

AGILOX

AGILOX PRODUCTS

ONE, OCF, ODM, BCO, IO & Analytics



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THE AGILE VEHICLE

SMALL AND AGILE, THE AGILOX ONE DRIVES THROUGH THE NARROWEST AISLES

DIMENSIONS (L x W x H)

1,510 MM × **800 MM** × **1,870 MM**
60 IN × **32 IN** × **74 IN**

PERFORMANCE DATA

500 MM **1,000 KG** **1.4 M/S**
20 IN **2204 LBS** max. speed
max. lifting height max. lifting weight



AGILOX ONE 1,200 mm / 47 IN with obstacle avoidance, single scissors and signal light package



SPECIFICATIONS

4 omnidirectional drives
Drive system

Dual electric spindles
Lift system

LiFePO4 with BMS
3 min charging = 1 h running
Battery

400 kg (880 lbs)
Unit weight

< 12 hours (1 vehicle) / 15 minutes (each additional AMR)
Commissioning time

CE, declaration of conformity
Certification

203 mm / 8 IN width
100 mm / 4 IN height
Fork dimensions

575 mm / 23 IN
Overall fork width

MAXIMUM EFFICIENCY

ALL PRODUCTS WITH THE PROVEN AGILOX X-SWARM TECHNOLOGY



ONE VARIATIONS



ONE Double Scissor Lift

AGILOX ONE 1200 mm with a double scissor lifting system

1,200 mm / 47 IN double scissor
750 kg / 1653 lbs
1,000 mm / 39 IN lifting height



ONE Narrowfork

AGILOX ONE basic vehicle with only one fork

1,200 mm / 47 IN single scissor
1,000 kg / 2,204 lbs
500 mm / 20 IN lifting height



ONE 1400 / 1600 / 1800

AGILOX ONE basic vehicle with lifting forks in three different lengths (1,400 mm, 1,600 mm, 1,800 mm)

V1400 1,400 mm / 55 IN single scissor 750 kg / 1653 lbs
500 mm / 20 IN lifting height
V1600 1,600 mm / 63 IN single scissor 750 kg / 1653 lbs
500 mm / 20 IN lifting height
V1800 1,800 mm / 71 IN single Scissor 750 kg / 1653 lbs
500 mm / 20 IN lifting height

ONE ADD-ONS



Obstacle Avoidance

Additional 3D sensor system in the direction of travel to increase safety in man-machine mixing mode



Signal Light Package

Light signal to increase safety in man-machine mixing mode (color: blue / green / red), additional signal lights in the fork tips (color: white / yellow)



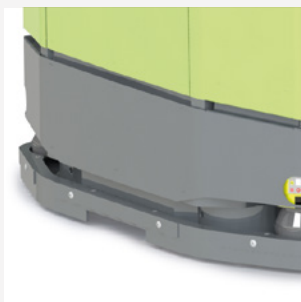
Barcode Identification Unit

Scanner for the detection of barcodes or QR codes



ESD Protection

Protection or discharge measure for operation in areas with ESD requirements to prevent electrostatic charging



Debris Protection

Dirt deflector in the front area of the vehicle, versions in rubber lip or brush



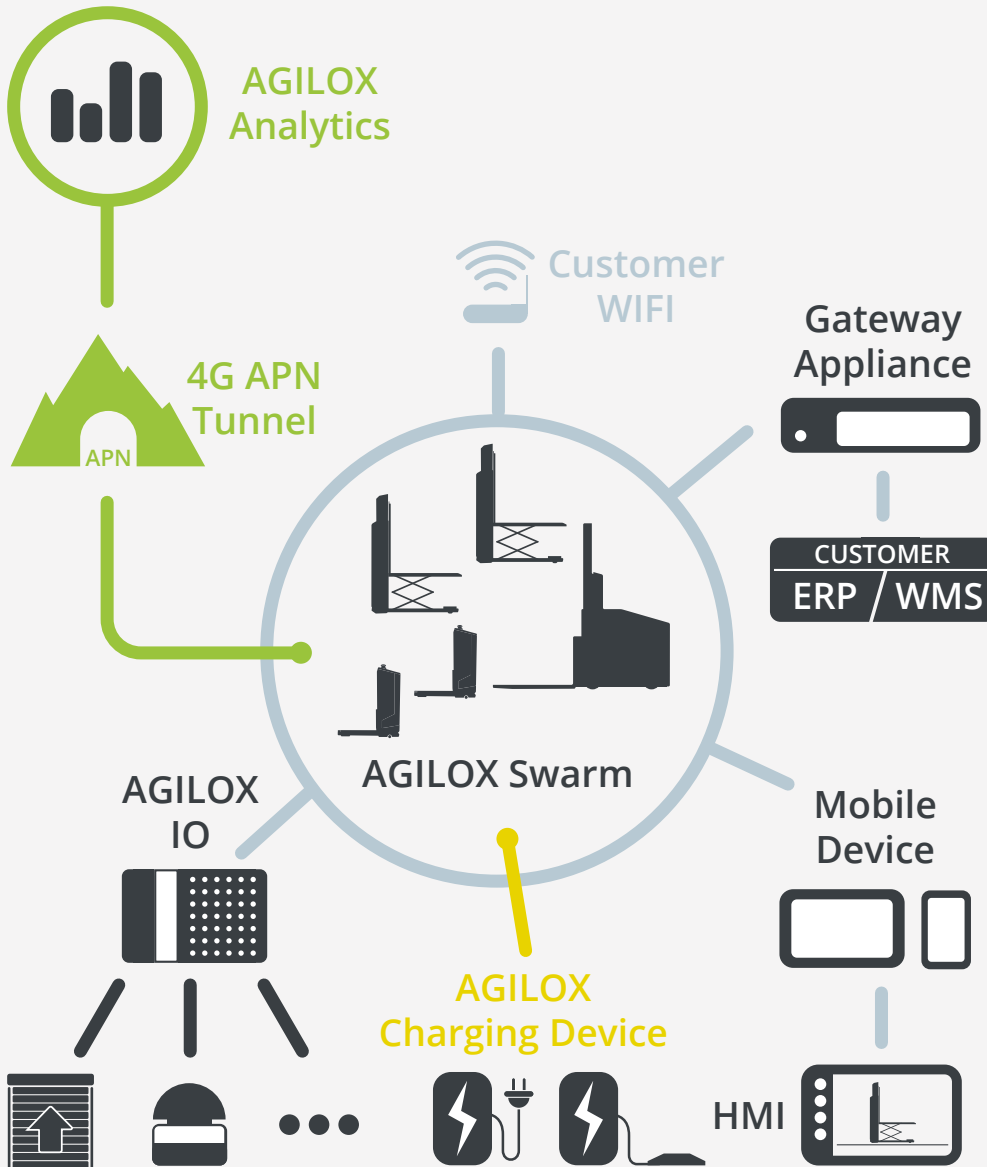
Mobile Charging Device

One mobile charger is recommended per AGILOX fleet (connection 230V / 16A)

AGILOX

SYSTEM OVERVIEW

The use of an AGILOX IGV is possible without adjustments and additions to the IT infrastructure. Thanks to swarm intelligence, neither a software nor a separate server for a master computer must be installed. AGILOX' plug and perform quality only requires customer provided WiFi and a 3-phase AC power connection. Open interfaces also allow the system to be flexibly and dynamically connected with the environment. Since navigation takes place without additional infrastructure, the system adapts to its changing environment almost automatically and adheres to the highest security standards.



AGILOX Charging

24/7 operations without changing the battery. 60 minutes of operation - 3 minutes to charge.

Customer WIFI

Customer-provided WiFi is required in order for vehicles to communicate with each other.

Customer ERP / WMS

Customer systems (e.g. ERP, WMS, MES, etc.) can be connected via the AGILOX JSON API.

AGILOX Swarm

Swarm Intelligence underpins the AGILOX fleet's navigation.

Mobile Device

The IGVs are controlled via mobile devices (e.g. smartphone, tablet, etc.) with browser access.

AGILOX HMI

The HMI is mapped in the web browser and is always available to interact with AGILOX vehicles.

AGILOX IO Box

The IO Box assists the customer in connecting their existing infrastructure (e.g. roller doors, fire alarm systems) with the AGILOX network.

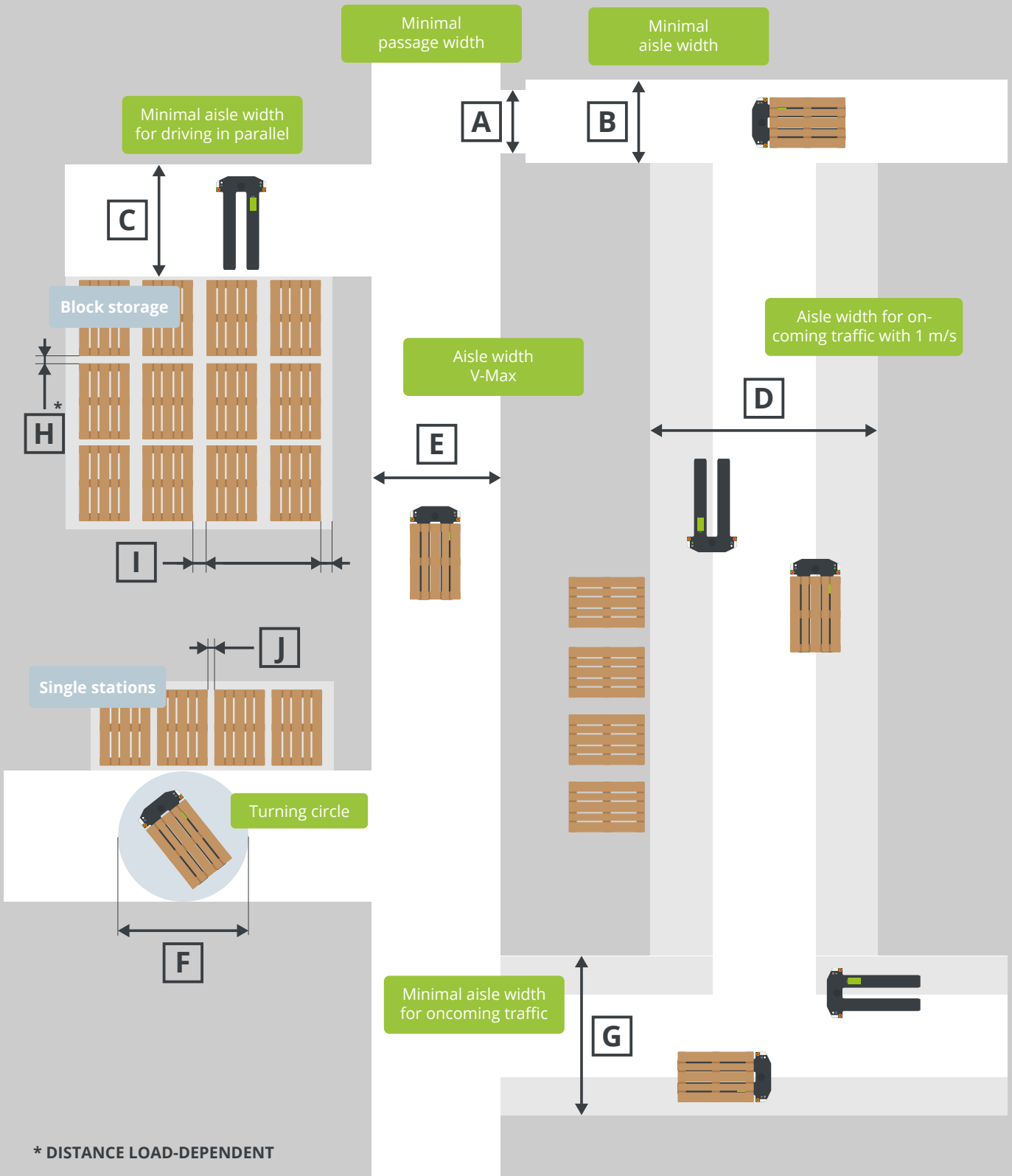
AGILOX Analytics

Access to the most important KPIs and data anytime and anywhere.

AGILOX ONE

DRIVING SURFACE DESIGN

Load Carrier	A	B	C	D	E	F	G	H	I	J
Euro Pallet 1200 x 800 MM	n/a	1300 MM 51 IN	1800 MM 71 IN	3600 MM 142 IN	2100 MM 83 IN	2100 MM 83 IN	2600 MM 102 IN	100 MM 4 IN	200 MM 8 IN	100 MM 4 IN



* DISTANCE LOAD-DEPENDENT

FOR HEAVIER LOADS THE AUTONOMOUS COUNTERBALANCED FORKLIFT OCF IS A REAL POWER MONSTER

DIMENSIONS (L x W x H)

2,800 MM × **1,200 MM** × **2,570 MM**
110 IN × **47 IN** × **101 IN**

PERFORMANCE DATA

1,600 MM **1,500 KG** **1.4 M/S**
63 IN **3306 LBS** max. speed
max. lifting height max. lifting weight



AGILOX OCF 1200 mm / 47 IN with obstacle avoidance



SPECIFICATIONS

3 omnidirectional drives

Drive system

Electric

Lift system

**LiFePO4 with BMS
3 min charging
= 1 h running**

Battery

3,600 kg (7940 lbs)

Unit weight

**< 12 hours (1 vehicle)
/ 15 minutes
(each additional
AMR)**

Commissioning time

**CE, declaration of
conformity**

Certification

**125 mm / 5 IN width
70 mm / 3 IN height**

Fork dimensions

**450 mm / 18 IN min.
960 mm / 38 IN max.**

Overall fork width

MAXIMUM EFFICIENCY

**ALL PRODUCTS WITH
THE PROVEN AGILOX
X-SWARM TECHNOLOGY**





OBSTACLE AVOIDANCE

3D sensor system in the direction of travel to increase safety in man-machine mixing mode

OCF ADD-ONS



Barcode Identification Unit

Scanner for the detection of barcodes or QR codes



Mobile Charging Device

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OCF Lifting Aids



Standard Stationary Charging Station

Stationary charging station for the AGILOX OCF (connection 400V / 16A)



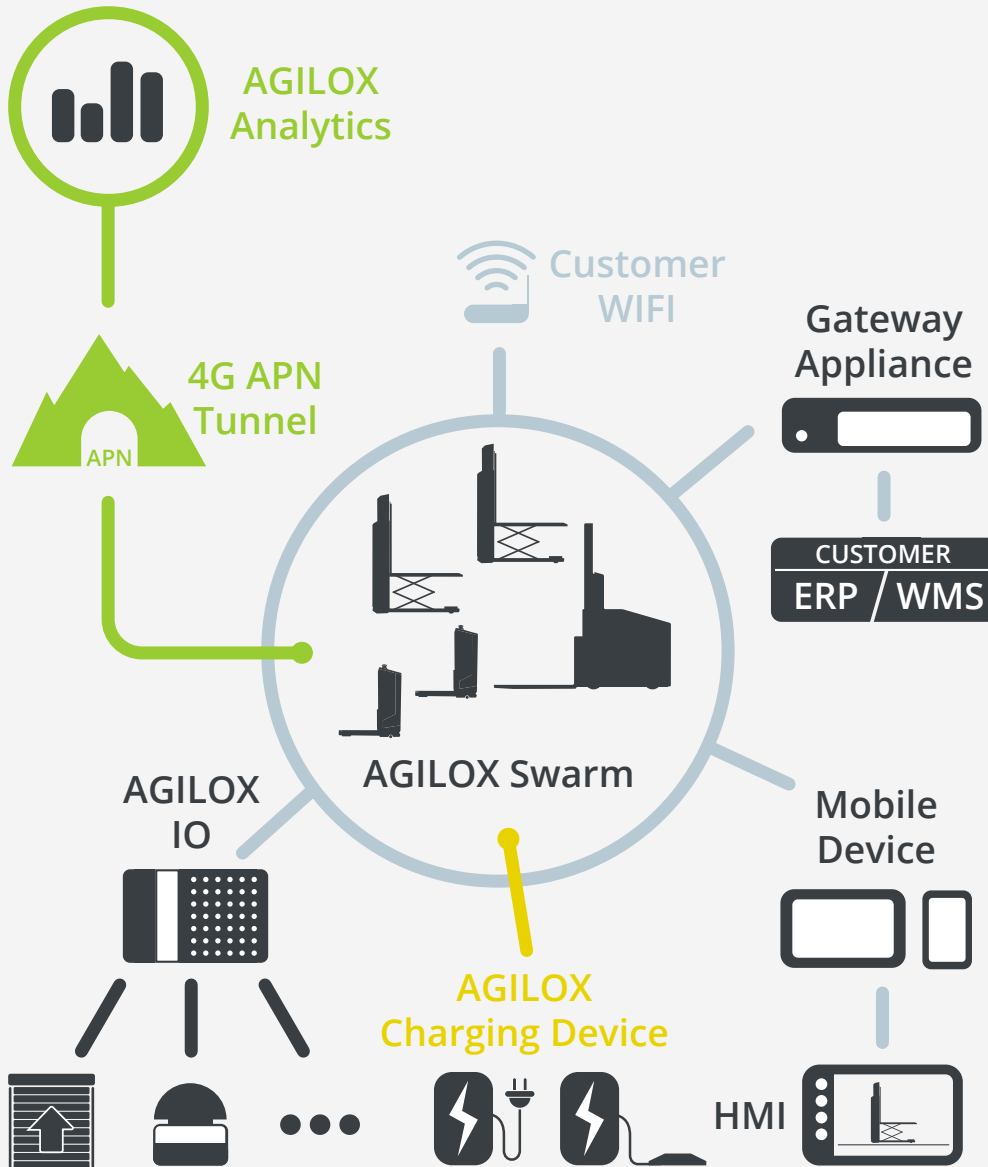
Quick Stationary Charging Station

Stationary fast charging station for the AGILOX OCF (connection 400V / 32A)

AGILOX

SYSTEM OVERVIEW

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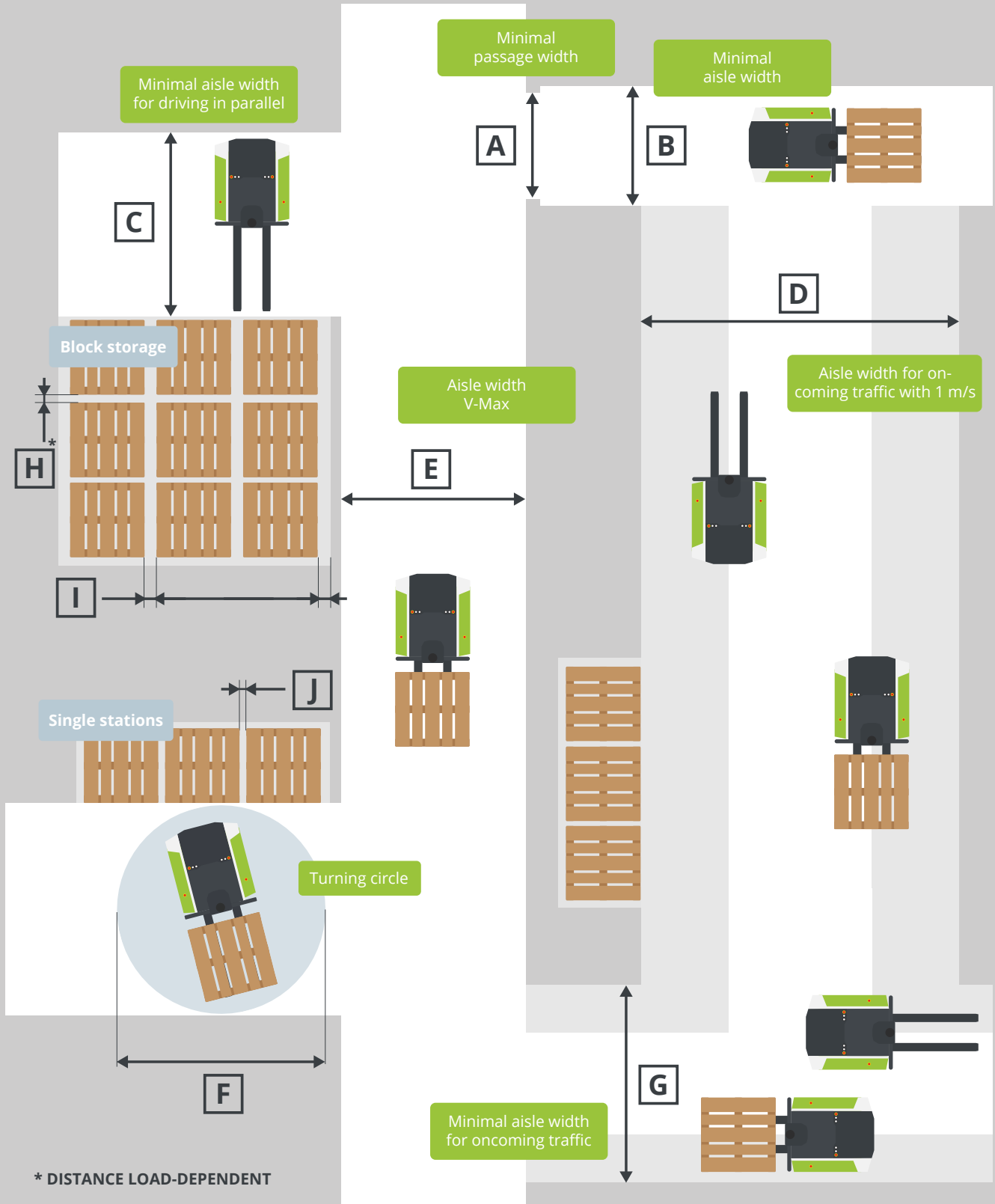
AGILOX Analytics

Access to the most important KPIs and data anytime and anywhere.

AGILOX OCF

DRIVING SURFACE DESIGN

Load Carrier	A	B	C	D	E	F	G	H	I	J
Pallet 1200 x 1200 MM	1700 MM 67 IN	1900 MM 75 IN	3200 MM 126 IN	5500 MM 216 IN	3100 MM 122 IN	3400 MM 134 IN	3800 MM 150 IN	100 MM 4 IN	200 MM 8 IN	100 MM 4 IN



* DISTANCE LOAD-DEPENDENT

OMNIDIRECTIONAL DOLLY MOVER MADE FOR INTELLIGENT TRANSPORTS OF SMALL LOAD CARRIERS

DIMENSIONS (L x W x H)

1,100 MM × **400 MM** × **1,235 MM**
43 IN × **16 IN** × **49 IN**

PERFORMANCE DATA

250 MM **300 KG** **1.4 M/S**
10 IN **661 LBS** max. speed
max. lifting height max. lifting weight



SPECIFICATIONS

2 omnidirectional drives

Drive system

Single electric spindles

Lift system

**LiFePO4 with BMS
3 min charging
= 1 h running**

Battery

160 kg (352 lbs)

Unit weight

**< 12 hours (1 vehicle)
/ 15 minutes
(each additional
AMR)**

Commissioning time

**CE, declaration of
conformity**

Certification

**205 mm /
8 IN width**

Fork width

MAXIMUM EFFICIENCY

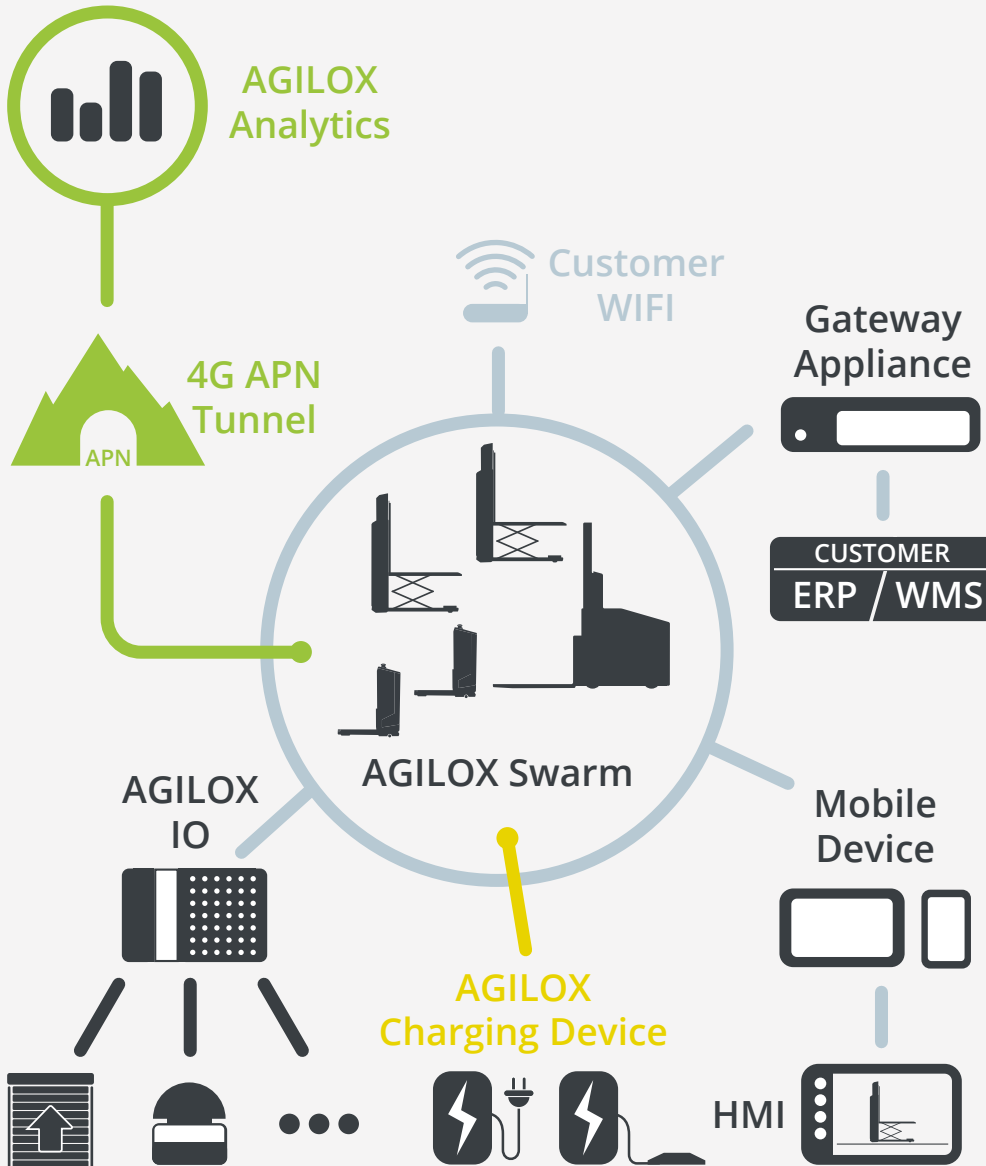
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AGILOX

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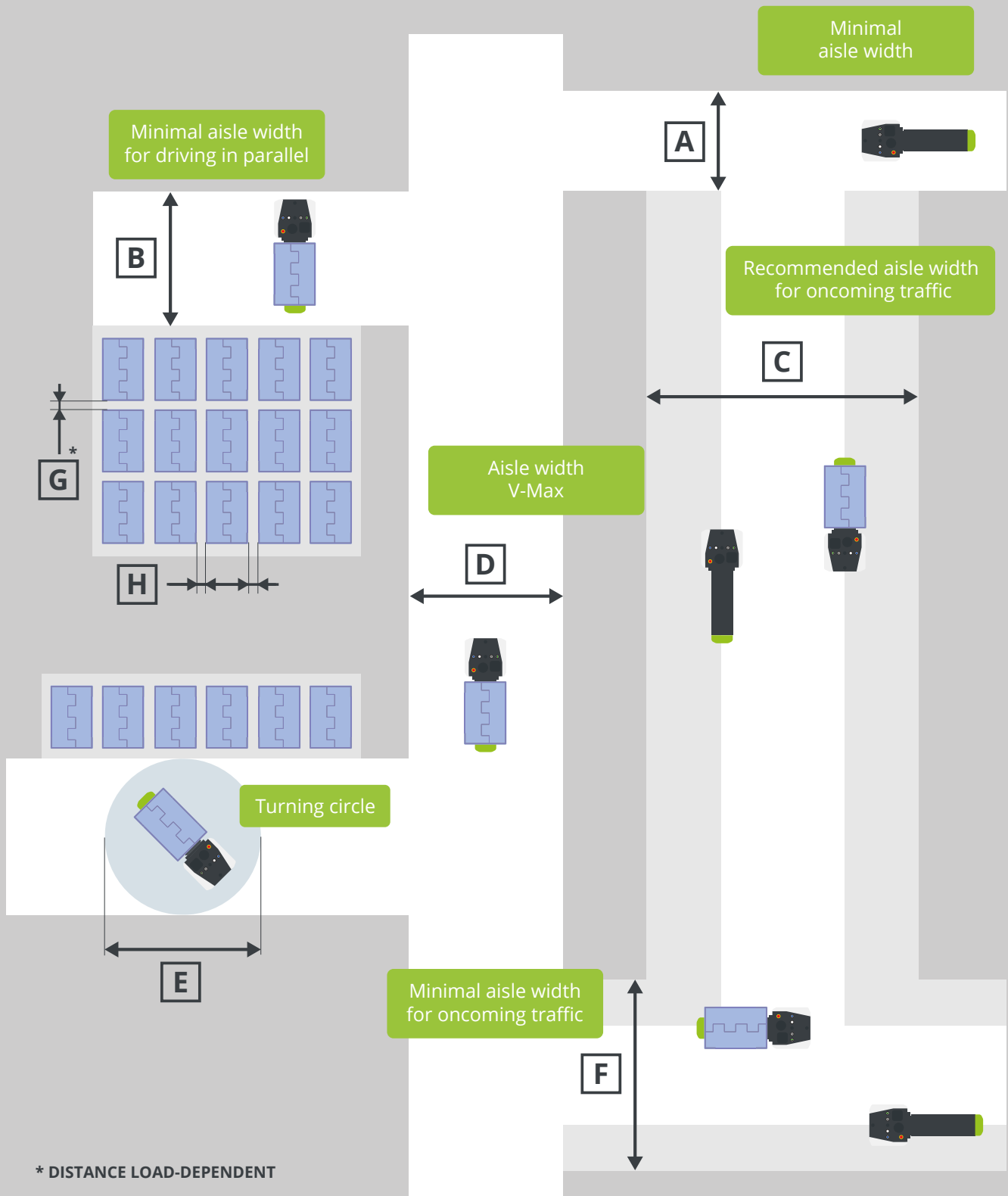
AGILOX Analytics

Access to the most important KPIs and data anytime and anywhere.

AGILOX ODM

DRIVING SURFACE DESIGN

Load Carrier	A	B	C	D	E	F	G	H
Dolly 600 x 400 MM	900 MM 35 IN	1300 MM 51 IN	1800 MM 71 IN	1400 MM 55 IN	1600 MM 63 IN	1600 MM 63 IN	50 MM 2 IN	50 MM 2 IN



* DISTANCE LOAD-DEPENDENT

WITH THE AGILOX BOX CARRIER, BOXES AND TRAYS CAN BE TRANSPORTED EFFORTLESSLY

BOX CARRIER

The AGILOX BCO (Box Carrier) is an additional module that the AGILOX ONE can hold like a Euro pallet. Power and controls are transmitted via CAN bus and the connection is made automatically – no human intervention is necessary to complete the retooling process. The upper part standard consists of two belt conveyors. On request, the conveyor technology can be expanded to up to eight conveyors on four levels.

DIMENSIONS (L x W x H)

1,161 MM × **800 MM** × **250 MM**
46 IN × **31 IN** × **10 IN**

LOAD CARRIER

55 KG **400 MM** **600 MM**
123 LBS **16 IN** **24 IN**
max. box weight max. box width max. box length

DELIVERY HEIGHT

250 MM **860 MM** **1,365 MM**
10 IN **34 IN** **54 IN**
min. delivery height max. delivery height
single scissor lift max. delivery height
double scissor lift



Box Carrier single level with belt conveyor



MAXIMUM EFFICIENCY

**ALL PRODUCTS WITH
THE PROVEN AGILOX
X-SWARM TECHNOLOGY**



VARIATION BCO

1 to 4 levels

Number of levels

Height of the levels individually designable

Level height

Between 2 and 8 conveyors

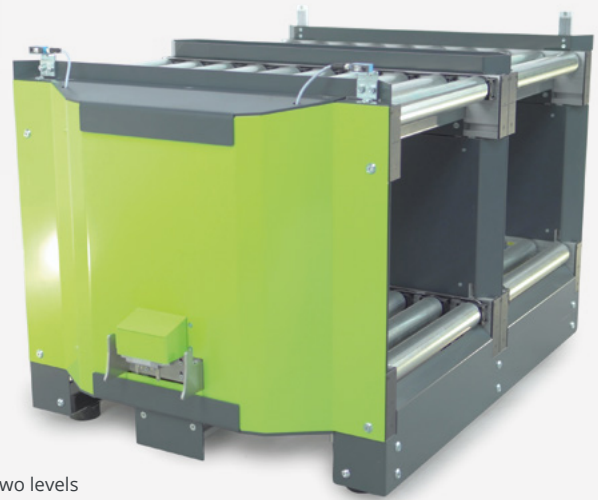
Number of conveyors

Roll or belt conveyor

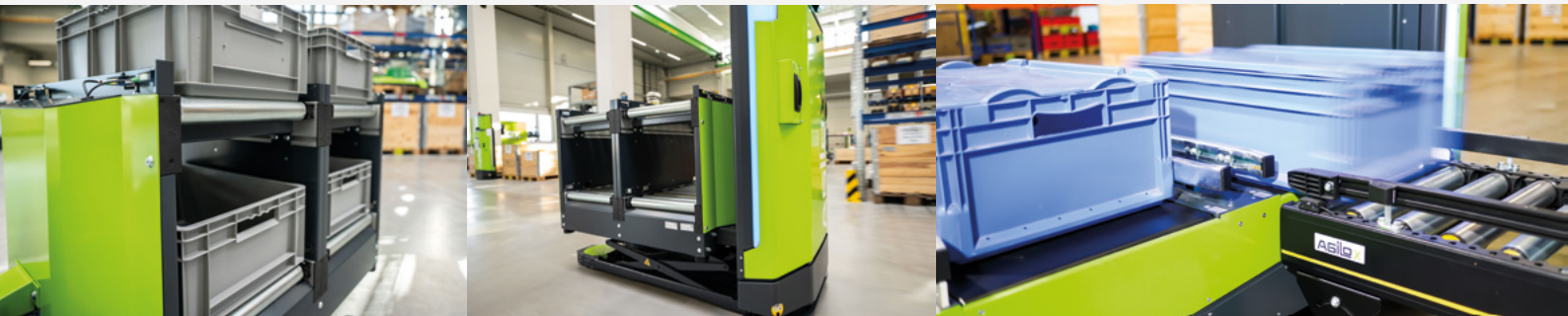
Conveyor type

Integrated scale

Optional add-on



Box Carrier two levels with roll conveyor

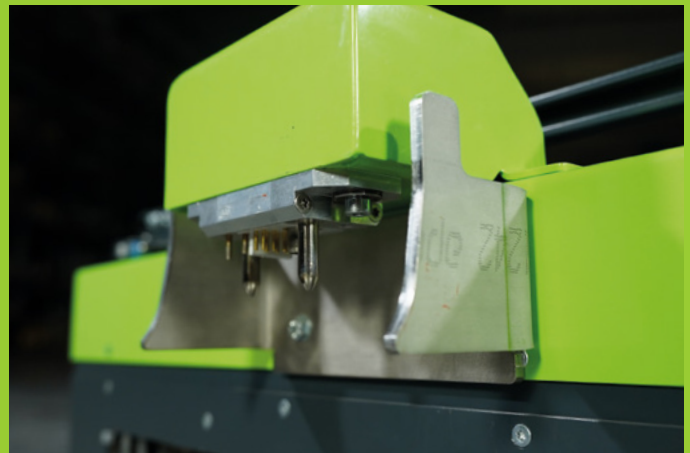


CONNECTOR ONE / BCO

ONE connector for BCO



Connector BCO



THE AGILOX IO BOX MAKES THE COMMUNICATION WITH PERIPHERAL DEVICES POSSIBLE

AGILOX IO

The AGILOX IO is an industrial control system (optionally Beckhoff or Siemens) with potential-free relay outputs and digital inputs (24VDC), which is connected to the AGILOX network. It can be used as an interface with the system operator's automation world and connects fieldbus systems and the IOs with the AGILOX network to ensure the required data exchange.



Siemens



Beckhoff

StandardSi 14/10



StandardBE 12/6



MiniSI 6/4



Type	StandardSi 14/10	StandardBE 12/6	MiniSI 6/4
Art.-Nr.	AGIIO-NSI	AGIIO-NBES	AGIIO-MSIS
PLC Manufacturer	Siemens	Beckhoff	Siemens
Control Cabinet	760 x 760 x 300 mm (WxHxD)	400 x 300 x 155 mm (WxHxD)	Yes
Input Count	14	12	6
Output Count	10	6	4
Output Characteristics	potential-free	potential-free	potential-free
I/O Extension Possible	max. 7 x IO Extension SI 16/16	No	No
Network Connection	Ethernet	Ethernet	Ethernet
Decentralized IOs possible	No	No	No
Assembly and Wiring	by customer	by customer	by customer
Required Power Supply	110 - 230 VAC	110 - 230 VAC	110 - 230 VAC

MAXIMUM EFFICIENCY

ALL PRODUCTS WITH THE PROVEN AGILOX X-SWARM TECHNOLOGY

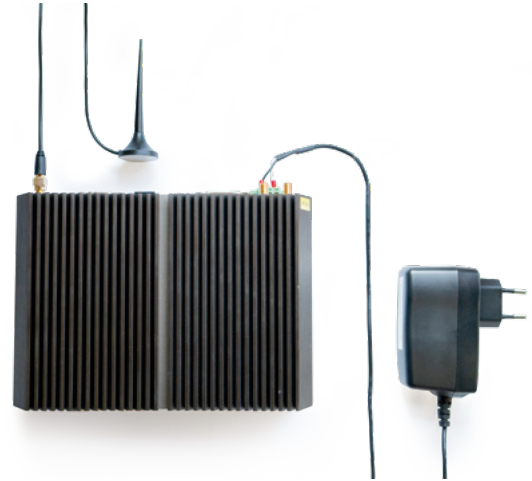


AGILOX IPC - GATEWAY APPLIANCE

AGILOX swarms do not need a master computer, the vehicles communicate with each other via WLAN and via this path they also communicate with higher-level IT systems (e.g. ERP, WMS, MES). In order to provide a permanently available contact person for these higher-level systems, who can also be reached via Ethernet, there is the Gateway Appliance. This instance consists of an industrial PC running the AGILOX Core Software. This means that orders from higher-level systems can also be transferred to the AGILOX system if, for example, all AGILOX vehicles are switched off or no WLAN is available at the moment.

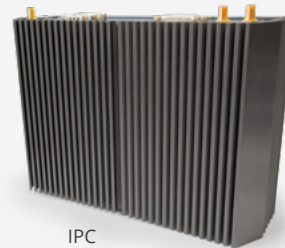


Type	Simple IPC
Art.-Nr.	AGIIO-SIPC
PLC Manufacturer	-
Control Cabinet	No
Input Count	-
Output Count	-
Output Characteristics	-
I/O Extension Possible	No
Network Connection	Ethernet + WiFi
Decentralized IOs possible	No
Assembly and Wiring	by customer
Required Power Supply	230V



AGILOX HYBRID BOX

The Hybrid Box combines the communication interface to automation units (IO Box) and IT systems (Gateway Appliance) in one control cabinet.



Type	Hybrid BE	Hybrid SI
Art.-Nr.	AGIPC-HBE	AGIPC-HSI
PLC Manufacturer	Beckhoff	Siemens
Control Cabinet	400 x 800 x 300mm (WxHxD)	760 x 760 x 300mm (WxHxD)
Input Count	12	14
Output Count	6	10
Output Characteristics	potential-free	potential-free
I/O Extension Possible	No	max. 7xIO Extension SI 16/16
Network Connection	Ethernet + WiFi	Ethernet + WiFi
Decentralized IOs possible	No	No
Assembly and Wiring	by customer	by customer
Required Power Supply	110V-230V	110V-230V



OTHER IO BOXES

Type	SimpleBE 12/6	SimpleBE 32/8	SimpleBE 128/32
Art.-Nr.	AGIIO-SBES	AGIIO-SBEM	AGIIO-SBEL
PLC Manufacturer	Beckhoff	Beckhoff	Beckhoff
Control Cabinet	No	No	No
Input Count	12	32	128
Output Count	6	8	32
Output Characteristics	potential-free	potential-free	non potential-free
I/O Extension Possible	No	No	No
Network Connection	Ethernet	Ethernet	Ethernet
Decentralized IOs possible	No	No	No
Assembly and Wiring	by customer	by customer	by customer
Required Power Supply	24VDC/4A	24VDC/4A	24VDC/4A

Type	SimpleSI 14/10	StandardBE 128/32	StandardBE WiFi 12/6
Art.-Nr.	AGIIO-SSI	AGIIO-NBEL	AGIIO-NBEW
PLC Manufacturer	Siemens	Beckhoff	Beckhoff
Control Cabinet	No	600 x 380 x 210 mm (WxHxD)	600 x 380 x 210 mm (WxHxD)
Input Count	14	128	12
Output Count	10	32	6
Output Characteristics	potential-free	non potential-free	potential-free
I/O Extension Possible	max. 7 x IO Extension SI 16/16	No	No
Network Connection	Ethernet	Ethernet	Ethernet + WiFi
Decentralized IOs possible	No	No	No
Assembly and Wiring	by customer	by customer	by customer
Required Power Supply	24VDC/4A	110V-230V	110V-230V

Type	StandardSI WiFi 14/10	Decentral BE 8/4
Art.-Nr.	AGIIO-NSIW	AGIIO-DBE
PLC Manufacturer	Siemens	Beckhoff
Control Cabinet	760 x 760 300 mm (WxHxD)	400 x 300 x 155 mm (WxHxD)
Input Count	14	8
Output Count	10	4
Output Characteristics	potential-free	potential-free
I/O Extension Possible	max. 7 x IO Extension SI 16/16	Beckhoff EP2338-1001
Network Connection	Ethernet	Ethernet
Decentralized IOs possible	No	max. 12 boxes with 8 digital channels each (max. 32 outputs can be used)
Assembly and Wiring	by customer	by customer
Required Power Supply	110V-230V	110V-230V

AGILOX ANALYTICS ENABLES UP-TO-THE-SECOND PERFORMANCE ANALYSIS AND THE EFFICIENCY INCREASE OF LOGISTICS PROCESSES

AGILOX ANALYTICS

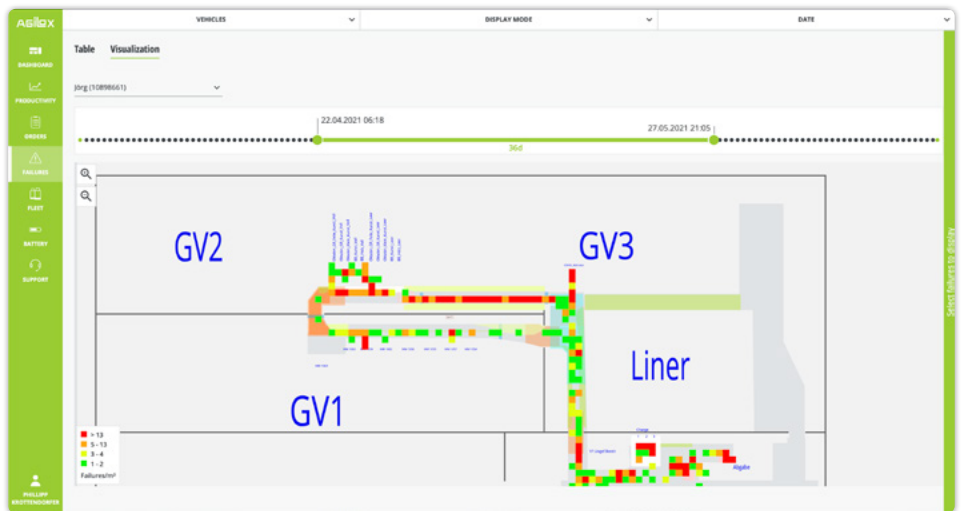
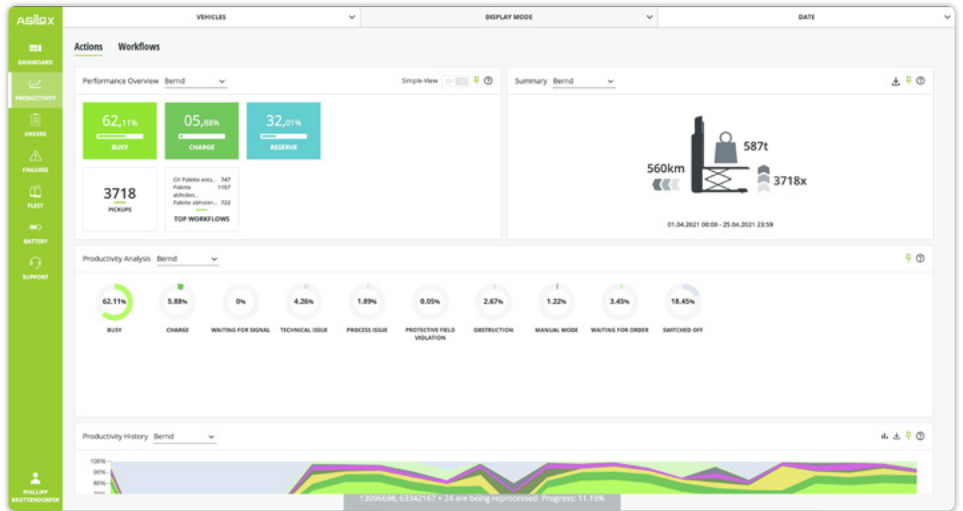
Collecting various process data and analyzing it is a key factor in optimizing operations in the material handling industry - especially when it can be done easily via a browser without any additional effort. As logistics processes are automated by an AGILOX, the volume of data increases, and with it the opportunity to make use of it. In AGILOX Analytics, the collected data is compiled and clearly presented. While our vehicles directly increase efficiency in operation, our private cloud-based data analysis platform AGILOX Analytics offers the possibility to do performance analysis as well as to get software support for the complete AGILOX fleet.

Guaranteed data safety

Because data security plays an essential role, AGILOX relies on a sophisticated security concept with a certified data center (ISO 27001). Data encryption to the highest security standards and a private connection to our cloud-based analytics platform, where the data is processed, guarantee the protection of customer data from unauthorized access and thus maximum data security.

Detailed data reports

AGILOX Analytics offers the possibility to analyze logistics processes as well as the condition of vehicles. More than 3.5 billion data points generated per vehicle in a year enable near real-time performance analysis down to the second over the entire service life. Sophisticated and detailed reports as well as an ongoing expansion of functions accommodate profound performance analysis. As a result, the productivity and efficiency of the entire logistics and production processes can be continuously improved, and forward-looking strategic decisions can be made. Browser-based access to the data is possible anytime and anywhere - whether via PC, tablet or smartphone.



ID	Name	Start	End	Duration	Distance	Batteryusage	Pickups
622378662127700013	Palette abholen SV starten	25.04.2021 11:41:49	25.04.2021 11:44:22	00:02:31	76.93m	-1%	0
275398902127700002	PAIK	25.04.2021 11:22:06	25.04.2021 11:22:58	00:00:50	9.53m	0%	0
622378662127700003	Palette abholen SV	25.04.2021 11:16:29	25.04.2021 11:22:06	00:05:38	157.58m	-3%	1
275398902127700001	PAIK	25.04.2021 11:10:38	25.04.2021 11:12:52	00:02:16	67.62m	-1%	0
275398902127700000	Supply Workflow V1 Umladefahrt SV	25.04.2021 11:06:45	25.04.2021 11:10:38	00:03:52	122.33m	-2%	1
622378662127700018	Supply V1 Umladefahrt SV starten	25.04.2021 11:04:35	25.04.2021 11:06:44	00:02:11	74.2m	-1%	0
622378662127700023	AGRO_2	25.04.2021 10:59:33	25.04.2021 11:04:34	00:04:58	94.05m	-2%	1
275398902127700006	Palette abholen SV	25.04.2021 10:54:11	25.04.2021 10:59:32	00:05:18	159.08m	-3%	1
Action		Start	End	Station			
1	PICKUP	25.04.2021 10:54:11	25.04.2021 10:56:42	V1_SV_vul7			
2	DROPP	25.04.2021 10:56:42	25.04.2021 10:59:32	Algabe			
275398902127700004	Palette abholen SV	25.04.2021 10:49:05	25.04.2021 10:54:09	00:05:03	157.02m	-2%	1
275398902127700005	Palette abholen SV	25.04.2021 10:44:19	25.04.2021 10:49:03	00:04:43	93.04m	-2%	1
275398902127700007	DEADLOCK	25.04.2021 10:47:08	25.04.2021 10:47:30	00:00:20	1.73m	0%	0
622378662127700014	Palette abholen SV starten	25.04.2021 10:41:48	25.04.2021 10:44:17	00:02:31	77.03m	-1%	0
275398902127700003	PAIK	25.04.2021 10:33:13	25.04.2021 10:34:15	00:01:05	13.99m	0%	0



OUR CUTTING-EDGE TECHNOLOGY IS YOUR ADVANTAGE

Explained on the basis of a transport order by our AGILOX ONE 

ORDER Transport good from **A** to **B**



PRODUCTION HALL

VISIT OUR WEBSITE WWW.AGILOX.NET