

PROCUREMENT SOLUTIONS

E-BUSINESS AND SYSTEMS FROM HAHN+KOLB

HK-MAT DR, FP, RT, HX



HAHN+KOLB
GROUP



LET'S WORK TOGETHER.

HK-MAT

YOUR OBJECTIVES

- 24-hour stock availability
- Low process costs through lean processes
- Reduction of wastage/lost stock
- Lower staff workload
- No lost time through lengthy searches for the correct tool
- Full transparency in tool distribution
- Clarity even for borrowed goods/measuring and testing equipment
- Lower planning and installation costs for your tool distribution system

**HK PORTAL:
WEBSITE AND SHOP**
www.hahn-kolb.com



HK-MAT

OUR SOLUTIONS

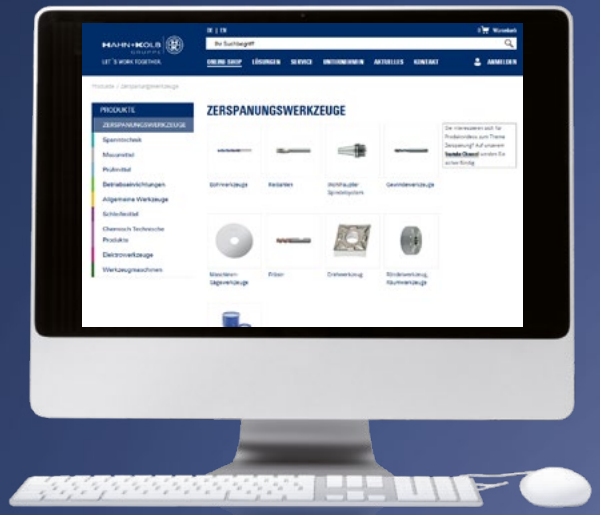
- Automated, consumption-based ordering and redelivery
- Developing employee awareness through personal identification at the machine
- Lightning-fast item retrieval through versatile search functions, barcode scanner or direct retrieval on sight
- "Reporting" of documented actions by email or in the service centre
- Evaluations, statistics and stock levels at the press of a button through online access to the **HAHN+KOLB** service centre
- Management of borrowed goods for transparent distribution of borrowed goods such as measuring equipment, power tools etc.
- LTE internet connection, no network connection required

OPTIMISE YOUR PROCESSES WITH
THE HK-MAT DISPENSING MACHINES



E-BUSINESS

OCI, EDI AND E-CATALOGUES



How do you get our product information?

There are two main ways of obtaining product information electronically: Via static electronic catalogues or by calling up the **HAHN+KOLB** online shop via the interface.

Electronic catalogue (first option):

An electronic catalogue is a file that exists in a defined format. This file contains all of our products or a particular range from the product portfolio. The most widely used format is BMEcat.

After importing this file, the product portfolio is available to the relevant employees and can be ordered via their procurement system.

Interface to the HAHN+KOLB online shop (second option):

Here, product information is exchanged between your ERP system and the **HAHN+KOLB** online shop via a standardised interface. One prominent version is the OCI interface (Open Catalog Interface). The **HAHN+KOLB** online shop is accessed directly from the individual's ERP system via the Internet. The shopping cart is then filled and the details transferred back to the individual's ERP system together with the product information.

Advantage: Product information is always up-to-date and not static

Electronic data interchange (EDI):

This is a structured way of transferring data (document types) between companies electronically. Individually defined standards (formats, transmission routes) are exchanged electronically following a single configuration and installation.

Document types:

Orders, order confirmations, dispatch notifications, invoices, credit notes

Data transmission methods:

Formats supported by **HAHN+KOLB** include: FTP, SFTP, FTPs, http(s), OFTP, X.400, E-Mail

Formats:

Formats supported by **HAHN+KOLB** include: EDIFACT, VDA, IDoc-XML, openTRANS, bizTALK, XML, cXML, CSV, xCBL



YOUR DETAILS AND REQUIREMENTS

KATALOGDATEN

Eingesetztes System/Plattform*:

Wie sollen die Katalogdaten bereitgestellt werden?

- Schnittstelle zum HK Online-Shop
 elektronischer Katalog

Bei Schnittstelle zum HK Online-Shop:

- OCI 4.0
 AribaPunchout

Bei elektronischem Katalog:

- BMEcat 1.2
 Ariba CIF
 Sonstiges:

Zusätzliche Anmerkungen zum Datenaustausch und Katalogdaten (Parameter, Felder,...):

ELEKTRONISCHER DATENAUSTAUSCH

Elektronische Bestellung:

Übertragung: HTTP(S) FTP
 OFTP E-Mail
 andere:

Formate:

EDIFACT openTRANS GSV
 IDoc-XML
 andere:

Weitere Nachrichten:

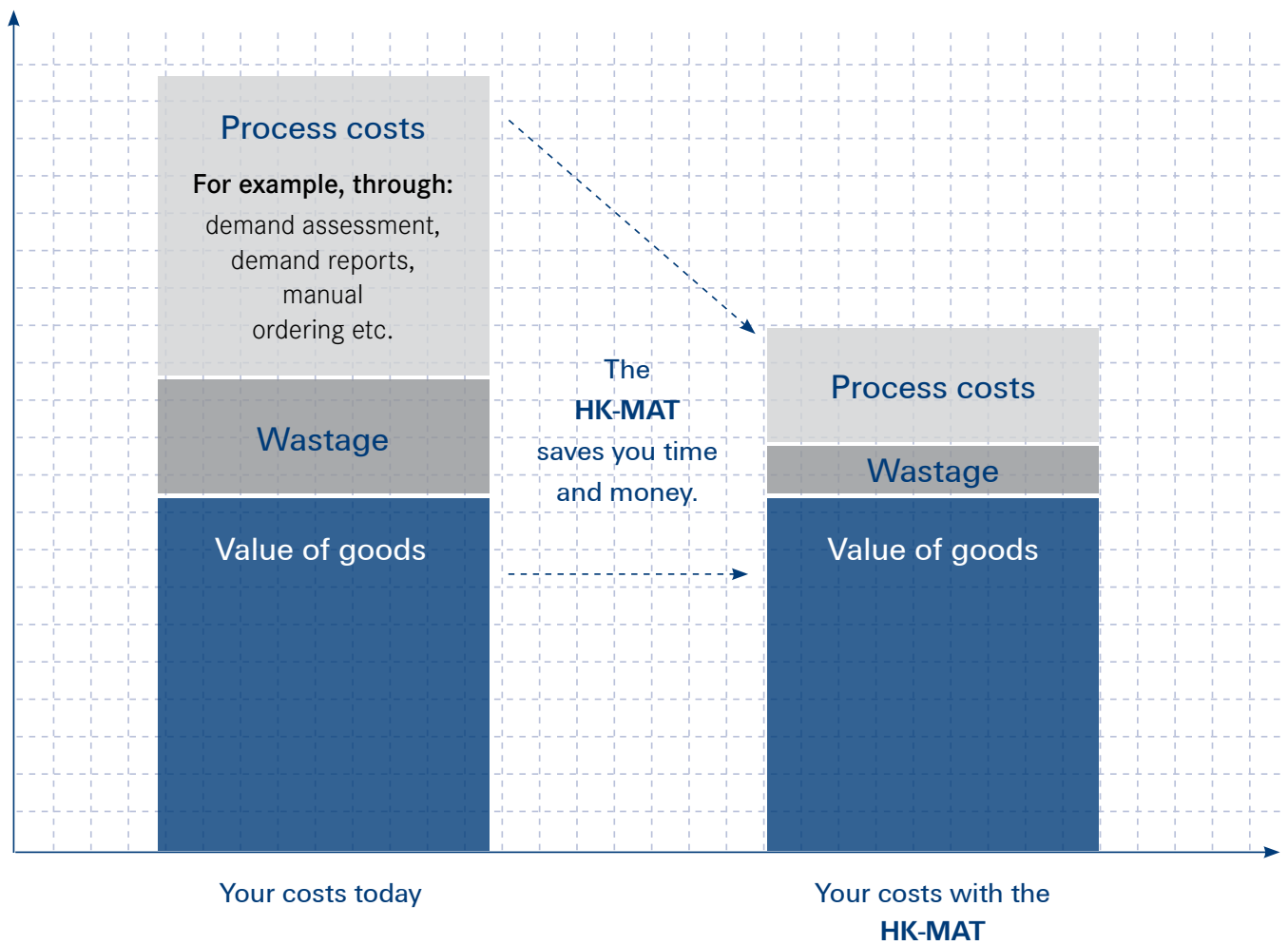
Auftragsbestätigung Lieferavis Rechnung

THE HK-MAT DISPENSING MACHINE

The **HK-MAT** is an established industry-specific, single-output solution in the tool management world, which includes the management of measuring and test equipment. The **HK-MAT** offers automated material supply. It reduces your procurement and storage costs, increases the availability of goods and reduces wastage of high-quality tools and consumables.



THE HK-MAT SAVES YOU TIME AND MONEY



WHAT ARE THE BENEFITS OF USING AN AUTOMATED DISPENSING MACHINE?

You reduce consumption, stock, time and costs! The advantages in detail:

- Avoids a laborious search for the right tool
- Reduces excess stocks and improves security of supply
- Automated ordering system
- Eliminates unnecessary multiple stocks during operation
- Provides short supply routes and increases employee productivity
- Avoids costly machine downtime
- Reduces tool stocks and tool costs
- Individual dispensing possible, e.g. of single reversible tips from entire packing units
- Extensive analysis options (current tool inventory, most and least popular items, cost per production order, etc.)
- Complete and secure booking of all stock movement
- Dispensing according to defined withdrawal rights, including employee identification
- Prevention of wastage
- 24-hour availability



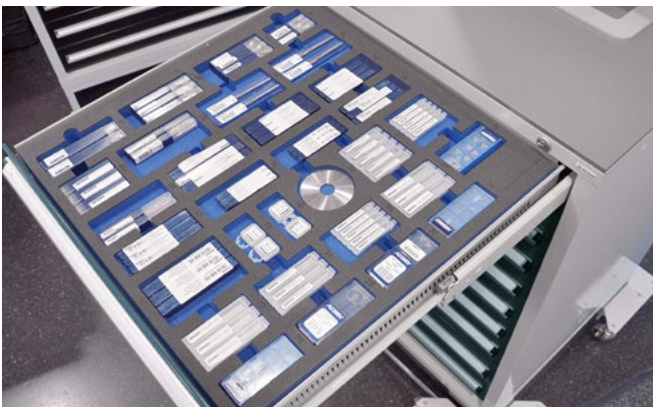
HK-MAT – SYSTEM DIVERSITY

Our **HK-MAT** solutions combine efficient, automated procurement with maximum flexibility for storing and dispensing both tools and operating supplies of all kinds for your employees – directly where the item is needed.

No matter what products you want to benefit from **HK-MAT** with, we have the perfect storage system! The **HK-MAT DR and DR LIGHT** (drawer dispensers), **HK-MAT FP** (flap dispenser), **HK-MAT HX** (spiral dispenser) and **HK-MAT RT** (rotational dispenser) system modules make **HK-MAT** the flexible tool distribution system to suit your operating materials.

AS INDIVIDUAL AS YOUR NEEDS

The **DR and DR LIGHT, FP, HX and RT HK-MAT modules** are each available as master modules (including controller display) or as add-on modules (without controller display). Of course, the user-friendly **HK-MAT** software enables any combination of the different modules.



HK-MAT DR AND DR LIGHT

The classic for your metal cutting tools and measuring equipment

- Maximum variety in the smallest space, for controlled removal and provisioning
- DR addition to the DR-Light with sensor-controlled flap inserts



HK-MAT FP

Your dispensing machine for all tool and measuring equipment needs

- Maximum safety for your high-value items
- Viewing window for extremely quick and easy direct removal



HK-MAT HX

Your expert for consumables with high turnover rates

- Precise individual removal of tools and packs
- Optimum availability of your auxiliary and operating supplies



HK-MAT RT

The innovation for metal cutting tools and consumable items of any kind

- "Removal on sight" via direct removal
- Individually-locking storage areas

HK-MAT DR AND HK-MAT DR LIGHT – DRAWER DISPENSERS

FOR METAL CUTTING TOOLS AND MEASURING EQUIPMENT

The **HK-MAT DR** and **DR LIGHT** drawer dispensers are your specialists for the provision of metal cutting tools as well as measuring and testing equipment. They also offer enough space for your general tools and consumables.

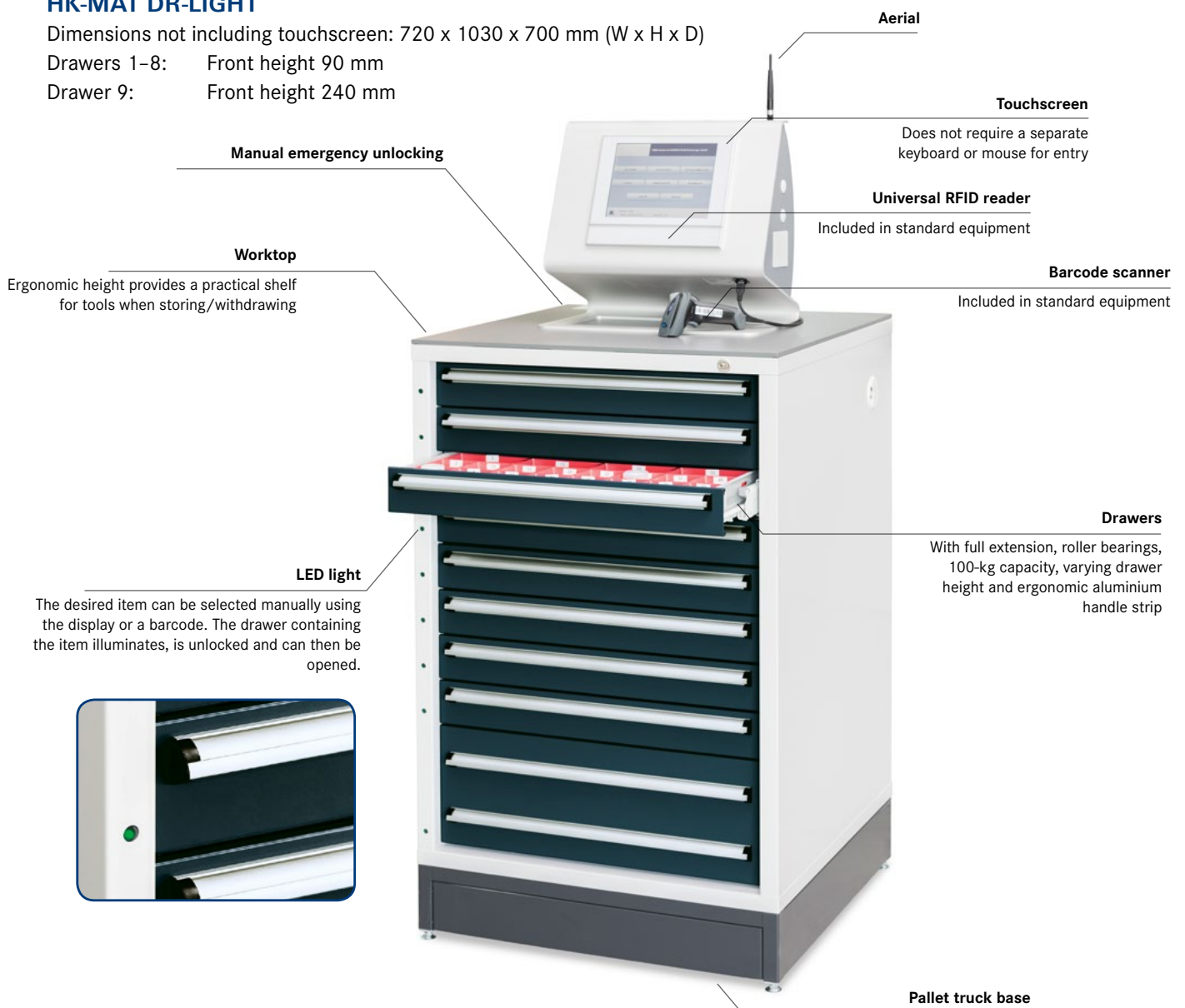
After login and item selection, the relevant drawer is unlocked and illuminated for the user with LED lights. The remaining drawers remain locked. The **electronically-secured individual flaps** within the drawers of the **HK-MAT DR** make this perfect for your high-value tools. By contrast, the **HK-MAT DR LIGHT's** open drawers offer you **even higher levels of flexibility and simplicity** without losing the fundamental benefits of the **HK-MAT** system.

HK-MAT DR-LIGHT

Dimensions not including touchscreen: 720 x 1030 x 700 mm (W x H x D)

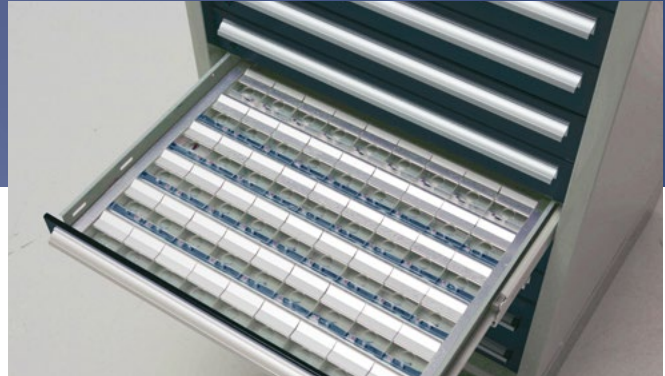
Drawers 1–8: Front height 90 mm

Drawer 9: Front height 240 mm



HK-MAT DR – FOR MORE SECURITY

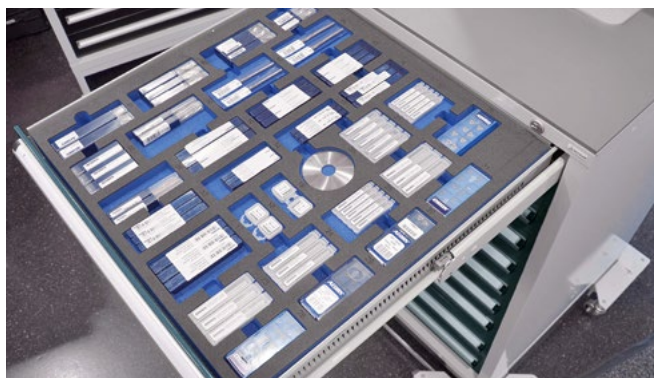
When planning your **HK-MAT DR**, various drawer heights and flap sizes are available. We select these for you based on your inventory. Each individual flap is locked electronically.



Drawer height mm	Variants	Flaps	Useful width mm	Useful depth mm	Useful height mm	
60	1	63 flaps	54 flaps	60	57	20
			9 flaps	60	132	20
	2	54 flaps	60	82	20	
	3	36 flaps	60	132	20	
	4	27 flaps	60	182	20	
90	5	18 flaps	60	282	20	
	1	54 flaps	60	82	50	
		36 flaps	60	132	50	
		18 flaps	184	82	50	
		6 flaps	184	282	50	
3 flaps		184	583	50		
150	1	6 flaps	184	291	110	
	2	4 flaps	277	291	110	

HK-MAT DR LIGHT – FOR MORE FLEXIBILITY

To sub-divide your drawers, choose the **HK-MAT DR LIGHT** – the best solution for you!



Divided using OPT-I-STORE® hard foam inserts



Classic partition material, aluminium compartment dividers, Small parts boxes made of plastic and trough plates

HK-MAT FP – THE FLAP DISPENSER



HK-MAT FP M27 Master module

The HK-MAT FP is a true all-rounder. Its locked storage spaces and design make the HK-MAT FP suitable for storage and deployment of various different tools and supplies, especially for your high-value items. The HK-MAT FP is also valued by our customers for dispensing measuring instruments and electric tools.

After selecting the desired item, the corresponding location is unlocked and indicated to the user via LED light; all other doors remain locked. Nine variants of the HK-MAT FP with up to 72 storage spaces are available for your different items.

Advantages:

- Individually-locking storage areas
- Immediate visibility and thus faster direct selection of each article
- Space-saving system with a small surface area
- Very flexible and modular with different flap sizes can be extended
- Compartment dividers within the flap for even easier removal

Dimensions:

- Cabinet dimensions (W x H x D): 600 x 1950 x 560 mm



Nine variants of the **HK-MAT FP** with up to 72 flaps are available for your individual needs.

HK-MAT FP external dimensions 60 x 195 x 56 cm (W x H x D)												
Master modules touch screen	M27				M33	M65						
Number of compartments	8	13	4	2	33	65						
Compartment internal dimensions	6 x 13 x 50	12 x 13 x 50	24 x 13 x 50	24 x 32 x 50	12 x 13 x 50	6 x 13 x 50						
Add-on modules	S72	S36	S34				S18	S10		S9	S5	
Number of compartments	72	36	16	12	4	2	18	8	2	9	4	1
Compartment internal dimensions	6 x 13 x 50	12 x 13 x 50	6 x 13 x 50	12 x 13 x 50	24 x 26 x 50	24 x 32 x 50	24 x 13 x 50	24 x 32 x 50	24 x 13 x 50	48 x 13 x 50	48 x 32	48 x 13



HK-MAT FP M33
Master module



HK-MAT FP M65
Master module



HK-MAT FP S72
Add-on module



HK-MAT FP S36
Add-on module



HK-MAT FP S34
Add-on module



HK-MAT FP S18
Add-on module



HK-MAT FP S10
Add-on module



HK-MAT FP S9
Add-on module



HK-MAT FP S5
Add-on module

HK-MAT HX — SPIRAL DISPENSER

FOR CONSUMABLES WITH HIGH TURNOVER RATES



HK-MAT HX

The HK-MAT HX spiral dispenser is essential to any modern operating material management system! For removing individual tools and consumables with extremely high turnover rates – even items with high levels of usage can be removed in a 100% controlled manner.

Our dispenser series with spiral coils can be customised depending on your requirements to suit the product range, item size and volume requirements. Spiral dispensers can be seamlessly integrated into your material supply without the need to restructure your internal processes.

Advantages:

- Output of individual products by dividing the pack sizes, e.g. cutting discs with a packing unit containing 50 pieces: Once 50 cutting discs have been issued, the control system identifies that one packing unit has been reached and that the item needs to be re-ordered
- Light sensor monitors the actual output of an item

Design:

- 6 product levels per machine
- 4–8 different products per level
- 5–25 products per spiral
- 24–48 different products per machine
- Max. 1200 products per machine

Dimensions:

- Cabinet dimensions (W x H x D): 860 x 1950 x 860 mm



HK-MAT RT – ROTATIONAL DISPENSER

FOR CUTTING TOOLS AND CONSUMABLES



HK-MAT RT

The HK-MAT RT is the ideal complement to the HK-MAT series. The RT is based on the dispensing logic of the HX spiral dispensers and is particularly suitable for transparent storing and dispensing any metal cutting tools and consumables that are unsuitable for output via a spiral.

If a user is authorised to remove items from the machine, they can turn the levels in "direct removal mode" until the desired item can be seen. The desired compartment is opened by pressing the black button on the right side of the level. In list removal mode, the desired compartment is moved to directly and opened.

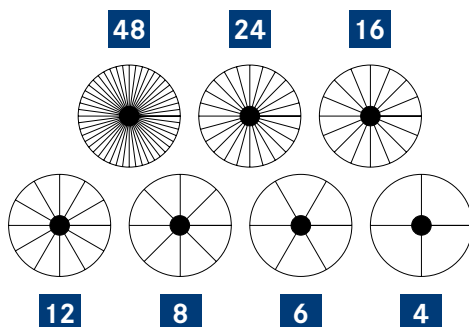
Advantages:

- Up to 384 electronically-locking storage spaces distributed across 8 levels
- Division of the individual layers can be adjusted at any time
- One item can be stored per storage location without wasting space
- After selecting an item via the search function or barcode scanner, the machine rotates the relevant product to the correct position in just a few seconds
- Removal on sight

Dimensions:

- Cabinet dimensions (W x H x D): 910 x 1830 x 795 mm

Compartment division options:



Number of compartments	Front width (mm)	Rear width (mm)	Height (mm)	Depth (mm)
4	390	85	110	260
6	320	60	110	260
8	230	45	110	260
12	160	25	110	260
16	120	17	110	260
24	78	8	110	260
48	35	0	110	260

HK-MAT — SIMPLE AND EFFECTIVE

IDENTIFICATION OPTIONS

- Your existing RFID chip
- PIN code
- Barcode
- Login options can be combined

SOFTWARE

- Operation of master module via touch screen
- Extremely user-friendly
- Low training costs
- High acceptance among users

INDIVIDUAL ACCESS RIGHTS

- Removal and storage
- Administration/item management
- Access to borrowed goods
- Locking of specific products for specific users
- User management
- User can operate the menu in a choice of over 20 languages

OPTIONS FOR LIGHTNING-FAST ITEM SEARCH

- Item search with search function or barcode scanner
- LED lights for immediate detection of storage location
- Direct removal on sight
- Search is made easier with category filter by product groups
- Favourites list generated automatically based on the most frequently used items
- Free text search via touch screen keyboard
- Table of contents including barcode and product image for printing





SPECIAL FEATURE! LTE online connection

- Internet connection via SIM card: mobile web
- No network connection required
- Quick and easy commissioning
- No pressure on your IT department/resources

ITEM INFORMATION

- Article number, customer material number, description, images, synonyms
- Additional data sheets (cutting data, safety data, etc.).

AUTOMATED RE-ORDERING

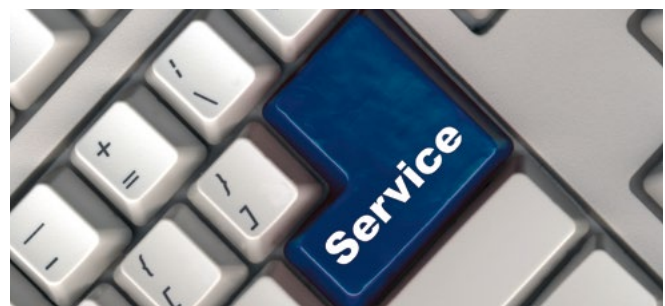
- Electronic ordering directly from HAHN+KOLB, other suppliers or your ERP system
- Several supplier options

HK SERVICE CENTRE

- Continual availability of stock, movements, statistics and bookings directly at the workplace
- Web-based access to the service centre
- Access is possible from all mobile devices
- Unlimited access, no license costs per user

HEARTBEAT

- Hourly confirmation of online connection for immediate alert of any connection errors



ONLY 4 STEPS TO YOUR INDIVIDUAL HK-MAT!

IT'S AS SIMPLE AS:



1. Defining your shopping basket

- Collection and evaluation of your material requirements
- Which item would you like to store?
- What quantities would you always like to have on site to be safe?



2. Planning the modules

- Customised planning of the individual modules by **HAHN+KOLB**
- Testing of the installation location (space requirements, internet connection)
- Offer preparation

Plan your individual **HK-MAT** system in conjunction with the **HK project manager**.



3. Order

- Project approval
- Contract signing



4. Commissioning

- System installation
- Administrator training
- Employee training

DB FERNVERKEHR AG

HAHN+KOLB supplied a total of 15 HK-MAT tool distribution systems for the new DB Fernverkehr AG maintenance facility at their Berlin Rummelsburg plant. With these systems, HAHN+KOLB is providing intelligent management of tools and measuring instruments for DB Fernverkehr AG – 24 hours a day.



TOOL DISPENSING SYSTEMS IN NEW TRAIN FACTORY

At the beginning of 2016, Deutsche Bahn opened the most modern maintenance hall for ICE (Inter City Express) trains in Germany at their plant in Rummelsburg, Berlin. DB Fernverkehr AG invested around 40 million euro in the expansion and conversion of their new 370-metre-long workshop, with the technology to maintain more vehicles in the future. Tool service provider and system supplier HAHN+KOLB equipped the plant with 15 HK-MAT tool distribution cabinets. With the systems, HAHN+KOLB is providing intelligent management of tools and measuring equipment for DB Fernverkehr—24 hours a day.

"Among other things, our goal was to optimise stock levels and guarantee 24-hour availability of tools and measuring equipment," explains Jörg Zschunke, Manufacturing and Maintenance Specialist at DB Fernverkehr AG. "HAHN+KOLB have impressed us with their product range, both with the HK-MAT and with their comprehensive customer service," says Jörg Zschunke. "The processes are transparent and the system ensures process reliability for all maintenance on rail vehicles. It also ensures that all measuring equipment is available, whilst taking

calibration periods into account."

From tools to master keys

"The management of keys, for example, was a very important topic," recalls Sascha Neck, responsible project manager from HAHN+KOLB. Up to 190 keys for rooms, compartments and storage spaces are managed by the HK-MAT and issued individually. This means it is always clear which key belongs where and at what time. In addition, electric tools can only be removed individually and with full pre-approval.

Railway-specific, oversized measuring equipment that does not fit in the dispensing cabinets is managed via external storage.

Constant control

HAHN+KOLB uses feature-rich software for its systems to ensure that all key information on tool stock levels is available at all times. Documents consumption and monitors all stock levels. Where there are multiples of one tool, the system documents the assignment of resources and simultaneously ensures availability of the required resources. The software also displays which borrowed items are in circulation and which tools have reached their inspection date. The HK-MAT software also records all measuring equipment and indicates the necessary calibration periods depending on their usage. This reduces calibration costs and at the same time ensures process reliability. "In terms of on-site employee training, those responsible at HAHN+KOLB have demonstrated the system to the staff," says Zschunke. "The concept behind it—to avoid the chaos of tools simply being put wherever there is space—was initially unfamiliar. However, using it not only offers benefits, but especially in terms of key management, it primarily offers security and transparency for everyone involved."





For over 60 years, this traditional company has been manufacturing tool holders, chucks and spindles, among other things, and the procurement effort for the cutting tools necessary for production had been very high up to this point. A lack of transparency about the actual availability in the tool inventory was also a burden on productivity. To save time, automate processes and maintain a reliable knowledge of stock at all times, in mid-2017 Diebold opted for the HK-MAT tool distribution system.

SECURED TOOL INVENTORY WITH MINIMAL EFFORT

Tool suppliers HAHN+KOLB and Helmut Diebold GmbH & Co. have been collaborating for decades: From as long ago as 1969, HAHN+KOLB has been offering the wide range of tools produced by the manufacturer in Jungingen, south-west Germany. Cutting tools and measuring equipment from around 25 different suppliers are used in the production of high-quality tool chucks, shrink fit chucks, tool spindles and measuring instruments. At the Jungingen location, the manufacturing staff have access to a total of around 700 different tools and measuring instruments. This comprehensive inventory used

to be monitored with a daily visual inspection by the department leaders. They then triggered an order via the ERP system as required. An unconvincing process in terms of lean management. "We are continuously developing our processes," explains Salvatore Viola, Project Manager for Lean Management at Diebold. "The time and the result simply did not fit."

This also concerns inventory security. Too many tools being stored means unnecessary capital commitment. In the worst cases, however, required tools were missing. This meant that orders directly in front of the machine could not be completed. To prevent this from happening and to use resources more efficiently, those responsible at Diebold decided on an HK-MAT from HAHN+KOLB. Using two main devices and four connected distribution cabinets, the tool manufacturer has now been organising all cutting tools and measuring instruments in the two production areas of milling and turning since spring 2017.

Individual solution with powerful software

Following a joint plant visit and a review of all relevant tools, the experts from HAHN+KOLB together with those involved at Diebold developed a suitable individual system. Manuel Blocher, Head of E-Business and Systems and responsible project manager from HAHN+KOLB knows what aspects of the HK-MAT are important for Diebold: "There are two different and physically separate locations within production for milling and turning. Here it was first important to define the necessary capacities and also to take account of the little things in the portfolio". The HK-MAT tool distribution machine is a manufacturer-independent device and can be equipped with products from different suppliers. All data from the six tool cabinets was simply inserted into the software system during the commissioning of the distribution stations.

"[This is] a big advantage for us, because that way dispensing is managed centrally," reinforces Salvatore Viola. The specialist in lean management was also impressed by the comprehensive analysis and reporting functions. To ensure that all key figures of the tool inventory





are available at any time, HAHN+KOLB uses feature-rich software in their systems. It documents consumption and monitors all stock levels. This firstly prevents resources being tied-up by making multiple tools available, and it simultaneously ensures the availability of the required products in sufficient quantity. The software also displays which loaned items are in circulation and which tools have reached their test date. The HK-MAT software also records the withdrawal frequency of measuring equipment, meaning the calibration period can be adjusted according to their use. This reduces calibration costs and at the same time ensures process reliability.

For the project manager at Diebold, the day-to-day suitability of the system is also important: "Our employees are very positive about the HK-MAT – not least because of its ease of use." An employee selects the desired item on the clear control panel and enters a PIN to unlock and open the locked drawer. When provided, each tool is uniquely assigned to an operational employee.

Comprehensive service every time

The customer service provided by the tool service provider was also important in deciding on systems from HAHN+KOLB. Not only were the tool distribution systems installed on time, but all employees were properly familiarised with the new device. "We could and still can contact HAHN+KOLB with any questions we may have – so everything runs smoothly," says Salvatore Viola, reflecting on the collaboration. And after several months of use, the Project Manager concludes: "Processes have been accelerated significantly, daily inspection tours are a thing of the past, and we can be sure that we will have the right amount of operating materials at all times."

Further references: Kuhn & Möhrlein GmbH & Co. KG, Eura Mobil GmbH, Sczesny Werkzeugbau GmbH, Dipl.-Ing. Jürgen Künzel Werkzeugbau, Behringer GmbH, BMW Group



LET'S WORK TOGETHER.



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ON-SITE CONSULTATION:

MAKE AN APPOINTMENT
WITH OUR E-BUSINESS/SYSTEMS
PROJECT MANAGERS

