safety.
Robust Connectivity: The spiral cable of the Model BL is not a mere accessory but a robust connector that enhances the overall security of the wheel chock. Crafted with durability in mind, this cable serves as a reliable link between the wheel chock and the loading dock infrastructure, providing a secure connection that withstands the rigors of industrial applications.
Extra Strength for Added Assurance: What sets the spiral cable apart is its extra strength. Engineered to withstand tension and stress, this cable acts as an unyielding tether, ensuring that the Model BL maintains a secure hold on the vehicle's wheel. The extra strength of the spiral cable adds an additional layer of assurance, instilling confidence in the stability of the wheel chock.
Dynamic Flexibility: While robust in its strength, the spiral cable of the Model BL also offers dynamic flexibility. This flexibility is crucial in accommodating different vehicle sizes and configurations, providing a versatile solution that adapts to the diverse needs of loading dock operations. The spiral design allows for controlled expansion and retraction, ensuring a snug fit around the wheel.
Enhanced Safety Measures: The integration of the extra-strong spiral cable significantly enhances safety measures during loading and unloading procedures. By establishing a secure connection, it acts as a secondary barrier against unintended vehicle movement, adding an extra layer of protection for both drivers and dock personnel.
Visual Deterrent: Beyond its functional aspects, the spiral cable serves as a visual deterrent, signaling to drivers and personnel that the Model BL is securely in place. This visual cue reinforces the importance of safety protocols and adds an element of awareness to loading dock operations.

Cable Type: Spiral Cable
Conductor Type: Cu (Copper)
Number of Conductors: 3
Conductor Cross-section 1mm2
Insulation Material : PUR
Insulation Color: Black
Rated Voltage: 300V/500V
Operating Temperature: -25...70°C
Spiral Cable Length Before Extension: 2m
Spiral Cable Length After Extension: 8m
Outer Cable Diameter: 7.2mm

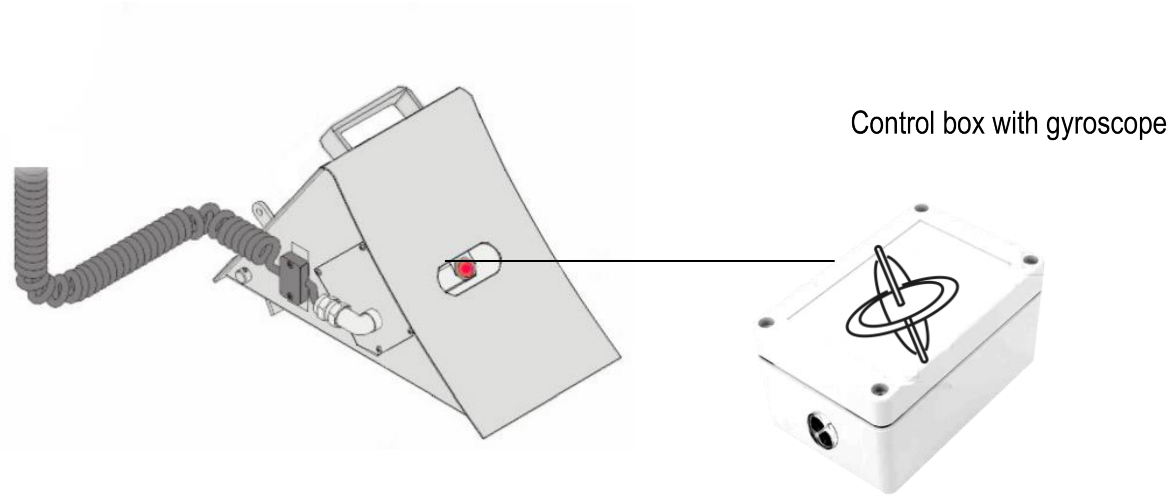
6. Unique Driver with Gyroscopic Intelligence

Navigating Safety with Precision

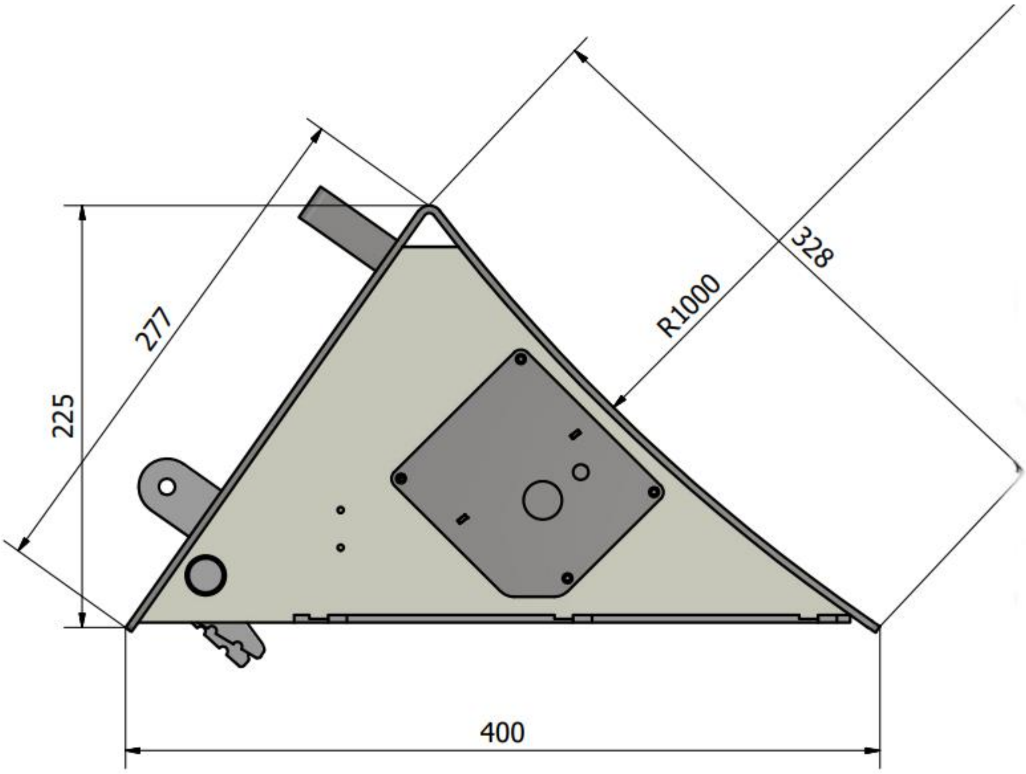
The Smart Wheel Chock Model BL stands out in the realm of loading dock safety, not only due to its physical strength but also thanks to its innovative and unique driver featuring gyroscopic intelligence. This advanced system takes safety to a new level by incorporating dynamic adjustments based on real-time readings from an integrated gyroscope.

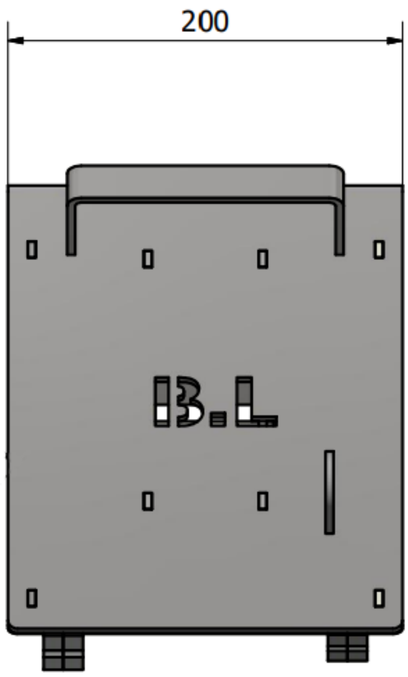


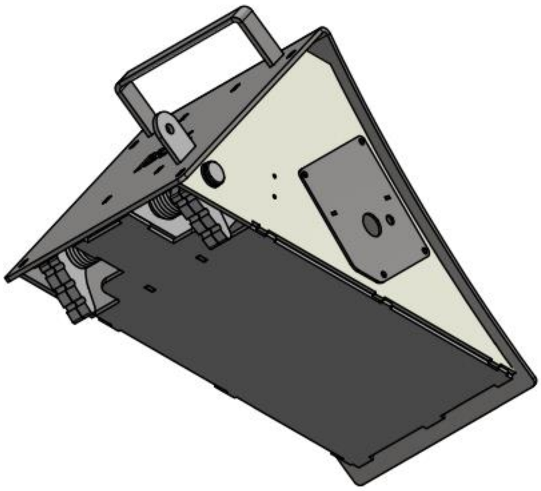
Gyroscopic Stability Assessment: At the core of this unique feature is a sophisticated gyroscope that constantly monitors the stability of the vehicle. The gyroscope acts as the eyes and ears of the Model BL, providing continuous feedback on the orientation and movement of the wheel. This real-time assessment enables the wheel chock to respond dynamically to any changes in the vehicle's stability.

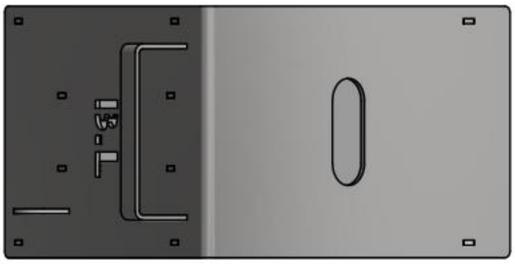


7. Dimensions









8. Adaptability

Tailoring to Diverse Needs

The Smart Wheel Chock Model BL is engineered with a focus on adaptability, recognizing the varied requirements of different loading dock scenarios. This adaptability ensures that the wheel chock seamlessly integrates into diverse operational environments, providing a versatile solution for a range of applications.
Adjustable Configuration: The Model BL features an adjustable configuration that allows for easy customization based on the specific dimensions and characteristics of different vehicles. This adaptability ensures a snug fit and optimal functionality, irrespective of variations in wheel sizes or vehicle types.
Compatibility Across Industries: Designed with versatility in mind, the Smart Wheel Chock Model BL is compatible across a spectrum of industries, including logistics, manufacturing, and distribution. Its adaptability makes it an ideal choice for facilities with a diverse fleet of vehicles, accommodating everything from trucks and trailers to specialized industrial equipment.
User-Friendly Adjustments: Adaptability extends to the user interface, with a user-friendly design that facilitates quick and straightforward adjustments. Dock personnel can easily tailor the settings of the Model BL to suit the specific requirements of each loading or unloading operation, contributing to an efficient and streamlined workflow.
Integration with Existing Systems: Recognizing the importance of seamless integration, the Model BL is designed to work harmoniously with existing loading dock systems. Whether it's compatibility with automated loading processes or integration with control systems, the adaptability of the Model BL ensures a smooth transition into various operational setups.
Environmental Flexibility: The adaptability of the Model BL goes beyond technical specifications; it also encompasses environmental flexibility. Engineered to withstand a range of environmental conditions, including temperature variations and exposure to elements, the wheel chock maintains optimal performance in diverse climates.

9. Robust Steel Construction with Full Zinc Coverage

Unyielding Strength

The Smart Wheel Chock Model BL distinguishes itself with an unparalleled level of strength and resilience, thanks to its robust steel construction fortified with full zinc coverage. This feature not only ensures the wheel chock's capacity to withstand heavy loads but also provides an exceptional defense against environmental elements, making it a stalwart guardian for your loading dock operations.
Strategic Reinforcements:
The foundation of the Model BL lies in its strategically reinforced steel structure. Every component is meticulously crafted to withstand the dynamic forces encountered in loading dock environments. This strategic reinforcement ensures that the wheel chock maintains its structural integrity even under challenging conditions.
Fully Zinc-Covered for Enhanced Protection: The entire construction of the Model BL is enveloped in a full zinc covering. This comprehensive protection serves as a shield against corrosion, rust, and other forms of deterioration that can compromise the structural strength over time. The full zinc coverage not only enhances the wheel chock's longevity but also contributes to its visual appeal, maintaining a professional appearance.
Durable Finish for Industrial Demands: Recognizing the rigorous demands of industrial settings, the Model BL boasts a durable finish that goes beyond aesthetics. This finish is engineered to resist wear and tear, providing an additional layer of defense against the harsh conditions typically encountered in loading docks. The durable finish ensures that the wheel chock maintains its robustness over an extended operational life.
Heavy-Duty Performance: The robust steel construction, coupled with full zinc coverage, equips the Model BL for heavy-duty performance. Whether supporting the weight of large trucks, trailers, or industrial equipment, the wheel chock's structural strength remains unyielding. This heavy-duty performance instills confidence in its ability to secure vehicles during loading and unloading operations.
Resilience to Environmental Factors:
In addition to its load-bearing capabilities, the Model BL exhibits resilience to environmental factors. From temperature variations to exposure to moisture, the full zinc coverage acts as a barrier, protecting the steel construction from the adverse effects of the elements. This resilience ensures consistent performance regardless of external conditions.

10. Wall Bracket

The Smart Wheel Chock Model BL is accompanied by a robust steel wall bracket, meticulously crafted and zinc-covered for added durability. This purposeful design reinforces stability during installation, ensuring a secure fit and contributing to the overall safety of your loading dock.

Key Features:

- Stability Reinforced Design: Precision-crafted for optimal stability during installation.
- Full Zinc Coverage: Comprehensive protection against corrosion and environmental wear.
- Uniform Aesthetics: Creates a cohesive and professional appearance alongside the wheel chock.
- Easy Integration: Adaptable design for seamless integration with existing structures.
- Extended Lifespan: Enhances the overall reliability and longevity of the wheel chock system.

The zinc-covered steel wall bracket, in synergy with the wheel chock, forms a durable and visually cohesive system, ensuring steadfast performance in your loading dock environment.