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OPTIMUM®

MASCHINEN - GERMANY

METAL WORKING MACHINERY

THE OPTIMUM IN TERMS OF QUALITY,
PRICE-PERFORMANCE AND SERVICE

MAIN CATALOGUE 2019

The OPTIMUM in terms of quality, price-performance and service

Sales and service Germany in Hallstadt/Bamberg

Dear Customer,

To support any conceivable metalworking application, we have composed an assortment in our OPTIMUM domain catalogue that covers many areas with suitable machines. Each of our products impresses with its quality, precision, long service life and value stability. OPTIMUM offers the right machine for most tasks - from bench-top drills to CNC lathes.

Your requirements are our target
For more than 25 years, we have focused on the design, development and production of OPTIMUM machines, and for more than 10 years on CNC machines. We work unceasingly on continually optimising our machines. One important point here is also production, which is of great importance to us. This is why we made a careful choice of manufacturers to supplement our own production facilities. We set great store by the fact that these manufacturers meet our internal quality requirements. Besides our own manufacturing operations, OPTIMUM exclusively relies on manufacturers who meet our requirements. This means that we can offer you metalworking machines that impress on many scores.

OPTIMUM has built up a good reputation in the course of the years on what is a continually changing and developing tool and machine market. We are proud to say that we combine expertise, experience and a balanced price-performance ratio. Our utmost priority is you as a satisfied customer. With our motivated and expert personnel we strive to complete OPTIMUM's know-how and propagate it to you our customers.

Kilian Stürmer
Managing Directors

YouTube

DISCOVER OUR PRODUCT VIDEOS NOW!

All of our product videos are available for you to watch on our YouTube channel **OPTIMUM Maschinen Germany GmbH**. **Subscribe** to our YouTube channel, to avoid missing any of the new videos.

Dealers and service

Thanks to our comprehensive network of specialist dealers, you always have a local partner with OPTIMUM who guarantees the best possible advice, intensive support, and trouble-free after-sales service. And, of course, our expert staff is there to help you at any time. Please don't hesitate to contact our qualified team if you have any questions. We are happy to help.

Our products

Are you looking for a functional machine that offers a comprehensive feature set at an attractive price? Then you are making the right decision in purchasing an OPTIMUM metalworking machine. Our machines impress with excellent quality, precise manufacturing, and they offer an "OPTIMUM" price-performance ratio. We cater to a comprehensive tool machine and sheet metal working programme and are guaranteed to have the right machine variant for your needs in our assortment. You can rely on OPTIMUM, because we can realise every single one of your requirements in the metalworking environment. This main catalogue will give you an impression of our capabilities and our wide product portfolio.

On-site for you: in Europe and worldwide

For many years, OPTIMUM Maschinen Germany has been synonymous with the development, design and production of metalworking machines and CNC machines characterised by high quality standards. In the course of the years, we have continually expanded our sales and service network.

Today, OPTIMUM Maschinen Germany GmbH, German company, collaborates globally with professional partners from its headquarters in Hallstadt near Bamberg.
You will find OPTIMUM subsidiaries with strong dealers. Our international sales network extends well beyond Germany's borders to many countries all over the world. This helps us to ensure that our customers can rely on the fast, uncomplicated and service-oriented expertise and quality standards of OPTIMUM thanks to our extensive sales organisation. We have established a responsible market position that you can trust in the course of the years!

All OPTIMUM products are produced under high quality requirements.

OPTIMUM plant in Yangzhou, China

Production

Since 2003, OPTIMUM Maschinen Germany GmbH has produced a large share of its metalworking machines in its own factory in Yangzhou China. The quality here is monitored by German quality management officers and production supervisors. A further major part of our OPTIMUM metalworking machines is exclusively produced for OPTIMUM in line with special requirements within the company group.

Production on our own CNC machines

Drilling machine assembly

Quality

OPTIMUM products are produced under high quality requirements. A price comparison with equivalent and comparable products will give you the assurance that our OPTIMUM machines are always products that stand up to any comparison in terms of operating convenience, equipment level, quality, technology and value for money and are thus always a good buy. Check out the robust design and durability for yourself; this is what our machines stand for in a metalworking world.
You can purchase the OPTIMUM brand with confidence, and assure the best possible quality for your operations. There are many products that look identical, or similar, on the market, but which by no means achieve our OPTIMUM quality standards.

Lathe production

Metal-cutting band saw production

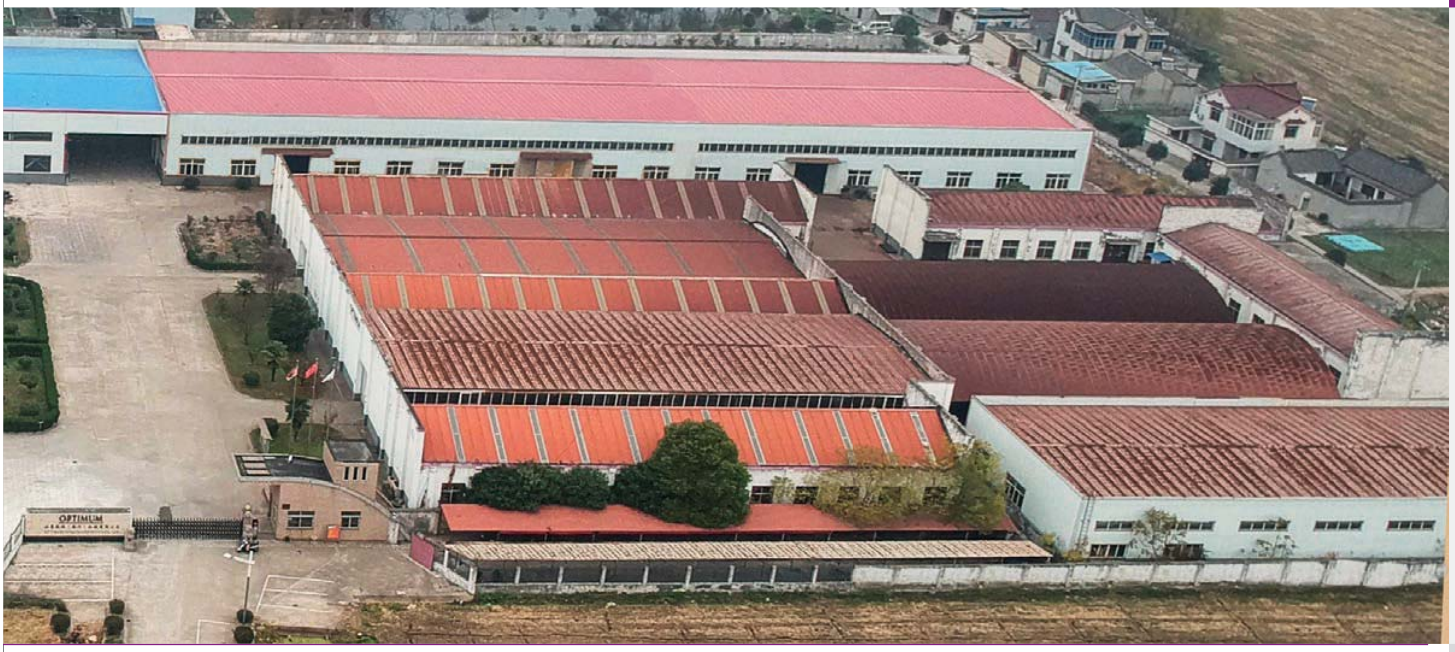
German Quality – made in China

Our production facilities

Optimum Maschinen Germany GmbH has commenced production in 2006 in Touqiao Town near Yangzhou in Jiangsu Province, only about three hours by car from Shanghai, on a total area of 20 000 square meters - a building floor space of 9 000 square meters with 180 employees, including 40 technicians.

Today, we produce our Optimum machine program in three production plants with a total area of 74 000 square meters and a building floor space of 30 000 m^2 with about 230 employees in production.

We permanently meet requirements for precision machining and economic efficiency.
We develop and configure the best solutions for our customers and take responsibility for them.
Our factories carry out strict technical process and quality controls Based on ISO 9001.
With a team of experienced experts and technicians and advanced production facilities, we produce quality products such as small and medium CNC machining centres, CNC lathes, CNC milling machines, milling and drilling machines and lathes for industrial and home use.



DIN EN ISO 9001
Excellent quality

Our factory is DIN EN ISO 9001 certified. This means that all company departments and services are subject to strict quality requirements. And this means consistently high quality for you. The objective of high quality is thrilled customers. And it is this attitude that finally helps to achieve this demanding certification. The key to the long-term success of our enterprise is also a relationship of trust with customers and suppliers. This explains why it is just as important to us as the sustainable quality of our products.

Our standards are high. And we strictly adhere to them

Certified quality in our production facilities

The excellence and safety of our products are assured by a system of internal processes, based on regular and frequent inspections in our factories and along the logistics chain. In order to ensure compliance with the strict requirements, each production site is regularly inspected.

Achieving our quality goals is an important management task

At Optimum, development and production are in the same hands, and the company sets high standards in all areas.

This is why our customers get what they expect from Optimum: innovative, well thought-out products with high practical suitability and an exceptionally long service life.

Quality control

Our company has developed a carefully planned quality management system and is certified according to ISO 9001:2008.

This system is an integral part of our operations and no exceptions or compromises are made or entered into with regard to the quality level of the products from production. Our Quality Assurance department is staffed by skilled employees who ensure that only products of impeccable quality are sold

Quality Assurance department

The Quality Assurance department consists of experienced technicians who are supervised by our German technicians, and attach great importance to high quality and impeccable product quality.

Each production step is checked and compared at all times with the available specifications

We want satisfied customers

This explains why our products' compliance with the customer quality requirements described earlier on is our company's top priority.

Production support

Our Engineering department has a well-coordinated team of specialists with excellent engineering qualifications. Their established expertise allows flexible and creative implementation of all requirements posed for our products and services.

A team of employees directly influences the production process on site through regular training and checks. It is only through this intensive support at the production site that we are in a position to achieve the proverbial OPTIMUM.

Quality management
Production
Outbound goods inspection

In addition to adherence to delivery deadlines and service, the quality of our products is extremely important to us. Continuous on-site checks by our quality manager ensure our quality. Our comprehensive incoming goods inspection is performed in line with generally accepted technical guidelines.

Quality management
Incoming goods inspection

Our quality managers from Germany are our first contacts for quality compliance on site. They are responsible for the dimensional accuracy of the components, for monitoring and quality assurance of the manufacturing process; they collaborate closely with our Engineering department at head office in Germany, thus ensuring an optimal symbiosis.

Planning

As early as the planning phase our engineering department manages the development of new products, which are manufactured both our facility and facilities operated by our partners. Major benefits: this ensures that market factors and customer requirements are immediately adopted into our workflow, setting the stage for a successful product design.

Development

Development relies exclusively on state-of-the-art 3D CAD software, which we use to create a virtual model of the machine. Besides ensuring optimum functionality of the machines, our development process also targets re-usability of the data generated during the development phase. These data are not only used for devising production documents and manuals, but are also used for computations, for computer-aided manufacturing, and for visualisation and animations.

Practical testing

Our engineers combine theory and practice. To avoid leaving anything to chance in terms of product satisfaction, all of our machines and tools go through application engineering tests, and we also consistently involve selected customers in this process. This means that each new product is expected to prove itself in the daily grind before it comes a fixed part of our product range. Engineering analysis helps us to discover and eliminate any remaining weak points.

The clearly engineering oriented approach of our staff – in addition to the premium quality of our products, and our expert service – contribute towards constantly high levels of customer satisfaction. And our focus on technically affine employees ensures our market success – today and looking forward!

Technical customer support

Our customers rightly expect our specialists to use their knowledge and experience to their utmost satisfaction. Our product consultants support users with technical information. To allow this to happen, our customers can use our free telephone hotline and our info email address to request qualified information and solutions at short notice.

Safeguarding copyrights

To secure the rewards of our technical development work for both ourselves and our customers, patent and utility model protection is essential for our in-house developments. This helps us permanently keep the technical lead that OPTIMUM products have.
The entire catalogue is protected by copyright. Additionally, to protect our products, we register our rights to our brands, patents and designs where possible in each individual case. We take strong action against any violation of our intellectual property.

Technical documentation and risk analyses

Our technical authors again achieve a high standardised level that meets or even exceeds all requirements. These huge efforts exclusively serve the purpose of facilitating the process of familiarisation with the machine for our customers, and ensuring permanent and safe operations.
Risk mitigation measures are developed to compensate for any safety risks identified in the scope of analysis. Following this, the residual risk is evaluated after implementing the measures.

Supplier management

Regular work meetings between our engineers and suppliers help to transfer our new developments and enhancements into series production at the manufacturing location in a targeted way. This direct support at our production facilities has been indispensable in manufacturing the quality products that our customers have trusted for more than 25 years.

Sales support

The requirements for OPTIMUM machines are equally as diverse as the production requirements of our end customers and the workpieces to be machined. To ensure this, our representatives and retailers have access to the entire application-specific know-how of our engineers in case of queries.
In a qualified and explanatory sales talk, our customers are given the support they need to tune their choice of products to match their needs.

Training

For employees from Engineering, Service and Sales as well as for our customers: Successful use of our products depends and is driven to a decisive extent by the fact that we pass on our technology know-how to our dealers, their sales and service staff and our customers through training sessions. The major benefits: this qualification offers the ability to ensure professionally founded consultancy and problem solving in all dealings with the customer. At our training centre, we offer practically-oriented product training that aim to disseminate professional knowledge in a highly intuitive way.

Supply of spare parts

We know that rapid availability of spare parts is one of the major preconditions for a working, customer-oriented service solution.
The planning, coordination and provisioning of spare parts is tuned at OPTIMUM Maschinen Germany GmbH so that our customers have the greatest possible benefits in terms of economic efficiency and speed.

Siemens cooperation partner for CNC training

Siemens has for many years been the system supplier of the control and drive technology for CNC-controlled lathes and milling machines by OPTIMUM Maschinen Germany GmbH. Due to our long-standing and successful collaboration, a cooperation partnership for CNC training in Bavaria was agreed in June 2012. Target-group specific courses familiarise the participants of the training program with the various Sinumerik controls.

Service support

...after all, good service is important to us!
In service cases, our OPTIMUM technicians are available at any time with their experience to support your workshop operations and ensure fast and targeted repairs.
In close cooperation with the service centre and its internal and external staff, weaknesses are analysed and customer needs registered. These weaknesses and needs are then evaluated from an engineering point of view and set out as tangible requirements or action catalogues.

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LATHES


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Leading and feed spindle lathes, characterised by excellent flexibility, precision and economy.

With DPA 21 digital position display and quick change tool holder.

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 8
- Precision slide
- All guides adjustable using cleats
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Shafts, gears and main spindle run in oil bath
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Clear-cut selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Leading spindle cover
- emergency stop button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X axis
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and hand wheel with adjustable fine scaling
- Tailstock crank for position change
- Tailstock spindle sleeve with two adjustable transmission ratios 1/4 or 1/1 rev
- LED machine lamp
- Fast feed - Pushbutton and selector lever for enabling rapid motion in transverse and longitudinal directions for an even more rational work approach. Does not switch off the entire machine when running into the limit switch
- Safety limit switch with positively opening contacts
- Electrical motor brake with fast emergency stop – in normal operations, fast stop without post-run
- Electrical system with Siemens components
- Energy chain for material-friendly cable and hose guiding
- Quick change tool holder SWH 9-D
- 1 tool holder 41 x 180 type D for square chisels 32 mm

Digital position display DPA 21

› Clear reduction of manufacturing times
› Glass scales

Control Cabinet

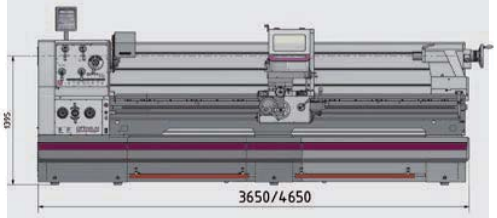
› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

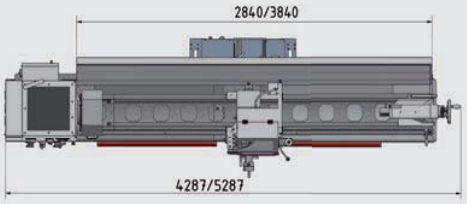
Fig.: TH 8030D

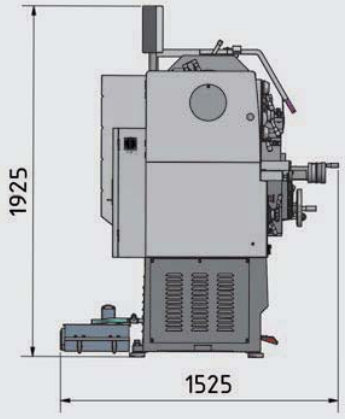
Technical specifications, accessories and dimensions

Model	TH 8020D	TH 8030D
Article no.	3462230	3462240
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	12 kW	
Coolant pump motor	150 W	
Spindle		
Drive motor	11 kW	
Spindle taper	Ø 113 mm (taper 1:20)	
Spindle seat	Camlock DIN ISO 702-2 No. 8	
Spindle bore, bar passage diameter	Ø 105 mm	
Quick change tool holder height	SWH 9-D	
Work area		
Centre height	400 mm	
Centre width	2 050 mm	3 050 mm
Swing Ø over machine bed	800 mm	
Swing in the bed bridge	1 035 mm	
Turning length in bed bridge	250 mm	
Swing over cross slide	570 mm	
Bed width	400 mm	
Load bearing capacity	1.4 t/m	
Speed range		
Spindle speed	25 - 1 600 rpm	
Number of speeds	16 speeds	
Travel		
Top slide travel	230 mm	
Cross slide travel	368 mm	
Feeds and pitches		
Feed motor output	550 W	
Rapid traverse	3.8 m /min. max. 5 min. (30 min. break)	
Longitudinal feed within the range	0.044 - 1.48 mm/rev (25 feeds)	
Cross feed within	0.022 - 0.74 mm/rev (25 feeds)	
Pitch - metric in range	0.45 - 120 mm/rev (54 pitches)	
Pitch - inch in range	80 - 7/16 turns/inch (60 pitches)	
Diametral pitch in range	7/8 - 160 turns/π (42 pitch)	
Modular thread in range	0.25 - 60 mm x π (46 thread)	
Tailstock		
Tailstock seat	MT 5	
Tailstock quill diameter/stroke	90 mm/235 mm	
Dimensions		
Length	4 287 mm	5 287 mm
width x height	1 525 x 1 925 mm	
Weight	3 455 kg	3 820 kg

Dimensions







Lathe chuck	Art no.
OPTIMUM three-jaw lathe chuck Ø 315 mm no. 8, centric	3442768
OPTIMUM Four-jaw lathe chuck Ø 315 mm no. 8, centric	3442856
OPTIMUM Four-jaw lathe chuck Ø 315 mm no. 8, individual	3442888
BISON three-jaw lathe chuck Ø 315 mm no. 8, centric	3450335
BISON Four-jaw lathe chuck Ø 315 mm no. 8, centric	3450385
Accessories	Art no.
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5 (2-row SKF angular contact bearings)	3451005
Lathe tool set HM 25 mm, 5-part (see page 192)	3441672
Lathe tool set HM 25 mm, 5-part, extension kit (see page 192)	3441623
Vibration-damping machine base SE 3 (6 pcs. required)	3381018
Vibration damper SE 85 (6 pcs. needed)	3352982
› More accessories for lathes from page 184	

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway max. Ø 150 mm
- › Follow rest passageway max. Ø 130 mm
- › LED machine lamp
- › Reduction sleeve Ø 113 mm / MT 5
- › One fixed and one alloyed centre MT 5
- › Quick change tool holder 9-D
- › Tool holder 41 x 180 type D for square chisels 32 mm
- › Replaceable gear set
- › Quality oil included
- › Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Leading and feed spindle lathes, characterised by excellent flexibility, precision and economy.

With DPA 21 digital position display and quick change tool holder.

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 8
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- All guides adjustable using cleats
- Gears and shafts running in oil bath
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Clear-cut selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Leading spindle cover
- Emergency stop button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and hand wheel with adjustable fine scaling
- Tailstock crank for position change
- Tailstock spindle sleeve with two adjustable transmission ratios 1/4 or 1/1 rev
- LED machine lamp
- Fast feed - Pushbutton and selector lever for enabling rapid motion in transverse and longitudinal directions for an even more rational work approach. Does not switch off the entire machine when running into the limit switch
- Safety limit switch with positively opening contacts
- Electrical motor brake with fast emergency stop – in normal operations, fast stop without post-run
- Electrical system with Siemens components
- Energy chain for material-friendly cable and hose guiding
- Quick change tool holder SWH 9-D
- 1 tool holder 41 x 180 type D for square chisels 32 mm

Digital position display DPA 21

› Clear reduction of manufacturing times
› Glass scales

Control Cabinet

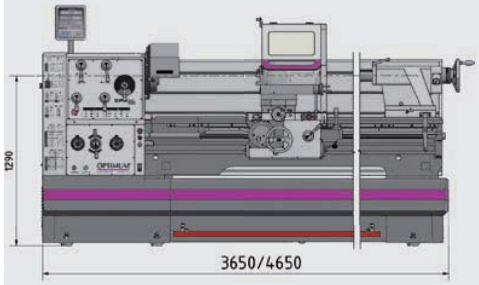
› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

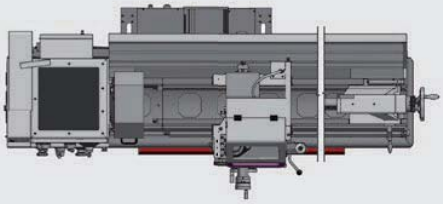
Fig.: TH 6630D

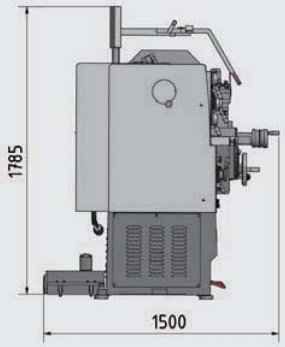
Technical specifications, accessories and dimensions

Model	TH 6620D	TH 6630D
Article no.	3462210	3462220
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	10 kW	
Coolant pump motor	150 W	
Spindle		
Drive motor	9 kW	
Spindle taper	Ø 113 mm (taper 1:20)	
Spindle seat	Camlock DIN ISO 702-2 No. 8	
Spindle bore, bar passage diameter	Ø 105 mm	
Quick change tool holder	SWH 9-D	
Work area		
Centre height	330 mm	
Centre width	2 050 mm	3 050 mm
Swing Ø over machine bed	660 mm	
Swing in the bed bridge	900 mm	
Turning length in bed bridge	250 mm	
Swing over cross slide	440 mm	
Bed width	400 mm	
Load bearing capacity	1.4 t/m	1.4 t/m
Speed range		
Spindle speed	25 - 1 600 rpm	
Number of speeds	16 speeds	
Travel		
Top slide travel	230 mm	
Cross slide travel	368 mm	
Feeds and pitches		
Feed motor output	550 W	
Rapid traverse	3.8 m /min. max. 5 min. (30 min. break)	
Longitudinal feed within the range	0.044 - 1.48 mm/rev (25 feeds)	
Cross feed within	0.022 - 0.74 mm/rev (25 feeds)	
Pitch - metric in range	0.45 - 120 mm/rev (54 pitches)	
Pitch - inch in range	80 - 7/16 turns/inch (60 pitches)	
Diametral pitch in range	7/8 - 160 turns/π (42 pitch)	
Modular thread in range	0.25 - 60 mm x π (46 thread)	
Tailstock		
Tailstock seat	MT 5	
Tailstock quill diameter/stroke	90 mm/235 mm	
Dimensions		
Length	3 650 mm	4 650 mm
width x height	1 500 x 1 785 mm	
Weight	3,345 kg	3 730 kg

Dimensions







Lathe chuck	Art no.
OPTIMUM three-jaw lathe chuck Ø 315 mm no. 8, centric	3442768
OPTIMUM Four-jaw lathe chuck Ø 315 mm no. 8, centric	3442856
OPTIMUM Four-jaw lathe chuck Ø 315 mm no. 8, individual	3442888
BISON three-jaw lathe chuck Ø 315 mm no. 8, centric	3450335
BISON Four-jaw lathe chuck Ø 315 mm no. 8, centric	3450385
Accessories	Art no.
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5 (2-row SKF angular contact bearings)	3451005
Lathe tool set HM 25 mm, 5-part (see page 192)	3441672
Lathe tool set HM 25 mm, 5-part, extension kit (see page 192)	3441623
Vibration-damping machine base SE 3 (6 pcs. required)	3381018
Vibration damper SE 85 (6 pcs. needed)	3352982
› More accessories for lathes from page 184	

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway max. Ø 150 mm
- › Follow rest passageway max. Ø 130 mm
- › LED machine lamp
- › Reduction sleeve Ø 113 mm / MT 5
- › One fixed and one alloyed centre MT 5
- › Quick change tool holder 9-D
- › Tool holder 41 x 180 type D for square chisels 32 mm
- › Replaceable gear set
- › Quality oil included
- › Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Precision feed and lead spindle lathes comply with strictest requirements in terms of technical equipment and precision. With digital position display NEWALL DP 700

Facts that impress in terms of quality, performance and price

- Machine bed and chassis made heavily ribbed cast material
- Single-part steel machine chassis
- High degrees of rigidity of the spindle bar housing thanks to pronounced ribbing made of 25GG cast material
- All feed gearwheels made of steel, hardened and polished
- shafts on needle bearings, all components lubricated in oil bath
- Hardened and polished spindle guarantees high degrees of accuracy and durability
- The powerful machining performance means that a high level of chip removal during roughing work is no problem
- Easy to service thanks to removable rear panel
- Energy chain for material-friendly cable and hose guiding
- Lockable chip guard moves with the bed slide with integrated position indicator and coolant hose, manually adjustable
- Decoupled hand wheels approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- No interchangeable gears required
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Hardened and polished bed guides
- Electronically braked motor
- Electronic feed shut-off of Z axis
- All electronic controls centrally accessible
- Working area completely illuminated
- External coolant tank with filling level display and oil separator
- Complete feed and lead spindle cover
- Electrical position shut-off with quadruple positioning stop
- Three-jaw lathe chuck included in standard scope of delivery
- Quick change tool holder SWH 7-C
- Tool holder 32 x 130 type D for square chisels 25 mm

- **Digital position display DP700**
  (For more information, see „NEWALL - DP700“ on page 248)

TX 5216:
Large spindle bore Ø 80 mm

TX 6222:
Large spindle bore Ø 105 mm

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

Touch panel

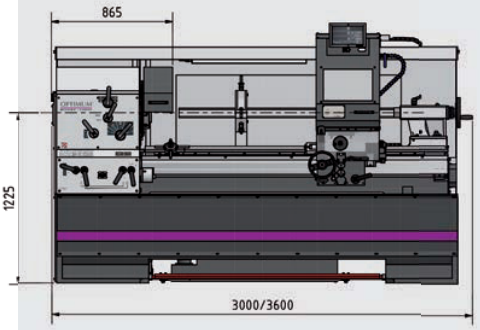
› **Centralised operation**
› Pitch deactivation using button
› Feed bar drive
› Rapid motion X and Y axis
› Machine lamp
› Cooling agent

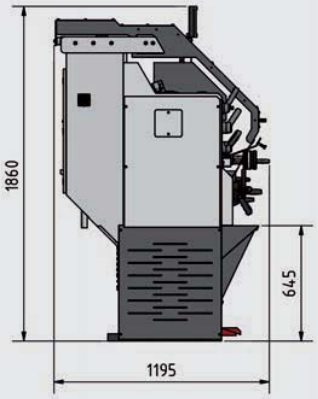
Fig. TX 5216

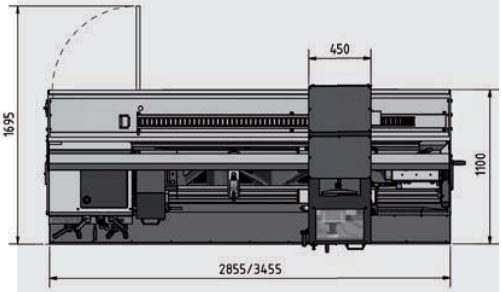
Technical specifications, accessories and dimensions

Model	TX 5216	TX6222
Article no.	3432440	3432460
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	6.1 kW	8.5 kW
Coolant pump motor	100 W	
Spindle		
Drive motor	5.5 kW	7.5 kW
Spindle taper	MT 7	Ø 113 mm (taper 1:20)
Spindle seat	Camlock DIN ISO 702-2 No. 8	
Spindle bore, bar passage diameter	Ø 80 mm	Ø 105 mm
Quick change tool holder	SWH 7-C	
Technical specifications		
Centre height	260 mm	310 mm
Centre width	1 600 mm	2 220 mm
Swing Ø over machine bed	520 mm	620 mm
Swing over cross slide	324 mm	424 mm
Bed width	350 mm	
Speed range		
Spindle speed	30 - 1 500 rpm	40 - 1 650 rpm
Number of speeds	12 speeds	
Travel		
Top slide travel	170 mm	
Cross slide travel	350 mm	
Feeds and pitches		
Longitudinal feed within the range	0.05 - 1.5 mm/rev (55 feeds)	
Cross feed within	0.025 - 0.75 mm/rev (55 feeds)	
Metric pitch	0.5 - 15 mm/rev (55 pitches)	
Pitch - inch in range	60 - 2 turns/inch (55 pitches)	
Diametral pitch in range	7/8 - 160 Gg/π (42 gears)	
Modular thread in range	0.25 - 7.5 mm x π (55 thread)	
Tailstock		
Tailstock seat	MT 5	
Tailstock quill diameter/stroke	Ø 72 mm/ 180 mm	
Dimensions		
Length	3 000 mm	3 600 mm
width x height	1 195 x 1 860 mm	1 194 x 1 860 mm
Weight	2 470 kg	2 800 kg

Dimensions







Accessories	Art no.
TX5216	
Follow rest passageway 15 - 125 mm	3438020
Steady rest passageway 10 - 185 mm	3438023
Steady rest passageway 160 - 285 mm	3438024
Lathe tool set HM 20 mm (see as of Page 192)	3441670
Lathe tool set HM 20 mm, extension kit (see page 192)	3441617
TX6222	
Follow rest passageway 15 - 125 mm	3438030
Steady rest passageway 10 - 185 mm	3438033
Steady rest passageway 160 - 285 mm	3438034
Lathe tool set HM 25 mm, extension kit (see page 192)	3441672
Lathe tool set HM 25 mm (see page 192)	3441623
Accessories	Art no.
Clamping disc Ø 450 mm no. 8	3442982
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5	3451005
Vibration damping machine base SE 3 (6 pcs. required)	3381018
› More accessories for lathes from page 184	

Scope of supply

- › Three-jaw lathe chuck Ø 315 mm no. 8
- › Fixed centre MT 5 long
- › Fixed centre MT 5 short
- › Operating tool
- › Machine initially filled with premium grade oil
- › Quick change tool holder SWH 7-C
- › Tool holder for square chisels 32 x 130 type D for 25 mm square chisels

TX 5216:

- › Reduction sleeve MT 7 / MT 5

TX 6222:

- › Reduction sleeve Ø 113 mm/MT 5

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Precision feed and lead spindle lathes with digital position display NEWALL DP 700 and quick change tool holder. TZ 4V with electronically controlled drive

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Partly clad with travelling, generously dimensioned chip guard
- Travelling swarf guard with integrated position display, coolant hose and additional control panel
- Plane und top slide spindle tempered and ground, adjustable via split spindle nut
- Feed and lead screw cover
- Granular feed and tapping range
- LED machine light for complete elimination of the workspace
- Energy chain for material-friendly cable and hose guiding
- Replacement gears also optionally available for imperial and modular thread
- Control cabinet with 24-V DC adapter
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Decoupled hand wheels approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- All contactors und relays by Siemens or Schneider
- Safety hand wheels with release function in the X and Z axis
- Chip tray pulls out to front
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- **Digital position display NEWALL DP 700**

TZ 4:

- Reduction of the main spindle braking time thanks to electrically braked motor
- Motor circuit switch

TZ 4V

- Reduction of the main spindle braking time thanks to energy recuperation
- All contactors und relays by Siemens or Eaton

TZ 4V - Siemens Inverter SINAMICS G120D

made in EU

More information: „SIEMENS SINAMICS G 120D Frequency inverters“ on page 140

Control panel

› **Centralised operation**
› For switching
› Lighting
› Coolant for TZ 4 for shifting two-speed motor
› Foil keypad, easily cleanable

Bed geometry

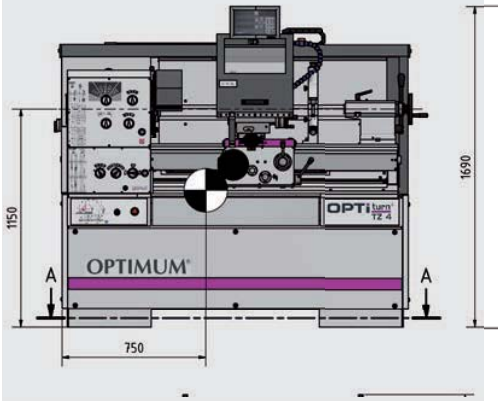
› Flat angle
› Higher force absorption

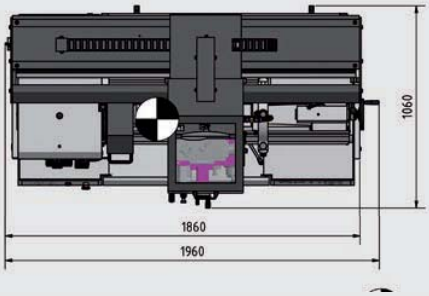
Fig.: TZ 4 - Shown with optional lathe chuck

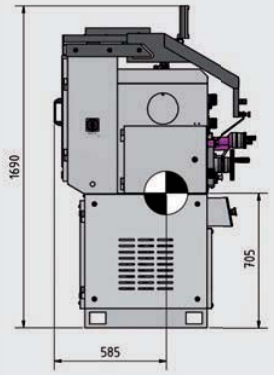
Technical specifications, accessories and dimensions

Model	TZ 4	TZ 4V**
Article no.	3432240	3432245
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	5 kW	6 kW
Coolant pump motor	125 Watts	
Spindle		
Drive motor	3 kW/4.5 kW	5.5 kW
Spindle taper	MT 6	
Spindle seat	DIN ISO 702-1 No. 5	
Spindle bore, bar passage diameter	Ø 52 mm	
Quick change tool holder	SWH 5-B	
Technical specifications		
Centre height	200 mm	
Centre width	800 mm	
Swing Ø over machine bed	400 mm	
Swing over cross slide	245 mm	
Bed width	260 mm	
Speed range		
Spindle speed	45 - 1 800 rpm	50 - 3 000 rpm
Number of speeds	16 speeds	2 speeds. Electrically controlled
Travel		
Top slide travel	112 mm	
Cross slide travel	212 mm	
Feeds and pitches		
Longitudinal feed within the range	0.0263 - 1.8416 mm/rev (48 feeds)	
Cross feed within	0.0133 - 0.9321 mm/rev (48 feeds)	
Pitch - metric in range	0.2 - 14 mm/rev (26 pitches)	
Pitch - inch in range (Replaceable gear set accessory art. no. 3444160)	80 - 1 turns/inch (42 pitch)	
Modular thread in range	0.1 - 7 mm x π (44 thread)	
Diametral pitch in range (Replaceable gear set accessory art. no. 3444160)	3 - 200 turns/π (33 pitch)	
Tailstock		
Tailstock seat	MT 3	
Spindle sleeve diameter / stroke	Ø 50 mm / 110 mm	
Dimensions		
Length x width x height	1 960 x 1 060 x 1 690 mm	
Weight	1 250 kg	

Dimensions







Lathe chuck TZ 4	Article no.
BISON four-jaw lathe chuck Ø 250 mm no. 5 cast Centrically clamping (chuck flange 3450218 required)	3450216
Lathe chuck TZ 4V	Article no.
BISON four-jaw lathe chuck Ø 250 mm no. 5 steel Centrically clamping (chuck flange 3450218 required)	3450217
Lathe chucks and accessories	Article no.
Chuck flange for lathe chuck Ø 250 mm no. 5 (for lathe chuck 3450216/3450217)	3450218
BISON three-jaw lathe chuck Ø 200 mm no. 5 cast Centrically clamping (chuck flange 3450212 required)	3450210
Chuck flange lathe chuck Ø 200 mm no. 5 (lathe chuck 3450210)	3450212
Clamping disc Ø 320 mm no. 5	3442979
BISON chuck flange for lathe chuck Ø 160 mm (Szf 3450245)	3450246
BISON collet chuck 16C - Ø 160 mm (requires chuck flange 3450246)	3450245
Lathe tool set HM 25 mm, 5-part (see page 192)	3441623
Interchangeable gear set for imperial and modular thread	3444160
Levelling platen SE 55 (8 pcs. required)	3352981

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway Ø 10 - 130 mm
- › Follow rest passageway Ø 10 - 100 mm
- › Reduction sleeve MT 3 and MT 6
- › Fixed centre MT 3
- › Quick change tool holder 5-B
- › Tool holder 25 x 120 type D for square chisels 20mm
- › Replaceable gear set for metric thread
- › Machine initially filled with premium grade oil
- › Operating tool
- › More accessories for lathes from page 184

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3 - Note for operation with frequency converter on page 253

Heavy leading and feed spindle lathes, characterised by excellent flexibility, precision and economy. Featuring Siemens inverter Vario drive

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 8
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- All guides adjustable using cleats
- Shafts, gears and main spindle run in oil bath
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Clear-cut selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Leading spindle cover
- Emergency stop button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard
- Two speeds
- Spindle bore/bar passage Ø 105 mm
- Siemens Sinamics frequency inverter / Safety Integrated
- Electrical system with Siemens components
- Energy chain for material-friendly cable and hose guiding
- Scale on thread gauge adjustable
- Quick change tool holder SWH 7-C
- 1 tool holder 32 x 150 type D for square chisels 25 mm
- Digital position display DPA 21
- Glass scales

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

Siemens Inverter SINAMICS G120D

made in EU

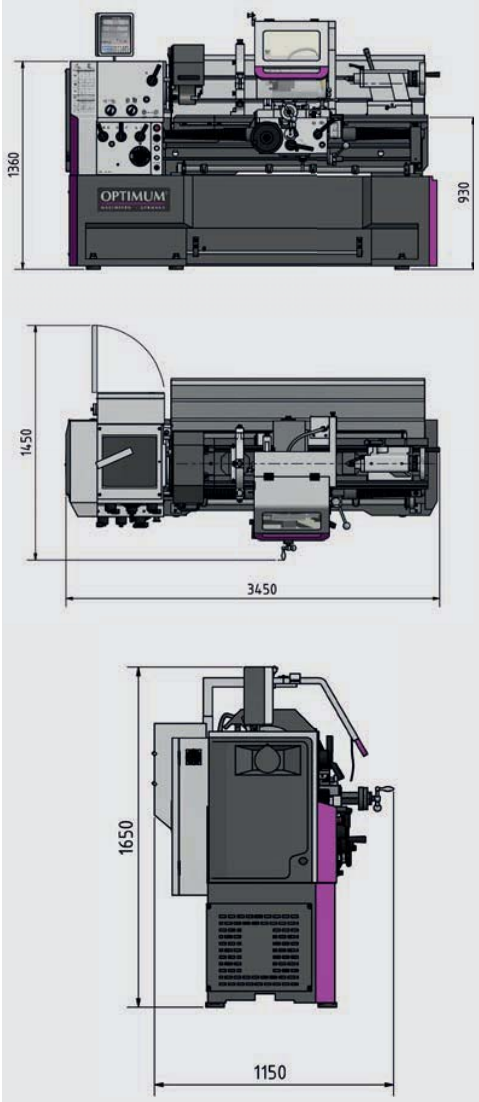
More information: „SIEMENS SINAMICS G 120D Frequency inverters“ on page 140

Fig.: TH 5615V - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 5620V
Article no.	3462175
Technical specifications	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	8.5 kW
Coolant pump motor	125 Watts
Spindle	
Drive motor	7.5 kW
Spindle taper	Ø 113 mm (taper 1:20)
Spindle seat	Camlock DIN ISO 702-2 No. 8
Spindle bore, bar passage diameter	Ø 105 mm
Quick change tool holder	SWH 7-C
Work area	
Centre height	280 mm
Centre width	1 910 mm
Swing Ø over machine bed	560 mm
Swing in the bed bridge	790 mm
Turning length in bed bridge	170 mm
Swing over cross slide	355 mm
Bed width	350 mm
Speed range	
Spindle speed	25 - 1 600 rpm
Number of speeds	2 speeds; electronically controlled
Travel	
Top slide travel	130 mm
Cross slide travel	316 mm
Feeds and pitches	
Longitudinal feed within the range	0.031 - 1.7 mm/U (42)
Cross feed within	0.014 - 0.784 mm/U (42)
Pitch - metric in range	0.1 - 14 mm/U (47)
Pitch - inch in range	112 - 2 turns/inch (60 pitches)
Diametral pitch in range	4 - 112 turns/π (50 pitch)
Modular thread in range	0.1 - 7 mm x π (34 thread)
Tailstock	
Tailstock seat	MT 5
Spindle sleeve diameter / stroke	Ø 75 mm / 180 mm
Dimensions	
Length x width x height	3 340 x 1 150 x 1 650 mm
Weight	2 720 kg

Dimensions



Lathe chuck	Article no.
OPTIMUM lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3442768
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3442856
Four-jaw lathe chuck Ø 315 mm no. 8, individual	3442888
BISON lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3450335
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3450385
› Information about lathe chucks from page 184	

Accessories	Article no.
Clamping disc Ø 450 mm no. 8	3442982
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5	3451005
Spare tool holder 40 x 160 type H for round	3384326
Spare tool holder 32 x 150 Type D square	3384308
Lathe tool set HM 32 mm, 5-part (see page 193)	3441674
Position stop with granular adjustment	3444023

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway max. Ø 165 mm
- › Follow rest passageway max. Ø 95 mm
- › LED machine lamp
- › Reduction sleeve Ø 113 mm / MT 5
- › One fixed and one alloyed centre MT 5
- › Quick change tool holder 7-C
- › Tool holder 32 x 150 type D for square chisels 25 mm
- › Thread gauge
- › Replaceable gear set
- › Gear wheels for threading gauge (metric)
- › Machine initially filled with premium grade oil
- › Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3 - Note for operation with frequency converter on page 253

Heavy leading and feed spindle lathes, characterised by excellent flexibility, precision and economy.

With DPA 21 digital position display and quick change tool holder.

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 8
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- All guides adjustable using cleats
- Gears and shafts running in oil bath
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Clear-cut selector lever for switching the feed speeds
- Closed design of the quick shift feed gear
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Leading spindle cover
- emergency stop button, motor circuit breaker, lockable main switch
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard
- Electrical system with Siemens components
- Energy chain for material-friendly cable and hose guiding
- Scale on thread gauge adjustable
- Quick change tool holder SWH 7-C
- 1 tool holder 32 x 150 type D for square chisels 25 mm

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

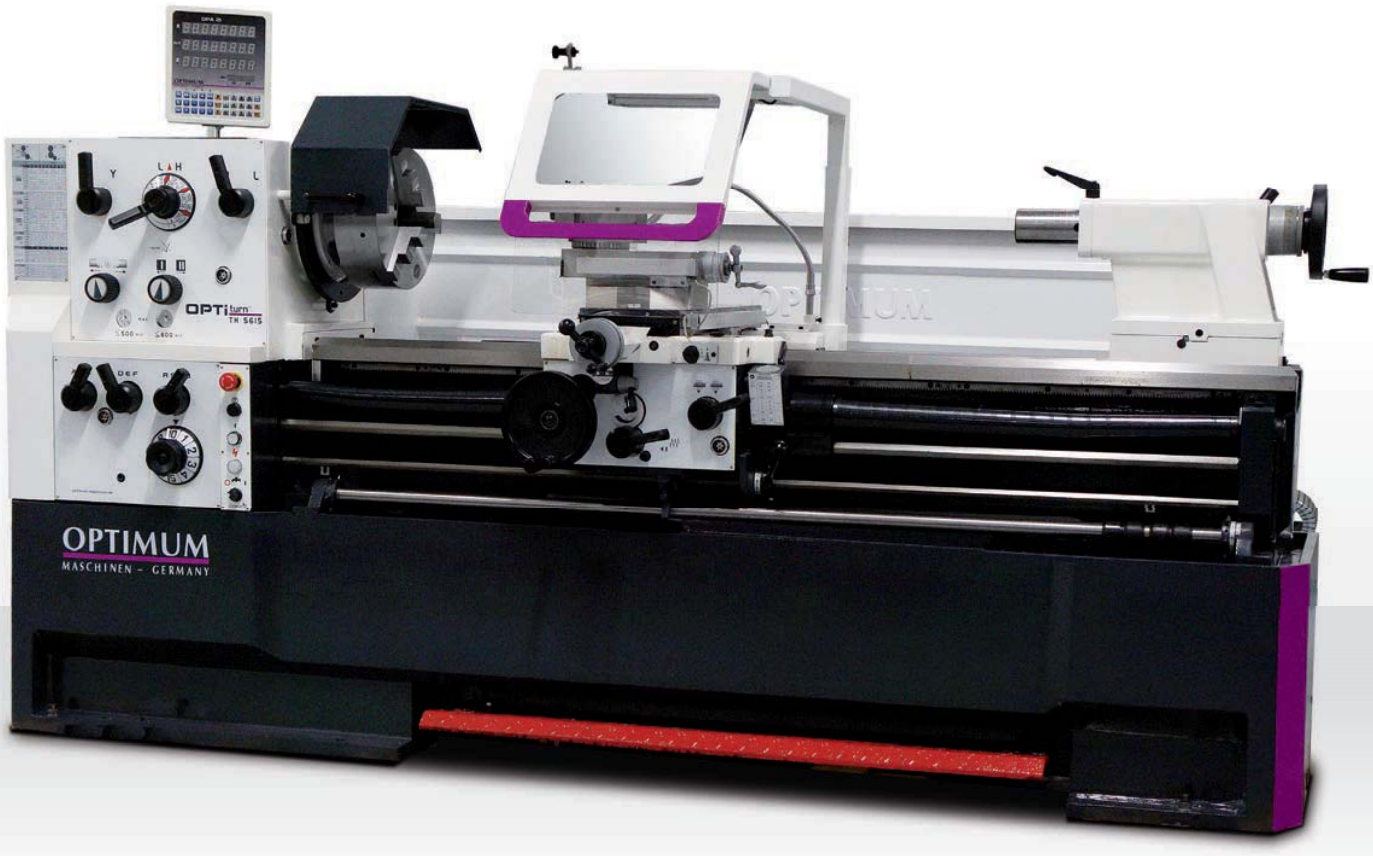
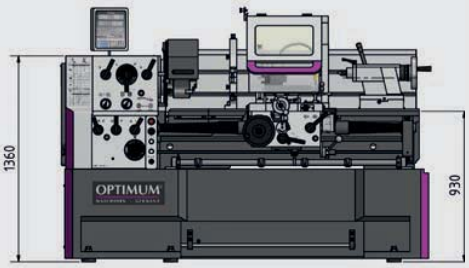


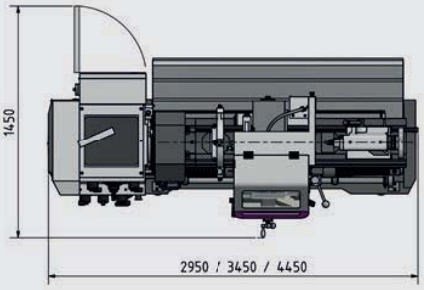
Fig.: TH 5615D - Shown with optional lathe chuck

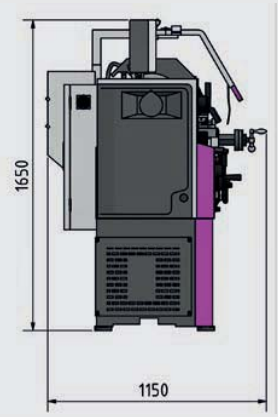
Technical specifications, accessories and dimensions

Model	TH 5615D	TH 5620D	TH 5630D
Article no.	3462160	3462170	3462180
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	8.5 kW		
Coolant pump motor	125 Watts		
Spindle			
Drive motor	7.5 kW		
Spindle taper	MT 7		
Spindle seat	Camlock DIN ISO 702-2 No. 8		
Spindle bore, bar passage diameter	Ø 80 mm		
Quick change tool holder height	SWH 7-C		
Work area			
Centre height	280 mm		
Centre width	1 420 mm	1 910 mm	2 910 mm
Swing Ø over machine bed	560 mm		
Swing in the bed bridge	790 mm		
Turning length in bed bridge	170 mm		
Swing over cross slide	355 mm		
Bed width	350 mm		
Speed range			
Spindle speed	25 - 1 600 rpm		
Number of speeds	12 speeds		
Travel			
Top slide travel	130 mm		
Cross slide travel	316 mm		
Feeds and pitches			
Longitudinal feed within the range	0.059 - 1.646 mm/U (35)		
Cross feed within	0.020 - 0.573 mm/U (35)		
Pitch - metric in range	0.2 - 14 mm/U (47)		
Pitch - inch in range	112 - 2 turns/inch (60 pitches)		
Diametral pitch in range	4 - 112 turns/π (50 pitch)		
Modular thread in range	0.1 - 7 mm x π (34 thread)		
Tailstock			
Tailstock seat	MT 5		
Spindle sleeve diameter / stroke	Ø 75 mm / 180 mm		
Dimensions			
Length	2 950 mm	3 450 mm	4 450 mm
width x height	1 150 x 1 650 mm		
Weight	2 300 kg	2 720 kg	3 000 kg

Dimensions







Lathe chuck	Art no.
OPTIMUM lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3442768
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3442856
Four-jaw lathe chuck Ø 315 mm no. 8, individual	3442888
BISON lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3450335
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3450385

Accessories	Art no.
Clamping disc Ø 450 mm no. 8	3442982
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5	3451005
Spare tool holder 40 x 160 type H for round	3384326
Spare tool holder 32 x 150 Type D square	3384308
Lathe tool set HM 32 mm, 5-part (see page 193)	3441674
Vibration damping machine base SE3 (6 pcs. required)	3381018
Position stop with granular adjustment	3444022

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Remember to order a lathe chuck

Scope of supply
› Steady rest passageway max. Ø 165 mm
› Follow rest passageway max. Ø 95 mm
› LED machine lamp
› Reduction sleeve MT 7 / MT 5
› One fixed and one alloyed centre MT 5
› Quick change tool holder 7-C
› Tool holder 32 x 150 type D for square chisels 25 mm
› Thread gauge
› Replaceable gear set
› Gear wheels for threading gauge (metric)
› Machine initially filled with premium grade oil
› Operating tool

Precision feed and lead spindle lathe – unique in terms of precision and operation with Siemens inverter Vario drive

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Shafts, gears and main spindle run in oil bath
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Quick-switching feed gear with closed design, gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Mechanical longitudinal feed switch-off of bed slide with four configurable eccentrics
- Leading spindle cover
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Scale on thread gauge adjustable
- Central lubrication in bed slide
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Generously dimensioned chip guard with integrated LED machine lamp
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Digital position display DPA 21 with speed display
- Lines routed in energy chain

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Eaton

Siemens Inverter SINAMICS G120D

made in EU

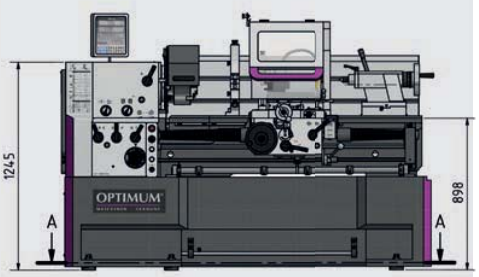
More information: „SIEMENS SINAMICS G 120D Frequency inverters“ on page 140

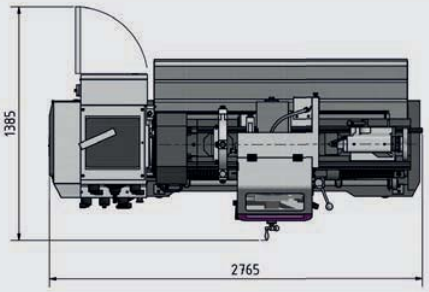
Fig.: TH 4615V - Shown with optional lathe chuck

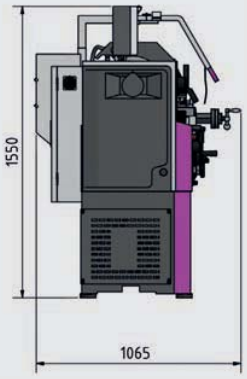
Technical specifications, accessories and dimensions

Model	TH 4615V
Article no.	3462125
Technical specifications	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	8.5 kW
Coolant pump motor	125 Watts
Spindle	
Drive motor	7.5 kW
Spindle taper	MT 7
Spindle seat	Camlock DIN ISO 702-2 No. 8
Spindle bore, bar passage diameter	Ø 80 mm
Quick change tool holder	SWH 5-B
Work area	
Centre height	230 mm
Centre width	1 560 mm
Swing Ø over machine bed	460 mm
Swing in the bed bridge	690 mm
Turning length in bed bridge	240 mm
Swing over cross slide	270 mm
Bed width	300 mm
Speed range	
Spindle speed	30 - 2 000 rpm
Number of speeds	Electronically controlled
Travel	
Top slide travel	125 mm
Cross slide travel	285 mm
Feeds and pitches	
Longitudinal feed within the range	0.031 - 1.7 mm/rev (42 feeds)
Cross feed within	0.014 - 0.784 mm/rev (42 feeds)
Pitch - metric in range	0.1 - 14 mm/rev (41 pitches)
Pitch - inch in range	112 - 2 turns/inch (41 pitches)
Diametral pitch in range	4 - 112 turns/π (50 thread)
Modular thread in range	0.1 - 7 mm x π (34 thread)
Tailstock	
Tailstock seat	MT 4
Spindle sleeve diameter / stroke	Ø 60 mm / 130 mm
Dimensions	
Length x width x height	2 765 x 1 065 x 1 550 mm
Weight	2 020 kg

Dimensions







Lathe chuck	Art no.
OPTIMUM lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3442768
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3442856
Four-jaw lathe chuck Ø 315 mm no. 8, individual	3442888
BISON lathe chucks	
Three-jaw lathe chuck Ø 315 mm no. 8, centric	3450335
Four-jaw lathe chuck Ø 315 mm no. 8, centric	3450385
› Information about lathe chucks from page 184	

Accessories	Art no.
Clamping disc Ø 450 mm no. 8	3442982
Travelling centre MT 5	3440705
BISON co-travelling centre MT 5	3451005
Spare tool holder 40 x 160 type H for round	3384326
Spare tool holder 32 x 150 Type D square	3384308
Lathe tool set HM 32 mm, 5-part (see page 193)	3441674
Position stop with granular adjustment	3444022
› More accessories for lathes from page 188	

Remember to order a lathe chuck

Scope of supply
› Steady rest passageway max. Ø 160 mm
› Follow rest passageway max. Ø 100 mm
› LED machine lamp
› Reduction sleeve MT 7 / MT 4
› Fixed centre MT 4
› Quick change tool holder 5-B
› Tool holder 25 x 120 type D for square chisels 20 mm
› Thread gauge
› Replaceable gear set
› Machine initially filled with premium grade oil
› Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3 - Note for operation with frequency converter on page 253

Precision leading and feed spindle lathes – unique in terms of precision and control.

With DPA 21 digital position display and quick change tool holder.

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Shafts, gears and main spindle run in oil bath
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Quick-switching feed gear with closed design, gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Mechanical longitudinal feed switch-off of bed slide with four configurable eccentrics
- Leading spindle cover
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Scale on thread gauge adjustable
- Central lubrication in bed slide
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- Generously dimensioned chip guard with integrated LED machine lamp
- Quick change tool holder SWH 5-B
- Tool holder 25 x 120 type D for square chisels 250 mm
- Digital position display DPA 21 with speed display

As of TH 4615:

- Lines routed in energy chain

Control Cabinet

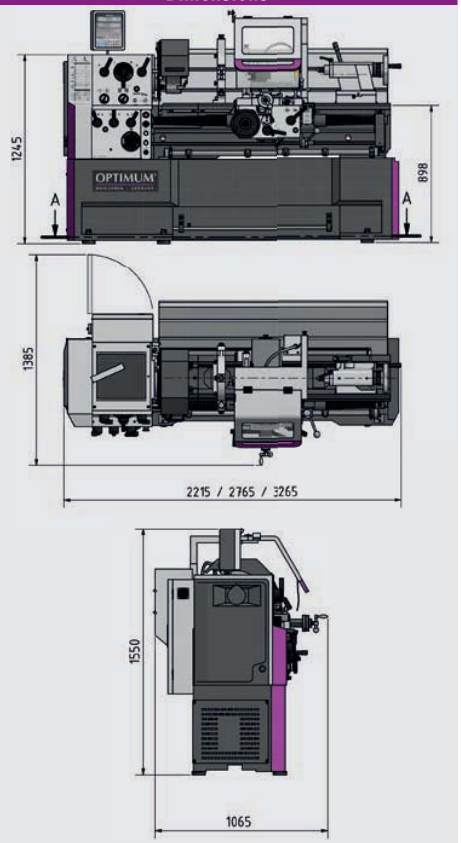
› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

Fig.: TH 4615D - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 4610D	TH 4615D	TH 4620D
Article no.	3462110	3462120	3462130
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz		
Total rated value	5.8 kW		
Coolant pump motor	125 Watts		
Spindle			
Drive motor	5.5 kW		
Spindle taper	MT 6		
Spindle seat	Camlock DIN ISO 702-2 No. 6		
Spindle bore, bar passage diameter	Ø 58 mm		
Quick change tool holder	SWH 5-B		
Work area			
Centre height	230 mm		
Centre width	1 060 mm	1 560 mm	2 060 mm
Swing Ø over machine bed	460 mm		
Swing in the bed bridge	690 mm		
Turning length in bed bridge	240 mm		
Swing over cross slide	270 mm		
Bed width	300 mm		
Speed range			
Spindle speed	25 - 2 000 rpm		
Number of speeds	12 speeds		
Travel			
Top slide travel	125 mm		
Cross slide travel	285 mm		
Feeds and pitches			
Longitudinal feed within the range	0.031 - 1.7 mm/rev (42 feeds)		
Cross feed within	0.014 - 0.784 mm/rev (42 feeds)		
Pitch - metric in range	0.1 - 14 mm/rev (41 pitches)		
Pitch - inch in range	112 - 2 turns/inch (41 pitches)		
Diametral pitch in range	4 - 112 turns/π (50 thread)		
Modular thread in range	0.1 - 7 mm x π (34 thread)		
Tailstock			
Tailstock seat	MT 4		
Spindle sleeve diameter / stroke	Ø 60 mm / 130 mm		
Dimensions			
Length	2 215 mm	2 765 mm	3 265 mm
width x height	1 065 x 1 550 mm		
Weight	1 720 kg	1 977 kg	2 400 kg

Dimensions



Remember to order a lathe chuck

Scope of supply

- Steady rest passageway max. Ø 160 mm
- Follow rest passageway max. Ø 100 mm
- LED machine lamp
- Reduction sleeve MT 6 / MT 4
- One fixed and one alloyed centre MT 4
- Quick change tool holder 5-B
- Tool holder 25 x 120 type D for square chisels 20 mm
- Thread gauge
- Replaceable gear set
- Gear wheels for threading gauge (metric)
- Machine initially filled with premium grade oil
- Operating tool

Accessories	Art no.
Spare tool holder 25 x 120 Type D for square	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324
Lathe tool set HM 20 mm, 5-part (see page 192)	3441670
Lathe tool set HM 20 mm, 5-part Extension kit (see page 192)	3441617
Clamping disc Ø 350 mm no. 6	3442980
Universal collet chuck device 5C	3441507
Collet kit 3 - 25 mm, 5C, 17-part	3441509
Vibration damping base SE 3 (6 pcs. needed)	3381018
Collet chuck 5C - Camlock no. 6	3441556
Position stop with granular adjustment	3444022
› More accessories for lathes from page 188	

Lathe chuck	Art no.
OPTIMUM lathe chucks	
Three-jaw lathe chuck Ø 250, no. 6, centre clamping	3442765
Four-jaw lathe chuck Ø 250 mm no. 6, centre clamping	3442852
Four-jaw lathe chuck Ø 250 mm no. 6, individual clamping	3442884
BISON lathe chucks	
Three-jaw lathe chuck Ø 250, no. 6, centre clamping	3450330
Four-jaw lathe chuck Ø 250 mm no. 6, centre clamping	3450380
› Information about lathe chucks from page 184	

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Precision leading and feed spindle machines, mature technology, fully equipped, easy to operate.

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 6
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- All metric pitches in range from 0.2 to 14 mm/rev and all inch pitches in range of 72 - 2 turns per inch configurable on control panel without replacing the interchangeable gear wheels thanks to gear shift
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Chassis and machine bed single-piece cast meehanite
- Leading spindle cover
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard
- Siemens Sinamics frequency inverter / Safety Integrated
- Quick change tool holder 5-B
- Tool holder 20 x 100 type D for square chisels 18 mm

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

Siemens Inverter SINAMICS G120D

made in EU

More information: „SIEMENS SINAMICS G 120D Frequency inverters“ on page 140

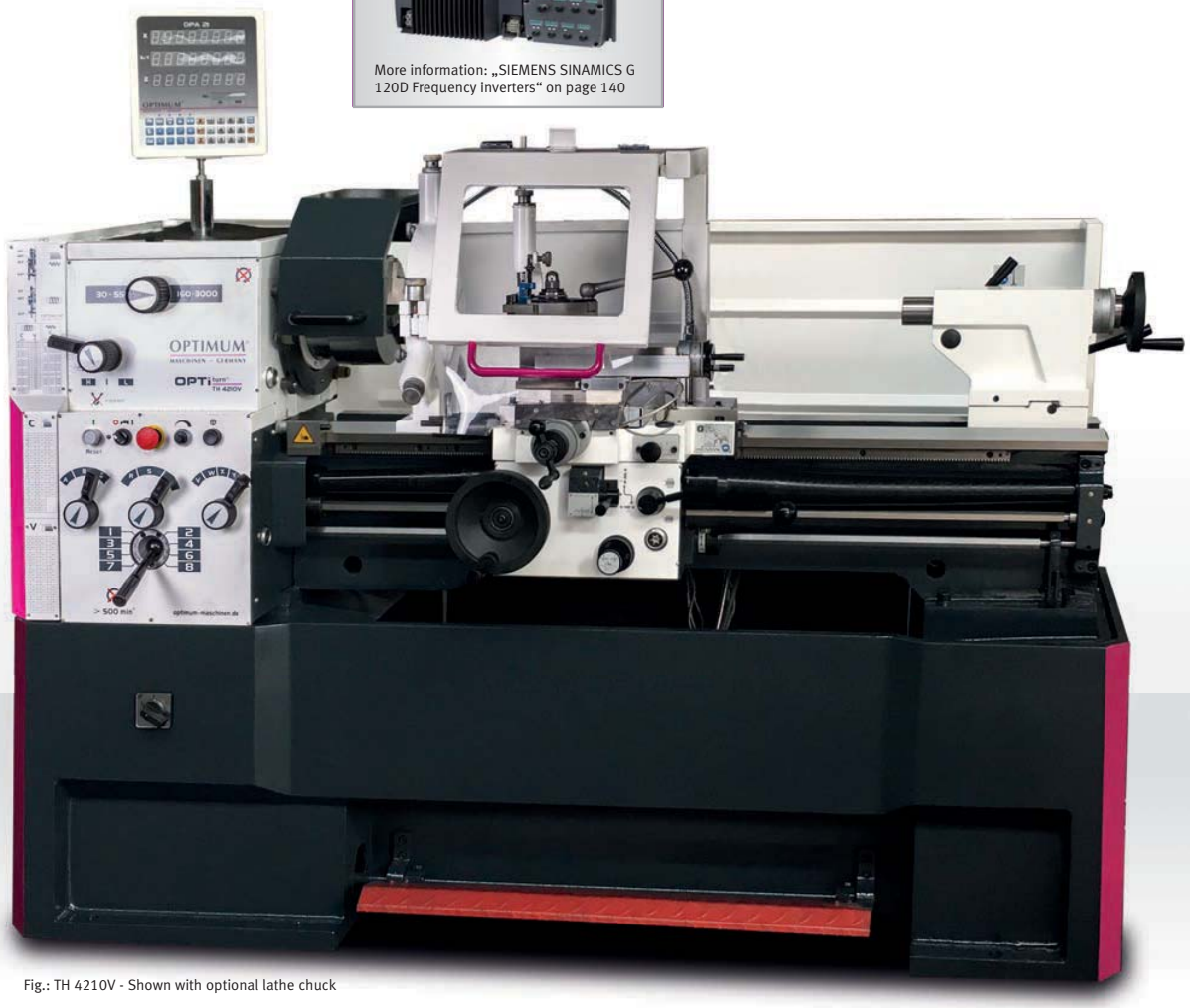
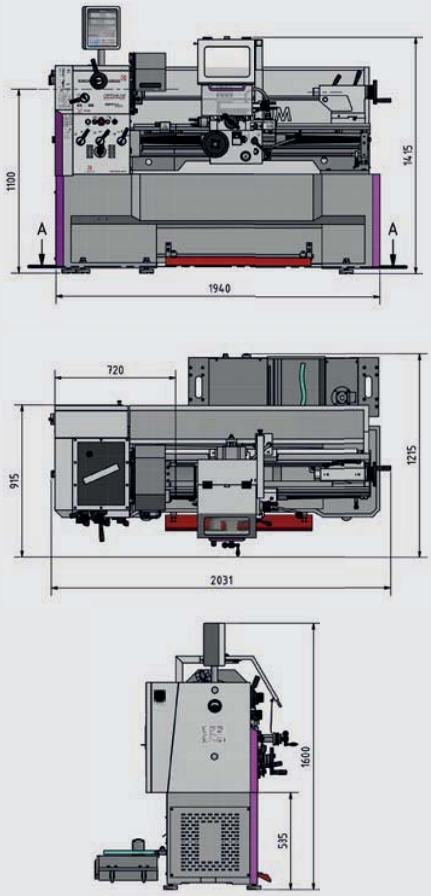


Fig.: TH 4210V - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 4210V
Article no.	3462060
Technical specifications	
Electrical connection	400 V / 3 Ph ~ 50 Hz
Total rated value	5.6 kW
Coolant pump motor	100 W
Spindle	
Drive motor	5.5 kW
Spindle taper	MT 6
Spindle seat	Camlock DIN ISO 702-2 No. 6
Spindle bore, bar passage diameter	Ø 52 mm
Quick change tool holder height	25 mm
Work area	
Centre height	210 mm
Centre width	1 000 mm
Swing Ø over machine bed	420 mm
Swing in the bed bridge	590 mm
Turning length in bed bridge	260 mm
Swing over cross slide	250 mm
Bed width	250 mm
Speed range	
Spindle speed	30 - 3 000 rpm
Number of speeds	2 speeds. Electronically controlled
Travel	
Top slide travel	140 mm
Cross slide travel	230 mm
Feeds and pitches	
Longitudinal feed within the range	0.05 - 1.7 mm/rev (17 feeds)
Cross feed within	0.025 - 0.85 mm/rev (17 feeds)
Pitch - metric in range	0.2 - 14 mm/rev (39 pitches)
Pitch - inch in range	72 - 2 turns/inch (45 pitches)
Diametral pitch in range	8 - 44 turns/π (21 pitch)
Modular thread in range	0.3 - 3.5 mm x π (18 thread)
Tailstock	
Tailstock seat	MT 4
Tailstock spindle sleeve diameter / stroke	Ø 50 mm / 120 mm
Dimensions	
Length x width x height	2 031 x 915 (coolant tank 1 215) x 1 415 (DPA 1 600) mm
Weight	1 160 kg

Dimensions



Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway Ø 15 - 145 mm
- › Follow rest passageway Ø 10 - 75 mm
- › LED machine lamp
- › Reduction sleeve MT 6 - MT 4
- › Fixed centre MT 4
- › Replaceable gear set
- › Position stop with granular adjustment
- › Machine initially filled with premium grade oil
- › Operating tool
- › Quick change tool holder 5-B
- › Tool holder 25 x 120 type D for square chisels 20 mm

Accessories	Art no.
Quick change tool holder SWH 5-B	3384305
Factory assembly SWH 5-B	9000400
Spare tool holder 25 x 120 Type D for square	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324
Lathe tool set HM 25 mm, 5-part (see page 192)	3441672
Lathe tool set HM 25 mm, 5-part Extension kit (see page 192)	3441623
Lathe tool set HM 20 mm, 5-part (see page 192)	3441670
Lathe tool set HM 20 mm, 5-part, Extension kit (see page 192)	3441617
Vibration damper SE 2 (6 pcs. needed)	3381016
Vibration damper SE 85 (6 pcs. needed)	3352982
Clamping block set 20-05	3440654
› More accessories for lathes from page 188	

Lathe chuck	Art no.
OPTIMUM lathe chucks	
Three-jaw lathe chuck Ø 250 mm no. 6, centric	3442765
Four-jaw lathe chuck Ø 250 mm no. 6, centric	3442852
Four-jaw lathe chuck Ø 250 mm no. 6, individual	3442884
BISON lathe chucks	
Three-jaw lathe chuck Ø 250 mm no. 6, centric	3450330
Four-jaw lathe chuck Ø 250 mm no. 6, centric	3450380
Three-jaw lathe check Ø 250 mm no. 6, steel	3450530
Four-jaw lathe chuck Ø 250 mm no. 6, steel	3450580
› Information about lathe chucks from page 184	

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3 - Note for operation with frequency converter on page 253

Precision leading and feed spindle machines, mature technology, fully equipped, easy to operate

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 6
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground borne on 2 re-adjustable precision taper rollers
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- All metric pitches in range from 0.2 to 14 mm/rev and all inch pitches in range of 72 - 2 turns per inch configurable on control panel without replacing the interchangeable gear wheels thanks to gear shift
- Right-handed/left-handed rotation switchable on bed slide, switchable via switching spindle
- Central lubrication in bed slide
- Chassis and machine bed single-piece cast meehanite
- Leading spindle cover
- Emergency stop device with foot pedal
- Safety hand wheels with release function in the X and Z axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Coolant system featuring separate coolant tank, fill level display and oil trap; easy and complete draining and cleaning as per DIN
- LED machine lamp in chip guard:

- **TH 4210D / TH 4215D:**
- **Digital position display DPA21**
  - › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  - › Sensor supplied for acquiring spindle speeds
  - › Glass scales

Control Cabinet

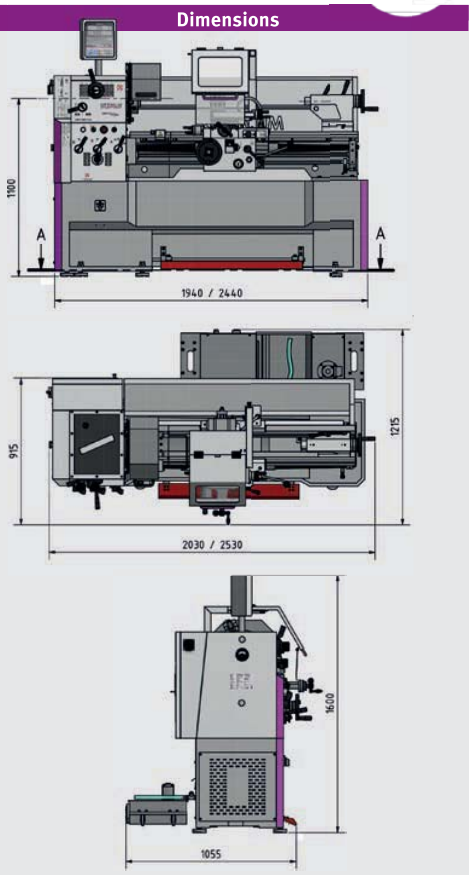
- › 24 Volt DC Power Supply
- › All contactors und relays by Siemens or Schneider

Fig.: TH 4210D - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 4210	
Article no.	3462050	
	9,990.00	
Model	**TH 4210D**	**TH 4215D**
Article no.	3462055	3462070
Technical specifications		
Electrical connection	400 V / 3 Ph ~ 50 Hz	
Total rated value	4.6 kW	
Coolant pump motor	100 W	
Spindle		
Drive motor	4.5 kW	
Spindle taper	MT 6	
Spindle seat	Camlock DIN ISO 702-2 No. 6	
Spindle bore, bar passage diameter	Ø 52 mm	
Quick change tool holder height	20 mm	
Work area		
Centre height	210 mm	
Centre width	1 000 mm	1 500 mm
Swing Ø over machine bed	420 mm	
Swing in the bed bridge	590 mm	
Turning length in bed bridge	260 mm	
Swing over cross slide	250 mm	
Bed width	250 mm	
Speed range		
Spindle speed	45 - 1 800 rpm	
Number of speeds	16 speeds	
Travel		
Top slide travel	140 mm	
Cross slide travel	230 mm	
Feeds and pitches		
Longitudinal feed within the range	0.05 - 1.7 mm/rev (17 feeds)	
Cross feed within	0.025 - 0.85 mm/rev (17 feeds)	
Pitch - metric in range	0.2 - 14 mm/rev (39 pitches)	
Pitch - inch in range	72 - 2 turns/inch (45 pitches)	
Diametral pitch in range	8 - 44 turns/π (21 pitch)	
Modular thread in range	0.3 - 3.5 mm x π (18 thread)	
Tailstock		
Tailstock seat	MT 4	
Tailstock spindle sleeve diameter / stroke	Ø 50 mm / 120 mm	
Dimensions		
Length	1 940 mm	2,440 mm
Width x height	915 x 1 375 (DPA 1 600) mm	
Weight	1 160 kg	1 340 kg

Dimensions



Remember to order a lathe chuck

Scope of supply

- Steady rest passageway Ø 15 - 145 mm
- Follow rest passageway Ø 10 - 75 mm
- LED machine lamp
- Reduction sleeve MT 6 - MT 4
- One fixed and one alloyed centre MT 4
- Replaceable gear set
- Gear wheels for threading gauge (metric)
- Position stop with granular adjustment
- Machine initially filled with premium grade oil
- Operating tool
- Quad tool holder max. 20 mm

Lathe chuck	Art no.
OPTIMUM cast lathe chucks	
Three-jaw lathe chuck Ø 250 mm no. 6, centric	3442765
Four-jaw lathe chuck Ø 250 mm no. 6, centric	3442852
Four-jaw lathe chuck Ø 250 mm no. 6, individual	3442884
BISON lathe chucks	
Three-jaw lathe chuck Ø 250 mm no. 6, cast Centre clamping	3450330
Four-jaw lathe chuck Ø 250 mm no. 6, cast Centre clamping	3450380
Three-jaw lathe check Ø 250 mm no. 6, steel Centre clamping	3450530
Four-jaw lathe chuck Ø 250 mm no. 6, steel Centre clamping	3450580
› Information about lathe chucks from page 188	

Accessories	Art no.
Quick change tool holder SWH 5-B	3384305
Factory assembly SWH 5-B	9000400
Spare tool holder 25 x 120 Type D for square	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324
Lathe tool set HM 20 mm, 5-part (see page 192)	3441670
Lathe tool set HM 20 mm, 5-part (see page 192)	3441617
Vibration damper SE 2 (6 pcs. needed)	3381016
Vibration damper SE 85 (6 pcs. needed)	3352982
Clamping block set 20-05	3440654
Universal collet chuck device 5C	3441507
› More accessories for lathes from page 184	

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Fully equipped lathes for mechanics. Impressive precision and performance. TH 4010D with digital position display DPA 21. TH 4010V additionally with Siemens inverter Vario drive

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 5
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- DC 24 Volt electrical system
- Lockable main switch
- Right-handed/left-handed rotation switchable on bed slide
- Safety hand wheels with release function in the X and Z axis
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Grey cast iron prism bed with strong ribbing, induction tempered and precision ground
- Pull-out chip drawer with guide rails
- Emergency stop device with foot pedal
- Machine base with 3 covers (no compartments)
- Coolant system
- LED machine lamp in chip guard

TH 4010 / TH 4010D:

- Motor circuit switch

TH 4010D / TH 4010V:

- **Digital position display DPA21**
  - › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  - › Glass scales

TH 4010V:

- Siemens Sinamics frequency inverter / Safety Integrated
- Quick change tool holder 3-E
- Tool holder 20 x 100 type D for square chisels

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider - TH 4010V by Eaton

TH 4010V: Siemens Inverter SINAMICS G120D

made in EU

More information: „SIEMENS SINAMICS G 120D Frequency inverters“ on page 140

Fig.: TH 4010D - Shown with optional lathe chuck

The Vario lathe complies with the DIN EN 55011 standard: class C1

Technical specifications, accessories and dimensions

Model	TH 4010	TH 4010D	TH 4010V**
Article no.	3402070	3402080	3402085
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz		
Spindle			
Drive motor	1.5/2.4 kW		4 kW
Spindle taper	MT 6		
Spindle seat	Camlock DIN ISO 702-2 No. 5		
Spindle bore, bar passage diameter	Ø 52 mm		
Quadruple tool holder mounting height	max. 16 mm		
Technical specifications			
Centre height	205 mm		
Centre width	1 000 mm		
Swing Ø over machine bed	410 mm		
Swing in the bed bridge	540 mm		
Turning length in bed bridge	165 mm		
Bed width	206 mm		
Speed range			
Spindle speed	45 - 1 800 rpm		30 - 3 000 rpm
speeds	16 speeds		2 speeds; elec. control
Travel			
Top slide travel	100 mm		
Cross slide travel	195 mm		
Feeds and pitches			
Longitudinal feed within the range	0.043 - 0.653 mm/rev (48 feeds)		
Cross feed within	0.015 - 0.206 mm/rev (48 feeds)		
Pitch - metric in range	0.4 - 7 mm/rev (42 pitches)		
Pitch - inch in range	70 - 4 turns/inch (42 pitches)		
Tailstock			
Tailstock seat	MT 3		
Tailstock- sleeve diameter/ sleeve travel	Ø 45 mm / 130 mm		
Dimensions			
Length x width x height	1 920 x 740 x 1 222 / 1 555 mm		
Net weight	775 kg		780 kg

Dimensions

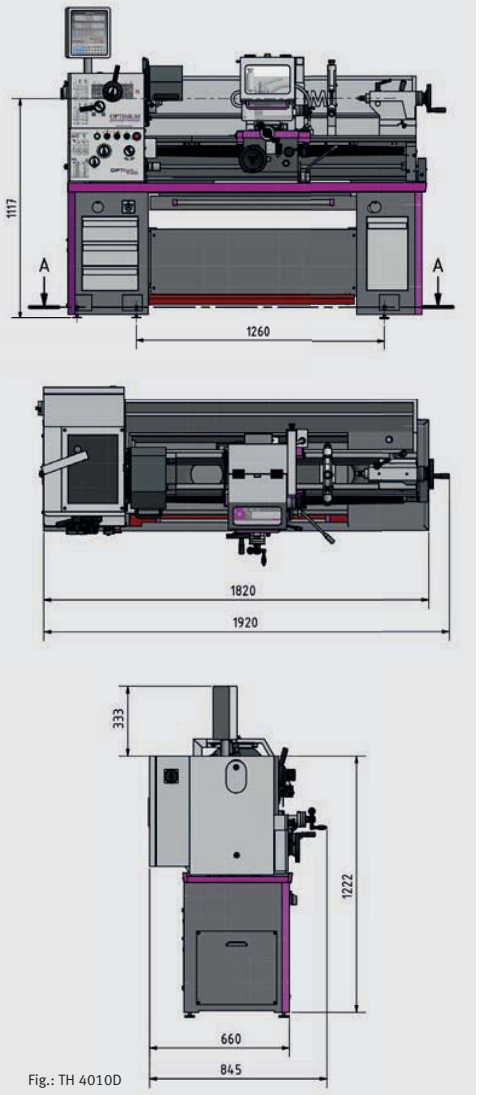


Fig.: TH 4010D

Lathe chuck	Art no.
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 5, centric	3442845
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 5, individual	3442880
BISON three-jaw lathe chuck Ø 200 mm no. 5, centric	3450315
BISON Four-jaw lathe chuck Ø 200 mm no. 5, centric	3450365
› Information about lathe chucks from page 184	

Accessories	Art no.
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322
Lathe tool set 16 mm, 11-part (see page 190)	3441604
Lathe tool set 16 mm, 5-part (see page 190)	3441668
Lathe tool set 16 mm, 5-part "Made in Germany" (see page 190)	3441216
Lathe tool set 16 mm, 5-part (see page 190)	3441610
Collet chuck 5C	3441555
Collet kit 3 - 25 mm, 5C, 17-part	3441509
Vibration-damping machine base SE 2 (6 pcs. required)	3381016
› More accessories for lathes from page 188	

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway Ø 5 - 85 mm
- › Follow rest passageway Ø 5 - 65 mm
- › LED machine lamp
- › Reduction sleeve MT 6 - MT 3
- › Fixed centres MT 3
- › Fixed centre MT 3, alloyed
- › Travelling centre MT 3
- › Position stop with granular adjustment
- › Change gear kit
- › Machine initially filled with premium grade oil
- › Operating tool

TH 4010 / TH 4010D

- › Quadruplicate tool holder 16 mm

TH 4010V

- › Quick change tool holder 3-E
- › Tool holder 20 x 100 type D for square chisels

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C2 - Note for operation with frequency converter on page 253

Feed and lead spindle lathe impresses with rugged design and simple handling. TM 4010D with DPA 21 digital position display

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideways
- Spindle collet Camlock DIN ISO 702-2 no. 5
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Tailstock with tempered and ground spindle sleeve
- DC 24 Volt electrical system
- All pitch gears made of steel, hardened and polished, shafts on needle bearings, all components lubricated in an oil bath
- Right-handed/left-handed rotation switchable on bed slide
- Safety hand wheels with release function in the X and Z axis
- Emergency stop device
- Perfectly concentric main spindle guarantees high load capacity thanks to use of precision taper roller bearings
- Chip compartment folds out for easy chip removal from front
- Machine chassis with rugged steel design
- Coolant pump with coolant tank and fill level display Tank removable for easy cleaning
- With safety device to prevent simultaneous operation of thread cutting and pitch mechanism
- Hand wheels decoupled and approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- LED machine lamp in chip guard
- Motor electrically braked
- Three-jaw chuck Ø 200 mm, no. 5 included in standard scope of delivery
- User-friendly membrane keyboard
- Two-channel CW/CCW switch approved in line with EN 23125

TM 4010D
Digital position display DPA21

Control Cabinet

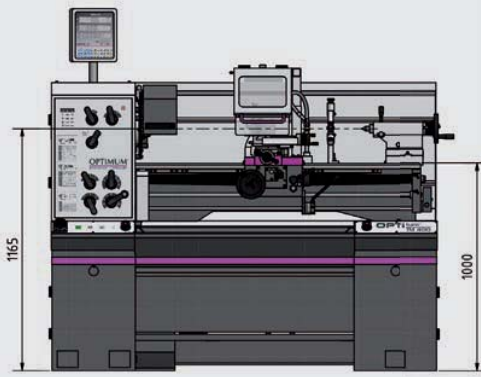
› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

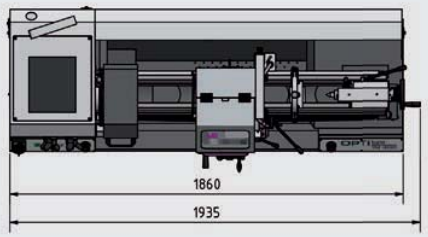
Fig.: TM 4010D

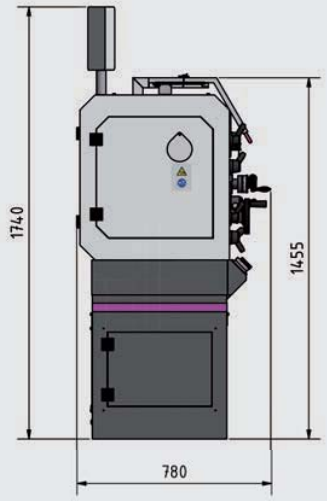
Technical specifications, accessories and dimensions

Model	TM 4010	TM 4010D
Article no.	3403040	3403045
Machine data		
Electrical connection	400 V / 3 Ph ~50 Hz	
Total rated value	2.3 kW	
Coolant pump motor	100 Watts	
Spindle		
Drive motor	2.2 kW	
Spindle taper	MT 6	
Spindle seat	Camlock DIN ISO 702-2 No. 5	
Spindle bore, bar passage diameter	Ø 53 mm	
Quick change tool holder	SWH 3-E	
Work areas		
Centre height	200 mm	
Centre width	1 000 mm	
Swing over cross slide	400 mm	
Swing in the bed bridge	250 mm	
Speed range		
Spindle speeds	70 - 2 000 rpm	
Number of speeds	8 speeds	
Travel		
Top slide travel	98 mm	
Cross slide travel	185 mm	
Feed and pitches		
Longitudinal feed within the range	0.014 - 0.38 mm/rev (26 feeds)	
Cross feed within	0.052 - 1.392 mm/rev (32 feeds)	
Pitch - metric in range	0.4 - 7 mm/rev (32 pitches)	
Pitch - inch in range	56 - 4 turns/inch (31 pitches)	
Tailstock		
Tailstock seat	MT 4	
Spindle sleeve diameter / stroke	Ø 50 mm / 110 mm	
Dimensions		
Length x width x height	1 935 / 780 / 1 740 mm	
Weight	500 kg	

Dimensions







Lathe chuck	Art no.
BISON three-jaw lathe chuck Ø 200 mm no. 5 Centrically clamping (chuck flange 3450212 required)	3450210
BISON four-jaw lathe chuck Ø 250 mm no. 5 Centrically clamping (chuck flange 3450218 required)	3450216
› Information about lathe chucks from page 184	

Accessories	Art no.
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322
Lathe tool set 16 mm, 11-part (see page 190)	3441604
Lathe tool set 16 mm, 5-part (see page 190)	3441668
Lathe tool set 16 mm, 5-part "Made in Germany" (see page 190)	3441216
Lathe tool set 16 mm, 5-part (see page 190)	3441610
Clamping disc Ø 320 mm no. 5	3442979
Vibration-damping machine base SE 2 (6 pcs. required)	3381016
Levelling platen SE 85 (6 pcs. required)	3352982
Position stop with granular adjustment	3441523
› More accessories for lathes from page 188	

Scope of supply

- › Three-jaw lathe chuck Ø 200 mm, no. 5
- › Quick change tool holder 3-E
- › Fixed steady 7 - 102 mm
- › Travelling steady 10 - 60 mm
- › Reduction sleeve MT 3 - MT 6
- › Fixed centre MT 4
- › Machine initially filled with premium grade oil
- › Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Fully equipped lathes for mechanics.

TH 3610D with DPA 21 digital position display

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 5
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Gears and shafts tempered and ground, running in oil bath on precision bearings
- Hand wheels decoupled and approved in line with EN 23125
- Safety hand wheels with release function in the X and Z axis
- Two-channel CW/CCW switch approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Motor circuit breaker, lockable main switch
- Right-handed/left-handed rotation switchable on bed slide
- Leading spindle cover
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.025 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Prism bed with strong ribbing, induction tempered and precision ground
- Machine chassis with tool compartments on both sides
- Emergency stop device with foot pedal
- Pull-out chip drawer with guide rails
- LED machine lamp integrated in chip guard

TH 3610D

- **Digital position display DPA 21**
  - › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  - › Glass scales

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider

Fig.: TH 3610D - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 3610	TH 3610D
Article no.	3402050	3402060
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Drive motor	1.5 kW	
Spindle		
Spindle taper	MT 6	
Spindle seat	Camlock DIN ISO 702-2 No. 5	
Spindle bore, bar passage diameter	Ø 52 mm	
Quadruple tool holder mounting height	max. 16 mm	
Work area		
Centre height	180 mm	
Centre width	980 mm	
Swing Ø over machine bed	356 mm	
Swing in the bed bridge	516 mm	
Turning length in bed bridge	160 mm	
Swing over cross slide	225 mm	
Bed width	187 mm	
Speed range		
Spindle speed	70 - 2 000 rpm	
Number of speeds	8 speeds	
Travel		
Top slide travel	100 mm	
Cross slide travel	170 mm	
Feeds and pitches		
Longitudinal feed within the range	0.052 - 1.392 mm/rev (32 feeds)	
Cross feed within	0.014 - 0.38 mm/rev (32 feeds)	
Pitch - metric in range	0.4 - 7 mm/rev (26 pitches)	
Pitch - inch in range	56 - 4 turns/inch (34 pitches)	
Tailstock		
Tailstock seat	MT 3	
Tailstock spindle sleeve diameter / stroke	Ø 42 mm / 120 mm	
Dimensions		
Length x width x height	1 930 x 725 x 1 350 / 1 620 mm	
Weight	610 kg	

Dimensions

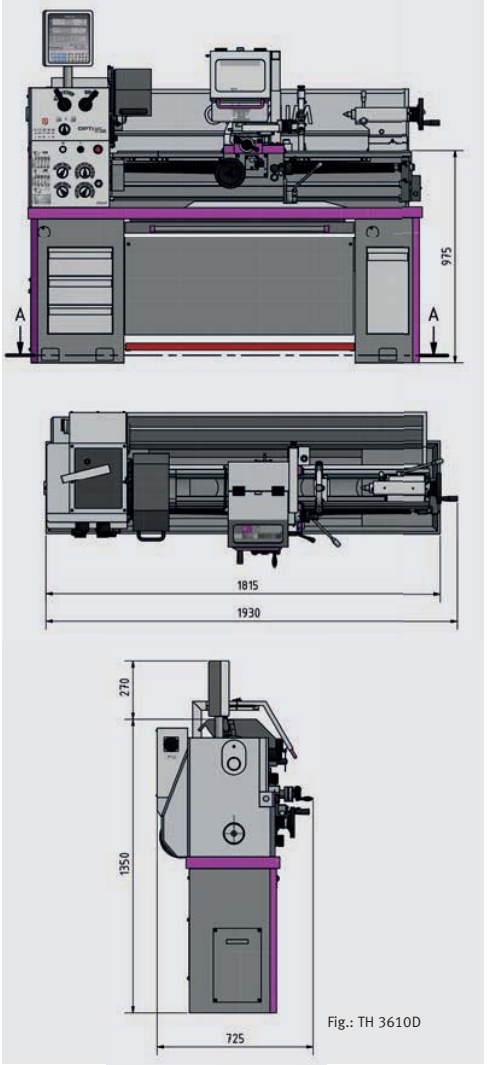


Fig.: TH 3610D

Lathe chuck	Art no.
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 5, centric	3442845
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 5, individual	3442880
BISON three-jaw lathe chuck Ø 200 mm no. 5, centric	3450315
BISON Four-jaw lathe chuck Ø 200 mm no. 5, centric	3450365
› Information about lathe chucks from page 184	

Accessories	Art no.
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322
Lathe tool set 16 mm, 11-part (see page 190)	3441604
Lathe tool set 16 mm, 5-part (see page 190)	3441668
Lathe tool set 16 mm, 5-part "Made in Germany" (see page 190)	3441216
Lathe tool set 16 mm, 5-part (see page 190)	3441610
Collet chuck 5C	3441555
Collet kit 3 - 25 mm, 5C, 17-part	3441509
Vibration damping machine base SE 2 (6 pcs. required)	3381016
Levelling platen SE 85 (6 pcs. required)	3352982
Position stop with granular adjustment	3441523
› More accessories for lathes from page 188	

Remember to order a lathe chuck

Scope of supply

- Steady rest passageway max. Ø 100 mm
- Follow rest passageway max. Ø 95 mm
- LED machine lamp
- Reduction sleeve MT 6 - MT 3
- One fixed and one alloyed centre MT 3
- Quadruple tool holder
- Replaceable gear set
- Machine chassis
- Machine initially filled with premium grade oil
- Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253

Fully equipped leading and feed spindle lathes.

TH 3309D with digital position display DPA 21, TH 3309V with brushless motor for continuously variable speed control and digital position display DPA 21

Facts that impress in terms of quality, performance and price

- Tempered and polished z-axis guideway
- Spindle collet Camlock DIN ISO 702-2 no. 4
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.02 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Main spindle runs in oil bath
- Gearwheels smooth running, tempered and ground
- Adjustment range top slide ± 90°
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Hand wheels decoupled and approved in line with EN 23125
- Safety hand wheels with release function in the X and Z axis
- Two-channel CW/CCW switch approved in line with EN 23125
- DC 24-Volt electric system with two-channel safety circuit as per EN 23125
- Chuck protection approved in line with EN 23125
- Switch with lifecycle calculation, approved in line with EN ISO 13849
- Lockable main switch
- Right-handed/left-handed rotation switchable on bed slide
- Leading spindle cover
- Tailstock adjustable ± 10 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Prism bed with strong ribbing, induction tempered and precision ground
- Machine chassis with tool compartment on right-hand side (left side with 3 covers (no compartments))
- Pull-out chip drawer with guide rails
- Emergency stop device with foot pedal
- LED machine lamp integrated in chip guard

TH 3309D / TH 3309V

- **Digital position display DPA 21**
  - › User-friendly membrane keyboard, splash water protected, sealed and dazzle free
  - › Glass scales

TH 3309V

- Smooth action and powerful brushless drive
- Speed change easily adjustable via potentiometer

Control Cabinet

› 24 Volt DC Power Supply
› All contactors und relays by Siemens or Schneider - TH 3309V by Eaton

TU 3309V Powerful brushless drive

› Particularly smooth action
› Virtually constant torque over the entire speed range
› Extremely powerful

Siemens Inverter SINAMICS G110M

› Integrated engineering
› Highest energy efficiency and
› Comfortable operation

Fig.: TH 3309D - Shown with optional lathe chuck

Technical specifications, accessories and dimensions

Model	TH 3309	TH 3309 D	TH 3309 V
Article no.	3402030	3402040	3402045
Technical specifications			
Electrical connection	400 V/3 Ph		230 V/1 Ph
Drive motor	1.5 kW		2.2 kW
Spindle			
Spindle taper	MT 5		
Spindle seat	Camlock DIN ISO 702-2 No. 4		
Spindle bore, bar passage diameter	Ø 38 mm		
Quadruple tool holder mounting height	16 mm		
Work area			
Centre height	165 mm		
Centre width	830 mm		
Swing Ø over machine bed	330 mm(1)		
Swing in the bed bridge	448 mm		
Turning length in bed bridge	196 mm		
Swing over cross slide	208 mm		
Speed range			
Spindle speed	70 - 2 000 rpm		15 - 2 250 rpm
Number of speeds	16 speeds		8 speed, electrically controlled
Travel			
Top slide travel	98 mm		
Cross slide travel	164 mm		
Feeds and pitches			
Longitudinal feed within the range	0.052 - 1.392 mm/rev (32 feeds)		
Cross feed within	0.014 - 0.38 mm/rev (32 feeds)		
Pitch - metric in range	0.4 - 7 mm/rev (26 pitches)		
Pitch - inch in range	56 - 4 turns/inch (34 pitches)		
Tailstock			
Tailstock seat	MT 3		
Tailstock- sleeve diameter/ sleeve travel	Ø 32 mm/110 mm		
Dimensions			
Length x width x height	1 685 x 745 x 1 320 / 1 590 mm		
Weight	430 kg		

Dimensions

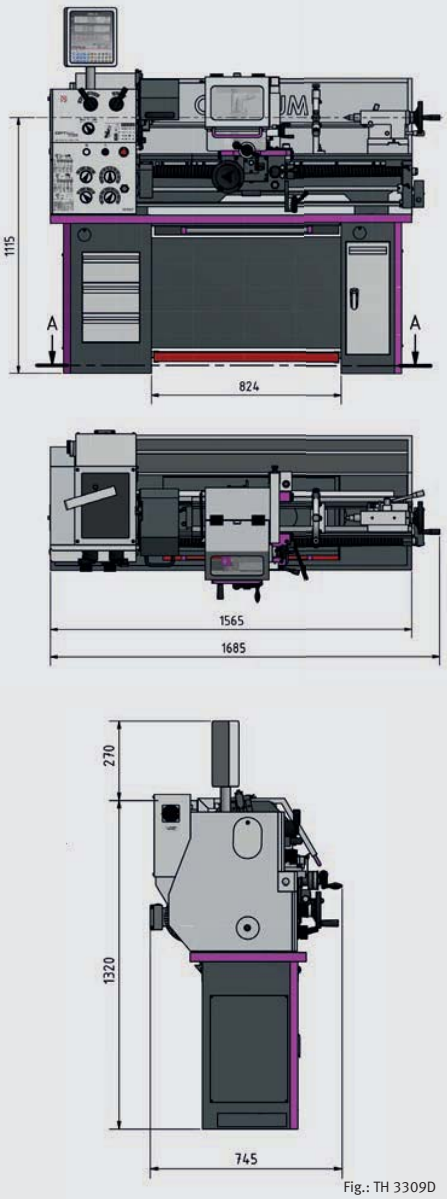


Fig.: TH 3309D

Lathe chuck	Art no.
OPTIMUM three-jaw lathe chuck Ø 200 mm no. 4, centric	3442762
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 4, centric	3442843
OPTIMUM Four-jaw lathe chuck Ø 200 mm no. 4, individual	3442879
BISON three-jaw lathe chuck Ø 160 mm no. 4, centric	3450305
BISON three-jaw lathe chuck Ø 200 mm no. 4, centric	3450310
BISON Four-jaw lathe chuck Ø 160 mm no. 4, centric	3450355
BISON Four-jaw lathe chuck Ø 200 mm no. 4, centric	3450360
› Information about lathe chucks from page 184	

Accessories	Art no.
Quick change tool holder SWH 3-E	3384303
Factory assembly SWH 3-E	9000400
Lathe tool set 16 mm, 5-part "Made in Germany" (see page 190)	3441216
Lathe tool set 16 mm, 5-part (see page 190)	3441610
Collet chuck 5 C	3441554
› More accessories for lathes from page 188	

Remember to order a lathe chuck

Scope of supply

- › Steady rest passageway Ø 19 - 70 mm
- › Follow rest passageway Ø 16 - 50 mm
- › LED machine lamp
- › Reduction sleeve MT 5 - MT 3
- › Two fixed centres MT 3
- › Quadruplicate tool holder 16 mm
- › Replaceable gear set
- › Machine chassis
- › Machine initially filled with premium grade oil
- › Operating tool

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C2 - Note for operation with frequency converter on page 253

Leading and feed spindle lathes with longitudinal and cross feed.

TU 3008G with gearbox.
TU 3008V with brushless motor for continuously variable speed control

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Ribbed grey cast steel prism bed with strong ribbing, induction tempered and precision ground
- Tempered and polished z-axis guideway
- Free moving feed gear with rounded gear wheels running in an oil bath
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Concentricity at chuck better than 0.04 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Right-handed/left-handed rotation switchable via control panel
- Tempered main spindle borne on adjustable precision taper roller bearings
- Tapered roller bearings in P5 quality
- Tempered spindle nose
- Large spindle bore Ø 38 mm
- Leading spindle for thread tapping or automatic longitudinal turning
- Leading and feed spindles borne on two sintered bearings
- Automatic longitudinal/cross feeds
- Feed and lead spindle cover
- Tailstock adjustable ± 5 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Interchangeable gears in standard scope of delivery for thread tapping
- Emergency stop button

TU 3008
- V-belt

TU 3008G
- Gearbox

TU 3008V
- V-belt and brushless drive
- Smooth action, powerful, brushless DC drive with excellent control characteristics
- High-precision steel chuck for higher speeds
- Digital speed display

TU 3008V
Powerful brushless drive

› Particularly smooth action
› Virtually constant torque over the entire speed range
› Extremely powerful

X-, Z- and Z0-axis

› Prepared for mounting of measuring system on X, Z and Z0 axis

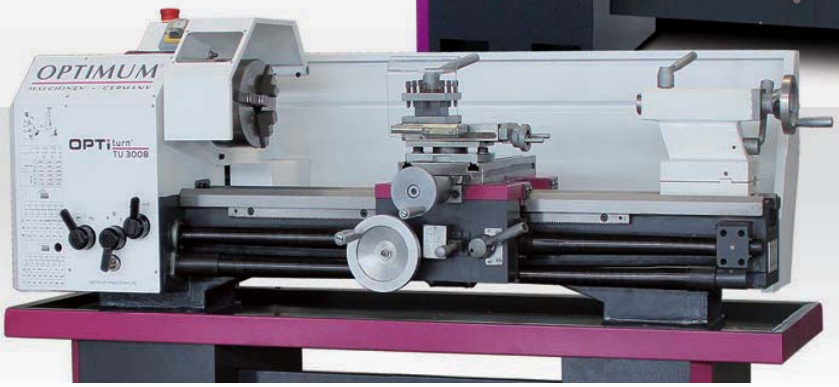


Fig.: TU 3008

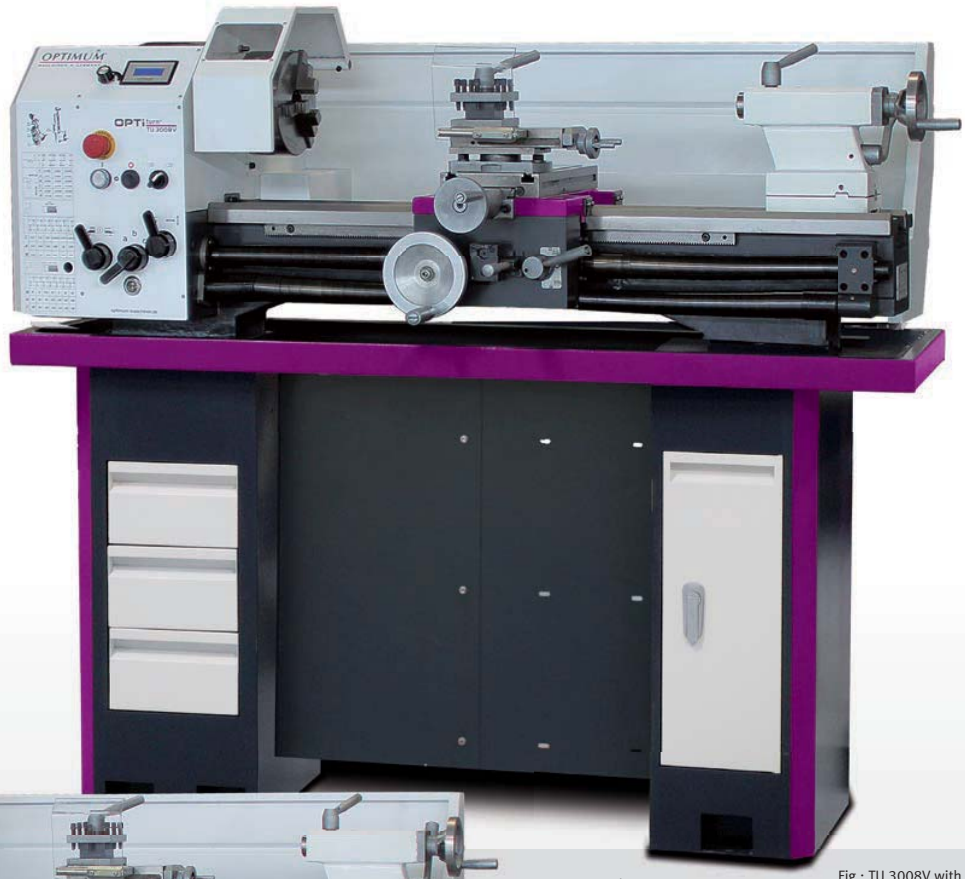


Fig.: TU 3008V with optional chassis

Accessories
Machine chassis
Art. no. 3440409

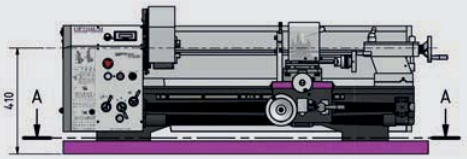
Vibration dampers machine base SE 1
(6 pcs. needed)
Art. no. 3381012

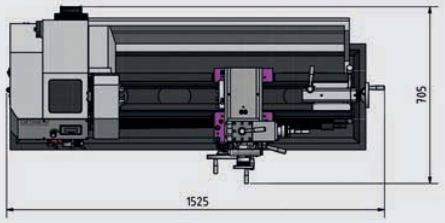
Levelling platen SE 55
(6 pcs. needed)
Art. no. 3352981

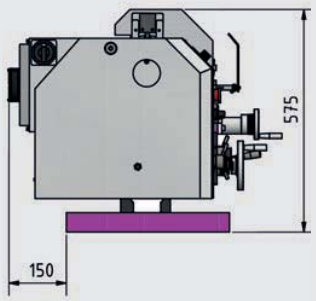
Technical specifications, accessories and dimensions

Model	TU 3008	TU 3008G	TU 3008V**
Article no.	3427200	3427210	3427205
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz		230 V / 1 Ph
Drive motor	1.1 kW	1.5 kW	
Spindle			
Spindle taper	MT 5		
Spindle seat	Camlock DIN ISO 702-2 No. 4		
Spindle bore, bar passage diameter	Ø 38 mm		
Quadruple tool holder mounting height	25 mm		
Work area			
Centre height	158 mm		
Centre width	800 mm	720 mm	800 mm
Swing Ø over machine bed	310 mm		
Swing over cross slide	190 mm		
Bed width	180 mm		
Speed range			
Spindle speed TU 3008	150 - 2 000 rpm / 6 speeds		
Spindle speed TU 3008G	165 - 2 400 rpm 6 speeds		
Spindle speed TU 3008V	30 - 3 000 rpm 5 speeds, electronically controlled		
Travel			
Top slide travel	65 mm		
Cross slide travel	150 mm		
Feeds and pitches			
Longitudinal feed within the range	0.085 - 0.832 mm/rev (9 feeds)		
Cross feed within	0.01 - 0.1 mm/rev (9 feeds)		
Pitch - metric in range	0.2 - 3.5 mm/rev (18 pitches)		
Pitch - inch in range	56 - 8 turns/inch (21 pitches)		
Tailstock			
Tailstock seat	MT 3		
Tailstock quill diameter/stroke	Ø 38 mm / 70 mm		
Dimensions			
Length x width x height	1 525 x 705 x 575 mm		
Weight	226 kg	261 kg	243 kg

Dimensions







Lathe chuck	Art no.
OPTIMUM Four-jaw lathe chuck Ø 160 mm no. 4, centric clamping	3442840
BISON Four-jaw lathe chuck Ø 160 mm no. 4, centric clamping	3450355
› Information about lathe chucks from page 184	

Accessories	Art no.
Follow rest passageway max. Ø 6 - 60 mm	3441460
Steady rest passageway Ø 6 - 60 mm	3441461
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000400
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 16 mm, 11-part (see page 190)	3441604
Lathe tool set 16 mm, 5-part (see page 190)	3441668
Lathe tool set 16 mm, 5-part (see page 190)	3441610
Lathe tool set 16 mm, 5-part "Made in Germany"	3441216
Collet kit 3 - 25 mm, 5C, 17-part	3441509
Collet chuck 5C - Camlock no. 4	3441554
Clamping block set 16-05	3440653
› More accessories for lathes from page 188	

Scope of supply

- › Three-jaw lathe chuck Ø 160 mm, centre clamping
- › Fixed centre MT 3 and MT 5
- › Splashguard
- › Chip tray
- › Quadruplicate tool holder 25 mm
- › Replaceable gear set
- › Operating tool

Accessories	Art no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Assembly kit (holders for the X / Y and Z0 axis/set of screws)	3383985
Factory assembly	9000420
› Infomation about position on page 252	

*Important information on „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3

Leading spindle lathes with feed gear for demanding users.

TU 2807V with brushless motor for continuously variable speed control

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Powerful motor, low-maintenance motor
- Ribbed grey cast steel prism bed with strong ribbing, induction tempered and precision ground
- Free moving feed gear with rounded gear wheels running in an oil bath
- Tempered and polished z-axis guideway
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Concentricity at chuck better than 0.04 mm
- Automatic longitudinal/leading spindle drive
- Leading spindle for thread tapping or automatic longitudinal turning
- Quadruple tool holder
- All guides adjustable using cleats
- Right-handed/left-handed rotation switchable via control panel
- Tempered main spindle borne on adjustable precision taper roller bearings
- Tapered roller bearings in P5 quality
- Tempered spindle nose with Ø 26 mm spindle bore
- Roll-milled trapezoidal spindles
- Chip guard on top slide
- Top slide displaceable on cross slide
- Tailstock adjustable ± 5 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Leading spindle borne on two sintered bearings
- Interchangeable gears in standard scope of delivery for thread tapping
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Thrust bearings
- Three-jaw lathe chuck included in standard scope of delivery
- Emergency stop button
- Fully equipped; the user can immediately start productive work after commissioning

TU 2807V

- Smooth action, powerful, brushless DC drive with excellent control characteristics
- High-precision steel chuck for higher speeds
- Speed change easily adjustable via potentiometer
- Digital speed display

TU 2807V
Powerful brushless drive

› Particularly smooth action
› Virtually constant torque over the entire speed range
› Extremely powerful

Accessories
Machine chassis
Art. no. 3440409

Vibration dampers machine base SE 1
(6 pcs. needed)
Art. no. 3381012

Levelling platen SE 55
(6 pcs. needed)
Art. no. 3352981

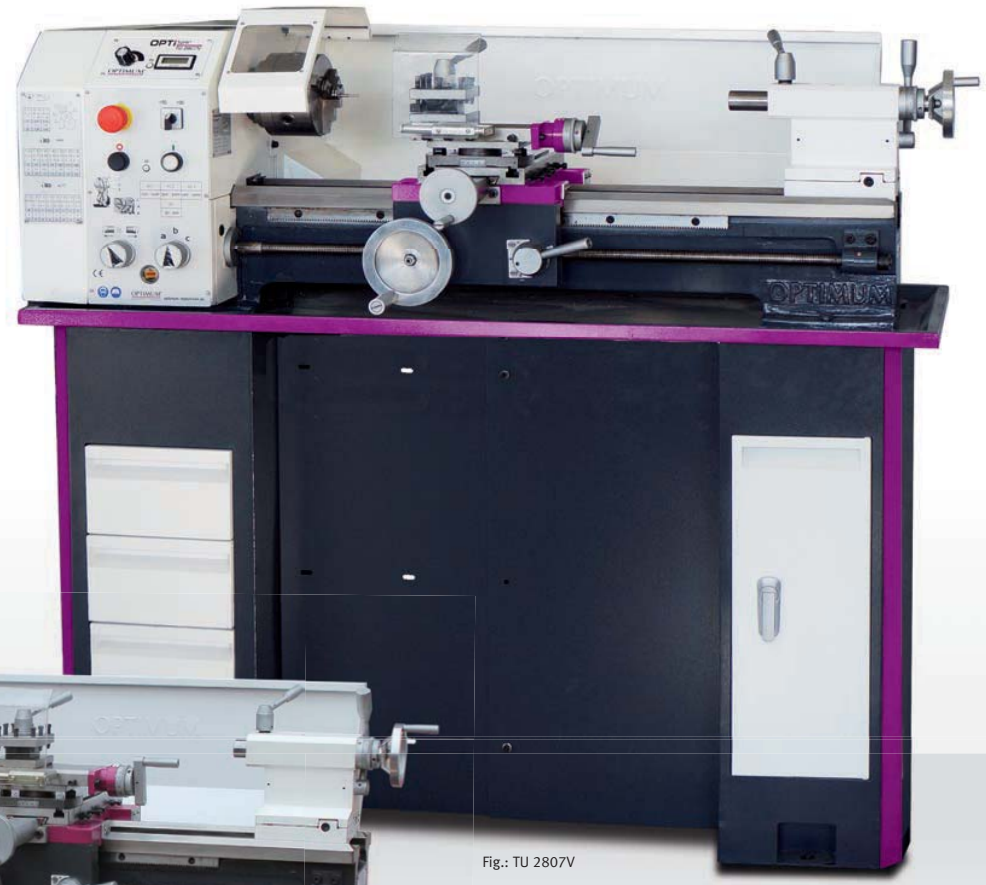


Fig.: TU 2807V

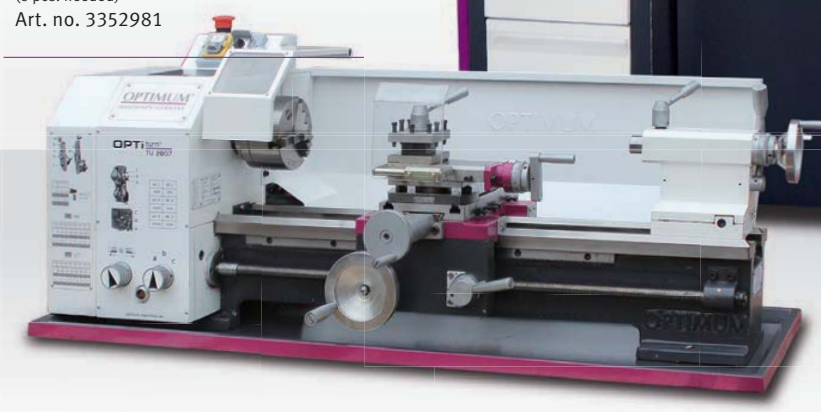
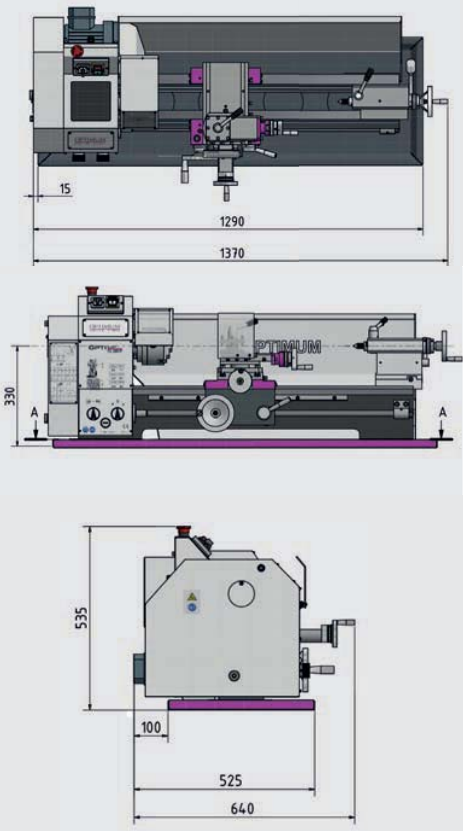


Fig.: TU 2807

Technical specifications, accessories and dimensions

Model	TU 2807	TU 2807V**
Article no. (230 V)	3427001	3427006
Article no. (400 V)	3427003	-
Technical specifications		
Electrical connection	230 V / 1 Ph ~ 50 Hz 400 V / 3 Ph ~50 Hz	230 V / 1 Ph ~ 50 Hz
Drive motor	850 W	1.5 kW
Spindle		
Spindle taper	MT 4	
Spindle seat	Short taper	
Spindle bore, bar passage diameter	Ø 26 mm	
Quadruple tool holder height	max. 13.5 mm	
Work area		
Centre height	140 mm	
Centre width	700 mm	
Swing Ø over machine bed	266 mm	
Swing over cross slide	170 mm	
Bed width	180 mm	
Speed range		
Spindle speed	150 - 2 000 rpm	30 - 4 000 rpm
Number of speeds	6 speeds	4 speeds Electronically controlled
Travel		
Top slide travel	60 mm	
Cross slide travel	160 mm	
Feeds and pitches		
Longitudinal feed within the range	0.07 - 0.4 mm/rev (6 feeds)	
Pitch - metric in range	0.2 - 3.5 mm/rev (18 pitches)	
Pitch - inch in range	56 - 8 turns/inch (21 pitches)	
Tailstock		
Tailstock seat	MT 2	
Tailstock quill diameter/stroke	30 mm /85 mm	
Dimensions		
Length x width x height	1 370 x 640 x 535 mm	1 370 x 660 x 440 mm
Weight	180 kg	

Dimensions



Lathe chucks and accessories	Art no.
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange 3441312 required)	3442874
Four-jaw lathe chuck Ø 125 mm, centre clamping (Chuck flange 3441312 required)	3442812
Chuck flange for lathe chuck Ø 125 mm (3442874/3442812)	3441312
Three-jaw lathe chuck Ø 160 mm, centre clamping (Chuck flange 3441413 required)	3442716
Four-jaw lathe chuck Ø 160 mm, centre clamping (Chuck flange 3441413 required)	3442816
Chuck flange for lathe chuck Ø 160 mm (3442716/3442816)	3441413
› Information about lathe chucks from page 184	

Scope of supply

- › Three-jaw lathe chuck Ø 125 mm, centre clamping
- › Fixed centre MT 2 and MT 4
- › Splashguard
- › Chip tray
- › HSS lathe tools
- › Quadruplicate tool holder 13.5 mm
- › Replaceable gear set
- › Operating tool

Accessories	Art no.
Steady rest passageway max. Ø 55 mm	3441415
Follow rest passageway max. Ø 56 mm	3441410
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part (see page 189)	3441602
Lathe tool set 12 mm, 11-part (see page 189)	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Collet kit ER 32, 3 - 20 mm	3441122
Collet chuck ER 25, cylindrical	3441305
Collet chuck ER 32, short taper	3441306
› More accessories for lathes from page 188	

Accessories	Art no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Factory assembly	9000420
› Infomation about position display on page 252	

*Important information on „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3

Leading spindle lathes with feed gear for demanding users.

TU 2506V with brushless motor for continuously variable speed control

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Powerful motor, low-maintenance motor
- Ribbed grey cast steel prism bed with strong ribbing, induction tempered and precision ground
- Tempered and polished z-axis guideway
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Automatic longitudinal/leading spindle drive
- Roll-milled trapezoidal spindles
- Chip guard on top slide
- Top slide displaceable on cross slide
- Leading spindle for thread tapping or automatic longitudinal turning
- Quadruple tool holder
- All guides adjustable using cleats
- Concentricity at chuck better than 0.04 mm
- Right-handed/left-handed rotation switchable via control panel
- Tempered main spindle borne on adjustable precision taper roller bearings
- Tapered roller bearings in P5 quality
- Tempered spindle nose with Ø 26 mm spindle bore
- Tailstock adjustable ± 5 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment of the tailstock without tools thanks to clamping lever
- Leading spindle borne on two sintered bearings
- Handwheels on slide with adjustable fine scaling 0.04 / 0.01 mm
- Thrust bearings
- Emergency stop button
- Three-jaw lathe chuck included in standard scope of delivery
- Interchangeable gears in standard scope of delivery for thread tapping
- Fully equipped; the user can immediately start productive work after commissioning

TU 2506 V

- Smooth action, powerful, brushless DC drive with excellent control characteristics
- High-precision steel chuck for higher speeds
- Speed change easily adjustable via potentiometer
- Digital speed display

TU 2506V
Powerful brushless drive

› Particularly smooth action
› Virtually constant torque over the entire speed range
› Extremely powerful

Accessories
Machine chassis
Art. no. 3440409

Vibration dampers machine base SE 1
(6 pcs. needed)
Art. no. 3381012

Levelling platen SE 55
(6 pcs. needed)
Art. no. 3352981

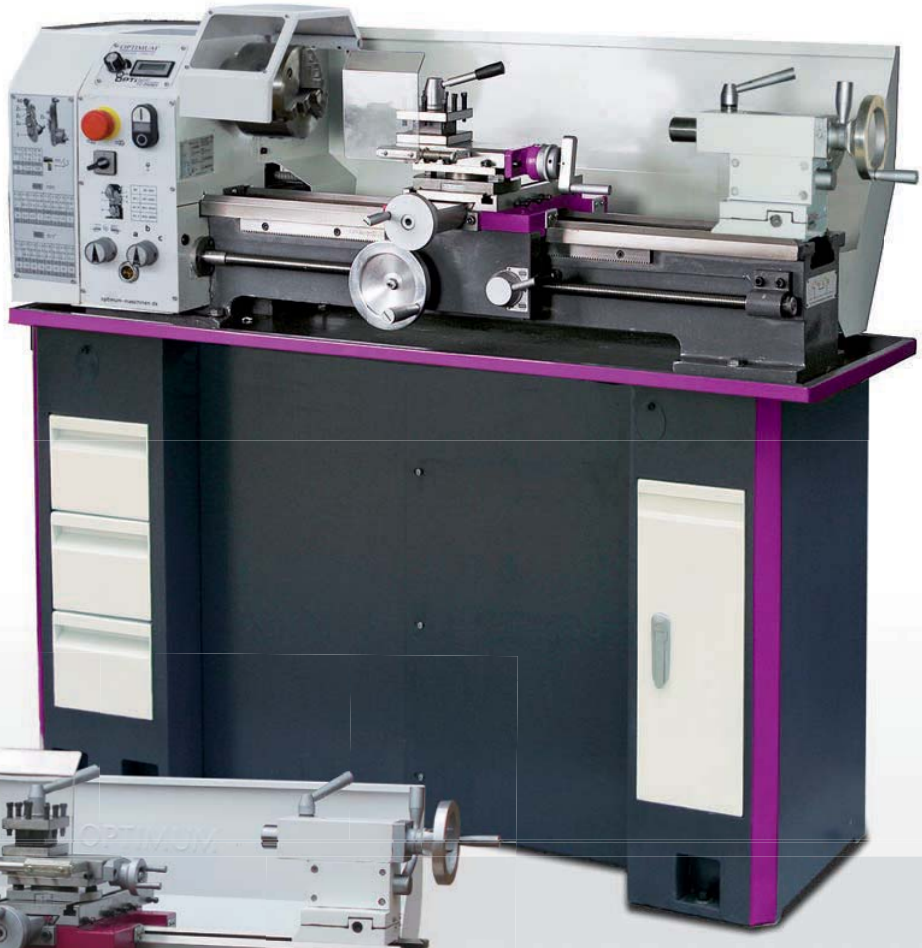


Fig.: TU 2506V

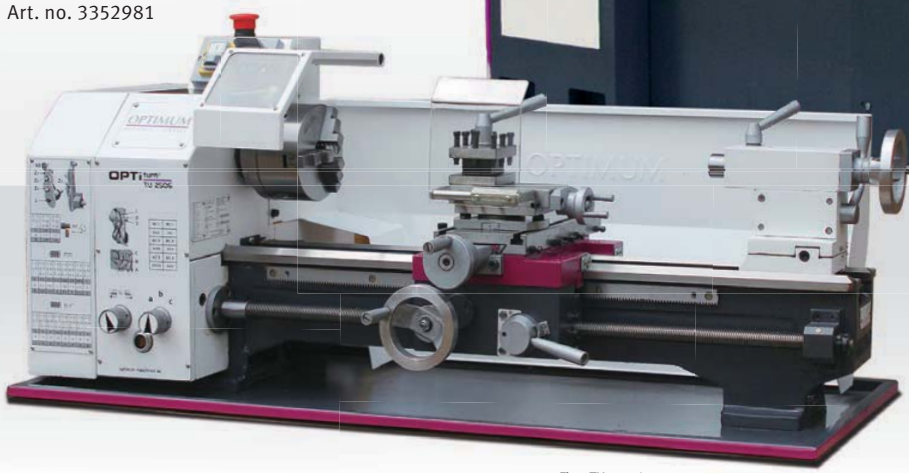
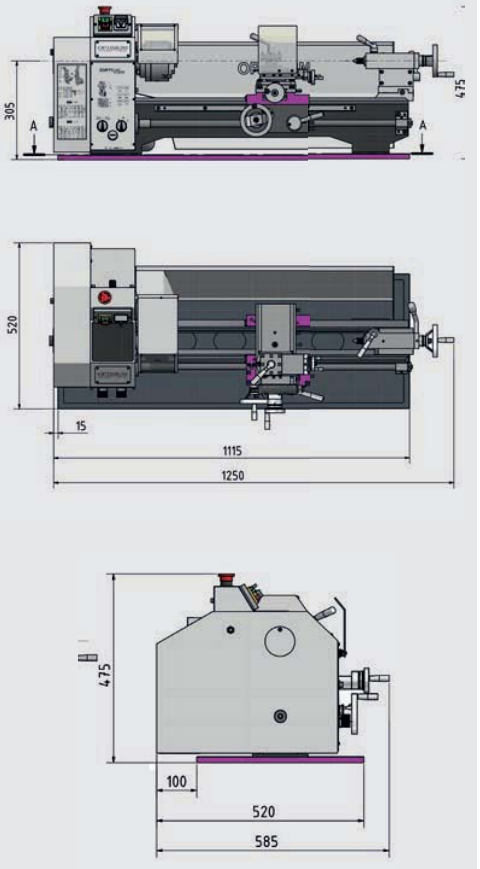


Fig.: TU 2506

Technical specifications, accessories and dimensions

Model	TU 2506	TU 2506V*
Article no. (230 V)	3425001	3425006
Article no. (400 V)	3425003	
Technical specifications		
Electrical connection	230 V / 1 Ph ~ 50 Hz 400 V / 3 Ph ~50 Hz	230 V / 1 Ph ~ 50 Hz
Drive motor	750 W	1.5 kW
Spindle		
Spindle taper	MT 4	
Spindle seat	Short taper	
Spindle bore, bar passage diameter	Ø 26 mm	
Quadruple tool holder mounting height	max. 13 mm	
Work area		
Centre height	125 mm	
Centre width	550 mm	
Swing Ø over machine bed	250 mm	
Bed width	135 mm	
Speed range		
Spindle speed	125 - 2 000 rpm	30 - 4 000 rpm
Number of speeds	6 speeds	4 speeds Electronically con-trolled
Travel		
Top slide travel	70 mm	
Cross slide travel	110 mm	
Feeds and pitches		
Longitudinal feed within the range	0.07 - 0.4 mm/rev (6 feeds)	
Pitch - metric in range	0.2 - 4 mm/rev (21 pitches)	
Pitch - inch in range	56 - 8 turns/inch (21 pitches)	
Tailstock		
Tailstock seat	MT 2	
Tailstock quill diameter/stroke	30 mm / 65 mm	
Dimensions		
Length x width x height	1 250 x 585 x 475 mm	1 250 x 650 x 420 mm
Weight	125 kg	

Dimensions



Lathe chucks and accessories	Art no.
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange 3441312 required)	3442874
Four-jaw lathe chuck Ø 125 mm, centre clamping (Chuck flange 3441312 required)	3442812
Chuck flange lathe chuck Ø 125 mm (lathe chuck 3442874/3442812)	3441312
Planar clamping disc Ø 240 mm	3441352
› Information about lathe chucks from page 184	

Accessories	Art no.
Steady rest passageway max. Ø 50 mm	3441315
Follow rest passageway max. Ø 34 mm	3441310
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part (see page 189)	3441602
Lathe tool set 12 mm, 11-part (see page 189)	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Collet kit ER 32, 3 - 20 mm	3441122
Collet chuck ER 25, cylindrical	3441305
Collet chuck ER 32, short taper	3441306
› More accessories for lathes from page 188	

Scope of supply

- › Three-jaw lathe chuck Ø 125 mm,
- › Centre clamping
- › Fixed centre MT 2 and MT 4
- › Splashguard
- › Chip tray
- › HSS lathe tools
- › Quadruple tool holder
- › Replaceable gear set
- › Operating tool

Accessories	Art no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Factory assembly	9000420
› Infomation about position display on page 252	

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C3 - Note for operation with frequency converter on page 253

OPTIMUM the original

Lathes for DIY.

TU 2406V with electronic speed control

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Tempered and polished z-axis guideway
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Roll-milled trapezoidal spindles
- Leading spindle borne on two sintered bearings
- Two tapered roller bearings in P5 quality
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.01 mm
- Quadruple tool holder
- All guides adjustable using cleats
- Chuck concentricity better than 0.05 mm
- Leading spindle for thread tapping or automatic longitudinal turning
- Right-handed/left-handed rotation switchable via control panel
- Tailstock adjustable ± 5 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Emergency stop button
- Thrust bearings
- Comprehensive range of accessories
- Three-jaw lathe chuck included in standard scope of delivery
- Lasting value

TU 2406 V

- Speed change easily adjustable via potentiometer
- Digital speed display
- EMC filter class C1

Accessories

Machine chassis
Art. no. 3440409

Vibration dampers machine base SE 1
(6 pcs. needed)
Art no. 3381012

Levelling platen SE 55
(6 pcs. needed)
Art no. 3352981

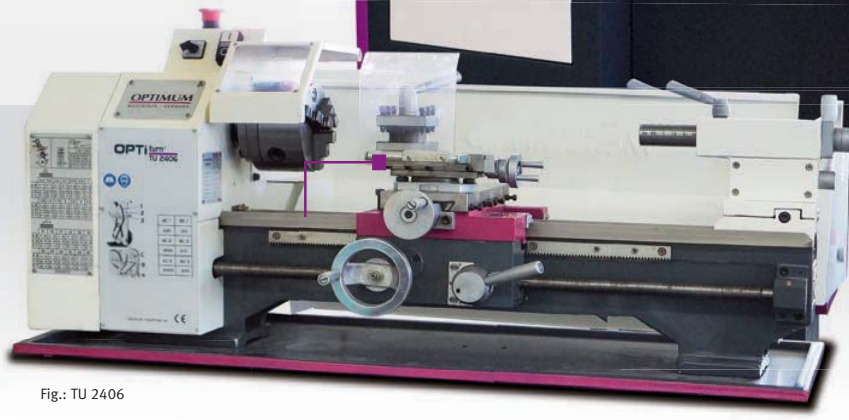


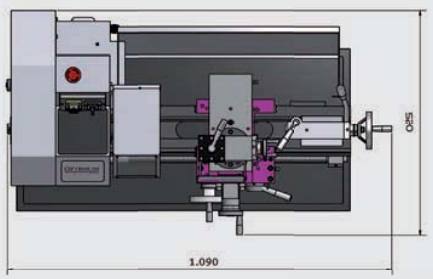
Fig.: TU 2406

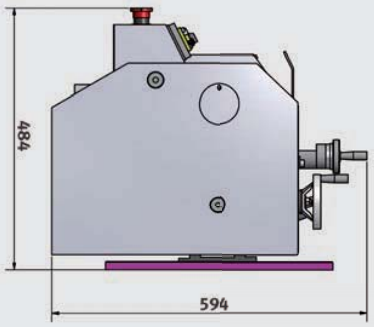
Fig.: TU 2406V with optional machine chassis

Technical specifications, accessories and dimensions

Model	TU 2406	TU 2406V**
Article no. (230 V)	3420350	3420355
Article no. (400 V)	3420353	-
Technical specifications		
Electrical connection	230 V / 1 Ph ~ 50 Hz 400 V / 3 Ph ~50 Hz	230 V / 1 Ph ~ 50 Hz
Drive motor	750 W	1.1 kW
Spindle		
Spindle taper	MT 3	
Spindle seat	cylindrical Ø 52 mm	
Spindle bore, bar passage diameter	Ø 21 mm	
Quadruple tool holder mounting height	14 mm	
Work area		
Centre height	125 mm	
Centre width	550 mm	
Swing Ø over machine bed	250 mm	
Bed width	135 mm	
Speed range		
Spindle speed	125 - 2 000 rpm	150 - 2 500 rpm
Number of speeds	6 speeds	2-speed, electronic speed control
Travel		
Top slide travel	75 mm	
Cross slide travel	120 mm	
Pitches		
Pitch - metric in range	0.4 - 3.5 mm/rev (14 pitches)	
Pitch - inch in range	44 - 10 turns/inch (12 pitches)	
Tailstock		
Tailstock seat	MT 2	
Tailstock - quill stroke	70 mm	
Dimensions		
Length x width x height	1 090 x 594 x 484 mm	
Weight	125 kg	

Dimensions





Lathe chucks and accessories	Art no.
Four-jaw lathe chuck Ø 125 mm, centre clamping (Chuck flange 3440511 required)	3442812
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange 3440511 required)	3442874
Chuck flange lathe chuck Ø 125 mm (lathe chuck 3442812/3442874)	3440511
Clamping disc Ø 220 mm	3440552
› Information about lathe chucks from page 184	

Scope of supply

- › Three-jaw lathe chuck Ø 125 mm,
- › Centre clamping
- › Fixed centre MT 2 and MT 3
- › Splashguard
- › Chip tray
- › Quadruple tool holder
- › Replaceable gear set
- › Operating tool

Accessories	Art no.
Steady rest passageway max. Ø 50 mm	3441315
Follow rest passageway max. Ø 34 mm	3441310
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part (see page 189)	3441602
Lathe tool set 12 mm, 11-part (see page 189)	3441603
Lathe tool set 12 mm, 5-part (see page 189)	3441666
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Information on „Lathe tool set“ from page 190	
Collet chuck ER 25, cylindrical	3440505
Collet chuck ER 32, short taper	3440506
› More accessories for lathes from page 188	

Accessories	Art no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Factory assembly	9000420
› Infomation about position display on page 252	

*Important information on „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C1 - Note for operation with frequency converter on page 253

OPTIMUM the original

Lathes for DIY.

TU 2304V with electronic speed control

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Grey cast iron prism bed with strong ribbing, aged for at least six months, induction tempered and precision ground
- Tempered and polished z-axis guideway
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Roll-milled trapezoidal spindles
- Leading spindle borne on two sintered bearings
- All guides adjustable using cleats
- Precision slide
- Hand wheels with adjustable fine scaling 0.04 / 0.01 mm
- Quadruple tool holder
- Chuck concentricity better than 0.05 mm
- Leading spindle for thread tapping or automatic longitudinal turning
- Right-handed/left-handed rotation switchable via control panel
- Tailstock adjustable ± 5 mm for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Emergency stop button
- Chuck protection
- Thrust bearings
- Interchangeable gear set for thread tapping
- Comprehensive range of accessories
- Three-jaw lathe chuck included in standard scope of delivery
- Lasting value

TU 2304 V

- Speed change easily adjustable via potentiometer
- Digital speed display
- EMC filter class C1

Fig. similar: TU 2304V with optional machine chassis

Accessories

Machine chassis
Art. no. 3440409

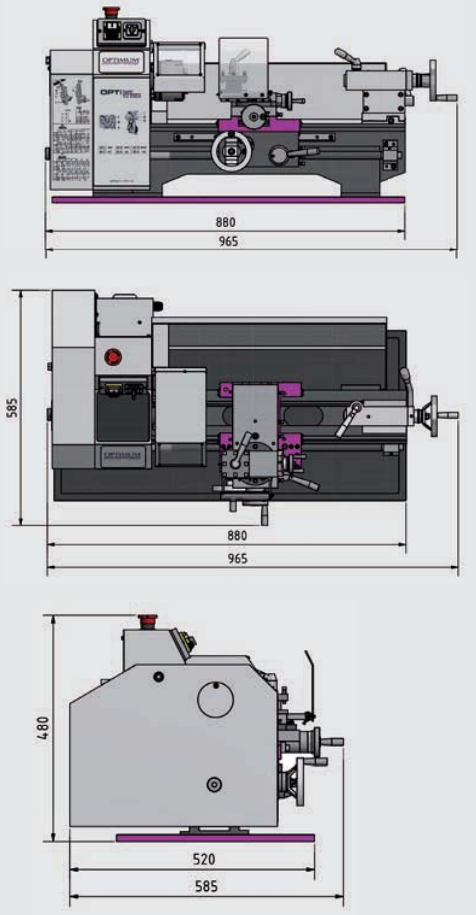
Vibration dampers machine base SE 1
(6 pcs. needed)
Art. no. 3381012

Levelling platen SE 55
(6 pcs. needed)
Art. no. 3352981

Technical specifications, accessories and dimensions

Model	TU 2304	TU 2304V**
Article no.	3420320	3420325
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	
Drive motor	750 W	
Spindle		
Spindle taper	MT 3	
Spindle seat	cylindrical Ø 72 mm	
Spindle bore, bar passage diameter	Ø 20 mm	
Quadruple tool holder mounting height	14 mm	
Work area		
Centre height	115 mm	
Centre width	450 mm	
Swing Ø over machine bed	230 mm	
Bed width	135 mm	
Speed range		
Spindle speed	125 - 2 000 rpm	150 - 2 200 rpm
Number of speeds	6 speeds	2 speeds, electronically controlled
Travel		
Top slide travel	75 mm	
Cross slide travel	120 mm	
Pitches		
Pitch - metric in range	0.4 - 3.5 mm/rev (14 pitches)	
Pitch - inch in range	44 - 8 turns/inch (14 pitches)	
Tailstock		
Tailstock seat	MT 2	
Tailstock - quill stroke	70 mm	
Dimensions		
Length x width x height	965 x 585 x 510 mm	
Weight	111 kg	114 kg

Dimensions



Lathe chucks and accessories	Art no.
Three-jaw lathe chuck Ø 125 mm, centre clamping (Chuck flange 3440313 required)	3442712
Four-jaw lathe chuck Ø 125 mm, centre clamping (Chuck flange 3440313 required)	3442812
Four-jaw lathe chuck Ø 125 mm, individual clamping (Chuck flange 3440313 required)	3442874
Chuck flange for lathe chuck Ø 125 mm	3440313
› Information about lathe chucks from page 184	

Accessories	Art no.
Steady rest passageway max. Ø 55 mm	3440361
Follow rest passageway max. Ø 34 mm	3440360
Quick change tool holder SWH 1-A	3384301
Factory assembly SWH 1-A	9000401
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321
Lathe tool set 10 mm, 11-part (see page 189)	3441602
Lathe tool set 12 mm, 11-part (see page 189)	3441603
Lathe tool set 12 mm, 5-part "Made in Germany"	3441212
Information on „Lathe tool set“ from page 190	
Travelling centre MT 2	3440702
Collet chuck ER 25 Ø 72 mm	3440305
Clamping disc Ø 170 mm	3440295
› More accessories for lathes from page 188	

Scope of supply

- › Three-jaw lathe chuck Ø 100 mm,
- › Centre clamping
- › Fixed centre MT 2 and MT 3
- › Splashguard
- › Chip tray
- › Quadruple tool holder
- › Replaceable gear set
- › Operating tool

Accessories	Art no.
	
Digital position display DRO 5 incl. 3 magnetic sensors	3383975
Magnetic strip length 1 100 mm	3383978
Factory assembly	9000420
› Infomation about position display on page 252	

*Important information on transport surcharges and „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C1 - Note for operation with frequency converter on page 253

Modelbuilding lathe with electronic speed control and digital speed display

Facts that impress in terms of quality, performance and price

- Precision workmanship
- Ribbed cast steel prism bed with strong ribbing, induction tempered and precision ground
- Tempered and polished z-axis guideway
- Tempered spindle nose (DIN 6350)
- Guaranteed concentricity of spindle nose better than 0.009 mm
- Automatic longitudinal/leading spindle drive
- Roll-milled trapezoidal thread on lead spindle
- Leading spindle borne on two sintered bearings
- Longitudinal, cross and top slides
- Right-handed/left-handed rotation switchable via control panel
- Tempered main spindle borne on adjustable precision taper roller bearings
- Tapered roller bearings in P5 quality
- Cylindrical centring mount
- Tempered spindle nose with Ø 21 mm spindle bore
- Lathe chuck concentricity better than 0.04 mm
- Tailstock adjustable for turning spheres
- Tailstock spindle sleeve and handwheel with adjustable fine scaling 0.02 mm
- Fast, easy adjustment without tools thanks to clamping lever
- Emergency stop button
- Chuck protection
- Thrust bearings
- Gearbox with interchangeable gearwheels
- Quadruple tool holder, rotating
- Interchangeable gear set as standard enables large thread tapping area
- Three-jaw lathe chuck included in standard scope of delivery
- EMC filter class C1

Model	TU 2004V
Article no.	3420310
Technical specifications	
Electrical connection	230 V / 1 Ph ~ 50 Hz
Drive motor	600 W
Spindle	
Spindle taper	MT 3
Spindle bore	Ø 21 mm
Spindle seat	cylindrical Ø 72 mm
Passageway three-jaw chuck	Ø 20 mm
Quadruple tool holder mounting height	12 mm
Work areas	
Centre height	100 mm
Centre width	300 mm
Max. turning diameter	200 mm*
Swing over cross slide	110 mm
Bed width	100 mm
Speed range	
Spindle speeds	150 - 2 500 rpm
Number of speeds	2 speeds. Electronic speed control
Travel	
Top slide travel	55 mm
Cross slide travel	75 mm
Feed and pitches	
Longitudinal feed within the range	0.1 - 0.2 mm/rev (2 feeds)
Pitch - metric in range	0.25 - 3 mm/rev (14 pitch)
Pitch - inch in range	44 - 8 turns/inch (12 pitches)
Tailstock	
Tailstock seat	MT 2
Tailstock - quill stroke	65 mm
Dimensions L x H x W	830 x 425 x 360 mm
Weight	61 kg

Scope of supply
› Three-jaw lathe chuck Ø 100 mm, centre clamping
› Fixed centre MT 2 and MT 3
› Splashguard
› Chip tray
› Replaceable gear set
› Quadruple tool holder
› Operating tool

Lathe chuck	Art. no.
Four-jaw lathe chuck Ø 100 mm, centre clamping (Chuck flange 3440312 required)	3442810
Four-jaw lathe chuck Ø 100 mm, individual clamping (Chuck flange 3440312 required)	3442872
Chuck flange for lathe chuck Ø 100 mm (3442810/3442872)	3440312
Clamping disc Ø 170 mm	3440295
› Information about lathe chucks from page 184	

Accessories	Art. no.
Follow rest passageway max. Ø 40 mm	3440230
Steady rest passageway max. Ø 50 mm	3440231
Collet chuck ER 25 Ø 72 mm	3440305
Quick change tool holder SWH-AA	3384311
Factory assembly SWH-AA	9000401
Spare tool holder 12 x 50 type D for square chisels	3384312
Spare tool holder 12 x 50 type H for round chisels	3384320
Lathe tool set 10 mm, 11-part	3441602
Lathe tool set 10 mm, 5-part	3441664
Information on „Lathe tool set“ from page 190	
› More accessories for lathes from page 188	

*“General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C1 - Note for operation with frequency converter on page 253

The small-scale lathe with electronically controllable speed

OPTIMUM the original

Facts that impress in terms of quality, performance and price

- Direct current motor
- Ribbed grey cast prism bed, induction tempered and ground
- Tempered and polished z-axis guideway
- Guaranteed concentricity of spindle nose better than 0.015 mm
- Chuck concentricity max. 0.05 mm
- Leading spindle for thread tapping or automatic longitudinal turning
- Longitudinal, cross and top slides
- Automatic longitudinal/leading spindle drive
- Large thread tapping area thanks to interchangeable gear set
- Three-jaw lathe chuck included in standard scope of delivery
- Fast and easy speed change through V-belt
- Safety switch in cover
- Right-handed/left-handed rotation switchable via control panel
- Chuck protection with microswitch
- Hand wheels with adjustable fine scaling 0.04 / 0.01 mm
- All guides adjustable without play using cleats
- Emergency stop button
- Low-voltage electronics
- EMC filter class C1

Model	TU 1503V
Article no.	3420260
Technical specifications	
Electrical connection	230 V / 1 Ph ~50 Hz
Drive motor	450 W
Spindle	
Spindle taper	MT 1
Spindle bore	Ø 11 mm
Spindle seat	cylindrical Ø 22 mm
Dual tool holder chuck height	12 mm
Work areas	
Centre height	75 mm
Centre width	265 mm
Max. turning diameter	150 mm*
Bed width	70 mm
Speed range	120 - 3 000 rpm
Number of speeds	Electronic speed control
Travel	
Top slide travel	40 mm
Cross slide travel	55 mm
Feed and pitch	
Longitudinal feed within the range	0.05 - 0.1 mm/rev (2 feeds)
Metric pitch	0.5 - 1.5 mm/rev (8 pitches)
Tailstock	
Tailstock seat	MT 1 short
Tailstock - quill stroke	30 mm
Dimensions L x W x H	570 x 340 x 300 mm
Weight	23 kg

Scope of supply
› Three-jaw lathe chuck Ø 80 mm, centre clamping
› Fixed centre MT 1
› Splashguard
› Chip tray
› Replaceable gear set
› Dual tool holder
› Operating tool

Lathe chuck	Article no.
Three-jaw lathe chuck Ø 80 mm, single clamping	3440287
Four-jaw lathe chuck Ø 80 mm, individual clamping	3440286
Four-jaw lathe chuck Ø 80 mm, centre clamping	3442808
› Information about lathe chucks from page 184	

Accessories	Article no.
Follow rest passageway max. Ø 45 mm	3440210
Steady rest passageway max. Ø 40 mm	3440211
Lathe tool set 8 mm, 5-part	3441662
Lathe tool set 8 mm, 11-part	3441601
Information on „Lathe tool set HM 8 mm“ on page 189	
Travelling centre MT 1	3440700
Collet chuck ER 16, Ø 22 mm, cylindrical	3440281
Collet kit ER 16, 1 - 10 mm, 12-part	3440282
› More accessories for lathes from page 188	

*Important information on „General notes on operating our machines“ on page 253
**The lathe (frequency converter) complies with the DIN EN 55011 standard: class C1 - Note for operation with frequency converter on page 253

Compatibility overview Accessories for lathes

Turning accessories		Article no.	TU 1503V	TU 2004V	TU 2304/V	TU 2406/V	TU 2506/V	TU 2807/V	TU 3008/G/V	TH 3309/D/V	TH 3610/D	TM 4010/D	TH 40	TH 42	TH 4210V	TH 46	TH 4615V	TH 56	TH 5620V	TZ 4/TZ4V	TX 5216	TX 6222	TH 66	TH 80
SWH	SWH AA	3384311		●																				
	SWH 1 - A	3384301			●	●	●	●	●															
	SWH 3 - E	3384303								●	●	○	●											
	SWH 5 - B	3384305												●	●	●	●			●				
	SWH 7 - C	3384307																●	●		●	●		
	SWH 9 - D	3384309																					●	●
Lathe tool	HM 8 mm	3441662	●	●	●																			
	HM 10 mm	3441664			●	●	●	●	●															
	HM 12 mm	3441666			●	●	●	●	●															
	HM 12 mm	3441212			●	●	●	●	●															
	HM 16 mm	3441668								●	●	●	●											
	HM 16 mm	3441216								●	●	●	●											
	HM 16 mm	3441610								●	●	●	●											
	HM 20 mm	3441670												●	●	●	●	●	●	●	●			
	HM 20 mm	3441617												●	●	●	●	●	●	●	●			
	HM 25 mm	3441672																				●	●	●
	HM 25 mm	3441623																				●	●	●
	HM 32 mm	3441674																					●	●
Single lathe tool 12 mm	SSSC L1212J09	3441225			●	●	●	●	●															
	SCLC L1212J09	3441226			●	●	●	●	●															
Lathe tool	HM 8 mm	3441601	●	●	●																			
	HM 10 mm	3441602			●	●	●	●	●															
	HM 12 mm	3441603			●	●	●	●	●															
	HM 16 mm	3441604								●	●	●	●											
Inside lathe tool set	10 mm	3441640			●	●	●	●	●															
	12 mm	3441641			●	●	●	●	●	●	●	●	●											
	Set	3441650								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Centring drill bit set		3203010			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Anti-vibration element	SE 1	3381012			●	●	●	●	●															
	SE 2	3381016			●	●	●	●	●	●	●	●	●											
	SE 3	3381018								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Levelling platen	SE 55	3352981	●	●	●	●	●	●	●															
	SE 85	3352982								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Clamping block	Set 16-05	3440653							●	●	●	●												
	Set 20-05	3440654										●	●	●	●	●	●	●	●	●	●	●		
	Set 25-05	3440655																					●	●
Twist drill HSS	MT 2	3051002		●	●	●	●	●																
	MT 3	3051003							●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○
Clamping disc	Ø 170 mm	3440295		●																				
	Ø 220 mm	3440552				●																		
	Ø 240 mm	3441352					●																	
	Ø 265 mm	3441452						●																
	Ø 300 mm No. 4	3442976							●	●														
	Ø 320 mm A2-5	3442979																		●				
	Ø 330 mm No. 5	3442978									●	●	●											
	Ø 350 mm No. 6	3442980												●	●	●								
	Ø 450 mm No. 8	3442982															●	●	●		●	●	●	●
Chuck flange	Ø 100 mm cyl.	3440312		●																				
	Ø 125 mm cyl.	3440313			●																			
	Ø 125 mm cyl.	3440511				●																		
	Ø 125 mm short	3441312					●	●																
	Ø 160 mm short	3441413						●																
BISON check flange	Ø 160 mm	3450245								●										●				

● Recommended | ○ Recommended - restrictions apply

Turning accessories		Article no.	TU 1503V	TU 2004V	TU 2304/V	TU 2406/V	TU 2506/V	TU 2807/V	TU 3008/G/V	TH 3309/D/V	TH 3610/D	TM 4010/D	TH 40	TH 42	TH 4210V	TH 46	TH 4615V	TH 56	TH 5620V	TZ 4/TZ4V	TX 5216	TX 6222	TH 66	TH 80
Chuck flange	Ø 160 mm No. 4	3441512								●														
	Ø 200 mm No. 4	3441513								●														
	Ø 200 mm No. 5	3441514									●	●	●											
	Ø 200 mm No. 6	3444012												●	●	●								
	Ø 250 mm No. 6	3444013												●	●									
	Ø 315 mm No. 8	3444041															●	●	●		●	●	●	●
Collet chuck	ER16	3440281	●																					
	ER25	3440305		●	●																			
	ER25	3440505				●																		
	ER32	3440506				●																		
	ER25	3441305					●	●																
	ER32	3441306					●	●																
BISON collet chuck	16C	3450246																		●				
Collet chuck	5C - No. 4	3441554							●	●														
	5C - No. 5	3441555									●	●	●											
	5C - No. 6	3441556												●	●	●								
	5C - No. 8	3441558															●	●	●		●	●	●	●
Travelling centre	MT 2	3440702		●	●	●	●	●																
	MT 3	3440703							●	●	●		●							●				
	MT 4	3440704										●		●	●	●	●							
	MT 5	3440705																●	●		●	●	●	●
Travelling centre with replaceable tips	MT 2	3440732		●	●	●	●	●																
	MT 3	3440733							●	●	●		●							●	●	●	●	●
	MT 4	3440734										●		●	●	●	●							
BISON Travelling centre	MT 2	3451002	●	●	●	●	●																	
	MT 3	3451003						●	●	●	●								●					
	MT 4	3451004										●		●	●	●								
	MT 5	3451005															●	●		●	●	●	●	●
Collet kit	5C	3441509							●	●	●	●	●	●	●	●	●	●	●					
Collet kit	ER 16	3440282	●																					
	ER 25	3441109		●	●	●	●	●																
	ER 32	3441122		●	●	●	●	●																
Collet chuck device	5C	3441506								●														
	5C	3441507												●										
Position stop		3441522								●														
		3441523									●													
		3444022														●	●							
		3444023																●	●					
Fixed steady		3440211	●																					
		3440231		●																				
		3440361			●																			
		3440515				●																		
		3441315					●																	
		3441415						●																
		3441461							●															
Travelling steady		3440210	●																					
		3440230		●																				
		3440360			●																			
		3441310				●	●																	
		3441410						●																
		3441460							●															
Universal coolant unit	230 V	3352002	●	●	●	●	●	●	●	●	●													

This equipment table covers all recommended equipment options. Depending on the individual case, use of accessories can be meaningful beyond this.

OPTIMUM

Three-jaw lathe chuck

OPTIMUM Three-jaw lathe chuck centre clamping	
▶ **Cast lathe chuck**	
› Cylindrical centring mount as per DIN 6350	
› Concentricity better than 0.05 mm	
› Chuck flange required	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 80 mm	3440287
Block jaw set, soft 1-part - 3 pcs.	3442902
Ø 100 mm	3442710
Block jaw set, soft 1-part - 3 pcs.	3442904
Ø 125 mm	3442712
Block jaw set, soft 1-part - 3 pcs.	3442906
Ø 160 mm	3442716
Block jaw set, soft 1-part - 3 pcs.	3442907

„Chuck flange“ on page 196

OPTIMUM

Three-jaw lathe chuck Camlock

OPTIMUM Three-jaw lathe chuck Camlock centre clamping	
▶ **Cast lathe chuck**	
› Camlock direct mount DIN 55029	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3442761
Block jaw set, soft 1-part - 3 pcs.	3442907
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3442762
Block jaw set, soft 1-part - 3 pcs.	3442910
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3442764
Block jaw set, soft 1-part - 3 pcs.	3442910
Ø 200 mm Camlock DIN ISO 702-2 No. 6	3442763
Block jaw set, soft 1-part - 3 pcs.	3442910
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3442765
Block jaw set, soft 1-part - 3 pcs.	3442912
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3442768
Block jaw set, soft 1-part - 3 pcs.	3442916

OPTIMUM

Four-jaw lathe chuck

OPTIMUM Four-jaw lathe chuck centre clamping	
▶ **Cast lathe chuck**	
› Cylindrical centring mount as per DIN 6350	
› Concentricity better than 0.05 mm	
› Chuck flange required	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 80 mm	3442808
Block jaw set, soft 1-part - 4 pcs.	3442920
Ø 100 mm	3442810
Block jaw set, soft 1-part - 4 pcs.	3442922
Ø 125 mm	3442812
Block jaw set, soft 1-part - 4 pcs.	3442924
Ø 160 mm	3442816
Block jaw set, soft 1-part - 4 pcs.	3442926

OPTIMUM Four-jaw lathe chuck individual clamping	
› **Scope of delivery:** Chuck key, set of hard reversible jaws	
Ø 80 mm	3440286
Ø 100 mm	3442872
Ø 125 mm	3442874

OPTIMUM **Data on the Lathe chucks, see page 187**
„Chuck flange“ on page 196

OPTIMUM

Four-jaw lathe chuck Camlock

OPTIMUM Four-jaw lathe chuck Camlock centre clamping	
▶ **Cast lathe chuck**	
› Camlock direct mount DIN 55029	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3442840
Block jaw set, soft 1-part - 4 pcs.	3442926
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3442843
Block jaw set, soft 1-part - 4 pcs.	3442927
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3442845
Block jaw set, soft 1-part - 4 pcs.	3442927
Ø 200 mm Camlock DIN ISO 702-2 No. 6	3442846
Block jaw set, soft 1-part - 4 pcs.	3442928
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3442852
Block jaw set, soft 1-part - 4 pcs.	3442935
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3442856
Block jaw set, soft 1-part - 4 pcs.	3442938

OPTIMUM Four-jaw lathe chuck Camlock individual clamping	
› **Scope of delivery:** Chuck key, set of hard reversible jaws	
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3442879
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3442880
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3442884
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3442888
Ø 400 mm Camlock DIN ISO 702-2 No. 8	3442890

MADE IN EU

Three-jaw lathe chuck

BISON Three-jaw lathe chuck centre clamping	
▶ **Lathe chuck body made of premium cast material**	
› All work surfaces induction tempered and polished to ensure a high level of clamping and repetition accuracy	
› Uniform clamping forces	
› High concentricity (better than DIN 6386)	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 125 mm DIN 6350	3450230
Block jaw set, soft	3450410
Ø 160 mm DIN 6350	3450232
Block jaw set, soft	3450412

BISON Three-jaw lathe chuck centre clamping	
▶ **Lathe chuck body made of premium steel**	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3450530
Block jaw set, soft	3450426

Three-jaw lathe chuck Camlock

BISON Three-jaw lathe chuck Camlock centre clamping	
▶ **Lathe chuck body made of premium cast material**	
› All work surfaces induction tempered and polished	
› Camlock direct mount DIN 55029	
› High concentricity (better than DIN 6386)	
› Incl. chuck key, hard single-part outside clamping jaws	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3450305
Block jaw set, soft	3450412
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3450310
Block jaw set, soft	3450414
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3450315
Block jaw set, soft	3450414
Ø 200 mm Camlock DIN ISO 702-2 No. 6	3450320
Block jaw set, soft	3450414
Ø 200 mm DIN 6350 A2-5	3450210
Block jaw set, soft	3450414
Ø 250 mm Camlock DIN ISO 702-2 No. 5	3450325
Block jaw set, soft	3450416
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3450330
Block jaw set, soft	3450416
Ø 250 mm Camlock DIN ISO 702-2 No. 8	3450331
Block jaw set, soft	3450416
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3450335
Block jaw set, soft	3450418

Four-jaw lathe chuck

BISON Four-jaw lathe chuck centre clamping	
▶ **Lathe chuck body made of premium cast material**	
› All work surfaces induction tempered and polished	
› Uniform clamping forces	
› High concentricity (better than DIN 6386)	
› **Scope of delivery:** Chuck key, hard single-part outside clamping jaws	
Ø 125 mm DIN 6350	3450234
Block jaw set, soft	3450420
Ø 160 mm DIN 6350	3450236
Block jaw set, soft	3450422

Chuck flange	
Ø 125 mm for three- and four-jaw lathe chucks Ø 125 mm	3450240
Ø 160 mm for three- and four-jaw lathe chucks Ø 160 mm	3450241
Ø 200 mm for three- and four-jaw lathe chucks Ø 200 mm	3450212
Ø 250 mm for three- and four-jaw lathe chucks Ø 250 mm	3450218

„Technical data four-jaw lathe chuck“ on page 187
„Chuck flange“ on page 196

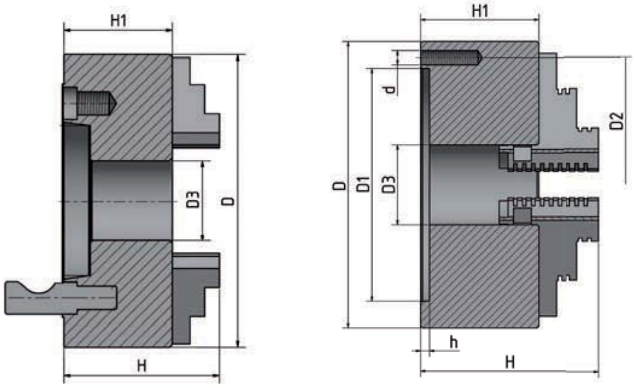
Four-jaw lathe chuck Camlock

BISON Four-jaw lathe chuck Camlock centre clamping	
▶ **Lathe chuck body made of premium cast material**	
› Incl. chuck key, hard single-part outside clamping jaws	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3450355
Block jaw set, soft	3450422
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3450360
Block jaw set, soft	3450424
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3450365
Block jaw set, soft	3450424
Ø 200 mm Camlock DIN ISO 702-2 No. 6	3450370
Block jaw set, soft	3450424
Ø 250 mm DIN 6350 for **A2-5**	3450216
Block jaw set, soft	3450426
Ø 250 mm Camlock DIN ISO 702-2 No. 5	3450375
Block jaw set, soft	3450426
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3450380
Block jaw set, soft	3450426
Ø 250 mm Camlock DIN ISO 702-2 No. 8	3450381
Block jaw set, soft	3450426
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3450385
Block jaw set, soft	3450428
Ø 400 mm Camlock DIN ISO 702-2 No. 8	3450390
Block jaw set, soft	3450430

BISON Four-jaw lathe chuck Camlock centre clamping	
▶ **Lathe chuck body made of premium steel**	
› Incl. chuck key, hard single-part outside clamping jaws	
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3450580
Block jaw set, soft	3450426
Ø 250 mm DIN 6350 for **A2-5**	3450217
Block jaw set, soft	3450426

OPTIMUM

Three-jaw lathe chuck

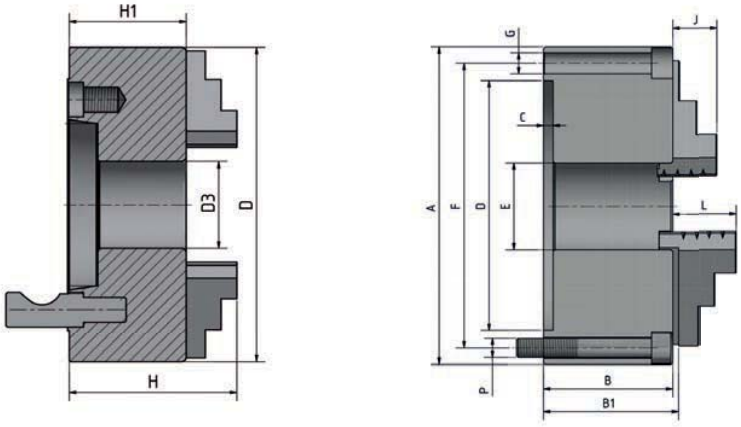


Chuck	Art. no.	D	D1	D2	D3	d	H	H1	h	Rotational speed (rpm)
Ø 80 mm	3440287	80	55	66	16	M6	66	50	3.5	4 000
Ø 100 mm	3442710	100	72	84	22	8M	75	55	3.5	4 200
Ø 125 mm	3442712	125	95	108	30	M8	84	58	4	3 800
Ø 160 mm	3442716	160	130	142	40	M8	95	65	5	3 000

Chuck	Camlock	Art. no.	D	D3	H	H1	Indexing circle	Rotational speed (rpm)
Ø 160 mm	No.4	3442761	160	40	101	71	82.6	3 000
Ø 200 mm	No.4	3442762	200	50	124	86	82.6	3 000
Ø 200 mm	No.5	3442764	200	52	124	86	104.8	3 000
Ø 200 mm	No.6	3442763	200	65	128	86	133.4	3 000
Ø 250 mm	No.6	3442765	250	70	140	98	133.4	2 400
Ø 315 mm	No.8	3442768	315	105	180	102.5	171.4	1 800

BISON

Three-jaw lathe chuck



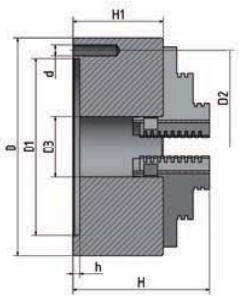
Chuck	Camlock	Art. no.	D	D3	H1	H	Indexing circle	Rotational speed (rpm)
Ø 160 mm	No.4	3450305	160	42	81.5	124.5	82.6	3 600
Ø 200 mm	No.4	3450310	200	56	107	136	82.6	3 000
Ø 200 mm	No.5	3450315	200	56	107	136	104.8	3 000
Ø 200 mm	No.6	3450320	200	55	91	136	133.4	3 000
Ø 250 mm	No.5	3450325	250	76	103.5	156.5	104.8	2 500
Ø 250 mm	No.6	3450330	250	76	103.5	156.5	133.4	2 500
Ø 250 mm	No.8	3450331	250	76	103.5	156.5	171.4	2 500
Ø 315 mm	No.8	3450335	315	103	117.7	174.7	171.4	2 000

Chuck	Art. no.	B	B1	C	D	E	F	G	J	L	kg	Rotational speed (rpm)
Ø 125 mm	3450230	56	60.8	4	95	32	108	3 x M8	20	40	5	4 000
Ø 160 mm	3450232	64.5	69.3	4	125	42	140	3 x M10	32	43	10	3 600

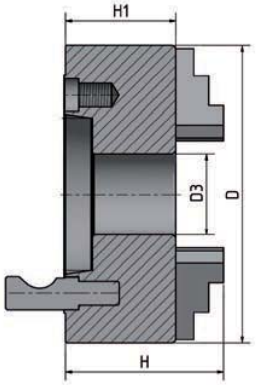
OPTIMUM

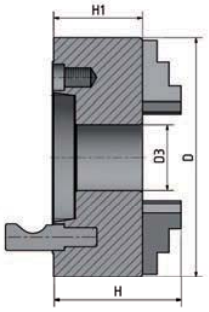
Four-jaw lathe chuck

Chuck	Art. no.	D	D1	D2	D3	d	H	H1	h	Rotational speed (rpm)
centre clamping										
Ø 80 mm	3442808	80	55	66	16	M6	66	50	3.5	4 300
Ø 100 mm	3442810	100	72	84	22	M8	75	55	3.5	3 400
Ø 125 mm	3442812	125	95	108	30	M8	84	58	4	2 750
Ø 160 mm	3442816	160	130	142	45	M8	95	65	5	2 150
individual clamping										
Ø 80 mm	3440286	80	55	66	22	M6	59	42	4	4 800
Ø 100 mm	3442872	100	72	84	25	M8	75	54	4	3 500
Ø 125 mm	3442874	125	95	108	30	M8	78	58	6	3 000



Chuck	Camlock	Art. no.	D	D3	H	H1	Indexing circle	Rotational speed (rpm)
Camlock centre clamping								
Ø 160 mm	No.4	3442840	160	40	95	71	82.6	2 150
Ø 200 mm	No.4	3442843	200	55	109	86	82.6	3 000
Ø 200 mm	No.5	3442845	200	52	109	86	104.8	3 000
Ø 200 mm	No.6	3442846	200	65	109	86	133.4	3 000
Ø 250 mm	No.6	3442852	250	70	120	98	133.4	2 400
Ø 315 mm	No.8	3442856	315	100	142.5	102.5	171.4	1 800
Camlock individual clamping								
Ø 200 mm	No.4	3442879	200	56	107	75	82.6	2 100
Ø 200 mm	No.5	3442880	200	56	107	75	104.8	2 100
Ø 250 mm	No.6	3442884	250	100	120	80	133.4	1 600
Ø 315 mm	No.8	3442888	315	95	134	100	171.4	1 200
Ø 400 mm	No.8	3442890	400	125	148	101	171.4	1 000

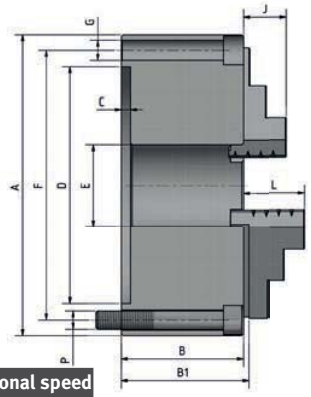




BISON

Four-jaw lathe chuck

Chuck	Camlock	Art. no.	D	D3	H1	H	Indexing circle	Rotational speed (rpm)
centre clamping								
Ø 160 mm	No.4	3450355	160	42	81.5	124.5	82.6	3 600
Ø 200 mm	No.4	3450360	200	55	91	136	82.6	3 000
Ø 200 mm	No.5	3450365	200	55	91	136	104.8	3 000
Ø 200 mm	No.6	3450370	200	55	91	136	133.4	3 000
Ø 250 mm	No.5	3450375	250	76	103.5	156.5	104.8	2 500
Ø 250 mm	No.6	3450380	250	76	103.5	156.5	133.4	2 500
Ø 250 mm	No.8	3450381	250	76	103.5	156.5	171.4	2 500
Ø 315 mm	No.8	3450385	315	103	117.7	174.7	171.4	2 000
Ø 400 mm	No.8	3450390	400	136	128.5	207.5	171.4	1 600



Chuck	Art. no.	B	B1	C	D H7	E	F	G	J	L	kg	Rotational speed (rpm)
Ø 125 mm	3450234	56	60.8	4	95	32	108	3 x M8	20	40	5	4 000
Ø 160 mm	3450236	64.5	69.3	4	125	42	140	3 x M10	32	43	10	3 600
Ø 250 mm	3450216	75	79.8	4	160	55	176	6 x M10	29	45	17.5	2 500
NEW **Ø 250 mm**	3450217	75	79.8	4	160	55	176	6 x M10	29	45	17.5	3 500

Quick change tool holder

Quick change tool holder
› Repetition accuracy 0.01 mm · angle scale on tool holder head
› 40 different angle settings · Height adjustment via star knob
› Tool holder head and tool holder with profile ground gears
› Play-free and repetition-accurate clamping of the change holder
› For self-assembly!

Quick change tool holder set SWH AA	3384311
› Tool holder head AA	
› 3 pcs. tool holder 12 x 50 type D for square chisels	
› 1 pc. tool holder 12 x 50 type H for round chisels	
Spare tool holder 12 x 50 Type D for square chisels	3384312
Spare tool holder 12 x 50 Type H for round chisels	3384320

Quick change tool holder set SWH 1-A	3384301
› Tool holder head A	
› 3 pcs. tool holder 20 x 90 type D for square chisels	
› 1 pc. tool holder 20 x 85 type H for round chisels	
Spare tool holder 20 x 90 type D for square chisels	3384302
Spare tool holder 20 x 85 type H for round chisels	3384321

Quick change tool holder set SWH 3-E	3384303
› Tool holder head E	
› 3 pcs. tool holder 20 x 100 type D for square chisels	
› 1 pc. tool holder 30 x 100 type H for round chisels	
Spare tool holder 20 x 100 type D for square chisels	3384304
Spare tool holder 30 x 100 type H for round chisels	3384322

Quick change tool holder set SWH 5-B	3384305
› Tool holder head B	
› 3 pcs. tool holder 25 x 120 type D for square chisels	
› 1 pc. tool holder 32 x 130 type H for round chisels	
Spare tool holder 25 x 120 type D for square chisels	3384306
Spare tool holder 32 x 130 type H for round chisels	3384324

Quick change tool holder set SWH 7-C	3384307
› Tool holder head C	
› 3 pcs. tool holder 32 x 150 type D for square chisels	
› 1 pc. tool holder 40 x 160 type H for round chisels	
Spare tool holder 32 x 150 type D for square chisels	3384308
Spare tool holder 40 x 160 type H for round chisels	3384326

Quick change tool holder set SWH 9-D	3384309
› Tool holder head D	
› 3 pcs. tool holder 40 x 180 type D for square chisels	
› 1 pc. tool holder 63 x 180 type H for round chisels	
Spare tool holder 40 x 180 type D for square chisels	3384332
Spare tool holder 63 x 180 type H for round chisels	3384333

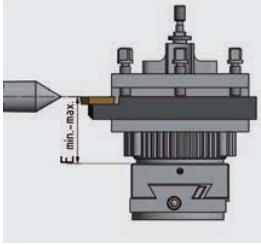
Factory assembly and adjustment SWH	9000400
› Only with orders for new machines	

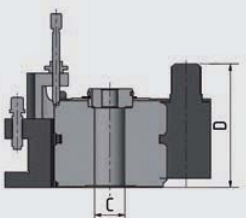
Tool holder head

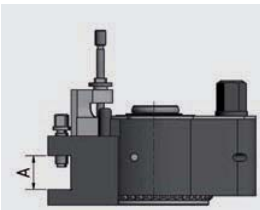
Tool holder type D
for square chisels

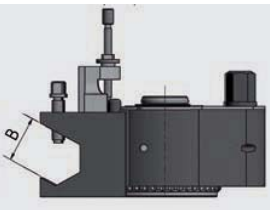
Tool holder type H
for round chisels

Tool holder head dimensions







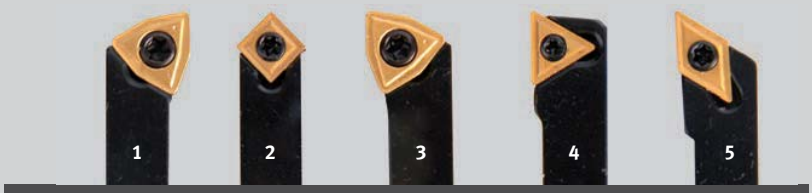


Tool holder head dimensions			SWH AA	SWH 1-A	SWH 3-E	SWH 5-B	SWH 7-C	SWH 9-D
Turning diameter		mm	120 - 220	150 - 300	200 - 400	300 - 500	400 - 700	600 - 800
Drive output lathe max.		kW	1	2	4.5	7	13	20
Support width square chisel max	A	mm	12	20	20	25	32	40
Diameter round chisel max.	B	mm	Ø 12	Ø 20	Ø 20	Ø 25	Ø 32	Ø40
Normal bore	C	mm	Ø13	Ø 20	Ø 20	Ø 32	Ø 40	Ø 40
Height of base body/overall	D	mm	37	56	68	79	110	122
Height top carriage to lathe centre	E	mm	18 - 26	28.5 - 39.5	28.5 - 39.5	37 - 57	47 - 87	60 - 95

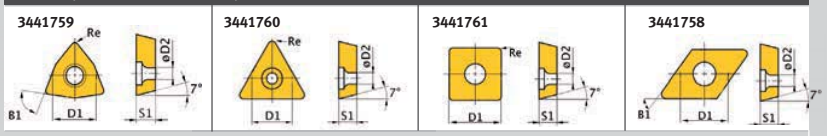
Lathe tool set
HM 8 mm

Lathe tool set HM 8 mm	3441662
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

	ISO			h1
1	SWGC	L0808	D05	8 mm
2	SSDC	N0808	D06	8 mm
3	SWGC	R0808	D05	8 mm
4	STGC	R0808	D09	8 mm
5	SDJC	R0808	D07	8 mm



HM replacement turning plates (5 pcs. each)



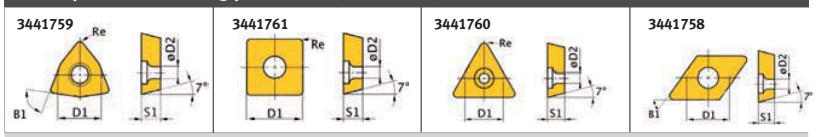
No.	Art. no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441761	SCMT060204	6.35	2.8	90°	2.38	0.4
4	3441760	TCMT090204	5.56	2.5	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

Lathe tool set
HM 10 mm

Lathe tool set HM 10 mm	3441664
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

	ISO			h1
1	SWGC	L1010	E05	10 mm
2	SSDC	N1010	E06	10 mm
3	SWGC	R1010	E05	10 mm
4	STGC	R1010	E09	10 mm
5	SDJC	R1010	E07	10 mm

HM replacement turning plates (5 pcs. each)



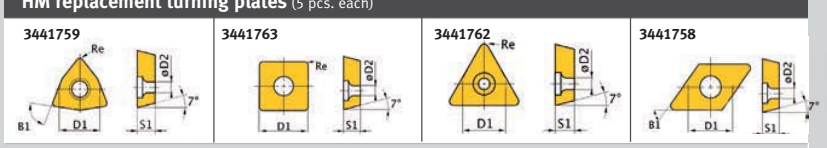
No.	Art. no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441761	SCMT060204	6.35	2.8	90°	2.38	0.4
4	3441760	TCMT090204	5.56	2.5	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

Lathe tool set
HM 12 mm

Lathe tool set HM 12 mm	3441666
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

	ISO			h1
1	SWGC	L1212	H 05	12 mm
2	SSDC	N1212	H 09	12 mm
3	SWGC	R1212	H 05	12 mm
4	STGC	R1212	H 11	12 mm
5	SDJC	R1212	H 07	12 mm

HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right
1/3	3441759	WCMT050308	7.94	3.2	80°	3.18	0.8
2	3441763	SCMT09T304	6.35	2.8	90°	2.38	0.4
4	3441762	TCMT110204	6.35	2.8	60°	2.38	0.4
5	3441758	DCMT070204	6.35	2.8	55°	2.38	0.4

Lathe tool set
HM 12 mm

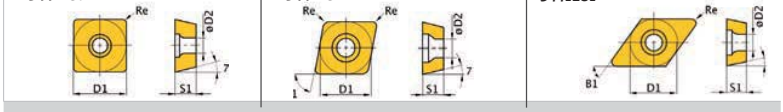
Lathe tool set HM 12 mm	3441212
› 5-part	
› With HM turning plates	
› TiN coated	

MADE IN GERMANY

	ISO	h1	Single lathe tool Art.no.
1	SSSC R1212 J09	12 mm	3441220
2	SCLC R1212 J09	12 mm	3441221
3	SDNC N1212 J11	12 mm	3441222
4	SDJC R1212 J11	12 mm	3441223
5	SDJC L1212 J11	12 mm	3441224

HM replacement turning plates (5 pcs. each)

3441280 | 3441282 | 3441281



No.	Art. no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

NEW

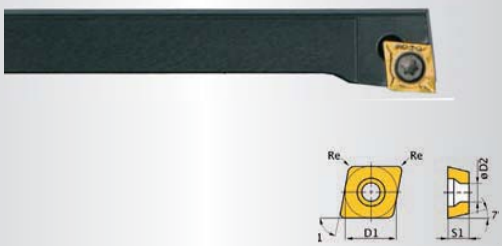
Lathe tool 12 mm MADE IN GERMANY	Article no.
SSSC L1212J09	3441225
HM replacement turning plates (5 pcs. each)	3441280

SCMT09T304	9.525	4.4	90°	3.97	0.4

NEW

Lathe tool 12 mm MADE IN GERMANY	Article no.
SCLC L1212J09	3441226
HM replacement turning plates (5 pcs. each)	3441282

CCMT09T304	9.525	4.4	80°	3.97	0.4



Lathe tool set
HM 16 mm

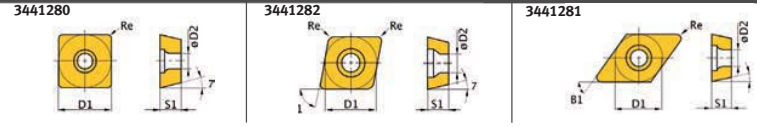
Lathe tool set HM 16 mm	3441216
› 5-part	
› With HM turning plates	
› TiN coated	

MADE IN GERMANY

	ISO	h1	Single lathe tool Art.no.
1	SSSC R1616 J09	16 mm	3441230
2	SCLC R1616 J09	16 mm	3441231
3	SDNC N1616 J11	16 mm	3441232
4	SDJC R1616 J11	16 mm	3441233
5	SDJC L1616 J11	16 mm	3441234

HM replacement turning plates (5 pcs. each)

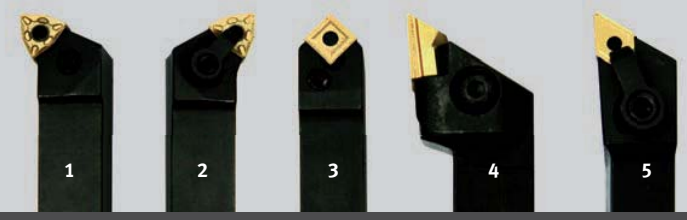
3441280 | 3441282 | 3441281



No.	Art. no.	ISO	D1	D2	B1	S1	right
1	3441280	SCMT09T304	9.525	4.4	90°	3.97	0.4
2	3441282	CCMT09T304	9.525	4.4	80°	3.97	0.4
3-5	3441281	DCMT11T304	9.525	4.4	55°	3.97	0.4

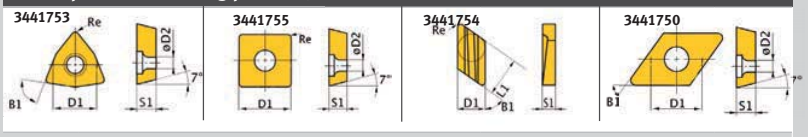
Lathe tool set
HM 16 mm

Lathe tool set HM 16 mm	3441668
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	PWLN	R1616	H06	16 mm
2	PWLN	L1616	H06	16 mm
3	PSDNN	1616	H09	16 mm
4	CKJN	R1616	H16	16 mm
5	MDJN	R1616	H11	16 mm

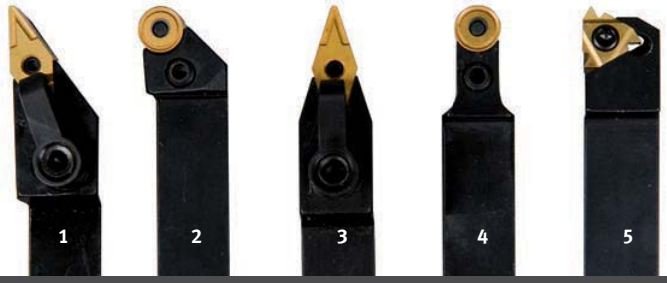
HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right	L1
1/2	3441753	WNMG060408	9.252	3.81	80°	4.76	0.8	
3	3441755	SNMG090304	9.252	3.81	90°	3.18	0.4	
4	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
5	3441750	DNMG110408	9.525	3.81	55°	4.76	0.8	

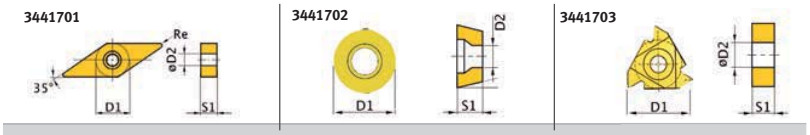
Lathe tool set
HM 16 mm

Lathe tool set HM 16 mm	3441610
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	MVJNR	1616	H16	16 mm
2	MVVNN	1616	H16	16 mm
3	PRANN	1616	H10	16 mm
4	PRGNR	1616	H10	16 mm
5	SER	1616	H16	16 mm

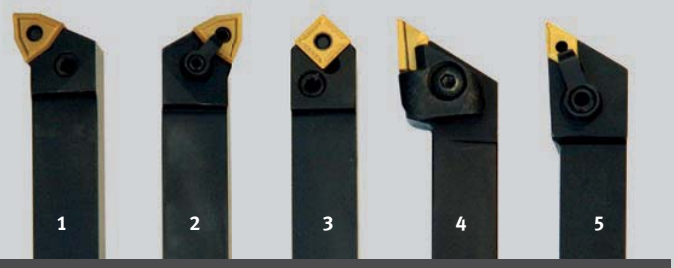
HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right
1/2	3441701	VNMG160408	9.525	3.81	35°	4.76	0.8
3/4	3441702	RNMM1003MO	10	3.6	-	3.97	
5	3441703	16ER AG60	16	3.95	60°	3.65	

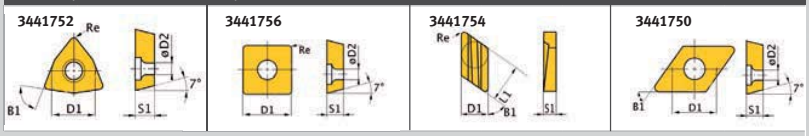
Lathe tool set
HM 16 mm

Lathe tool set HM 16 mm	3441670
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	PWLN	R2020	08 grain	20 mm
2	PWLN	L2020	08 grain	20 mm
3	PSDN	N2020	12 grain	20 mm
4	CKJN	R2020	16 grain	20 mm
5	MDJN	R2020	11 grain	20 mm

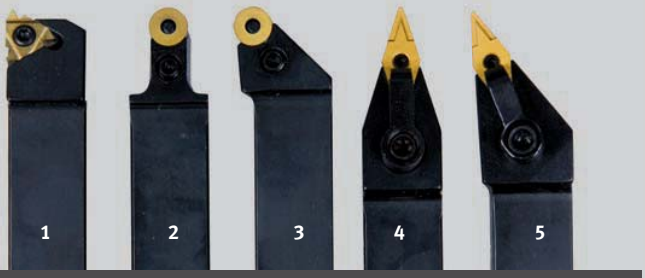
HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right	L1
1/2	3441752	WNMG080408	9.252	3.81	80°	4.76	0.8	
3	3441756	SNMG120408	12.7	5.16	90°	4.76	0.8	
4	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
5	3441750	DNMG110408	9.525	3.81	55°	4.76	0.8	

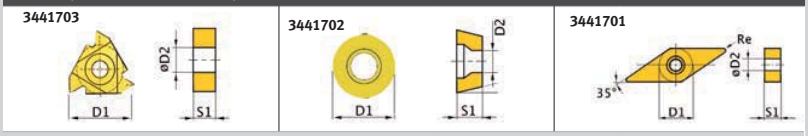
Lathe tool set
HM 20 mm

Lathe tool set HM 20 mm	3441617
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	SER	2020	16 grain	20 mm
2	PRGNR	2020	10 grain	20 mm
3	PRANN	2020	10 grain	20 mm
4	MVVNN	2020	16 grain	20 mm
5	MVJNR	2020	16 grain	20 mm

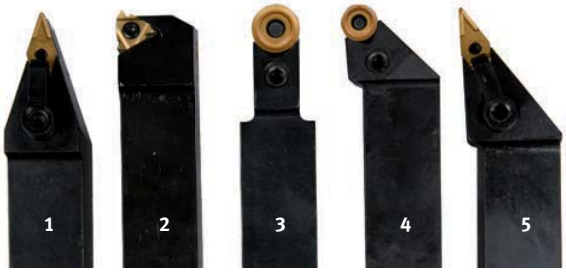
HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right
1	3441703	16ER AG60	16	3.95	60°	3.65	
2/3	3441702	RNMM1003MO	10	3.6	-	3.97	
4/5	3441701	VNMG160408	9 525	3.81	35°	4.76	0.8

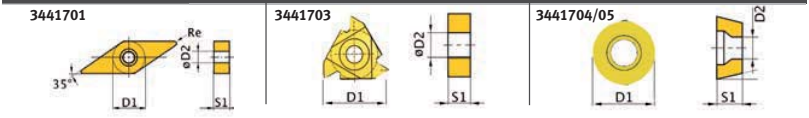
Lathe tool set
HM 25 mm

Lathe tool set HM 25 mm	3441623
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	MVVN	N2525	M16	25 mm
2	SE	R2525	M16	25 mm
3	PRGN	R2525	M12	25 mm
4	PRAN	N2525	M16	25 mm
5	MVJN	R2525	M16	25 mm

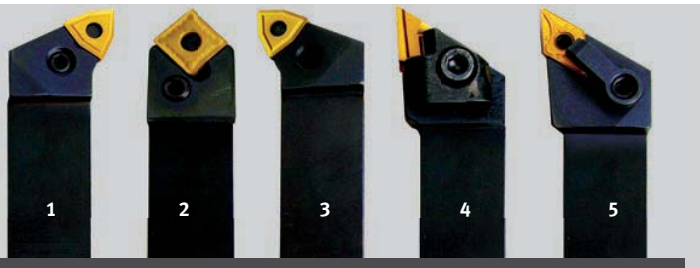
HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right
1/2	3441701	VNMG160408	9 525	3.81	35°	4.76	0.8
3	3441703	16ER AG60	16	3.95	60°	3.65	
4	3441705	RNMG1204MO	12	4.75	R	5.1	-
5	3441704	RNMG1605MO	16	5.4	R	6.3	-

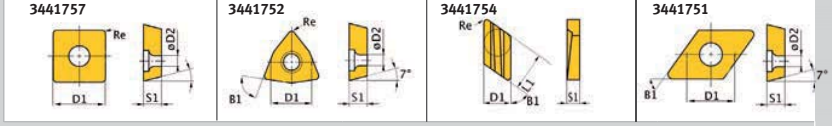
Lathe tool set
HM 25 mm

Lathe tool set HM 25 mm	3441672
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	



	ISO			h1
1	PWLN	L2525	M08	25 mm
2	PSDN	N2525	M15	25 mm
3	PWLN	R2525	M08	25 mm
4	CKJNR	R2525	M16	25 mm
5	MDJN	R2525	M15	25 mm

HM replacement turning plates (5 pcs. each)



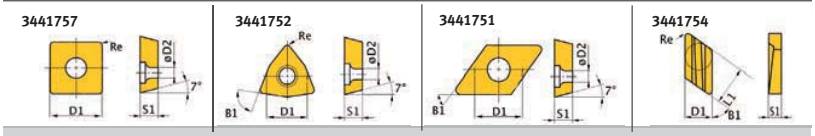
No.	Art. no.	ISO	D1	D2	B1	S1	right	L1
1/2	3441752	WNMG080408	9.252	3.81	80°	4.76	0.8	
3	3441757	SNMG150608	15.875	6.35	90°	6.35	0.8	
4	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
5	3441751	DNMG150408	12.7	5.16	55°	4.76	0.8	

Lathe tool set
HM 32 mm

Lathe tool set HM 32 mm	3441674
› 5-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

	ISO			h1
1	PWLN	L3232	P08	32 mm
2	PSDN	N3232	P15	32 mm
3	PWLN	R3232	P08	32 mm
4	CKJN	R3232	P16	32 mm
5	MDJN	R3232	P15	32 mm

HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO	D1	D2	B1	S1	right	L1
56/58	3441752	WNMG080408	9.252	3.81	80°	4.76	0.8	
57	3441757	SNMG150608	15 875	6.35	90°	6.35	0.8	
59	3441754	KNUX160405R	9.252		55°	4.76	0.5	16.15
60	3441751	DNMG150408	12.7	5.16	55°	4.76	0.8	

Inside lathe tool set 10 mm

Inside lathe tool set 10 mm	3441640
› 3-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

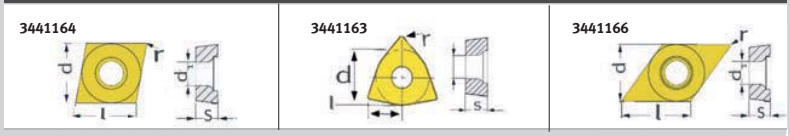
No.	ISO		
1	S10K	SCFCR	06
2	S10K	SDQCR	07
3	S10K	STFCR	11

Inside lathe tool set 12 mm

Inside lathe tool set 12 mm	3441641
› 3-part	
› With HM turning plates	
› TiN coated	
› Aluminium box	

No.	ISO		
1	S12M	SCFCR	06
2	S12M	SDQCR	07
3	S12M	STFCR	11

HM replacement turning plates (5 pcs. each)



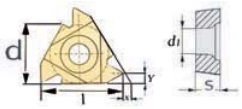
No.	Art. no.	ISO		l	s	R	d	d1
61	3441164	CCMT060204	C/80°	6.35	2.60	0.40	6.35	2.70
62	3441163	TCMT110204	T/60°	10.84	2.53	0.40	9.1	2.70
63	3441166	DCMT070204	D/55°	7.30	2.53	0.40	6.35	2.70

Inside thread turning tool set
8 - 20 mm

Inside thread turning tool set	3441650
› 5-part (8/10/12/16/20 mm)	
› With HM turning plates	
› TiN coated	
› Aluminium box	

No.	ISO			d
1	S10K	SIR 0008	H08	8 mm
2	S10K	SIR 0010	11 grain	10 mm
3	S10K	SIR 0012	M11	12 mm
4	S10K	SIR 0016	P16	16 mm
5	S10K	SIR 0020	S16	20 mm

HM replacement turning plates (5 pcs. each)



No.	Art. no.	ISO		l	s	R	d	d1
1	3441725	08IR A60	60° IR	8	2.22	4.76	2.5	M10
2/3	3441726	11IR A60	60° IR	11	3.22	6.35	3.0	M12
4/5	3441727	16IR A60	60° IR	16	3.65	9.5	3.95	M16

Lathe tool set
8 / 10 / 12 / 16 mm

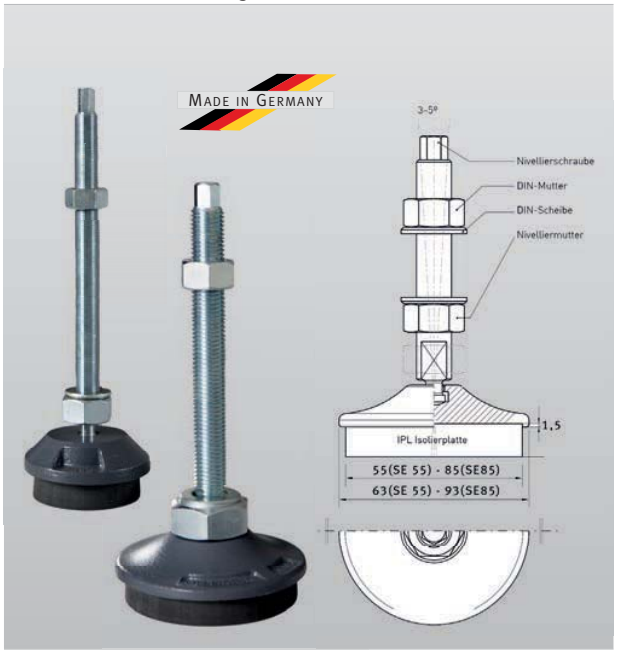
Lathe tool set HM 8 mm	3441601
11-part . With HM plates soldered on	
Lathe tool set HM 10 mm	3441602
11-part . With HM plates soldered on	
Lathe tool set HM 12 mm	3441603
11-part . With HM plates soldered on	
Lathe tool set HM 16 mm	3441604
11-part . With HM plates soldered on	

Pilot bit set	3203010
› As per DIN 333 shape A	
› 10-part: 0.75/1/1.5/1.6/2/2.5/3/3.15/4/5 mm	
› Right-hand cutting chisel edge 120°	
› Countersinking angle 60°	
› Top quality HSS for tensile strength up to approx. 750 N/mm^2	
› Powerful shank, also well suited for predrilling and expansion drilling with a twist drill bit	
› Practical OPTIMUM plastic case	

Vibration damping machine base	
› The machines and equipment can be installed without anchors and precisely levelled using the height adjustment system.	
› Effective impact and vibration damping improves the machine's capability	
SE 1	3381012
SE 2	3381016
SE 3	3381018

Load	SE 1	SE 2	SE 3
Milling machines	340 kg	460 kg	1 600 kg
Sawing/gen. Machine	570 kg	1 460 kg	3 500 kg
Threading	M12	M16	M 20
Base Ø/Base height	120/32	160/35	185/39

Levelling platen/vibration damper	Article no.
› Effective vibration and structure-borne noise insulation and noise reduction	
› Fast and technically uncomplicated levelling	
› Eliminates floor unevenness up to 5º	
› Precision levelling by means of a regular threaded screw	
› Better distribution of impact-like axial forces due to the geometrically larger contact surface with the screw.	
› No notching effect - like for example with conical screw tips.	
› The levelling screw and the levelling disc are captively connected by a very simple system.	
› Problem-free changeover of the machine possible, as the complete levelling disc remains on the machine foot when the machine is lifted.	
SE 55	3352981
› Jackscrew M12 x 1 x 150	
› Maximum load: 600 kg	
SE 85	3352982
› Jackscrew M16 x 1 x 150	
› Maximum load: 1 500 kg	



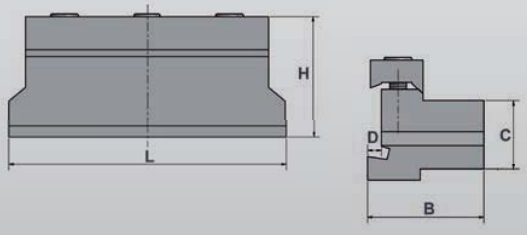
Clamping block set 16-05	3440653
Lathes: TU 3008 / TH 3309 / TH 3610	
› 1 pc. clamping block SLTBN 16-05	
› 1 pc. parting off tool SLIH 26-2	
› 1 pc. parting off tool SLIH 26-3	
› 5 pcs. cutting inserts GTN2 (cutting width 2.2 mm)	
› 5 pcs. cutting inserts GTN3 (cutting width 3.1 mm)	
› Aluminium box	

Clamping block set 20-05	3440654
Lathes: TH 4010 / TH 4210 / TH 46 / TH 56	
› 1 pc. clamping block SLTBN 20-05	
› 1 pc. parting off tool SLIH 26-3	
› 1 pc. parting off tool SLIH 26-4	
› 5 pcs. cutting inserts GTN3 (cutting width 3.1 mm)	
› 5 pcs. cutting inserts GTN4 (cutting width 4.1 mm)	
› Aluminium box	

Clamping block set 25-05	3440655
For lathes:TH 66 / TH 80	
› 1 pc. clamping block SLTBN 25-05	
› 1 pc. parting off tool SLIH 26-3	
› 1 pc. parting off tool SLIH 26-4	
› 5 pcs. cutting inserts GTN3 (cutting width 3.1 mm)	
› 5 pcs. cutting inserts GTN4 (cutting width 4.1 mm)	
› Aluminium box	

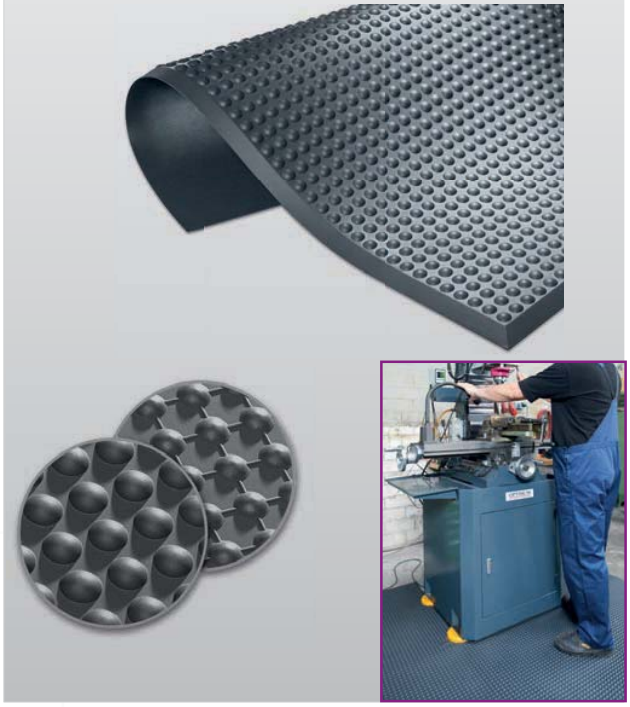
Replacement cutting insert set (10 pcs.)	
for cutting inserts **GTN 2**	3440663
for cutting inserts **GTN 3**	3440664
for cutting inserts **GTN 4**	3440665

Clamping block set with clamping inserts and parting off tool



Clamping block	16-05	20-05	25-05
L x W x H	88 x 38 x 42 mm	88 x 38 x 43 mm	100 x 42 x 43.5 mm
C	16 mm	20 mm	25 mm
D	4 mm	5 mm	5 mm

Workplace mats – for dry and wet areas	Article no.
› Fire-resistant	
› Made of polyurethane on polyether basis	
› Surface: nubbed	
› Underside: nubbed for maximum standing comfort and slip resistance	
› Thickness 14 mm	
› Colour anthracite	
› Temperature resistance -35°C to +95°C	
› Fire classification B1 as per DIN 4102	
› 5-year warranty	
Work mat	6800000
Dimensions 1 840 x 640 mm	
Work mat	6800005
Dimensions 1 840 x 940 mm	
Work mat	6800001
Dimensions 3 040 x 640 mm	
Work mat	6800006
Dimensions 3 040 x 940 mm	



Twist drill HSS with morse taper	Article no.
› 9-part; sizes 14.5/16/18/20/22/24/26/28/30 mm	
› Long lifetime, good chip removal	
› Right handed	
MT 2	3051002
MT 3	3051003

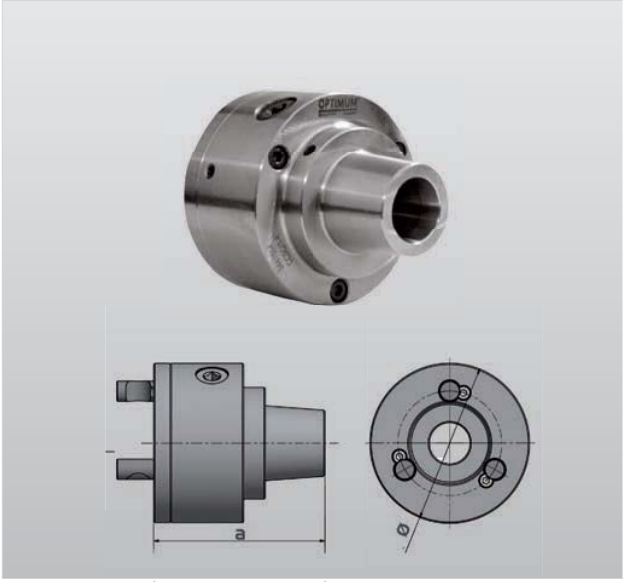
Clamping disc	Article no.
Ø 170 mm for TU 2004V	3440295
Ø 220 mm for TU 2406	3440552
Ø 240 mm for TU 2506	3441352
Ø 265 mm for TU 2807	3441452
Ø 300 mm Camlock DIN ISO 702-2 No. 4	3442976
Ø 320 mm A 2-5	3442979
Ø 330 mm Camlock DIN ISO 702-2 No. 5	3442978
Ø 350 mm Camlock DIN ISO 702-2 No. 6	3442980
Ø 450 mm No. 8	3442982

Chuck flange	Article no.
› For lathe chuck assembly	
Ø 160 mm Camlock DIN ISO 702-2 No. 4	3441512
› for four-jaw lathe chucks Ø 160 mm	
Ø 200 mm Camlock DIN ISO 702-2 No. 4	3441513
› for four-jaw lathe chucks Ø 200 mm	
Ø 200 mm Camlock DIN ISO 702-2 No. 5	3441514
› for four-jaw lathe chucks Ø 200 mm	
Ø 200 mm Camlock DIN ISO 702-2 No. 6	3444012
› for four-jaw lathe chucks Ø 200 mm	
Ø 250 mm Camlock DIN ISO 702-2 No. 6	3444013
› for four-jaw lathe chucks Ø 250 mm	
Ø 315 mm Camlock DIN ISO 702-2 No. 8	3444041
› for three- and four-jaw lathe chucks Ø 315 mm	

Chuck flange	Article no.
› For lathe chuck assembly	
Ø **100 mm**	3440312
› Cylindrical for TU 2004V	
Ø **125 mm**	3440313
› Cylindrical for TU 2304	
Ø **125 mm**	3440511
› Cylindrical for TU 2406	
Ø **125 mm**	3441312
› Short taper for TU 2506 / TU 2807	
Ø **160 mm**	3441413
› Short taper for TU 2807	

Collet chuck	Article no.
With short taper mount	
ER 16 Ø 22 mm	3440281
› **Cylindrical** for TU 1503V	
ER 25 Ø 72 mm	3440305
› **Cylindrical** for TU 2004V / TU 2304	
ER 25 Ø 52 mm	3440505
› **Cylindrical** for TU 2406	
ER 32 Ø 52 mm	3440506
› **Cylindrical** for TU 2406	
ER 25 Ø 52 mm	3441305
› **Cylindrical** for TU 2506 / TU 2807	
ER 32 Ø 52 mm	3441306
› **Short taper** for TU 2506 / TU 2807	

Collet chuck for collet type 5C 5C / 385E	
› as per DIN 6341	
› With spindle chuck as per DIN ISO 702-2	
› Concentricity 0.02 mm	
5C - Camlock no. 4	3441554
› a = 71 mm / Ø = 126 mm	
5C - Camlock Nr. 5	3441555
› a = 107.4 mm / Ø = 126 mm	
5C - Camlock no. 6	3441556
› a = 160 mm / Ø = 182 mm	
5C - Camlock no. 8	3441558
› a = 163 mm / Ø = 225 mm	

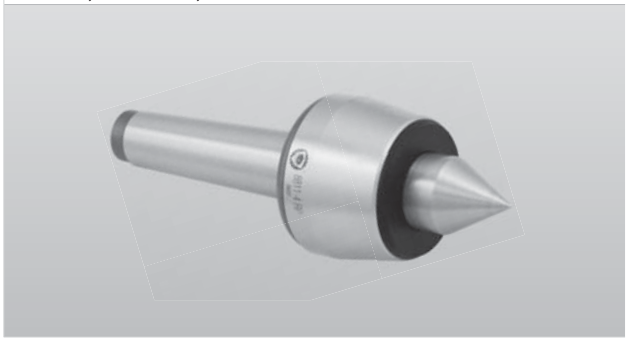


Travelling centre	Article no.
max. radial run-out 0.006 mm	
MT 1	3440701
› Max. speed 5 000 rpm; radial load max. 320 N	
MT 2	3440702
› Max. speed 5 000 rpm; radial load max. 400 N	
MT 3	3440703
› Max. speed 4 500 rpm; radial load max. 800 N	
MT 4	3440704
› Max. speed 3 500 rpm; radial load max. 1 250 N	
MT 5	3440705
› Max. speed 3 000 rpm; radial load max. 1 500 N	
MT 6	3440706
› Max. speed 2 500 rpm; radial load max. 1 800 N	

Collet kit SPZ - 5C	3441509
› 17-part, clamping range 3 - 25 mm	
› Norm 385 E	
› For universal collet chuck device	

Collet kit	Article no.
› DIN 6499	
ER 16	3440282
› 12-part, clamping range Ø 1 - 10 mm	
ER 25	3441109
› 15-part, clamping range Ø 1 - 16 mm	
ER 32	3441122
› 18-part, clamping range Ø 3 - 20 mm	

BISON g centre	Article no.
max. radial run-out 0.005 mm	
MT 2 (NSK ball roller bearings INA needle bearings)	3451002
› Max. speed 7 000 rpm; radial load max. 2 000 N	
MT 3 (NSK ball roller bearings INA needle bearings)	3451003
› Max. speed 5 000 rpm; radial load max. 4 000 N	
MT 4 (NSK ball roller bearings INA needle bearings)	3451004
› Max. speed 3 800 rpm; radial load max. 8 000 N	
MT 5 (2-row SKF angular contact bearings)	3451005
› Max. speed 3 000 rpm; radial load max. 20 000 N	



Travelling centre	Article no.
› With 7 replaceable tips	
› Body made of tempered and polished tool steel	
› Precision needle bearings guarantee excellent concentricity	
MT 2	3440732
MT 3	3440733
MT 4	3440734

Universal collet chuck device 5C	Article no.
› for lathe **TH 3309**	3441506
› for lathe **TH 42** (not Vario)	3441507

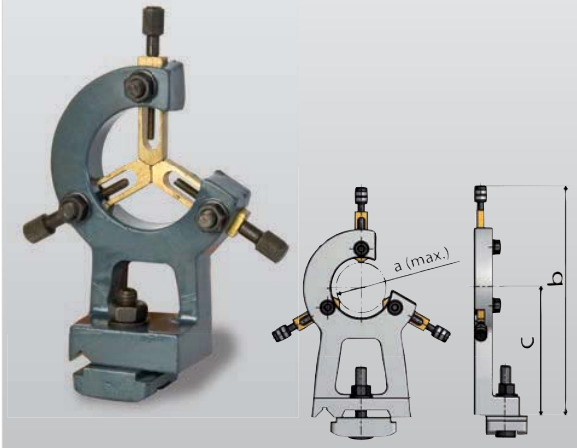
Universal coolant unit	3352002
› Motor output 100 Watt 230 V ~50 Hz	
› Delivery height max. 2 m	
› Flow rate 4.5 l/min	
› Container capacity 10 l	
› Complete with container, flexible tube and hose	
› With switch/plug combination	
› Magnetic base fastener for coolant hose	
› For self-assembly!	

AQUACUT C1	3530030
• 10 litre cannister	
• For mixing emulsions	
• Cooling emulsion	
• High-pressure resistant and containing mineral oil, for long tool life and clean surfaces	
• Emulsifiable with water, microbe-resistant and kind to the skin	

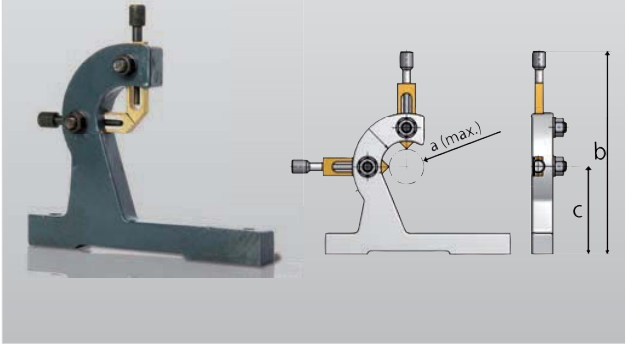
You will find more coolant accessories from page 246

Position stop With fine adjustment	Article no.
› for lathe **TH 3309**	3441522
› for lathe **TH 3610**	3441523
› for lathe **TH 46**	3444022
› for lathe **TH 56**	3444023

Fixed steady	Article no.
for **TU 1503V**	3440211
› a = Ø 40 mm; b = 145 mm; c = 70.5 mm	
for **TU 2004V**	3440231
› a = Ø 50 mm; b = 200 mm; c = 100 mm	
for **TU 2304 / TU 2304V**	3440361
› a = Ø 55 mm; b = 220 mm; c = 115 mm	
for **TU 2406 / TU 2506**	3441315
› a = Ø 50 mm; b = 245 mm; c = 125 mm	
for **TU 2807 / TU 2807V**	3441415
› a = Ø 55 mm; b = 250 mm; c = 140 mm	
for **TU 3008 / TU 3008G / TU 3008V**	3441461
› a = Ø 60 mm; b = 260 mm; c = 157 mm	



Travelling steady	Article no.
for **TU 1503V**	3440210
› a = Ø 45 mm; b = 155 mm; c = 76 mm	
for **TU 2004V**	3440230
› a = Ø 40 mm; b = 195 mm; c = 100 mm	
for **TU 2304 / TU 2304V**	3440360
› a = Ø 34 mm; b = 200 mm; c = 97 mm	
for **TU 2406 / TU 2506**	3441310
› a = Ø 34 mm; b = 220 mm; c = 107 mm	
for **TU 2807 / TU 2807V**	3441410
› a = Ø 56 mm; b = 250 mm; c = 130 mm	
for **TU 3008 / TU 3008G / TU 3008V**	3441460
› a = Ø 60 mm; b = 255 mm; c = 151 mm	



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Warranty conditions

› Independently of your legal warranty entitlement, OPTIMUM provides a guarantee on the basis of the following provisions for the period as stated in the catalogue for the respective machine; the guarantee period starts on the date of sale of the machine to the end customer. OPTIMUM offers a guarantee on catalogue products where a guarantee is specifically indicated. The guarantee exclusively covers defects resulting from material or manufacturing errors. The warranty exclusively covers spare parts but not the transport and installation costs or labour and ancillary services necessary for eliminating defects. The guarantee excludes unintended use or improper application such as overloading of the machine or the use of non-approved and unsuitable tools, use of force, damage caused by external influences or by foreign bodies, e.g., dust, chips or stones, damage caused by failure to observe the Operating Instructions, e.g., connection to the wrong mains voltage or current, failure to observe assembly instructions, conversions and extensions carried out by the customer, as well as normal wear. The guarantee also excludes partially or fully disassembled machines and machine tools. When claiming against guarantee/warranty, you must submit the original sales receipt showing the date of purchase. Repairs under guarantee/warranty may be performed by authorised partners only who will be named by the guarantee/warranty provider. The guarantee/warranty is restricted to the end customer of the new machine and is not transferrable.

General notes on operating our machines

› Our machines must be supervised at all times during operation. Leaving the machine during operations constitutes gross negligence.
› The details on machine precision are found in the technical data of the catalogue pages. If you do not find any values here, please contact info@optimum-maschinen.de for more detailed information.
› The stated precisions are achieved under standardised conditions (correct installation of the machine and ambient temperature of 20 °C). The machines are not designed for continuous operation.

› Please note that operators are required to make conversions in the event of installing third-party chucks or flanged chucks to reach the stated, technically possible rotating diameter.

Operation of machines with frequency converters

› **Electrical connection only by a qualified electrician**
Machines with frequency inverters or inverters must not be operated via an ordinary plug. A permanent connection is required. The drive components conduct a high leakage current via the protective conductor. Touching conductive parts when the protective conductor is interrupted can result in death or serious injury.

› **Building electrics:**
In order to avoid tripping of residual current circuit breakers - if present in the building electrics - an all-current-sensitive residual current circuit breaker type B is required.
AC - sensitive AC type RCDs (AC only) are not suitable for frequency inverters. AC sensitive earth-leakage circuit breakers of type AC are no longer in use and are no longer permitted in Germany.

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