

FORTNA

Data Sheet

FORTNA Shoe Sorter



Reliable sorting with high capacity

The FORTNA Shoe Sorter is a versatile sorting solution that stands out due to its advanced design, high capacity, and low noise level. This sorter is capable of sorting products with a large variation in size and weight. The shoe sorter meets various sorting needs such as shipping and distribution, warehouse routing, and cross docking. Based on its linear configuration, it can be applied to fulfill medium and high-throughput capacity.



Minimized noise

Lower sound emissions due to the fully closed deck. Equipped with unique sound-absorbing materials making it capable of running exceptionally silently.



Modular design

Modular design for customer-specific configurations with standard components. Extreme flexibility in placement of divert locations. Safe and ergonomic working environment.



High-speed capacity

Innovative and patented high-speed divert system for reliable sorting at high speeds. Highly accurate timing of the divert switch due to the divert control modules. A single-sided sliding shoe that reduces distances between parcels on single-sided sorters. Handling of a wide range of items sizes.



Reliable and gentle product sorting

Advanced C-shaped sliding shoe design with cushioning elements for gentle product handling.



Fast and easy maintenance

Easy sorter access for maintenance to reduce downtime. The patented fully closed deck prevents cartons from getting stuck between the slats, dust from entering the sorter, and ingestion of foreign objects and debris.

Application for a wide range of settings

The FORTNA Shoe Sorter can address a variety of sortation needs alongside being part of a turnkey material handling solution that includes all functional aspects such as loading and unloading, induction, merging, item detection, and chutes.

Divert control module (DCM)

- Communicates via Profinet or Ethernet/IP. This allows application in traditional Siemens or Allen Bradley PLC architectures
- Comes pre-wired to the divert switch and pre-mounted to the sorter.
- Controls actuation of divert switches in addition to monitoring the condition of the actuating divert solenoid.

Mechanical package

The FORTNA Shoe Sorter is also offered as mechanical equipment only. In this case the mechanical package also includes:

- All divert switches and DCM.
- Required sensor pack to track parcels, shoe pins, and monitor the condition of the sorter.

An optional package is available to include power supplies and network cables, making it more plug-and-play. PLC level controls would be in the third-party integrator scope of work.



Configuration and performance

Technical Data

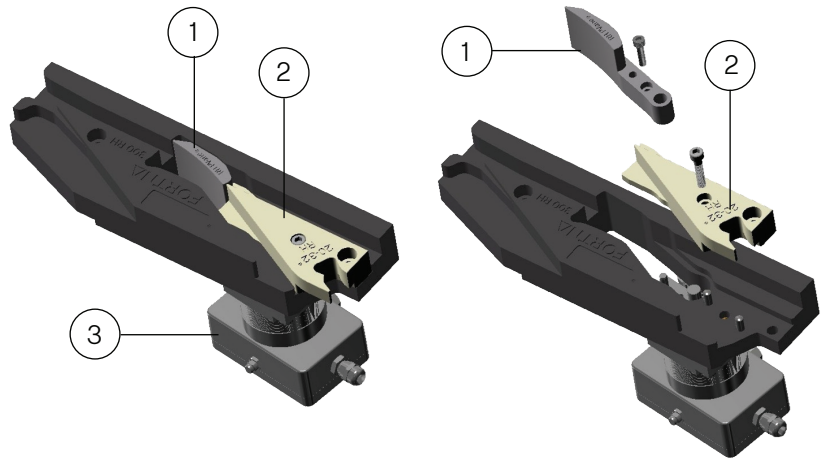
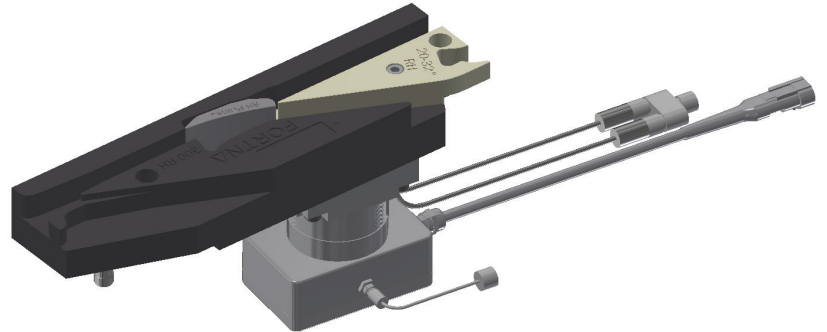
	metric	imperial
Sorting angles	20/25/30/45°	20/25/30/45°
Max. transport speed	3.3 m/s	650 ft/min
Advised max speed at 20°	3.3 m/s	650 ft/min
Advised max speed at 25°	2.6 m/s	520 ft/min
Advised max speed at 30°	2.0 m/s	400 ft/min
Advised max speed at 45°	1.5 m/s	300 ft/min
Power	SEW 400 or 480 VAC electric motors	SEW 400 or 480 VAC electric motors
Divert switch	electric	electric
Transport width	400/600/800/1000mm	16/24/32/40 inch
Sorter length	12 - 150 m	40 - 500 ft
Product weight	0.25 - 50 kg	0.55 - 110 lb
Maximum Sorter Deck Load	50 kg/m	33 lb/ft
Environment	0 - 45 C°	32 - 113 °F
Safety	fully compliant with CE standards	
Sliding shoe type	double or single sided	double or single sided



FORTNA Shoe Sorter GEN 4

Higher performance, greater durability

- Over time, the FORTNA shoe sorter has continually evolved to keep pace with changing demands. Building on this legacy, the latest advancement is GEN 4 divert switch technology for shoe sorters.
- The GEN 4 features several key innovations:
 - A horizontal divert switch mechanism
 - Redesigned high durability plastic vanes
 - A straight shoe pin design
- These advancements significantly enhance overall sorter performance, reliability, durability, and translate into a lower overall total cost of ownership.



1	Divert Vane
2	Wear Block
3	Pin Guide at Exit

GEN 4 Key benefits

Improved reliability and durability

Optimized vane geometry reduces friction between shoe pins and vanes, improving wear performance and extending component lifespan.

Simplified maintenance and lower operating costs

Vanes and wear blocks can be replaced directly in the field, increasing serviceability and reducing downtime.

Higher speed for increased throughput capacity

Higher transport speeds - up to 3.3 m/s - enable greater system capacity.

For Integrators

The FORTNA Shoe Sorter is also available for integrators as a product or sub-system, given its highly modular design that offers endless possibilities.

Versatile

The narrow slats and the option to mount diverts and chutes at variable locations demonstrate its great potential for efficient sortation.

Footprint optimized

The FORTNA Shoe Sorter allows chutes to be mounted in any given position with a small distance between them so that the length of the sorter is optimized regardless of the setting.

Precise control

The DCM allows precise control of the timing of the divert switches, which reduces development time for the integrator while preventing issues related to activation mistiming, which can affect the performance and durability of the sorter.

FORTNA

About FORTNA

FORTNA partners with the world's leading brands to transform omnichannel and parcel distribution operations. Known world-wide for enabling companies to keep pace with digital disruption and growth objectives, we design and deliver solutions, powered by intelligent software, to optimize fast, accurate and cost-effective order fulfillment and last mile delivery. Our people, innovative approach and proprietary algorithms and tools ensure optimal operations design and material and information flow.

Contact us today at www.FORTNA.com