



INNOVATION
WITH
PURPOSE

Close loop **MEDICATION** &
consumables **SOLUTIONS**

Product Portfolio

Smart Medication Management Solutions



Dear Esteemed Colleagues and Partners.

On behalf of the entire APD International Sales Team, it is my pleasure to extend a warm welcome to our company. We are a leading Spanish technological firm with over four decades of expertise in developing cutting-edge solutions for hospital pharmacy automation.

In an era where healthcare systems worldwide are increasingly challenged to optimize efficiency while ensuring patient safety, our commitment to innovation remains unwavering. Through relentless dedication to advancing technology, we have positioned ourselves at the international forefront of the digital transformation in hospital pharmacy management.

The digitalization of medication management represents a pivotal advancement in healthcare delivery. By integrating our state-of-the-art solutions, hospitals can streamline operations, enhance medication safety protocols, and ultimately improve patient outcomes. Our comprehensive suite of products is designed not only to meet but to exceed the stringent demands of modern healthcare environments.

Furthermore, as the landscape of pharmacy automation evolves, so too do our solutions. We pride ourselves on staying abreast of the latest trends and developments in the industry. From robotic cutting and packing systems to sophisticated inventory management software, our offerings are tailored to address the evolving needs of healthcare providers globally.

At APD, innovation is not just a goal but a core principle. We collaborate closely with healthcare professionals and institutions to ensure that our solutions are not only technologically advanced but also seamlessly integrate into existing workflows. This partnership approach allows us to deliver bespoke solutions that empower healthcare providers to focus more on patient care and less on administrative complexities.

As we embark on this journey of digital transformation together, we invite you to explore the possibilities that APD can offer your institution. Whether you are seeking to enhance medication management efficiency, improve medication adherence, or advance towards a more patient-centric model of care, we are here to support your goals. Thank you for considering APD as your partner in driving innovation in hospital pharmacy automation. We look forward to forging lasting partnerships that redefine the future of healthcare delivery worldwide. Welcome.

A handwritten signature in black ink, appearing to be 'V. Perea'.

Yours sincerely,

Victor Perea García

Corporate Development Director
vpg@gapd.es



THIS IS WHERE WE DEVELOP AND MANUFACTURE FOR YOU

Head Office. Madrid. SPAIN.

Closed Loop Medication & Consumables Solutions



CENTRAL PHARMACY



Registration
& Storage

NURSING WARDS



Automatic
Dispensing

BEDSIDE



Patient
Medication
Administration

APD solutions represent **the most efficient and complete Closed Loop Management System**, for the correct monitoring and control of the medication and consumables stock, anytime and anywhere along the process.

From the very 1st moment the goods are received in the Hospital Central Warehouse, until they are administrated bedside to the patient or used on a surgery, APD solutions **ensure their full traceability**, boosting patient safety while reducing the associated hospital consumption **bill on the range of 25% to 30%.**

From sophisticated cutting & unit dose repackaging Robots, automatic dispensing cabinets (ADC's) or RFID Smart Cabinets and Warehouses, APD solutions **are the answer to all the logistical challenges of hospital pharmacies in the 21st century.**

About Athos™

Throughout these years we have tackled **complex projects in countless hospitals**, which has allowed us to be at the forefront of technology.

APD includes all of its Pharmacy Automation solutions under the Athos™ trademark, making **available to hospital professionals around the world a wide portfolio** of products and technological solutions for a better and greater control of the logistics processes of both medicines and supplies.

Athos™ DOSYS

Automated medication dispensing system



Main Benefits



- **Flexible configuration:**

Variety of drawers in several degrees of security



- **User friendly software:**

The perfect combination of an intuitive software in a touch screen



- **Fully integrated**

With other Hospital Information Systems, Electronic Prescription and Pharmacy Stock Systems

The automated dispensing systems are integrated by **electronically controlled cabinets** and a central management software.

Thanks to the automated dispensing systems developed by APD, **minimizing the medication errors**, reducing the workload of the pharmacy staff and improving access to the medications in the nursing units has become a reality.

- **Lowered medication errors** related to both dispensing and management of medications.
- **Reduced inventory** levels in nursing units.
- **Improved working** time in keeping the medicament inventory levels.
- **Increased control** of medication expiration dates.
- **Lowered medication net costs** (between 20% to 40%).
- **Improved quality of healthcare** by ensuring the delivery of the right dose at the right time to the right patient.

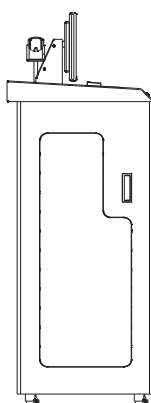
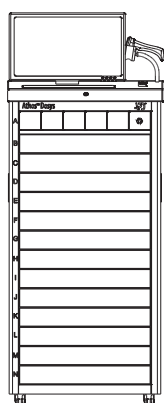


Operational Details

- Athos™ Dosys Main Cabinet is equipped with a computer, a touch screen, a mouse and a keyboard to ease its operation and data management.
- The Cabinet includes an interfaces hub to control up to 8 auxiliary supply cabinet combined with refrigerators. This option provides a great level of flexibility to the Hospital professionals.
- The included PC offers fingerprint or keycard identification. The optional barcode scanner or RFID reader guarantees the dispensation and replenishment of medicaments.
- Athos™ Dosys software controls the dispensing systems installed in the wards. The console version of the software enables a terminal placed in the Hospital Pharmacy to manage (alarms included) and configure the dispensing systems throughout the hospital.



Technical specifications:

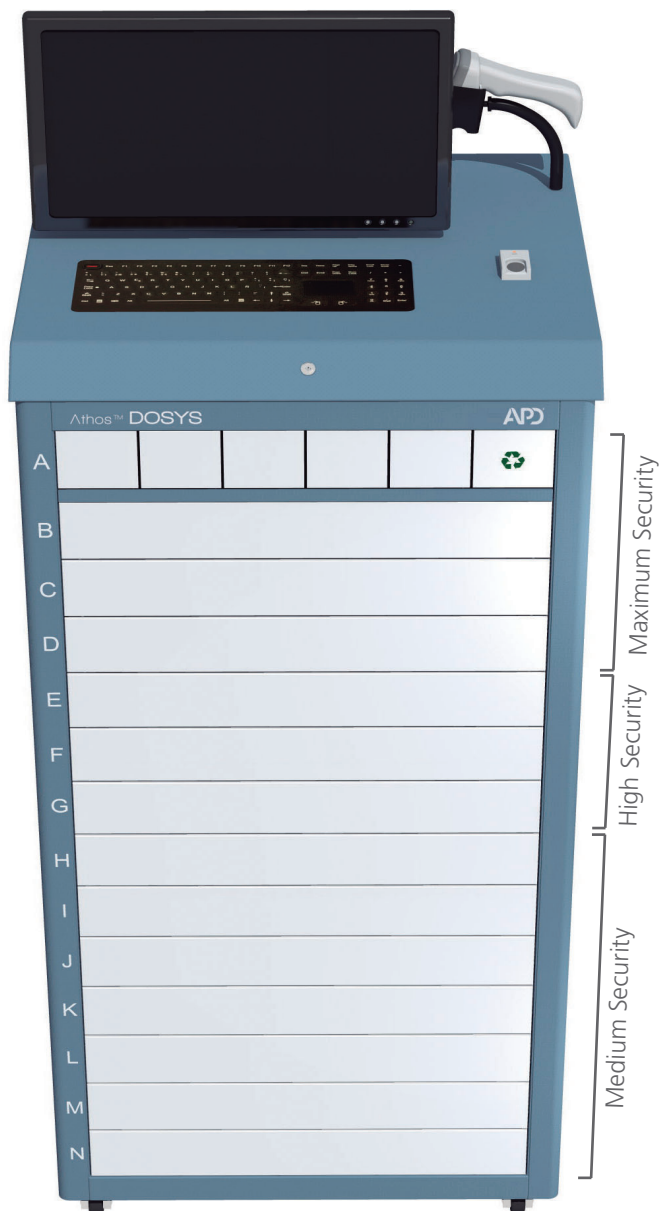


Exterior dimensions:
653 mm (Width) x 700 mm (Depth) x 1082 mm (Height without wheels)

Supply voltage
Electric
Interface
Interface with auxiliary cabinet
Integration with Pharmacy
Remote monitoring

125 / 220 Vca
5 A Min.
RJ-45 / Ethernet
XLR-7S / RS-232|RS-485
HL7 Protocol
SNMP Protocol

Drawers System

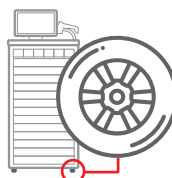


Athos™ Dosys is a **modular Automated Dispensing Cabinet** that combines a maximum of **14 drawers, boxes and medicine compartments**, being capable of controlling up to 8 auxiliary Columns, cabinets and refrigerators.

It's a fully customizable solution, providing Hospital Pharmacist and nurses the highest flexibility with the widest variety of drawer sizes.



Athos™ Dosys provides a connectivity to a centralized computerized management system for the distribution of stored medicines, which streamlines the procedures for dispensing and improving the efficiency of the pharmaceutical logistics system, as well as the management of the alarms generated in the dispensing network.



It can be fixed to the wall or equipped with wheels to facilitate its movement.

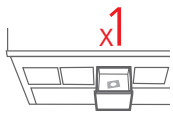
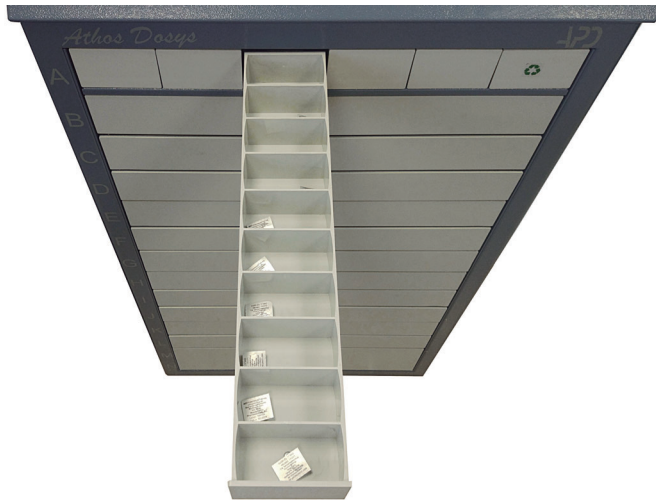
Main Benefits

- The internal volume of the tray allows to accommodate locking drawers of single, double or triple capacity, which can be structured according to the specific operational needs of each Hospital unit.
- By removing the dividers from a row or a column, different sizes of compartments can be obtained to achieve the desired sizing.
- Pharmacy technicians can unlock the mechanism to remove, replace or change the drawers.



MAXIMUM SECURITY

It includes 6 drawers of 10 compartments each of sequential opening, in which only one medicine reference is placed per drawer.



This format only allows the sequential access to one reference. The drawer opens to the first compartment that has stock, to prevent multiple doses being extracted without control.

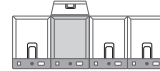
HIGH SECURITY

It includes 10 configurable high capacity locking drawers with controlled opening covers.

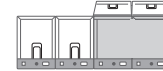


The useful dimensions of these compartments are:

Single compartment



Double compartment



Triple compartment

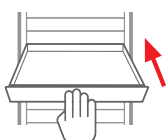


MEDIUM SECURITY I

It includes 6 drawers with 10 compartments, or a single configurable drawer to accommodate up to 64 compartments without a lid (matrix).



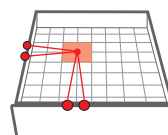
When the dispensation of a reference is made, the application opens in its entirety the drawer in which it is located. Athos™ Dosys application displays the compartment in which it is located on the monitor screen.



Once the reference is dispensed, the drawer should be closed by pushing gently from the front until the drawer is blocked by the electric lock mechanism.

MEDIUM SECURITY II

It includes 6 drawers with 10 compartments, or a single configurable drawer to accommodate up to 64 compartments without a lid (matrix).



This type of tray has an assistance system with led light indication by abscissa and ordered axes that facilitate the nursing team the identification of the compartment from which to withdraw or replace medication. In addition, the Athos™ Dosys application displays the compartment in which the requested reference is located on the monitor screen.

Athos™ DOSYS ANESTHESIA

Supporting a simpler & effectivier anesthesia workflow in OR's



Main Benefits



- **Boost patient safety:**

Thanks to its restricted user access control and the automatic association of the medication withdrawn with the generation of the corresponding labels and an exclusive voice verification system of the administered medication.



- **Improved stock management:**

Through the integration with the pharmacy management software, automating the replenishment procedures and registering the consumption per patient.



- **Advanced data exploitation tools:**

Increasing visibility of the anesthesia stock in the Pharmacy.



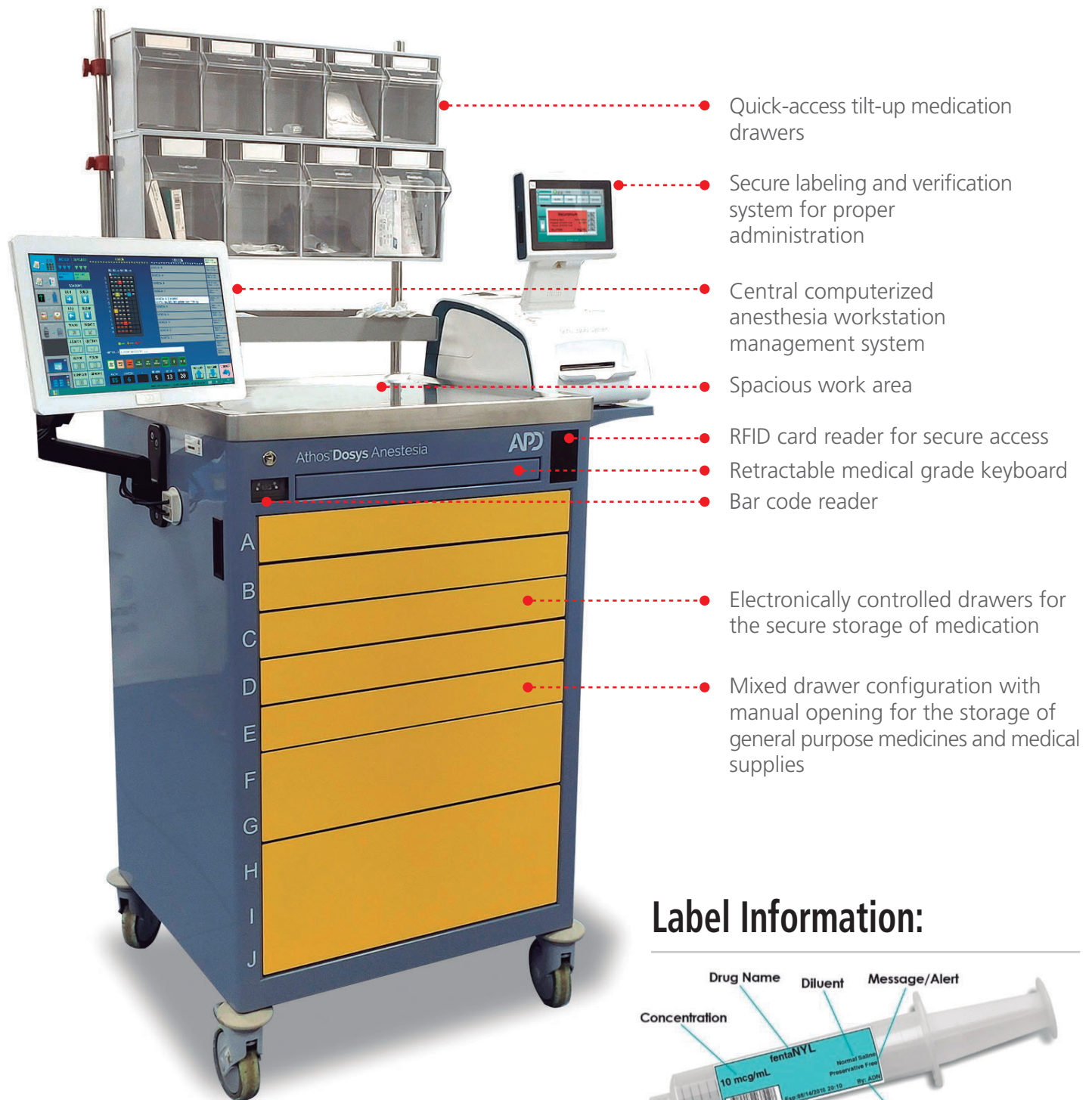
- **Closed Loop Reconciliation:**

The administered medication will be automatically recorded in the patient's electronic medical record.

The management of drugs and medical devices in OR's is a major challenge for hospitals worldwide. APD's Athos™ Anesthesia workstation is **designed to provide anesthesiologists with complete control and availability of narcotic drugs** and associated medical devices before, during and after any surgery.



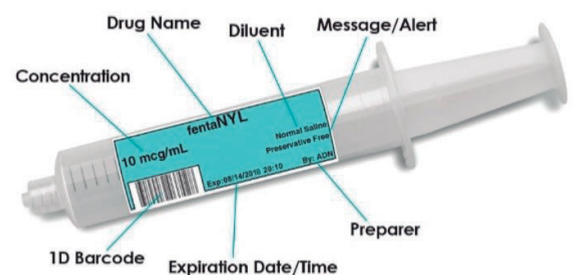
Key advantages:



Highlights:

- Thanks to the Athos™ Anesthesia Workstation, patient safety will reach its highest level by providing a complete traceability of the medication from the time it is stored until it is administered to the patient or returned to the Pharmacy, in compliance with current legislation.
- Athos™ Anesthesia workstation fully automates the medication dispensing procedures, facilitating the proper identification of medications once they are prepared and verifying them before they are administered to the patient.

Label Information:



Athos™ DOSYS NARCOTICS

Storage and management of controlled medications



Main Benefits



- **High capacity**, possibility of configuration of shelves and drawers of different sizes according to the pharmacy needs.



- **Individualized narcotics circuit** connected to the management program.



- The system allows the computerized registration of all the necessary data to obtain the **Drug Traceability Report** directly from the data exploitation system.
- **Automatic orders** to suppliers and automatic replenishment orders from the automated dispensing cabinets.

Athos™ Dosys Narcotics is an effective and fully integrated solution that supports the efforts of any Hospital Pharmacy on the **management of controlled substances, optimizing the complexity of their special workflow.**



Our Athos™ Dosys – Narcotics is a modular and scalable solution, tailor made for every storage need of the Hospital Pharmacy. Up to seven Cabinets can be connected to the Main Unit.

Key characteristics:

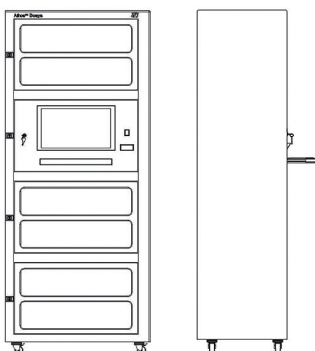
- Reduction of working time, greater efficiency and effectiveness of the human resources involved in the Narcotics workflow.
- Improvement on the availability of medicines based on the comprehensive control of their expiry date.
- Greater inventory control in the Central Pharmacy and in the different Wards, thus optimizing the workflow.
- Adaptation capability of the operating software to meet every local legislation of the handling of narcotics medications.

Workflow:

- **Dispensing from cabinets:** Record and monitoring of all patient dispenses.
- **Mixtures and repackaging of narcotic drugs:** the system is fully compliant with the withdrawal of a narcotic drug for mixing or repackaging.
- **Breakages and Expiration dates:** the system obtains the data of any narcotic drug that have been either broken or have expired.
- **Replenishments and loans:** Replenishment of peripheral ADCs distributed throughout the Hospital and loan of narcotic drugs to other healthcare facilities.
- **Supplier orders and returns:** Management of drug purchases and returns of narcotics.



Technical specifications:



Exterior dimensions:

800 mm (Width) x 600 mm (Depth) x 2000 mm (Height without wheels)

Supply voltage

220 Vca

Interface with auxiliary cabinet

XLR-7S / RS-232|RS-485

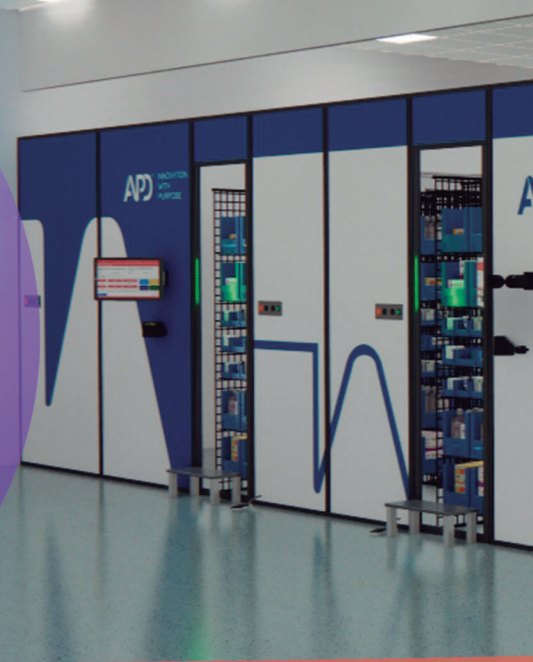
Integration with Pharmacy

HIS / HL7 Protocol

Athos™ STORAGE

Horizontal Carousel

For the complete automation of the medication management process



Main Benefits



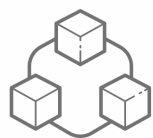
- **Saving pharmacy time** in reconciling discrepancies in stock numbers, establishing stock quotas and automating the list of pharmaceutical products needed for procurement.



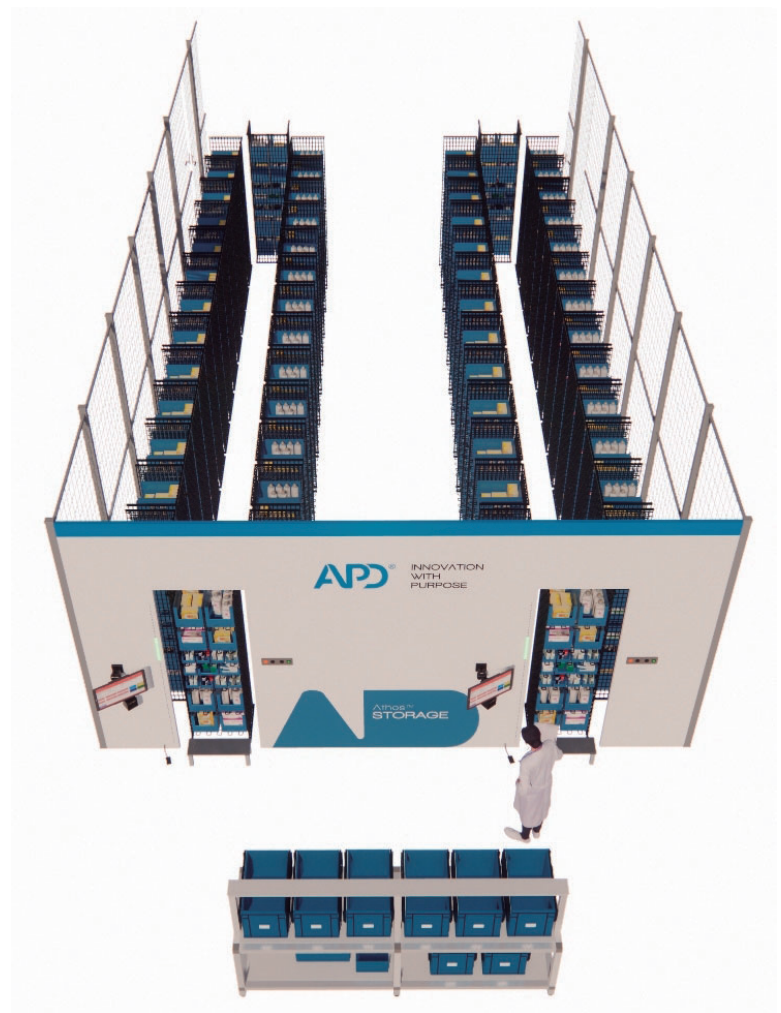
- **Reducing or eliminating the need for paper** and manual interventions during purchasing, invoice matching and other financial processes.



- **Improving inventory control** and oversight by implementing a perpetual inventory management process.

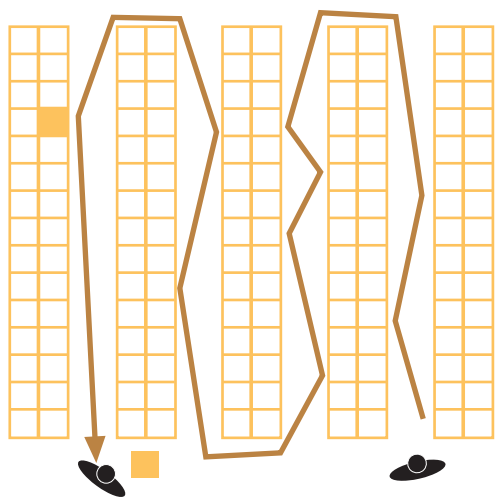


- **Improving workflow efficiency** and traceability through the use of automated storage that optimizes space and increases capacity. Applying automated safety controls to minimize risk (e.g., barcode scanning technology) and prevent critical medication incidents.



Great productivity in order preparation

- Based on the "product to operator" principle
- Fixed Picking Post with operator assistance
- Preparation of several orders at the same time



How does a conventional system work?

- Time wasted walking long distances all over the pharmacy
- Excessive search time
- Errors
- Post-preparation check-up
- Manual preparation of each order
- Intensive use of specialized staff

Operator to product:

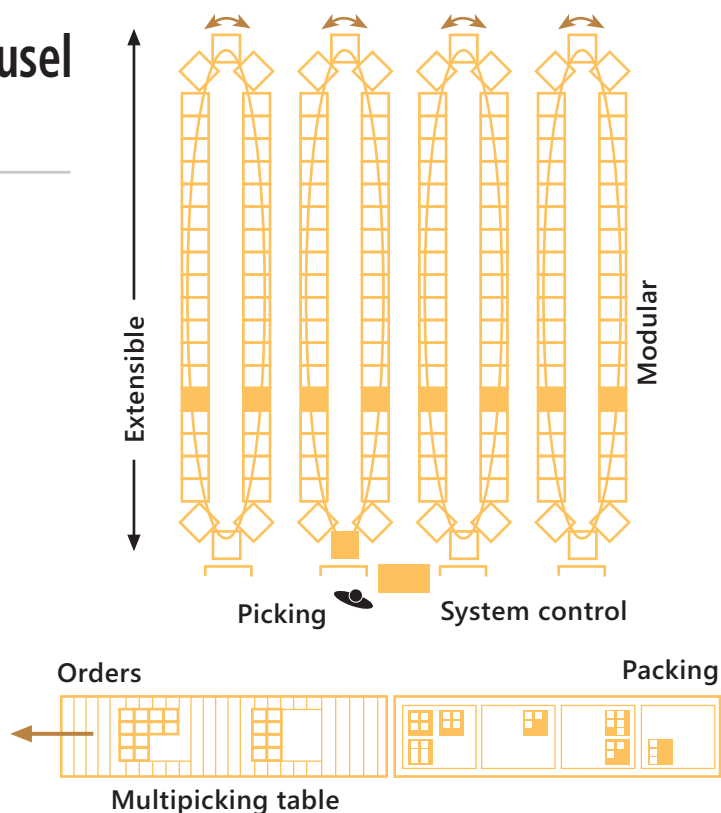
limited to aprox. 60 lines / hour

What can provide an automated carousel to the hospital pharmacy?

- Centralization of the picking point
- Elimination of errors
- High productivity rates
- Elimination of paper support
- Preparation of several orders at the same time
- Simultaneous Picking & Packing
- Real time inventory update
- Reduction of administrative tasks
- Non-specialized staff
- Quick capital ROI

Product to operator:

Between 350 and 600 lines per operator/hour





Athos™ STORAGE

Athos™ STORAGE

Vertical Carousel

For the complete automation of the medication management process



Main Benefits



- **Comprehensive integration** with the own Hospital Pharmacy management application.



- **Zero mistakes allowed:** assistance for the correct dispensing thanks to the touchscreen monitor and the internal LED lightbar.



- **Correct Inventory** management.



- **Optimization** of high rotation products.



- **Accurate organization** and management of low rotation products.

- **Expiry management** to avoid any waste.



Between 80% to 120% of total space saving:

- Flexible design, based on total floor surface availability.
- Improvement of search and management time.
- Fully automation of the Medication Management Process.
- Friendly user systems.

Custom dimensions:

- Height from 3 up to 6 meters.
- Tray width from 2.728 to 3.364 mm.
- Depth of the trays = 315 mm.
- Max load per tray = 130 Kg.
- Number of carries from 10 to 22.

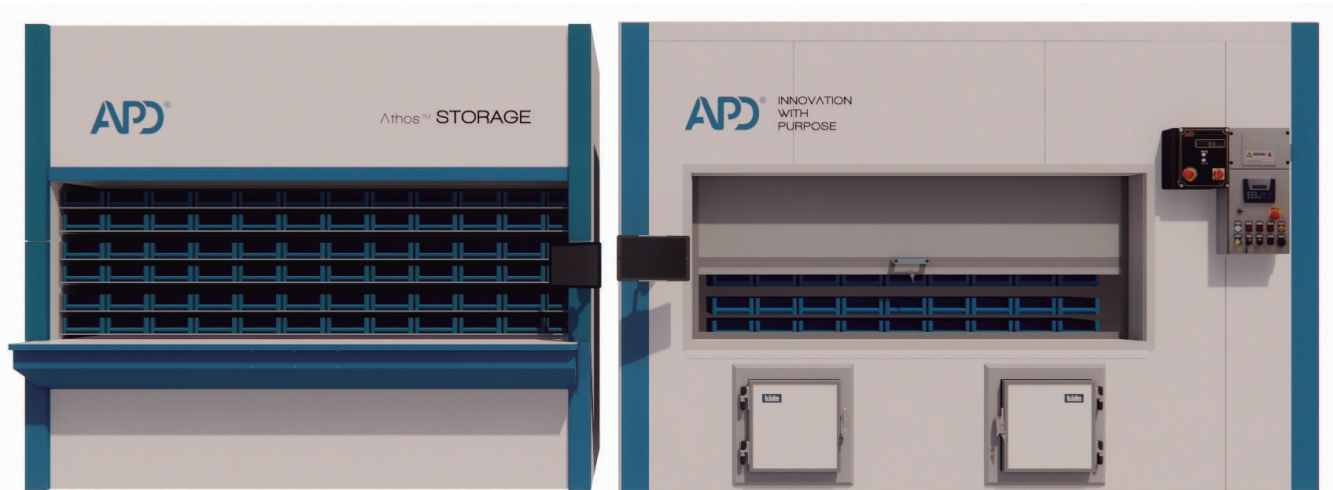
Double storage capacity

- APD solution of rotating trays can double the capacity of a conventional drawer, keeping the same occupied surface.
- The Athos™ Storage Carrousel is made to measure so that the Hospital Pharmacy can use all the available height.
- Available for refrigerated and non refrigerated medications.



NUMBERS OF CARRIERS	12	14	16	18	20
HEIGHT (mm)	2.330	2.560	2.840	3.190	3.450

USEFUL VOLUME PER UNIT (m³)						
TOTAL WIDTHS (mm)	2.728	3,1	3,6	4,1	4,6	5,1
	3.325	3,7	4,3	4,9	5,5	6,1
	3.364	3,9	4,6	5,2	5,9	6,5



Athos™ uniBOT

Robotic Unit Dose Cutting & Repacking System



Athos™ uniBOT is the **robotic system**, designed and manufactured by APD, for **packaging in unit doses format** in a fully automatic way, supporting the optimization of the resources used in the Hospital Pharmacy.

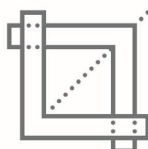
Main Benefits



- **Maximum Traceability and Safety:** Clear identification of drugs through a unique code and batch control and expiration.



- **Autonomy:** Up to 4.5 hours of autonomous operation at full load, without human intervention.



- **Great Versatility:** Allowing the cutting of any blister format or the loading of bulk drugs through a special hopper.

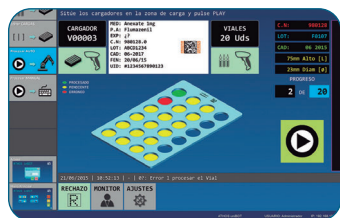
The only robotic **automatic cutting and repacking system** for any format available in the Pharma industry.

- Athos™ uniBOT offers the hospital pharmacist a truly reliable, fast and proven system for the automation of the cutting process of barely any type of blisters, and its later packaging with full guarantee of the traceability of the entire process.
- The Automatic repackaging in unit doses simplifies the production of the medication pouch and guarantees their identification by means of a unique code, thus eliminating the error of administration to the patient. In this way, it makes possible for Nursing to check electronically that the medication that is being administered coincides at all times with the one prescribed for that specific patient.

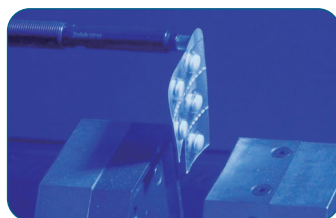
Maximum speed and simplicity in the whole process:



1 Robot loading



2 Software configuration



3 Identification and cutting



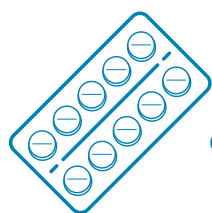
4 Unit Dose packing



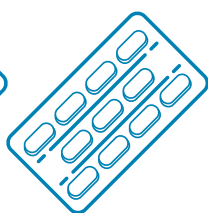
Highlights:

- Automatic identification function of blister packs, (using 1D / 2D barcode reader and / or RFID reader).
- Cutting of the blister pack and packaging of the units in order to maintain at all times the conservation condition and expiration by the manufacturer.
- Integration with the Medicines Catalog and Active Directory of the Hospital.
- Special design and ergonomics suitable for the operation on a hospital environment.

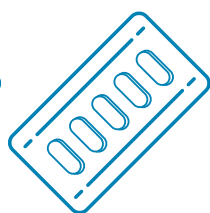
Supported blister formats:



Regular Distribution



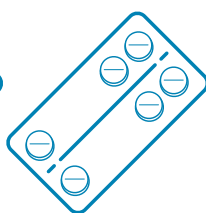
Alternate Distribution



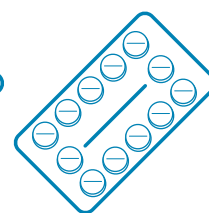
String Type Distribution



Semi-rigid Distribution

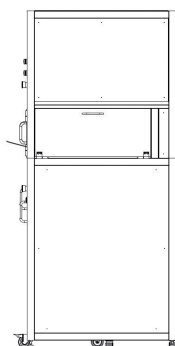
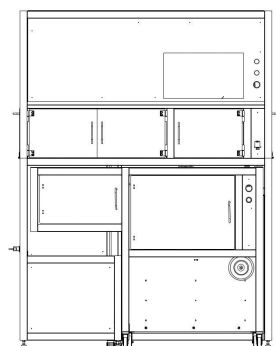


Asymmetrical Distribution



Circular Distribution

Technical specifications:



Exterior dimensions:

1520 mm (Width) x 900 mm (Depth) x 1990 mm (Height without wheels)

Weight

150 Kg

Supply voltage

220 Vca

Interface with auxiliary cabinet

XLR-7S / RS-232|RS-485

Integration with Pharmacy

HIS / HL7 Protocol

Athos™ uniPACK

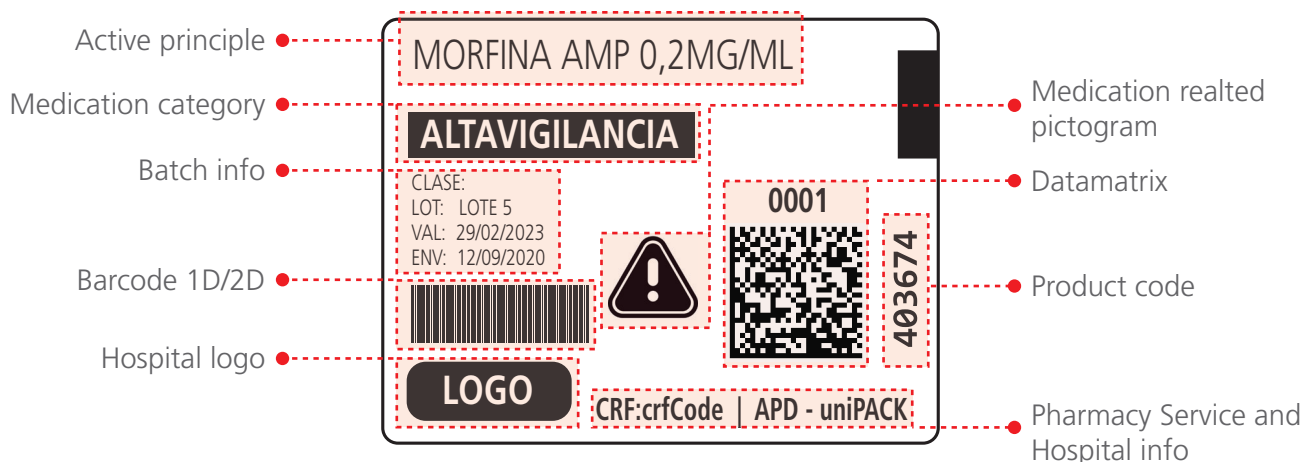
Automatic Medicine Packing Robot



Athos™ UniPACK is the last fully **automated Packing Robot** developed by APD for the **correct preparation of the Unit dose format** on any Hospital Pharmacy.



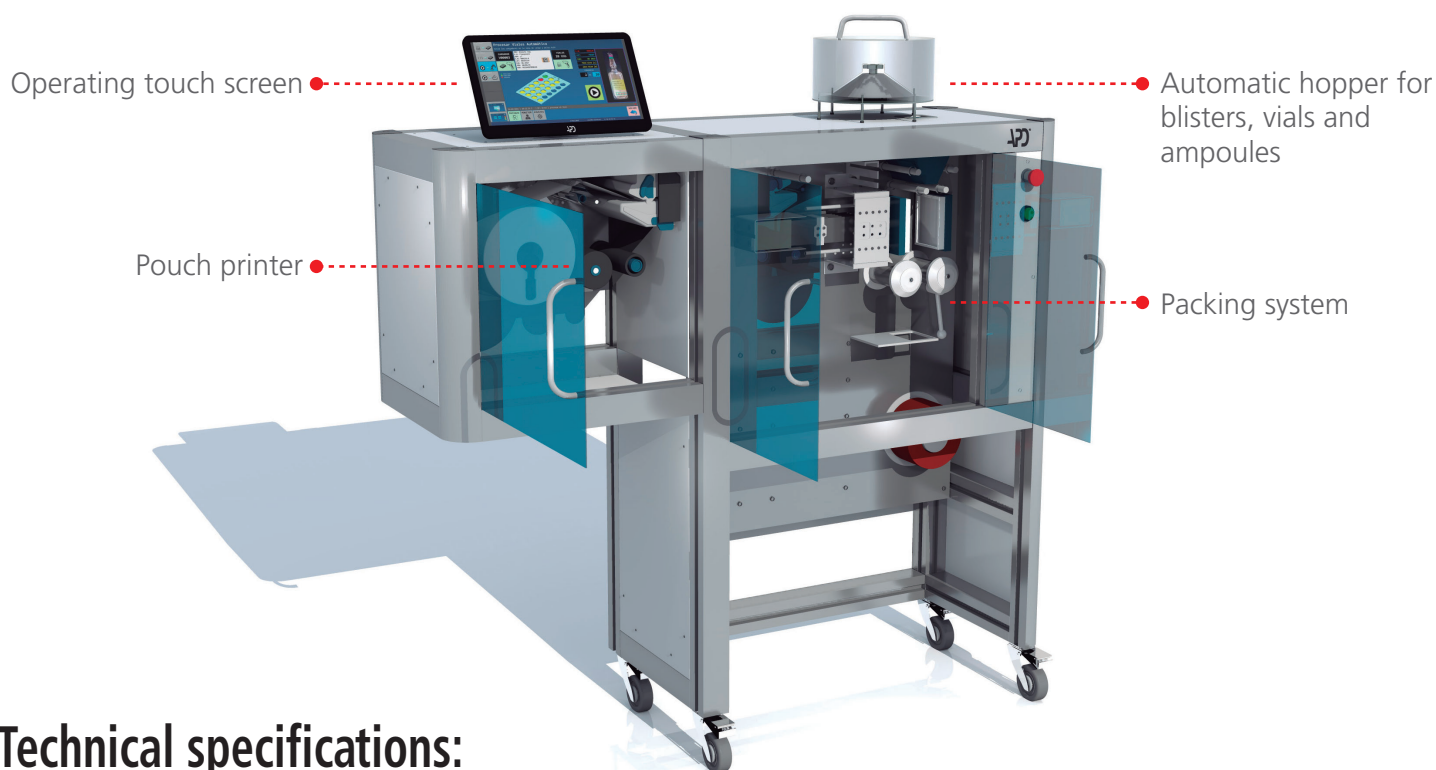
- As an example, it's shown below the printed information on the medication pouch.



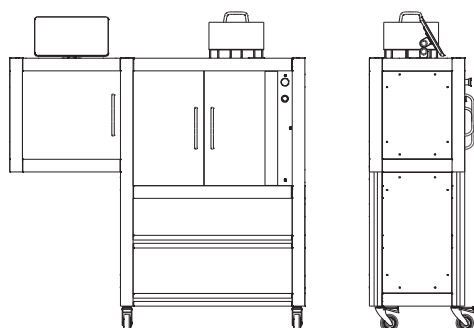
* All the elements printed are fully customizable.

Key advantages:

- Package solid oral forms. Continuously makes pouch-type containers by thermocompression with pre-forming of two paper tapes by standard validated process. It also provides preformed cutting.
- Package of embossed shapes without breaking the container.
- Measurement of the blister format of at least 56x50 mm which allows the packaging of different sizes of medicines with or without blister.
- Depending on the selected packing mode, it can process up to 1400-1800 pouches/hour.
- It incorporates a thermal transfer printer.
- Barcode printing and / or 2D codes. Inclusion of pictograms and different letter formats.
- Electronically controlled process by a computer with touch screen and a bar code reader integrated in the packaging machine.
- Reading of several barcode formats: EAN 13 Spain, EAN 39, EAN 128 and Datamatrix.
- Total control of the produced medication pouches.
- Digital indicator to select the number of pouches to be cut.
- Metal table with wheels for easy movement and cleaning.
- Automatic hopper for the packaging of bulk medication, ampoules and vials.



Technical specifications:



Exterior dimensions:

1400 mm (Width) x 550 mm (Depth) x 1000 mm (Height without wheels)

Weight

70 Kg

Supply voltage

220 Vca

Interface with auxiliary cabinet

XLR-7S / RS-232|RS-485

Integration with Pharmacy

HIS / HL7 Protocol

Athos™ DOSYS RFID

RFID Smart cabinets for managing high-value medical devices

Athos™ Dosys RFID

APD

RFID
Cabinet

RFID
Cabinet

Main Benefits



- **Quicker ROI for the Hospital through:**

- Enhanced control of expiration dates
- Real time control of the stock of any high cost material
- Significant decrease of material losses
- Elimination of stock-out situation



- **New and more efficient management models**

- Allowing the hospital to allocate products on deposit by the suppliers until the actual use of the material.

- Athos™ Dosys RFID is a Smart Cabinet with controlled access and based on RFID technology indicated for the management and control of medicines or medical devices of high cost or with a high requirement for the patients traceability.

- The Cabinet and its associated software, Athos™ Track, have connectivity to the centralized management system of the Hospital that allows the total automation and traceability of the stored material management processes, 24/7.

Configurations options

Baskets



Modular system based on different basket sizes

Catheters



Special configuration to combine both medication or medical devices with catheters

Stents



Configuration example for the storage of stents

Athos™ Dosys RFID Cabinet is the **best way to ensure real-time control and traceability of high-cost surgical products**



Traceability.

Registration of both dispensation and return movements, automatic stock management in real time and detailed control of expiration dates.



Athos TRACK Software Suite.

With an intuitive interface through a touch screen specially designed for the use of the healthcare professionals.



Access Control.

User identification and track of all material movements in the Cabinet.



Cost allocation.

To the patient or to a particular cost center.



Access to information.

Web-based application to query information from any Device, anywhere, anytime. Automatic generation of replacement orders



Alerts.

Light and sound alert system.



Management Reports.

Comprehensive report of the average intervention cost per patient, per operation or per surgeon.



Integrations.

With other Hospital Corporate Systems.



Ergonomics.

Interior LED lights and interior panels with removable trays.



Control of suppliers.

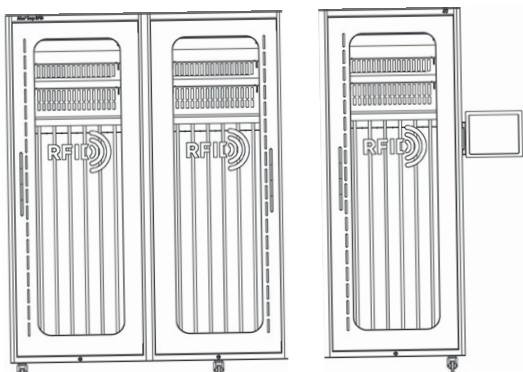
Allowing the healthcare organization to manage its purchases more efficiently.



Contingency System.

Manual opening and possibility to incorporate a UPS unit.

Technical specifications:



Fully scalable solution

Expands the total storage space by installing additional cabinets connected to the base unit.

Exterior dimensions:

800 mm (Width) x 580 mm (Depth) x 2060 mm (Height without wheels)

Weight

150 Kg

Supply voltage

220 Vca

Interface with auxiliary cabinet

XLR-7S / RS-232|RS-485

Integrations

HIS / HL7 Protocol

LDAP authentication

HIS

Pharmacy Management System

Some of our references



SPAIN



PORTUGAL





Local support with global reach

APD's Service Programs offers a complete range of post-sales services, aimed at ensuring its distribution network and end customers with the strictest service continuity, at peak performance.

We make available to all our clients a multi-language Customer Service organization, with a wide technical knowledge in all our solutions portfolio. Additionally, our R & D division offers

support services for IT integrations and connectivity assistance, both remotely or locally deploying in the destination territory.

Our standard service includes warranty extensions, spare parts stock, quick turnaround times for repairment's or 24/7 phone support. We tailor made our after sales services according to the project specific needs.





HEADQUARTERS

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