COMPETENT TOOL MANAGEMENT



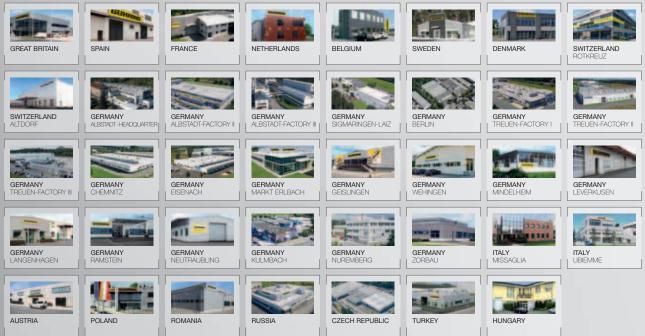


FLEXIBLE. PROFESSIONAL. SUSTAINABLE.

MAXIMUM NETWORKING THROUGH WORLDWIDE PRODUCTION SITES.

1975

EUROPE



EVERYTHING FROM ONE SUPPLIER. COMPREHENSIVE AND GLOBAL.

48 SALES COMPANIES

MORE THAN 70 production and service centres

AMERICA

ASIA

CHINA

TANK NOT

INDONESIA



INDIA

JAPAN

KOREA

99. j

THAILAND

VIETNAM

AFRICA







Choice of Gühring locations





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TM 326	30
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»WE ARE **READY** FOR **INDUSTRY 4.0 «**

GÜHRING TOOL MANAGEMENT COMPETENT PARTNER

For more than 15 years Gühring has successfully carried out tool management projects worldwide in a variety of extension levels. Small as well as medium-sized companies with individual and small batch production as well as enterprise customers with large batch production are supported by Gühring with full responsibility.

Because of the wide variation and the experience in implementing worldwide customer projects Gühring possesses an outstanding expertise in the tool management sector. With this know-how Gühring can also support your company in specifically optimising your tool management.

All TM systems can be combined with each other and can be operated via the basic units of the TM 326 and TM 526 systems or via the TM 426 control terminal.





GÜHRING TOOL MANAGEMENT ADVANTAGES

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Whilst direct tooling costs reflect tool consumption they remain the target of optimisation in companies, indirect tooling costs are hidden in the process organisation of tool management. They are less transparent and less quantifiable.

On the one hand indirect tooling costs are for example costs incurred through the necessary process organisation such as procurement, storage etc., on the other hand they are also costs arising from deficits in these management processes.

GÜHRING TOOL MANAGEMENT OPTIMISES PROCESSES & REDUCES COSTS.

FOR THE COMPANY'S PRODUCTION IT MEANS:

- Interruption of production orders due to unavailable tools
- Insufficient transparency of tool stock and storage locations
- Increased time investment of foremen and machine operators due to unavailable tools
- Overstock or missing/understock in warehouse
- ▲ Increased tool variety

RECEIVE ALL THE COMPONENTS YOU REQUIRE FROM ONE SUPPLIER – GÜHRING.

Any activities to optimise the process organisation and the costs connected that have to be carried out by employees responsible in addition to the daily work schedule are often neglected due to lack of time. This is where Gühring begins with its modular tool management concepts.

You can receive all required components from one supplier – Gühring.



RE-ORGANISATION AND CONTROL OF YOUR TOOL MANAGEMENT

TRANSPARENCY OF ALL PROCESSES THANKS TO THE APPLICATION OF GÜHRING'S TOOL MANAGEMENT SOFTWARE

AUTOMATED TOOL DISPENSING SYSTEMS

GSS SHRINK FIT AND PRE-SETTING EQUIPMENT

> FURTHER OPTIMISING DIRECT TOOLING COSTS. IDENTIFYING AND REDUCING INDIRECT TOOLING COSTS.

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GÜHRING TOOL MANAGEMENT CONCEPTS

LOGISTIC TOOL MANAGEMENT.

PERFORMANCE

- Gühring as central logistics partner for the procurement of all products in the machining and production area
- Article spectrum includes all types of cutting tools as well as accessories
- The customer decides which tools are applied during the project
- Scheduling and ordering of all tools to be applied including non-Gühring products
- Nonitoring delivery schedules
- ▲ Tool availability including consignment stock
- Nonitoring stock levels
- Gühring TM tool dispensing system for tool storage
- Re-grinding and re-coating in G
 ühring service centres or with original supplier
- > Delivery of new and refurbished tools
- 🔪 Filling the Gühring TM tool dispensing system
- Consumption and costing report
- Monthly invoicing by Gühring based on withdrawn tools. Subcontractors paid by Gühring

ADVANTAGES

- The customer can focus on core competences and value adding activities
- Customer specific compilation of scope of performance
- Only one contact person for the procurement of all tools and products
- Reduction of tied-up capital thanks to consignment stock
- Determining the cost reduction potential for indirect tooling costs
- Cost transparency thanks to clear cost allocation and monthly consumption reports to various criteria such as time period, product, cost centre, tool type etc.
- 24 hour tool dispensing during partly unmanned shifts

TECHNOLOGICAL TOOL MANAGEMENT.

PERFORMANCE

- Responsibility of complete tool management
- Gühring project team including tool managers, application technicians and pre-setting personnel on-site
- Looking after Gühring tools and non-Gühring products – including turning, grinding, honing and assembly
- Scheduling and ordering all tools to be applied
- Nonitoring delivery deadlines
- Incoming goods inspection
- Nanaging tool stock
- Assembly and pre-setting of tools
- Delivery of pre-set tools directly to manufacturing facilities
- Collection of worn tools from production area
- Disassembly and assessment of worn tools including wear analysis
- Dispatch of tools for refurbishment, i.e. re-grinding and re-coating
- Continuous technological improvements of tools and processes (CIP)
- Comprehensive reporting such as for example tooling costs per component, determining the cost driver per workpiece, documentation of tool life development
- Monthly invoicing by Gühring according to agreed modus, sub-contractors are paid by Gühring

ADVANTAGES

- Customer specific compilation of scope of performance
- Quick achievement of optimisation targets as Gühring tool managers can invest 100% of working time in optimisations
- Reduction of personnel costs in tool management
- Reduction of tied-up capital thanks to consignment stock
- Determining the cost reduction potential for indirect tooling costs
- Cost transparency thanks to clear cost allocation and monthly consumption reports to various criteria

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GÜHRING TOOL MANAGEMENT CONCEPT MODULES

Gühring's tool management concepts are designed according to customer requirements. Long-term experience of the tooling sector, the technology and the professional handling of workflow and customer data form the optimal basis for a reliable and individual co-operation with Gühring as a partner. Tool management is divided into the following concept modules.

GTMS

Modern and practice-oriented tool management software from Gühring is the engine of tool management.



GING

LOGISTICS

The GTMS triggers order suggestions as required and co-ordinates delivery and re-grind service.



SERVICE

Thanks to the co-ordinated delivery and re-grind service all production relevant working materials and tools are made available based on requirement and on time.



INTEGRATION

By incorporating the software in the existing customer infrastructure it provides support to all relevant tool management processes.



INTERFACES

With the assistance of interfaces GTMS connects to all ERP/PPS, CAD and IT systems. Also logistics systems like paternoster or shuttle systems can be controlled and managed.



IDENTIFICATION

Login is either by barcode, PIN, RFID or by biometric data.



ONLINE COMMUNICATION

GTMS enables data exchange via Intranet and Internet, web applications on tablet, smartphone and PC.



MACHINES

Multiplex dispensing systems offer solutions for various areas of application and security levels.

» OUR **INTELLIGENT TM SOLUTIONS OPTIMISE** YOUR TOOL MANAGEMENT.«

GTMS

GÜHRING TOOL MANAGEMENT CUSTOMER EXAMPLES

MillCraft 3D in Affalterbach is a young, fast growing company in the model mould and prototype construction sector. For the machining of high-tech materials the team applies the technology of Gühring to satisfy the high customer demands.



MillCraft 3D Managing Director Sven Goldschmidt appreciates the use of Gühring's TM 326 tool dispensing system:

» For us, flexibility and speed, coupled with a high degree of quality, are enormously important. Here, Gühring's tool dispensing system is a great help. As well as an accurate order management it guarantees us quick tool availability and is therefore indispensable in our daily work process. «



Sven Goldschmidt I Managing Director MillCraft 3D



» GÜHRING'S TOOL DISPENSING SYSTEM IS INDISPENSABLE IN OUR DAILY WORK PROCESS.«



»TM 526 – **OF ESSENTIAL BENEFIT** TO OUR COMPANY. «

» SELF-EXPLANATORY SOFTWARE – TOOL SEARCH IS A THING OF THE PAST. «

GÜHRING TOOL MANAGEMENT CUSTOMER EXAMPLES

»Hightech made in Regensburg« – how the dynamic company Aytec faces the challenges of its international customers. Here it relies on tools and dispensing systems from Gühring to guarantee the quality for manufacturing special machines.«



AyTec Managing Director Christian Ruhland about the tool management:

»The controlled dispensing and the automatic re-ordering of tools is very important to us. With the Gühring tool dispensing system TM 526 required tools for the production process are always available and we can fully concentrate on our core competences. This is a significant benefit for our company.«

The users Jonas Polleter and Paul Troppmann are also convinced of the Gühring tool dispensing system:

» Thanks to the GTMS self-explanatory software tool search is a thing of the past. «



Jonas Polleter and Paul Troppmann I Company employees of AyTec

GÜHRING TOOL MANAGEMENT CUSTOMER EXAMPLES

EDUR has been producing and selling state-of-the-art centrifugal pumps with high quality standards since 1927. The innovative pump technology of the EDUR pump factory has developed continuously over the decades and today sets new standards on the world market. The product range is the result of excellent engineering services, innovative manufacturing methods and a high level of quality and a forward-looking corporate philosophy.



EDUR Managing Director Dr. Glenny Holdhof on Tool Management:

» We convince our customers with high-quality products and short delivery times. To achieve this, we rely on lean, flexible and efficient production processes. The Gühring Tool Management System supports us in an excellent way. It guarantees fast tool availability for work preparation and machine operators, so that our employees can concentrate on their core tasks.«



Dr. Glenny Holdhof I Managing Director EDUR



» THE GÜHRING TOOL MANAGEMENT **PROVIDES EXCELLENT SUPPORT** FOR OUR PRODUCTION PROCESSES, «

GÜHRING TM-SOFTWARE MODULAR DESIGN

All Gühring tool dispensing systems are controlled by the user-friendly GTMS. It allows a simple, quick and intuitive operation via integrated touchscreen and provides the customer application and individual setting possibilities in all areas of production.

Thanks to the modular design processes in manufacturing can be accurately costumised and all aspects of the tool cycle, from provision and storage to disposal, can be transparently presented. The software documents all relevant movement data of stock, triggers order suggestions and enables evaluations to different criteria.

This comprehensive and detailed reporting offers your company a multitude of optimisation potentials in the tool cycle. Interfaces furthermore enable the connection to different merchandise management systems as well as an online connection to your suppliers thanks to automated order processes.







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GÜHRING TM-SOFTWARE PERFORMANCE & CUSTOMER ADVANTAGES

- Simple and intuitive user interface and menu navigation
- Nersonal dashboard
- Creation of various tool lists
- Direct call-up of CAD systems and graphics programmes for processing and presenting tool drawings
- Comprehensive storage management functions with which also Gühring's TM tool machines are controlled
- Depiction of customer organisation for clear cost allocation of tool withdrawals

- Accurate consumption analyses to various criteria, i.e. tool consumption per component, machine or manufacturing area
- Individual solutions can be programmed according to customer requirements
- Connection to all current ERP/PPS systems, tool management and paternoster lift systems via programming of corresponding interfaces
- 🔪 Multi-lingual software
- Normal Production of individual customer forms



NOW WITH **NEW AND OPTIMISED** USER INTERFACE.

GÜHRING TOOL MANAGEMENT TOOL DISPENSING SYSTEMS. MACHINES AND STORAGE SYSTEMS

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THE CORRECT SYSTEM FOR ANY APPLICATION.

Classical production is undergoing profound change: Industry 4.0 is to combine industrial production with communication and information technology and thus contribute to increasing productivity and flexibility.

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More than just dispensing systems - within the Tool Management service, Gühring provides its customers with the necessary data for a transparent machining process and optimises it.

27

GÜHRING TM TOOL DISPENSING SYSTEMS DISPENSING SYSTEMS TM 326/TM 426/TM 526/TM 626

Controlled storage and dispensing of tools is the basis for gaining tool consumption transparency and direct tooling costs. A prerequisite for this is however that tool stock is kept under lock and key and that every tool withdrawal is indeed registered in the management software. This is the only way to ensure that the stock displayed by the software physically exists and the tool scheduling can work reliably.

All systems are controlled by the GTMS logistics module. It enables a simple and intuitive operation of the dispensing machines.

Log-in is customer specific by PIN, barcode, RFID or biometric data. Depending on the system type tools can be stored and managed under different security levels. The Gühring dispensing systems TM 326, TM 426, TM 526 and TM 626 were developed for this purpose.

They are compatible to one another and can be adapted to various customer requirements for individual, small and large series production.

These Gühring TM tool systems therefore offer the decisive advantages of an intelligent tool dispensing system.

SECURE NOW.

PROFIT.

LONG-TERM SAVING.

ADVANTAGES

- > 24 hour controlled tool availability
- Reduction in storage and management costs
- Permanent consumption control
- Prevention of production stoppages
- Clear allocation of tooling costs
- Elimination of safety stock
- Storage and management of all articles relevant to production
- Eliminates loss and theft
- Employee awareness of tooling costs
- Communication with all IT systems possible

POWERED BY GÜHRING. HIGH-END-PERFORMANCE.

INCLUSIVE:







GÜHRING

TM-SOFTWARE



SCANNER

COMPUTER

TOUCHSCREEN



TM 326 BASIC VERSION



TM 326 embodies a flexible storage solution for all application requirements for individual and small batch production. Electronically locked drawers can be individually adapted in height and partitioning options according to the article spectrum. It is ideal for accommodating different products in small quantities.

The storage module is the centrepiece of Gühring's Tool Management Software that monitors and controls all movements. The system can be combined with all Gühring system types.



TM 326 DESIGNS AND DIMENSIONS

BASIC UNIT EQUIPMENT

- Electronically locked dispensing system in a rigid steel sheet construction
- Manually operated drawers with LED display and full pull-out (load capacity per drawer max. 200 kg)
- N Individual drawer height and partitioning options
- Height: 1700 mm (incl. attachment)Usable height: 900 mm
- NOW THE WIN 10, 64 Bit
- Not scanner for reading barcodes and QR codes
- ▲ 21.5" HD touchscreen monitor
- Note: Storage module of Gühring TM software
- Note: Note:



	1010 mm	750 mm	
1700 mm			
TM	326 basic unit I front and side view		

OTHER

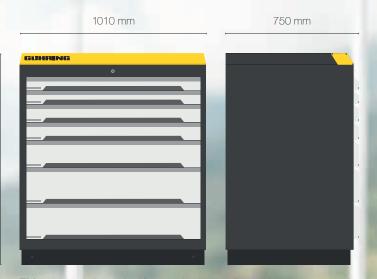
\ Lift truck base with removable front panel

♦ Operating voltage: 230 V | 50 Hz

Special colours to RAL I NCS on request

EXTENSION UNIT EQUIPMENT

- Electronically locked dispensing system in a rigid steel sheet construction
- Manually operated drawers with LED display and full pull-out (load capacity per drawer max. 200 kg)
- Individual drawer height and partitioning options
- 2 different heights:
 Height: 1160 mm | 1570 mm
 Usable height: 900 mm | 1300 mm



TM 326 extension units I front and side view (overall height: 1160 mm)

750 mm

1010 mm

1570 mm

1160 mm

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TM 326 extension units I front and side view (overall height: 1570 mm)

33

TM 326 DESIGNS AND DIMENSIONS

DRAWER PARTITIONING OPTIONS

Flexible composition of drawer height

 Available front height:
 75 mm
 100 mm
 150 mm
 200 mm

 Usable height:
 60 mm
 85 mm
 135 mm
 185 mm



Partition set (standard equipment)



Box set



Recess set

Anti-slip mat



ELECTRONIC DRAWER FLAP SYSTEM

Available front he	Flexible composition of drawer heightAvailable front height:75 mm 100 mm 150 mm 200 mmUsable height:50 mm 75 mm 125 mm 175 mm			
Flaps per drawer	Internal compartment dimension width x depth	Flap partitioning width x depth		
48	109 x 75 mm	8 x 6		
40	109 x 95 mm	8 x 5		
32	109 x 125 mm	8 x 4		
36	146 x 75 mm	6 x 6		
24	146 x 125 mm	6 x 4		
24	220 x 75 mm	4 x 6		
18	146 x 175 mm	6 x 3		
20	220 x 95 mm	4 x 5		
16	220 x 125 mm	4 × 4		
12	440 x 75 mm	2 x 6		
12	225 x 200 mm	3 x 4		
8	440 x 125 mm	2 x 4		
4	440 x 259 mm	2 x 2		



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TM 526 DRAWER SYSTEM



ACCESS ELECTRONICALLY LIMITED. TRANSPARENT TOOL MOVEMENTS. 100 % DISPENSING CONTROL.

The TM 526 system has been designed for large batch production with high product turnover rate. The individual drawer gradually opens when operated, this means only the respective booked quantity is dispensed. This results in 100% tool withdrawal transparency as well as a clear allocation of tooling costs.





TM 526 DESIGNS AND DIMENSIONS

BASIC UNIT EQUIPMENT

- Electronically locked dispensing system in a rigid steel sheet construction
- Manually operated drawers with LED display and full pull-out (load capacity per drawer max. 20kg)
- Number And Width Individual drawer height and width
- Neight: 1750 mm (incl. attachment)
- NOW IN 10, 64 Bit
- Scanner for reading barcodes and QR codes
- ▶ 21.5" HD touchscreen monitor
- Note: Storage module of Gühring TM software

885 mm

▲ Operating manual available



650 mm

1750 mm



TM 526 basic unit I front and side view

OTHER

\ Lift truck base with removable front panel

♦ Operating voltage: 230 V I 50 Hz

Special colours to RAL I NCS on request

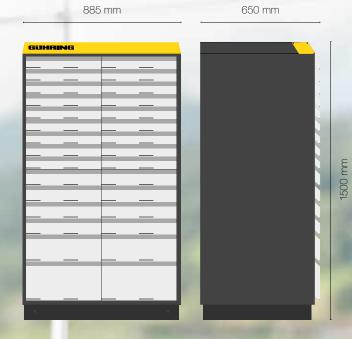
EXTENSION UNIT EQUIPMENT

- Electronically locked dispensing system in a rigid steel sheet construction
- Manually operated drawers with LED display and full pull-out (load capacity per drawer max. 20 kg)

	885 mm				650 mm		
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				11			
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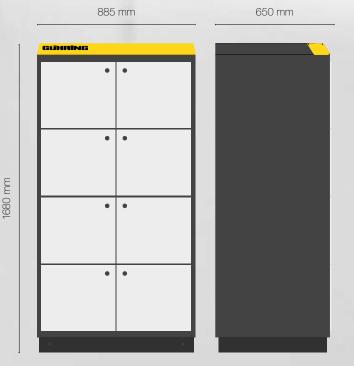
1300 mm

- Number And A large A l
- ▶ 2 different heights: 1300 mm | 1500 mm



TM 526 extension unit (2 heights) I front and side view

EXTENSION UNIT LOCKABLE COMPARTMENT EQUIPMENT



- Option with 16 lockable compartments Available internal dimensions: 315 x 150 x 534 mm (W x H x D)
- Version "Power supply"
 Option with 16 lockable compartments, each storage locker is equipped with 230V
 Available internal dimensions:
 315 x 150 x 384 mm (W x H x D)
- Option with 8 lockable compartments Available internal dimensions: 315 x 330 x 534 mm (W x H x D)
- Version "Power supply"
 Option with 8 lockable compartments, each storage locker is equipped with 230 V
 Available internal dimensions: 315 x 330 x 384 mm (W x H x D)

TM 526 extension unit lockable compartment I front and side view

TM 526 DESIGNS AND DIMENSIONS

DRAWER PARTITIONING OPTIONS

- Normal Street Street Construction (load capacity per drawer max. 20 kg)
- 🔪 Available drawer height/level: 42 mm | 60 mm | 114 mm | 186 mm | 258 mm | 330 mm
- Possible drawer partitioning: 16 | 8 | 4 | 2 | 1 Individual compartment depth of drawer partitioning: 30 mm | 60 mm | 128 mm | 252 mm | 526 mm
- Variable drawer width per level
 - 50 mm | 8 drawers per level (only for 42 mm height) | Possible drawer partitioning: 13
 - 110 mm | 5 drawers per level (only for 42 mm and 60 mm height) | Possible drawer partitioning: 16
 - 150 mm | 4 drawers per level | Possible drawer partitioning: 16
 - 215 mm | 3 drawers per level | Possible drawer partitioning: 16
 - 350 mm | 2 drawers per level | Possible drawer partitioning: 16









GÜHRING TM TOOL DISPENSING SYSTEMS FLEXIBLE STORAGE OPTIONS FOR ALL APPLICATION AREAS



For all tools, the additional storage systems guarantee the suitable space, which can be freely combined with the Gühring basic units.

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Control via the Gühring TM tool dispensing systems TM 326, TM 426 Terminal and TM 526 guarantees safe storage and withdrawal only after booking.

LARGE STORAGE SPACE. TRANSPARENT MANAGEMENT.

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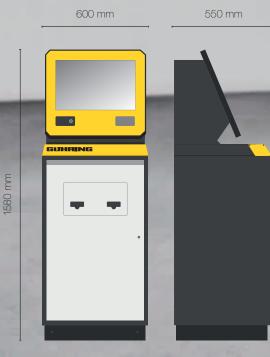
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TM 426 SPIRAL SYSTEM DESIGNS AND DIMENSIONS

EQUIPMENT CONTROL TERMINAL

- No. 10, 64 Bit
- Scanner for reading barcodes and QR-Codes
- Noptional label printer (1 or 2 printer)
- 🔪 21.5" HD touch screen monitor
- Note: Storage module of Gühring TM software
- 🔪 Operating manual



TM 426 control terminal I front and side view

OTHER

- Lift truck base with removable front panel
- V Operating voltage: 230 V I 50 Hz
- Special colours to RAL I NCS on request



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Optional pull-out drawer for the label printer

EQUIPMENT SPIRAL SYSTEMS

- Nithdrawal to Fifo principle
- ▲ 6-7 spiral levels with 10 spiral places each
- ▲ Goods dispensed bottom
- Spiral options can be configured according to product spectrum

EQUIPMENT SPIRAL SYSTEM LIFT

- Nithdrawal to Fifo principle
- 10 Spiral levels with 10 Spiral places each
- ▲ Goods dispensed top
- Integrated transport lift for tools



GÜHRING

VERTICAL PULL-OUT SYSTEM AND LOCKER DOOR SYSTEM THE COMPLEMENTARY STORAGE SYSTEMS

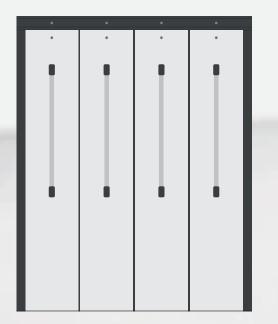
EQUIPMENT VERTICAL PULL-OUT SYSTEM

- Pull-outs with electronic locking via GTMS (load capacity per pull-out: 300 kg)
- 3 different pull-out options:
 4 pull-outs per 300 mm
 6 pull-outs per 200 mm
 8 pull-outs per 150 mm

1340 mm

- 2 different depths: 765 mm 1 1135 mm
- Robust design thanks to rotating pull-out roller and reaching in security
- Various partitioning material available

765 mm 1135 mm

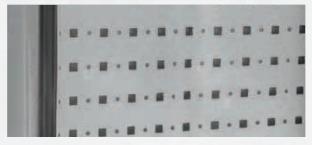


Vertical pull-out system I front and side view (2 depths)



Storage tray

680 mm



Perforated sheet wall



Tool holders



Holders for extra length tools

EQUIPMENT LOCKER DOOR SYSTEM

Locker door cabinet available with or without viewing window

-

4-8 shelves (load capacity per shelf: 200 kg)

Electronic locking by Gühring TM software

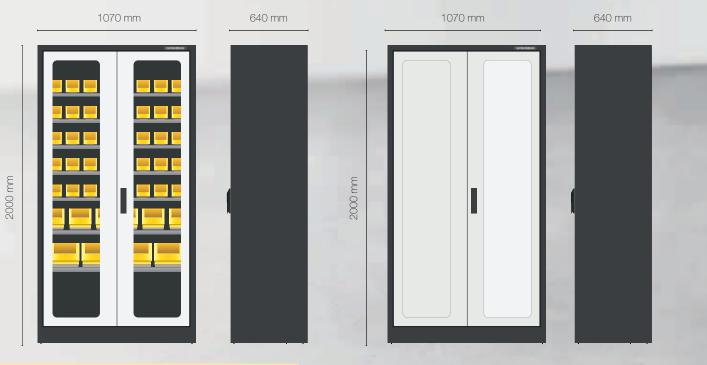


Locker door system with and without viewing window I front and side view

TM 626 DESIGNS AND DIMENSIONS

EQUIPMENT

Automatic load cell machine with or without viewing window
Up to 13 shelves possible
Available shelf variants: Number load cells: 1 | 4 | 4 | 6 | 6 | 8 Weighing range in kg: 80 | 8 | 20 | 4 | 8 | 4
Available storage boxes, yellow: Dimension: small | medium | large Internal dimensions L x W x H (mm): 139 x 87 x 68 | 199 x 129 x 116 | 299 x 186 x 134
Electronic control via Gühring TM machines / control terminal or as stand-alone unit with network connection and RFID authentication (data transfer via FTP server)

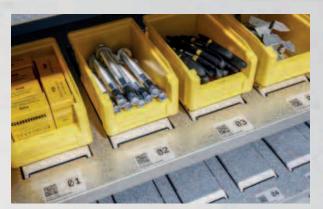


OTHER

- Noperating voltage: 230 V I 50 Hz
- Special colours to RAL I NCS on request



Reader for authentication available for stand-alone units



Optimal stock management and bulk material



The TM 626 is the ideal storage system solution for small parts, auxiliaries and consumables. All storage locations are equipped with load cell technology that registers every filling and removal. The booking is done in the Gühring Tool Management Software. Direct access to the system via an RFID solution enables decentralized placement and can avoid long distances in production.









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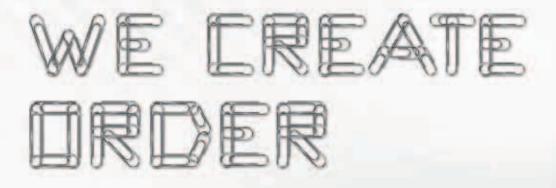
OPTIMAL STORAGE FOR ALL TYPES OF CONSUMABLES.

TARGETED AND QUICK THANKS TO STATUS LED LIGHT.



OUR CUSTOMERS CONFIRM:

- 10% lower tool consumption
- 14% less machine stoppages thanks to permanent tool availability
- 14% greater application of re-ground tools in production
- N Daily 1 hour time saving in tool search and procurement





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