

EN

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



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 m² 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



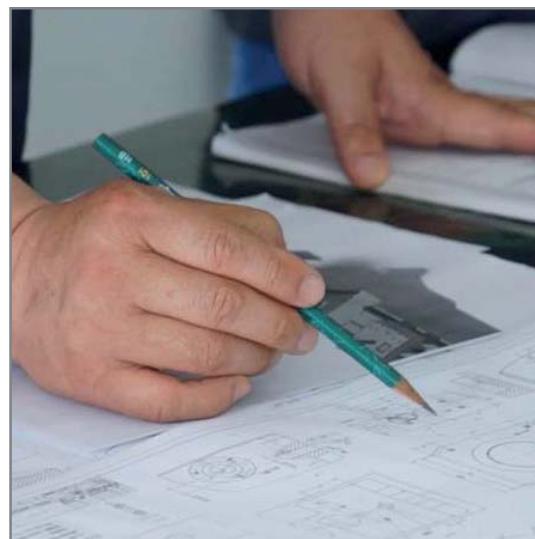
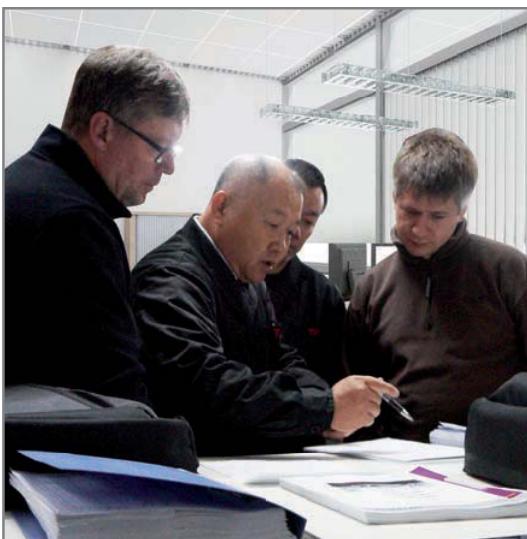
This explains why our products' compliance with the customer quality requirements described earlier on is our company's top priority.



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 pre-conditions 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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DRILLING MACHINES



Drills with gear units
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Belt-driven drills
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Radial drills
Page 50 - 51 and Page 54 - 57

Heavy duty gearbox drill for industrial use. With coolant and thread tapping unit, and automatic spindle sleeve feed. **DH 55V** with continuously adjustable speed control

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Dirt/water-resistant, easy-to-clean membrane keyboard
- ▶ 24 V DC electronics
- ▶ Electrical spindle sleeve feed
- ▶ Drilling depth stop
- ▶ Automatic gearwheel lubrication via oil pump
- ▶ Thread tapping device
- ▶ Machine lamp integrated in drilling head
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Generously dimensioned drilling table, solid, precision workmanship, with parallel T-slots and recirculating coolant duct, reinforcing ribs on rear, rotates through $\pm 90^\circ$ about the column, laterally tilting

- ▶ Motorised drilling table height adjustment
- ▶ Cooling unit and external coolant tank, can be removed for easier and complete emptying
- ▶ Chip filter in line with Machinery Directive
- ▶ Extremely stable, thick-walled cast-iron column for excellent force absorption
- ▶ Solid base plate with parallel T-slots, precision surface finish
- ▶ Optional footswitch available for toggling between clockwise and anticlockwise run and for thread tapping

OPTIdrill **DH 55V**

- ▶ Continuously adjustable speed control
- ▶ Feed shutdown





Technical specifications, accessories and dimensions

Model	DH 55G	DH 55V
Article no.	3034265	3034267
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor output	2.2 / 2.8 kW	2.8 kW
Coolant pump motor		100 W
Drilling performance		
Drilling performance in steel (S235JR)		Ø 55 mm
Cont. drilling performance steel (S235JR)		Ø 50 mm
Thread tapping steel (S235JR)		M42
Spindle		
Spindle sleeve stroke		200 mm
Spindle seat		MT 4
Throat		400 mm
Automatic spindle sleeve feed		3 speeds: 0.1 / 0.15 / 0.2 mm/rev
Rotational speeds		
Spindle speeds	45 - 2 000 rpm	10 - 3 000 rpm
Number of speeds	16 speeds	4 speeds, electronically controlled
Drilling table		
Drilling table workspace L x W		600 x 600 mm
T-slot size / spacing / count		18 mm / 160 mm / 3
Drilling table load bearing capacity		350 kg
Drill table rotation/lateral tilt		360° / ± 90°
Clearance spindle - drilling table		130 - 750 mm
Machine base		
Machine base work area L x W		515 x 570 mm
T-slot size / spacing / count		18 mm / 150 mm / 2
Distance spindle - machine base		max. 1 300 mm
Dimensions		
Column diameter		Ø 200 mm
Length x width x height		850 x 1 050 x 2 500 mm
Weight	800 kg	900 kg

Accessories	Article no.
Assortment of clamping tools size 16, 58-parts	3352019
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Direct quick release chuck 1 - 16 mm	3050574
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665
Thermdrill MT 2	3060005
Foot switch	3050032

for thread tapping and toggling clockwise/anticlockwise rotation

› More „Accessories for drills“ from page 64

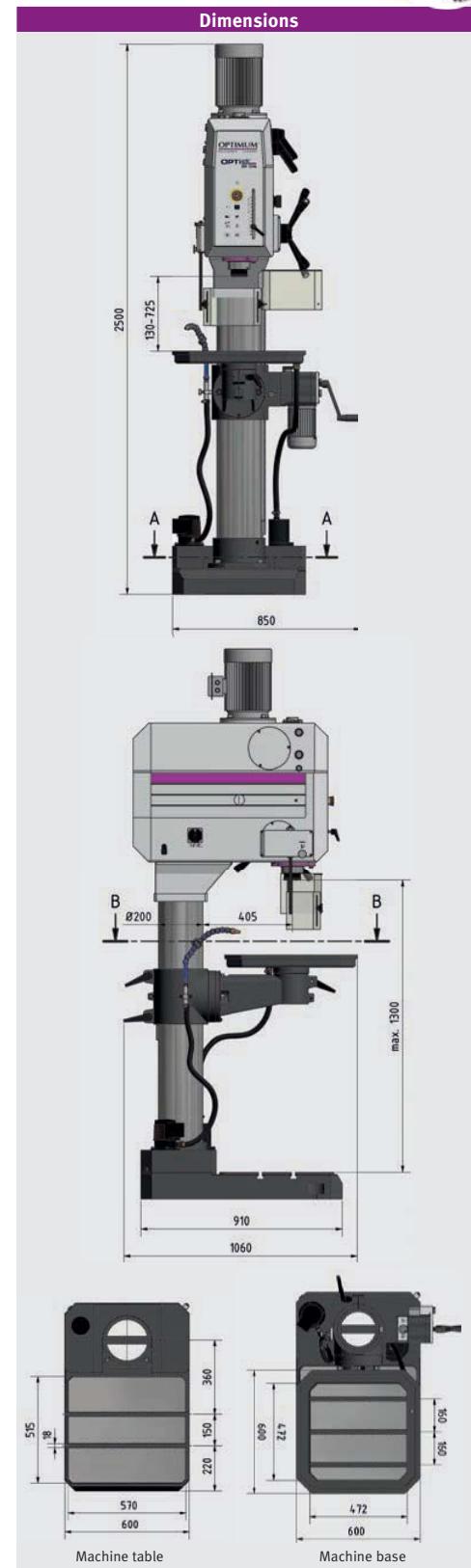


Machine vices	Article no.
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240

› Information on the vices on page 71

* Important information on transport surcharges and „Operation of machines with frequency converters“ on page 253

**The drill (frequency converter) complies with the DIN EN 55011 standard: class C2



Scope of supply

› Quick-action drill chuck 1 - 16 mm

› Morse taper MT 4/B16

Heavy duty gearbox drill for industrial use

With coolant and thread tapping unit, and automatic spindle sleeve feed

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Smooth action due to polished gearwheels running in an oil sump
- ▶ Excellent concentricity thanks to tempered and ground main spindle
- ▶ Two-stage drive motor
- ▶ Right-handed/left-handed rotation
- ▶ Automatic gearwheel lubrication via oil pump
- ▶ Thread tapping device.
- ▶ Main switch and motor circuit breaker
- ▶ Motorised table height adjustment
- ▶ Machine lamp integrated into drilling head
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection

- ▶ Generously dimensioned drilling table, solid, precision workmanship, with parallel T-slots and recirculating coolant duct, reinforcing ribs on rear, rotates through $\pm 90^\circ$ about the column, laterally tilting
- ▶ Cooling unit and external coolant tank, can be removed for easier and complete emptying
- ▶ Chip filter in line with Machinery Directive
- ▶ Extremely stable, thick-walled cast-iron column – column diameter 200 mm – for excellent force absorption
- ▶ Solid base plate with parallel T-slots, precision surface finish



Integrated push-out tool



- ▶ Spindle lock with integrated ejector for easy tool change

Automatic spindle sleeve feed



- ▶ For deep drilling or blind hole drilling, the clutch on the automatic spindle sleeve feed can be released or engaged at any time by pressing the button on the feed handle.



Technical specifications, accessories and dimensions

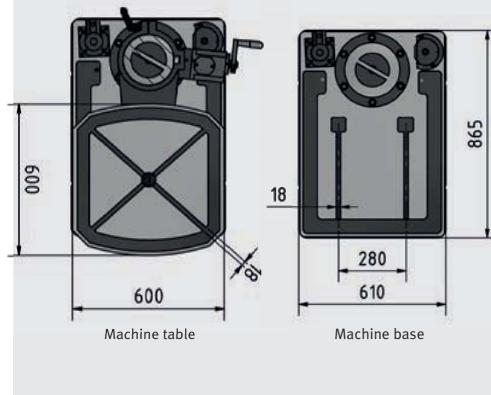
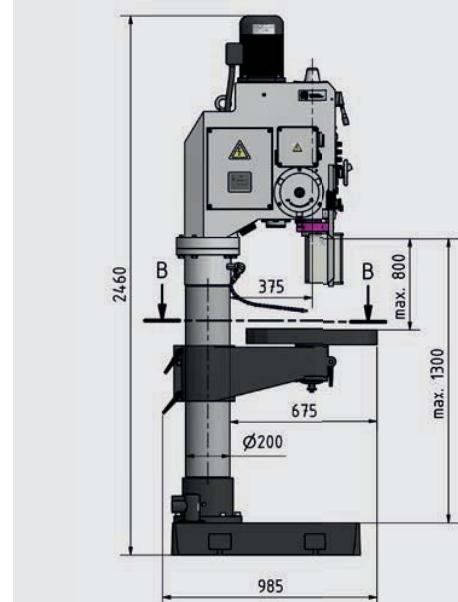
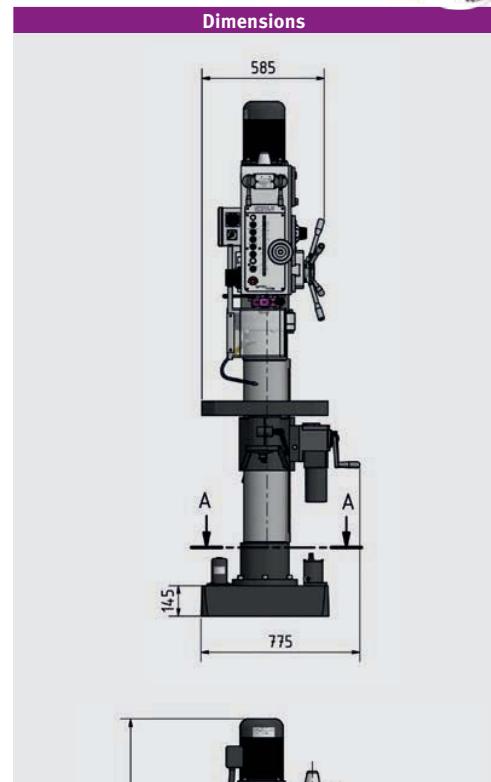
Model	B 50GSM
Article no.	3034500
Technical specifications	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	2.4/3.0 kW
Coolant pump motor	40 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 50 mm
Continuous drilling performance in steel (S235JR)	Ø 45 mm
Thread tapping steel (S235JR)	M42
Spindle seat	
Spindle sleeve stroke	230 mm
Spindle seat	MT 4
Throat	375 mm
Autom. spindle sleeve feed	6 speeds: 0.05-0.3 mm/rev
Speeds	
Spindle speeds	54 - 2 090 rpm
Number of speeds	18 speeds
Drilling table	
Workspace drilling table length x width	600 x 600 mm
T-slot size	18 mm, diagonal
Drilling table load bearing capacity	300 kg
Drill table rotation/lateral tilt	360° / ± 90°
Clearance spindle - drilling table	max. 800 mm
Machine base	
Machine base workspace length x width	600 x 520 mm
T-Slot size / no / distance	18 mm / 2 / 280 mm
Distance spindle - machine base	max. 1 300 mm
Dimensions	
Column diameter	Ø 200 mm
Length x width x height	985 x 775 x 2 460 mm
Overall weight	950 kg

Scope of supply
› Quick-action drill chuck 1 - 16 mm
› Morse taper MT 4/B16
› T-slot nuts

Accessories	Article no.
Assortment of clamping tools size 16, 58-parts	3352019
Hold-down device 18 mm/M16	3352032
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Direct quick release chuck 1 - 16 mm	3050574
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665
Thermdrill MT 2	3060005
› More „Accessories for drills“ from page 64	

Machine vises	Article no.
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240

› Information on the vises on page 71



Heavy-duty gearbox drilling machine with thread tapping device for industrial applications.
DH 45V with continuously adjustable speed control

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Dirt- and water-resistant, easy-to-clean membrane keyboard
- ▶ 24 V DC electronics
- ▶ Drilling depth stop
- ▶ Automatic gearwheel lubrication via oil pump
- ▶ Thread tapping device.
- ▶ Machine lamp integrated in drilling head
- ▶ Main switch
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Generously dimensioned drilling table, solid, precision workmanship, with parallel T-slots and recirculating coolant duct, reinforcing ribs on rear, rotates through $\pm 90^\circ$ about the column, laterally tilting
- ▶ Cooling unit and external coolant tank, can be removed for easier and complete emptying

- ▶ Extremely stable, thick-walled cast-iron column for excellent force absorption
- ▶ Solid base plate with parallel T-slots, precision surface finish
- ▶ Optional footswitch available for toggling between clockwise/anticlockwise run and for thread tapping (Article no. 3050032)

OPTIdrill DH 45G

- ▶ Mechanical spindle sleeve feed

OPTIdrill DH 45V

- ▶ Electrical spindle sleeve feed
- ▶ Continuously adjustable speed control
- ▶ Feed shutdown



- ▶ Easily readable digital display for speed, drilling depth | tapping depth and piece counter
- ▶ Feed deactivation via depth adjustment



Figure: DH 45V



Technical specifications, accessories and dimensions

Model	DH 45G	DH 45V**
Article no.	3034255	3034262
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor output	2.2 kW	
Coolant pump motor	40 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 40 mm	
Cont. drilling performance steel (S235JR)	Ø 35 mm	
Thread tapping steel (S235JR)	M35	
Spindle		
Spindle sleeve stroke	180 mm	
Spindle seat	MT 4	
Throat	350 mm	
Automatic spindle sleeve feed	3 speeds: 0.1 / 0.15 / 0.2 mm/rev	
Speeds		
Spindle speeds	90 - 1 520 rpm	30 - 2 430 rpm
Number of speeds	8 speeds	4 speeds, electronically controlled
Drilling table		
Drilling table workspace L x W	530 x 530 mm	
T-slot size / spacing / count	16 mm / 3 / 125 mm	
Drilling table load bearing capacity	250 kg	
Drill table rotation/lateral tilt	360° / ± 90°	
Clearance spindle - drilling table	100 - 740 mm	
Machine base		
Machine base work area L x W	435 x 445 mm	
T-slot size / spacing / count	18 mm / 150 mm / 2	
Distance spindle - machine base	max. 1 210 mm	
Dimensions		
Column diameter	Ø 150 mm	
Length x width x height	850 x 550 x 2.350 mm	
Weight	530 kg	550 kg

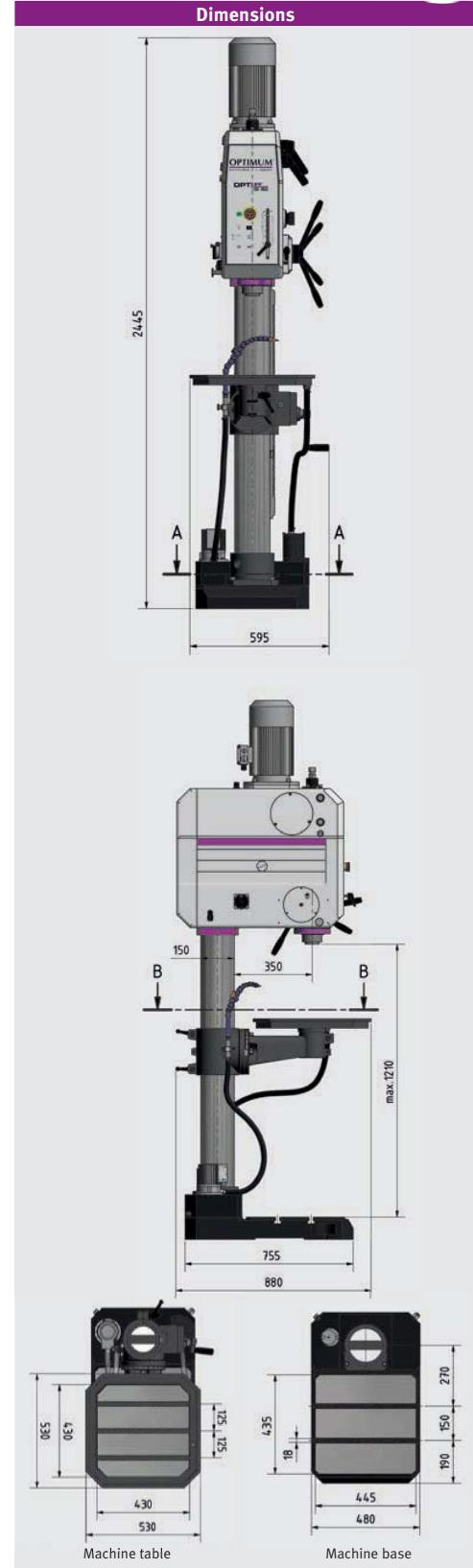
Accessories	Article no.
Assortment of clamping tools size 16, 58-parts	3352019
Assortment of clamping tools size 14, 58-parts	3352018
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Direct quick release chuck 1 - 16 mm	3050574
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665
Thermdrill MT 2	3060005
Foot switch	3050032
for thread tapping and toggling clockwise/anticlockwise rotation	
> More „Accessories for drills“ from page 64	



Machine vices	Article no.
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240

* Important information on transport surcharges and „Operation of machines with frequency converters“ on page 253

**The drill (frequency converter) complies with the DIN EN 55011 standard: class C2



Scope of supply
> Quick-action drill chuck 1 - 16 mm
> Morse taper MT 4/B16

Gear drilling machine with thread tapping unit.

DH 35V with continuously adjustable speed control.

Facts that impress in terms of quality, performance and price

- ▶ Dirt/water-resistant, easy-to-clean membrane keyboard
- ▶ 24 V DC electronics
- ▶ Drilling depth stop
- ▶ Electrical spindle sleeve feed
- ▶ Low-maintenance gear unit running in a closed oil sump
- ▶ Thread tapping device.
- ▶ Machine lamp integrated in drilling head
- ▶ Main switch
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Generously dimensioned drilling table, solid, precision workmanship, with diagonal T-slots and recirculating coolant duct, reinforcing ribs on rear, rotates through $\pm 90^\circ$ about the column, laterally tilting

- ▶ Coolant unit with coolant tank integrated into base plate
- ▶ Chip filter removes coarse components from the coolant
- ▶ Extremely stable, thick-walled cast-iron column for excellent force absorption
- ▶ Solid base plate with parallel T-slots, precision surface finish
- ▶ Optional footswitch available for toggling between clockwise/anticlockwise run and for thread tapping (Article no. 3050032)

OPTI^{drill} DH 45V

- ▶ Continuously adjustable speed control
- ▶ Feed shutdown



- ▶ Easily readable digital display for speed, drilling depth | tapping depth and piece counter
- ▶ Feed deactivation via depth adjustment



Fig.: DH 35G

Fig.: DH 35V



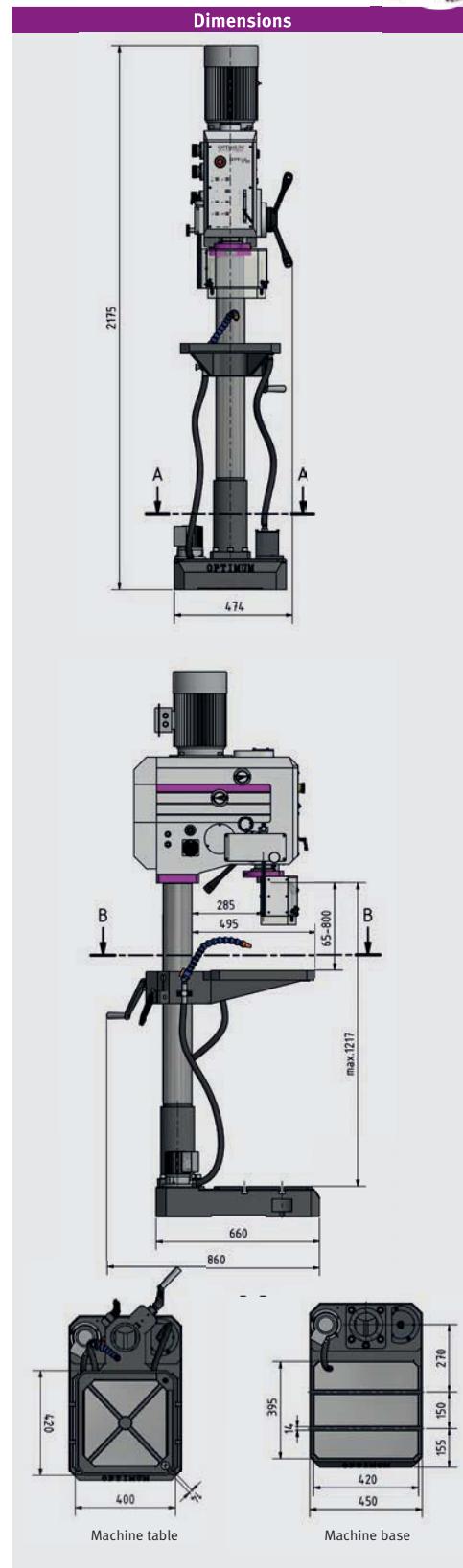
Technical specifications, accessories and dimensions

Model	DH 35G	DH 35V
Article no.	3034250	3034252
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor output	1.5 / 2.2 kW	2.2 kW
Coolant pump motor	40 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 35 mm	
Continuous drilling performance in steel (S235JR)	Ø 26 mm	
Thread tapping steel (S235JR)	M24	
Spindle		
Spindle sleeve stroke	125 mm	
Spindle seat	MT 4	
Throat	285 mm	
Automatic spindle sleeve feed	3 speeds: 0.05-0.15 mm/rev	
Speeds		
Spindle speeds	75 - 2 000 rpm	30 - 2 950 rpm 4 speeds, electronically controlled
Number of speeds	8 speeds	
Drilling table		
Drilling table workspace L x W	400 - 420 mm	
T-slot size	14 mm, diagonal	
Drilling table load bearing capacity	200 kg	
Drill table rotation/lateral tilt	360° / ± 90°	
Clearance spindle - drilling table	65 - 800 mm	
Machine base		
Machine base work area L x W	420 x 395 mm	
T-slot size / spacing / count	14 mm / 150 mm / 2	
Distance spindle - machine base	max. 1 217 mm	
Dimensions		
Column diameter	Ø 115 mm	
Length x width x height	860 x 474 x 2 175 mm	
Weight	350 kg	450 kg

Accessories	Article no.
Assortment of clamping tools size 12, 58-parts	3352017
Blank holder 14 mm/M12	3352031
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Direct quick release chuck 1 - 16 mm	3050574
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665
Therm drill MT 2	3060005
Foot switch	3050032
for thread tapping and toggling clockwise/anticlockwise rotation	
> More „Accessories for drills“ from page 64	



Machine vices	Article no.
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240
> Information on the vices on page 71	



Scope of supply
> Quick-action drill chuck 1 - 16 mm
> Morse taper MT 4/B16

Heavy-duty gearbox drilling machine with thread tapping device

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Automatic gearwheel lubrication via oil pump
- ▶ Excellent concentricity thanks to hardened and polished main spindle
- ▶ Thread tapping device.
- ▶ Main switch and motor circuit breaker
- ▶ Adjustable drilling depth stop with millimetre scale
- ▶ Machine lamp integrated in drilling head
- ▶ Precision, generously dimensioned drilling table, solid workmanship, with diagonal T-slots and recirculating coolant duct, reinforcing ribs on rear
- ▶ Integrated push-out tool for easy tool changes
- ▶ Coolant system and chip filter in line with Machinery Directive
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate, large dimensions, extremely stable

OPTIdrill B 40 GSM

- ▶ Electrical spindle sleeve feed

OPTIdrill B 40GSP

- ▶ Manual spindle sleeve feed



Spindle sleeve feed
2 speeds 0.1/0.2 mm/rev



B 40GSM - electrical

For deep drilling or blind hole drilling, the clutch on the automatic spindle sleeve feed can be released or engaged at any time by pressing the button on the feed handle



Control Cabinet

- ▶ Clear-cut layout
- ▶ Generously dimensioned
- ▶ Certified switches by ABB
- ▶ 24V AC
- ▶ Certified components by Siemens or Schneider



Fig.: B 40GSP

Fig.: B 40GSM



Technical specifications, accessories and dimensions

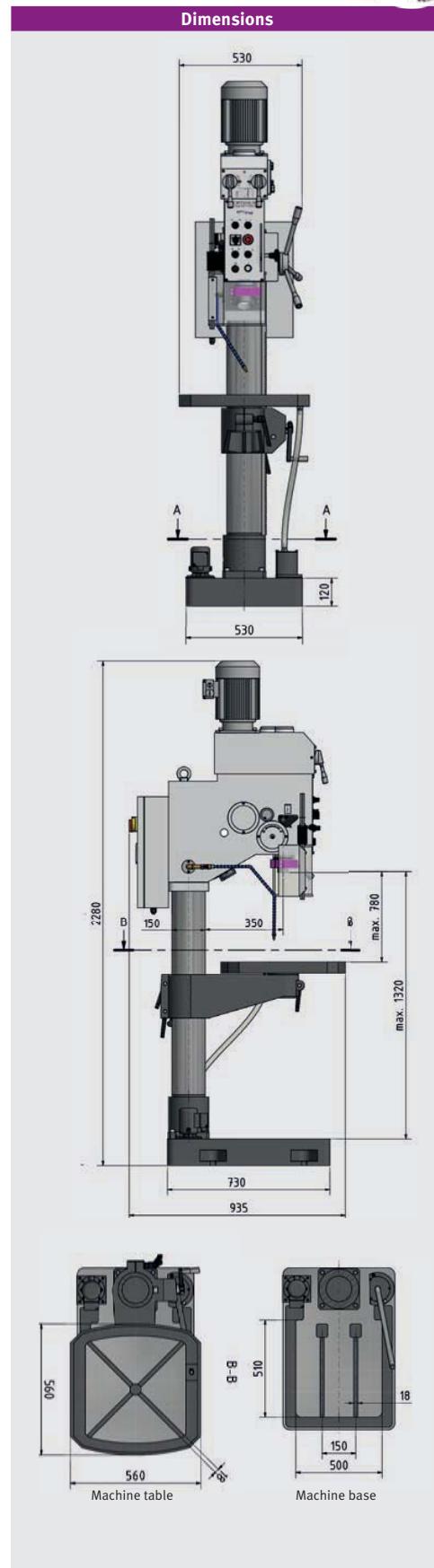
Model	B 40GSP
Article no.	3034403
Model	B 40GSM
Article no.	3034400
Technical specifications	
Electrical connection	400 V / 3 Ph ~50 Hz
Total rated value	0.85 / 1.5 kW
Coolant pump motor	40 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 35 mm
Cont. drilling performance in steel (S235JR)	Ø 30 mm
Thread tapping steel (S235JR)	M24
Spindle seat	
Spindle sleeve stroke	180 mm
Spindle seat	MT 4
Throat	350 mm
Spindle sleeve feed	2 speeds, 0.1/0.2 mm/rev
Speeds	
Spindle speeds	50 - 1 450 rpm
Number of speeds	18 speeds
Drilling table	
Workspace drilling table length x width	560 x 560 mm
T-slot size	18 mm, diagonal
Rotating drilling table	± 90°
Clearance spindle - drilling table	max. 780 mm
Drilling table load bearing capacity	250 kg
Machine base	
Machine base work area L x W	510 x 500 mm
T-Slot size / no / distance	18 mm / 2 / 150 mm
Clearance spindle - machine base	max. 1 320 mm
Dimensions	
Column diameter	Ø 150 mm
Length x width x height	935 x 530 x 2 280 mm
Overall weight	465 kg 500 kg

Scope of supply

- › Quick-action drill chuck 1 - 16 mm
- › Morse taper MT 4/B16

Accessories	Article no.
Assortment of clamping tools size 16, 58-parts	3352019
Blank holder 14 mm/M12	3352031
Quick release chuck direct MT 4 / 1 - 16 mm	3050574
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Reduction sleeve MT 4 - MT 3	3050664
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234
› Information on the vices on page 71	



Upright drills with Siemens inverter technology and polyamide gearwheels.

With continuously adjustable speed control. Installation of an optional footswitch possible

Facts that impress in terms of quality, performance and price

- ▶ Frequency converter
- ▶ User-friendly membrane keyboard
- ▶ Digital speed display
- ▶ Thread tapping function
- ▶ Smooth action thanks to polished multi-tooth carrier
- ▶ Excellent concentricity thanks to hardened and polished main spindle
- ▶ Low-maintenance, grease-lubricated gearbox
- ▶ Gearbox with PA6 gearwheels
- ▶ Large speed range
- ▶ User-friendly membrane keyboard
- ▶ Heavy, solid cast design
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Adjustable drilling depth stop with millimetre scale
- ▶ Right-handed/left-handed rotation
- ▶ Thread tapping function
- ▶ Machine lamp integrated in drilling head
- ▶ Integrated push-out tool for easy tool changes
- ▶ Drilling table with precision workmanship, diagonal T-slots, circumferential coolant duct
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate, large dimensions and pronounced ribbing on rear
- ▶ Optional footswitch available for toggling between clockwise/anticlockwise run and for thread tapping (Article no. 3050032)

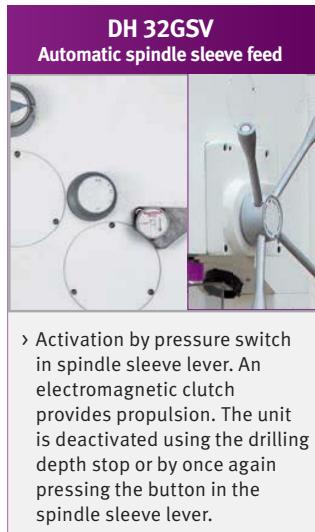
OPTIdrill DH 32GSV

- ▶ Automatic spindle sleeve feed
- ▶ Coolant system and chip filter in line with Machinery Directive
- ▶ Torque in lowest gear up to 200 Nm



Figure: DH 28GSV with optional chuck

Figure: DH 32GSV with optional chuck



Technical specifications, accessories and dimensions

Model	DH 28GSV	DH 32GSV
Article no.	3034235	3034245
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	1.5 kW	2.2 kW
Coolant pump motor	-	40 W
Drilling performance		
Drilling performance in steel (S235)R	Ø 26 mm	Ø 30 mm
Continuous drilling performance steel (S235)R	Ø 23 mm	Ø 26 mm
Thread tapping steel (S235)R	M 16 x 2 mm	M 16 x 2 mm
Spindle		
Spindle sleeve stroke	127 mm	125 mm
Spindle seat	MT 3	MT 4
Throat	260 mm	285 mm
Automatic spindle sleeve feed	-	2 speeds: 0.05 / 0.1 mm
Speeds		
Spindle speeds	45 - 3 200 rpm	40 - 3 000 rpm
Number of speeds	4 speeds, electronically controlled	
Drilling table		
Drilling table workspace L x W	376 x 394 mm	400 x 420 mm
T-slot size	14 mm, diagonal	14 mm, diagonal
Drilling table load bearing capacity	150 kg	200 kg
Rotating drilling table	360°	360°
Clearance spindle - drilling table	max. 875 mm	max. 820 mm
Machine base		
Machine base work area L x W	350 x 356 mm	420 x 395 mm
T-slot size / spacing / count	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Distance spindle - machine base	max. 1 285 mm	max. 1 270 mm
Dimensions		
Column diameter	Ø 92 mm	Ø 115 mm
Length x width x height	690 x 375 x 2 080 mm	820 x 450 x 2 230 mm
Overall weight	175 kg	304 kg

Scope of supply

- › Morse taper MK

Accessories	Article no.
Assortment of clamping tools size 12, 58-part	3352017
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Thermdrill MT 2	3060005
Foot switch	3050032
Functions: Right-handed/left-handed rotation for thread tapping	
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 120	3000012
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234

- › Information on the vices on page 71

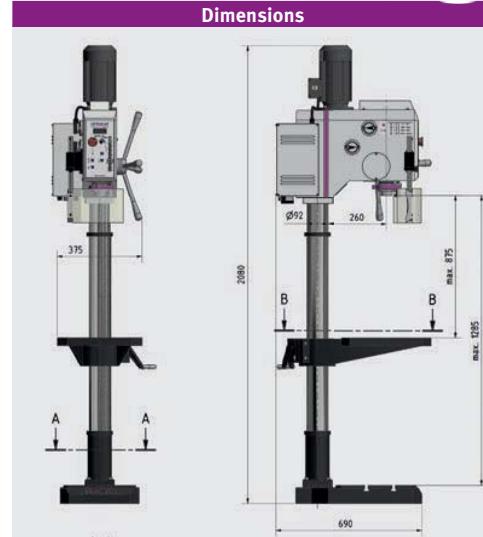
* Important information on transport surcharges and „Operation of machines with frequency converters“ on page 253
The machines comply with DIN EN 55011: class C2.



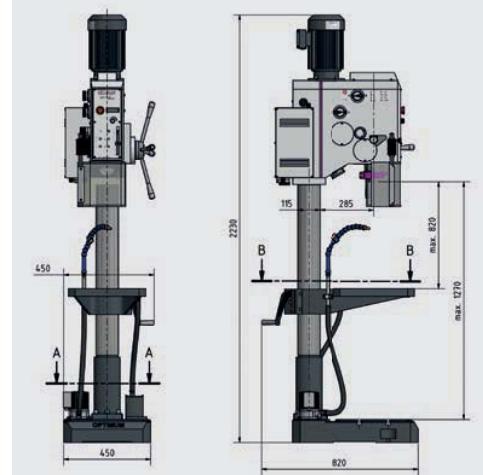
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Dimensions



Dimensions



Accessories DH 28GSV	Article no.
Direct quick release chuck 1-16 mm	3050573
Morse taper MT 3/B16	3050660
Reduction sleeve MT 3 - MT 2	3050663
Twist drill HSS / MT 3	3051003
Universal coolant unit	3352002

Accessories DH 32GSV	Article no.
Direct quick release chuck 1-16 mm	3050574
Morse taper MT 4/B16	3050661
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665

Preface

Drilling

Milling

Turning

Saws

Grinding

Polishing

Lamps

Measuring

Bench and Upright drills with polyamide gearwheels.
Installation of an optional footswitch possible with DH 32GS

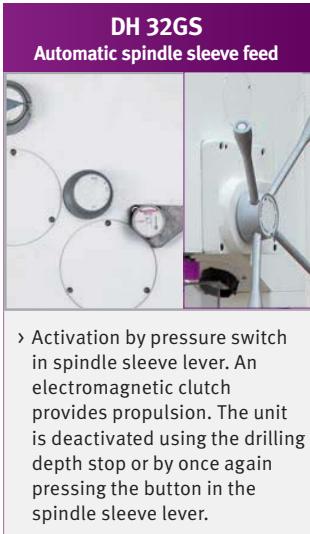
Facts that impress in terms of quality, performance and price

- ▶ Excellent concentricity thanks to hardened and polished main spindle
- ▶ Low-maintenance, grease-lubricated gearbox
- ▶ Gearbox with PA6 gearwheels
- ▶ Large speed range
- ▶ Heavy, solid cast design
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Adjustable drilling depth stop with millimetre scale
- ▶ Right-handed/left-handed rotation
- ▶ Machine lamp integrated in drilling head
- ▶ Integrated push-out tool for easy tool changes

- ▶ Drilling table with precision workmanship, diagonal T-slots, circumferential coolant duct
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate, large dimensions and pronounced ribbing on rear

OPTIdrill DH 32GS

- ▶ Thread tapping function
- ▶ Automatic spindle sleeve feed
- ▶ Coolant system and chip filter in line with Machinery Directive
- ▶ Optional footswitch available for toggling between clockwise/anticlockwise run and for thread tapping (Article no. 3050032)





Technical data and accessories

Model	DH 26GT	DH 28GS	DH 32GS
Article no.	3034220	3034230	3034240
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	1.1 / 1.5 kW	1.1 / 1.5 kW	1.5 / 2.2 kW
Coolant pump motor	-	-	40 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 24 mm	Ø 26 mm	Ø 30 mm
Continuous drilling performance steel (S235JR)	Ø 21 mm	Ø 23 mm	Ø 26 mm
Thread tapping steel (S235JR)	-	-	M16 x 2 mm
Spindle			
Spindle sleeve stroke	127 mm	127 mm	125 mm
Spindle seat	MT 3	MT 3	MT 4
Throat	235 mm	260 mm	285 mm
Automatic spindle sleeve feed	-	-	2 speeds: 0.05 mm / 0.1 mm
Speeds			
Spindle speeds	75 - 2 900 rpm	75 - 2 900 rpm	75 - 2 000 rpm
Number of speeds	8 speeds	8 speeds	8 speeds
Drilling table			
Workspace drilling table length x width	380 x 380 mm	376 x 394 mm	400 x 420 mm
T-slot size	14 mm, diagonal	14 mm, diagonal	14 mm, diagonal
Drilling table load bearing capacity	120 kg	150 kg	200 kg
Rotating drilling table	360°	360°	360°
Clearance spindle - drilling table	max. 450 mm	max. 875 mm	max. 820 mm
Machine base			
Machine base work area L x W	350 x 356 mm	350 x 356 mm	450 x 395 mm
T-slot size / spacing / count	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Distance spindle - machine base	max. 610 mm	max. 1 285 mm	max. 1 270 mm
Dimensions			
Column diameter	Ø 92 mm	Ø 92 mm	Ø 115 mm
Length x width x height	610 x 380 x 1 430 mm	640 x 376 x 2 080 mm	725 x 450 x 2 200 mm
Overall weight	158 kg	175 kg	312 kg

Scope of supply

› Morse taper MK

Accessories	Article no.
Assortment of clamping tools size 12, 58-parts	3352017
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Thermdrill MT 2	3060005

› More „Accessories for drills“ from page 64

Machine vices	Article no.
BMS 120	3000012
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234

› Information on the vices on page 71

Accessories DH 26GT / DH 28GS	Article no.
Direct quick release chuck 1-16 mm	3050573
Morse taper MT 3/B16	3050660
Reduction sleeve MT 3 - MT 2	3050663
Twist drill HSS / MT 3	3051003
Thread tapping chuck M3 - M12	3050705
Thread tapping chuck M8 - M20	3050706
Universal coolant unit	3352002

Accessories DH 32GS	Article no.
Direct quick release chuck 1-16 mm	3050574
Morse taper MT 4/B16	3050661
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 2	3050665
Foot switch	3050032
Functions:	
› Thread tapping	
› Clockwise/anti-clockwise change over switch	



Column gear drilling machine with cross table.
The versatile machine for milling and drilling

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Smooth action due to polished gearwheels running in an oil sump
- ▶ Large speed range of 95 - 3 200 rpm
- ▶ Two-stage industrial quality electric motor
- ▶ Generously dimensioned, Solid cross table with precision surface finish, adjustable via 3 hand wheels, includes integrated length scale
- ▶ Adjustable end stops on the cross table
- ▶ Gear head and table are height adjustable
- ▶ Table guideways precisely adjustable via V-ledges
- ▶ Solid baseplate with precision surface finish can be used as a workspace for particularly high workpieces by swivelling out the cross table
- ▶ Right-handed/left-handed rotation
- ▶ Gear head pivots through $\pm 60^\circ$
- ▶ Drilling depth stop
- ▶ Thread tapping function



Fig.: DH 40CT

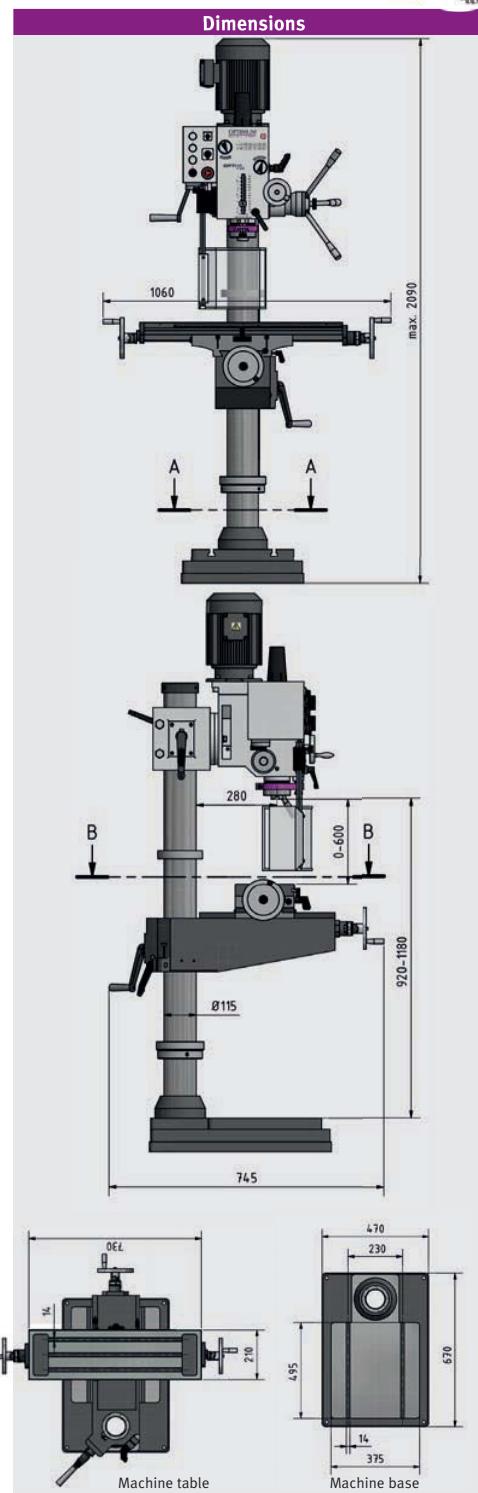


Technical specifications, accessories and dimensions

Model	DH 40CT
Article no.	3034350
Technical data	
Electrical connection	400 V / 3 Ph ~ 50 Hz
Motor output, 2 stages	1.1 / 1.5 kW
Drilling/milling output	
Drilling performance in steel (S235JR)	Ø 32 mm
Continuous drilling performance in steel (S235JR)	Ø 25 mm
Max. sensor head size	Ø 76 mm
Max. shaft milling cutter size	Ø 25 mm
Thread tapping steel (S235JR)	M16
Spindle	
Spindle sleeve stroke	120 mm
Spindle seat	MT 4
Throat	280 mm
Spindle sleeve diameter	75 mm
Draw-in rod	M16
Drilling/milling head	
Rotating drilling table / Swivel range	360° / ± 45°
Spindle speeds	95 - 3 200 rpm
Speeds	2 x 6 speeds
Cross table	
Length x width	730 x 210 mm
T-Slot size / no / distance	14 mm / 3 / 63 mm
Load bearing capacity	50 kg
Clearance spindle to cross table	max. 600 mm
X-axis travel stroke manual	480 mm
Y-axis travel stroke manual	180 mm
Z-axis travel stroke manual	560 mm
Machine base	
Machine base work area L x W	495 x 375 mm
T-slot size / spacing / count	14 mm / 230 mm / 2
Distance spindle - machine base	920 - 1 180 mm
Dimensions	
Column diameter	Ø 115 mm
Length x width x height	1 060 x 745 x 2 090 mm
Weight	350 kg

Accessories	Article no.
Assortment of clamping tools size 12, 58-parts	3352017
Hold-down device 14 mm/M12	3352031
Parallel shim set, 20-part	3354001
Height-adjustable tailstock RST 1	3356155
Horizontal-vertical rotary indexing table RT 150	3356150
Universal coolant unit	3352002
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 120	3000012
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234
› Information on the vices on page 71	



Scope of supply
› Key type drill chuck 1 - 13 mm / B18
› T-slot nuts
› Push-out tools large and small
› Reduction sleeve MT 4 - MT 3
› Arbor for drill chuck MT 4 / B16
› Operating tool

Universal column gearbox drills with 12 speeds for milling and drilling.
DH 40GP additionally with automatic spindle sleeve feed

Facts that impress in terms of quality, performance and price

- ▶ Heavy, solid cast design
- ▶ Smooth action due to polished gearwheels running in an oil sump
- ▶ Two-stage industrial electric motor
- ▶ Thread tapping function
- ▶ Gear head and table are height adjustable
- ▶ Large speed range from 95 - 3 200 rpm thanks to 12 switchable speeds
- ▶ Large drilling table, solid, precision workmanship, with diagonal T-slots and recirculating coolant duct, reinforcing ribs on rear side, double clamping
- ▶ Drilling depth stop
- ▶ Height-adjustable chuck protection with micro switch for greatest possible protection of the user

- ▶ Coupling for switching over from manual rough to manual fine feed
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate with precision surface finish can be used as a workspace for particularly high workpieces by swivelling out the drilling table

OPTIdrill DH 40G

- ▶ Manually spindle sleeve feed

OPTIdrill DH 40GP

- ▶ Automatic or manually spindle sleeve feed





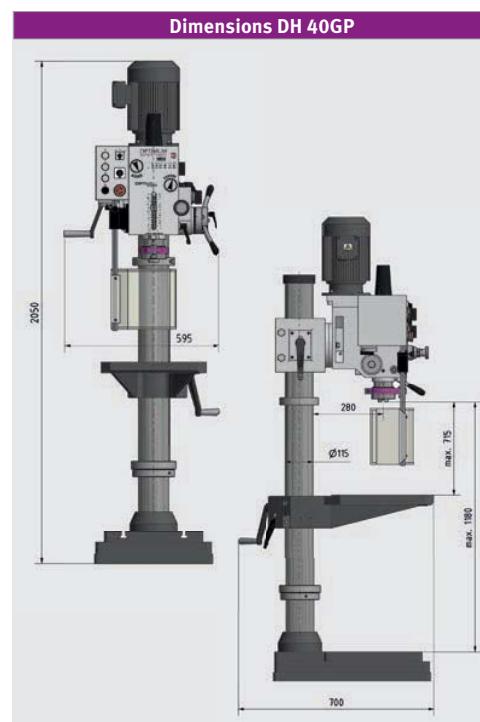
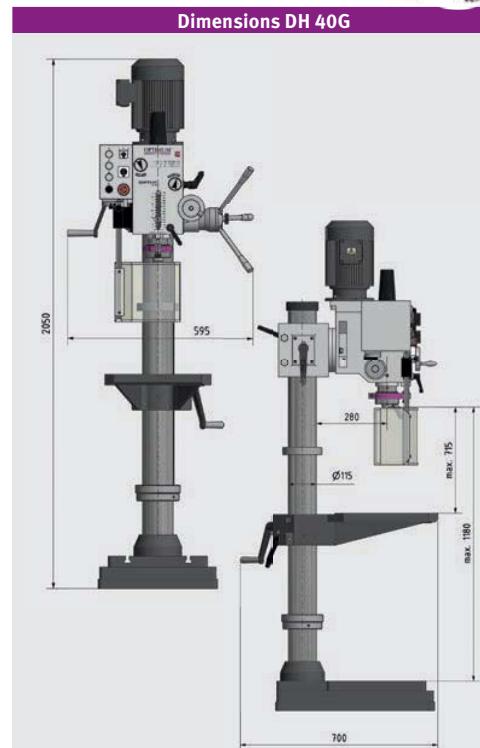
Technical specifications, accessories and dimensions

Model	DH 40G	DH 40GP
Article no.	3034355	3034360
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	
Motor output	1.1 / 1.5 kW	
Drilling performance		
Drilling performance in steel (S235)R	Ø 32 mm	
Continuous drilling performance in steel (S235JR)	Ø 25 mm	
Thread tapping steel (S235JR)	M16	
Spindle		
Spindle sleeve stroke	120 mm	
Spindle sleeve diameter	75 mm	
Spindle seat	MT 4	
Throat	280 mm	
Automatic spindle sleeve feed	3 speeds: 0.1 - 0.26 mm/rev	
Drilling head pivots/rotates	± 45° / 360°	
Drilling head height adjustment	0 - 265 mm	
Speeds		
Spindle speeds	95 - 3 200 rpm	
Speeds	2 x 6 speeds	
Drilling table		
Length x width	500 x 460 mm	
T-slot size	14 mm, diagonal	
Load bearing capacity	50 kg	
Rotation/lateral tilt	360° / ± 90°	
Clearance spindle - drilling table	max. 715 mm	
Machine base		
Machine base work area L x W	650 x 450 mm	
T-slot size / spacing / count	14 mm / 230 mm / 2	
Distance spindle - machine base	max. 1 180 mm	
Dimensions		
Column diameter	Ø 115 mm	
Length x width x height	595 x 700 x 2 050 mm	
Weight	320 kg	335 kg

Accessories	Article no.
Assortment of clamping tools size 12, 58-parts	3352017
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Universal coolant unit	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Direct quick release chuck 1 - 16 mm	3050574
Collet chuck set MT 4/ ER 32	3352094
Reduction sleeve MT 4 - MT 3	3050664
Morse taper MT 4/B16	3050661

Machine vices	Article no.
BMS 120	3000012
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240

› Information on the vices on page 71



Scope of supply
› Quick-action drill chuck 1 - 13 mm
› Morse taper MT 4/B16
› Tie rod M16
› Adapter MT 4 - MT 3
› Operating tool

Bench and Upright drills with continuous, mechanical belt gear from **BERGES**. Quick speed adjustment using a lever

MADE IN GERMANY
VARIO DRIVE

Facts that impress in terms of quality, performance and price

- ▶ Smooth action powerful electric motor
- ▶ Two speeds
- ▶ Right-handed/left-handed rotation
- ▶ V-belt cover with safety switch
- ▶ Digital speed display integrated in housing
- ▶ Guaranteed concentricity guaranteed to be less than 0.015 mm measured in the drilling spindle sleeve
- ▶ Height adjustable chuck guard with micro switch for greatest possible protection of the user
- ▶ Machine lamp integrated into drilling head
- ▶ Drilling spindle with precision ball bearings
- ▶ Premium quick clamping chuck as standard
- ▶ Precision, generously dimensioned drilling table, solid workmanship, with diagonal T-slots, rotating through 360°, recirculating coolant duct

- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate with pronounced ribbing on rear
- ▶ The baseplate can be used as a workspace for particularly high workpieces by swivelling out the drilling table

As of DH 28BV

- ▶ Easy tool changes through integrated push-out tool
- ▶ Spindle sleeve lever made of steel

DH 40BV

- ▶ Digital depth sensor
- ▶ Reduction gearbox enables far higher torque



- ▶ Extremely reliable through manual speed control
- ▶ Powerful, smooth action
- ▶ Durable wide groove v-belt
- ▶ Speed change also possible while machine is running
- ▶ Permanent optimal motor efficiency
- ▶ DH 40BV-with reduction gearbox



- ▶ Quicker speed adjustment using a lever



- ▶ Information see page 72



Figure: DH 24BV

Figure: DH 40BV



Technical data and accessories

Model	DH 24BV	DH 28BV	DH 40BV
Article no.	3020420	3020430	3020450
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	0.85 / 1.5 kW	0.85 / 1.5 kW	1.5 / 2.2 kW
Drilling performance			
Drilling performance in steel (S235)R	Ø 24 mm	Ø 28 mm	Ø 40 mm
Continuous drilling performance in steel (S235)R	Ø 20 mm	Ø 24 mm	Ø 32 mm
Spindle			
Spindle sleeve stroke	85 mm	105 mm	160 mm
Spindle seat	MT 2	MT 3	MT 4
Throat	165 mm	200 mm	285 mm
Speeds			
Spindle speeds	300 - 4 000 rpm	300 - 4 000 rpm	150 - 2 000 rpm
Number of speeds	2 speed motor, manual	2 speed motor, manual	2 speed motor, manual
Drilling table			
Drilling table workspace L x W	280 x 300 mm	340 x 360 mm	420 x 400 mm
T-slot size	14 mm, diagonal	14 mm, diagonal	14 mm, diagonal
Clearance spindle - drilling table	max. 515 mm	max. 860 mm	max. 790 mm
Machine base			
Machine base work area L x W	280 x 260 mm	320 x 320 mm	390 x 400 mm
T-slot size / spacing / count	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Rotating drilling table	360°	360°	360°
Distance spindle - machine base	max. 681 mm	max. 1 285 mm	max. 1 275 mm
Dimensions			
Column diameter	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	675 x 555 x 1 025 mm	755 x 550 x 1 745 mm	920 x 680 x 1 895 mm
Weight	115 kg	152 kg	275 kg

Scope of supply

- › Quick-action drill chuck 1 - 16 mm
- › Morse taper MK
- › T-slot nuts

Accessories	Article no.
Assortment of clamping tools size 12	3352017
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Thread tapping chuck M3 - M12	3050705
Thread tapping chuck M8 - M20	3050706
Universal coolant unit	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230

› Information on the vices on page 71

DH 24BV accessories	Article no.
Direct quick release chuck 1 - 16 mm	3050571
Direct quick release chuck 1 - 13 mm	3050572
Collet chuck set MT 2 / ER 25	3352052
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002

DH 28BV ACCESSORIES	Article no.
Direct quick release chuck 1 - 16 mm	3050573
Collet chuck set MT 3 / ER 32	3352093
Reduction sleeve MT 3 - MT 2	3050663
Reduction sleeve MT 3 - MT 2	3350313
Morse taper MT 3/B16	3050660
Twist drill bit HSS / MT 3, 9 parts	3051003

DH 40BV accessories	Article no.
Direct quick release chuck 1 - 16 mm	3050574
Collet chuck set MT 4 / ER 32	3352094
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 3	3350314
Morse taper MT 4/B16	3050661

Rugged bench and Upright drills with powerful OPTIMUM Brushless drive, electronic speed control

Facts that impress in terms of quality, performance and price

- ▶ Powerful brushless drive with particularly smooth action and high performance with almost constant torque over the entire speed range
- ▶ Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- ▶ Smooth action thanks to polished multi-tooth carrier
- ▶ Guaranteed concentricity guaranteed to be less than 0.015 mm measured in the drilling spindle sleeve
- ▶ Separate emergency stop button
- ▶ Digital speed display integrated in housing
- ▶ Premium OPTIMUM quick clamping chuck as standard
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Single-piece, pressure cast aluminium spindle sleeve lever (B 24HV with Softgrip handles)
- ▶ Drilling depth stop
- ▶ V-belt cover with safety switch
- ▶ V-belt tensioning device
- ▶ Right-handed/left-handed rotation
- ▶ Machine lamp integrated in drilling head
- ▶ Precision workmanship; rugged drilling table with diagonal T-slots, 360° rotation and all-around cooling water channel
- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate, large dimensions and pronounced ribbing on rear

As of B 28HV

- ▶ Spindle sleeve lever made of steel
- ▶ Coolant system
- ▶ Chip filter in line with Machinery Directive
- ▶ Easy tool changes through integrated push-out tool

B 34HV

- ▶ Spindle sleeve stroke 160 mm
- ▶ Thread tapping function
- ▶ Digital depth sensor

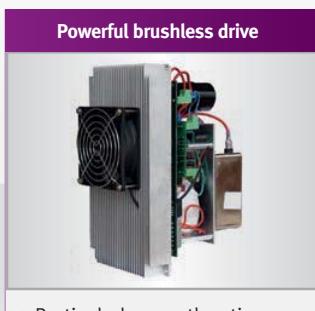


Operating modes „auto“

- › Motor runs automatically after lever movement
- › Stops again in original position
- › Start and stop pushbuttons do not need to be actuated for repetitive drilling tasks

Operating modes „Thread tapping“

- › The motor is activated by moving the handle down
- › The direction of rotation is changed by the limit switch on the adjustable drilling depth stop



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



Fig.: B 24HV



Technical data and accessories

Model	B 24HV	B 28HV	B 34HV
Article no.	3020245	3020285	3020335
Technical specifications			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	1.5 kW	1.5 kW	2.2 kW
Coolant pump motor	-	40 W	40 W
Drilling performance			
Drilling performance in steel (S235)R	Ø 24 mm	Ø 28 mm	Ø 34 mm
Continuous drilling performance in steel (S235JR)	Ø 20 mm	Ø 24 mm	Ø 26 mm
Thread tapping steel (S235JR)	-	-	M 16 x 2 mm
Spindle			
Spindle sleeve stroke	85 mm	105 mm	160 mm
Spindle seat	MT 2	MT 3	MT 4
Throat	165 mm	200 mm	285 mm
Speeds			
Spindle speeds	100 - 5 950 rpm	35 - 5 600 rpm	40 - 5 000 rpm
Number of speeds	4 speeds	12 speeds	9 speeds
	Electronic speed control	Electronic speed control	Electronic speed control
Drilling table			
Drilling table workspace L x W	280 x 300 mm	340 x 360 mm	420 x 400 mm
T-slot size	14 mm, diagonal	14 mm, diagonal	14 mm, diagonal
Rotating drilling table	360°	360°	360°
Clearance spindle - drilling table	max. 515 mm	max. 860 mm	max. 790 mm
Machine base			
Machine base work area L x W	280 x 260 mm	320 x 320 mm	390 x 390 mm
T-slot size / spacing / count	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Rotating drilling table	360°	360°	360°
Distance spindle - machine base	max. 590 mm	max. 1 285 mm	max. 1 275 mm
Dimensions			
Column diameter	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	665 x 434 x 998 mm	701 x 474 x 1 755 mm	918 x 595 x 1 930 mm
Weight	96 kg	166 kg	275 kg

Accessories	Article no.
Assortment of clamping tools size 12	3352017
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5% , 25 parts	3201010
Twist drill bits HSS-CO 5% , 51 parts	3201020
Twist drill bits HSS-CO 5% , 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
> More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234
> Information on the vises on page 71	

Accessories B 24HV	Article no.
Direct quick release chuck 1 - 16 mm	3050571
Direct quick release chuck 1 - 13 mm	3050572
Collet chuck set MT 2 / ER 25	3352052
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002
Thread tapping chuck MT 2	3050702
Universal coolant unit	3352002
Accessories B 28HV	Article no.
Direct quick release chuck 1 - 16 mm	3050573
Collet chuck set MT 3 / ER 32	3352093
Reduction sleeve MT 3 - MT 2	3050663
Reduction sleeve MT 3 - MT 2	3350313
Morse taper MT 3/B16	3050660
Twist drill bit HSS / MT 3, 9 parts	3051003
Thread tapping chuck MT 3	3050705
Accessories B 34HV	Article no.
Direct quick release chuck 1 - 16 mm	3050574
Collet chuck set MT 4 / ER 32	3352094
Reduction sleeve MT 4 - MT 3	3050664
Reduction sleeve MT 4 - MT 3	3350314
Morse taper MT 4/B16	3050661
Thread tapping chuck MT 4	3050709

* Important information on the transport packaging flat rate and surcharge and „Operation of machines with frequency converters“ on page 253

**The machines comply with DIN EN 55011: class C2.

Rugged table drilling machine with powerful OPTIMUM brushless drive.

Machine highlight - menu-controlled operation of the drilling/thread tapping operation modes

Facts that impress in terms of quality, performance and price

- ▶ Smooth action and powerful brushless drive
- ▶ Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- ▶ Smooth action thanks to polished multi-tooth carrier
- ▶ Guaranteed concentricity guaranteed to be less than 0.015 mm measured in the drilling spindle sleeve
- ▶ Drilling spindle with precision ball bearings
- ▶ Membrane keyboard; soiling and water resistant, easy to clean
- ▶ Premium OPTIMUM quick clamping chuck as standard
- ▶ Separate emergency stop button
- ▶ Precise workmanship; stable drilling table with diagonal T-slots, 360° rotation
- ▶ Circumferential coolant channel surrounding the drilling table
- ▶ Generously dimensioned, height adjustable protective screen with safety switch for greatest possible user protection
- ▶ Drilling depth stop
- ▶ V-belt cover with safety switch
- ▶ V-belt tensioning device
- ▶ Solid baseplate with, pronounced ribbing on rear

Powerful brushless drive



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

Menu-controlled operation
Working modes drilling / Threading



OLED-Display

- › Drilling
- › Thread tapping
- › Workpiece thickness selection
- › Spindle speed
- › Depth display (target/actual)

Thermdrill



- › Information see page 72



Figure: DH 18V

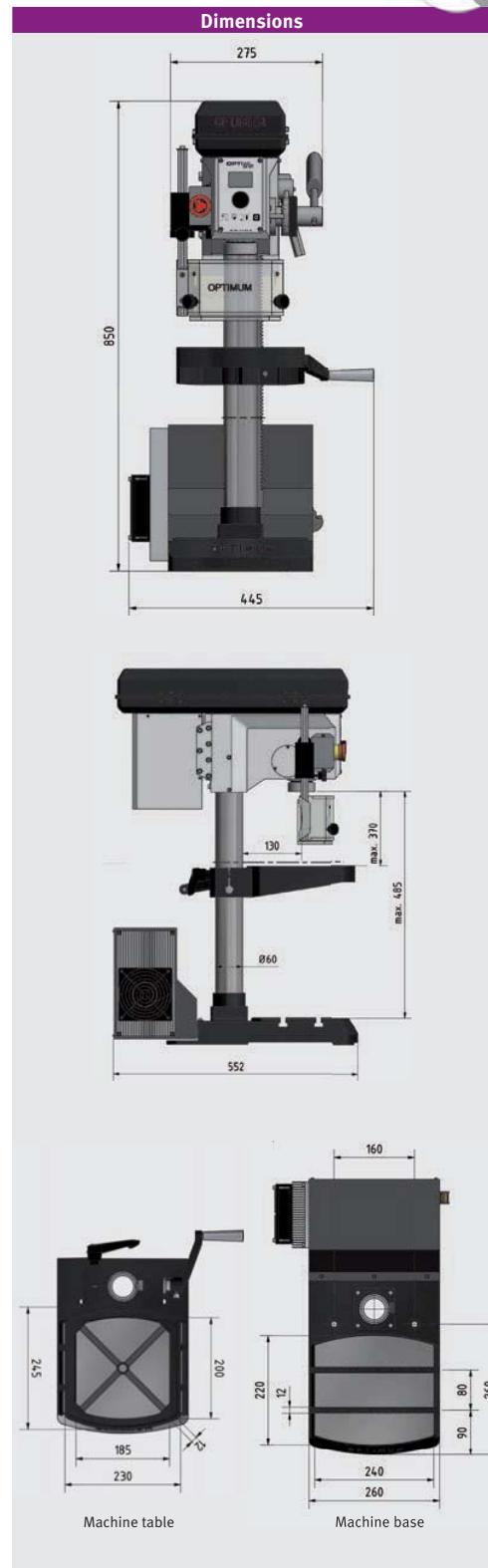


Technical specifications, accessories and dimensions

Model	DH 18V
Article no.	3020220
Technical specifications	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor output	1.5 kW
Drilling performance	
Drilling performance in steel (S235JR)	Ø 18 mm
Continuous drilling performance in steel (S235JR)	Ø 16 mm
Thread tapping steel (S235JR)	M10
Spindle	
Spindle sleeve stroke	65 mm
Spindle seat	MT 2
Throat	132 mm
Speeds	
Spindle speeds	100 - 6 000 rpm
Number of speeds	5 speeds Electronic speed control
Drilling table	
Drilling table workspace L x W	230 x 245 mm
T-slot size	12 mm, diagonal
Rotating drilling table	360°
Clearance spindle - drilling table	max. 370 mm
Machine base	
Machine base work area L x W	220 x 240 mm
T-slot size / spacing / count	12 mm / 80 mm / 2
Distance spindle - machine base	max. 485 mm
Dimensions	
Column diameter	Ø 60 mm
Length x width x height	445 x 552 x 850 mm
Weight	64 kg

Accessories	Article no.
Quick release chuck direct MT 2 / 1 - 16 mm	3050571
Quick release chuck direct MT 2 / 1 - 13 mm	3050572
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002
Assortment of clamping tools size 10, 58-parts	3352016
Taper drill punch MSP1	3050636
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Thread tapping chuck 6 inserts, sizes M3 - M12	3050702
Thermdrill MT 2	3060005
Machine chassis	
Information „Machine bases“ on page 135	
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230
› Information on the vices on page 71	



Scope of supply

- › Quick clamping drill chuck 1 - 13 mm
- › Morse taper MT 2
- › T-slot nuts

Rugged bench/Upright drills with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Smooth, powerful industrial electric motor
- ▶ Separate emergency stop button
- ▶ Rugged cast column
- ▶ Drilling depth stop
- ▶ Precision machined drilling table with diagonal T-slots and all-around cooling water channel
- ▶ V-belt cover with safety switch
- ▶ V-belt quick tensioning device
- ▶ Solid, generously dimensioned baseplate with T-slots, pronounced ribbing on rear
- ▶ The baseplate can be used for particularly high workpieces by swivelling out the drilling table
- ▶ Guaranteed concentricity better than 0.015 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ Premium Optimum quick clamping chuck as standard equipment
- ▶ Generously dimensioned, height adjustable protective screen with safety switch

As of B 24H

- ▶ Machine lamp

As of B 24H/400V

- ▶ Right-handed/left-handed rotation

As of B 28H

- ▶ Easy tool changes through integrated push-out tool
- ▶ Spindle sleeve lever made of steel

B 34H

- ▶ Digital depth sensor
- ▶ Digital speed display



Fig.: B 16H

Fig.: B 24H

Fig.: B 28H

Fig.: B 34H



Technical data and accessories

Model	B 16H	B 24H	B 28H	B 34H
Article no. (230 V)	-	3020241	-	-
Article no. (400 V)	3020217	3020243	3020283	3020333
Technical specifications				
Electrical connection	400 V / 3 Ph ~50 Hz	230 V/1 Ph - 400 V/3 Ph	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	550 W	850 W	850 W	1.5/2.2 kW
Drilling performance				
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 24 mm	Ø 28 mm	Ø 34 mm
Continuous drilling performance in steel (S235JR)	Ø 11 mm	Ø 20 mm	Ø 24 mm	Ø 26 mm
Spindle				
Spindle sleeve stroke	65 mm	85 mm	105 mm	160 mm
Spindle seat	MT 2	MT 2	MT 3	MT 4
Throat	130 mm	165 mm	200 mm	285 mm
Speeds				
Spindle speeds	450 - 3 500 rpm	350 - 4 000 rpm	120 - 4 000 rpm	145 - 4 800 rpm
Number of speeds	5 speeds	7 speeds	16 speeds	2 x 9 speeds
Drilling table				
Drilling table workspace L x W	230 x 245 mm	280 x 300 mm	340 x 360 mm	420 x 400 mm
Diagonal T-slot size	12 mm	14 mm	14 mm	14 mm
Rotating drilling table	360°	360°	360°	360°
Clearance spindle - drilling table	max. 370 mm	max. 515 mm	max. 860 mm	max. 790 mm
Machine base				
Machine base work area L x W	200 x 240 mm	280 x 260 mm	320 x 320 mm	390 x 390 mm
T-slot size / spacing / count	12 mm / 80 mm / 2	14 mm / 120 mm / 2	14 mm / 120 mm / 2	14 mm / 150 mm / 2
Distance spindle - machine base	max. 495 mm	max. 590 mm	max. 1 285 mm	max. 1 275 mm
Dimensions				
Column diameter	Ø 60 mm	Ø 80 mm	Ø 92 mm	Ø 115 mm
Length x width x height	549 x 300 x 848 mm	665 x 434 x 998 mm	698 x 449 x 1 721 mm	918 x 585 x 1 895 mm
Weight	54 kg	92 kg	166 kg	260 kg

Scope of supply

- › Quick clamping drill chuck 1 – 13 mm (B 16H)
- › Quick clamping drill chuck 1 – 16 mm (as of B 24H)
- › Morse cone
- › T-slot nuts

Accessories B 16H / B 24H

Article no.

Quick release chuck direct MT 2 1-16 mm	3050571
Quick release chuck direct MT 2 1-13 mm	3050572
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002
Assortment of clamping tools size 10, 58-parts	3352016
Taper drill punch MSP1	3050636
Collet chuck set MT 2/ ER 25	3352052

Accessories

Article no.

Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Universal coolant unit	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
› More „Accessories for drills“ from page 64	

Machine vices

Article no.

BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI 140	3000214
BSI-Q 100	3000230
BSI-Q 140	3000234
› Information on the vises on the page 71	

Accessories B 34H

Article no.

Quick release chuck direct MT 4	3050574
Morse taper MT 4/B16	3050661
Reduction sleeve MT 4 - MT 3	3050664
Assortment of clamping tools size 12, 58-parts	3352017
Thread tapping chuck M3 - M12	3050709
Thread tapping chuck M8 - M20	3050710
Collet chuck set MT 4/ ER 32	3352094

Bench-mounted drilling machine with continuously adjustable speed control.

Machine highlight - menu-controlled operation of the drilling/thread tapping operation modes

Facts that impress in terms of quality, performance and price

- ▶ Best possible force transmission thanks to aluminium pulleys
- ▶ Emergency stop button
- ▶ Drill spindle with precision ball bearings
- ▶ Guaranteed concentricity less than 0.03 mm measured at the drilling spindle sleeve
- ▶ Dirt- and water-resistant, easy-to-clean membrane keyboard with high-contrast OLED display
- ▶ Anti-glare LED lighting on the left and right, integrated into the drilling head. No annoying shadows
- ▶ Thread tapping mode
- ▶ Language selection in display field, choice of DE-EN-FR-RU
- ▶ Digital reference point
- ▶ Digital parts counter
- ▶ Audible signal on reaching drilling depth
- ▶ Reduced speed in thread tapping mode
- ▶ Height adjustability chuck guard with microswitch for maximum protection
- ▶ Precision drilling table with parallel T-slots, precision surface finish
- ▶ Swivelling drilling table
- ▶ Solid base plate with parallel T-slots

Menu-controlled operation
Working modes drilling / Threading
› During drill and thread tapping, the machine automatically sets the optimum speed for the tool, after the user enters the drill diameter and material.

OLED display
› Spindle speed › Depth display (target/actual) › Counter › Selected tool and tool size





Technical specifications, accessories and dimensions

Model	DX 17V
Article no.	3020170
Electrical connection	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor output	1.0 kW
Drilling performance	
Drilling performance in steel (S235JR)	Ø 16 mm
Continuous drilling performance in steel (S235JR)	Ø 13 mm
Thread tapping steel (S235JR)	M8
Spindle	
Spindle sleeve stroke	60 mm
Spindle seat	B 16
Throat	235 mm
Speeds	
Spindle speeds	50 - 4 000 rpm
Number of speeds	Electronic speed control
Drilling table	
Drilling table workspace L x W	290 x 290 mm
T-slot size / spacing / count	10 mm / 100 mm / 2
Rotating drilling table	360°
Clearance chuck - drilling table	98 - 315 mm
Machine base	
Machine base work area L x W	290 x 280 mm
T-slot size / spacing / count	14 mm / 100 mm / 2
Distance chuck - machine base	max. 385 mm
Dimensions	
Column diameter	Ø 60 mm
Length x width x height	425 x 475 x 980 mm
Weight	73 kg

Accessories	Article no.
Assortment of clamping tools size 8	3352015
Assortment of clamping tools size 12	3352017
T-slot nut 10 mm / M 8	3353020
T-slot nut 14 mm / M 12	3353025
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Machine chassis	3353000
Information „Machine bases“ on page 135	
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 85	3000008
BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230
› Information on the vices on page 71	

Important information on „Operation of machines with frequency converters“ on page 253
The drill (frequency converter) complies with the DIN EN 55011 standard: class C2



Scope of supply
› Quick clamping drill chuck 1 - 13 mm

Table drilling machine with continuously adjustable speed control

Facts that impress in terms of quality, performance and price

- ▶ Best possible force transmission thanks to to aluminium pulleys
- ▶ Digital speed display integrated in housing, speed control via potentiometer
- ▶ Emergency stop button
- ▶ Drill spindle with precision ball bearings
- ▶ Premium OPTIMUM quick clamping chuck as standard
- ▶ Guaranteed concentricity less than 0.03 mm measured at the drilling spindle sleeve
- ▶ Height adjustability chuck guard with microswitch
- ▶ Membrane keyboard, dirt/water-resistant , easy to clean
- ▶ Precision drilling table with parallel T-slots

- ▶ Thick walled cast column for high force absorption and stability
- ▶ Solid baseplate with, pronounced ribbing on rear
- ▶ EMC filter class C2

DX 13V

- ▶ Drill head height adjustable

DX 15V

- ▶ Drilling table height-adjustable via rack
- ▶ MT Adapter



Fig.: DX 13V



Fig.: DX 15V



Technical specifications, accessories and dimensions

Model	DX 13V	DX 15V
Article no.	3020150	3020155
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor output	0.85 kW	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 15 mm
Continuous drilling performance in steel (S235JR)	Ø 11 mm	Ø 12 mm
Spindle		
Spindle sleeve stroke	60 mm	
Spindle seat	B 16	MT 2
Throat	235 mm	
Speeds		
Spindle speeds	100 - 3 000 rpm	
Number of speeds	Electronically controlled	
Drilling table		
Drilling table workspace L x W	-	290 x 290 mm
T-slot size / spacing / count	-	10 mm / 100 mm / 2
Rotating drilling table	-	360°
Clearance chuck - drilling table	-	98 - 375 mm
Machine base		
Machine base work area L x W	280 x 290 mm	290 x 280 mm
T-slot size / spacing / count	14 mm / 100 mm / 2	
Distance chuck - machine base	92 - 297 mm	290 - 355 mm
Dimensions		
Column diameter	Ø 60 mm	
Length x width x height	325 x 517 x 895 mm	425 x 475 x 980 mm
Weight	51 kg	66 kg

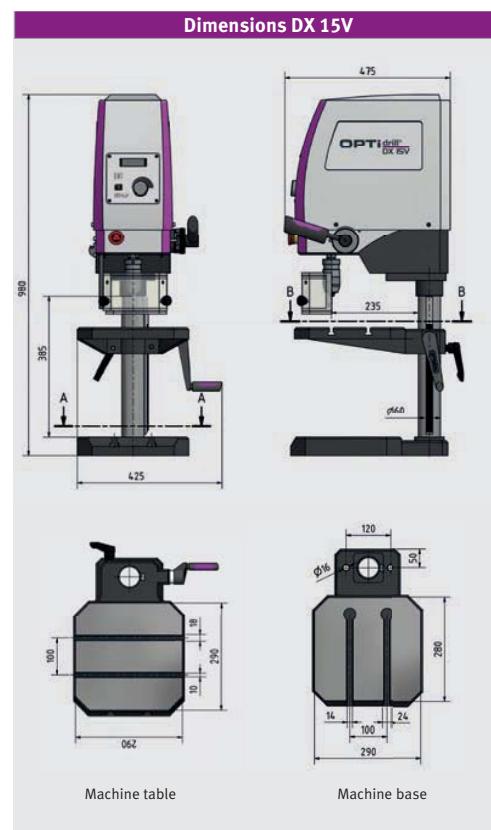
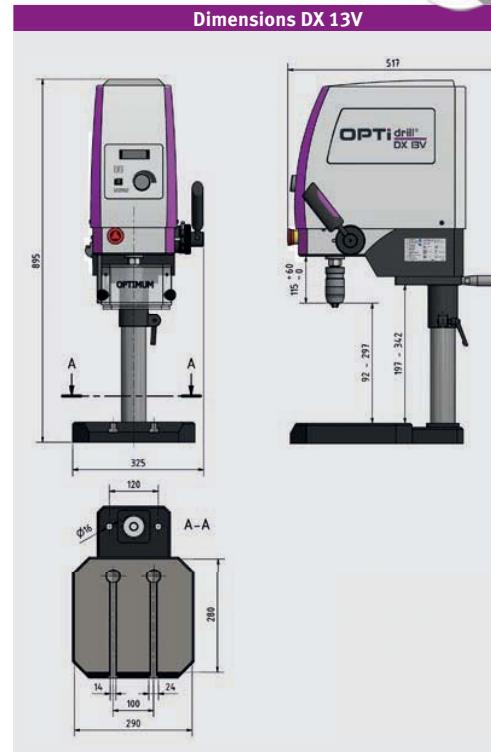
Accessories	Article no.
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
T-slot nut (individual) M12 / 14 mm	3353025
Assortment of clamping tools size 12, 58-parts	3352017
Blank holder 14 mm/M12	3352031
Universal coolant unit	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Machine chassis	3353000
Information „Machine bases“ on page 135	

Accessories DX 15V	Article no.
Twist drill HSS MT 2	3051002
Quick release chuck direct MT 2 / 1 - 16 mm	3050571
Quick release chuck direct MT 2 / 1 - 13 mm	3050572
Morse taper MT 2/B16	3050659
T-slot nut (individual) M 8 / 10 mm	3353022
Assortment of clamping tools size 8, 58-parts	3352015
Thread tapping chuck 6 inserts, sizes M3 - M12	3050702
Thermdrill MT 2	3060005

Machine vices	Article no.
BMS 85	3000008
BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230

› Information on the vises on page 71

Important information on „Operation of machines with frequency converters“ on page 255
The drilling machines (frequency inverters) comply with standard DIN EN 55011: Class C2



Bench/Upright drills with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Industrial motor
- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Digital drilling depth display and spindle speed integrated in housing
- ▶ Separate emergency stop button
- ▶ Precision spindle bore
- ▶ Safety electrical system in 24 V DC
- ▶ Guaranteed concentricity less than 0.02 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ Premium quick clamping chuck
- ▶ Drilling depth stop
- ▶ Precise workmanship; stable drilling table with diagonal T-slots and all-around cooling water channel
- ▶ V-belt cover with safety switch
- ▶ Single-piece, pressure cast aluminium spindle sleeve lever with Softgrip handles

- ▶ Generously dimensioned, height adjustable protective screen with safety switch
- ▶ Heavy duty design of entire machine

As of D 23 Pro

- ▶ GATES quality belts

As of D 23 Pro / 400 V

- ▶ Right-handed/left-handed rotation

D 33Pro

- ▶ Solid, generously dimensioned baseplate with T-slots, pronounced ribbing on rear



Fig.: D 17Pro

Fig.: D 23Pro

Fig.: D 26Pro

Fig.: D 33Pro



Technical specifications, accessories and dimensions

Model	D 17Pro	D 23Pro	D 26Pro	D 33Pro
Article no. (230 V)	3003010	3003015	-	-
Article no. (400 V)	-	3003020	3003030	3003040
Technical specifications				
Electrical connection	230 V / 1 Ph ~50 Hz	230 V/1 Ph w.o. 400 V/3 Ph	400 V / 3 Ph ~ 50 Hz	400 V / 3 Ph ~ 50 Hz
Motor output	500 W	750 W	750 W	1.1 kW
Drilling performance				
Drilling performance in steel (S235JR)	Ø 16 mm	Ø 25 mm	Ø 25 mm	Ø 30 mm
Continuous drilling performance in steel (S235JR)	Ø 12 mm	Ø 20 mm	Ø 20 mm	Ø 25 mm
Spindle				
Spindle sleeve stroke	65 mm	80 mm	85 mm	120 mm
Spindle seat	MT 2	MT 2	MT 3	MT 4
Throat	152 mm	180 mm	210 mm	254 mm
Speeds				
Spindle speeds	680 - 2 700 rpm	200 - 2 440 rpm	200 - 2 440 rpm	120 - 1 810 rpm
Number of speeds	5 speeds	12 speeds	12 speeds	9 speeds
Drilling table				
Drilling table workspace L x W	235 x 220 mm	280 x 245 mm	330 x 290 mm	475 x 425 mm
T-slot size	12 mm, diagonal	12 mm, diagonal	14 mm, diagonal	14 mm, diagonal
Drill table rotation/lateral tilt	360° / ± 90°	360° / ± 90°	360° / ± 90°	360° / ± 90°
Clearance spindle - drilling table	max. 325 mm	max. 425 mm	max. 720 mm	max. 695 mm
Machine base				
Machine base work area L x W	220 x 230 mm	240 x 250 mm	385 x 260 mm	410 x 325 mm
T-slot size / spacing / count	16 mm / 148 mm / 2	16 mm / 170 mm / 2	16 mm / 170 mm / 2	16 mm / 250 mm / 2
Distance spindle - machine base	max. 530 mm	max. 618 mm	max. 1 230 mm	max. 1 180 mm
Dimensions				
Column diameter	Ø 60 mm	Ø 73 mm	Ø 80 mm	Ø 92 mm
Length x width x height	565 x 275 x 840 mm	615 x 330 x 1 015 mm	670 x 355 x 1 640 mm	755 x 440 x 1 705 mm
Weight	36.5 kg	58 kg / 63.5 kg	85 kg	132 kg

Scope of supply

- › Quick-action drill chuck 1 - 16 mm
- › Morse cone
- › T-slot nuts

Accessories	Article no.
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magn. holder	3356663
Coolant hose KMS 2	3356660
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
BMS 85	3000008
BMS 100	3000010
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230
› Information on the vises on page 71	

Accessories D 17Pro / D 23Pro

Article no.
Direct quick release chuck 1 - 16 mm
Direct quick release chuck 1 - 13 mm
Morse taper MT 2/B16
Twist drill bit HSS / MT 2, 9 parts
Thread tapping chuck MT 2
Assortment of clamping tools size 10

Accessories D 26Pro

Article no.
Direct quick release chuck 1 - 16 mm
Reduction sleeve MT 3 - MT 2
Morse taper MT 3/B16
Twist drill bit HSS / MT 3, 9 parts
Taper drill punch MSP1
Assortment of clamping tools size 12
Assortment of clamping tools size 14

Accessories B 33Pro

Article no.
Direct quick release chuck 1 - 16 mm
Reduction sleeve MT 4 - MT 3
Reduction sleeve MT 4 - MT 3
Morse taper MT 4/B16
Taper drill punch MSP2
Assortment of clamping tools size 12
Assortment of clamping tools size 14

Bench drill with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Separate emergency stop button
- ▶ Guaranteed concentricity less than 0.02 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ Premium quick clamping chuck
- ▶ Drilling depth stop
- ▶ Precise workmanship; stable drilling table with diagonal T-slots and all-around cooling water channel
- ▶ V-belt cover with safety switch
- ▶ Single-piece, pressure cast aluminium spindle sleeve lever with Softgrip handles





Technical specifications, accessories and dimensions

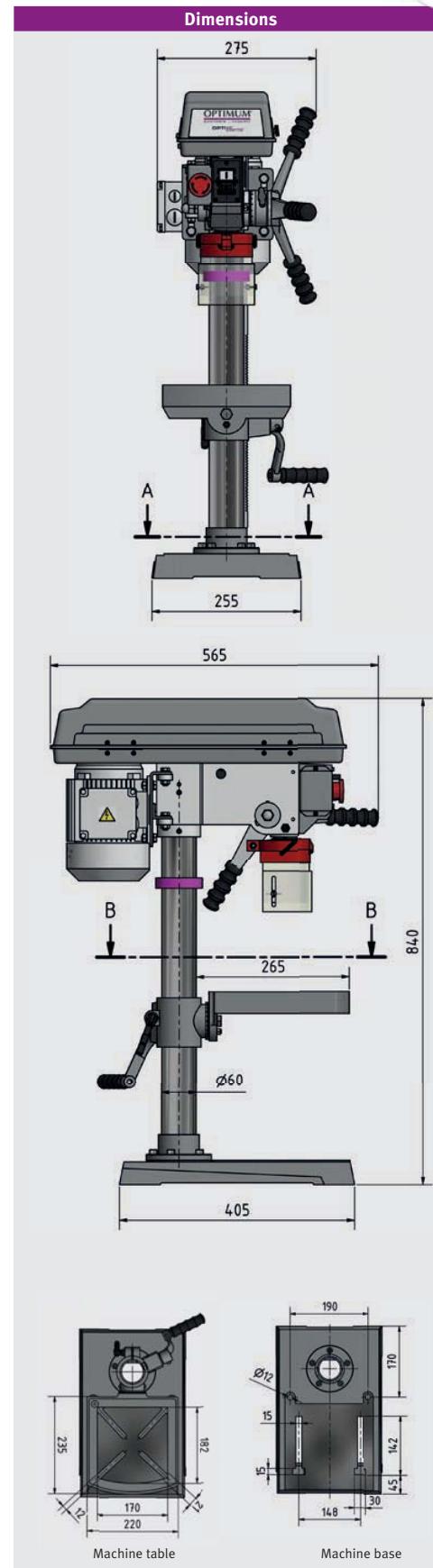
Model	D 17Pro basic
Article no.	3201010
Technical specifications	
Electrical connection	230 V / 1 Ph ~50 Hz
Motor output	490 W
Drilling performance	
Drilling performance in steel (S235JR)	Ø 15.5 mm
Continuous drilling performance in steel (S235JR)	Ø 12 mm
Spindle	
Spindle sleeve stroke	65 mm
Spindle seat	MT 2
Throat	152 mm
Speeds	
Spindle speeds	680 - 2 700 rpm
Number of speeds	5 speeds
Drilling table	
Drilling table workspace L x W	235 x 220 mm
T-slot size	12 mm, 2 diagonal
Drill table rotation/lateral tilt	360° / ± 45°
Clearance spindle - drilling table	325 mm
Machine base	
Machine base work area L x W	220 x 230 mm
T-slot size / spacing / count	14 mm / 148 mm / 2
Distance spindle - machine base	530 mm
Dimensions	
Column diameter	Ø 60 mm
Length x width x height	565 x 275 x 840 mm
Weight	41.5 kg

Scope of supply

- › Quick-action drill chuck 1 - 15,5 mm
- › Morse cone
- › T-slot nuts

Accessories	Article no.
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magn. holder	3356663
Coolant hose KMS 2	3356660

› More „Accessories for drills“ from page 64



Drilling

Milling

Turning

Saws

Grinding

Polishing

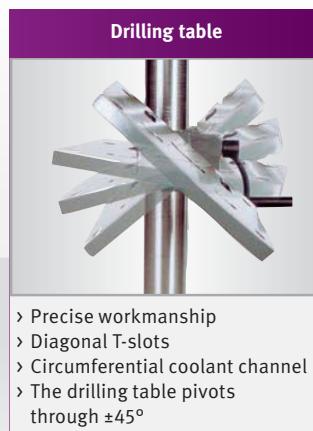
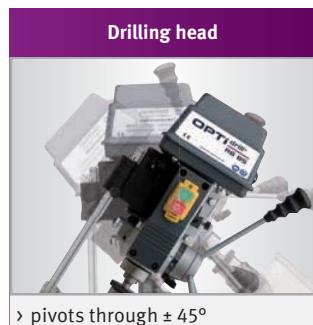
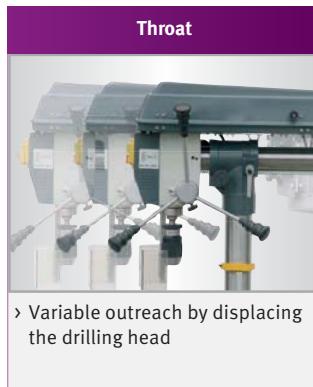
Lamps

Measuring

Lightweight radial drilling machine with long outreach for wood, plastics, aluminium

Facts that impress in terms of quality, performance and price

- ▶ Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- ▶ Guaranteed concentricity of drill spindle better than 0.03 mm measured in the drilling spindle sleeve
- ▶ Height-adjustable chuck protection with micro switch for best possible user protection
- ▶ Drill spindle with precision ball bearings
- ▶ V-belt cover with safety switch
- ▶ Precision drilling table with fastening holes for extended drilling table support
- ▶ Steel column for extremely smooth action and stability
- ▶ Solid and generously dimensioned baseplate with grooves for T slot nuts, rear with pronounced ribbing
- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Separate emergency stop button
- ▶ Drilling depth stop
- ▶ OPTIMUM key type drill chuck in standard scope of delivery
- ▶ Optimal price-performance ratio
- ▶ Lasting value





Technical specifications, accessories and dimensions

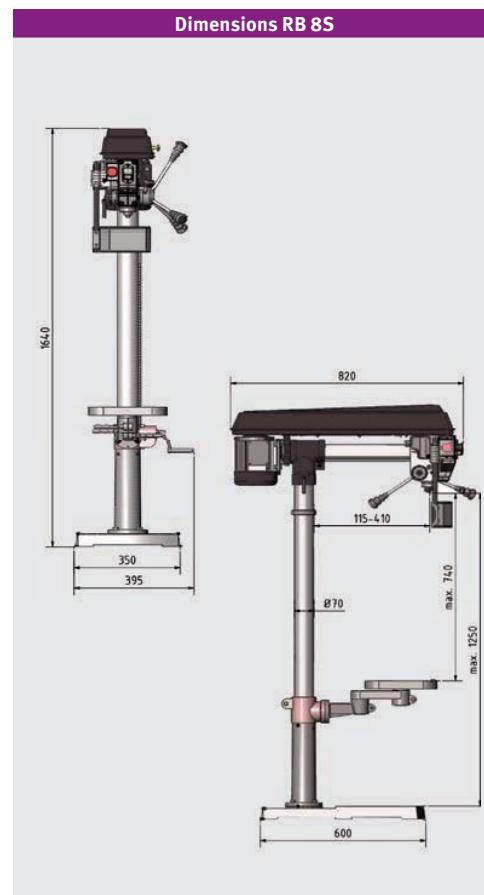
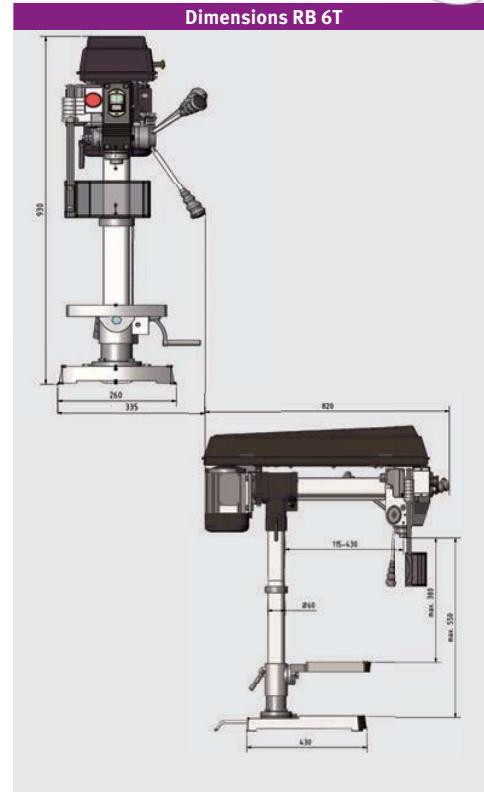
Model	RB 6T	RB 8S
Article no.	3009161	3009181
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	
Motor output	750 W	
Drilling performance		
Drilling performance in steel (S235JR)	Ø 16 mm	
Continuous drilling performance in steel (S235JR)	Ø 12 mm	
Spindle		
Spindle sleeve stroke	80 mm	
Spindle seat	MT 2	
Throat	115 - 430 mm	
Speeds		
Spindle speeds	390 - 3 000 rpm	
Number of speeds	5 speeds	
Drilling table		
Drilling table workspace L x W	225 x 230 mm	262 x 262 mm
T-groove size	-	14 mm, diagonal
Grove size	14 mm	-
Pivoting drilling table	± 45°	
Clearance spindle - drilling table	max. 380 mm	max. 740 mm
Machine base		
Machine base work area L x W	430 x 260 mm	600 x 350 mm
Groove size / spacing / count	14 mm / 130 mm / 2	14 mm / 220 mm / 2
Clearance spindle - machine base	max. 550 mm	max. 1 250 mm
Dimensions		
Column diameter	Ø 60 mm	Ø 70 mm
Length x width x height	820 x 335 x 930 mm	820 x 395 x 1 640 mm
Weight	47 kg	60 kg

Scope of supply

- › Key type drill chuck 1 - 16 mm B 16
- › Morse taper MT 2/B16

Accessories	Article no.
Quick release chuck direct MT 2 / 1 - 16 mm	3050571
Quick release chuck direct MT 2 / 1 - 13 mm	3050572
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002
Assortment of clamping tools size 12, 58-parts	3352017
Taper drill punch MSP1	3050636
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magnetic holder	3356663
Coolant hose KMS 2	3356660
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
› More „Accessories for drills“ from page 64	

Machine vices	Article no.
MSO 125	3000125
BMS 120	3000012
BSI 100	3000210
BSI-Q 100	3000230
› Information on the vices on page 71	



Inexpensive bench/Upright drills with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Precision drilling table, pivots through $\pm 45^\circ$
- ▶ Solid, generously dimensioned baseplate with grooves, rear with pronounced ribbing
- ▶ Quality proven in millions of applications

As of B 14

- ▶ T-slot nut for fastening vice

As of B 20

- ▶ Precise workmanship; stable drilling table with diagonal T-slots and all-around cooling water channel

As of B 20 / 400 V

- ▶ Right-handed/left-handed rotation



Fig.: B 13



Fig.: B 14



Fig.: B 16



Fig.: B 20

Model	B 13	B 14	B 16	B 20
Article no.	3008131	3008141	3008161	3008201
Technical specifications				
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph 400 V / 3 Ph
Motor output	300 W	350 W	450 W	0.55 kW
Drilling performance				
Drilling performance in steel (S235JR)	\varnothing 13 mm	\varnothing 14 mm	\varnothing 16 mm	\varnothing 20 mm
Continuous drilling performance in steel (S235JR)	\varnothing 12 mm	\varnothing 12 mm	\varnothing 15 mm	\varnothing 18 mm
Spindle				
Spindle sleeve stroke	50 mm	50 mm	65 mm	80 mm
Throat	104 mm	104 mm	125 mm	170 mm
Spindle seat	fixed/B16	fixed/B16	MT 2	MT 2
Speeds				
Spindle speeds	520 - 2 620 rpm	520 - 2 620 rpm	660 - 2 500 rpm	210 - 2 220 rpm
Number of speeds	5 speeds	5 speeds	5 speeds	12 speeds
Drilling table				
Drilling table workspace L x W	160 x 160 mm	160 x 160 mm	200 x 200 mm	275 x 275 mm
T-slot width	14 mm, diagonal	14 mm, diagonal	14 mm, diagonal	14 mm, diagonal
Drill table rotation/lateral tilt	$360^\circ / \pm 45^\circ$			
Clearance spindle - drilling table	max. 240 mm	max. 330 mm	max. 390 mm	max. 465 mm
Machine base				
Machine base work area L x W	135 x 175 mm	140 x 180 mm	160 x 170 mm	205 x 200 mm
Distance spindle - machine base	max. 325 mm	max. 440 mm	max. 525 mm	max. 645 mm
Dimensions				
Column diameter	46 mm	46 mm	60 mm	70 mm
Length x width x height	420 x 220 x 580 mm	420 x 230 x 700 mm	510 x 270 x 820 mm	600 x 350 x 990 mm
Weight	18 kg	20 kg	34 kg	51 kg



Fig.: B 25



Fig.: B 32

Model	B 25	B 32
Article no.	3008253	3008323
Technical specifications		
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Motor output	0.55 kW	1.1 kW
Drilling performance		
Drilling performance in steel (S235JR)	Ø 20 mm	Ø 32 mm
Continuous drilling performance steel (S235JR)	Ø 18 mm	Ø 28 mm
Spindle		
Spindle sleeve stroke	80 mm	125 mm
Throat	170 mm	225 mm
Spindle seat	MT 3	MT 4
Speeds		
Spindle speeds	210 - 2 220 rpm	140 - 2 020 rpm
Number of speeds	12 speeds	9 speeds
Drilling table		
Drilling table workspace L x W	275 x 275 mm	360 x 360 mm
T-slot size	14 mm, diagonal	14 mm, diagonal
Drill table rotation/lateral tilt	360° / ± 45°	360° / ± 45°
Clearance spindle - drilling table	max. 760 mm	max. 600 mm
Machine base		
Machine base work area L x W	235 x 220 mm	260 x 270 mm
Distance spindle - machine base	max. 1 210 mm	max. 1 170 mm
Dimensions		
Column diameter	Ø 70 mm	Ø 92 mm
Length x width x height	690 x 390 x 1 570 mm	790 x 400 x 1 730 mm
Weight	57 kg	137 kg



- › Ground multi-tooth carrier
- › Best possible force transmission thanks to aluminium pulleys in combination with GATES quality toothed belts
- › V-belt cover with safety switch



- › Guaranteed concentricity better than 0.03 mm measured in the drilling spindle sleeve
- › Drilling spindle with precision ball bearings
- › OPTIMUM quick clamping drill chuck included in standard scope of delivery (B13 with key type drill chuck)



- › User-friendly switch as per IP 54
- › Separate emergency stop button

Scope of supply

B 13

- › Key type drill chuck 1.5 - 13 mm

B 14

- › Quick-action drill chuck 1 - 13 mm
- › T-slot nuts

B 16 / B 20

- › Quick-action drill chuck 1 - 16 mm
- › Morse taper MT 2/B16
- › T-slot nuts

B 25

- › Quick-action drill chuck 1 - 16 mm
- › Morse taper MT 3/B16
- › T-slot nuts

B 32

- › Quick-action drill chuck 1 - 16 mm
- › Morse taper MT 4/B16
- › T-slot nuts
- › „Accessories for drills“ from page 64

Inexpensive bench drills with V-belt drive

Facts that impress in terms of quality, performance and price

- ▶ Precision drilling table, pivots through $\pm 45^\circ$
- ▶ Solid, generously dimensioned baseplate with grooves, rear with pronounced ribbing
- ▶ Geschliffener Vielzahn-Mitnehmer
- ▶ Precise workmanship; stable drilling table with diagonal T-slots and all-around cooling water channel
- ▶ Guaranteed concentricity less than 0.02 mm measured in the drilling spindle sleeve
- ▶ Drill spindle with precision ball bearings
- ▶ User-friendly safety switch with IP 54 degree of protection
- ▶ Separate emergency stop button

B 14basic/ B 16basic

- ▶ T-slot nut for fastening vice



Fig.: B 13basic



Fig.: B 14basic



Fig.: B 16basic



Technical specifications and accessories

Model	B 13basic	B 14basic	B 16basic
Article no.	3008013	3008014	3008016
Technical specifications			
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	300 W	350 W	450 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 13 mm	Ø 14 mm	Ø 15,5 mm
Continuous drilling performance steel (S235JR)	Ø 12 mm	Ø 12 mm	Ø 14 mm
Spindle			
Spindle sleeve stroke	50 mm	50 mm	65 mm
Throat	104 mm	104 mm	125 mm
Spindle seat	fixed/B16	fixed/B16	MT 2
Speeds			
Spindle speeds	520 - 2 620 rpm	520 - 2 620 rpm	660 - 2 500 rpm
Number of speeds	5 speed	5 speed	5 speed
Drilling table			
Drilling table workspace L x W	160 x 160 mm	160 x 160 mm	200 x 200 mm
T-slot size	14 mm, 2 diagonal	14 mm, 2 diagonal	14 mm, 2 diagonal
Drill table rotation/lateral tilt	360° / ± 45°	360° / ± 45°	360° / ± 45°
Clearance spindle - drilling table	240 mm	330 mm	390 mm
Machine base			
Machine base work area L x W	135 x 175 mm	140 x 180 mm	160 x 170 mm
Distance spindle - machine base	325 mm	440 mm	525 mm
Dimensions			
Column diameter	46 mm	46 mm	60 mm
Length x width x height	420 x 220 x 580 mm	420 x 230 x 700 mm	510 x 270 x 820 mm
Weight	18 kg	20 kg	34 kg

Accessories	Article no.
Hold-down device 14 mm/M12	3352031
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Quick clamping drill chuck 1 - 8 mm; B16	3050608
Quick clamping drill chuck 1 - 10 mm; B16	3050610
Quick clamping drill chuck 1 - 13 mm; B16	3050623
Quick clamping drill chuck 1 - 16 mm; B16	3050626
Universal coolant unit 230 V	3352002
Coolant mist lubricator MMC 1 with magn. holder	3356663
Coolant hose KMS 2	3356660
Assortment of clamping tools size 12, 58-parts	3352017
› More „Accessories for drills“ from page 64	

Scope of supply
B 13basic
› Key type drill chuck 1,5 - 13 mm
B 14basic
› Quick-action drill chuck 1 - 13 mm
› T-slot nuts
B 16basic
› Quick-action drill chuck 1 - 16 mm
› Morse taper MT 2/B16
› T-slot nuts

Accessories B16basic	Article no.
Direct quick release chuck 1 - 16 mm	3050571
Direct quick release chuck 1 - 13 mm	3050572
Morse taper MT 2/B16	3050659
Twist drill bit HSS / MT 2, 9 parts	3051002
Thread tapping chuck MT 2	3050702

Precision, solid radial drilling machines, premium quality

Ideal for versatile deployment in one-off and serial production

Facts that impress in terms of quality, performance and price

- ▶ Versatile range of applications, such as drilling, reaming, thread tapping
- ▶ Electrically braked motor
- ▶ Control elements with 24 V DC electronics
- ▶ Heavy, solid, premium quality casting
- ▶ Long reach thanks to horizontally adjustable machine head
- ▶ Clear-cut control panel layout
- ▶ Smooth action pivoting and travel axes
- ▶ Swivelling column with sophisticated workmanship and optimised clamping for maximum stability and minimum clamping offset
- ▶ Torsionally stiff boom design, capable of supporting heavy loads
- ▶ Height-adjustment of boom via powerful motorised drive and lifting spindle
- ▶ Drilling head gear box runs in oil sump
- ▶ Boom guideways tempered and precision ground
- ▶ Gear wheels made of chrome-nickel steel, tempered and precision ground for lower noise and smooth action

- ▶ Drilling head and column can be clamped or released separately
- ▶ Right-handed/left-handed rotation
- ▶ Solid, generously dimensioned precision drilling table
- ▶ Hardened and ground clamping table with parallel T-slots
- ▶ Machine lamp
- ▶ Overload protection
- ▶ Thick-walled cast column ensures very smooth action and stability
- ▶ LED lamp
- ▶ Coolant unit with coolant tank in machine base

RD 4 / RD 5

- ▶ All axes are clamped manually

RD 6

- ▶ Column is clamped hydraulically

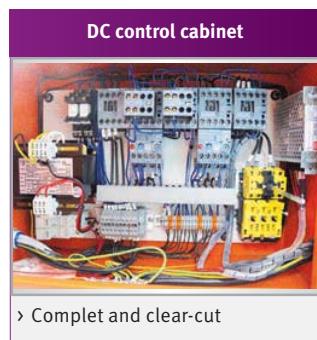


Fig. RD 5 with optional accessories



Technical data and accessories

Model	RD 4	RD 5	RD 6
Article no.	3049040	3049050	3049070
Technical specifications			
Electrical connection	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz	400 V / 3 Ph ~50 Hz
Total rated value	3 kW	4 kW	6.5 kW
Spindle motor drive output	1.5 kW	2.25 kW	4 kW
Boom lift motor drive output	0.75 kW	0.75 kW	1.5 kW
Hydraulic clamping drive	-	-	0.75 kW
Coolant pump motor	90 W	90 W	90 W
Drilling performance			
Drilling performance in steel (S235JR)	Ø 32 mm	Ø 42 mm	Ø 50 mm
Continuous drilling performance in steel (S235JR)	Ø 28 mm	Ø 40 mm	Ø 45 mm
Thread tapping steel (S235JR)			
Spindle			
Spindle sleeve stroke	220 mm	230 mm	270 mm
Spindle seat	MT 4	MT 4	MT 5
Automatic spindle sleeve feed	3 speeds: 0.05-0.15 mm/rev	3 speeds: 0.05-0.15 mm/rev	3 speeds: 0.06-0.2 mm/rev
Boom			
Angle of rotation	± 180°	± 180°	± 180°
Drilling head travel (horizontal)	530 mm	820 mm	1 250 mm
Boom lift stroke (vertical)	580 mm	570 mm	680 mm
Speeds			
Spindle speeds	73 - 1 247 rpm	37 - 1 253 rpm	44 - 1 206 rpm
Number of speeds	6	12	12
Drilling table			
Large base L x W	1 260 x 700 mm	1 608 x 745 mm	2 550 x 970 mm
Base work area L x W x H	828 x 522 mm	1 147 x 589 mm	1 800 x 830 mm
T-slot size / spacing / count	19 mm / 171 mm / 3	19 mm / 171 mm / 3	14 mm / 180 mm / 4
Clearance spindle to base	260 - 1 060 mm	470 - 1 270 mm	465 - 1 420 mm
Distance spindle to column	220 - 750 mm	280 - 1 100 mm	350 - 1 600 mm
Clamping table			
Clamping table work area L x W	600 x 445 x 380 mm	635 x 520 x 415 mm	630 x 500 x 500 mm
T-Slot size / no / distance	19 mm / 100 mm / 3	19 mm / 121 mm / 3	22 mm / 150 mm / 3
Distance spindle to clamping table	0 - 675 mm	50 - 850 mm	0 - 910 mm
Dimensions			
Column diameter	210 mm	260 mm	320 mm
Length x width x height (max.)	1 260 x 700 x 2 180 mm	1 725 x 745 x 2 550 mm	2 670 x 1 120 x 2 760 mm
Weight	1 120 kg	1 800 kg	3 200 kg

Accessories	Article no.
Precision quick release chucks 1 - 8 mm; B16	3050608
Precision quick release chucks 1 - 10 mm; B16	3050610
Precision quick release chucks 1 - 13 mm; B16	3050623
Precision quick release chucks 1 - 16 mm; B16	3050626
› More „Accessories for drills“ from page 64	

Accessories RD 4 / RD 5	Article no.
Quick release chuck direct MT 4 / 1 - 16 mm	3050574
Reduction sleeve MT 4 - MT 3	3050664
Twist drill HSS / MT 3	3051003
Morse taper MT 4/B16	3050661
Blank holder 18 mm/M16	3352032
Assortment of clamping tools size 16, 58 parts	3352019

Accessories RD 6	Article no.
Morse taper MT 5/B16	3050675
Assortment of clamping tools size 12, 58 parts	3352017

Scope of supply

› Clamping table

Precision radial drilling machine with standard chassis and clamping table.

Suitable for machining bulky workpieces

Facts that impress in terms of quality, performance and price

- ▶ Versatile range of applications
- ▶ Powerful premium motor
- ▶ Electrically braked motor
- ▶ Long reach thanks to horizontally adjustable machine head
- ▶ Mechanical head, column and boom clamping
- ▶ Solid grey cast iron ensures stability, smooth action and precision
- ▶ Spindle with precision taper roller bearings

- ▶ Guaranteed concentricity better than 0.015 mm measured in the drilling spindle sleeve
- ▶ Large speed range from 155 - 2 250 rpm thanks to two-speed motor
- ▶ Solid, precision drilling table, generously dimensioned with precision surface finish and parallel T grooves
- ▶ Thick-walled steel column (\varnothing 115 mm) ensures smooth action and stability



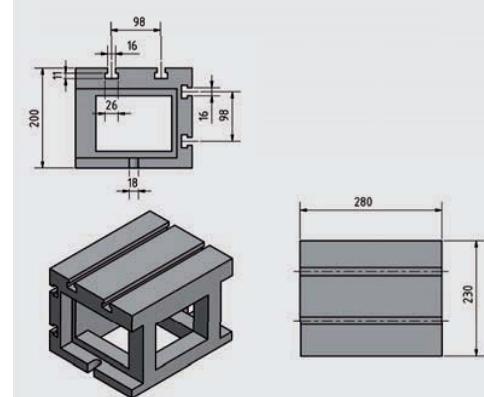
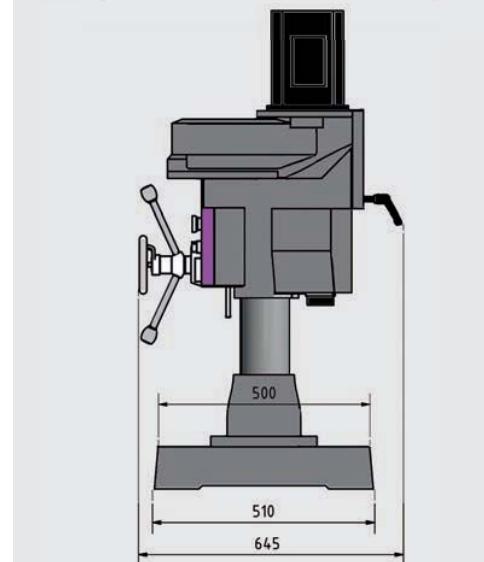
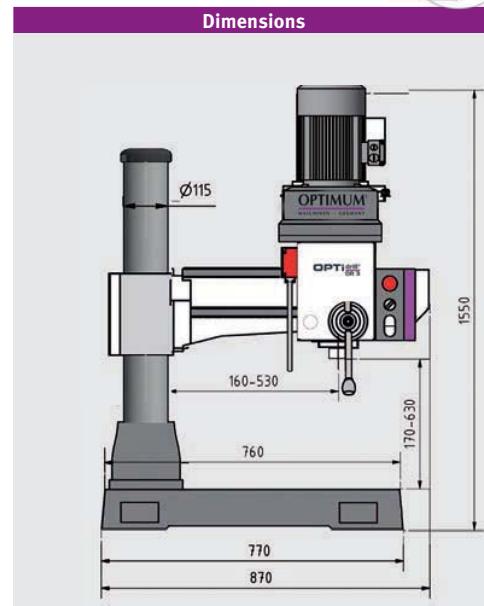


Technical specifications, accessories and dimensions

Model	RD 3
Article no.	3049030
Technical specifications	
Electrical connection	400 V / 3 Ph ~ 50 Hz
Motor output	0.55 / 1.1 kW
Drilling performance	
Drilling performance in steel (S235JR)	Ø 28 mm
Continuous drilling performance in steel (S235JR)	Ø 24 mm
Thread tapping steel (S235JR)	M12
Spindle	
Spindle sleeve stroke	130 mm
Spindle seat	MT 3
Throat	160 - 530 mm
Speeds	
Spindle speeds	155 - 2 250 rpm
Number of speeds	2 x 5 speeds
Drilling table	
Drilling table workspace L x W	780 x 520 mm
Usable workpiece mounting surface	500 x 550 mm
T-slot size / spacing / count	16 mm / 100 mm / 3
Drilling table load bearing capacity	200 kg
Clearance spindle - drilling table	170 - 630 mm
Clamping table	
Length x width x height	280 x 230 x 200 mm
T-slot size / spacing / count	16 mm / 98 mm / 2
Distance spindle to clamping table	max. 430 mm
Dimensions	
Column diameter	Ø 115 mm
Length x width x height	870 x 645 x 1 550 mm (chassis 2 150 mm)
Weight	288 kg

Accessories	Article no.
Quick release chuck direct MT 3 / 1 - 16 mm	3050573
Precision quick release chucks 1 - 8 mm; B16	3050608
Precision quick release chucks 1 - 10 mm; B16	3050610
Precision quick release chucks 1 - 13 mm; B16	3050623
Precision quick release chucks 1 - 16 mm; B16	3050626
Reduction sleeve MT 3 - MT 2	3050663
Morse taper MT 3/B16	3050660
Extension sleeve MT 3 - MT 4	3050668
Twist drill bit HSS / MT 3, 9 parts	3051003
Twist drill bits HSS-CO 5%, 25 parts	3201010
Twist drill bits HSS-CO 5%, 51 parts	3201020
Twist drill bits HSS-CO 5%, 41 parts	3201021
Assortment of clamping tools size 14, 58 parts	3352018
Universal coolant unit	3352002
Thread tapping chuck MT 3 with 6 inserts	3050705
Collet chuck set MT 3/ ER 32 - M12	3352093
> More „Accessories for drills“ from page 64	

Machine vices	Article no.
BSI 140	3000214
BSI 200	3000220
BSI-Q 140	3000234
BSI-Q 200	3000240
> Information on the vices on page 71	



Scope of supply
> Machine chassis
> Clamping table

Compatibility overview accessories for drills

Accessories drilling			Belt-driven drills										Drills with gear units			Radial drills		
			DH 55G	DH 50GSM	DH 45G / DH 45V	DH 35G / DH 35V	B 40GSP / GSM	DH 40G / DH 40GP	DH 40CT	DH 32GS / GSV	DH 28GS / DH 28GSV	DH 26GT	DH 40BV	RB 6T	RD 6	RD 4 / RD 5	RD 3	RB 8S
Twist drill bit set	25-part	3201010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	51-part	3201020	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	41-part	3201021	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Conical counterbore set	3201050	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spot facer set	3201051			●	●	●		●	●	●	●	●	●	●	●	●	●	●
Step drill bit set	3201055				●	●				●	●	●	●	●	●	●	●	●
Step drill bit set	3201056					●	●	●	●		●	●	●	●	●	●	●	●
Thread repair assortment	3202010	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Reducing sleeve	MT 3-MT 2	3050663			●		●			●			●	●				●
	MT 4-MT 3	3050664				●		●		●			●	●	●	●	●	●
	MT 4-MT 2	3050665				●		●		●			●	●	●	●	●	●
Reducing sleeve	MT 3 - MT 2	3350313			●		●			●			●	●	●			●
	MT 4 - MT 3	3350314				●		●		●			●	●	●	●	●	●
Morse cone B16	MT 2	3050659		●	●		●	●		●	●		●	●			●	●
	MT 3	3050660			●		●			●			●	●				●
	MT 4	3050661			●		●			●			●	●	●	●	●	●
Morse cone	MT 5	3050675																●
Extension sleeve	MT 2 - MT 3	3050667								●			●					
	MT 3 - MT 4	3050668								●			●	●				●
Taper drill punch	MSP 1	3050636			●	●	●	●	●	●			●				●	●
	MSP 2	3050637						●		●			●	●				●
Hold-down device	14 mm	3352031	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	18 mm	3352032															●	●
Arbor for drill chuck	MT 4 / M16	3350304													●	●		
Thermdrill	MT 2	3060005								●	●	●	●	●	●	●	●	●
Machine chassis	3353000	○ ○ ○ ○	○ ○	○						●	●	●	●					

● Recommended

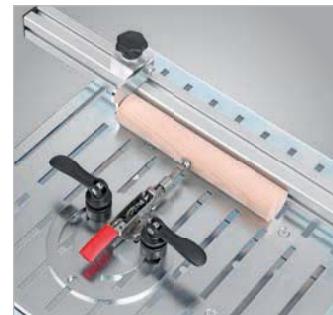
Recommended - restrictions apply

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

Clamping plate with 720 mm stop rail, ideal for any drilling table

Facts that impress in terms of quality, performance and price

- ▶ Quickly and easily fitted on the machine tables of drilling or milling machines
- ▶ Clamping elements and stop modules can be freely positioned and clamped without tools
- ▶ The table extension is attached to the side mounting rails and extends the clamping plate to the left, right or front



Adapter plate with clamp, horizontal



Machine vise
clamped

Accessories	Clamping plate
Article no.	5190015
Dimensions (L x W x H)	450 x 400 x 50 mm
Overall weight	8.9 kg

Scope of supply
› Clamping plate
› Mounting bracket
› Stop rail 720 mm
› Two clamping element

Accessories

Clamping plate for drilling machines incl. assembly carrier 450 x 400 mm Art no. 5198110	Stop rail 720 mm incl. 2 clamping elements Art no. 5198121	Machine vise incl. 2 clamping elements Art no. 5198135	Stop and clamping element Ø30 mm Art no. 5198150
Position bracket incl. 1 clamping element Art no. 5198151	Adapter platen round with horizontal clamp length 180 mm Art no. 5198161	Adapter platen round with upright clamp length 180 mm Art no. 5198163	Connecting web Art no. 5850126
Table extension 1 100 x 172 mm Art no. 5850112	Mounting rail Length 330 mm left and right Art no. 5850103	Mounting rail Length 430 mm front Art no. 5850104	

Collet chuck set

MT 2 / ER 25 - M10	3352052
› Collet chuck	
› 15 spring collets; sizes Ø 1.5 - Ø 16 mm/DIN ISO 15488	
› Hook wrench	
› Aluminium case	
MT 2 / ER 32 - M10	3352053
› Collet chuck	
› 18 spring collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench	
› Aluminium case	
MT 3 / ER 32 - M12	3352093
› Collet chuck	
› 18 spring collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench	
› Aluminium case	
MT 4 / ER 32 - M16	3352094
› Collet chuck	
› 18 spring collets; sizes Ø 2 - Ø 20 mm/DIN ISO 15488	
› Hook wrench	
› Aluminium case	



Quick-change adapter with B16 adapter

Tapping chucks small (M3-M12)	3050715
Tapping chucks large (M8-M20)	3050716
	NEU



Thread tapping chuck M5 - M12

- › Quick reverse built-in, immediately effective on changing the feed direction
- › Slip clutch 4-stage adjustable
- › With collet B16

Scope of delivery:

- › 2 pcs. flexible spring collet
- › 2 pcs. flat spanner
- › *Allen key



Thread tapping chuck with 6 quick-change inserts

Note: The square size depends on the shank diameter of the manual thread tapping bit (ISO standard)

MT 2; sizes M3 - M12	3050702
MT 3; sizes M3 - M12	3050705
MT 4; sizes M3 - M12	3050709
M3, M4, M5, M6-8, M10, M12	
MT 3; sizes M8 - M20	3050706
MT 4; sizes M8 - M20	3050710
M8, M10, M12, M14, M16, M18-M20	



OPTIMUM Precision quick release chuck

Concentricity better than 0.06 mm

1 - 8 mm; B16	3050608
1 - 10 mm; B16	3050610
1 - 13 mm; B16	3050623
1 - 16 mm; B16	3050626



OPTIMUM Direct quick release chuck

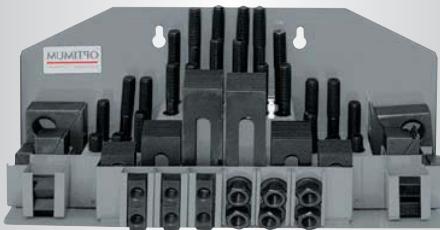
MT 2 1 - 16 mm; up to 6 000 rpm	3050571
MT 2 1 - 13 mm; up to 8 000 rpm	3050572
MT 3 1 - 16 mm; up to 6 000 rpm	3050573
MT 4 1 - 16 mm; up to 6 000 rpm	3050574



Accessories for drills

Assortment of clamping tools size

> Metric thread	
> 58-part: 24 pull studs, 6 T-slot nuts, 6 nuts, 4 extension nuts, 6 step blocks, 12 clamping blocks	
Size 8	3352015
> T-slot nuts 10 mm; locking thread M 8	
Size 10	3352016
> T-slot nuts 12 mm; locking thread M10	
Size 12	3352017
> T-slot nuts 14 mm; locking thread M12	
Size 14	3352018
> T-slot nuts 16 mm; locking thread M 14	
Size 16	3352019
> T-slot nuts 18 mm; locking thread M16	



T-slot nut (individual)

10 mm; locking thread M 8	3353020
12 mm; locking thread M10	3353022
14 mm; locking thread M12	3353025
15.7 mm; locking thread M12	3353024
16 mm; locking thread M 14	3353026
18 mm; locking thread M16	3353028

Twist drill HSS with morse taper

> 9-part; 14,5/16/18/20/22/24/26/28/30 mm	
> Long service life.	
> Good chip removal	
> Right handed	
MT 2	3051002
MT 3	3051003



Twist drill set

> As per DIN 338 HSS-CO 5%	
> Tetrahedral 135° split point allows for excellent self-centring	
> Improved tool service life thanks to alloyed components	
> High speed/feed properties	
> Strong core design optimises the structural strength of the bit and minimises the risk of bit breakage	
> Practical OPTIMUM plastic case	
25-part	3201010
> 1-13 mm	
51-part	3201020
> 1-6 mm (in 0.1 mm increments)	
41-part	3201021
> 6-10 mm (in 0.1 mm increments)	



Fig. Spiral drill bit set 51-part

Conical counterbore set

	3201050
> As per standard DIN 335C	
> 6-part: 6/8/10/11.5/15/19 mm	
> Premium conical counterbores Burrs are nicely chamfered and removed without causing scratches	
> Compatible with popular battery-powered screwdrivers and drills, including Upright drills	
> Practical OPTIMUM plastic case	



NEW

Spot facer set

3201051

- › As per standard 373
- › 6-part: for M3 / M4 / M5 / M6 / M8 / M10 mm screws
- › HSS
- › Piloted counterbore size 6.5 x 3.2 mm / 8 x 4.3 mm / 10 x 5.3 mm / 11 x 6.4 mm / 15 x 8.54 mm / 18 x 10.5 mm
- › Fine grade for countersinking screws and nuts as per DIN 74
- › Practical OPTIMUM plastic case



Step drill bit set

3201055

- › 3-part: 3 - 14 mm / 8 - 20 mm / 16 - 30.5 mm
- › With sharp tip, no pre-drilling required
- › Conically rising blades and radially undercut circumference for peeling action
- › Drilling without burr and chatter marks
- › Uses: Steel sheet 0.1 - 2 mm, stainless steel (V2A) 0.1 - 1 mm, non-ferrous metals 0.1 - 5 mm, plastics - 10 mm
- › Practical OPTIMUM plastic case



Step drill bit set

3201056

- › 3-part: 4 - 12 mm / 12 - 20 mm / 20 - 30 mm
- › Drilling and deburring cylindrical holes in materials up to 4 or 6 mm thickness.
- › Shank with three clamping surfaces
- › Drill step increment 1 mm
- › Practical OPTIMUM plastic case



Thread repair assortment

3202010

- › 5 pcs. twist drill bit (5.2 mm/6.3 mm/8.3 mm/10.4 mm/12.4 mm)
- › 5 pcs. thread tap: (M5 / M6 / M8 / M10 / M12)
- › 5 pcs. inserter for threaded inserts
- › 5 pcs. tang breaker
- › 100 pcs. threaded inserts: 25 pcs. each M5x0.8 mm / M6x1.0 / M8x1.25 / M10x1.5
- › 10 pcs. threaded insert: M12x1.75 mm
- › For repairing defective threads
- › For reinforcing the thread on materials with a low shear strength
- › Practical OPTIMUM metal case



Drilling and thread tapping set

3202015

- › Through bore
- › 15-part
- › 7 pcs. thread tap: M3 / M4 / M5 / M6 / M8 / M10 / M12
- › 7 pcs. spiral bit DIN 338; Ø2.5 mm / Ø3.3 mm / Ø4.2 mm / Ø5.0 mm / Ø6.8 mm / Ø8.5 mm / Ø10.2 mm
- › Tap wrench DIN 1814 size 1½
- › Practical OPTIMUM plastic case



Accessories for drills

Reducing sleeve

MT 3 - MT 2	3050663
MT 4 - MT 3	3050664
MT 4 - MT 2	3050665



Morse cone

MT 2 / B16	3050659
MT 3 / B16	3050660
MT 4 / B16	3050661
MT 5 - B16	3050675
MT 6 - B16	3050676



Extension sleeves

MT 2 - MT 3	3050667
MT 3 - MT 4	3050668



Taper drill punch

MSP 1 for MT 1 to MT 3	3050636
MSP 2 for MT 4 to MT 6	3050637



Arbor for drill chuck

External taper MT 3 / M12 / B16	3350303
External taper MT 4 / M16 / B16	3350304



Reducing sleeve

MT 3 - MT 2 / M12	3350313
MT 4 - MT 3 / M16	3350314



Hold-down unit set of 2

Clamping height adjustable	
Brass plate below clamping arm protects material against damage	
Table groove 14 mm/M12	3352031
L x W x H: 115 x 42 x 39 mm	
Height adjustment: 0 - 89 mm	
Table groove 18 mm/M16	3352032
L x W x H: 133 x 50 x 49 mm	
Height adjustment: 0 - 101 mm	



NEW

AQUACUT C1

• 10 litre cannister	
• For mixing emulsions	
• Drilling and 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	



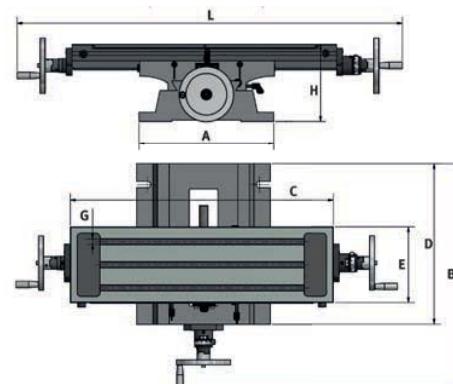
You will find more coolant accessories from page 246

Cross tables KT

Facts that impress in terms of quality, performance and price

- ▶ Coolant channel
- ▶ Dovetail guide adjustable
- ▶ Handwheels right, front and left - for model KT 120 only right and front
- ▶ Adjustable handwheel scaling with 0.05 mm scale

Technical specifications	KT 120	KT 179	KT 180	KT 210
A (Base width)	222 mm	274 mm	274 mm	280 mm
D (base length)	280 mm	340 mm	340 mm	362 mm
C (table length)	400 mm	500 mm	700 mm	730 mm
E (table width)	120 mm	180 mm	180 mm	210 mm
G (T-slot size)	10 mm	12 mm	12 mm	14 mm
Length x width x height	506 x 400 x 140 mm	748 x 483 x 155 mm	948 x 483 x 155 mm	1 060 x 538 x 185 mm
Weight	22 kg	40 kg	52 kg	84 kg
Travel				
X axis	220 mm	287 mm	480 mm	480 mm
Y axis	165 mm	167 mm	170 mm	210 mm
Max. load	40 kg	55 kg	55 kg	80 kg



Cross tables KT

KT 120	3356595
KT 179	3356596
KT 180	3356591
KT 210	3356600

Workplace mats – for dry and wet areas

Facts that impress in terms of quality, performance and price



- ▶ Fire-resistant
- ▶ Made of polyurethane on polyether basis
- ▶ Surface: nubbed
- ▶ Underside: nubbed for maximum standing comfort and slip resistance
- ▶ 5-year warranty



Technical specifications	Work mat 1 840 x 640 mm	Work mat 1 840 x 940 mm	Work mat 3 040 x 640 mm	Work mat 3 040 x 940 mm
Article no.	6800000	6800005	6800001	6800006
Thickness	14 mm	14 mm	14 mm	14 mm
Colour	anthracite	anthracite	anthracite	anthracite
Temperature resistant	-35 °C to +95 °C			
Fire classification	B1 as per DIN 4102			
Dimensions	1 840 x 640 mm	1 840 x 940 mm	3 040 x 640 mm	3 040 x 940 mm
Weight	6 kg	9 kg	10.5 kg	15 kg

Compatibility overview vises for drills

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

Machine vices

Machine vices MSO with prisms

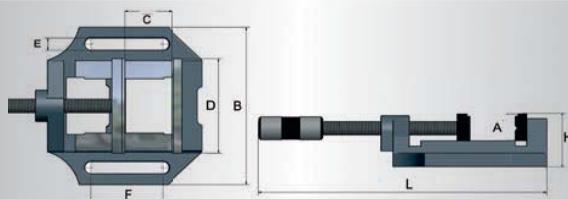
- > Easy action
- > Spindle with rolled trapezoid thread
- > Many assembly options on drill table thanks to slots

MSO 75 3000075

MSO 100 3000100

MSO 125 3000125

MSO 150 3000150



Tech. data	A	C	D	E	F	L	B	H	kg
MSO 75 mm	28	55	75	12.5	55	270	130	52	2.3
MSO 100 mm	28	90	100	12.5	74	350	165	55	3.2
MSO 125 mm	30	110	125	12.5	80	400	182	65	4.5
MSO 150 mm	35	130	150	14.5	110	455	208	67	6.2



MSO 100

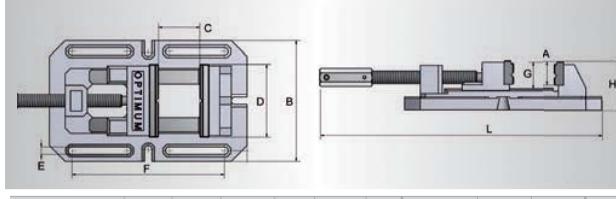
Machine vices BSI

- > Drill vices in industrial quality
- > Replaceable prism jaws
- > Long guides on moving jaw prevent tilting
- > Precision ground prism jaws
- > Many assembly options on drill table thanks to slots
- > Premium grey cast
- > Scraped guide surfaces

BSI 100 3000210

BSI 140 3000214

BSI 200 3000220



Tech. data	A	C	D	E	F	G	L	B	H	kg
BSI 100 mm	35	110	100	12	216	40	max. 460	170	74	8.7
BSI 140 mm	45	150	140	14	290	50	max. 610	230	93	18
BSI 200 mm	58	200	200	16	406	64	max. 788	290	118	37

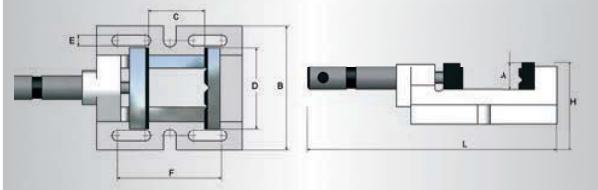


BSI 140

Machine vices BMS with prisms

- > Rugged design with prism jaws
- > Easy action
- > Precise jaw guidance
- > Spindle with rolled trapezoid thread
- > Many assembly options on drill table thanks to slots

BMS 85	3000008
BMS 100	3000010
BMS 120	3000012
BMS 150	3000015
BMS 200	3000020



Tech. data	A	C	D	E	F	L	B	H	kg
BMS 85 mm	27	70	85	11	109	260	130	60	3.2
BMS 100 mm	30	90	100	12.5	125	280	150	66	4.6
BMS 120 mm	35	110	120	12.5	146	330	170	70	5.6
BMS 150 mm	45	130	150	12.5	180	375	200	78	7.6
BMS 200 mm	60	160	200	12.5	210	445	252	95	16

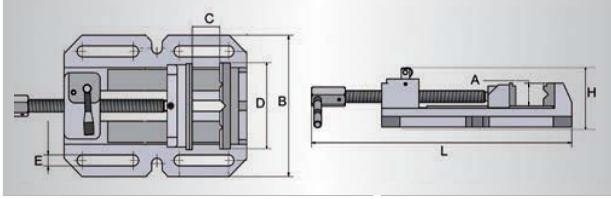


BMS 85

Machine vices BSI-Q

- > Drill vices in industrial quality
- > Quick clamping thanks to quick release
- > Replaceable prism jaws
- > Long guides on moving jaw prevent tilting
- > Precision ground prism jaws
- > Many assembly options on drill table thanks to slots
- > Premium grey cast . Scrapped guide surfaces

BSI-Q 100	3000230
BSI-Q 140	3000234
BSI-Q 200	3000240



Tech. data	A	C	D	E	L	B	H	kg
BSI-Q 100 mm	30	105	100	12	max. 335	150	95	5.5
BSI-Q 140 mm	40	155	140	14	max. 415	200	100	10.7
BSI-Q 200 mm	55	220	200	16	max. 525	275	125	20.2



BSI-Q 100



The solution for loose rivet nuts

Secure threaded connections
for thin wall thicknesses

THERMDRILL®

Verbindungstechnik – Made in Germany

The Thermdrill® method



MADE IN
GERMANY



In thermal drilling, the friction heat from the existing material is used to create an anti-twist protected bushing without material removal in which a thread is then tapped.

- For aluminium, brass, copper, steel, stainless steel as of 1.0 mm wall thickness
- For use with **milling cutters, CNC systems and Upright drills**

www.thermdrill.com

✓ Cost savings

✓ Time savings

✓ Maximum safety

Thermal drill								
SHAPE			CUT					
For bushes with collars			For bushes without collars					
								
<ul style="list-style-type: none"> • Suitable for aluminium, non-ferrous metal, steel and stainless steel. Made of solid carbide with a special polygon grind 								
Size	Type	Max. material thickness [mm]	Art. no.	Max. material thickness [mm]	Art. no.			
M4	short	1.5	3060104	2.0	3060164			
	long	2.5	3060124	4.0	3060144			
M5	short	2.0	3060105	3.0	3060165			
	long	3.0	3060125	4.5	3060145			
M6	short	2.0	3060106	3.0	3060166			
	long	3.5	3060126	5.0	3060146			
8M	short	2.5	3060108	4.0	3060168			
	long	4.0	3060128	6.0	3060148			
M10	short	2.5	3060110	4.0	3060170			
	long	4.5	3060130	6.5	3060150			
M12	short	2.5	3060112	4.0	3060172			
	long	4.5	3060132	6.5	3060152			

Other thread sizes available (also in metric fine and pipe threads)

Thread tapper	
	
TiN coated and with lubrication grooves Tolerance 6HX Shape C	• Legacy tool fittings can be used
Size	
M4 x 0.7	3060184
M5 x 0.8	3060185
M6 x 1.0	3060186
M8 x 1.25	3060188
M10 x 1.25	3060190
M12 x 1.25	3060192

Basic equipment	
	
Contains everything you need to get started with the THERMDRILL right away	
Art. no.	
MT 2	3060005
Contents:	
► THERMDRILL Paste 100 g	
► Thread tapping oil 100 ml	
► Open-end wrench	
► Hook wrench	
► Tool holder with cooling ring MT 3	
► Case	
► Reduction sleeve MT 3 - MT 2	
► Spring collets (Ø 6/8/10/12 mm)	

Tool set = Thermal drill + thread tapper					
Type SHAPE			Type CUT		
Size	Type	Max. material thickness [mm]	Art. no.	Max. material thickness [mm]	Art. no.
M4	short	1.5	3060024	2.0	3060044
	long	2.5	3060034	4.0	3060054
M5	short	2.0	3060025	3.0	3060045
	long	3.0	3060035	4.5	3060055
M6	short	2.0	3060026	3.0	3060046
	long	3.5	3060036	5.0	3060056
8M	short	2.5	3060028	4.0	3060048
	long	4.0	3060038	6.0	3060058
M10	short	2.5	3060030	4.0	3060050
	long	4.5	3060040	6.5	3060060
M12	short	2.5	3060032	4.0	3060052
	long	4.5	3060042	6.5	3060062

THERMDRILL Paste	
Container	Art. no.
For friction drilling including brush	
1 kg	3060090



Protects the thermal drill against excessive wear.

Thread tapping oil	
Container	Art. no.
Including brush	
1 litre	3060092
	
High-performance oil, specially suited for thread tapping in aluminium, copper, brass, steel, stainless steel	

New at OPTIMUM



MAGNETIC DRILLING MACHINES

Core drills and core drilling technology

Core drilling is an extremely economical process because it is faster, quieter and more precise than twist drilling.

Core drilling technology for versatile applications such as drilling in steel girders, drilling magnetic, multilayer materials or staggered drilling.

Magnetic core drilling machine with continuously variable speed,
when you need reliability, precision and economy at work

Facts that impress in terms of quality, performance and price

- ▶ Stable drilling guidance thanks to long and especially deep-mounted spindle sleeve holder
- ▶ Device is earthed and double insulated, thus ideal for building sites
- ▶ Overcharge protection
- ▶ Internal self-lubrication function ensures a longer service life of the gear unit
- ▶ Soft start protects the engine and extends its lifetime
- ▶ High quality construction
- ▶ Conversion from core drilling to full drilling in just a few steps
- ▶ Automatic return to the starting position





Control panel

- Confusion-free and ergonomic arrangement of the switches



Automatic internal lubrication

- The coolant is directly to the tip of the core drill
- No dry running and overheating of the drill
- no unnecessary coolant use
- Tool life and work results are significantly improved



Coolant tank

- Detachable coolant tank
- External fastening
- Well-designed and practical



Magnetic base

- The magnetic base has a wear-resistant design to extend the life of the magnetic base and thereby the maximum magnetic holding force



Motor

- Powerful motor with high torque and low-maintenance



Transport case

- For comfortable transport and optimal protection
- Ideal protection of the machines even in hard use.

Metal case

- for the machines DM 35PF and DM 50PM



Handles

- Ergonomic and rugged handles for "balanced" holding/fastening of the machine
- Rugged crank handle



Guides

- Safe guides for stability and precision
- Vario machines with low-wear brass guides



- Five HSS core bits and one TiAlN core bit
- For testing, including one 18 mm core bit featuring our highest quality level with TiAlN coating for a long service life and excellent cutting properties
- Set in a practical plastic case
- Five HSS core bits Ø 12, 14, 16, 20, 22 mm, One TiAlN core bit Ø 18 mm
- Drilling depth 30 mm, One ejector pin



- Core bit with hard and smooth TiAlN coating
- TiAlN coating for a long service life and excellent cutting properties
- Set in a practical plastic case
- Six TiAlN core bits Ø 12, 14, 16, 18, 20, 22 mm
- Drilling depth 30 mm
- One ejector pin

OPTI^{drill}[®] DM 35

► Weldon shank



OPTI^{drill}[®] DM 50

► Weldon shank



Model	DM 35	DM 50
Article no.	3071035	3071050
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	1.6 kW	1.7 kW
Carriers		
Drill bit adapter	Weldon 3/4"	Weldon 3/4"
Tool shank	Weldon shank Ø 19 mm (3/4")	Weldon shank Ø 19 mm (3/4")
Magnetic foot		
Magnetic foot dimensions	166 x 80 mm	166 x 80 mm
Magnetic attraction force	13.8 KN	14.5 KN
Speeds		
Speed without load	810 rpm	790 rpm
Dimensions		
Length x width x height	250 x 220 x 300 - 470 mm	250 x 220 x 300 - 470 mm
Weight	10.5 kg	10.6 kg

OPTIdrill® DM 35PF
with automatic spindle sleeve feed

► Weldon shank



OPTIdrill® DM 35V

- Continuously variable speed control
- Quick clamping chuck
- Weldon shank



Core drilling



Drilling bit Ø max. Ø 35 mm

Drilling bit depth max. 35 mm

Twist drill

Drilling bit Ø max. Ø 13 mm

Model	DM 35PF	DM 35V
Article no.	3071435	3071135
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	1.6 kW	1.55 kW
Carriers		
Drill bit adapter	Weldon 3/4"	Weldon 3/4"
Tool shank	Weldon shank Ø 19 mm (3/4")	Weldon shank Ø 19 mm (3/4")
Magnetic foot		
Magnetic foot dimensions	166 x 80 mm	166 x 80 mm
Magnetic attraction force	16 KN	14.8 KN
Speeds		
Speed without load	810 rpm	120 - 830 rpm stepless
Dimensions		
Length x width x height	350 x 250 x 430 mm	250 x 220 x 300 - 470 mm
Weight	14 kg	10.8 kg

OPTI^{drill}[®] DM 50V

- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ Weldon shank



Fig. : with optional accessories

Circular level



for perfect alignment

OPTI^{drill}[®] DM 60V

- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ MT collet



Fig. : with optional accessories



Core drilling

Drilling bit Ø max. Ø 50 mm

Drilling bit depth max. 50 mm

Twist drill

Drilling bit Ø max. Ø 13 mm



Core drilling

Drilling bit Ø max. Ø 60 mm

Drilling bit depth max. 50 mm

Twist drill

Drilling bit Ø max. Ø 23 mm

Model	DM 50V	DM 60V
Article no.	3071150	3071160
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	1.7 kW	1.89 kW
Carriers		
Drill bit adapter	Weldon 3/4"	MT 2 and Weldon 3/4"
Tool shank	Weldon shank Ø 19 mm (3/4")	Weldon shank Ø 19 mm (3/4")
Magnetic foot		
Magnetic foot dimensions	166 x 80 mm	202 x 103 mm
Magnetic attraction force	15,6 KN	16 KN
Speeds		
Speed without load	100 - 810 rpm stepless	240 - 440 rpm stepless
Dimensions		
Length x width x height	250 x 220 x 300 - 470 mm	330 x 240 x 450 - 650 mm
Weight	11 kg	18.3 kg

OPTIdrill® DM 98V

- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ MK collet



Fig. : with optional accessories



Core drilling

Drilling bit Ø max.	Ø 98 mm
Drilling bit depth max.	75 mm
Twist drill	
Drilling bit Ø max.	Ø 28 mm

OPTIdrill® DM 36VT with Thread tapping function

- ▶ Thread tapping
- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ Weldon and MT toolholder



› Thread tapping



› Twist drill



› core bit drilling

Fig. : with optional accessories

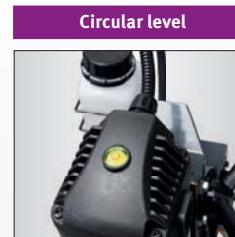
Core drilling

Drilling bit Ø max.	Ø 36 mm
Drilling bit depth max.	35 mm
Twist drill	
Drilling bit Ø max.	Ø 18 mm
Gewindebohren	M15

Model	DM 98V	DM 36VT
Article no.	3071198	3071236
Technical specifications		
Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	2.18 kW	1.55 kW
Carriers		
Drill bit adapter	MT 3 and Weldon 3/4"	MT 2 and Weldon 3/4"
Tool shank	Weldon shank Ø 19 mm (3/4")	Weldon shank Ø 19 mm (3/4")
Magnetic foot		
Magnetic foot dimensions	202 x 103 mm	166 x 80 mm
Magnetic attraction force	17 KN	14.2 KN
Speeds		
Speed without load	160 - 340 rpm stufenlos	15 - 270 / 520 rpm 2 gear, stepless
Dimensions		
Length x width x height	330 x 240 x 450 - 650 mm	250 x 220 x 360 - 530 mm
Weight	18.5 kg	12 kg

OPTI_idrill[®] DM 38VF for working in cramped conditions

- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ Weldon shank



Circular level

› for perfect alignment



Pluggable handle

› can be fitted on the left or right side of the machine as required



Fig.: with optional accessories



Core drilling

Drilling bit-Ø max.	Ø 38 mm
Core drilling depth max.	35 mm

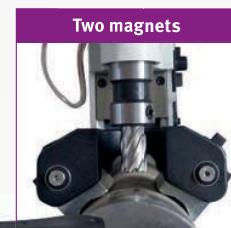
OPTI_idrill[®] DM 50PM with permanent magnet

- ▶ Continuously variable speed control
- ▶ Quick clamping chuck
- ▶ MT collet



Permanent magnet

› Independent of power source and thus 100% safe



Two magnets

› individually switchable
› The machine can be moved to test or clean the hole without losing the position on the pipe



Fig.: with optional accessories



Core drilling

Drilling bit-Ø max.	Ø 50 mm
Core drilling depth max.	50 mm

Spiral bit

Drilling bit-Ø max.	Ø 13 mm
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Model	DM 38VF	DM 50PM
Article no.	3071338	3071550

Technical specifications

Electrical connection	230 V / 1 Ph ~50 Hz	230 V / 1 Ph ~50 Hz
Motor output	1.65 kW	1.7 kW
Carriers		
Drill bit adapter	Weldon 3/4"	Weldon 3/4"
Tool shank	Weldon shark Ø 19 mm (3/4")	Weldon shark Ø 19 mm (3/4")
Magnetic foot		
Magnetic foot dimensions	156 x 80 mm	165 x 83 mm
Magnetic attraction force	14.5 KN	16.5 KN
Speeds		
Speed without load	660 rpm	20 - 280 / 510 rpm 2 gear stages, stepless
Dimensions		
Length x width x height	350 x 150 x 240 mm	340 x 250 x 430 - 530 mm
Weight	8.8 kg	11.7 kg

The magnetic drilling machines (speed controlled) comply with the standard DIN EN 55011: Class C2

Please note

- › These offers are intended exclusively for business owners, retailers and tradespersons who are making a purchase in pursuit of their profession or self-employment. This is an explicit CONDITION FOR THE CONCLUSION OF A CONTRACT. Consumers are not eligible to purchase as per Section 13 BGB (German Civil Code)
- › We accept no liability for printing errors, mistakes or incorrect representation.
- › Subject to technical modifications and visual changes.
- › Illustrations show optimal accessories in some cases
- › Delivery is effected solely on the basis of our terms of delivery and payment.
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- › Our retention of title shall remain valid in case of sale to a third-party.
- › Legal warranty conditions apply for businesses.
- › Copying and reproduction in full or in part is subject to written approval by us.
- › Please note that transport packaging surcharges apply for some machines in this catalogue to cover transport units, packaging and packaging overheads.

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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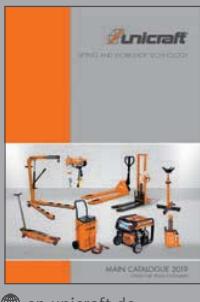
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