

Asentics *easy*

The High-Speed Measuring and Packing System for Seals



## PRODUCT & PERFORMANCE

**Asentics EASY – Ultra-fast and reliable sorting and packing of elastomer seals using high-precision optical dimensional measurement according to ISO 3601-I.**

### Design / Ergonomic concept

The Asentics EASY is an automatic quality assurance inspection system for standard circular seals and customised non-circular seals (frame seals). The system's mechanics are designed to measure precisely a broad range of products and to serve for an ultra-fast sorting and bag packing.

### System Layout and Sensors

The Asentics EASY is designed to provide optimum measurement results for high-volume sorting and packing batches of elastomer seals. As the part passes through the system, a high-precision optical dimension sensor and optionally a height monitoring unit (HMU) are determining the seal's quality.

Each single part is exactly counted and can be automatically sorted (Check & Sort) and/or packed with precise amount of parts with an optional automatic bag packaging system (Check & Pack). In this way the Asentics EASY is ideal to prevent fatal product mix-ups in the packing process.

The feeding concept with inclined belt conveyor in combination with a powerful separation unit is simple, rugged and highly effective. It allows to run a broad range of products and to generate a high and steady throughput. Together with its large part container the Asentics EASY is well suited for high-volume batch sorting and packing.

To accomplish product changes in a minimum of time the system can be fully controlled via the Asentics standard user interface. All speed and position settings are stored in the product data base and will be set automatically when changing the product. Besides this, the Asentics EASY is also available in a cost-reduced, semi-automatic version with manual drives for positioning the rotary disk, brush and guide bar.

Either way, due to its ergonomics, working with the Asentics *Check & Pack* and *Check & Sort* is fast and easy. Maintenance and cleaning works are simple. The open design assures an unobstructed access to all machine components.

### Features and Benefits

- **Maximum performance**
  - High and steady throughput (up to 15 parts per second)
  - High-speed packaging performance
  - Broad range of parts (up to 100 mm OD)
  - Standard circular and customized non-circular seals (frame seals)
  - High measurement accuracy (acc. to ISO 3601-I)
- **Minimum downtimes / set-up times**
  - Fully automatic system set-up
  - Large part container (180 l)
  - Unobstructed access for fast and easy maintenance
- **Outstanding ease of use**
  - Asentics standard user interface (well-known from Asentics VARIO systems)
  - User authentication via key card
  - Product and order selection via barcode scanner
  - Remote access for configuration, backup and services
  - Fast and simple belt change
- **Compact and rugged design**
  - Small footprint
  - Low in height
  - High durability
- **Available as cost-reduced version**
  - Check & Sort (as basic inspection system)
  - semi-automatic set-up

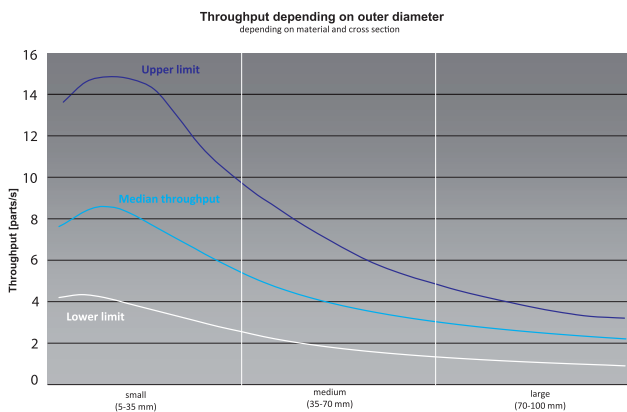
## ADAPTABILITY & SPECIFICATIONS

### Selectable field-of-view and resolution

To insure optimum measurement results, Asentics EASY can be equipped with 5.0 MP or even 12.0 MP cameras and with different fields-of-view, ranging from 28 mm to 110 mm. This way Asentics EASY can be tailored to individual inspection requirements.

### Highest throughput – exact part counting

With minimum of mechanical adjustments Asentics EASY can perform with highest throughput of up to 15 parts/s. All necessary product parameters are stored in a data record and can be accessed at any time. Product change is a fully automatic process and takes merely a few seconds – the operator is only required to clean carefully and clear the infeed. Thus, the Asentics EASY ensures the reproducibility of sorting results at all times.



The throughput depends on a number of various factors. Typically, it lies between the upper and lower curves. A large volume part container ensures high Asentics EASY uptime. We have defined the removal of "good" parts as an open interface, allowing you to integrate either the system's eject bin with a volume of approx. 38 litres (Check & Sort) or roll away bag packing device for direct packing and labelling (Check & Pack).

### The right Asentics EASY for you

The Asentics EASY generally covers all requirements for sorting and packing a broad range of seals. All Asentics EASY models are based on the same mechanical principles and only differ in size of sensor field-of-view, camera resolution, software options and sorting and packing equipment. Asentics EASY is available with 28 mm, 50 mm, 80 mm and 110 mm fields-of-view. When inspecting very specialized seals, you can make a number of adjustments to the mechanical system. For more details please ask our applications department.

#### Asentics EASY – sealing inspection and sorting applications

Check & Sort for dimensional measuring, counting and sorting
Check & Pack for dimensional measuring, counting, packing and labelling
Dimensional measurement of circular seals and customised frame seals (Dimension Sensor)
Contour-related defects and differences (Dimension Sensor)
Sorting of height and planarity related differences (HMU Sensor)
Fully-automatic version, up-time optimized for high product variety
Semi-automatic version, cost reduced for limited product variety

### System configurations

Sensors	
Dimension sensor	●
Colour sensor	○
Height Measurement Unit – HMU	
HMU Sensor 10 µm	○
Hardware options	
Automation equipment	
Semi-automatic Feeder Setup (belt speed)	●
Fully Automatic Feeder Setup (belt speed, rotary disk, brush, guide bar)	○
Security equipment	
Access Control	○
Power Guard	○
Antistatic equipment	
Antistatic Kit	○
I/O equipment	
TFT Monitor plus keyboard with trackball	●
Touchscreen operator panel	○
Barcode reader	○
Temperature sensor	○
Part containers ("bad" and "undefined" parts)	● 2 pcs
Additional equipment	
Check & Sort eject station "good parts"	○
Automated Bagging Unit	○ (Check & Pack)
Line Feed printer for plastic bags	○ (Check & Pack)
Calibration Kit	○
Remote Access / Inspection Net	○
Software options	
Notches and Nubs	●
FRAME SEALS™	○

● included · ○ optional · – not available

## TECHNICAL DETAILS

### Highest flexibility – Check & Sort or Check & Pack

The Asentics EASY is available in two basic versions. The *Check & Sort* is a basic inspection system for elastomer seals which is optimized for measuring seal dimensions with high accuracy at very high speed for reasonable costs. The *Check & Pack* results from simply replacing the "good" part eject station by a fully automated bag packing unit as shown in the options.

This gives the opportunity to use the Asentics EASY with different control functions and options in various situations. Especially in a non-chained 100% quality controlled production with i.e. warehouse

located seals, the Asentics EASY is the ideal product even as a complement to other high-end inspection systems like Asentics VARIO and COMPACT.

#### The Asentics EASY offers the following control functions:

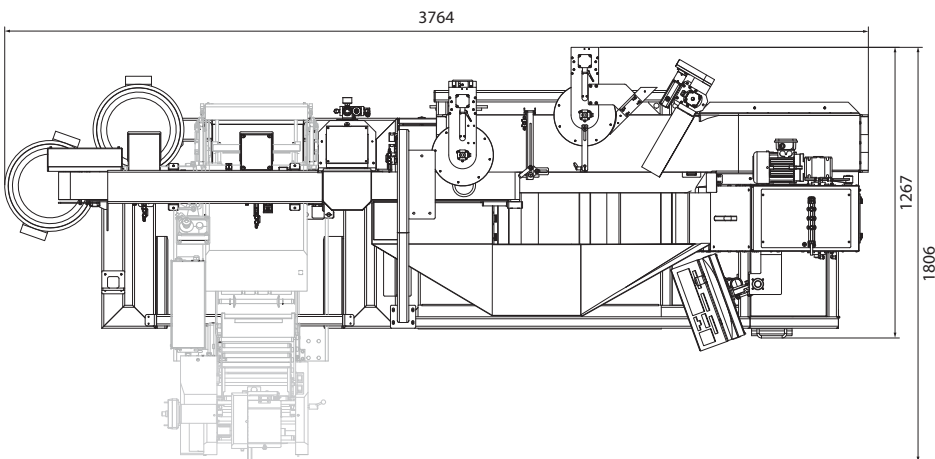
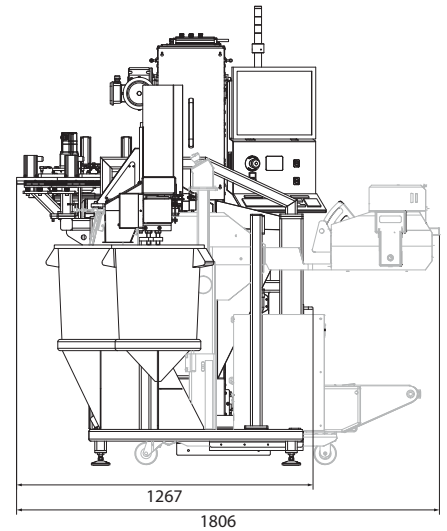
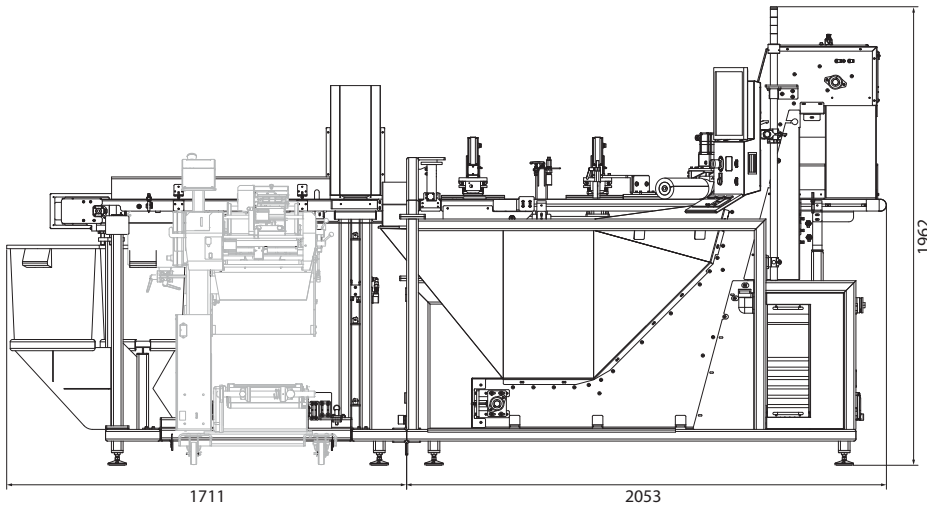
- Dimension (Inner diameter ID, cross section CS)
- Height and planarity with HMU sensor (optional)
- Quantity (precise part counting)
- Other criteria upon request (i.e. colour)

### Sensor Specifications

Model	EASY-25 5.0 MP	EASY-50 5.0 MP	EASY-50 12.0 MP	EASY-100 5.0 MP	EASY-100 12.0 MP
Field of view	28 mm / 1.10"	52 mm / 2.05"	56 mm / 2.20"	104 mm / 4.09"	110 mm / 4.33"
Max. OD (dimensionally stable parts)	25 mm / 0.98"	50 mm / 1.97"	50 mm / 1.97"	100 mm / 3.94"	100 mm / 3.94"
<b>Dimension Sensor</b>					
Resolution	14 µm / 0.00	26 µm / 0.00102"	19 µm / 0.00075"	51 µm / 0.00201"	37 µm / 0.00146"
Smallest detectable defect size					
- azimuthal	35 µm / 0.00138"	65 µm / 0.00256"	48 µm / 0.00187"	128 µm / 0.00502"	93 µm / 0.00364"
- radial	11 µm / 0.00044"	21 µm / 0.00082"	15 µm / 0.00060"	41 µm / 0.00161"	30 µm / 0.00117"
Measurement accuracy	7 µm / 0.00028"	13 µm / 0.00051"	9 µm / 0.00035"	26 µm / 0.00100"	19 µm / 0.00073"
Camera resolution	5.0 Megapixel	5.0 Megapixel	12.0 Megapixel	5.0 Megapixel	12.0 Megapixel
LED illumination	infrared	infrared	infrared	infrared	infrared
<b>HR-HMU-Sensor</b>					
Measuring range	10 mm / 0.39"				
Resolution	10 µm / 0.00039"				
Sample rate	5 kHz				
Measurement accuracy	100 µm / 0.0039"				
Illumination	Laser, red				
<b>Part Dimensions</b>					
Separation capacity min. OD	5 mm / 0.1969"				
Separation capacity min. CS	1 mm / 0.0394" (smaller on request)				
Separation capacity max. height	9 mm / 0.3542" with HMU, (heigher on request)				

## TECHNICAL DETAILS

### Dimensions



The product in this document is subject to continuous development and improvement. We reserve the right to amend specifications without notice.

#### Weight

600 kg

#### Electrical connection

Supply voltage 400 V – 1 phase  
Frequency 50/60 Hz  
Power consumption 2.0 kW  
Fuse 10 A – slow blow

#### Pneumatics

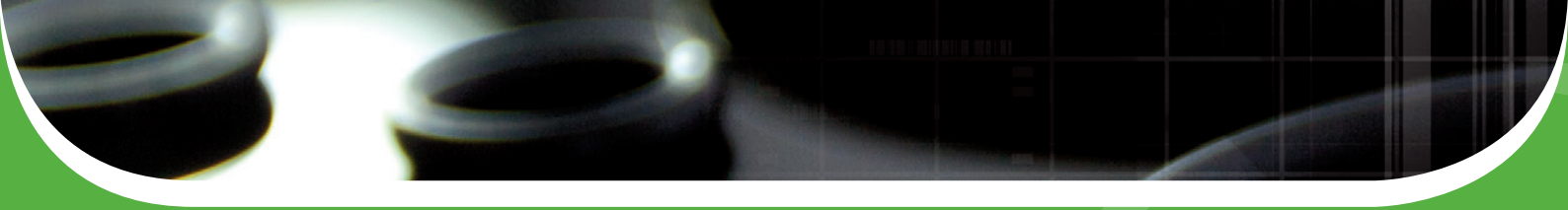
Compressed-air dry and oil-free  
Max. pressure 12 bar  
Working pressure 6 bar  
Air consumption 100 – 150 l / min.

#### Noise level

Volume < 70 db (A)

#### Operating conditions

Temperature range 10 °C – 30 °C, Non-condensing



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