

THE FUTURE RIGHT NOW

PRECISION lathes, drilling- and milling machines



turning



milling










drilling

MAIN CATALOG 2018

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Overview lathes, drilling- and milling machines



Conventional lathes

Description **Lathes D2000 | D2400**
with cylindrical guideways
Center distance 350 | 500 mm
Center height 110 mm
on page 8



Description **Lathes D4000**
with prismatic cast iron bed
Center distance 350 mm
Center height 100 mm
on page 14



Description **Lathes D6000**
with prismatic cast iron bed
1.4 kW or 2.0 kW
Center distance 600 mm
Center height 135 mm
on page 20



Description **Lathes D6000-C**
with prismatic cast iron bed
and installed stepper motors
1.4 kW or 2.0 kW
Center distance 600 mm
Center height 135 mm
on page 30



Description **CNC lathes CC-D6000**
with prismatic cast iron bed
with nccad **basic** or **professional**
1.4 kW or 2.0 kW
Center distance 600 mm
Center height 135 mm
on page 38



Description **CNC lathes CC-D6200**
with slant bed
with nccad professional
Center distance 600 mm
Center height 135 mm
on page 48



CNC Lathes



Conventional milling machines



CNC milling machines





Description **Milling machines F1200**
with dovetail guides
1.4 kW or 2.0 kW
X-axis 260 mm
Y-axis 150 mm
Work table 450 x 180 mm

Catalog on page 66

Description **Milling machines F1210**
with dovetail guides
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 150 mm
Work table 700 x 180 mm

Catalog on page 72

Description **Milling machines F1410**
with linear guides
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 200 mm
Work table 700 x 180 mm

Catalog on page 78

Description **Milling machines F1200-C**
with dovetail guides
and installed stepper motors
1.4 kW or 2.0 kW
X-axis 260 mm
Y-axis 150 mm
Work table 450 x 180 mm

Catalog on page 86

Description **Milling machines F1210-C**
with dovetail guides
and installed stepper motors
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 150 mm
Work table 700 x 180 mm

Catalog on page 92

Description **Milling machines F1410-C**
with linear guides
and installed stepper motors
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 200 mm
Work table 700 x 180 mm

Catalog on page 98



Description **CNC milling machines CC-F1200**
with dovetail guides
with nccad basic or professional
1.4 kW or 2.0 kW
X-axis 260 mm
Y-axis 150 mm
Work table 450 x 180 mm

Catalog on page 104



Description **CNC milling machines CC-F1210**
with dovetail guides
with nccad basic or professional
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 150 mm
Work table 700 x 180 mm

Catalog on page 114



Description **CNC milling machines CC-F1410**
with linear guides
with nccad basic or professional
1.4 kW or 2.0 kW
X-axis 500 mm
Y-axis 200 mm
Work table 700 x 180 mm

Catalog on page 124



Description **CNC milling machine CC-F1220**
with dovetail guides
with nccad professional
X-axis 500 mm
Y-axis 150 mm
Work table 700 x 180 mm

Catalog on page 134

LATHES

D2000 | D2400 | D4000 | D6000 | D6000 hs



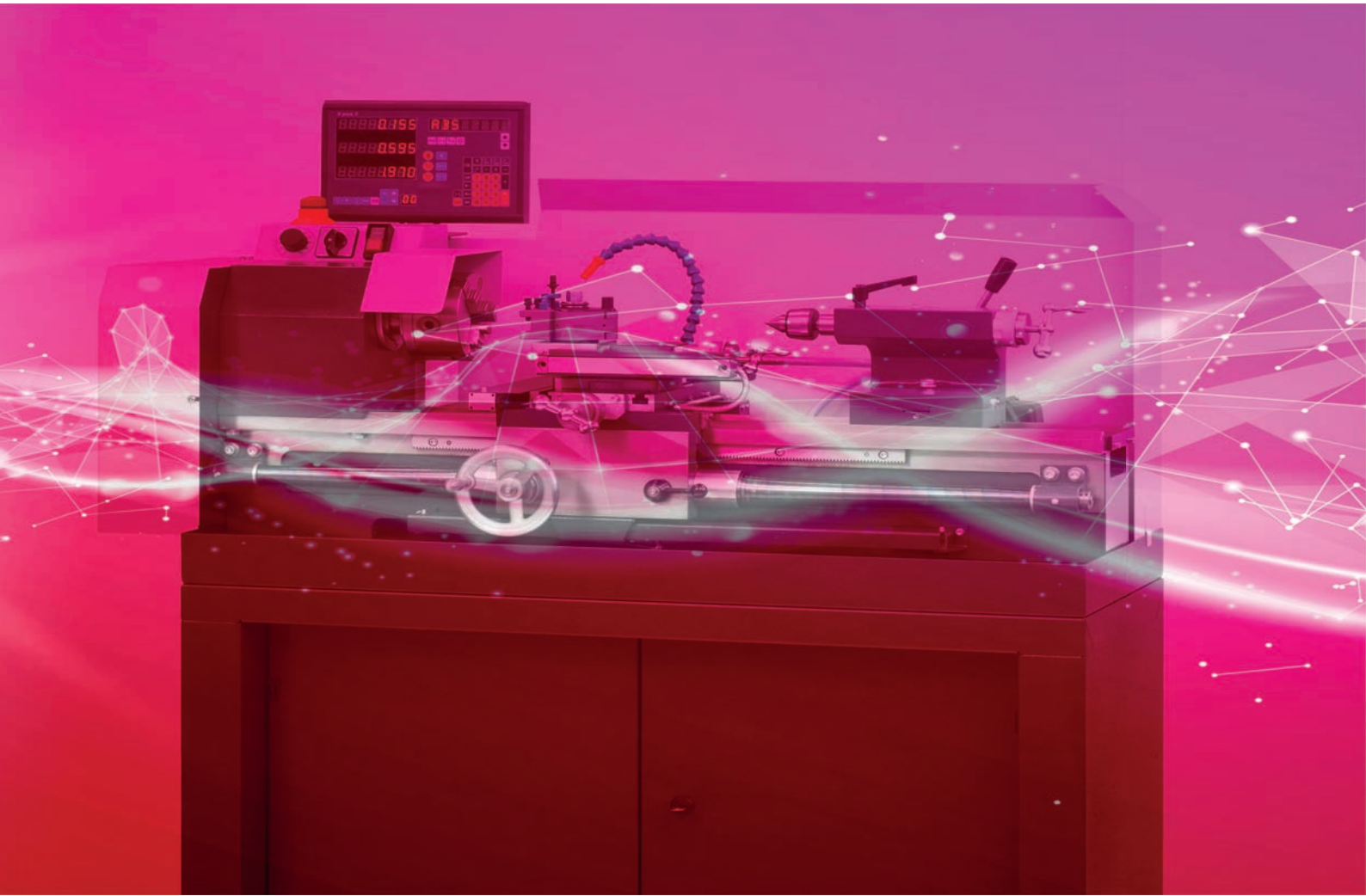
turning



milling



drilling





- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ the classics - tried and tested for over 40 years
- ✓ the space saver
- ✓ for metal processing
- ✓ thanks to optimised swarf waste, also ideally suited for wood processing
- ✓ perfect for hobby and model building due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Lathe D2000

Lead screw lathe with precise ground cylindrical steel guideways

Item no. 10108
Price 2,499.00 € | 2,973.81 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 100 mm**
with turning and drilling jaws
- Dead center MT2
- Main spindle bore Ø 20 mm
(main spindle bore Ø 30 mm optional page 10)
- Thread cutting prepared
with lead screw drive and change gear quadrant
automatic longitudinal feed rate 0.085 mm/rev
(for thread cutting the change gear set is needed
optional page 13
for metric 0.25-6.0 mm and inch 10-36 TPI threads
and automatic longitudinal feed rate 0.16 mm/rev)

Working range

- **Center distance 350 mm**
- Center height 110 mm
- Workpiece diameter max. 220 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Cylindrical guideways

- precise ground cylindrical guideways
- made of highest quality steel
- high rigidity
- optimal swarf waste
- **10 years warranty on the guideways**

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 52



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ the classics - tried and tested for over 40 years
- ✓ for metal processing
- ✓ thanks to optimised swarf waste, also ideally suited for wood processing
- ✓ perfect for hobby, model building, craft and workshop use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Lathe D2400

**Lead screw lathe
with precise ground cylindrical steel guideways**

Item no. 10200
Price 2,690.00 € | 3,201.10 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 100 mm**
with turning and drilling jaws
- Dead center MT2
- Main spindle bore Ø 20 mm
(main spindle bore Ø 30 mm optional page 10)
- Thread cutting prepared
with lead screw drive and change gear quadrant
automatic longitudinal feed rate 0.085 mm/rev
(for thread cutting the change gear set is needed
optional page 13
for metric 0.25-6.0 mm and inch 10-36 TPI threads
and automatic longitudinal feed rate 0.16 mm/rev)

Working range

- **Center distance 500 mm**
- Center height 110 mm
- Workpiece diameter max. 220 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Cylindrical guideways

- precise ground cylindrical guideways
- made of highest quality steel
- high rigidity
- optimal swarf waste
- **10 years warranty on the guideways**

Warranty

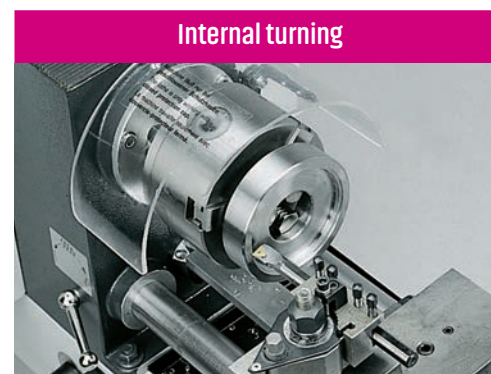
- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

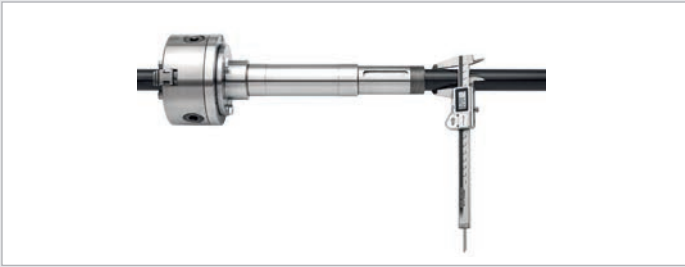
- can be found on page 52



Grooving



Internal turning

**Optional tooling available and recommended****Main spindle bore \varnothing 30 mm**for workpiece \varnothing up to 30 mm

Item no. 10278

Price 472.00 € | 561.68 € incl. VAT

- without morse taper
- cannot be retrofitted

**Digital position readout (DRO) and 2 optical scales**
for exact positioning of the workpieces

Item no. 10126 - for D2000

Price 1,795.00 € | 2,136.05 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Item no. 10226 - for D2400

Price 1,850.00 € | 2,201.50 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Z-axis - for D2000

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Z-axis - for D2400

Item no. 10287 optical scale 520 mm for Z-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10289 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT

Optional tooling available and recommended



Chip- and coolant tray

Item no. 10174 - for D2000
 Price 29.00 € | 34.51 € incl. VAT
 • Dimensions W560 x D170 x H10 mm

Item no. 10175 - for D2400
 Price 30.00 € | 35.70 € incl. VAT
 • Dimensions W700 x D170 x H10 mm



Chip- and coolant tray with splash guard

Item no. 10156 - for D2000
 Price 199.00 € | 236.81 € incl. VAT
 • Dimensions W1060 x D464 x H500 mm

Item no. 10256 - for D2400
 Price 199.00 € | 236.81 € incl. VAT
 • Dimensions W1060 x D464 x H500 mm



Coolant unit with splash guard

Item no. 10164 - for D2000
 Price 525.00 € | 624.75 € incl. VAT

Item no. 10264 - for D2400
 Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H553 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 19 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges

Coolant concentrate

Item no. 11550
 Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels

WABECO
 MASCHINENMANUFAKTUR seit 1885



Optional tooling available and recommended



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Milling attachment

for drilling and milling work

Item no. 10270
Price 159.00 € | 189.21 € incl. VAT

included in delivery

- Milling attachment 130 x 100 mm
width of slots 12 mm
can be rotated infinitely by 360°
can be traversed in 3 axes
- Clamping angle



Fixed stay

for machining longer workpieces

Item no. 10170
Price 125.00 € | 148.75 € incl. VAT

- for hollow turning and drilling longer workpieces
- is fixed to the cylindrical guideways



Live stay

for machining longer workpieces

Item no. 10172
Price 110.00 € | 130.90 € incl. VAT

- to support long, thin shafts during longitudinal turning,
prevents them from sagging
- is fixed to the tool slide

Optional tooling available and recommended



Hand steel rest

for wood processing

Item no. 10160
 Price 79.00 € | 94.01 € incl. VAT

- adjustable

Application

- for turning works
- the lower part of the hand steel rest is clamped to the guiding bars of the lathe and can be placed close to the workpiece by adjusting as necessary



Change gear set

for thread cutting

Item no. 10179
 Price 115.00 € | 136.85 € incl. VAT

- 10 pieces
- for metric 0.25-6.0 mm and inch 10-36 TPI threads
- automatic longitudinal feed rate 0.16 mm/rev



Push type gun

Item no. 11535
 Price 19.90 € | 23.68 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow-/universal mouthpiece



Tool set

Item no. 10997
 Price 329.00 € | 391.51 € incl. VAT

included in delivery

- Quick-change tool post, main body size Aa (A0)
- Boring steel holder size Aa (A0)
- Turning tool holder size Aa (A0)
- Carbide-tipped turning tool set 6 pieces
 cross section 10 x 10 mm
- Quick-action drill chuck
 clamping width 1-13 mm
 inner taper B16
- Drill chuck arbor MT2
 morse taper MT2 and flat tang



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ the space saver
- ✓ for metal processing
- ✓ perfect for hobby, model building, craft and workshop use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Lathe D4000

Lead screw lathe with prismatic cast iron bed

Item no. 10400
Price 2,995.00 € | 3,564.05 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 100 mm**
with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm
- Thread cutting
with lead screw drive and change gear quadrant
tumbler gear for left- and right-hand threads
change gear set for metric 0.25 - 7.0 mm and
inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive
0.085 and 0.16 mm/rev

Working range

- Center distance 350 mm
- Center height 100 mm
- Workpiece diameter max. 200 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 53



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ the space saver
- ✓ for metal processing
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- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Lathe D4000

Lead screw lathe with prismatic cast iron bed

Item no. 10401
 Price 3,095.00 € | 3,683.05 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 125 mm**
with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm
- Thread cutting
with lead screw drive and change gear quadrant
tumbler gear for left- and right-hand threads
change gear set for metric 0.25 - 7.0 mm and
inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive
0.085 and 0.16 mm/rev

Working range

- Center distance 350 mm
- Center height 100 mm
- Workpiece diameter max. 200 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 53





Optional tooling available and recommended



Quick-action collet chuck

for quickly changing the workpieces

Item no. 10929
Price 2,050.00 € | 2,439.50 € incl. VAT

- Clamping range 2 - 30 mm
- to be used up to max. 4000 rpm
- self-locking
- for dead length collets or Rubber-Flex collets
- Collets from 2 - 30 mm available - price upon request
- factory installed
- for optional retrofitting (upon request)

Application

for clamping and unclamping of the workpieces with hand lever



Mountable digital vernier scales

for precise machining of the workpieces

Item no. 10425
Price 377.00 € | 448.63 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Z- and Z1-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 11370 for X-axis measuring length 100 mm
Price 43.00 € | 51.17 € incl. VAT

Item no. 11364 for Z-axis measuring length 400 mm
Price 89.00 € | 105.91 € incl. VAT

Item no. 11360 for Z1-axis measuring length 100 mm
Price 39.00 € | 46.41 € incl. VAT

Item no. 10499 mounting kit for 3 axes
Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 2 optical scales

for exact positioning of the workpieces

Item no. 10426
Price 1,795.00 € | 2,136.05 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Optional tooling available and recommended



Digital position readout (DRO) and 2 optical scales

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 10489 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Chip- and coolant tray with splash guard

Item no. 10456

Price 210.00 € | 249.90 € incl. VAT

- Dimensions W1060 x D464 x H500 mm



Coolant unit with splash guard

Item no. 10464

Price 535.00 € | 636.65 € incl. VAT

- Dimensions W1060 x D445 x H553 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 19 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges

Coolant concentrate

Item no. 11550

Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels





Optional tooling available and recommended



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Milling attachment

for drilling and milling work

Item no. 10470
Price 299.00 € | 355.81 € incl. VAT

included in delivery

- Milling attachment 130 x 100 mm
width of slots 12 mm
can be rotated infinitely by 360°
can be traversed in 3 axes
- Longitudinal slide
- Clamping angle



Adjustable longitudinal stop

Item no. 10475
Price 59.00 € | 70.21 € incl. VAT

- for longitudinal turning
- for protecting the lathe chuck

Application

for series production - for turning the workpieces to exactly the same position every time



Fixed stay

for machining longer workpieces

Item no. 10471
Price 179.00 € | 213.01 € incl. VAT

- for hollow turning and drilling longer workpieces
- is fixed to the prismatic guide

Optional tooling available and recommended



Push type gun

Item no. 11535
 Price 19.90 € | 23.68 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow-/universal mouthpiece



Tool set

Item no. 10997
 Price 329.00 € | 391.51 € incl. VAT

included in delivery

- Quick-change tool post, main body size Aa (A0)
- Boring steel holder size Aa (A0)
- Turning tool holder size Aa (A0)
- Carbide-tipped turning tool set 6 pieces
 cross section 10 x 10 mm
- Quick-action drill chuck
 clamping width 1-13 mm
 inner taper B16
- Drill chuck arbor MT2
 morse taper MT2 and flat tang



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Lathe D6000

Lead screw lathe with prismatic cast iron bed

Item no. 10601

Price 4,195.00 € | 4,992.05 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 125 mm**
with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm
(main spindle bore Ø 30 mm optional page 22)
- Thread cutting
with lead screw drive and change gear quadrant
tumbler gear for left- and right-hand threads
change gear set for metric 0.25 - 7.0 mm and
inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive
0.085 and 0.16 mm/rev

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 53



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Lathe D6000 hs

Lead screw lathe with prismatic cast iron bed

Item no. 10606
 Price 5,995.00 € | 7,134.05 € incl. VAT

Basic equipment

- **3-jaw lathe chuck Ø 125 mm**
with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm
(main spindle bore Ø 30 mm optional page 22)
- Thread cutting
with lead screw drive and change gear quadrant
tumbler gear for left- and right-hand threads
change gear set for metric 0.25 - 7.0 mm and
inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive
0.085 and 0.16 mm/rev

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **2.0 kW, 50 - 5000 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

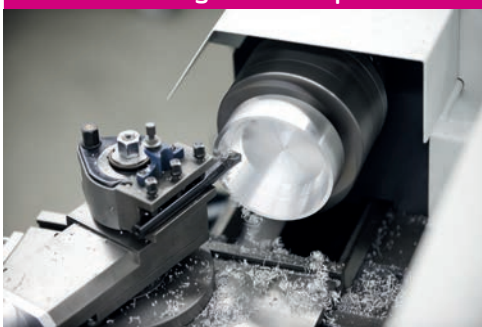
Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 53

Turning the inner taper



Knurling



**Optional tooling available and recommended**

Main spindle bore \varnothing 30 mm
for workpiece \varnothing up to 30 mm

Item no. 10678

Price 472.00 € | 561.68 € incl. VAT

- with ground taper insert MT3
- cannot be retrofitted

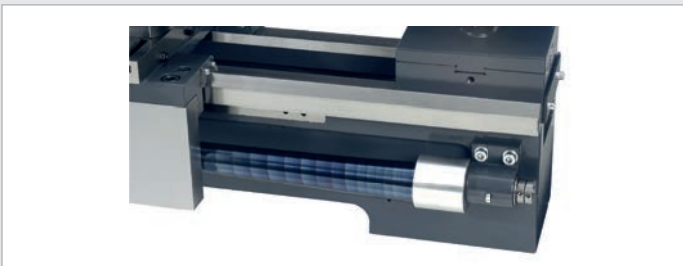


Ball screws for both axes
for high positioning accuracy

Item no. 10645

Price 1,595.00 € | 1,898.05 € incl. VAT

- incl. lead screw cover
- Zero backlash ball screws
- high precision pitch and positioning accuracy
- wear-free
- cannot be retrofitted



Lead screw cover

to protect the lead screw against swarf

Item no. 10680

Price 300.00 € | 357.00 € incl. VAT

- to prevent premature wear and loss of precision
- cannot be retrofitted



Camlock D1-4 “Quick Change” option

for quickly changing lathe and collet chucks by means of the Camlock fixture

Item no. 10640

Price 399.00 € | 474.81 € incl. VAT

- Camlock main spindle nose according to DIN 55029 size 4
- factory installed
- cannot be retrofitted

suitable camlock 3- and 4-jaw lathe chuck

can be found on page 174

suitable camlock collet chuck

can be found on page 177

Optional tooling available and recommended



Quick-action collet chuck

for quickly changing the workpieces

Item no. 10930
Price 2,050.00 € | 2,439.50 € incl. VAT

- Clamping range 2 - 30 mm
- to be used up to max. 4000 rpm
- self-locking
- for dead length collets or Rubber-Flex collets
- Collets from 2 - 30 mm available - price upon request
- factory installed
- for optional retrofitting (upon request)

Application

for clamping and unclamping of the workpieces with hand lever



Mountable digital vernier scales

for precise machining of the workpieces

Item no. 10625
Price 410.00 € | 487.90 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Z- and Z1-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 11371 for X-axis measuring length 150 mm

Price 46.00 € | 54.74 € incl. VAT

Item no. 11365 for Z-axis measuring length 500 mm

Price 119.00 € | 141.61 € incl. VAT

Item no. 11360 for Z1-axis measuring length 100 mm

Price 39.00 € | 46.41 € incl. VAT

Item no. 10699 mounting kit for 3 axes

Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 2 optical scales

for exact positioning of the workpieces

Item no. 10626
Price 1,850.00 € | 2,201.50 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

**Optional tooling available and recommended****Digital position readout (DRO) and 2 optical scales**Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10689 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT

**Digital position readout (DRO) and 3 optical scales**

for exact positioning of the workpieces

Item no. 10627

Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Optical scale 100 mm for Z1-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10283 optical scale 100 mm for Z1-axis

Price 249.00 € | 296.31 € incl. VAT

Item no. 10685 mounting kit and protective covers

Price 258.00 € | 307.02 € incl. VAT

**Chip- and coolant tray with splash guard**

Item no. 10656

Price 199.00 € | 236.81 € incl. VAT

- Dimensions W1060 x D464 x H500 mm

Optional tooling available and recommended



Coolant unit with splash guard

Item no. 10664
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H553 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 19 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

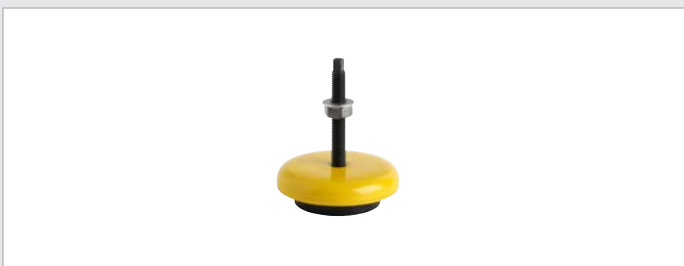
- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Optional tooling available and recommended



Milling attachment

for drilling and milling work

Item no. 10671

Price 299.00 € | 355.81 € incl. VAT

included in delivery

- Milling attachment 130 x 100 mm
width of slots 12 mm
can be rotated infinitely by 360°
can be traversed in 3 axes
- Longitudinal slide
- Clamping angle



Adjustable longitudinal stop

Item no. 10675

Price 59.00 € | 70.21 € incl. VAT

- for longitudinal turning
- for protecting the lathe chuck

Application

for series production - for turning the workpieces to exactly the same position every time



Fixed stay

for machining longer workpieces

Item no. 10670

Price 179.00 € | 213.01 € incl. VAT

- for hollow turning and drilling longer workpieces
- is fixed to the prismatic guide



Live stay

for machining longer workpieces

Item no. 10672

Price 179.00 € | 213.01 € incl. VAT

- to support long, thin shafts during longitudinal turning,
prevents them from sagging
- is fixed to the tool slide



Push type gun

Item no. 11535

Price 19.90 € | 23.68 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow-/universal mouthpiece

Optional tooling available and recommended**Tool set**

Item no. 10995

Price 379.00 € | 451.01 € incl. VAT

included in delivery

- Quick-change tool post, main body size A
- Boring steel holder size A
- Turning tool holder size A
- Carbide-tipped turning tool set 6 pieces
cross section 10 x 10 mm
- Quick-action drill chuck
clamping width 1-13 mm
inner taper B16
- Drill chuck arbor MT2
morse taper MT2 and flat tang

CNC LATHES

D6000-C | CC-D6000 | CC-D6200 hs



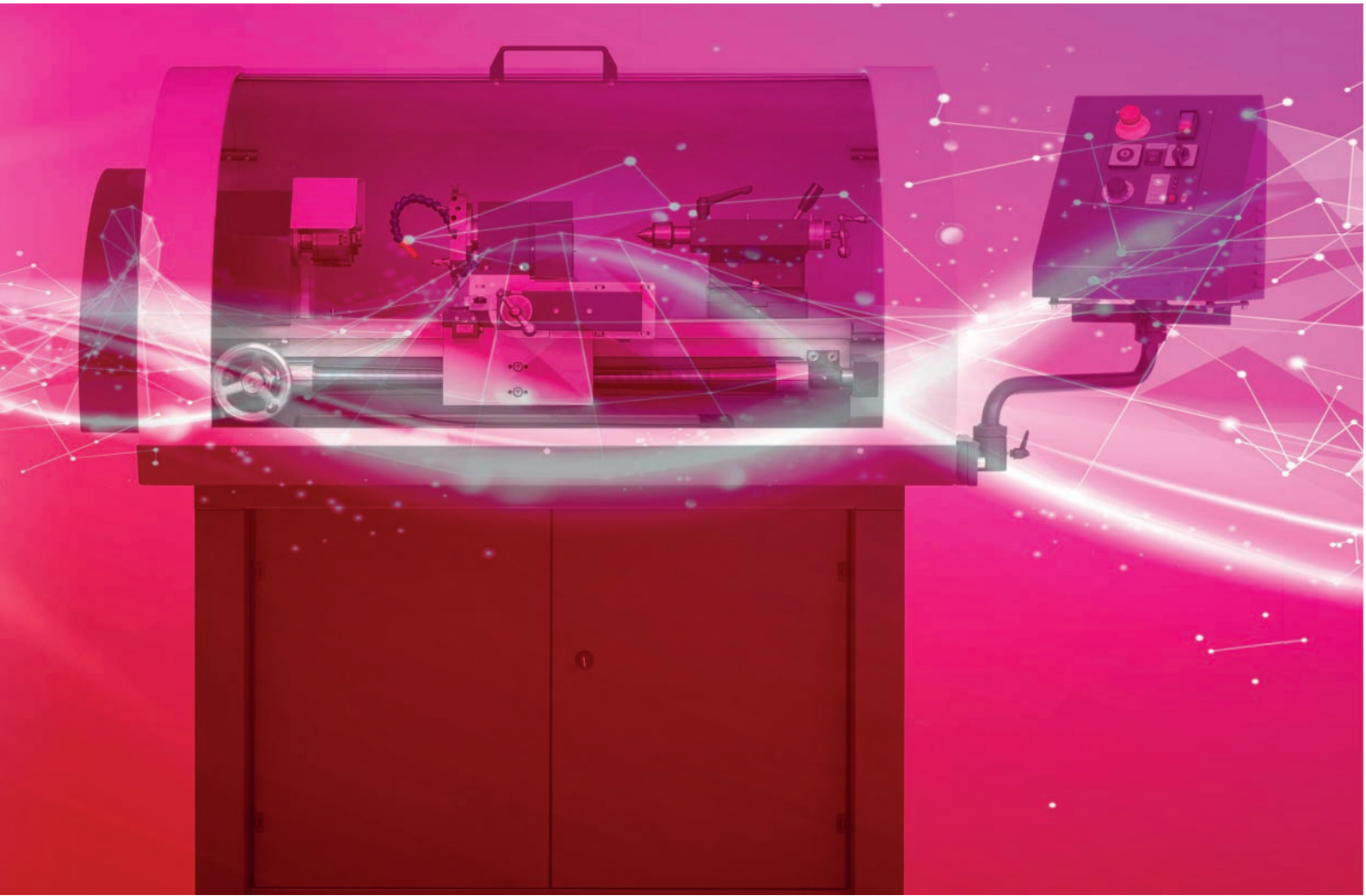
turning



milling



drilling





- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Lathe D6000-C

Lead screw lathe with prismatic cast iron bed and installed stepper motors

Item no. 1060001
Price 5,495.00 € | 6,539.05 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the lathe can be used in conventional as well as in CNC mode

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 32)
- Thread cutting with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads 2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- 2 powerful stepper motors for controlling the X- and Z-axis
- 2 limit switches for X- and Z-axis

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC lathe does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

Technical data

- can be found on page 56



- ✓ precise lead screw lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Lathe D6000-C hs

Lead screw lathe with prismatic cast iron bed and installed stepper motors

Item no. 1060012
Price 7,295.00 € | 8,681.05 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the lathe can be used in conventional as well as in CNC mode

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 32)
- Thread cutting with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- 2 powerful stepper motors for controlling the X- and Z-axis
- 2 limit switches for X- and Z-axis

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **2.0 kW, 50 - 5000 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC lathe does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

Technical data

- can be found on page 56



Optional tooling available and recommended



Main spindle bore \emptyset 30 mm
for workpiece \emptyset up to 30 mm

Item no. 10678
Price 472.00 € | 561.68 € incl. VAT

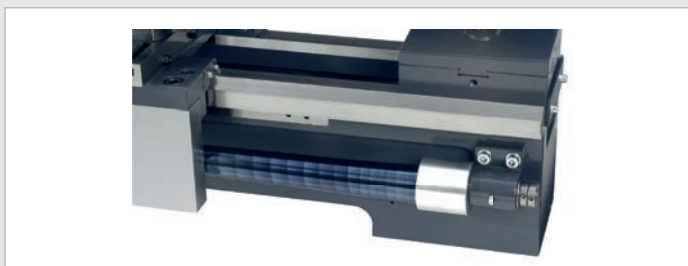
- with ground taper insert MT3
- cannot be retrofitted



Ball screws for both axes
for high positioning accuracy

Item no. 10645
Price 1,595.00 € | 1,898.05 € incl. VAT

- incl. lead screw cover
- Zero backlash ball screws
- high precision pitch and positioning accuracy
- wear-free
- cannot be retrofitted



Lead screw cover
to protect the lead screw against swarf

Item no. 10680
Price 300.00 € | 357.00 € incl. VAT

- to prevent premature wear and loss of precision
- cannot be retrofitted



Camlock D1-4 "Quick Change" option
for quickly changing lathe and collet chucks by means of the Camlock fixture

Item no. 10640
Price 399.00 € | 474.81 € incl. VAT

- Camlock main spindle nose according to DIN 55029 size 4
- factory installed
- cannot be retrofitted

suitable camlock 3- and 4-jaw lathe chuck

can be found on page 174

suitable camlock collet chuck

can be found on page 177

Optional tooling available and recommended



Quick-action collet chuck

for quickly changing the workpieces

Item no. 10930
Price 2,050.00 € | 2,439.50 € incl. VAT

- Clamping range 2 - 30 mm
- to be used up to max. 4000 rpm
- self-locking
- for dead length collets or Rubber-Flex collets
- Collets from 2 - 30 mm available - price upon request
- factory installed
- for optional retrofitting (upon request)

Application

for clamping and unclamping of the workpieces with hand lever



Mountable digital vernier scales

for precise machining of the workpieces

Item no. 10625
Price 410.00 € | 487.90 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Z- and Z1-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 11371 for X-axis measuring length 150 mm
Price 46.00 € | 54.74 € incl. VAT

Item no. 11365 for Z-axis measuring length 500 mm
Price 119.00 € | 141.61 € incl. VAT

Item no. 11360 for Z1-axis measuring length 100 mm
Price 39.00 € | 46.41 € incl. VAT

Item no. 10699 mounting kit for 3 axes
Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 2 optical scales

for exact positioning of the workpieces

Item no. 10626
Price 1,850.00 € | 2,201.50 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

**Optional tooling available and recommended****Digital position readout (DRO) and 2 optical scales**Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10689 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT

**Digital position readout (DRO) and 3 optical scales**

for exact positioning of the workpieces

Item no. 10627

Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Optical scale 100 mm for Z1-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10283 optical scale 100 mm for Z1-axis

Price 249.00 € | 296.31 € incl. VAT

Item no. 10685 mounting kit and protective covers

Price 258.00 € | 307.02 € incl. VAT

Optional tooling available and recommended



Automatic tool turret with 8 tool positions
for an automated production

Item no. 1060098

Price 2,100.00 € | 2,499.00 € incl. VAT

- for 4 outside processing tools cross section 10 x 10 mm
- for 4 inside processing tools location hole Ø 16 mm
- for safety reasons only available with machine safety cabin
- for optional retrofitting (upon request)



Machine safety cabin
to prevent accidents

Item no. 1060090

Price 1,699.00 € | 2,021.81 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 57

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. **Without a machine safety cabin a CNC lathe does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**



Machine base cabinet

Item no. 10267

Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Levelling element

Item no. 10268

Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Chip- and coolant tray with splash guard

Item no. 10656

Price 199.00 € | 236.81 € incl. VAT

- Dimensions W1060 x D464 x H500 mm



Optional tooling available and recommended



Coolant unit with splash guard

Item no. 10664
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H553 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 19 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



Push type gun

Item no. 11535
Price 19.90 € | 23.68 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow-/universal mouthpiece



Tool set

Item no. 10995
Price 379.00 € | 451.01 € incl. VAT

included in delivery

- Quick-change tool post, main body size A
- Boring steel holder size A
- Turning tool holder size A
- Carbide-tipped turning tool set 6 pieces cross section 10 x 10 mm
- Quick-action drill chuck clamping width 1-13 mm inner taper B16
- Drill chuck arbor MT2 morse taper MT2 and flat tang



nccad basic and professional controller and turning software

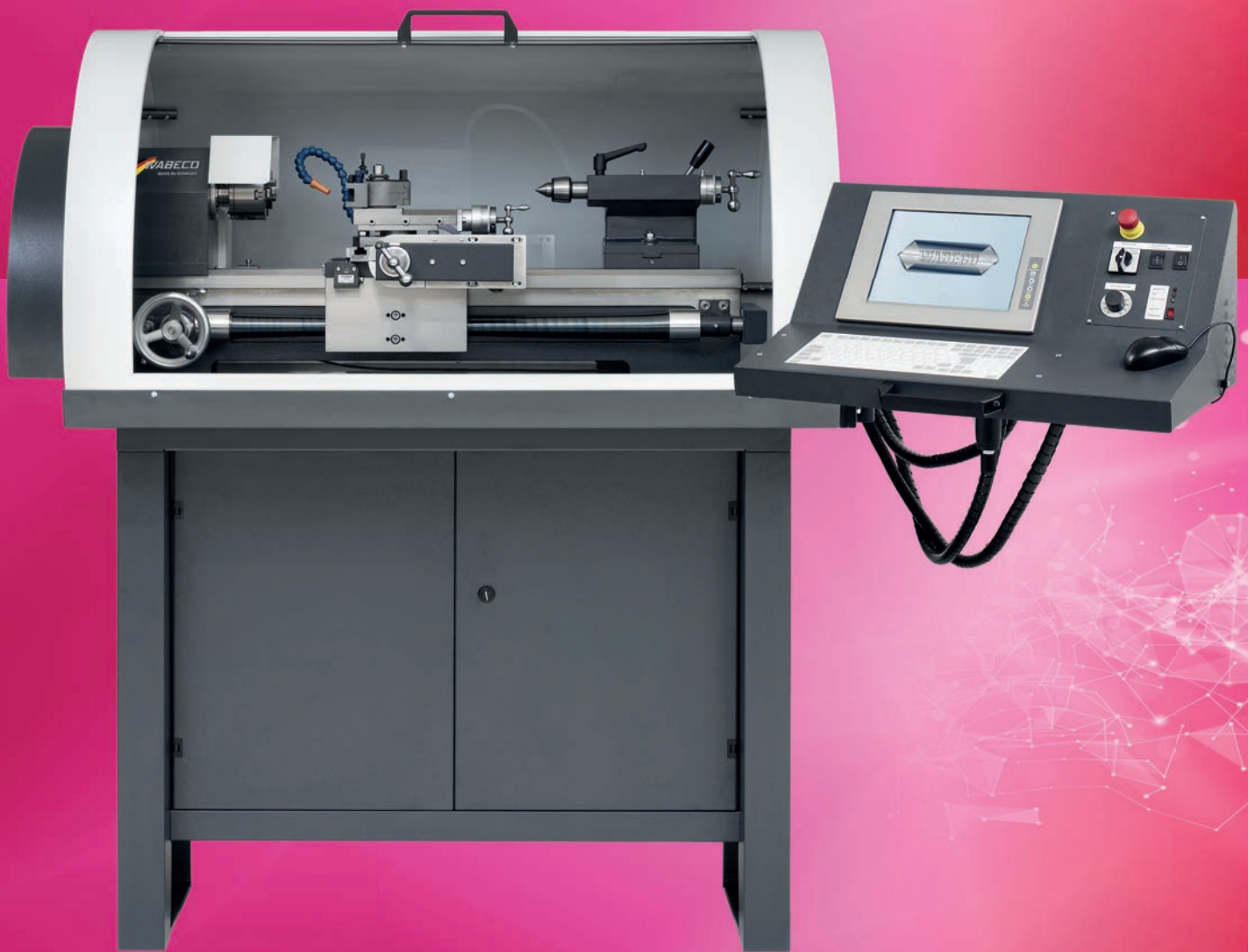
nccad basic and nccad professional turning software differ in

- software functions
- and the control electronics

nccad professional turning software also provides the possibility

- of an automated production through the use of the tool turret
- thread cutting in CNC operation
- the use of an electronic handwheel
- as well as higher travel speeds







- ✓ precise lead screw CNC lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO lathe with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC lathe. To meet industrial standard safety requirements this to CNC converted lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a lathe converted to CNC does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

CNC lathe CC-D6000 basic

Lead screw CNC lathe with prismatic cast iron bed and nccad basic controller

Item no. 1060051
Price 6,795.00 € | 8,086.05 € incl. VAT

Special feature

- the lathe can be used in conventional as well as in CNC mode

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 44)
- Thread cutting conventional with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads 2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- Thread cutting not possible in CNC mode
- Machine control panel with integrated machine control elements
- nccad basic turning software

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

PC-control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 58

Software description

- can be found on page 62



- ✓ precise lead screw CNC lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO lathe with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC lathe. To meet industrial standard safety requirements this to CNC converted lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a lathe converted to CNC does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

CNC lathe CC-D6000 hs basic

Lead screw CNC lathe with prismatic cast iron bed and nccad basic controller

Item no. 1060056

Price 8,595.00 € | 10,228.05 € incl. VAT

Special feature

- the lathe can be used in conventional as well as in CNC mode

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 44)
- Thread cutting conventional with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads 2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- Thread cutting not possible in CNC mode
- Machine control panel with integrated machine control elements
- nccad basic turning software

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **2.0 kW, 50 - 5000 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

PC-control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 58

Software description

- can be found on page 62



- ✓ precise lead screw CNC lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC-control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO lathe with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC lathe. To meet industrial standard safety requirements this to CNC converted lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a lathe converted to CNC does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

CNC lathe CC-D6000 professional

Lead screw CNC lathe with prismatic cast iron bed and nccad professional controller

Item no. 1060021

Price 9,095.00 € | 10,823.05 € incl. VAT

Special feature

- **the lathe can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **Possibility of an automated production through the use of the automatic tool turret with 8 tool positions** (optional page 46)
- **the use of an electronic handwheel** (optional page 47)

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 44)
- Thread cutting conventional with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- Thread cutting in CNC mode
- Machine control panel with integrated machine control elements
- nccad professional turning software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 44)

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **1.4 kW, 30 - 2300 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

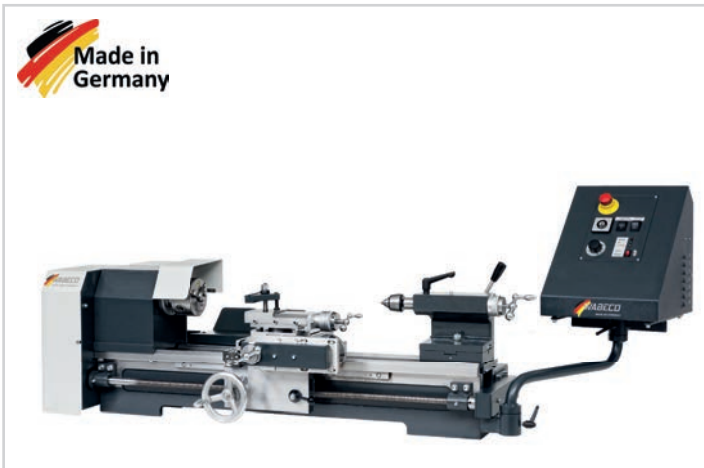
- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 58

Software description

- can be found on page 62



- ✓ precise lead screw CNC lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC-control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO lathe with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC lathe. To meet industrial standard safety requirements this to CNC converted lathe should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a lathe converted to CNC does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**

CNC lathe CC-D6000 hs professional **Lead screw CNC lathe with prismatic cast iron bed** **and nccad professional controller**

Item no.	1060071
Price	10,895.00 € 12,965.05 € incl. VAT

Special feature

- **the lathe can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **Possibility of an automated production through the use of the automatic tool turret with 8 tool positions** (optional page 46)
- **the use of an electronic handwheel** (optional page 47)

Basic equipment

- **3-jaw lathe chuck Ø 125 mm** with turning and drilling jaws
- Live center MT2
- Main spindle bore Ø 20 mm (main spindle bore Ø 30 mm optional page 44)
- Thread cutting conventional with lead screw drive and change gear quadrant tumbler gear for left- and right-hand threads change gear set for metric 0.25 - 7.0 mm and inch 10 - 40 TPI threads
2 automatic longitudinal feed rates/lead screw drive 0.085 and 0.16 mm/rev
- Thread cutting in CNC mode
- Machine control panel with integrated machine control elements
- nccad professional turning software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 44)

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- **2.0 kW, 50 - 5000 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 58

Software description

- can be found on page 62



Optional tooling available and recommended



Main spindle bore \emptyset 30 mm
for workpiece \emptyset up to 30 mm

Item no. 10678
Price 472.00 € | 561.68 € incl. VAT

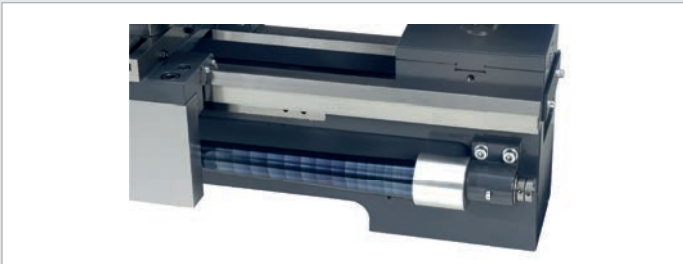
- with ground taper insert MT3
- cannot be retrofitted



Ball screws for both axes
for high positioning accuracy

Item no. 10645
Price 1,595.00 € | 1,898.05 € incl. VAT

- for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable
- incl. lead screw cover
- Zero backlash ball screws
- high precision pitch and positioning accuracy
- wear-free
- cannot be retrofitted

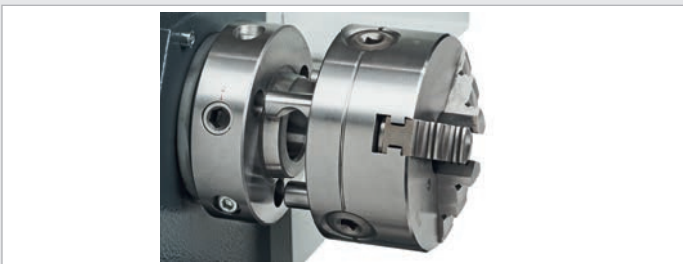


Lead screw cover

to protect the lead screw against swarf

Item no. 10680
Price 300.00 € | 357.00 € incl. VAT

- to prevent premature wear and loss of precision
- cannot be retrofitted



Camlock D1-4 "Quick Change" option

for quickly changing lathe and collet chucks by means of the Camlock fixture

Item no. 10640
Price 399.00 € | 474.81 € incl. VAT

- Camlock main spindle nose according to DIN 55029 size 4
- factory installed
- cannot be retrofitted

suitable camlock 3- and 4-jaw lathe chuck

can be found on page 174

suitable camlock collet chuck

can be found on page 177

Optional tooling available and recommended



Quick-action collet chuck

for quickly changing the workpieces

Item no. 10930
Price 2,050.00 € | 2,439.50 € incl. VAT

- Clamping range 2 - 30 mm
- to be used up to max. 4000 rpm
- self-locking
- for dead length collets or Rubber-Flex collets
- Collets from 2 - 30 mm available - price upon request
- factory installed
- for optional retrofitting (upon request)

Application

for clamping and unclamping of the workpieces with hand lever



Digital position readout (DRO) and 2 optical scales

for exact positioning of the workpieces

Item no. 1060126
Price 1,850.00 € | 2,201.50 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes
Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis
Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis
Price 359.00 € | 427.21 € incl. VAT

Item no. 1060189 mounting kit and protective covers
Price 198.00 € | 235.62 € incl. VAT



Digital position readout (DRO) and 3 optical scales

for exact positioning of the workpieces

Item no. 1060127
Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 170 mm for X-axis
- Optical scale 520 mm for Z-axis
- Optical scale 100 mm for Z1-axis
- Mounting kit and protective covers for optical scales
- factory installation



Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales

Mounting by the customer

Drilled holes and threads must be added to the lathe by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10284 optical scale 170 mm for X-axis

Price 259.00 € | 308.21 € incl. VAT

Item no. 10287 optical scale 520 mm for Z-axis

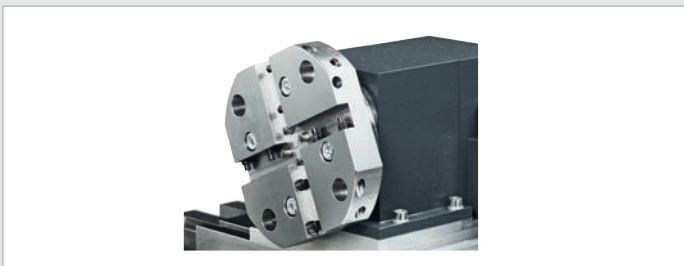
Price 359.00 € | 427.21 € incl. VAT

Item no. 10283 optical scale 100 mm for Z1-axis

Price 249.00 € | 296.31 € incl. VAT

Item no. 1060185 mounting kit and protective covers

Price 258.00 € | 307.02 € incl. VAT



Automatic tool turret with 8 tool positions for an automated production

Item no. 1060098

Price 2,100.00 € | 2,499.00 € incl. VAT

- for 4 outside processing tools cross section 10 x 10 mm
- for 4 inside processing tools location hole \varnothing 16 mm
- for safety reasons only available with machine safety cabin
- for optional retrofitting (upon request)
- **only usable in connection with nccad professional**



Machine safety cabin

to prevent accidents

Item no. 1060090

Price 1,699.00 € | 2,021.81 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 59

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. **Without a machine safety cabin a CNC lathe does not meet CE listed requirements and can result in serious injuries. Extreme caution is required operating a CNC lathe.**



Industrial monitor with membrane keyboard

Item no. 1060095

Price 2,950.00 € | 3,510.50 € incl. VAT

- ergonomic control unit housing
- with integrated machine operating elements
- with swiveling support arm
- replaces PC monitor and keyboard
- a PC is not part of the delivery
- only available with machine safety cabin
- cannot be retrofitted

Optional tooling available and recommended



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Electronic handwheel

for manually moving the axes

Item no. 1060130
Price 590.00 € | 702.10 € incl. VAT

- for 2 axes
- used for the positioning of the axes during the setup mode (workpiece zero point)
- **only usable in connection with nccad professional**



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



Push type gun

Item no. 11535
Price 19.90 € | 23.68 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow-/universal mouthpiece





- ✓ precise CNC slant bed lathe
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for series production
- ✓ perfect for workshop, industry, education, fixture construction, tool making, prototype construction and mold construction use due to extreme precision
- ✓ robust construction
- ✓ universal use and operator-friendly

CNC lathe CC-D6200 hs professional **Slant bed CNC lathe with prismatic cast iron bed** **and nccad professional controller**

Item no.	1060800
Price	16,995.00 € 20,224.05 € incl. VAT

Basic equipment

- 3-jaw lathe chuck Ø 125 mm with turning and drilling jaws
- Main spindle bore Ø 30 mm
- Ball screws for both axes
- Lead screw cover
- Automatic tool turret with 8 tool positions
- Machine safety cabin with integrated coolant unit
- Keyboard tray with integrated machine operating elements
- nccad professional turning software

Working range

- Center distance 600 mm
- Center height 135 mm
- Workpiece diameter max. 270 mm

Main drive power

- 2.0 kW, 50 - 5000 rpm (frequency-controlled main drive motor)
- extremely silent running due to modern electronically adjustable drive technology

Ball screws

- with zero backlash ball screws
- high precision pitch and positioning accuracy
- wear-free

Lead screw cover

- to protect the lead screw against swarf
- to prevent premature wear and loss of precision

Slant bed with prismatic cast iron bed

- made of diagonally ribbed gray cast iron
- inductively hardened and ground guideways

Automatic tool turret with 8 tool positions

- with 8 magazine stations

PC-control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 60

Software description

- can be found on page 62



Optional tooling available and recommended



Camlock D1-4 "Quick Change" option

for quickly changing lathe and collet chucks by means of the Camlock fixture

Item no. 10640
Price 399.00 € | 474.81 € incl. VAT

- Camlock main spindle nose according to DIN 55029 size 4
- factory installed
- cannot be retrofitted

suitable camlock 3- and 4-jaw lathe chuck

can be found on page 174

suitable camlock collet chuck

can be found on page 177



Machine base cabinet

Item no. 1120269
Price 1,995.00 € | 2,374.05 € incl. VAT

- Dimensions W1420 x D1000 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Electronic handwheel

for manually moving the axes

Item no. 1060130
Price 590.00 € | 702.10 € incl. VAT

- for 2 axes
- used for the positioning of the axes during the setup mode (workpiece zero point)



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



	D2000	D2400
Working range		
Center distance	350 mm	500 mm
Center height	110 mm	110 mm
Turning Ø above cross slide	126 mm	126 mm
Turning Ø above the guideways	220 mm	220 mm
Bed width	○	○
Machine precision		
Machine precision	according to DIN 8606	according to DIN 8606
True running accuracy of spindle nose	0.005 mm	0.005 mm
cylindrical turning to 100 mm cantilevered	0.01 mm	0.01 mm
cylindrical turning with a finishing cut to 300 mm between the centers	0.015 mm	0.015 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	1.4 kW
Single-phase inverse-speed motor speed-controlled	●	●
in direct current model with permanent, closed loop rpm control system	●	●
frequency-controlled main drive motor	○	○
due to high speed suitable for small workpiece diameters	○	○
electronically infinitely variable drive	30 - 2300 rpm	30 - 2300 rpm
Main spindle drive which can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Drive technology		
Spindle electronics with multiple fault monitoring circuit	●	●
e.g. turning a steel shaft Ø 50 mm in one infeed	approx. 5 mm	approx. 5 mm
Headstock		
Housing made of gray cast iron	○	○
V-shaped slot	○	○
Spindle head in 2 adjustable precision DIN tapered roller bearings	●	●
Right-left rotation of the main spindle	●	●
Intermediate gear between main spindle and drive	●	●
high torque even in the lower speed range, e.g. for machining hard-to-cut materials	●	●
Main spindle bore	Ø 20 mm	Ø 20 mm
Taper in main spindle	MT3	MT3
Main spindle nose Ø 70 mm	according to DIN 6350	according to DIN 6350

Subject to technical modifications

● yes ○ no

D4000	D6000	D6000 hs
350 mm	600 mm	600 mm
100 mm	135 mm	135 mm
120 mm	170 mm	170 mm
200 mm	270 mm	270 mm
120 mm	185 mm	185 mm

according to DIN 8606	according to DIN 8606	according to DIN 8606
0.005 mm	0.005 mm	0.005 mm
0.01 mm	0.01 mm	0.01 mm
0.015 mm	0.015 mm	0.015 mm

1.4 kW	1.4 kW	2.0 kW
●	●	○
●	●	○
○	○	●
○	○	●
30 - 2300 rpm	30 - 2300 rpm	50 - 5000 rpm
●	●	●
with overload protection	with overload protection	with overload protection
●	●	●

●	●	●
approx. 5 mm	approx. 10 mm	approx. 10 mm

●	●	●
scraped by hands	scraped by hands	scraped by hands
●	●	●
●	●	●
●	●	●
●	●	●
Ø 20 mm	Ø 20 mm	Ø 20 mm
MT3	MT3	MT3
according to DIN 6350	according to DIN 6350	according to DIN 6350

● yes ○ no



	D2000	D2400
Tailstock with quick adjustment		
lateral adjustability of tailstock upper part	± 10 mm	± 10 mm
Tailstock sleeve	with an internal MT2 morse taper	with an internal MT2 morse taper
Travel of tailstock sleeve	65 mm	65 mm
Scale ring reading accuracy	○	○

Tool slide

universally adjustable	●	●
Dovetail guides	readjustable free of play	readjustable free of play
Reading accuracy of the scale rings	0.05 mm	0.05 mm
Travel of cross slide	110 mm	110 mm
Travel of longitudinal slide	58 mm	58 mm
Longitudinal slide can be swiveled through	360°	360°
max. height of turning tools	20 mm	20 mm
Cutting scrapers prevent dirt and cuttings entering the guideways	●	●

Thread cutting

	prepared	prepared
with lead screw drive and change gear quadrant	●	●
Tumbler gear	○	○
Automatic longitudinal feed rate	0.085 mm/rev optional 0.16 mm/rev	0.085 mm/rev optional 0.16 mm/rev
Change gear set for thread cutting	optional metric 0.25 - 6.0 mm inch 10 - 36 TPI	optional metric 0.25 - 6.0 mm inch 10 - 36 TPI

Overload clutch

on the lead screw and the lead screw drive to avoid damage to the feed system	●	●
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Dimensions and weight

Machine dimensions without packaging	W1050 x D410 x H420 mm	W1200 x D410 x H420 mm
Weight without packaging	59 kg	65 kg

Subject to technical modifications

● yes ○ no

D4000	D6000	D6000 hs
± 10 mm	± 10 mm	± 10 mm
with an internal MT2 morse taper	with an internal MT2 morse taper	with an internal MT2 morse taper
45 mm	65 mm	65 mm
0.1 mm	0.1 mm	0.1 mm
●	●	●
readjustable free of play	readjustable free of play	readjustable free of play
0.05 mm	0.05 mm	0.05 mm
100 mm	140 mm	140 mm
50 mm	60 mm	60 mm
360°	360°	360°
16 mm	20 mm	20 mm
●	●	●
standard	standard	standard
●	●	●
for left- and right-hand threads	for left- and right-hand threads	for left- and right-hand threads
0.085 and 0.16 mm/rev	0.085 and 0.16 mm/rev	0.085 and 0.16 mm/rev
metric 0.25 - 7.0 mm inch 10 - 40 TPI	metric 0.25 - 7.0 mm inch 10 - 40 TPI	metric 0.25 - 7.0 mm inch 10 - 40 TPI
●	●	●
W860 x D400 x H370 mm	W1200 x D510 x H470 mm	W1200 x D630 x H470 mm
71 kg	150 kg	177 kg

● yes ○ no



	D6000-C	D6000-C hs
Working range		
Center distance	600 mm	600 mm
Center height	135 mm	135 mm
Turning Ø above cross slide	170 mm	170 mm
Turning Ø above the guideways	270 mm	270 mm
Bed width	185 mm	185 mm
Machine precision		
Machine precision	according to DIN 8606	according to DIN 8606
True running accuracy of spindle nose	0.005 mm	0.005 mm
cylindrical turning to 100 mm cantilevered	0.01 mm	0.01 mm
cylindrical turning with a finishing cut to 300 mm between the centers	0.015 mm	0.015 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	2.0 kW
Single-phase inverse-speed motor speed-controlled	●	○
in direct current model with permanent, closed loop rpm control system	●	○
frequency-controlled main drive motor	○	●
due to high speed suitable for small workpiece diameters	○	●
electronically infinitely variable drive	30 - 2300 rpm	50 - 5000 rpm
Main spindle drive which can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Headstock		
Housing made of gray cast iron	●	●
V-shaped slot	scraped by hands	scraped by hands
Spindle head in 2 adjustable precision DIN tapered roller bearings	●	●
Right-left rotation of the main spindle	●	●
Intermediate gear between main spindle and drive	●	●
high torque even in the lower speed range, e.g. for machining hard-to-cut materials	●	●
Main spindle bore	Ø 20 mm	Ø 20 mm
Taper in main spindle	MT3	MT3
Main spindle nose Ø 70 mm	according to DIN 6350	according to DIN 6350
Tailstock with quick adjustment		
lateral adjustability of tailstock upper part	± 10 mm	± 10 mm
Tailstock sleeve	with an internal MT2 morse taper	with an internal MT2 morse taper
Travel of tailstock sleeve	65 mm	65 mm
Scale ring reading accuracy	0.1 mm	0.1 mm

	D6000-C	D6000-C hs
Tool slide		
universally adjustable	●	●
Dovetail guides	readjustable free of play	readjustable free of play
Reading accuracy of the scale rings	0.05 mm	0.05 mm
Travel of cross slide	140 mm	140 mm
Travel of longitudinal slide	60 mm	60 mm
Longitudinal slide can be swiveled through	360°	360°
max. height of turning tools	20 mm	20 mm
Cutting scrapers prevent dirt and cuttings entering the guideways	●	●
Thread cutting		
with lead screw drive and change gear quadrant	●	●
Tumbler gear	for left- and right-hand threads	for left- and right-hand threads
2 automatic longitudinal feed rates conventional	0.085 and 0.16 mm/rev	0.085 and 0.16 mm/rev
Change gear set for thread cutting	metric 0.25 - 7.0 mm inch 10 - 40 TPI	metric 0.25 - 7.0 mm inch 10 - 40 TPI
Overload clutch		
on the lead screw and the lead screw drive to avoid damage to the feed system	●	●
Stepper motors		
maintenance-free	●	●
Power	bipolar	bipolar
Step angle	1.8° ± 0.09°	1.8° ± 0.09°
Resistance	0.3 Ohm	0.3 Ohm
high feed and acceleration values	●	●
Plug	sub D-9 pole	sub D-9 pole
Industrial control	3 m shielded cable	3 m shielded cable
Limit switches X- and Z-axis		
mechanical single limit switch	●	●
Dimensions and weight		
Machine dimensions without packaging	W1230 x D510 x H470 mm	W1230 x D630 x H470 mm
Weight without packaging	157 kg	184 kg
Machine safety cabin (optional)		
Content coolant	36 liter	36 liter
Dimensions without packaging	W1298 x D848 x H653 mm	W1298 x D848 x H653 mm
Weight without packaging	81.5 kg	81.5 kg

Subject to technical modifications

● yes ○ no



	CC-D6000	CC-D6000 hs
Working range		
Center distance	600 mm	600 mm
Center height	135 mm	135 mm
Turning Ø above cross slide	170 mm	170 mm
Turning Ø above the guideways	270 mm	270 mm
Bed width	185 mm	185 mm
Machine precision		
Machine precision	according to DIN 8606	according to DIN 8606
True running accuracy of spindle nose	0.005 mm	0.005 mm
cylindrical turning to 100 mm cantilevered	0.01 mm	0.01 mm
cylindrical turning with a finishing cut to 300 mm between the centers	0.015 mm	0.015 mm
Positioning accuracy	± 0.015 mm	± 0.015 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	2.0 kW
Single-phase inverse-speed motor speed-controlled	●	○
in direct current model with permanent, closed loop rpm control system	●	○
frequency-controlled main drive motor	○	●
due to high speed suitable for small workpiece diameters	○	●
electronically infinitely variable drive	30 - 2300 rpm	50 - 5000 rpm
Main spindle drive which can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Drive technology		
Spindle electronics with multiple fault monitoring circuit	●	●
e.g. turning a steel shaft Ø 50 mm in one infeed	approx. 5 mm	approx. 5 mm
Headstock		
Housing made of gray cast iron	●	●
V-shaped slot	scraped by hands	scraped by hands
Spindle head in 2 adjustable precision DIN tapered roller bearings	●	●
Right-left rotation of the main spindle	●	●
Intermediate gear between main spindle and drive	●	●
high torque even in the lower speed range, e.g. for machining hard-to-cut materials	●	●
Main spindle bore	Ø 20 mm	Ø 20 mm
Taper in main spindle	MT3	MT3
Main spindle nose Ø 70 mm	according to DIN 6350	according to DIN 6350

● yes ○ no

	CC-D6000	CC-D6000 hs
Tailstock with quick adjustment		
lateral adjustability of tailstock upper part	± 10 mm	± 10 mm
Tailstock sleeve	with an internal MT2 morse taper	with an internal MT2 morse taper
Travel of tailstock sleeve	65 mm	65 mm
Scale ring reading accuracy	0.1 mm	0.1 mm
Tool slide		
universally adjustable	●	●
Dovetail guides	readjustable free of play	readjustable free of play
Reading accuracy of the scale rings	0.05 mm	0.05 mm
Travel of cross slide	140 mm	140 mm
Travel of longitudinal slide	60 mm	60 mm
Longitudinal slide can be swiveled through	360°	360°
max. height of turning tools	20 mm	20 mm
Cutting scrapers prevent dirt and cuttings entering the guideways	●	●
Thread cutting (in conventional operation)		
with lead screw drive and change gear quadrant	●	●
Tumbler gear	for left- and right-hand threads	for left- and right-hand threads
2 automatic longitudinal feed rates conventional	0.085 and 0.16 mm/rev	0.085 and 0.16 mm/rev
Change gear set for thread cutting	metric 0.25 - 7.0 mm inch 10 - 40 TPI	metric 0.25 - 7.0 mm inch 10 - 40 TPI
Overload clutch (in conventional operation)		
on the lead screw and the lead screw drive to avoid damage to the feed system	●	●
Stepper motors		
maintenance-free	●	●
Travel speed (rapid traverse) X- and Z-axis		
nccad basic	30 - 500 mm/min	30 - 500 mm/min
nccad professional	30 - 1000 mm/min	30 - 1000 mm/min
Limit switches X- and Z-axis		
mechanical single limit switch	●	●
Dimensions and weight		
Machine dimensions without packaging	W1230 x D510 x H470 mm	W1230 x D630 x H470 mm
Weight without packaging	172 kg	199 kg
Machine safety cabin (optional)		
Content coolant	36 liter	36 liter
Dimensions without packaging	W1298 x D848 x H653 mm	W1298 x D848 x H653 mm
Weight without packaging	81.5 kg	81.5 kg

Subject to technical modifications

● yes ○ no



CC-D6200 hs

Working range

Center distance	600 mm
Center height	135 mm
Turning Ø above cross slide	170 mm
Turning Ø above the guideways	270 mm
Bed width	185 mm

Machine precision

Machine precision	according to DIN 8606
True running accuracy of spindle nose	0.005 mm
cylindrical turning to 100 mm cantilevered	0.01 mm
cylindrical turning with a finishing cut to 300 mm between the centers	0.015 mm
Positioning accuracy	± 0.015 mm

Main drive motor

Main drive motor 230 V, 50/60 Hz	2.0 kW
frequency-controlled main drive motor	●
due to high speed suitable for small workpiece diameters	●
electronically infinitely variable drive	50 - 5000 rpm
Main spindle drive which can be adjusted by means of a potentiometer over a wide range of cutting speeds	●
Main drive motor	with overload protection
constant torque throughout the entire speed range	●

Headstock

Housing made of gray cast iron	●
V-shaped slot	scraped by hands
Spindle head in 2 adjustable precision DIN tapered roller bearings	●
Right-left rotation of the main spindle	●
high torque even in the lower speed range, e.g. for machining hard-to-cut materials	●
Main spindle bore	Ø 30 mm
Taper in main spindle	MT3
Main spindle nose Ø 70 mm	according to DIN 6350

Tailstock with quick adjustment

lateral adjustability of tailstock upper part	± 10 mm
Tailstock sleeve	with an internal MT2 morse taper
Travel of tailstock sleeve	65 mm
Scale ring reading accuracy	0.1 mm

● yes ○ no

CC-D6200 hs

Spindles

high precision ball screws

Stepper motors

maintenance-free

Travel speed (rapid traverse)

X- and Z-axis

30 - 1000 mm/min

Limit switches X- and Z-axis

mechanical single limit switch

Tool turret

Cross section for 4 outside processing tools

10 x 10 mm

Location hole for 4 inside processing tools

Ø 16 mm

Machine safety cabin

with integrated coolant unit

Content coolant

27 liter

Feed pump

230 V, 50/60 Hz

Dimensions and weight

Machine dimensions without packaging

W1420 x D1000 x H900 mm

Weight without packaging

352 kg

Subject to technical modifications

 yes no



nccad turning software	nccad basic	nccad professional
Type of control		
2D interpolation, i.e. 2 axes can be displaced simultaneously	●	●
2½D interpolation, i.e. 2 axes can be displaced simultaneously the 3 rd axis is intended for controlling the tool turret with 8 tool positions	○	●
Support of microstepping, i.e. smooth run and high position resolution	●	●
Look A-head, i.e. an anticipatory program process	○	●
Dialog-oriented operator guidance		
dialog-oriented operator guidance	●	●
Program input		
according to DIN 66025 with G- and M-functions	●	●
graphical programming	●	●
Automatic creation of CNC programs		
on the basis of a designed contour according to DIN 66025	●	●
Data import		
DXF-files from a CAD system e.g. Auto CAD	●	●
HPGL files e.g. from Corel Draw	●	●
Contour generation by using the CAD module		
Drawings can be created directly	●	●
Coordinates can be entered or edited, e.g. commands can be changed, added and/or deleted	●	●
the following functions are available: drawing of straight lines, curves, circles, polygones etc.	●	●
Contours can be e.g. shifted, rotated, copied, mirrored and trimmed	●	●
Contour generation by means of mouse or keyboard	●	●
the drawings can be dimensioned	●	●
Technology values		
Input of technology values for the drawn contour e.g. feed, in-feed depth, processing sequence, fine swarf removal etc.	●	●
Graphic simulation		
for easy checking of programming errors	●	●
Graphic simulation with 3D view		
Simulation with the represented tool	○	●
for easy checking of programming errors	○	●
Workpiece can be rotated during the simulation for a better view	○	●
Machine zero point		
Machine zero point is interrogated by means of a reference travel via limit switches	●	●

● yes ○ no

nccad turning software	nccad basic	nccad professional
Workpiece zero points		
19 workpiece zero points can arbitrarily be set	●	●
Tool administration		
Tool administration	●	●
Tool memory		
Administration of up to max. 20 tools	○	●
Definition of tools e.g. cutter angle, cutting edge length, cutting edge geometry, etc.	○	●
Manual control panel		
for displacing the individual axes without inputting a program	●	●
Direct input of the travel value either by means of the keyboard or the arrow keys in the manual control panel	●	●
Display of the current values on the screen	●	●
Help		
Manual integrated in the software	●	●
Direct help via the F1 key for the functions displayed in the menu bar	●	●
System requirements		
starting from Pentium 2 at least 600 MHz	●	●
Working memory min. 64 MB RAM, CD drive	●	●
serial interface (RS232)	●	●
Graphic resolution 1024 x 768	●	●
60 MB left on hard drive	●	●
the 3D simulation requires a graphic card with a large memory such as GeForce2 made by NVIDIA	○	●
Operating systems		
Windows XP, Windows NT and Windows 7	●	●
Thread cutting		
in CAD/CAM mode for longitudinal metric and inch threads up to 2.5 mm pitch	○	●
Speed		
the speed can be controlled via the software	○	●
Network		
compatible	●	●
Update		
to nccad professional is possible (provided that ball screws are used)	●	○
Tool turret with 8 tool positions		
optional	○	●
Electronic handwheel		
optional - for the zero point travel	○	●

DRILLING- and MILLING MACHINES

F1200 | F1200 hs | F1210 | F1210 hs | F1410 LF | F1410 LF hs



turning



milling



drilling





- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1200

Vertical milling machine with dovetail guides

Item no. 11200
Price 2,550.00 € | 3,034.50 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 68)
- **Work table 450 x 180 mm**

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 68)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 138





- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1200 hs

Vertical milling machine with dovetail guides

Item no. 11202
Price 3,850.00 € | 4,581.50 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 68)
- **Work table 450 x 180 mm**

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 68)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 138





Optional tooling available and recommended



Tool holder MT3

Item no. 11230
Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231
Price 350.00 € | 416.50 € incl. VAT

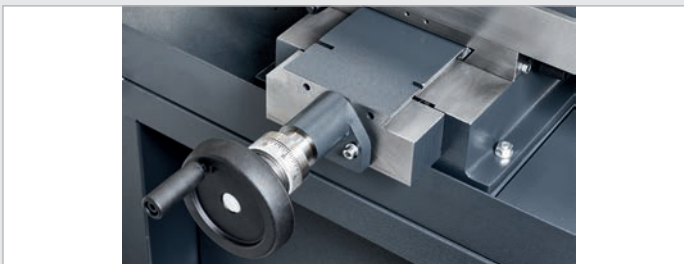
- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes for high positioning accuracy

Item no. 11245
Price 1,150.00 € | 1,368.50 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension for extended Y-travel

Item no. 11235
Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted



Clockwise and counter clockwise rotation of the work spindle for thread boring

Item no. 11234
Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted



Coordinate table for left-handers

Item no. 11232
Price upon request

- Handwheel in the X-axis is on the left side of the coordinate table

Optional tooling available and recommended



Mountable digital vernier scales for precise machining of the workpieces

Item no. 11225
Price 382.00 € | 454.58 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Y- and Z-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 11363 for X-axis measuring length 300 mm

Price 69.00 € | 82.11 € incl. VAT

Item no. 11362 for Y-axis measuring length 200 mm

Price 49.00 € | 58.31 € incl. VAT

Item no. 11373 for Z-axis measuring length 300 mm

Price 89.00 € | 105.91 € incl. VAT

Item no. 11299 mounting kit for 3 axes

Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 11226
Price 2,100.00 € | 2,499.00 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 270 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10285 optical scale 270 mm for X-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 11289 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Optional tooling available and recommended



Machine base cabinet

Item no. 11267
Price 460.00 € | 547.40 € incl. VAT

- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels

Optional tooling available and recommended

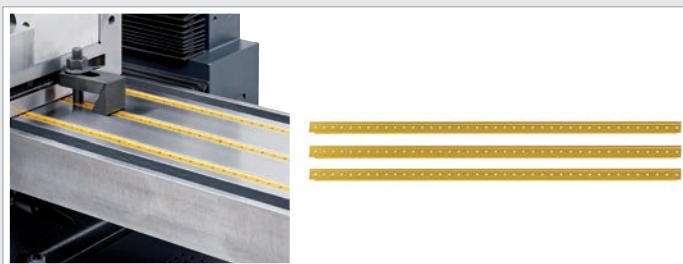


Example of use

Mounting bracket

Item no. 11238
Price 169.00 € | 201.11 € incl. VAT

- for high speed motors, high frequency spindles, drilling machines etc. (not part of the delivery)
- suitable for WABECO milling machines
- with Euronorm mounting \varnothing 43 mm
- Swiveling feature 90° in both directions (-90° to $+90^\circ$)
- Outreach 185 mm
- Dimensions W120 x D235 x H120 mm
- Weight without packaging 3.8 kg



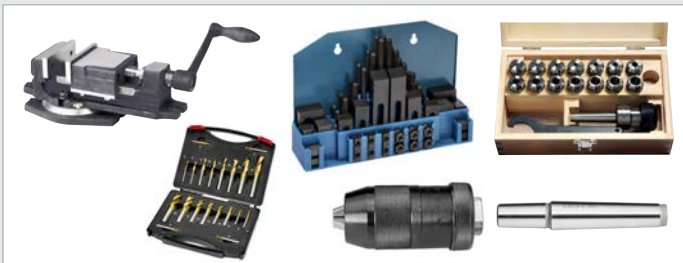
T-slot covers original Vertex

Item no. 11259
Price 36.00 € | 42.84 € incl. VAT

- PU: 3 pieces
- for 12 mm T-slot width
- Length per cover rail 400 mm
- anodized aluminum
- Swarf deflector, prevents swarfs from getting into the T-slots
- with bores for draining off coolant
- can be cut as necessary

Application

T-slot covers may be used on milling tables, drilling tables, etc.

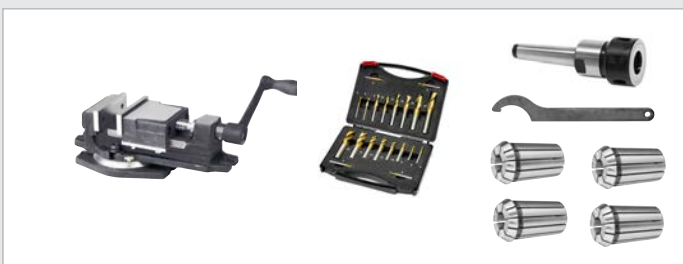


Tool set

Item no. 11997
Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces for 12 mm T-slot width M10 thread
- Quick-action drill chuck clamping width 1-13 mm inner taper B16
- Drill chuck arbor MT2-M10 with morse taper MT2 and tightening thread M10



Tool set

Item no. 11999
Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets \varnothing 6 - 10 - 12 - 16 mm



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1210

Vertical milling machine with dovetail guides

Item no. 11400
Price 2,850.00 € | 3,391.50 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 74)
- **Work table 700 x 180 mm**

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 74)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 139





- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1210 hs

Vertical milling machine with dovetail guides

Item no. 11402
Price 4,150.00 € | 4,938.50 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 74)
- **Work table 700 x 180 mm**

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 74)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 139





Optional tooling available and recommended



Tool holder MT3

Item no. 11230
Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231
Price 350.00 € | 416.50 € incl. VAT

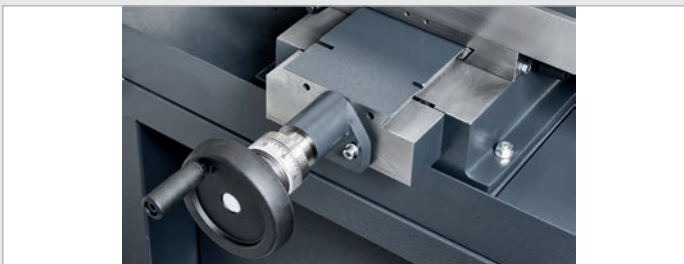
- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes for high positioning accuracy

Item no. 11445
Price 1,250.00 € | 1,487.50 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension for extended Y-travel

Item no. 11235
Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted



Clockwise and counter clockwise rotation of the work spindle for thread boring

Item no. 11234
Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted



Coordinate table for left-handers

Item no. 11432
Price upon request

- Handwheel in the X-axis is on the left side of the coordinate table

Optional tooling available and recommended



Mountable digital vernier scales for precise machining of the workpieces

Item no. 11425
Price 425.00 € | 505.75 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Y- and Z-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 11365 for X-axis measuring length 500 mm

Price 119.00 € | 141.61 € incl. VAT

Item no. 11362 for Y-axis measuring length 200 mm

Price 49.00 € | 58.31 € incl. VAT

Item no. 11373 for Z-axis measuring length 300 mm

Price 89.00 € | 105.91 € incl. VAT

Item no. 11299 mounting kit for 3 axes

Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 11426
Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 11489 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Optional tooling available and recommended



Machine base cabinet

- Item no. 11267
Price 460.00 € | 547.40 € incl. VAT
- Dimensions W700 x D445 x H850 mm
 - with lockable door and 2 shelves
 - Weight without packaging 46 kg



Levelling element

- Item no. 10268
Price 16.00 € | 19.04 € incl. VAT
- PU: 1 piece
 - Vibration pick-up and absorption element
 - for precise height adjustment on uneven grounds
 - Ø 80 mm, thread M10
 - prevents the machine base cabinet from moving
 - per machine base cabinet 4 levelling elements are required



Coolant unit

- Item no. 11264
Price 400.00 € | 476.00 € incl. VAT
- Dimensions W700 x D445 x H258 mm
 - with feed pump 230 V, 50/60 Hz
 - flexible hose with stop valve and nozzle
 - Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant return plate

- Item no. 11265
Price 29.00 € | 34.51 € incl. VAT
- Dimensions W285 x D300 x H17.5 mm
 - is hooked into the coolant unit
 - the coolant is returned to the coolant unit



Coolant concentrate

- Item no. 11550
Price 89.00 € | 105.91 € incl. VAT
- Content: 5 liter
 - High-performance cooling lubricant on mineral oil base
 - Corrosion protection
 - Solvent: 5% or 1:20 with water
 - especially suitable for processing high-alloy, rust- and acid-resistant steels

Optional tooling available and recommended

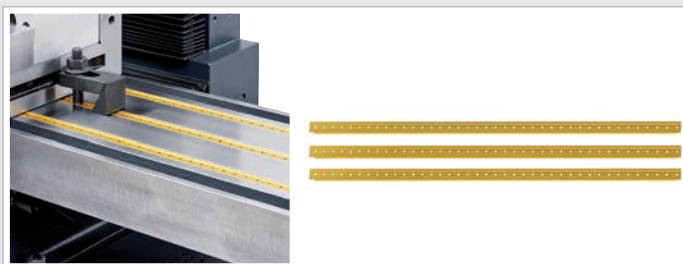


Example of use

Mounting bracket

Item no. 11238
Price 169.00 € | 201.11 € incl. VAT

- for high speed motors, high frequency spindles, drilling machines etc. (not part of the delivery)
- suitable for WABECO milling machines
- with Euronorm mounting \varnothing 43 mm
- Swiveling feature 90° in both directions (-90° to $+90^\circ$)
- Outreach 185 mm
- Dimensions W120 x D235 x H120 mm
- Weight without packaging 3.8 kg



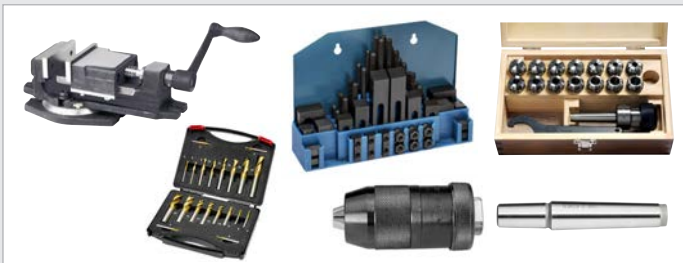
T-slot covers original Vertex

Item no. 11259
Price 36.00 € | 42.84 € incl. VAT

- PU: 3 pieces
- for 12 mm T-slot width
- Length per cover rail 400 mm
- anodized aluminum
- Swarf deflector, prevents swarfs from getting into the T-slots
- with bores for draining off coolant
- can be cut as necessary

Application

T-slot covers may be used on milling tables, drilling tables, etc.

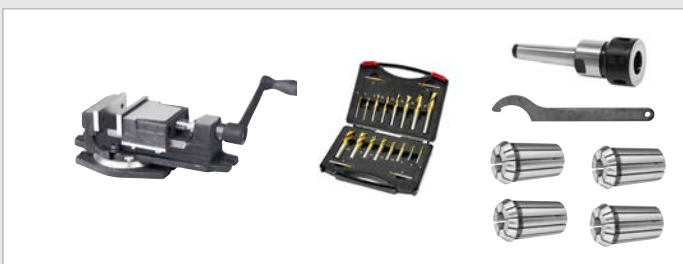


Tool set

Item no. 11997
Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces for 12 mm T-slot width M10 thread
- Quick-action drill chuck clamping width 1-13 mm inner taper B16
- Drill chuck arbor MT2-M10 with morse taper MT2 and tightening thread M10



Tool set

Item no. 11999
Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets \varnothing 6 - 10 - 12 - 16 mm



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1410 LF

Vertical milling machine with maintenance-free linear guides

Item no. 16400
Price 5,195.00 € | 6,182.05 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 80)
- **Work table 700 x 180 mm**

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides
- Results in clean machined surfaces due to fine adjustable, fine tunable linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 139

Curve-wheel milling with dividing attachment





- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for hobby, model building, craft, workshop and industry use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1410 LF hs

Vertical milling machine with maintenance-free linear guides

Item no. 16402
 Price 6,495.00 € | 7,729.05 € incl. VAT

Special feature

- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 80)
- **Work table 700 x 180 mm**

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides
- Results in clean machined surfaces due to fine adjustable, fine tunable linear guides

Tool clamping and ejecting system

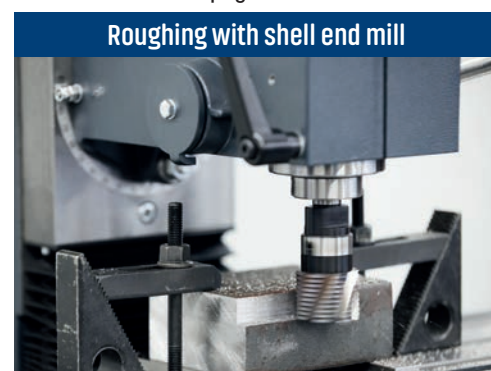
- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort
- no need to drive out tools with a hammer, therefore, no damage to the anti-friction bearings

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- can be found on page 139





Optional tooling available and recommended



Tool holder MT3

Item no. 11230
Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231
Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes for high positioning accuracy

Item no. 16445
Price 1,795.00 € | 2,136.05 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- Counterbalance adjustment in the Z-axis
- cannot be retrofitted



Clockwise and counter clockwise rotation of the work spindle for thread boring

Item no. 11234
Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 16426
Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 16489 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Machine base cabinet

Item no. 11267

Price 460.00 € | 547.40 € incl. VAT

- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg

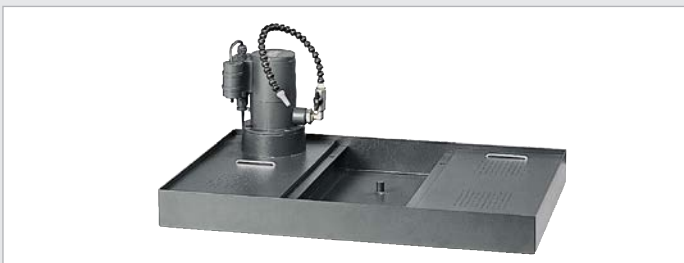


Levelling element

Item no. 10268

Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Coolant unit

Item no. 11264

Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Optional tooling available and recommended



Coolant return plate

Item no. 11265
Price 29.00 € | 34.51 € incl. VAT

- Dimensions W285 x D300 x H17.5 mm
- is hooked into the coolant unit
- the coolant is returned to the coolant unit



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



Example of use

Mounting bracket

Item no. 11238
Price 169.00 € | 201.11 € incl. VAT

- for high speed motors, high frequency spindles, drilling machines etc. (not part of the delivery)
- suitable for WABECO milling machines
- with Euronorm mounting \varnothing 43 mm
- Swiveling feature 90° in both directions (-90° to $+90^\circ$)
- Outreach 185 mm
- Dimensions W120 x D235 x H120 mm
- Weight without packaging 3.8 kg



T-slot covers original Vertex

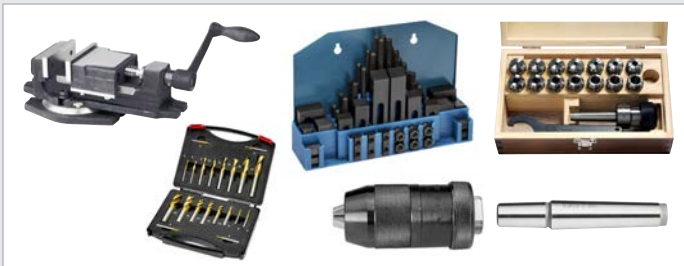
Item no. 11259
Price 36.00 € | 42.84 € incl. VAT

- PU: 3 pieces
- for 12 mm T-slot width
- Length per cover rail 400 mm
- anodized aluminum
- Swarf deflector, prevents swarfs from getting into the T-slots
- with bores for draining off coolant
- can be cut as necessary

Application

T-slot covers may be used on milling tables, drilling tables, etc.

Optional tooling available and recommended



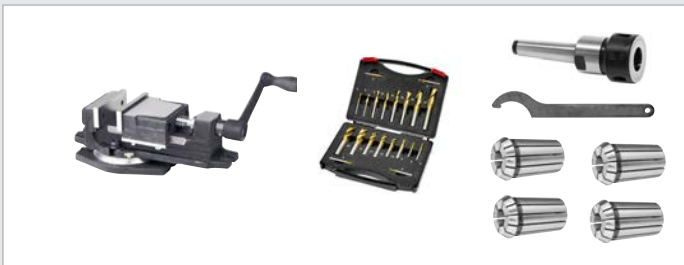
Tool set

Item no. 11997

Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces
for 12 mm T-slot width M10 thread
- Quick-action drill chuck
clamping width 1-13 mm
inner taper B16
- Drill chuck arbor MT2-M10
with morse taper MT2 and tightening thread M10



Tool set

Item no. 11999

Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets Ø 6 - 10 - 12 - 16 mm

CNC DRILLING- and MILLING MACHINES

F1200-C | F1210-C | F1410-C LF | CC-F1200 | CC-F1210 | CC-F1410 LF | CC-F1220 hs



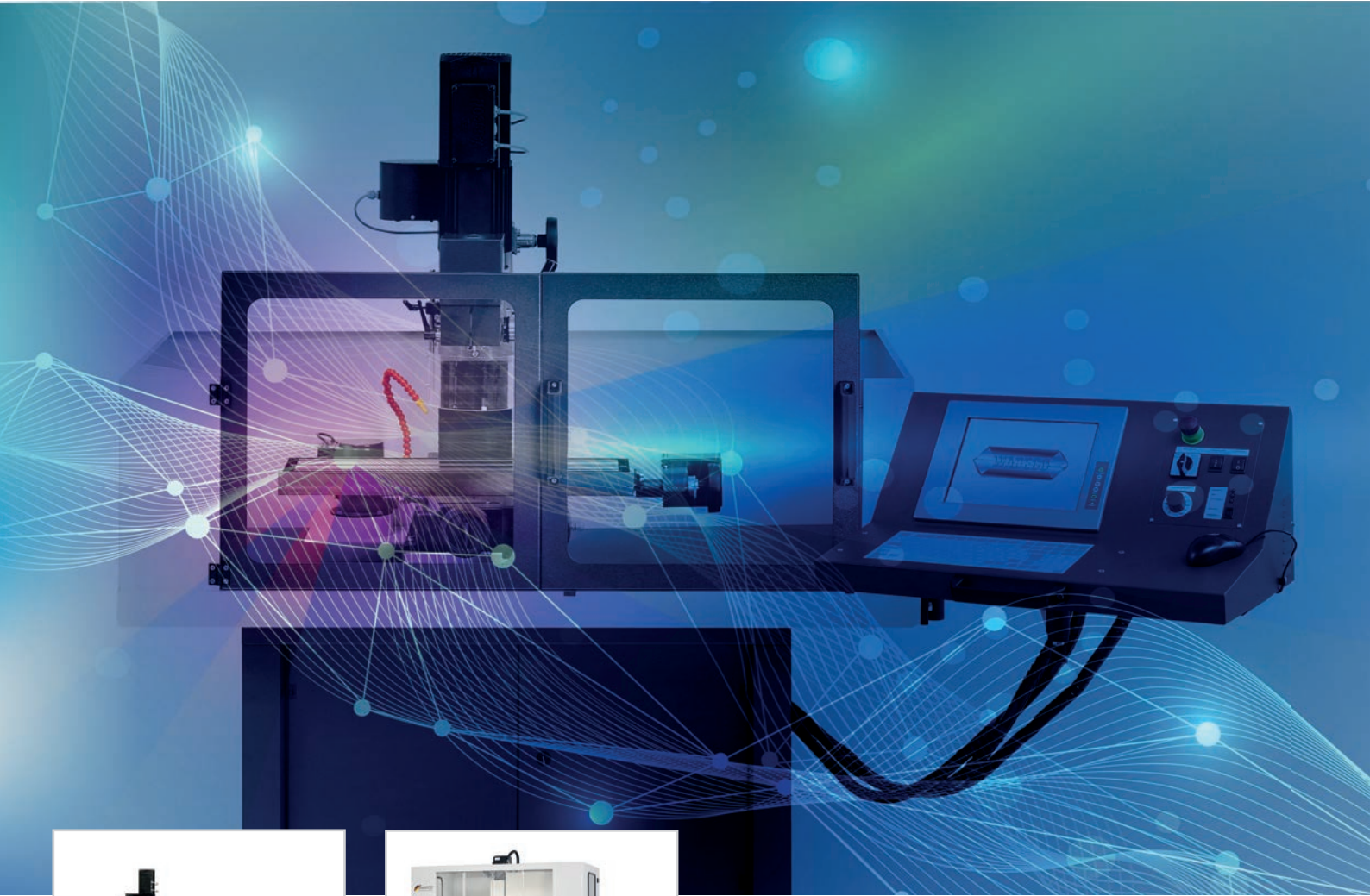
turning



milling



drilling





- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1200-C Vertical milling machine with dovetail guides and installed stepper motors

Item no. 1120001
Price 4,199.00 € | 4,996.81 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 88)
- **Work table 450 x 180 mm**
- 3 powerful stepper motors
for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 88)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 142



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1200-C hs Vertical milling machine with dovetail guides and installed stepper motors

Item no. 1120002
Price 5,499.00 € | 6,543.81 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 88)
- **Work table 450 x 180 mm**
- 3 powerful stepper motors
for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 88)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 142



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350,00 € | 416,50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



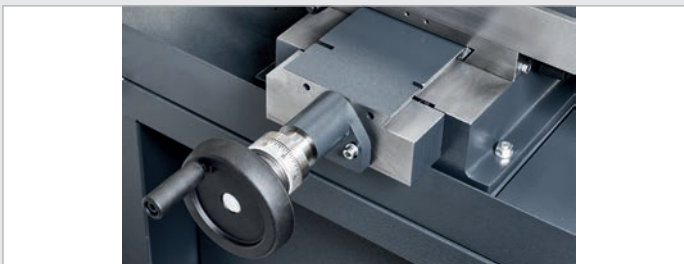
Ball screws for all 3 axes

for high positioning accuracy

Item no. 11245

Price 1,150.00 € | 1,368.50 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension

for extended Y-travel

Item no. 11235

Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted



Clockwise and counter clockwise rotation

of the work spindle

for thread boring

Item no. 11234

Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted

Optional tooling available and recommended



Mountable digital vernier scales for precise machining of the workpieces

Item no. 11225
Price 382.00 € | 454.58 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Y- and Z-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 11363 for X-axis measuring length 300 mm

Price 69.00 € | 82.11 € incl. VAT

Item no. 11362 for Y-axis measuring length 200 mm

Price 49.00 € | 58.31 € incl. VAT

Item no. 11373 for Z-axis measuring length 300 mm

Price 89.00 € | 105.91 € incl. VAT

Item no. 11299 mounting kit for 3 axes

Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 11226
Price 2,100.00 € | 2,499.00 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 270 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10285 optical scale 270 mm for X-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 11289 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



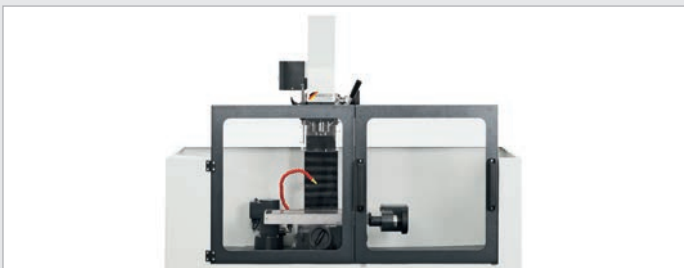
Optional tooling available and recommended



NC-rotary table for 4-axes machining

Item no. 1140085
Price 890.00 € | 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- [can only be used in conjunction with nccad professional](#)
- Technical data can be found on page 146



Machine safety cabin

to prevent accidents

Item no. 1140090
Price 1,550.00 € | 1,844.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 146

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. [Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.](#)



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- [for milling machines in conjunction with machine safety cabin](#)
- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Machine base cabinet

Item no. 11267
Price 460.00 € | 547.40 € incl. VAT

- [for milling machines without machine safety cabin](#)
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required

Optional tooling available and recommended



Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

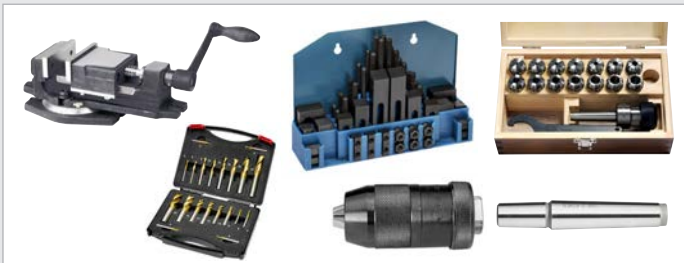
- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy rust- and acid-resistant steels

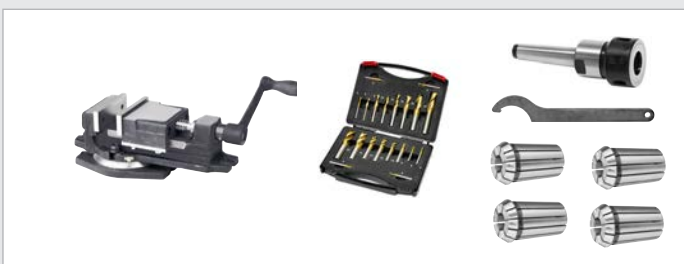


Tool set

Item no. 11997
Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces for 12 mm T-slot width M10 thread
- Quick-action drill chuck clamping width 1-13 mm inner taper B16
- Drill chuck arbor MT2-M10 with morse taper MT2 and tightening thread M10



Tool set

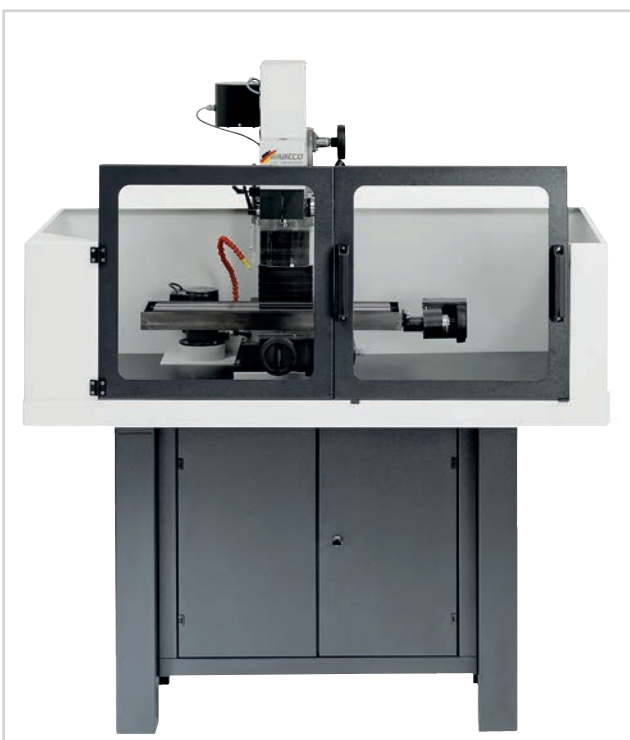
Item no. 11999
Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets Ø 6 - 10 - 12 - 16 mm



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1210-C Vertical milling machine with dovetail guides and installed stepper motors

Item no. 1140001
Price 4,499.00 € | 5,353.81 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 94)
- **Work table 700 x 180 mm**
- 3 powerful stepper motors
for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 94)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 143



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1210-C hs Vertical milling machine with dovetail guides and installed stepper motors

Item no. 1140002
Price 5,799.00 € | 6,900.81 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 94)
- **Work table 700 x 180 mm**
- 3 powerful stepper motors for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 94)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 143



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes

for high positioning accuracy

Item no. 11445

Price 1,250.00 € | 1,487.50 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension

for extended Y-travel

Item no. 11235

Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted



Clockwise and counter clockwise rotation

of the work spindle

for thread boring

Item no. 11234

Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted

Optional tooling available and recommended



Mountable digital vernier scales for precise machining of the workpieces

Item no. 11425
Price 425.00 € | 505.75 € incl. VAT

included in delivery

- 3 mountable digital vernier scales for X-, Y- and Z-axis
- Mounting kit for 3 axes
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 11365 for X-axis measuring length 500 mm

Price 119.00 € | 141.61 € incl. VAT

Item no. 11362 for Y-axis measuring length 200 mm

Price 49.00 € | 58.31 € incl. VAT

Item no. 11373 for Z-axis measuring length 300 mm

Price 89.00 € | 105.91 € incl. VAT

Item no. 11299 mounting kit for 3 axes

Price 90.00 € | 107.10 € incl. VAT



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 11426
Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 11489 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



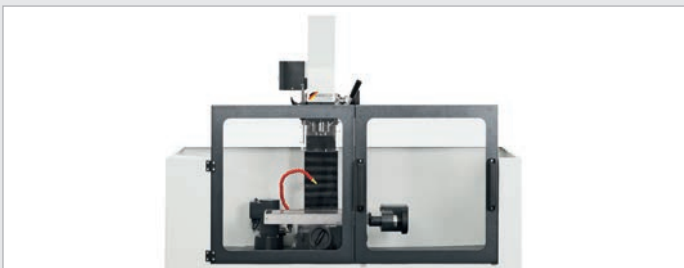
Optional tooling available and recommended



NC-rotary table for 4-axes machining

Item no. 1140085
Price 890.00 € | 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- **can only be used in conjunction with nccad professional**
- Technical data can be found on page 147



Machine safety cabin

to prevent accidents

Item no. 1140090
Price 1,550.00 € | 1,844.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 147

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**



Machine base cabinet

Item no. 10267
Price 525.00 € | 624.75 € incl. VAT

- **for milling machines in conjunction with machine safety cabin**
- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Machine base cabinet

Item no. 11267
Price 460.00 € | 547.40 € incl. VAT

- **for milling machines without machine safety cabin**
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required

Optional tooling available and recommended



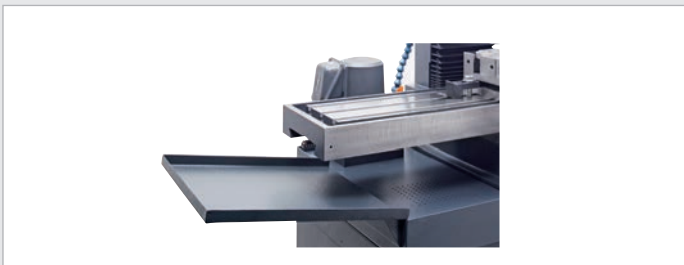
Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant return plate

Item no. 11265
Price 29.00 € | 34.51 € incl. VAT

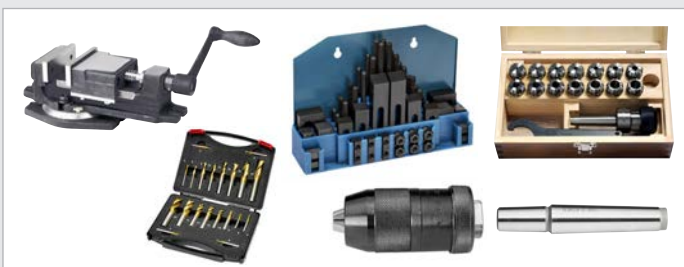
- Dimensions W285 x D300 x H17.5 mm
- is hooked into the coolant unit
- the coolant is returned to the coolant unit



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels

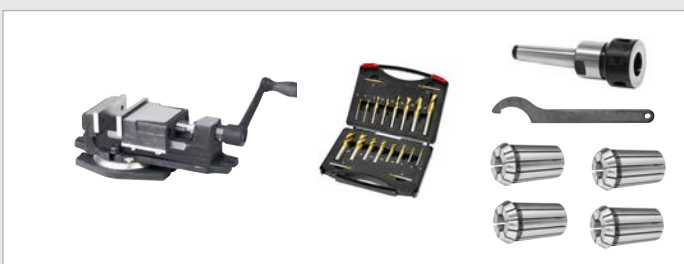


Tool set

Item no. 11997
Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces for 12 mm T-slot width M10 thread
- Quick-action drill chuck B16 clamping width 1-13 mm
- Drill chuck arbor MT2-M10-M10



Tool set

Item no. 11999
Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets Ø 6 - 10 - 12 - 16 mm



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1410-C LF

Vertical milling machine with maintenance-free linear guides and installed stepper motors

Item no. 1640001
Price 7,150.00 € | 8,508.50 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holder MT3 or ISO30 optional page 100)
- **Work table 700 x 180 mm**
- 3 powerful stepper motors for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 143



- ✓ precise vertical milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements



Drilling- and milling machine F1410-C LF hs Vertical milling machine with maintenance-free linear guides and installed stepper motors

Item no. 1640002
Price 8,450.00 € | 10,055.50 € incl. VAT

Special feature

- for installation of a CNC controller with software as e.g. Mach CNC controller, Heidenhain controller etc.
- the milling machine can be used in conventional as well as in CNC mode
- thanks to the quill feature with drill depth stop, unit can also be used for drilling operation

Basic equipment

- Tool holder MT2
(tool holder MT3 or ISO30 optional page 100)
- **Work table 700 x 180 mm**
- 3 powerful stepper motors
for controlling the X-, Y- and Z-axis
- 3 limit switches for X-, Y- and Z-axis

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 5 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Note

To meet industrial standard safety requirements a CNC milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**

Technical data

- can be found on page 143



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes

for high positioning accuracy

Item no. 16445

Price 1,795.00 € | 2,136.05 € incl. VAT

- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- Counterbalance adjustment in the Z-axis
- cannot be retrofitted



Clockwise and counter clockwise rotation

of the work spindle

for thread boring

Item no. 11234

Price 69.00 € | 82.11 € incl. VAT

- only in conjunction with 1.4 kW motor
- cannot be retrofitted



Digital position readout (DRO) and 3 optical scales

for exact positioning of the workpieces

Item no. 16426

Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no.	<u>10280 digital position readout (DRO) for 3 axes</u>
Price	699.00 € 831.81 € incl. VAT
Item no.	<u>10287 optical scale 520 mm for X-axis</u>
Price	359.00 € 427.21 € incl. VAT
Item no.	<u>10285 optical scale 270 mm for Y-axis</u>
Price	289.00 € 343.91 € incl. VAT
Item no.	<u>10286 optical scale 320 mm for Z-axis</u>
Price	299.00 € 355.81 € incl. VAT
Item no.	<u>16489 mounting kit and protective covers</u>
Price	198.00 € 235.62 € incl. VAT



NC-rotary table for 4-axes machining

Item no.	1140085
Price	890.00 € 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- [can only be used in conjunction with nccad professional](#)
- Technical data can be found on page 147



Machine safety cabin

to prevent accidents

Item no.	1640090
Price	1,750.00 € 2,082.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 147

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. [Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.](#)



Machine base cabinet

Item no.	11270
Price	740.00 € 880.60 € incl. VAT

- [for milling machines in conjunction with machine safety cabin](#)
- Dimensions W1000 x D700 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 76 kg



Optional tooling available and recommended



Machine base cabinet

Item no. 11267
Price 460.00 € | 547.40 € incl. VAT

- for milling machines without machine safety cabin
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant return plate

Item no. 11265
Price 29.00 € | 34.51 € incl. VAT

- Dimensions W285 x D300 x H17.5 mm
- is hooked into the coolant unit
- the coolant is returned to the coolant unit

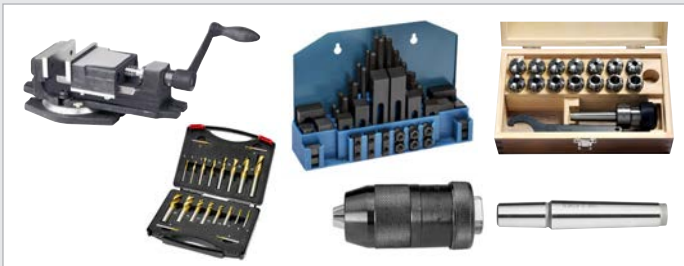
Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels

WABECO
MASCHINENMANUFAKTUR seit 1885

Optional tooling available and recommended

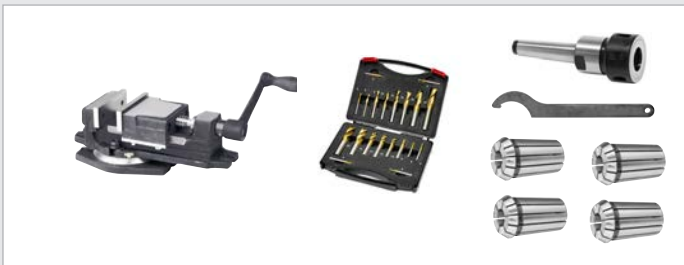


Tool set

Item no. 11997
Price 699.00 € | 831.81 € incl. VAT

included in delivery

- Machine vice 125 mm
- Mill set "Titanium"-coated 20 pieces
- Collet set MT2 16 pieces
- Step clamp set 58 pieces for 12 mm T-slot width M10 thread
- Quick-action drill chuck clamping width 1-13 mm inner taper B16
- Drill chuck arbor MT2-M10 with morse taper MT2 and tightening thread M10



Tool set

Item no. 11999
Price 415.00 € | 493.85 € incl. VAT

included in delivery

- Machine vice 100 mm
- Mill set "Titanium"-coated 20 pieces
- Collet chuck MT2-M10 with key
- 4 collets Ø 6 - 10 - 12 - 16 mm



nccad basic and professional controller and milling software

nccad basic and nccad professional milling software differ in

- software functions
- and the control electronics

nccad professional milling software also provides the possibility

- of an automated production through the use of the NC-rotary table in CNC operation
- the use of an electronic handwheel
- as well as higher travel speeds



with dovetail guides
work table 450 x 180 mm





- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1200 basic Vertical CNC milling machine with dovetail guides and nccad basic controller

Item no. 1120050
Price 5,100.00 € | 6,069.00 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 110)
- **Work table 450 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 110)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 148

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1200 hs basic Vertical CNC milling machine with dovetail guides and nccad basic controller

Item no.	1120052
Price	6,400.00 € 7,616.00 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 110)
- **Work table 450 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 110)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 148

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1200 professional **Vertical CNC milling machine with dovetail guides** **and nccad professional controller**

Item no. 1120011
Price 7,200.00 € | 8,568.00 € incl. VAT

Special feature

- **the milling machine can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **automated production through the use of the NC-rotary table in CNC mode** (optional page 111)
- **the use of an electronic handwheel** (optional page 111)

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 110)
- **Work table 450 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 110)

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 110)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 148

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ the space-saver
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1200 hs professional Vertical CNC milling machine with dovetail guides and nccad professional controller

Item no.	1120013
Price	8,500.00 € 10,115.00 € incl. VAT

Special feature

- **the milling machine can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **automated production through the use of the NC-rotary table in CNC mode** (optional page 111)
- **the use of an electronic handwheel** (optional page 111)

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 110)
- **Work table 450 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 110)

Working range

- **Longitudinal travel X-axis 260 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 110)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 148

Software description

- Software description can be found on page 156



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes

for high positioning accuracy

Item no. 11245

Price 1,150.00 € | 1,368.50 € incl. VAT

- for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable
- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension

for extended Y-travel

Item no. 11235

Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted

Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 1120226
Price 2,100.00 € | 2,499.00 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 270 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes
Price 699.00 € | 831.81 € incl. VAT

Item no. 10285 optical scale 270 mm for X-axis
Price 289.00 € | 343.91 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis
Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis
Price 299.00 € | 355.81 € incl. VAT

Item no. 1120089 mounting kit and protective covers
Price 198.00 € | 235.62 € incl. VAT



NC-rotary table for 4-axes machining

Item no. 1140085
Price 890.00 € | 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- [can only be used in conjunction with nccad professional](#)
- Technical data can be found on page 152



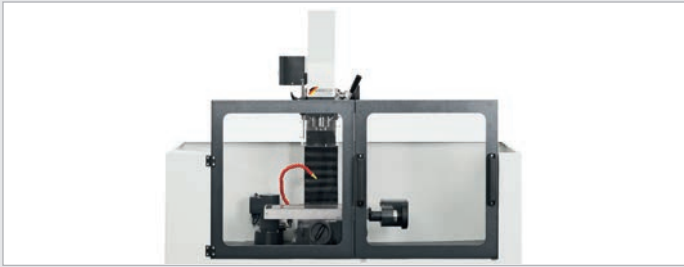
Electronic handwheel for manually moving the axes

Item no. 1140130
Price 590.00 € | 702.10 € incl. VAT

- for 3 axes
- used for the positioning of the axes during the setup operation (workpiece zero point)
- [can only be used in conjunction with nccad professional](#)



Optional tooling available and recommended



Machine safety cabin to prevent accidents

Item no. 1140090

Price 1,550.00 € | 1,844.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 152

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**



Industrial monitor and membrane keyboard

Item no. 1140095

Price 2,950.00 € | 3,510.50 € incl. VAT

- ergonomic control unit housing
- with integrated machine operating elements
- with swiveling support arm
- replaces PC monitor and keyboard
- a PC is not part of the delivery
- only available with machine safety cabin
- cannot be retrofitted



Machine base cabinet

Item no. 10267

Price 525,00 € | 624.75 € incl. VAT

- **for milling machines in conjunction with machine safety cabin**
- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Machine base cabinet

Item no. 11267

Price 460.00 € | 547.40 € incl. VAT

- **for milling machines without machine safety cabin**
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg

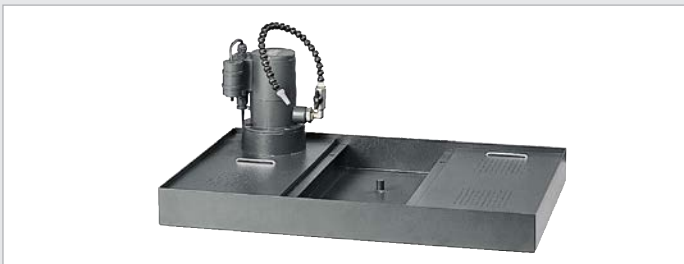
Optional tooling available and recommended



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



nccad basic and professional controller and milling software

nccad basic and nccad professional milling software differ in

- the software functions
- and the control electronics

nccad professional milling software also provides the possibility

- of an automated production through the use of the NC-rotary table in CNC operation
- the use of an electronic handwheel
- as well as higher travel speeds



with dovetail guides
work table 700 x 180 mm





- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1210 basic Vertical CNC milling machine with dovetail guides and nccad basic controller

Item no. 1140050
Price 5,400.00 € | 6,426.00 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 120)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 120)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1210 hs basic Vertical CNC milling machine with dovetail guides and nccad basic controller

Item no. 1140052
Price 6,700.00 € | 7,973.00 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 120)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 120)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1210 professional Vertical CNC milling machine with dovetail guides and nccad professional controller

Item no. 1140011
Price 7,500.00 € | 8,925.00 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode
- higher travel speeds compared to nccad basic controller
- automated production through the use of the NC-rotary table in CNC mode (optional page 121)
- the use of an electronic handwheel (optional page 121)

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 120)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 120)

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 120)
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with dovetail guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1210 hs professional Vertical CNC milling machine with dovetail guides and nccad professional controller

Item no.	1140013
Price	8,800.00 € 10,472.00 € incl. VAT

Special feature

- **the milling machine can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **automated production through the use of the NC-rotary table in CNC mode** (optional page 121)
- **the use of an electronic handwheel** (optional page 121)

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 120)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 120)

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm** (optional 180 mm page 120)
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides
- Results in clean machined surfaces due to fine adjustable, fine tunable dovetail guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes

for high positioning accuracy

Item no. 11445

Price 1,250.00 € | 1,487.50 € incl. VAT

- for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable
- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- cannot be retrofitted



Y-extension

for extended Y-travel

Item no. 11235

Price 400.00 € | 476.00 € incl. VAT

- max. travel path 180 mm
- cannot be retrofitted

Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 1140426
Price 2,180.00 € | 2,594.20 € incl. VAT

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes
Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis
Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis
Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis
Price 299.00 € | 355.81 € incl. VAT

Item no. 1140089 mounting kit and protective covers
Price 198.00 € | 235.62 € incl. VAT



NC-rotary table for 4-axes machining

Item no. 1140085
Price 890.00 € | 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- [can only be used in conjunction with nccad professional](#)
- Technical data can be found on page 153



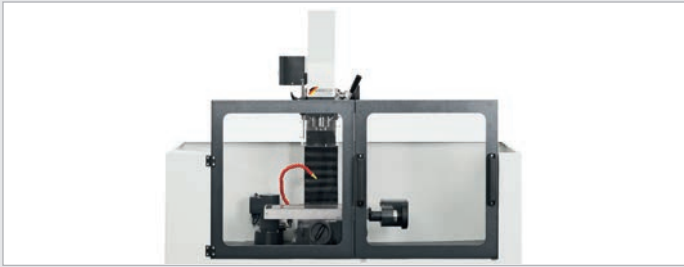
Electronic handwheel for manually moving the axes

Item no. 1140130
Price 590.00 € | 702.10 € incl. VAT

- for 3 axes
- used for the positioning of the axes during the setup operation (workpiece zero point)
- [can only be used in conjunction with nccad professional](#)



Optional tooling available and recommended



Machine safety cabin to prevent accidents

Item no. 1140090

Price 1,550.00 € | 1,844.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 153

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. **Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.**



Industrial monitor and membrane keyboard

Item no. 1140095

Price 2,950.00 € | 3,510.50 € incl. VAT

- ergonomic control unit housing
- with integrated machine operating elements
- with swiveling support arm
- replaces PC monitor and keyboard
- a PC is not part of the delivery
- only available with machine safety cabin
- cannot be retrofitted



Machine base cabinet

Item no. 10267

Price 525.00 € | 624.75 € incl. VAT

- **for milling machines in conjunction with machine safety cabin**
- Dimensions W1060 x D445 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 58 kg



Machine base cabinet

Item no. 11267

Price 460.00 € | 547.40 € incl. VAT

- **for milling machines without machine safety cabin**
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg

Optional tooling available and recommended



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



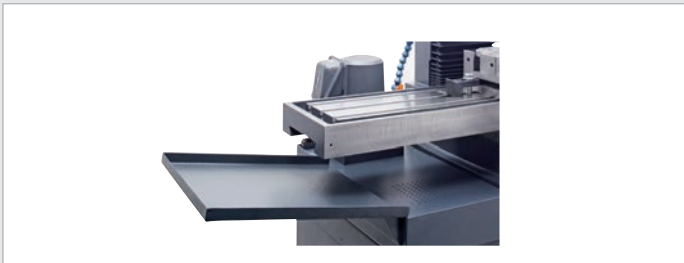
Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant return plate

Item no. 11265
Price 29.00 € | 34.51 € incl. VAT

- Dimensions W285 x D300 x H17.5 mm
- is hooked into the coolant unit
- the coolant is returned to the coolant unit



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



nccad basic and professional controller and milling software

nccad basic and nccad professional milling software differ in

- the software functions
- and the control electronics

nccad professional milling software also provides the possibility

- of an automated production through the use of the NC-rotary table in CNC operation
- the use of an electronic handwheel
- as well as higher travel speeds



with maintenance-free linear guides
work table 700 x 180 mm





- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1410 LF basic

Vertical milling machine with maintenance-free linear guides and nccad basic controller

Item no. 1640050
Price 7,745.00 € | 9,216.55 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 130)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1410 LF hs basic Vertical milling machine with maintenance-free linear guides and nccad basic controller

Item no.	1640052
Price	9,045.00 € 10,763.55 € incl. VAT

Special feature

- **the milling machine can be used in conventional as well as in CNC mode**

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 130)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad basic milling software

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm**
frequency-controlled main drive motor
- extremely silent running
due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1410 LF professional Vertical milling machine with maintenance-free linear guides and nccad professional controller

Item no.	1640011
Price	9,845.00 € 11,715.55 € incl. VAT

Special feature

- the milling machine can be used in conventional as well as in CNC mode
- higher travel speeds compared to nccad basic controller
- automated production through the use of the NC-rotary table in CNC mode (optional page 132)
- the use of an electronic handwheel (optional page 132)

Basic equipment

- Tool holder MT2
(tool holders MT3 or ISO30 optional page 130)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 130)

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **1.4 kW, 140 - 3000 rpm**
- extremely silent running
due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ with maintenance-free linear guides
- ✓ with large working range
- ✓ for metal processing
- ✓ for single and small-series production
- ✓ perfect for craft, workshop, industry and education use due to extreme precision
- ✓ universal use and operator-friendly
- ✓ extensive accessories meet the most diverse customer requirements

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Note

Upgrading a manual WABECO milling machine with CNC components, connecting a WABECO nccad controller and a PC makes it now a high precision CNC milling machine. To meet industrial standard safety requirements this to CNC converted milling machine should be installed into a machine safety cabin. Please refer to local safety standard requirements. **Without a machine safety cabin a milling machine converted to CNC does not meet CE listed requirements and can result in serious injuries.**

CNC milling machine CC-F1410 LF hs professional Vertical milling machine with maintenance-free linear guides and nccad professional controller

Item no. 1640013
Price 11,145.00 € | 13,262.55 € incl. VAT

Special feature

- **the milling machine can be used in conventional as well as in CNC mode**
- **higher travel speeds compared to nccad basic controller**
- **automated production through the use of the NC-rotary table in CNC mode** (optional page 132)
- **the use of an electronic handwheel** (optional page 132)

Basic equipment

- Tool holder MT2 (tool holders MT3 or ISO30 optional page 130)
- **Work table 700 x 180 mm**
- Machine control panel with integrated machine control elements
- nccad professional milling software for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable (optional page 130)

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 200 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- **2.0 kW, 100 - 7500 rpm** frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Linear guides

- hardened and ground in all axes
- with ball bearings
- high precision and rigidity
- high workpiece accuracy
- improved surface quality
- 4 protective accordion bellows to protect linear guides

Tool clamping and ejecting system

- for clamping and ejecting the tools (mills, drills, clamping chucks etc.) without extra effort

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 149

Software description

- Software description can be found on page 156



Optional tooling available and recommended



Tool holder MT3

Item no. 11230

Price 350.00 € | 416.50 € incl. VAT

- Morse taper MT3 and tightening thread M12
- cannot be retrofitted



Tool holder ISO30

Item no. 11231

Price 350.00 € | 416.50 € incl. VAT

- Steep taper ISO30 (DIN 2080) and tightening thread M12
- cannot be retrofitted



Ball screws for all 3 axes

for high positioning accuracy

Item no. 16445

Price 1,795.00 € | 2,136.05 € incl. VAT

- for the utmost positioning accuracy the use of ball screws with nccad professional is indispensable
- high precision pitch and positioning accuracy
- wear-free
- Down and up milling
- Counterbalance adjustment in the Z-axis
- cannot be retrofitted



Digital position readout (DRO) and 3 optical scales for exact positioning of the workpieces

Item no. 1640426

Price 2,180.00 € | 2,594.20 € incl. VAT

- for CNC milling machines without machine safety cabin included in delivery
- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Optional tooling available and recommended



Digital position readout (DRO) and 3 optical scales

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 1640089 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Digital position readout (DRO) and 3 optical scales

for exact positioning of the workpieces

Item no. 1640427

Price 2,180.00 € | 2,594.20 € incl. VAT

- for CNC milling machines in conjunction with machine safety cabin

included in delivery

- Digital position readout (DRO) for 3 axes
- Optical scale 520 mm for X-axis
- Optical scale 270 mm for Y-axis
- Optical scale 320 mm for Z-axis
- Mounting kit and protective covers for optical scales
- factory installation

Mounting by the customer

Drilled holes and threads must be added to the milling machine by the customer

Item no. 10280 digital position readout (DRO) for 3 axes

Price 699.00 € | 831.81 € incl. VAT

Item no. 10287 optical scale 520 mm for X-axis

Price 359.00 € | 427.21 € incl. VAT

Item no. 10285 optical scale 270 mm for Y-axis

Price 289.00 € | 343.91 € incl. VAT

Item no. 10286 optical scale 320 mm for Z-axis

Price 299.00 € | 355.81 € incl. VAT

Item no. 1640088 mounting kit and protective covers

Price 198.00 € | 235.62 € incl. VAT



Optional tooling available and recommended



NC-rotary table for 4-axes machining

Item no. 1140085
Price 890.00 € | 1,059.10 € incl. VAT

- the NC-rotary table is indispensable for rotational machining in one clamping position
- can be mounted to the work table vertically or horizontally
- for safety reasons only available with machine safety cabin
- [can only be used in conjunction with nccad professional](#)
- Technical data can be found on page 153

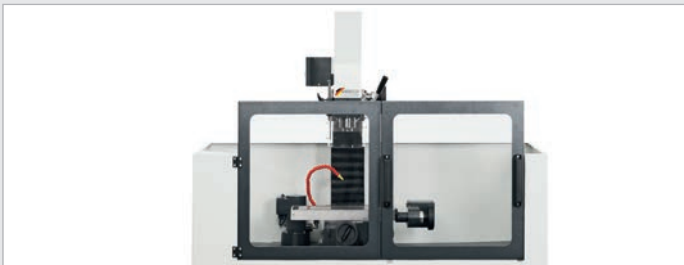


Electronic handwheel

for manually moving the axes

Item no. 1140130
Price 590.00 € | 702.10 € incl. VAT

- for 3 axes
- used for the positioning of the axes during the setup operation (workpiece zero point)
- [can only be used in conjunction with nccad professional](#)



Machine safety cabin

to prevent accidents

Item no. 1640090
Price 1,750.00 € | 2,082.50 € incl. VAT

- with integrated coolant unit
- cannot be retrofitted
- Technical data can be found on page 153

Note

The standard EN2006/42 EG is only met in combination with a machine safety cabin. [Without a machine safety cabin a CNC milling machine does not meet CE listed requirements and can result in serious injuries.](#)



Industrial monitor and membrane keyboard

Item no. 1140095
Price 2,950.00 € | 3,510.50 € incl. VAT

- ergonomic control unit housing
- with integrated machine operating elements
- with swiveling support arm
- replaces PC monitor and keyboard
- a PC is not part of the delivery
- only available with machine safety cabin
- cannot be retrofitted



Machine base cabinet

Item no. 11270
Price 740.00 € | 880.60 € incl. VAT

- [for milling machines in conjunction with machine safety cabin](#)
- Dimensions W1000 x D700 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 76 kg

Optional tooling available and recommended



Machine base cabinet

Item no. 11267
Price 460.00 € | 547.40 € incl. VAT

- for milling machines without machine safety cabin
- Dimensions W700 x D445 x H850 mm
- with lockable door and 2 shelves
- Weight without packaging 46 kg



Levelling element

Item no. 10268
Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- for precise height adjustment on uneven grounds
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- per machine base cabinet 4 levelling elements are required



Coolant unit

Item no. 11264
Price 400.00 € | 476.00 € incl. VAT

- Dimensions W700 x D445 x H258 mm
- with feed pump 230 V, 50/60 Hz
- flexible hose with stop valve and nozzle
- Content coolant: 13 liter

Application

- for cooling and lubrication
- e.g. when processing high-alloy steel and aluminum, improves the surface finish, increases tool endurance, prevents build-up edges



Coolant return plate

Item no. 11265
Price 29.00 € | 34.51 € incl. VAT

- Dimensions W285 x D300 x H17.5 mm
- is hooked into the coolant unit
- the coolant is returned to the coolant unit



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels





- ✓ precise vertical CNC milling machine
- ✓ in-house design and production
- ✓ for metal processing
- ✓ for series production
- ✓ perfect for workshop, industry, education, fixture construction, tool making, prototype construction and mold construction use due to extreme precision
- ✓ robust construction
- ✓ universal use and operator-friendly



CNC milling machine CC-F1220 hs professional

Vertical CNC milling machine with dovetail guides and nccad professional controller

Item no.	1140200
Price	22,990.00 € 27,358.10 € incl. VAT

Basic equipment

- Tool holder ISO30 according to DIN69871
- Work table 700 x 180 mm
- Automatic tool changer (ATC) with 8 tool positions
- Ball screws installed on all 3 axes
- Machine safety cabin with integrated coolant unit
- Key pad area with integrated machine operating elements
- nccad professional milling software

Working range

- **Longitudinal travel X-axis 500 mm**
- **Transverse travel Y-axis 150 mm**
- Vertical travel Z-axis 280 mm

Main drive power

- 2.0 kW, 100 - 7500 rpm frequency-controlled main drive motor
- extremely silent running due to modern electronically adjustable drive technology

Ball screws

- Down and up milling
- high precision pitch and positioning accuracy
- wear-free

Dovetail guides

- free of play and adjustable in all axes
- 2 protective accordion bellows to protect dovetail guides

Automatic tool changer (ATC) with 8 tool positions

- with double gripper system
- 8 magazine stations

PC control

- for creating programs and for controlling the CNC machine a PC is required (PCs are not part of the delivery)
- the PC assumes the program creation, the program administration and the data archiving
- CNC programs can be created on several PCs independently from the CNC machine

Warranty

- 2 years warranty - the warranty does not cover parts subject to wear
- Availability of spare parts also guaranteed after warranty period

Technical data

- Technical data can be found on page 154

Software description

- Software description can be found on page 156



Optional tooling available and recommended



Machine base cabinet

Item no. 1120269

Price 1,995.00 € | 2,374.05 € incl. VAT

- Dimensions W1420 x D1000 x H850 mm
- with 2 lockable doors and 2 shelves
- Weight without packaging 117 kg



Electronic handwheel

for manually moving the axes

Item no. 1140130

Price 590.00 € | 702.10 € incl. VAT

- for 3 axes
- used for the positioning of the axes during the setup operation (workpiece zero point)



Coolant concentrate

Item no. 11550

Price 89.00 € | 105.91 € incl. VAT

- Content: 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



	F1200	F1200 hs
Working range		
Longitudinal travel X-axis	260 mm	260 mm
Transverse travel Y-axis	150 mm optional 180 mm	150 mm optional 180 mm
Vertical travel Z-axis	280 mm	280 mm
Drill stroke	55 mm	55 mm
Distance milling table - tool spindle	min. 100 mm max. 380 mm	min. 100 mm max. 380 mm
Outreach tool spindle - column	185 mm	185 mm
Machine precision		
Machine precision	according to DIN 8615	according to DIN 8615
True running accuracy of the tool spindle	0.01 mm	0.01 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	2.0 kW
Single-phase inverse-speed motor speed-controlled	●	○
as direct current model with permanent, closed loop rpm control system	●	○
frequency-controlled main drive motor	○	●
due to high speed suitable for small workpieces e.g. for engraving work	○	●
Clockwise and counter clockwise rotation for thread boring	○	●
electronically infinitely variable drive	140 - 3000 rpm	100 - 7500 rpm
Spindle speed can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Drive technology		
Drive electronics with multiple fault monitoring circuit	●	●
e.g. milling in steel with a shank cutter Ø 10 mm with one infeed	approx. 10 mm	approx. 10 mm
Feed screws		
re-adjustable free of play trapezoidal thread spindle in all axes by means of adjustable bronze double nuts	●	●
Scale rings reading accuracy	0.05 mm	0.05 mm
Subject to technical modifications		

● yes ○ no

F1210	F1210 hs	F1410 LF	F1410 LF hs
500 mm	500 mm	500 mm	500 mm
150 mm optional 180 mm	150 mm optional 180 mm	200 mm	200 mm
280 mm	280 mm	280 mm	280 mm
55 mm	55 mm	55 mm	55 mm
min. 90 mm max. 370 mm	min. 90 mm max. 370 mm	min. 60 mm max. 340 mm	min. 60 mm max. 340 mm
185 mm	185 mm	185 mm	185 mm

according to DIN 8615	according to DIN 8615	according to DIN 8615	according to DIN 8615
0.01 mm	0.01 mm	0.01 mm	0.01 mm

1.4 kW	2.0 kW	1.4 kW	2.0 kW
●	○	●	○
●	○	●	○
○	●	○	●
○	●	○	●
○	●	○	●
140 - 3000 rpm	100 - 7500 rpm	140 - 3000 rpm	100 - 7500 rpm
●	●	●	●
with overload protection	with overload protection	with overload protection	with overload protection
●	●	●	●

●	●	●	●
approx. 10 mm	approx. 10 mm	approx. 10 mm	approx. 10 mm

●	●	●	●
0.05 mm	0.05 mm	0.05 mm	0.05 mm

● yes ○ no



	F1200	F1200 hs
Tool spindle		
Tool holder MT2 with tightening thread M10	●	●
with re-adjustable anti-friction bearings arranged in a large diameter drilling- and milling quill	●	●
high torque even in the lowest speed range e.g. for machining hard-to-cut materials	●	●
wide toothed belt between motor and tool spindle ensures a slip-free drive and a smooth running	●	●
Z-column and coordinate table		
made of ribbed gray cast iron	●	●
Work table	450 x 180 mm	450 x 180 mm
Number of T-slots	3	3
Width of T-slots	12 mm	12 mm
Center distance between T-slots	50 mm	50 mm
Fine feed in the Z-axis	●	●
Milling head		
Swiveling feature of milling head in both directions	90° (-90° to +90°)	90° (-90° to +90°)
Angle position easily read off of the large scale	●	●
Vertical position can be preset by means of a hardened and ground conical index pin	●	●
Protective hood	●	●
form-fit clamping of the quill over the entire lateral surface	●	●
Quill stroke with drilling depth stop	●	●
Reading accuracy scale ring - quill stroke	0.1 mm	0.1 mm
Dimensions and weight		
Machine dimensions without packaging	W655 x D625 x H670 mm	W650 x D610 x H870 mm
Weight without packaging	85 kg	96 kg

Subject to technical modifications

● yes ○ no

F1210	F1210 hs	F1410 LF	F1410 LF hs
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
700 x 180 mm	700 x 180 mm	700 x 180 mm	700 x 180 mm
3	3	3	3
12 mm	12 mm	12 mm	12 mm
50 mm	50 mm	50 mm	50 mm
●	●	●	●
90° (-90° to +90°)	90° (-90° to +90°)	90° (-90° to +90°)	90° (-90° to +90°)
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
0.1 mm	0.1 mm	0.1 mm	0.1 mm
W900 x D610 x H670 mm	W900 x D625 x H880 mm	W940 x D720 x H720 mm	W940 x D720 x H880 mm
101 kg	112 kg	118 kg	127 kg

● yes ○ no



	F1200-C	F1200-C hs
Working range		
Longitudinal travel X-axis	260 mm	260 mm
Transverse travel Y-axis	150 mm optional 180 mm	150 mm optional 180 mm
Vertical travel Z-axis	280 mm	280 mm
Drill stroke	55 mm	55 mm
Distance milling table - tool spindle	min. 100 mm max. 380 mm	min. 100 mm max. 380 mm
Outreach tool spindle - column	185 mm	185 mm
Machine precision		
Machine precision	according to DIN 8615	according to DIN 8615
True running accuracy of the tool spindle	0.01 mm	0.01 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	2.0 kW
Single-phase inverse-speed motor speed-controlled	●	○
as a direct current model with permanent, closed loop rpm control system	●	○
frequency-controlled main drive motor	○	●
due to high speed suitable for small workpieces e.g. for engraving work	○	●
Clockwise and counter clockwise rotation for thread boring	○	●
electronically infinitely variable drive	140 - 3000 rpm	100 - 7500 rpm
Spindle speed can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Drive technology		
Drive electronics with multiple fault monitoring circuit	●	●
e.g. milling in steel with a shank cutter Ø 10 mm with one infeed	approx. 10 mm	approx. 10 mm
Feed screws		
re-adjustable free of play trapezoidal thread spindle in all axes by means of adjustable bronze double nuts	●	●
Scale rings reading accuracy	0.05 mm	0.05 mm

Subject to technical modifications

● yes ○ no

F1210-C	F1210-C hs	F1410-C LF	F1410-C LF hs
500 mm	500 mm	500 mm	500 mm
150 mm optional 180 mm	150 mm optional 180 mm	200 mm	200 mm
280 mm	280 mm	280 mm	280 mm
55 mm	55 mm	55 mm	55 mm
min. 90 mm max. 370 mm	min. 90 mm max. 370 mm	min. 60 mm max. 340 mm	min. 60 mm max. 340 mm
185 mm	185 mm	185 mm	185 mm
according to DIN 8615	according to DIN 8615	according to DIN 8615	according to DIN 8615
0.01 mm	0.01 mm	0.01 mm	0.01 mm
1.4 kW	2.0 kW	1.4 kW	2.0 kW
●	○	●	○
●	○	●	○
○	●	○	●
○	●	○	●
○	●	○	●
140 - 3000 rpm	100 - 7500 rpm	140 - 3000 rpm	100 - 7500 rpm
●	●	●	●
with overload protection	with overload protection	with overload protection	with overload protection
●	●	●	●
●	●	●	●
approx. 10 mm	approx. 10 mm	approx. 10 mm	approx. 10 mm
●	●	●	●
0.05 mm	0.05 mm	0.05 mm	0.05 mm

● yes ○ no



	F1200-C	F1200-C hs
Tool spindle		
Tool holder MT2 with tightening thread M10	●	●
with re-adjustable anti-friction bearings arranged in a large diameter drilling- and milling quill	●	●
high torque even in the lowest speed range e.g. for machining hard-to-cut materials	●	●
wide toothed belt between motor and tool spindle ensures a slip-free drive and a smooth running	●	●
Z-column and coordinate table		
made of ribbed gray cast iron	●	●
Work table	450 x 180 mm	450 x 180 mm
Number of T-slots	3	3
Width of T-slots	12 mm	12 mm
Center distance between T-slots	50 mm	50 mm
Fine feed in the Z-axis	●	●
Milling head		
Swiveling feature of milling head in both directions	90° (-90° to +90°)	90° (-90° to +90°)
Angle position easily read off of the large scale	●	●
Vertical position can be preset by means of a hardened and ground conical index pin	●	●
Protective hood	●	●
form-fit clamping of the quill over the entire lateral surface	●	●
Quill stroke with drilling depth stop	●	●
Reading accuracy scale ring - quill stroke	0.1 mm	0.1 mm
Stepper motors		
maintenance-free	●	●
Power	bipolar	bipolar
Step angle	1.8° ± 0.09°	1.8° ± 0.09°
Resistance	0.3 Ohm	0.3 Ohm
high feed and acceleration values	●	●
Plug	Sub D 9 pol	Sub D 9 pol
Industrial control line	3 m shielded cable	3 m shielded cable
Limit switches X-, Y- and Z-axis		
mechanical single limit switches	●	●
Dimensions and weight		
Machine dimensions without packaging	W665 x D635 x H740 mm	W665 x D635 x H880 mm
Weight without packaging	96 kg	107 kg

Subject to technical modifications

● yes ○ no

F1210-C	F1210-C hs	F1410-C LF	F1410-C LF hs
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
700 x 180 mm	700 x 180 mm	700 x 180 mm	700 x 180 mm
3	3	3	3
12 mm	12 mm	12 mm	12 mm
50 mm	50 mm	50 mm	50 mm
●	●	●	●
90° (-90° to +90°)	90° (-90° to +90°)	90° (-90° to +90°)	90° (-90° to +90°)
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
0.1 mm	0.1 mm	0.1 mm	0.1 mm
●	●	●	●
bipolar	bipolar	bipolar	bipolar
$1.8^\circ \pm 0.09^\circ$	$1.8^\circ \pm 0.09^\circ$	$1.8^\circ \pm 0.09^\circ$	$1.8^\circ \pm 0.09^\circ$
0.3 Ohm	0.3 Ohm	0.3 Ohm	0.3 Ohm
●	●	●	●
Sub D 9 pol	Sub D 9 pol	Sub D 9 pol	Sub D 9 pol
3 m shielded cable	3 m shielded cable	3 m shielded cable	3 m shielded cable
●	●	●	●
W910 x D635 x H740 mm	W910 x D635 x H880 mm	W950 x D730 x H740 mm	W950 x D730 x H880 mm
112 kg	123 kg	129 kg	138 kg

● yes ○ no



	F1200-C	F1200-C hs
Machine safety cabin (optional)		
Content coolant	42 liter	42 liter
Dimensions without packaging	W1500 x D700 x H475 mm	W1500 x D700 x H475 mm
Weight without packaging	83 kg	83 kg
NC-rotary table (optional)		
Table diameter	150 mm	150 mm
Height	80 mm	80 mm
Width of T-slots	10 mm	10 mm
Number of T-slots	3	3
Spindle bore continuous	MT2	MT2
True running accuracy	0.02 mm	0.02 mm
Weight without packaging	14 kg	14 kg

Subject to technical modifications

 yes no

F1210-C	F1210-C hs	F1410-C LF	F1410-C LF hs
42 liter	42 liter	58 liter	58 liter
W1500 x D700 x H475 mm	W1500 x D700 x H475 mm	W1530 x D950 x H475 mm	W1530 x D950 x H475 mm
83 kg	83 kg	109 kg	109 kg
150 mm	150 mm	150 mm	150 mm
80 mm	80 mm	80 mm	80 mm
10 mm	10 mm	10 mm	10 mm
3	3	3	3
MT2	MT2	MT2	MT2
0.02 mm	0.02 mm	0.02 mm	0.02 mm
14 kg	14 kg	14 kg	14 kg

● yes ○ no



	CC-F1200	CC-F1200 hs
Working range		
Longitudinal travel X-axis	260 mm	260 mm
Transverse travel Y-axis	150 mm optional 180 mm	150 mm optional 180 mm
Vertical travel Z-axis	280 mm	280 mm
Drill stroke	55 mm	55 mm
Distance milling table - tool spindle	min. 100 mm max. 380 mm	min. 100 mm max. 380 mm
Outreach tool spindle - column	185 mm	185 mm
Machine precision		
Machine precision	according to DIN 8615	according to DIN 8615
True running accuracy of the tool spindle	0.01 mm	0.01 mm
Positioning accuracy	± 0.015 mm	± 0.015 mm
Main drive motor		
Main drive motor 230 V, 50/60 Hz	1.4 kW	2.0 kW
Single-phase inverse-speed motor speed-controlled	●	○
as direct current model with permanent, closed loop rpm control system	●	○
frequency-controlled main drive motor	○	●
due to high speed suitable for small workpieces e.g. for engraving work	○	●
Clockwise and counter clockwise rotation for thread boring	○	●
electronically infinitely variable drive	140 - 3000 rpm	100 - 7500 rpm
Spindle speed can be adjusted by means of a potentiometer over a wide range of cutting speeds	●	●
Main drive motor	with overload protection	with overload protection
constant torque throughout the entire speed range	●	●
Drive technology		
Drive electronics with multiple fault monitoring circuit	●	●
e.g. milling in steel with a shank cutter Ø 10 mm with one infeed	approx. 4 mm	approx. 4 mm
Feed screws		
re-adjustable free of play trapezoidal thread spindle in all axes by means of adjustable bronze double nuts	●	●
Scale rings reading accuracy	0.05 mm	0.05 mm

Subject to technical modifications

● yes ○ no

CC-F1210	CC-F1210 hs	CC-F1410 LF	CC-F1410 LF hs
500 mm	500 mm	500 mm	500 mm
150 mm optional 180 mm	150 mm optional 180 mm	200 mm	200 mm
280 mm	280 mm	280 mm	280 mm
55 mm	55 mm	55 mm	55 mm
min. 90 mm max. 370 mm	min. 90 mm max. 370 mm	min. 60 mm max. 340 mm	min. 60 mm max. 340 mm
185 mm	185 mm	185 mm	185 mm
according to DIN 8615	according to DIN 8615	according to DIN 8615	according to DIN 8615
0.01 mm	0.01 mm	0.01 mm	0.01 mm
± 0.015 mm	± 0.015 mm	± 0.015 mm	± 0.015 mm
1.4 kW	2.0 kW	1.4 kW	2.0 kW
●	○	●	○
●	○	●	○
○	●	○	●
○	●	○	●
○	●	○	●
140 - 3000 rpm	100 - 7500 rpm	140 - 3000 rpm	100 - 7500 rpm
●	●	●	●
with overload protection	with overload protection	with overload protection	with overload protection
●	●	●	●
●	●	●	●
approx. 4 mm	approx. 4 mm	approx. 4 mm	approx. 4 mm
●	●	●	●
0.05 mm	0.05 mm	0.05 mm	0.05 mm

● yes ○ no



	CC-F1200	CC-F1200 hs
Tool spindle		
Tool holder MT2 with tightening thread M10	●	●
with re-adjustable anti-friction bearings arranged in a large diameter drilling- and milling quill	●	●
high torque even in the lowest speed range e.g. for machining hard-to-cut materials	●	●
wide toothed belt between motor and tool spindle ensures a slip-free drive and a smooth running	●	●
Z-column and coordinate table		
made of ribbed gray cast iron	●	●
Work table	450 x 180 mm	450 x 180 mm
Number of T-slots	3	3
Width of T-slots	12 mm	12 mm
Center distance between T-slots	50 mm	50 mm
Fine feed in the Z-axis	●	●
Milling head		
Swiveling feature of milling head in both directions	90° (-90° to +90°)	90° (-90° to +90°)
Angle position easily read off of the large scale	●	●
Vertical position can be preset by means of a hardened and ground conical index pin	●	●
Protective hood	●	●
form-fit clamping of the quill over the entire lateral surface	●	●
Quill stroke with drilling depth stop	●	●
Stepper motors		
maintenance-free	●	●
Limit switches X-, Y- and Z-axis		
mechanical single limit switches	●	●
Travel speed (rapid traverse)		
X- and Y-axis		
nccad basic	30 - 600 mm/min	30 - 600 mm/min
nccad professional	30 - 1200 mm/min	30 - 1200 mm/min
Z-axis		
nccad basic	30 - 400 mm/min	30 - 400 mm/min
nccad professional	30 - 800 mm/min	30 - 800 mm/min
Dimensions and weight		
Machine dimensions without packaging	W665 x D635 x H740 mm	W665 x D635 x H880 mm
Weight without packaging	106 kg	115 kg

Subject to technical modifications

● yes ○ no



	CC-F1200	CC-F1200 hs
Machine safety cabin (optional)		
Content coolant	42 liter	42 liter
Dimensions without packaging	W1500 x D700 x H475 mm	W1500 x D700 x H475 mm
Weight without packaging	83 kg	83 kg
NC-rotary table (optional)		
Table diameter	150 mm	150 mm
Height	80 mm	80 mm
Width of T-slots	10 mm	10 mm
Number of T-slots	3	3
Spindle bore continuous	MT2	MT2
True running accuracy	0.02 mm	0.02 mm
Weight without packaging	14 kg	14 kg

Subject to technical modifications

 yes no

CC-F1210	CC-F1210 hs	CC-F1410 LF	CC-F1410 LF hs
42 liter	42 liter	58 liter	58 liter
W1500 x D700 x H475 mm	W1500 x D700 x H475 mm	W1530 x D950 x H475 mm	W1530 x D950 x H475 mm
83 kg	83 kg	109 kg	109 kg
150 mm	150 mm	150 mm	150 mm
80 mm	80 mm	80 mm	80 mm
10 mm	10 mm	10 mm	10 mm
3	3	3	3
MT2	MT2	MT2	MT2
0.02 mm	0.02 mm	0.02 mm	0.02 mm
14 kg	14 kg	14 kg	14 kg

● yes ○ no



CC-F1220 hs

Working range

Longitudinal travel X-axis	500 mm
Transverse travel Y-axis	150 mm
Vertical travel Z-axis	280 mm
Distance milling table - tool spindle	min. 110 mm max. 390 mm
Outreach tool spindle - column	185 mm

Machine precision

Machine precision	according to DIN 8615
True running accuracy of the tool spindle	0.01 mm
Positioning accuracy	± 0.015 mm

Main drive motor

Main drive motor 230 V, 50/60 Hz	2.0 kW
frequency-controlled main drive power	●
due to high speed suitable for small workpieces e.g. for engraving work	●
programmable speed range	100 - 7500 rpm
Main drive motor	with overload protection

Tool spindle

Tool holder ISO30 DIN69871	●
arranged with re-adjustable anti-friction bearings	●
high torque even in the lowest speed range e.g. for machining hard-to-cut materials	●
wide toothed belt between motor and tool spindle ensures a slip-free drive and a smooth running	●

Z-column and coordinate table

made of ribbed gray cast iron	●
Work table	700 x 180 mm
Number of T-slots	3
Width of T-slots	12 mm
Center distance between T-slots	50 mm

Spindles

high precision ball screws	●
----------------------------	---

● yes ○ no

CC-F1220 hs

Stepper motors

maintenance-free

Limit switches X-, Y- and Z-axis

mechanical single limit switches

Travel speed (rapid traverse)

X- and Y-axis

30 - 1200 mm/min

Z-axis

30 - 800 mm/min

Automatic tool changer (ATC)

with double gripper system

Magazine stations

8

Tool change time

6 seconds

Tool diameter

max. 50 mm

Tool weight

max. 2.3 kg

Demand for compressed air

6 bar

Machine safety cabin

with integrated coolant system

Content coolant

72 liter

Feed pump

230 Volt, 50/60 Hz

Dimensions and weight

Machine dimensions without packaging

W1420 x D1000 x H1310 mm

Weight without packaging

340 kg

Subject to technical modifications

 yes no



nccad milling software	nccad basic	nccad professional
Type of control		
2½ D interpolation, i.e. 2 axes can be displaced simultaneously , the 3rd axis can be advanced when required	●	●
3D interpolation, i.e. 3 axes can be displaced simultaneously, the 4th axis used for controlling the NC-rotary table	○	●
Support of microstepping, i.e. smooth run and high position resolution	●	●
Look A-head, i.e. an anticipatory program process	○	●
Dialog-oriented operator guidance		
dialog-oriented operator guidance	●	●
Program input		
graphical programming	●	●
according to DIN 66025 with G- and M-functions	●	●
Automatic creation of CNC programs		
on the basis of a designed contour according to DIN 66025	●	●
Data import		
DXF-files from a CAD system e.g. Auto CAD	●	●
HPGL files e.g. from Corel Draw	●	●
Import of 3D objects in STL-format	○	●
Contour generation by using the CAD module		
Drawings can be created directly	●	●
Coordinates can be entered or edited, e.g. commands can be changed, added and/or deleted	●	●
these functions are available: drawing of straight lines, curves, circles, polygones, engraved text etc.	●	●
Contours can be e.g. shifted, rotated, copied, mirrored and trimmed	●	●
Contour generation by means of mouse or keyboard	●	●
CAD special features like e.g. toothed wheel, ellipses, curve interpolations, engraved texts and circuit board milling	●	●
the drawings can be dimensioned	●	●
Technology values		
Input of technology values for the drawn contour e.g. feed, tool Ø, total depth, part in-feed, the lapping factor of the tool in the case of pocket milling, processing sequence etc.. Machining via single part, pocket angle parallel and contour parallel, track correction inside or outside	●	●
Graphic simulation		
for easy checking of programming errors	●	●
Graphic simulation with 3D view		
Simulation with the represented tool	○	●
for easy checking of programming errors	○	●
Workpiece can be rotated during the simulation for a better view	○	●

nccad milling software	nccad basic	nccad professional
Machine zero point		
Machine zero point is queried by means of a reference travel via limit switches	●	●
Workpiece zero points		
19 workpiece zero points can arbitrarily be set	●	●
Tool administration		
Tool administration	●	●
Tool memory		
Administration of up to max. 20 tools	○	●
Definition of tools e.g. diameter, cutting edge length	○	●
Manual control panel		
for displacing the individual axes without inputting a programm	●	●
Direct input of the travel value either by means of the keyboard or via the arrow keys in the manual control panel	●	●
Display of the current values on the screen	●	●
Help		
Manual integrated in the software	●	●
Direct help via the F1 key for the functions displayed in the menu bar	●	●
System requirements		
starting from Pentium 2 at least 600 MHz,	●	●
Working memory min. 64 MB RAM, CD drive	●	●
serial interface (RS232)	●	●
Graphic resolution 1024 x 786	●	●
60 MB left on hard drive	●	●
the 3D simulation requires a graphic card with a large memory such as GeForce2 made by NVIDIA	○	●
Operating systems		
Windows XP, Windows NT and Windows 7	●	●
Tool spindle		
Tool spindle can optionally be turned on or off via the software	●	●
Network		
compatible	●	●
Update		
to nccad professional is possible (provided that ball screws are used)	●	○
NC-rotary table		
(optional) for controlling the 4th axis	○	●
Electronic handwheel		
(optional) for the zero point travel	○	●

**Parting tool holder with parting blade**

- Parting tool holder
total length 80 mm
- Parting blade HSS
thickness 1.5 mm
total length 63 mm

Cross section	Item no.	Price
8 x 8 mm	10837	12.00 € 14.28 € incl. VAT
10 x 10 mm	10835	12.00 € 14.28 € incl. VAT

**Replacement blade HSS for parting tool holder**

- Item no. 10836
Price 5.00 € | 5.95 € incl. VAT
- Parting blade thickness 1.5 mm
 - Total length 63 mm

**Parting tool holder with 2 parting blades**

- Parting tool holder
total length 80 mm
- 2 parting blades HSS
thickness 1.5 mm
total length 63 mm

Cross section	Item no.	Price
8 x 8 mm	10839	16.00 € 19.04 € incl. VAT
10 x 10 mm	10834	16.00 € 19.04 € incl. VAT

**Parting tool holder industrial quality**

- Item no. 1090640
Price 119.00 € | 141.61 € incl. VAT
- Cross section 10 x 10 mm
 - without parting insert
 - suitable parting insert item no. 1090650

Application

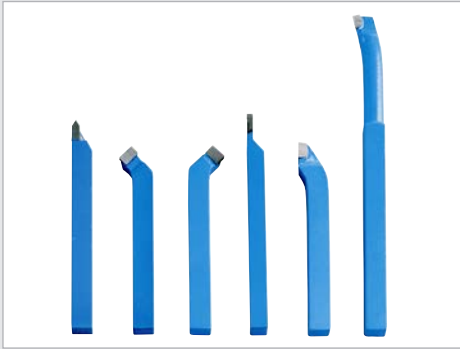
- for outside processing

**Parting insert for parting tool holder**

- Item no. 1090650
Price 40.00 € | 47.60 € incl. VAT
- Thickness 2.2 mm
 - PU: 5 pieces
 - for parting tool holder item no. 1090640

Application

- for parting and grooving

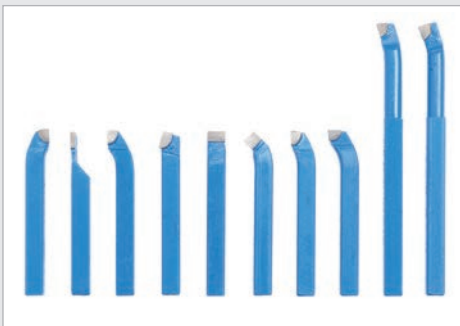


Carbide-tipped turning tool set

Item no. 10910

Price 20.00 € | 23.80 € incl. VAT

- 6 pieces
- Cross section 10 x 10 mm
- with carbide tips P30
- high cutting speed and short production times
- at the same time the long service life of carbide metal reduces the tool changing time
- 1x parting tool DIN 4981 R for grooving and parting
- 1x inside turning tool for corner work DIN 4974 R for turning of internal bores
- 1x right-hand offset side turning tool DIN 4980 R for longitudinal turning
- 1x right-hand cranked turning tool DIN 4972 R for longitudinal turning
- 1x outside thread turning tool DIN 282 R for external thread turning 60°
- 1x left-hand turning tool DIN 4972 L for longitudinal turning



Carbide-tipped turning tool sets

- 10 pieces
- with carbide tips P30
- high cutting speed and short production times
- at the same time the long service life of carbide metal reduces the tool changing time
- all turning tools have precision-ground cutting edges and flanks
- 1x left-hand offset side turning tool DIN 4980 L for longitudinal turning
- 1x parting tool DIN 4981 R for grooving and parting
- 1x right-hand offset side turning tool DIN 4980 R for longitudinal turning
- 1x right-hand straight turning tool DIN 4971 R for longitudinal turning
- 1x wide turning tool DIN 4976 for grooving
- 1x right-hand cranked turning tool DIN 4972 R for longitudinal turning
- 1x right-hand shouldered corner turning tool DIN 4978 for longitudinal turning
- 1x offset face turning tool DIN 4977 for face turning
- 1x inside turning tool for corner work DIN 4974 R for turning of internal bores
- 1x inside turning tool DIN 4973 for turning of internal bores

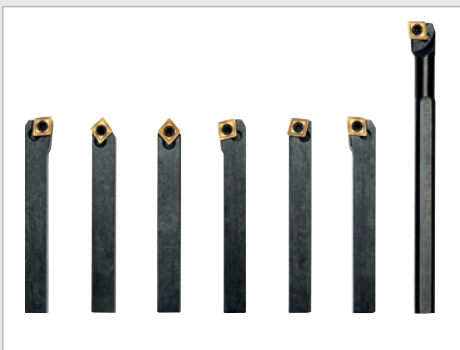
Cross section	Item no.	Price
8 x 8 mm	10911	36.00 € 42.84 € incl. VAT
10 x 10 mm	10912	38.00 € 45.22 € incl. VAT
12 x 12 mm	10913	44.00 € 52.36 € incl. VAT
16 x 16 mm	10914	58.00 € 69.02 € incl. VAT
20 x 20 mm	10909	68.00 € 80.92 € incl. VAT



HSS turning tool sets

- 8 pieces
- all turning tools have precision-ground cutting edges and flanks
- 1x left-hand turning tool for longitudinal turning
- 1x outside thread turning tool 60° for external thread turning and longitudinal turning
- 1x cranked roughing tool for longitudinal turning
- 1x thread turning tool 60° for external thread turning
- 1x internal thread turning tool 60° for internal thread turning
- 1x right-hand turning tool for longitudinal turning
- 1x parting tool for grooving and parting
- 1x boring tool for turning of internal bores

Cross section	Item no.	Price
4 x 4 mm	10915	35.00 € 41.65 € incl. VAT
6 x 6 mm	10918	44.00 € 52.36 € incl. VAT
8 x 8 mm	10916	47.00 € 55.93 € incl. VAT
10 x 10 mm	10917	57.00 € 67.83 € incl. VAT
12 x 12 mm	10919	68.00 € 80.92 € incl. VAT



Turning tool sets for indexable inserts

- 7 pieces
- with key
- each turning tool with indexable insert of carbide quality
- each indexable insert has 4 cutting edges
- Plate form CCMT
- 1x left-hand turning tool for longitudinal turning
- 1x right-hand turning tool for longitudinal turning
- 1x pointed turning tool for external thread turning and longitudinal turning
- 1x right-hand straight turning tool for longitudinal turning
- 1x right-hand facing tool for face turning
- 1x offset pointed turning tool for external thread turning and longitudinal turning
- 1x boring bar for turning of internal bores

Cross section	Item no.	Price
8 x 8 mm	10860	139.00 € 165.41 € incl. VAT
10 x 10 mm	10861	140.00 € 166.60 € incl. VAT



Carbide tip indexable inserts

Item no.	10865
Price	39.00 € 46.41 € incl. VAT

- PU: 5 pieces
- Carbide quality
- each indexable insert has 4 cutting edges
- Plate form CCMT



Parting tool

- with carbide tip P30
- DIN 4981 R
- for grooving and parting

Cross section	Item no.	Price
8 x 8 mm	109111	6.60 € 7.85 € incl. VAT
10 x 10 mm	109101	6.80 € 8.09 € incl. VAT



Inside turning tool for corner work

- with carbide tip P30
- DIN 4974 R
- right-hand cutting for turning of internal bores

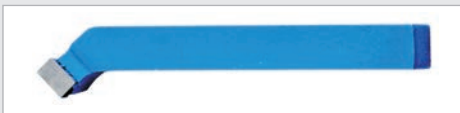
Cross section	Item no.	Price
8 x 8 mm	109112	6.60 € 7.85 € incl. VAT
10 x 10 mm	109102	6.80 € 8.09 € incl. VAT



Right-hand offset turning tool 90°

- with carbide tip P30
- DIN 4980 R
- for longitudinal turning

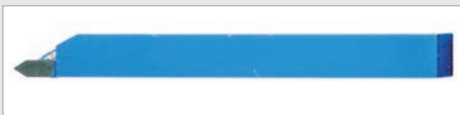
Cross section	Item no.	Price
8 x 8 mm	109113	6.60 € 7.85 € incl. VAT
10 x 10 mm	109103	6.80 € 8.09 € incl. VAT



Right-hand cranked turning tool 45°

- with carbide tip P30
- DIN 4972 R
- for longitudinal turning

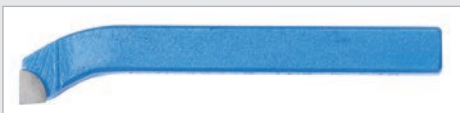
Cross section	Item no.	Price
8 x 8 mm	109114	6.20 € 7.38 € incl. VAT
10 x 10 mm	109104	6.40 € 7.62 € incl. VAT



Outside thread turning tool 60°

Item no. 109105
Price 7.90 € | 9.40 € incl. VAT

- Cross section 10 x 10 mm
- with carbide tip P30
- DIN 282 R
- for external thread turning and longitudinal turning



Right-hand face turning tool

Item no. 109117
Price 6.20 € | 7.38 € incl. VAT

- Cross section 8 x 8 mm
- with carbide tip P30
- DIN 4977 R
- for face turning



Left-hand turning tool

- with key
- for longitudinal turning
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Cross section	Item no.	Price
8 x 8 mm	108601	26.00 € 30.94 € incl. VAT
10 x 10 mm	108611	27.00 € 32.13 € incl. VAT



Right-hand turning tool

- with key
- for longitudinal turning
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Cross section	Item no.	Price
8 x 8 mm	108602	26.00 € 30.94 € incl. VAT
10 x 10 mm	108612	27.00 € 32.13 € incl. VAT



Right-hand facing tool

- with key
- for face turning
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Cross section	Item no.	Price
8 x 8 mm	108603	26.00 € 30.94 € incl. VAT
10 x 10 mm	108613	27.00 € 32.13 € incl. VAT



Right-hand straight turning tool

- with key
- for longitudinal turning
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Cross section	Item no.	Price
8 x 8 mm	108604	26.00 € 30.94 € incl. VAT
10 x 10 mm	108614	27.00 € 32.13 € incl. VAT



Pointed turning tool

- with key
- for external thread turning and longitudinal turning
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Cross section	Item no.	Price
8 x 8 mm	108605	26.00 € 30.94 € incl. VAT
10 x 10 mm	108615	27.00 € 32.13 € incl. VAT



Boring bar

- with key
- right-hand cutting for turning of internal bores
- each turning tool with indexable insert of carbide quality
- Plate form CCMT
- the indexable insert has 4 cutting edges
- suitable replacement indexable inserts item no. 10865 on page 160

Shank Ø	lowest turning Ø	Item no.	Price
8 mm	10 mm	108606	38.00 € 45.22 € incl. VAT
10 mm	12 mm	108616	38.00 € 45.22 € incl. VAT



Pointed turning tool industrial quality

Item no. 10820
Price 59.90 € | 71.28 € incl. VAT

- Cross section 10 x 10 mm
- right-hand cutting
- without indexable insert
- suitable indexable insert item no. 10830 on page 164
- for longitudinal turning



Offset face turning tool industrial quality

Item no. 10821
Price 59.90 € | 71.28 € incl. VAT

- cross section 10 x 10 mm
- right-hand cutting
- without indexable insert
- suitable indexable insert item no. 10833 on page 164
- for face turning



Offset turning tool for corner work industrial quality

Item no. 10822
Price 59.90 € | 71.28 € incl. VAT

- Cross section 10 x 10 mm
- right-hand cutting
- without indexable insert
- suitable indexable insert item no. 10830 on page 164
- for longitudinal turning

**Straight turning tool industrial quality**

Item no. 10823

Price 59.90 € | 71.28 € incl. VAT

- Cross section 10 x 10 mm
- right-hand cutting
- without indexable insert
- suitable indexable insert item no. 10831 on page 164
- for rough and longitudinal turning

**Cranked turning tool industrial quality**

Item no. 10824

Price 59.90 € | 71.28 € incl. VAT

- Cross section 10 x 10 mm
- right-hand cutting
- without indexable insert
- suitable indexable insert item no. 10832 on page 164
- for longitudinal and face turning

**Carbide tip indexable insert industrial quality**

Item no. 10830

Price 9.50 € | 11.31 € incl. VAT

- PU: 1 piece
- Indexable insert with 6 cutting edges
- suitable for turning tools item no. 10820 and 10822

**Carbide tip indexable insert industrial quality**

Item no. 10831

Price 11.50 € | 13.69 € incl. VAT

- PU: 1 piece
- Indexable insert with 8 cutting edges
- suitable for turning tool item no. 10823

**Carbide tip indexable insert industrial quality**

Item no. 10832

Price 11.50 € | 13.69 € incl. VAT

- PU: 1 piece
- Indexable insert with 8 cutting edges
- suitable for turning tool item no. 10824

**Carbide tip indexable insert industrial quality**

Item no. 10833

Price 9.50 € | 11.31 € incl. VAT

- PU: 1 piece
- Indexable insert with 6 cutting edges
- suitable for turning tool item no. 10821



2-fold knurling tool

Item no. 10923
Price 19.00 € | 22.61 € incl. VAT

- Cross section 10 x 10 mm
- with 2 straight knurling wheels
- rough and fine
- Width 4 mm
- Ø 15 mm

Application

- for clamping in lathes
- used to profile spindles, screws, nuts e.g.



Knurling tool

Item no. 10920
Price 16.00 € | 19.04 € incl. VAT

- Cross section 12 x 12 mm
- self-centering
- with 2 cross knurling wheels
- Width 9.5 mm
- Ø 19 mm

Application

- for clamping in lathes
- used to profile spindles, screws, nuts e.g.



Knurling holder

Item no. 10921
Price 29.00 € | 34.51 € incl. VAT

- cross section 10 x 10 mm
- self-centering
- with 2 cross knurling wheels
- Width 9.5 mm
- Ø 19 mm

Application

- for clamping in lathes
- used to profile spindles, screws, nuts e.g.



Replacement knurling wheels

Item no. 10922
Price 5.00 € | 5.95 € incl. VAT

- PU: 2 pieces
- 2 cross knurling wheels
- Width 9.5 mm
- Ø 19 mm
- suitable for item no. 10920 and 10921



Center drills

- HSS DIN 333
- 60° countersink angle
- spirally-fluted, ground
- right-hand cutting

Application

- For exactly centered bores in metals. Both face ends of the workpiece receive the appropriate center hole when turned between the centers.

Nominal Ø mm	Item no.	Price
1.00	10841	2.90 € 3.45 € incl. VAT
2.00	10842	3.40 € 4.05 € incl. VAT
2.50	10843	3.90 € 4.64 € incl. VAT
5.00	10845	6.90 € 8.21 € incl. VAT



Center drill set

Item no.	10846
Price	15.00 € 17.85 € incl. VAT

included in delivery

- 4 center drills with nominal Ø 1.00, 2.00, 2.50 and 5.00 mm
- HSS DIN 333
- 60° countersink angle
- spirally-fluted, ground
- right-hand cutting



Quick-change tool post main body

- very precise locating fixture
- rapid tool change
- the tool blade always returns to exactly the same position after changing the tool post
- the repeating accuracy is 0.01 mm
- the height of the tool blade tip can be adjusted quickly by means of an adjusting screw on each tool holder
- 40 different angular settings
- compatible e.g. with following producers: AXA, Klopfer, Multi Suisse

Size	Item no.	Price
Aa (A0)	10780	159.00 € 189.21 € incl. VAT
A	10785	189.00 € 224.91 € incl. VAT



Boring steel holder

- for holding cylindrical tools such as boring steels
- compatible e.g. with following producers: AXA, Klopfer, Multi Suisse

Size	Item no.	Price
Aa (A0)	10781	52.00 € 61.88 € incl. VAT
A	10786	64.00 € 76.16 € incl. VAT



Parting tool holder

- for holding parting tool
- compatible e.g. with following producers: AXA, Klopfer, Multi Suisse

Size	Item no.	Price
Aa (A0)	10782	80.00 € 95.20 € incl. VAT
A	10787	82.00 € 97.58 € incl. VAT



Turning tool holder

- for holding rectangular tools
- compatible e.g. with following producers: AXA, Klopfer, Multi Suisse

Size	Item no.	Price
Aa (A0)	10783	49.00 € 58.31 € incl. VAT
A	10788	52.00 € 61.88 € incl. VAT



Boring bar holder

- for holding boring bars
- compatible e.g. with following producers: AXA, Klopfer, Multi Suisse

Size	Item no.	Price
Aa (A0)	10784	73.00 € 86.87 € incl. VAT
A	10789	82.00 € 97.58 € incl. VAT



Parting blade

Item no.	10790
Price	29.50 € 35.11 € incl. VAT

- Total length 100 mm
- Thickness 2.7 mm
- Height 10 mm
- suitable for item no. 10782 and 10787

Application

- for grooving and cutting to length of workpieces



Quick-change tool post sets

- 5 pieces

included in delivery

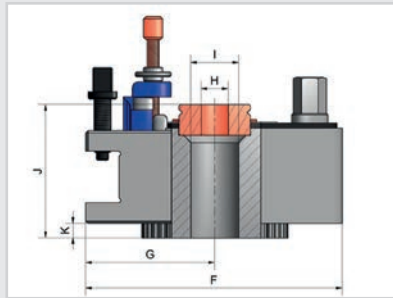
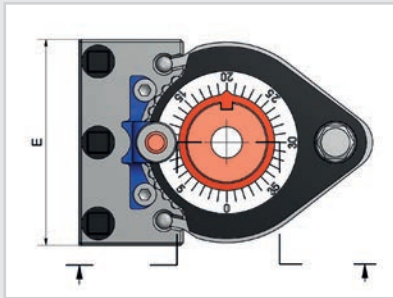
- 1 x quick-change tool post, main body
technical data can be found on page 166
- 1 x boring steel holder
technical data can be found on page 166
- 3 x turning tool holder
technical data can be found on page 167

Size	Item no.	Price
Aa (A0)	10793	309.00 € 367.71 € incl. VAT
A	10794	389.00 € 462.91 € incl. VAT



When choosing the size attention should be paid to

- The turning tool tip must be aligned precisely to the turning axis center (center point).
- To do this, the turning tool must be in the inserted steel holder on the turning axis center (center point).
The height of the steel holder can be adjusted by turning the adjustment screw (D).
- The length of the steel holder (E) should correspond to the width of the longitudinal support upper section, if possible.
- The turning tool height (C) must be selected in such a way that, after the addition of the height of the lower lip (B) of the steel holder, it is smaller than height (A).
- The boring (H) in the centering disk must be bored to the dimension of the stud bolt.



Size	Aa (A0)	A
Quick-change tool post main body		
Center height (A)	depending on the machine	depending on the machine
Lower lip of steel holder (B)	6.5 mm	10 mm
Height of working steel max. (C)	12 mm	20 mm
Length of steel holder (E)	50 mm	90 mm
Total width (F)	76 mm	104 mm
Outreach (G)	35 mm	52 mm
Boring for stud bolt (H)	10 mm	10 mm
Boring in main body (I)	13 mm	20 mm
Height (J)	37 mm	56 mm
Height adjustment (K)	10 mm	12 mm
Boring tool holder		
for boring tools up to max cross section	12 mm	20 mm
Number of clamp screws	4	3
Total length	50 mm	90 mm
Parting tool holder		
Number of clamp screws	4	3
Turning tool holder		
for turning tools up to max. cross section	12 mm	20 mm
Number of clamp screws	4	3
Total length	50 mm	90 mm
Boring bar holder		
for boring bars with max. diameter	15 mm	20 mm
Total length	50 mm	90 mm
Subject to technical modifications		



Dead center MT2

Item no. 10762

Price 9.00 € | 10.71 € incl. VAT

- Morse taper MT2
- hardened and ground

Application

- for use in the tailstock, for machining long workpieces



Dead center MT3

Item no. 10763

Price 9.90 € | 11.78 € incl. VAT

- Morse taper MT3
- hardened and ground

Application

- for use in the spindle nose of the main spindle. Long workpieces, as well as parts which require repeated rechucking and a high degree of concentricity, are machined between the centers.



Live centers

- hardened and ground
- Precision bearings guarantee high true running accuracy

Application

- for use in the tailstock, for machining long workpieces

Morse taper	Item no.	Price
MT2	10766	35.00 € 41.65 € incl. VAT
MT3	10770	43.00 € 51.17 € incl. VAT
MT4	10771	49.00 € 58.31 € incl. VAT



Live center set MT2

Item no. 10768

Price 105.00 € | 124.95 € incl. VAT

- 8 pieces
- Morse taper MT2
- with interchangeable inserts
- hardened and ground
- Precision bearings guarantee high true running accuracy

Application

- for use in the tailstock, for machining long workpieces



3-jaw lathe chucks

- centrally clamping
- without mounting flange

included in delivery

- Turning and drilling jaws
- Clamping key
- Fastening screws

Soft unstepped jaws 1 set

- from Ø 100 mm optional available
- for turning out for exact true running accuracy on workpiece

Item no.	10700	10711	10721	10752
Price without VAT	84.00 €	92.00 €	114.00 €	165.00 €
Price incl. VAT	99.96 €	109.48 €	135.66 €	196.35 €

3-jaw lathe chucks

Total Ø	80 mm	100 mm	125 mm	160 mm
Clamping Ø	3.5 - 67 mm	4.0 - 83 mm	4.0 - 125 mm	3.0 - 160 mm
max. speed	4000 rpm	3500 rpm	3000 rpm	2500 rpm
Bore	16 mm	22 mm	30 mm	44 mm
cylindrical inside diameter	55 mm	70 mm	95 mm	130 mm
Pitch circle Ø	66 mm	83 mm	108 mm	142 mm
Number of bores	3x M6	3x M8	3x M8	3x M8
Total height with jaws	67 mm	75 mm	85 mm	94 mm
Total height without jaws	50 mm	56 mm	58 mm	65 mm

Soft unstepped jaws

Item no.	○	10713	10723	10752-1
Price without VAT	○	45.00 €	45.00 €	75.00 €
Price incl. VAT	○	53.55 €	53.55 €	89.25 €

Mounting flanges

Mounting flanges for WABECO lathes

Item no.	10701	○	10733	10746
Mounting flanges for dividing attachment Ø 100 mm				
Item no.	10741	○	○	○
Mounting flanges for dividing attachment Ø 110 mm				
Item no.	10742	○	○	○
Mounting flanges for dividing attachment Ø 150 mm				
Item no.	○	10743	10743	○

Prices for all mounting flanges

Price without VAT	55.00 €	55.00 €	55.00 €	55.00 €
Price incl. VAT	65.45 €	65.45 €	65.45 €	65.45 €

Subject to technical modifications

○ not available



4-jaw lathe chucks

- centrally clamping
- without mounting flange

included in delivery

- Turning and drilling jaws
- Clamping key
- Fastening screws

Soft unstopped jaws 1 set

- from Ø 100 mm optional available
- for turning out for exact true running accuracy on workpiece

Item no.	10728	10729	10731	10753
Price without VAT	132.00 €	145.00 €	149.00 €	229.00 €
Price incl. VAT	157.08 €	172.55 €	177.31 €	272.51 €

4-jaw lathe chucks

Total Ø	80 mm	100 mm	125 mm	160 mm
Clamping Ø	3.5 - 67 mm	5.5 - 83 mm	5.5 - 125 mm	3.0 - 160 mm
max. speed	4000 rpm	3500 rpm	3000 rpm	2500 rpm
Bore	16 mm	22 mm	30 mm	44 mm
cylindrical inside diameter	55 mm	70 mm	95 mm	130 mm
Pitch circle Ø	66 mm	83 mm	108 mm	142 mm
Number of bores	3x M6	3x M8	3x M8	3x M8
Total height with jaws	67 mm	75 mm	85 mm	94 mm
Total height without jaws	50 mm	56 mm	58 mm	65 mm

Soft unstepped jaws

Item no.	○	10739	10738	10753-1
Price without VAT	○	49.00 €	49.00 €	79.00 €
Price incl. VAT	○	58.31 €	58.31 €	94.01 €

Mounting flanges

Mounting flanges for WABECO lathes

Item no.	10701	○	10733	10746
Mounting flanges for dividing attachment Ø 100 mm				
Item no.	10741	○	○	○
Mounting flanges for dividing attachment Ø 110 mm				
Item no.	10742	○	○	○
Mounting flanges for dividing attachment Ø 150 mm				
Item no.	○	10743	10743	○

Prices for all mounting flanges

Price without VAT	55.00 €	55.00 €	55.00 €	55.00 €
Price incl. VAT	65.45 €	65.45 €	65.45 €	65.45 €

Subject to technical modifications

○ not available



Precision 3-jaw lathe chucks

- according to DIN 6350
- centrally clamping
- without mounting flange

included in delivery

- Turning and drilling jaws
- Clamping key
- Fastening screws

Soft unstepped jaws 1 set

- from Ø 100 mm optional available
- for turning out for exact true running accuracy on workpiece

Item no.	10710	10712	10720	10722	10750
Price without VAT	270.00 €	399.00 €	295.00 €	460.00 €	349.00 €
Price incl. VAT	321.30 €	474.81 €	351.05 €	547.40 €	415.31 €

3-jaw lathe chucks

	Cast iron version	Steel version	Cast iron version	Steel version	Cast iron version
Total Ø	100 mm	100 mm	125 mm	125 mm	160 mm
Clamping Ø	3.0 - 83 mm	3.0 - 83 mm	3.0 - 125 mm	3.0 - 125 mm	3.0 - 160 mm
max. speed	3500 rpm	5200 rpm	3200 rpm	4800 rpm	3000 rpm
Bore	20 mm	20 mm	32 mm	32 mm	42 mm
cylindrical inside diameter	70 mm	70 mm	95 mm	95 mm	125 mm
Pitch circle Ø	83 mm	83 mm	108 mm	108 mm	140 mm
Number of bores	3x M8	3x M8	3x M8	3x M8	6x M10
Total height with jaws	66 mm	66 mm	76 mm	76 mm	97 mm
Total height without jaws	50 mm	50 mm	56 mm	56 mm	66 mm

Soft unstepped jaws

Item no.	10717	10717	10727	10727	10754
Price without VAT	72.00 €	72.00 €	72.00 €	72.00 €	94.00 €
Price incl. VAT	85.68 €	85.68 €	85.68 €	85.68 €	111.86 €

Mounting flanges

Mounting flanges for WABECO lathes

Item no.	○	○	10733	10733	10745
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Mounting flanges for dividing attachment Ø 150 mm

Item no.	10743	10743	10743	10743	○
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Prices for all mounting flanges

Price without VAT	55.00 €	55.00 €	55.00 €	55.00 €	55.00 €
Price incl. VAT	65.45 €	65.45 €	65.45 €	65.45 €	65.45 €

Subject to technical modifications

○ not available



Precision 4-jaw lathe chucks

- according to DIN 6350
- centrally clamping
- without mounting flange

included in delivery

- Turning and drilling jaws
- Clamping key
- Fastening screws

Soft unstepped jaws 1 set

- from Ø 100 mm optional available
- for turning out for exact true running accuracy on workpiece

Item no.	10730	10732
Price without VAT	319.00 €	549.00 €
Price incl. VAT	379.61 €	653.31 €

4-jaw lathe chucks

	Cast iron version	Steel version
Total Ø	125 mm	125 mm
Clamping Ø	3.0 - 125 mm	3.0 - 125 mm
max. speed	3200 rpm	4800 rpm
Bore	32 mm	32 mm
cylindrical inside diameter	95 mm	95 mm
Pitch circle Ø	108 mm	108 mm
Number of bores	3x M8	3x M8
Total height with jaws	76 mm	76 mm
Total height without jaws	56 mm	56 mm

Soft unstepped jaws

Item no.	10737	10737
Price without VAT	115.00 €	115.00 €
Price incl. VAT	136.85 €	136.85 €

Mounting flanges

Mounting flanges for WABECO lathes

Item no.	10733	10733
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Mounting flanges for dividing attachment Ø 150 mm

Item no.	10743	10743
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Prices for all mounting flanges

Price without VAT	55.00 €	55.00 €
Price incl. VAT	65.45 €	65.45 €

Subject to technical modifications ○ not available



Precision camlock 3- and 4-jaw lathe chucks

- centrally clamping
 - for all lathes with camlock main spindle nose according to DIN 55029 size 4
- included in delivery
- Turning and drilling jaws
 - Clamping key

Item no.	10724	10755	10734	10756
Price without VAT	420.00 €	575.00 €	575.00 €	768.00 €
Price incl. VAT	499.80 €	684.25 €	684.25 €	913.92 €

	3-jaws Cast iron version	3-jaws Steel version	4-jaws Cast iron version	4-jaws Steel version
Total Ø	125 mm	125 mm	125 mm	125 mm
Clamping Ø	125 mm	125 mm	125 mm	125 mm
max. speed	3200 rpm	4800 rpm	3200 rpm	4800 rpm
Bore	32 mm	32 mm	32 mm	32 mm
Total height with jaws	80 mm	80 mm	80 mm	80 mm
Total height without jaws	60 mm	60 mm	60 mm	60 mm

Subject to technical modifications



3-jaw chucks

- centrally clamping
- with morse taper MT2 and tightening thread M10
- with turning and drilling jaws and clamping key

Application

- for clamping in the tailstock of lathes
- for clamping in the milling head of milling machines

Item no.	10705	10714
Price without VAT	119.00 €	129.00 €
Price incl. VAT	141.61 €	153.51 €
Total Ø	80 mm	100 mm
Clamping Ø	2 - 67 mm	3 - 83 mm
max. speed	3000 rpm	3000 rpm
Total length incl. cone	152 mm	162 mm



Independent chucks

- heavy version for industrial use
- with 4 stepped reverse-clamping jaws, which can be adjusted individually and independently of each other
- without mounting flange

Application

- Workpiece clamping device for clamping large and irregularly shaped workpieces

Item no.	13310	13314	13318	13322
Price without VAT	82.00 €	89.00 €	105.00 €	135.00 €
Price incl. VAT	97.58 €	105.91 €	124.95 €	160.65 €
Total Ø	80 mm	100 mm	125 mm	160 mm
Clamping Ø	80 mm	100 mm	125 mm	160 mm
max. speed	2500 rpm	2500 rpm	2300 rpm	2000 rpm
Bore	22 mm	25 mm	30 mm	40 mm
cylindrical inside diameter	55 mm	72 mm	95 mm	130 mm
Pitch circle Ø	66 mm	84 mm	108 mm	142 mm
Number of bores	4x M6	4x M8	4x M8	4x M8
Total height with jaws	58 mm	78 mm	79 mm	98 mm
Total height without jaws	42 mm	55 mm	56 mm	65 mm

Mounting flanges

Mounting flanges for WABECO lathes

Item no.	10701	13315	13319	10746
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Mounting flanges for dividing attachment Ø 100 mm

Item no.	10741	○	○	○
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Mounting flanges for dividing attachment Ø 110 mm

Item no.	10742	○	○	○
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Mounting flanges for dividing attachment Ø 150 mm

Item no.	○	10744	10743	○
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Prices for all mounting flanges

Price without VAT	55.00 €	55.00 €	55.00 €	55.00 €
Price with VAT	65.45 €	65.45 €	65.45 €	65.45 €

Subject to technical modifications

○ not available



Clamping and face plate

Item no.	13300
Price	125.00 € 148.75 € incl. VAT

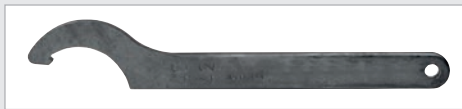
- for all lathes with cylindrical main spindle nose according to DIN 6350
- cylindrical inside diameter 70 mm
- Clamping Ø up to 150 mm
- with 4 T-slots 10 mm wide
- for receiving irregularly shaped workpieces



Collet chuck

Item no. 10775
Price 98.00 € | 116.62 € incl. VAT

- for all lathes with cylindrical main spindle nose according to DIN 6350
- cylindrical inside diameter 70 mm
- Clamping range in connection with collets from 2-16 mm (collets are not part of the delivery)
- for holding the collets item no. 11702 to 11716 on page 179
- an extremely high true running accuracy when clamping workpieces



Key for collet chuck

Item no. 11726
Price 8.00 € | 9.52 € incl. VAT



Collet chuck with key and collets

Item no. 10778
Price 299.00 € | 355.81 € incl. VAT

- 16 pieces included in delivery
- Collet chuck (description can be found on this page above)
- Key
- 14 collets from \varnothing 3 - 16 mm description can be found on page 179



5C collet chuck

Item no. 10749
Price 290.00 € | 345.10 € incl. VAT

- for all lathes with cylindrical main spindle nose according to DIN 6350
- cylindrical inside diameter 95 mm
- Clamping range in connection with 5C collets from 2-25 mm (5C collets are not part of the delivery)
- for holding the 5C collets item no. 11735 on page 177
- an extremely high true running accuracy when clamping workpieces

Mounting flange

Item no. 10733
Price 55.00 € | 65.45 € incl. VAT

- Mounting flange for all lathes with cylindrical main spindle nose according to DIN 6350
- cylindrical inside diameter 70 mm



Camlock 5C collet chuck with flange

Item no. 10779

Price 355.00 € | 422.45 € incl. VAT

- for all lathes with camlock main spindle nose according to DIN 55029 size 4
- Clamping range in connection with 5C collets from 2-25 mm (5C collets are not part of the delivery)
- for holding the 5C collets item no. 11735 on page 177
- an extremely high true running accuracy when clamping workpieces



5C collet set

Item no. 11735

Price 325.00 € | 386.75 € incl. VAT

- 18 pieces
- included in delivery
- Collets type 385 E with Ø
2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 14 - 15 - 16 - 18 - 20 - 21 - 22 - 23 - 24 - 25 mm
hardened and ground



Tool turret with 6 tool positions

Item no. 10798

Price 255.00 € | 303.45 € incl. VAT

- 21 pieces
- with morse taper MT2
- Gray cast iron version
- with 6 cylindrical location holes Ø 16 mm

included in delivery

- 2 key-type drill chucks clamping width 1.5 - 13 mm
- 1 live center
- 1 tapping attachment with 5 die holders 2x Ø 20 mm and each 1x Ø 25, 30 and 38 mm
- 1 tapping attachment with 7 tap holders each 1x Ø 2 - 3 - 4 - 4.5 - 6 - 8 and 9 mm

Application

- for use in the tailstock of lathes



Tapping attachment

Item no. 11691

Price 99.90 € | 118.88 € incl. VAT

- 9 pieces
- with morse taper MT2 and flat tang
- 4 die holders Ø 16 - 20 - 25 - 30 mm
- 4 tap holders Ø 5 - 6 - 7 - 10 mm
- Gray cast iron version

Application

- for use in the tailstock of lathes
- for inside and outside cutting for lathes



Collet chuck MT2-M10

Item no. 11725

Price 99.00 € | 117.81 € incl. VAT

- with morse taper MT2 and tightening thread M10
- Clamping range with collets 2-16 mm (collets are not part of the delivery)
- hardened and ground
- for mounting the collets item no. 11702 to 11716 on page 179

Application

- suitable for clamping all mills and drills with straight shank



Key for collet chuck MT2-M10

Item no. 11726

Price 8.00 € | 9.52 € incl. VAT



Collet chuck MT2-M10 with key

Item no. 11728

Price 107.00 € | 127.33 € incl. VAT

- with morse taper MT2 and tightening thread M10
- Clamping range with collets 2-16 mm (collets are not part of the delivery)
- hardened and ground
- for mounting the collets item no. 11702 to 11716 on page 179



Collet set MT2-M10

Item no. 11734

Price 299.00 € | 355.81 € incl. VAT

- 16 pieces

included in delivery

- Collet chuck with morse taper MT2 and tightening thread M10 clamping range with collets 3-16 mm hardened and ground
- Key for collet chuck
- 14 collets from \varnothing 3 to 16 mm according to DIN 415E OZ (description on page 179)



Collet chuck ISO30-M12

Item no. 1190730

Price 115.00 € | 136.85 € incl. VAT

- with steep taper ISO30 and tightening thread M12
- Clamping range with collets 2-16 mm (collets are not part of the delivery)
- hardened and ground
- for mounting the collets item no. 11702 to 11716 on page 179

Application

- suitable for clamping all mills and drills with straight shank



Key for collet chuck ISO30-M12

Item no. 11726
 Price 8.00 € | 9.52 € incl. VAT



Collet chuck ISO30-M12 with key

Item no. 1190731
 Price 123.00 € | 146.37 € incl. VAT

- with steep taper ISO30 and tightening thread M12
- Clamping range with collets 2-16 mm (collets are not part of the delivery)
- hardened and ground
- for mounting the collets item no. 11702 to 11716 on page 179



Collet set ISO30-M12

Item no. 1190734
 Price 315.00 € | 374.85 € incl. VAT

- 16 pieces included in delivery
- Collet chuck with steep taper ISO30 and tightening thread M12 clamping range with collets 3-16 mm (collets are not part of the delivery) hardened and ground
- Key for collet chuck
- 14 collets from Ø 3 to 16 mm according to DIN 415E OZ (description on page 179)



Collets

- double slotted
- according to DIN 415E OZ
- with a clamping range of up to 0.5 mm below nominal size, i.e. e.g. the collet 8 mm can clamp up to 7.5 mm
- hardened and ground
- intermediate sizes upon request

Item no.	11702	117025	11703	11704	11705	11706	11707	11708
Price without VAT	30.00 €	30.00 €	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €
Price incl. VAT	35.70 €	35.70 €	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €
Collets Ø mm	2	2.5	3	4	5	6	7	8

Item no.	11709	11710	11711	11712	11713	11714	11715	11716
Price without VAT	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €	19.50 €
Price incl. VAT	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €	23.21 €
Collets Ø mm	9	10	11	12	13	14	15	16



Morse taper sleeves MT2

- Morse taper MT2 and tightening thread M10
- short outreach, ensures improved stiffness
- hardened and ground

Application

- **for inserting directly into the tool spindle**

Collets Ø	Item no.	Price
1 mm	13001	15.00 € 17.85 € incl. VAT
2 mm	13002	15.00 € 17.85 € incl. VAT
3 mm	13003	15.00 € 17.85 € incl. VAT
4 mm	13004	15.00 € 17.85 € incl. VAT
5 mm	13005	15.00 € 17.85 € incl. VAT
6 mm	13006	15.00 € 17.85 € incl. VAT
7 mm	13007	15.00 € 17.85 € incl. VAT
8 mm	13008	15.00 € 17.85 € incl. VAT
9 mm	13009	15.00 € 17.85 € incl. VAT
10 mm	13010	15.00 € 17.85 € incl. VAT
11 mm	13011	15.00 € 17.85 € incl. VAT
12 mm	13012	15.00 € 17.85 € incl. VAT
13 mm	13013	15.00 € 17.85 € incl. VAT



Morse taper sleeve set MT2

Item no. 13020

Price 189.00 € | 224.91 € incl. VAT

- 13 pieces

included in delivery

- 13 morse taper sleeves with clamping Ø from 1 - 13 mm
morse taper MT2 and tightening thread M10
short outreach, ensures improved stiffness
hardened and ground

Application

- **for inserting directly into the tool spindle**



End mill arbor (Weldon) MT2-M10

- with morse taper MT2 and tightening M10
- hardened and ground

Application

- **for inserting directly into the tool spindle**
- the end mill arbors serve to tighten tools with a lateral driving surface

Location hole Ø	Item no.	Price
6 mm	1190780	28.00 € 33.32 € incl. VAT
8 mm	1190781	28.00 € 33.32 € incl. VAT
10 mm	1190782	28.00 € 33.32 € incl. VAT
12 mm	1190783	28.00 € 33.32 € incl. VAT
16 mm	1190784	28.00 € 33.32 € incl. VAT
20 mm	1190785	28.00 € 33.32 € incl. VAT



End mill arbor (Weldon) ISO30-M12

- with steep taper ISO30 (DIN 2080) and tightening thread M12
- hardened and ground

Application

- **for inserting directly into the tool spindle**
- the end mill arbors serve to tighten tools with a lateral driving surface

Location hole Ø	Item no.	Price
6 mm	1190770	49.00 € 58.31 € incl. VAT
8 mm	1190771	49.00 € 58.31 € incl. VAT
10 mm	1190772	49.00 € 58.31 € incl. VAT
12 mm	1190773	49.00 € 58.31 € incl. VAT
16 mm	1190774	49.00 € 58.31 € incl. VAT



Milling cutter 90° MT2

Item no. 11800
Price 89.90 € | 106.98 € incl. VAT

- with carbide tip indexable inserts
- with morse taper MT2 and tightening thread M10
- 3 flutes milling cutter
- Outer Ø 20 mm
- with clamping screw and screwdriver

Application

- **for inserting directly into the tool spindle**
- for face milling and square shoulder milling



Replacement indexable insert for milling cutter 90° MT2

Item no. 11879
Price 10.50 € | 12.50 € incl. VAT

- PU: 1 piece
- Indexable insert with 2 flutes

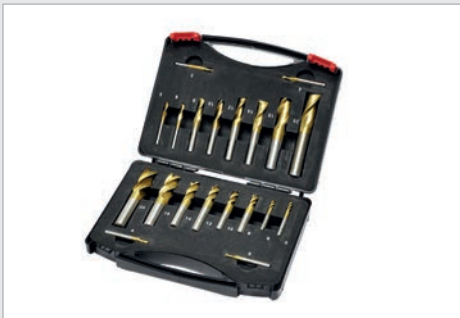
**Mill set "Titanium"-coated**

Item no. 11873

Price 50.00 € | 59.50 € incl. VAT

- 12 pieces
- 6 slotting mills - 2 flutes
1 cutting edge cuts to the middle in the front face, therefore also suitable for drilling followed by lateral displacement
- 6 end mills - 4 flutes
- helically grooved
- for a better workpiece surface
- high endurance, high cutting efficiency
- substantially less wear in comparison with HSS mills

Cutter Ø mm 2 flutes	3	4	6	8	10	12
Cutter Ø mm 4 flutes	3	4	6	8	10	12
Shank Ø mm	6	6	6	10	10	12

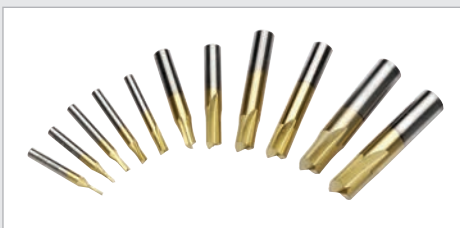
**Mill set "Titanium"-coated**

Item no. 11870

Price 95.00 € | 113.05 € incl. VAT

- 20 pieces
- 10 slotting mills - 2 flutes
1 cutting edge cuts to the middle in the front face, therefore also suitable for drilling followed by lateral displacement
- 10 end mills - 4 flutes
- helically grooved
- for a better workpiece surface
- high endurance, high cutting efficiency
- substantially less wear in comparison with HSS mills

Cutter Ø mm 2 flutes	3	4	5	6	8	10	12	14	18	20
Cutter Ø mm 4 flutes	3	4	5	6	8	10	12	14	18	20
Shank Ø mm	6	6	6	6	10	10	12	12	16	16

**Slotting mill set "Titanium"-coated**

Item no. 11825

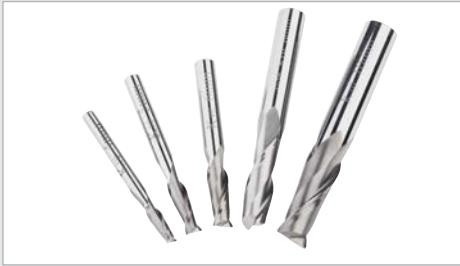
Price 50.00 € | 59.50 € incl. VAT

- 11 pieces
- short with straight shank
- 2 flutes slotting mills
- helically grooved

Application

- 1 cutting edge cuts to the middle in the front face, therefore also suitable for drilling followed by lateral displacement
- for drilling and milling e.g. of feather key grooves

Cutter Ø mm	2	3	4	5	6	8	10	12	14	16	18
Shank Ø mm	6	6	6	6	6	10	10	12	12	16	16



Slotting mill set solid carbide

Item no. 11826
Price 65.00 € | 77.35 € incl. VAT

- 5 pieces
- with straight shank
- 2 flutes slotting mills
- helically grooved
- very high endurance

Application

- 1 cutting edge cuts to the middle in the front face, therefore also suitable for drilling followed by lateral displacement
- for drilling and milling e.g. of feather key grooves

Cutter Ø mm	4	5	6	8	10
Shank Ø mm	4	5	6	8	10



End mill set "Titanium"-coated

Item no. 11843
Price 45.00 € | 53.55 € incl. VAT

- 9 pieces
- short with straight shank
- 4 flutes end mills
- helically grooved

Application

- for deep grooves and contour milling
- not suitable for drilling

Cutter Ø mm	4	5	6	8	10	12	14	16	18
Shank Ø mm	6	6	6	10	10	12	12	16	16



End mill set solid carbide

Item no. 11869
Price 65.00 € | 77.35 € incl. VAT

- 5 pieces
- with straight shank
- 4 flutes end mills
- helically grooved
- very high endurance

Application

- for deep grooves and contour milling
- not suitable for drilling

Cutter Ø mm	4	5	6	8	10
Shank Ø mm	4	5	6	8	10



Radius mill set HSS

Item no. 11885
 Price 45.00 € | 53.55 € incl. VAT

- 5 pieces
- with straight shank
- 4 flutes radius mills
- 1 cutting edge cuts to the middle in the front face, therefore also suitable for drilling followed by lateral displacement

Application

- for milling of semi-circular grooves, rounding off edges, contour milling

Cutter Ø mm	4	5	6	8	10
Shank Ø mm	6	6	6	10	10
Radius mm	2	2.5	3	4	5



Slot cutter set HSS

Item no. 11888
 Price 135.00 € | 160.65 € incl. VAT

- 9 pieces
- with straight shank
- cross toothed
- cuts on the perimeter

Application

- for milling woodruff key grooves
- for milling small slots and grooves

Ø mm	10.5	10.5	19.5	19.5	19.5	22.5	25.5	28.5	32.5
Cutter width mm	2	3	4	5	6	5	6	8	10
Shank Ø mm	12	12	12	12	12	12	12	12	12



Angle milling cutter set HSS

Item no. 11887
 Price 95.00 € | 113.05 € incl. VAT

- 5 pieces
- with straight shank
- cuts on the perimeter and on the front side
- straight toothed

Application

- for milling of small dovetail guides
- for breaking edges

Ø mm	13	16	20	25	32
Shank Ø mm	12	12	12	12	16
Angle of mill	60°	60°	60°	60°	60°



Corner rounding end mill set HSS

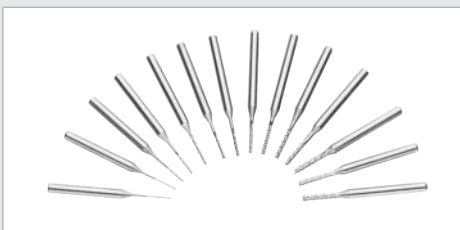
Item no. 11889
Price 110.00 € | 130.90 € incl. VAT

- 8 pieces
- with straight shank
- right-hand cutting
- straight toothed

Application

- for milling of round outer edges and guides

Radius mm	1	2	3	4	5	6	8	10
Shank Ø mm	10	10	12	12	12	16	16	16



Carbide milling cutter set

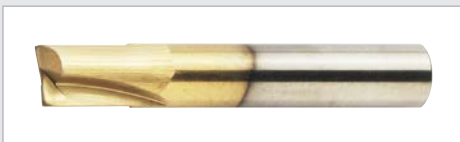
Item no. 11890
Price 65.00 € | 77.35 € incl. VAT

- 14 pieces
- with straight shank

Application

- suitable for drilling and milling at high speed

Ø mm	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Shank Ø mm	3	3	3	3	3	3	3	3	3	3	3	3	3	3



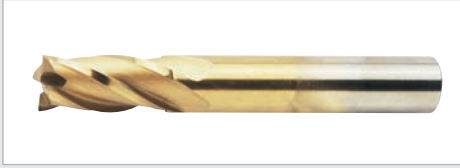
Slotting mills "Titanium"-coated

- 2 flutes slotting mills
- short with straight shank
- straight grooved
- 1 cutting edge cuts to the middle on the front face, therefore also suitable for drilling followed by lateral displacement

Application

- for drilling and milling e.g. of feather key grooves

Item no.	11810	11811	11812	11813	11814	11815	11816	11817	11818	11819	11820
Price without VAT	4.60 €	4.60 €	4.70 €	4.90 €	5.20 €	5.80 €	7.40 €	7.90 €	10.20 €	11.80 €	13.40 €
Price incl. VAT	5.47 €	5.47 €	5.59 €	5.83 €	6.19 €	6.90 €	8.81 €	9.40 €	12.14 €	14.04 €	15.95 €
Cutter Ø mm	2	3	4	5	6	8	10	12	14	16	18
Shank Ø mm	6	6	6	6	6	10	10	12	12	16	16



End mills “Titanium”-coated

- 4 flutes end mills
- short with straight shank
- helically grooved

Application

- for deep grooves and contour milling
- not suitable for drilling

Item no.	11829	11830	11831	11832	11833	11834	11835	11836	11837	11838
Price without VAT	5.30 €	5.30 €	5.70 €	5.80 €	6.20 €	7.50 €	9.10 €	10.40 €	12.10 €	14.50 €
Price incl. VAT	6.31 €	6.31 €	6.78 €	6.90 €	7.38 €	8.93 €	10.83 €	12.38 €	14.40 €	17.26 €
Cutter Ø mm	3	4	5	6	8	10	12	14	16	18
Shank Ø mm	6	6	6	6	10	10	12	12	16	16



End mills “Titanium”-coated

- 4 flutes end mills
- with straight shank
- roughing and knurling teeth characteristics, relief ground

Application

- for roughing deep grooves and contour milling
- not suitable for drilling

Item no.	11850	11851	11852	11853	11854
Price without VAT	25.00 €	26.00 €	28.00 €	29.00 €	35.00 €
Price incl. VAT	29.75 €	30.94 €	33.32 €	34.51 €	41.65 €
Cutter Ø mm	10	12	14	16	18
Shank Ø mm	10	12	12	16	16



Storage box for mills

Item no. 13600

Price 19.90 € | 23.68 € incl. VAT

- Plastic box for 62 mills

Shank Ø mm	6	8	10	12	16	20	25	32	42
for quantity of mills	15	12	5	5	8	7	6	2	2



Countersink bit set 90° HSS

Item no. 11989
Price 42.90 € | 51.05 € incl. VAT

- 6 pieces
- with 3 flutes
- with straight shank
- right-hand cutting

Application

- for countersinking flat-headed screws free of chatter marks and for countersinking and deburring

Countersink Ø mm	6.3	8.3	10.4	12.4	16.5	20.5
Shank Ø mm	5	6	6	8	10	10



Countersink bit and deburrer set 90° HSS

Item no. 11990
Price 42.90 € | 51.05 € incl. VAT

- 5 pieces
- with cross hole
- with straight shank

Application

- for deburring and countersinking bores
- due to the special cutting angle, the swarf is easily shelled
- the swarf is led safely through the slanted hole
- thus damage to the workpiece can be avoided

Countersink Ø mm	6	10	14	21	28
Shank Ø mm	6	6	8	10	12
for bores mm	1-4	2-5	5-10	10-15	15-20



Counterbore set HSS

Item no. 11991
Price 63.90 € | 76.04 € incl. VAT

- 7 pieces
- with straight shank
- solid dowel pin

Application

- for through holes
- for countersinking of cylinder head screws

for screws mm	M3	M4	M5	M6	M8	M10	M12
Shank Ø mm	6	6	6	8	10	12	12
Dowel pin Ø mm	3.2	4.2	5.2	6.2	8.2	10.2	12.2

**Combi shell end mill arbor MT2x16-M10**

Item no. 11729

Price 74.00 € | 88.06 € incl. VAT

- with morse taper MT2x16 and tightening thread M10
- with mill retaining screw and feather key
- for mills with longitudinal and transverse slot
- hardened and ground

Application

- for mounting all milling tools with location hole \varnothing 16 mm such as shell end mills, side milling cutters, angle milling cutters etc.

**Key for combi shell end mill arbor MT2x16-M10**

Item no. 11730

Price 14.00 € | 16.66 € incl. VAT

**Combi shell end mill arbor MT2x16-M10 with key**

Item no. 11731

Price 79.00 € | 94.01 € incl. VAT

- with morse taper MT2x16 and tightening thread M10
- with mill retaining screw and feather key
- for mills with longitudinal and transverse slot
- hardened and ground

Application

- for mounting all milling tools with location hole \varnothing 16 mm such as shell end mills, side milling cutters, angle milling cutters etc.

**Combi shell end mill arbor MT2x16-M10 with arbor spacers and key**

Item no. 11732

Price 111.00 € | 132.09 € incl. VAT

- 7 pieces

included in delivery

- Combi shell end mill arbor with morse taper MT2x16 and tightening thread M10 with mill retaining screw and feather key for mills with longitudinal and transverse slot hardened and ground
- Key for combi shell end mill arbor
- 5 arbor spacers width 1 - 2 - 5 - 10 - 20 mm



Combi shell end mill arbor MT2x16-M10 set

Item no. 11733

Price 185.00 € | 220.15 € incl. VAT

- 9 pieces

included in delivery

- Combi shell end mill arbor with morse taper MT2x16 and tightening thread M10 with mill retaining screw and feather key for mills with longitudinal and transverse slot hardened and ground
- Key for combi shell end mill arbor
- 5 arbor spacers width 1 - 2 - 5 - 10 - 20 mm
- Shell end mill Ø 40 - width 40 mm
- Metal slitting saw blade HSS Ø 63 - width 2.0 mm

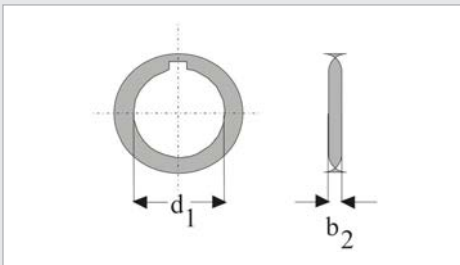


Arbor spacers

- Location hole Ø 16 mm
- suitable for combi shell end mill arbors with location hole Ø 16 mm

Application

- Since shell end mills, side milling cutters, single-angle milling cutters and metal slitting saw blades come in all various widths, these arbor spacers are indispensable in combination with a shell end mill arbor.



Width b_2	Bore d_1	Item no.	Price
1 mm	16 mm	11641	2.80 € 3.33 € incl. VAT
2 mm	16 mm	11642	6.10 € 7.26 € incl. VAT
5 mm	16 mm	11645	6.80 € 8.09 € incl. VAT.
10 mm	16 mm	11647	9.20 € 10.95 € incl. VAT
20 mm	16 mm	11649	11.50 € 13.69 € incl. VAT



Arbor spacer set

Item no. 11650

Price 32.00 € | 38.08 € incl. VAT

- 5 pieces
- Location hole Ø 16 mm
- suitable for combi shell end mill arbors with location hole Ø 16 mm

included in delivery

- Arbor spacers width 1 - 2 - 5 - 10 - 20 mm

Application

- Since shell end mills, side milling cutters, single-angle milling cutters and metal slitting saw blades come in all various widths, these arbor spacers are indispensable in combination with a shell end mill arbor.



Combi shell end mill arbor ISO30x16-M12

Item no. 1190735

Price 89.00 € | 105.91 € incl. VAT

- with steep taper ISO30x16 (DIN 2080) and tightening thread M12
- with mill retaining screw and feather key
- for mills with longitudinal and transverse slot
- hardened and ground

Application

- for holding all milling tools with location hole \varnothing 16 mm like shell end mills, side milling cutters, single-angle milling cutters etc.



Key for combi shell end mill arbor ISO30x16-M12

Item no. 11730

Price 14.00 € | 16.66 € incl. VAT



Combi shell end mill arbor ISO30x16-M12 with key

Item no. 1190736

Price 94.00 € | 111.86 € incl. VAT

- with steep taper ISO30x16 (DIN 2080) and tightening thread M12
- with mill retaining screw and feather key
- for mills with longitudinal and transverse slot
- hardened and ground

Application

- for holding all milling tools with location hole \varnothing 16 mm like shell end mills, side milling cutters, single-angle milling cutters etc.



Combi shell end mill arbor ISO30x16-M12 with arbor spacers and key

Item no. 1190737

Price 130.00 € | 154.70 € incl. VAT

- 7 pieces

included in delivery

- Combi shell end mill arbor with steep taper ISO30x16 (DIN 2080) and tightening thread M12 with mill retaining screw and feather key for mills with longitudinal and transverse slot hardened and ground
- Key for combi shell end mill arbor
- 5 arbor spacers width 1 - 2 - 5 - 10 - 20 mm



Single-angle milling cutters HSS

- Location hole \varnothing 16 mm
- with longitudinal slot
- cuts on the perimeter and on the front side

Application

- for clamping onto combi shell end mill arbors with location hole \varnothing 16 mm
- for milling e.g. angular guides (dovetail)

Milling angle	\varnothing	Item no.	Price
45°	63 mm	11910	45.00 € 53.55 € incl. VAT
60°	63 mm	11911	45.00 € 53.55 € incl. VAT



Shell end mills HSS with fine tothing

- Location hole \varnothing 16 mm
- Finishing cutter with fine tothing
- cuts on the perimeter and on the front side
- fine toothed
- with longitudinal and transverse slot

Application

- for clamping onto combi shell end mill arbors with location hole \varnothing 16 mm
- for milling of corners and plane surfaces

Width	\varnothing	Item no.	Price
20 mm	40 mm	11920	39.00 € 46.41 € incl. VAT
35 mm	35 mm	11921	49.00 € 58.31 € incl. VAT
40 mm	40 mm	11922	55.00 € 65.45 € incl. VAT



Shell end mill HSS with rough tothing

Item no. 11925
Price 65.00 € | 77.35 € incl. VAT

- Location hole \varnothing 16 mm
- Roughing mill with rough tothing
- cuts on the perimeter and on the front side
- Roughing and knurling toothed characteristics relief ground
- with longitudinal and transverse slot

Application

- for clamping onto combi shell end mill arbors with location hole \varnothing 16 mm
- for rough milling of corners and plane surfaces

Width	\varnothing
40 mm	40 mm



Side milling cutters HSS

- Location hole Ø 16 mm
- cuts on 3 sides
- cross toothed
- with longitudinal slot

Application

- for clamping onto combi shell end mill arbors with location hole Ø 16 mm
- for extremely long grooves

Width	Ø	Item no.	Price
4 mm	50 mm	11930	28.00 € 33.32 € incl. VAT
5 mm	50 mm	11931	29.00 € 34.51 € incl. VAT
6 mm	50 mm	11932	30.00 € 35.70 € incl. VAT
8 mm	50 mm	11933	32.00 € 38.08 € incl. VAT
10 mm	50 mm	11934	34.00 € 40.46 € incl. VAT



Side milling cutter set HSS

Item no. 11935
Price 149.00 € | 177.31 € incl. VAT

- 5 pieces
- included in delivery
- 5 side milling cutters width 4 - 5 - 6 - 8 - 10 mm
location hole Ø 16 mm
Ø 50 mm
cuts on 3 sides
cross toothed
with longitudinal slot

Application

- for clamping onto combi shell end mill arbors with location hole Ø 16 mm
- for cutting to length and for slitting of workpieces



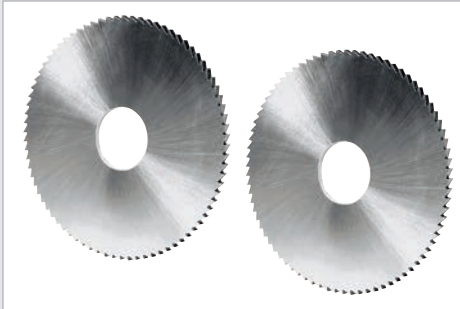
Metal slitting saw blades HSS

- Location hole Ø 16 mm
- with lateral clearance
- fine toothed

Application

- for clamping onto combi shell end mill arbors with location hole Ø 16 mm
- for cutting to length and for slitting of workpieces

Width	Ø	Item no.	Price
1 mm	63 mm	11951	23.00 € 27.37 € incl. VAT
2 mm	63 mm	11952	24.00 € 28.56 € incl. VAT



Metal slitting saw blade set

Item no. 11953
Price 45.00 € | 53.55 € incl. VAT

- 2 pieces

included in delivery

- 2 metal slitting saw blades width 1 and 2 mm
location hole Ø 16 mm
Ø 63 mm
with lateral clearance
fine toothed

Application

- for clamping onto combi shell end mill arbors with location hole Ø 16 mm
- for cutting to length and for slitting of workpieces



Metal slitting saw blade set with holder for slitting saw blade

Item no. 11960
Price 49.50 € | 58.91 € incl. VAT

- 4 pieces

included in delivery

- Holder for metal slitting saw blade
location shank Ø 12 mm
- 3 metal slitting saw blades

Application

- for cutting to length and for slitting of workpieces

Width	Ø	Location hole mm
1.0 mm	63 mm	16
1.5 mm	63 mm	16
2.0 mm	63 mm	16



Face mill industrial quality

Item no. 11878
Price 169.00 € | 201.11 € incl. VAT

- with 6 carbide tip indexable inserts
- 6 flutes face mill
- Outer Ø 40 mm
- Location hole Ø 16 mm
- with clamping screw and screwdriver
- very good swarf removal due to positive cutting blade locations

Application

- for clamping onto combi shell end mill arbors with location hole Ø 16 mm



Replacement indexable insert for face mill

Item no. 11879
Price 10.50 € | 12.50 € incl. VAT

- PU: 1 piece
- Indexable insert with 2 flutes

**Key-type drill chuck B16**

Item no. 11620
 Price 29.00 € | 34.51 € incl. VAT

- Clamping width 1.5 - 13 mm
- Inner taper B16

Application

- for clamping and releasing the tools by means of a key

**Key-type drill chuck with drill chuck arbor MT2**

Item no. 11621
 Price 40.00 € | 47.60 € incl. VAT

included in delivery

- Key-type drill chuck
clamping width 1.5 - 13 mm
inner taper B16
- Drill chuck arbor
with morse taper MT2 and flat tang
outer taper B16

**Quick-action drill chuck B16**

- Inner taper B16
- heavy version for industrial use

Application

- for fast clamping and releasing of the tools without key

Clamping width	Item no.	Price
1 - 13 mm	11623	49.00 € 58.31 € incl. VAT
3 - 16 mm	11624	49.00 € 58.31 € incl. VAT

**Quick-action drill chuck B16 with drill chuck arbor MT2**included in delivery

- Quick-action drill chuck
inner taper B16
- Drill chuck arbor
MT2 and flat tang outer taper B16

Clamping width	Item no.	Price
1 - 13 mm	11622	60.00 € 71.40 € incl. VAT
3 - 16 mm	11626	60.00 € 71.40 € incl. VAT

**Quick-action drill chuck B16 with drill chuck arbor MT2**included in delivery

- Quick-action drill chuck
inner taper B16
- Drill chuck arbor
MT2 and tightening thread M10 outer taper B16

Clamping width	Item no.	Price
1 - 13 mm	11630	90.00 € 107.10 € incl. VAT
3 - 16 mm	11631	90.00 € 107.10 € incl. VAT



Drill chuck arbor MT2-M10

Item no. 11627

Price 45.00 € | 53.55 € incl. VAT

- for milling machines
- with morse taper MT2 and tightening thread M10
- Outer taper B16
- hardened and ground



Drill chuck arbor MT2

Item no. 11628

Price 15.00 € | 17.85 € incl. VAT

- for lathes
- with morse taper MT2 and flat tang
- Outer taper B16
- hardened and ground



Drill sleeve from MT3 to MT2

Item no. 11635

Price 8.50 € | 10.12 € incl. VAT

- with morse taper MT3 outside and morse taper MT2 inside
- with flat tang
- hardened and ground



Quick-action drill chuck B16 with drill chuck arbor ISO30

included in delivery

- Quick-action drill chuck
inner taper B16
heavy version for industrial use
- Drill chuck arbor
with steep taper ISO30 and tightening thread M12
outer taper B16

Clamping width	Item no.	Price
1 - 13 mm	11633	137.00 € 163.03 € incl. VAT
3 - 16 mm	11634	137.00 € 163.03 € incl. VAT



Drill chuck arbor ISO30

Item no. 1190750

Price 89.00 € | 105.91 € incl. VAT

- with steep taper ISO30 and tightening thread M12
- Outer taper B16
- hardened and ground



Boring heads MT2 and MT3

- Head Ø 50 mm
- with morse taper and tightening thread
- **Feed accuracy 0.02 mm**
- Location hole 12 mm
- Total length 145 mm
- Adjustability of the boring bar holder 20 mm
- Center-to-center spacing of boring bar holders 15 mm
- hardened and ground
- suitable boring bar set item no. 11671 on page 199

Application

- e.g. setting holes, punctures etc.
- for vertical and horizontal use
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines

Morse taper	Item no.	Price
MT2 - M10	11666	125.00 € 148.75 € incl. VAT
MT3 - M12	11675	129.00 € 153.51 € incl. VAT



Boring head MT2-M10 with boring bar set

Item no. 11663
Price 150.00 € | 178.50 € incl. VAT

- 2 pieces
- included in delivery
- Boring head
description item no. 11666 on this page
 - Boring bar set with shank Ø 12 mm
description item no. 11671 on page 199



Boring head MT2-M10

Item no. 11667
Price 149.00 € | 177.31 € incl. VAT

- Head Ø 75 mm
- with morse taper MT2 and tightening thread M10
- **Feed accuracy 0.02 mm**
- Location hole 20 mm
- Total length 165 mm
- Adjustability of the boring bar holder 40 mm
- Center-to-center spacing of boring bar holders 24 mm
- 1 drill sleeve from shank Ø 20 to 12 mm
- hardened and ground
- suitable boring bar set item no. 11671 on page 199

Application

- e.g. setting holes, punctures etc.
- for vertical and horizontal use
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines



Boring head MT2-M10 with boring bar set

Item no. 11672

Price 174.00 € | 207.06 € incl. VAT

- 2 pieces

included in delivery

- Boring head
description item no. 11667 on page 196 below
- Boring bar set with shank \varnothing 12 mm
description item no. 11671 on page 199



Boring head ISO30-M12

Item no. 11664

Price 149.00 € | 177.31 € incl. VAT

- Head \varnothing 75 mm
- with steep taper ISO30 and tightening thread M12
- **Feed accuracy 0.02 mm**
- Location hole 20 mm
- Total length 160 mm
- Adjustability of the boring bar holder 20 mm
- Center-to-center spacing of boring bar holders 15 mm
- 1 drill sleeve from shank \varnothing 20 to 12 mm
- hardened and ground
- suitable boring bar set item no. 11671 on page 199

Application

- e.g. setting holes, punctures etc.
- for vertical and horizontal use
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines



Boring head ISO30-M12 with boring bar set

Item no. 11673

Price 174.00 € | 207.06 € incl. VAT

- 2 pieces

included in delivery

- Boring head
description item no. 11664 on this page
- Boring bar set with shank \varnothing 12 mm
description item no. 11671 on page 199



Boring head MT2-M10 original Vertex

Item no. 11665
Price 335.00 € | 398.65 € incl. VAT

- Head Ø 50 mm
- with morse taper MT2 and tightening thread M10
- **Feed accuracy 0.01 mm**
- Location hole 12 mm
- Total length 145 mm
- Adjustability of the boring bar holder 20 mm
- Center-to-center spacing of boring bar holders 15 mm
- hardened and ground
- suitable boring bar set item no. 11671 on page 199

Boring tools

- 2 boring bars carbide-tipped with shank Ø 12 mm length 70 and 80 mm
- 1 tool holder with shank Ø 12 mm length 90 mm for square bits

Application

- e.g. setting holes, punctures etc.
- for vertical and horizontal use
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines



Boring head MT2-M10 original Vertex

Item no. 11668
Price 399.00 € | 474.81 € incl. VAT

- Head Ø 80 mm
- with morse taper MT2 and tightening thread M10
- **Feed accuracy 0.01 mm**
- Location hole 16 mm
- Total length 165 mm
- Center-to-center spacing of boring bar holders 30 mm
- hardened and ground

Boring tools

- 3 boring bars carbide-tipped with shank Ø 10 mm length 60, 70 and 75 mm
- 3 boring bars carbide-tipped with shank Ø 16 mm length 95, 100 and 125 mm
- 1 tool holder with shank Ø 16 mm length 120 mm for square bits
- 1 drill sleeve from shank Ø 16 to 10 mm

Application

- e.g. setting holes, punctures etc.
- for vertical and horizontal use
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines



Boring bar sets

- 9 pieces
- hardened and ground shank
- carbide-tipped

Application

- Internal turning from 8 mm
- Boring work with the boring head

Shank Ø	Item no.	Price
10 mm	11670	22.00 € 26.18 € incl. VAT
12 mm	11671	26.00 € 30.94 € incl. VAT



Fly cutter set

Item no.	11805
Price	49.90 € 59.38 € incl. VAT

- 3 pieces
- Shank Ø 10 mm
- Head Ø 14, 18, 22 mm
- Blade HSS
- Blade length 30 mm
- infinitely variable adjustment of the diameter

Application

- for finishing bores and face milling
- for clamping in table drilling machines, pillar drilling machines, column drilling machines and milling machines



Circle cutter with bevelled blade

Item no.	11686
Price	85.00 € 101.15 € incl. VAT

- Morse taper MT2 and flat tang
- Grooving capacity 30 - 300 mm
- infinitely variable adjustment of the diameter
- with drawing cut, i.e. the cutting motion is performed sloped to the tool for obtaining tear-free edges
- Material strength steel up to approx. 5 mm
- Drill hole 5 mm
- hardened and ground

Application

- for clamping in drills, column drilling machines, table drilling machines, pillar drilling machines, milling machines etc.
- for precise cutting out holes or disks



Replacement blade for circle cutter

Item no.	11687
Price	19.00 € 22.61 € incl. VAT

- for circle cutter item no. 11686



Threading attachment original Vertex

Item no. 11680

Price 155.00 € | 184.45 € incl. VAT

- for thread cutting from M2 to M8
- with morse taper MT2 and flat tang
- with key-type drill chuck
- automatic forward and reverse motion

Application

- for clamping in drills, column drilling machines, pillar drilling machines, table drilling machines and milling machines which use a spindle sleeve feed and on which the direction rotation of the drilling or milling spindle cannot be reversed



Threading attachments

- for thread cutting from M5 to M12
- with morse taper and flat tang
- Torque of sliding clutch is 4-fold adjustable with adjustable safety sliding clutch - protects the tap from breakage
- automatic forward and reverse motion
- with 2 rubber flex grips

Application

- for clamping in drills, column drilling machines, pillar drilling machines, table drilling machines and milling machines which use a spindle sleeve feed and on which the direction rotation of the drilling or milling spindle cannot be reversed

Morse taper	Item no.	Price
MT2	11683	399.00 € 474.81 € incl. VAT
MT3	11684	399.00 € 474.81 € incl. VAT



Tap chuck original Vertex

Item no. 11690

Price 76.00 € | 90.44 € incl. VAT

- for thread cutting from M4 to M12
- Inner taper B16
- Head Ø 42 mm
- Total length 72 mm

Application

- for inside thread cutting on machine tools with right- and left-hand operation e.g. lathes, milling machines, drilling machines etc.
- the torque is transferred by the square of the tap
- the tap is centered by the clamping jaws



Tap chuck with drill chuck arbor MT2-M10

Item no. 11692

Price 119.00 € | 141.61 € incl. VAT

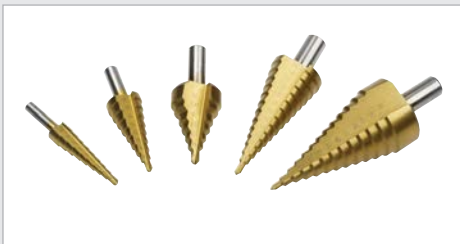
- 2 pieces

included in delivery

- Tap chuck
for thread cutting from M4 to M12
inner taper B16
head Ø 42 mm
total length 72 mm
- Drill chuck arbor
with morse taper MT2 and tightening thread M10
outer taper B16

Application

- for inside thread cutting on machine tools with right- and left-hand operation e.g. lathes, milling machines, drilling machines etc.
- the torque is transferred by the square of the tap
- the tap is centered by the clamping jaws



Step drill set "Titanium"-coated

Item no. 11880

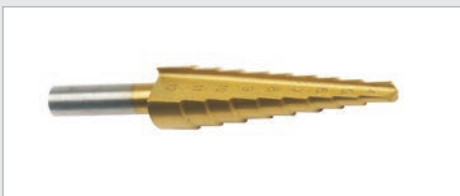
Price 99.90 € | 118.88 € incl. VAT

- 5 pieces
- with straight shank
- with 2 flutes
- with center drill tip

Application

- for drilling in thin sheet metal without pre-boring, burr-free drilling without deforming the sheet
- drills and removes burr at the same time with the next drill step

Steps Ø mm	4 - 12	4 - 20	5 - 28	4 - 30	4 - 39
Shank Ø mm	6	8	10	10	12



Step drill Ø 4-12 "Titanium"-coated

Item no. 11881

Price 18.00 € | 21.42 € incl. VAT

- Step Ø 4 - 12 mm - shank Ø 6 mm
- with straight shank
- with 2 flutes
- with center drill tip



Step drill Ø 5-28 "Titanium"-coated

Item no. 11882

Price 24.00 € | 28.56 € incl. VAT

- Step Ø 5 - 28 mm - shank Ø 10 mm
- with straight shank
- with 2 flutes
- with center drill tip



Digital position readout (DRO) for 3 axes and optical scales

- Color display
- 7-digit position indicator
- +/- indication
- Resolution 0.005 mm
- reversible metric/inch
- reversible count direction by means of operation sign change
- Coordinate value setting or zero setting
- incremental or absolute measurement input
- Parameter input
- Tool memory for 100 tools with independent coordinate reference points
- Tool no. display
- Coordinate reference points
- Calculator function (addition, subtraction etc.)
- Input and consideration of shrink factors
- in the case of a power cut the data are stored in the read only memory
- switchable from lathes to milling machines
- Optical scales are protected against shock and dirt
- ergonomically designed folio keyboard, protected against dust and splash water

especially for lathes

- Diameter or radius display
- Display of the Z0 and Z1 axes with adding function, either the addend or the individual value is displayed

especially for milling machines

- Trigonometric functions (sin; cos; tan)
- Pitch circle calculation with indication of individual coordinates

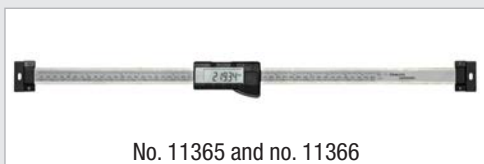
Application

- for precise, fast and safe manufacturing
- quick set up due to exact positioning
- no parallax or reading errors
- absolute repeatability

	Item no.	Price
Digital position readout (DRO) for 3 axes	10280	699.00 € 831.81 € incl. VAT
Optical scale measuring length 100 mm	10283	249.00 € 296.31 € incl. VAT
Optical scale measuring length 170 mm	10284	259.00 € 308.21 € incl. VAT
Optical scale measuring length 270 mm	10285	289.00 € 343.91 € incl. VAT
Optical scale measuring length 320 mm	10286	299.00 € 355.81 € incl. VAT
Optical scale measuring length 520 mm	10287	359.00 € 427.21 € incl. VAT



No. 11360 to no. 11364



No. 11365 and no. 11366



for vertical mounting

Mountable digital vernier scales

- 5-digit LCD display
- Reading accuracy 0.01 mm
- reversible metric/inch
- Zero position
- Mini-USB interface for position display
- can be cut to any desired intermediate size

Application

- for the mounting on lathes, milling machines, coordinate tables, table drilling machines, pillar drilling machines, column drilling machines etc. for measuring travel distances
- Mountable digital vernier scales for precise and exact positioning, for example, any play in the spindle can be ignored.

for horizontal mounting

Measuring length	Item no.	Price
100 mm	11360	39.00 € 46.41 € incl. VAT
150 mm	11361	43.00 € 51.17 € incl. VAT
200 mm	11362	49.00 € 58.31 € incl. VAT
300 mm	11363	69.00 € 82.11 € incl. VAT
400 mm	11364	89.00 € 105.91 € incl. VAT
500 mm	11365	119.00 € 141.61 € incl. VAT
600 mm	11366	160.00 € 190.40 € incl. VAT

for vertical mounting

Measuring length	Item no.	Price
100 mm	11370	43.00 € 51.17 € incl. VAT
150 mm	11371	46.00 € 54.74 € incl. VAT
200 mm	11372	56.00 € 66.64 € incl. VAT
300 mm	11373	89.00 € 105.91 € incl. VAT
400 mm	11374	110.00 € 130.90 € incl. VAT
500 mm	11375	149.00 € 177.31 € incl. VAT



Single axis position readout (DRO) with power plug

Item no.	11356
Price	95.00 € 113.05 € incl. VAT

- 5-digit LCD display with light
- Reading accuracy 0.01 mm
- reversible metric/inch
- Zero position
- solid plastic housing with magnetic mount
- 1 connecting cable for Mini-USB port

Application

- for connecting to a mountable digital vernier scale (not part of the delivery)
- used to display output data
- the position indicator can be easily attached to the lathes, milling machines, table drilling machines, pillar drilling machines, column drilling machines, etc. using the magnetic mount



3-axes position readout (DRO) with power plug

Item no. 11358
Price 209.00 € | 248.71 € incl. VAT

- 5-digit LCD display with light
- Reading accuracy 0.01 mm
- reversible metric/inch
- Zero position
- solid plastic housing with magnetic mount
- 3 connecting cables for Mini-USB port

Application

- for connecting to mountable digital vernier scales (not part of the delivery)
- the position indicator can be easily attached to the lathes, milling machines, table drilling machines, pillar drilling machines, column drilling machines, etc. using the magnetic mount



Power plug

Item no. 11379
Price 12.00 € | 14.28 € incl. VAT

- for single axis and 3-axes position readout (DRO)



Marking and height gauge

Item no. 11325
Price 74.00 € | 88.06 € incl. VAT

- Measuring height 300 mm
- ground and hardened
- 2 locking screws
- Precise adjustment
- adjustable carbide tip

Application

- for marking holes, slots, etc. on different workpieces



Digital marking and height gauge

Item no. 11326
Price 165.00 € | 196.35 € incl. VAT

- Measuring height 300 mm
- 5-digit LCD display
- Reading accuracy ± 0.01 mm
- Reset button
- reversible metric/inch
- ground and hardened
- 2 locking screws
- Precise adjustment
- adjustable carbide tip

Application

- for marking holes, slots, etc. on different workpieces



Vernier calipers

- Reading accuracy 0.05 mm
- with locking screw and depth gauge
- hardened and ground

Measuring range	Item no.	Price
100 mm	11314	13.00 € 15.47 € incl. VAT
150 mm	11322	15.00 € 17.85 € incl. VAT



Dial vernier caliper

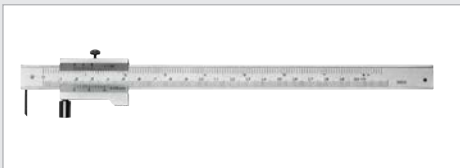
- Item no. 11319
Price 25.00 € | 29.75 € incl. VAT
- Reading accuracy 0.02 mm
 - with locking screw and depth gauge
 - hardened and ground



Electronic digital vernier calipers

- 5-digit LCD display
- Reading accuracy 0.01 mm
- reversible metric/inch
- with locking screw and depth gauge
- hardened and ground

Measuring range	Item no.	Price
100 mm	11328	25.00 € 29.75 € incl. VAT
150 mm	11320	30.00 € 35.70 € incl. VAT
200 mm	11321	40.00 € 47.60 € incl. VAT



Marking vernier caliper

- Item no. 13125
Price 29.90 € | 35.58 € incl. VAT
- Measuring range 200 mm
 - Reading accuracy 0.05 mm
 - with guide roller
 - hardened and ground



Divider with scriber

- Item no. 13101
Price 17.50 € | 20.83 € incl. VAT
- Rail length 150 mm
 - Scriber 150 mm
 - Opening width 190 mm
 - hardened tips
 - clamping screw



Center indicator with dial gauge

Item no. 11337

Price 110.00 € | 130.90 € incl. VAT

- Dial Ø 40 mm, 0 - 3 mm
- Clamping shank Ø 10 mm
- Head length 135 mm
- Reading accuracy 0.01 mm
- with 3 outside and inside feelers each - length: 45, 100 and 150 mm
- resilient scriber
- with stop rod for fixing the head

Application

- suitable for determining the centers of bores and shafts
- for centering, scribing or zero point marking



Dial test indicator

Item no. 13160

Price 39.00 € | 46.41 € incl. VAT

- Dial Ø 30 mm
- Measuring span 0.8 mm
- Reading accuracy 0.01 mm
- Scale 0 - 40 - 0
- Feeler length 12 mm
- Measuring insert equipped with carbide ball Ø 2 mm
- with dovetail guides for clamping shank
- incl. clamping shank Ø 6 and 8 mm



Dial gauge

Item no. 11334

Price 18.00 € | 21.42 € incl. VAT

- Measuring range 10 mm
- Scale division 0.01 mm
- Clamping shank Ø 8 mm h6
- Metal casing matt-chromium finished Ø 55 mm
- according to DIN 878

Application

- for measuring and presetting tools and jigs on machines



Digital dial gauge

Item no. 11336

Price 69.00 € | 82.11 € incl. VAT

- Measuring range 10 mm
- Reading accuracy 0.01 mm
- Clamping shank Ø 8 mm h6
- 4-digit LCD display
- Zero position button
- reversible metric/inch
- Metal casing matt-chromium finished Ø 58 mm

Application

- for measuring and presetting tools and jigs on machines



Magnetic measuring stand

Item no. 11333

Price 20.00 € | 23.80 € incl. VAT

- mechanical clamping of the magnetic base
- the magnet can be switched on and off
- Holding force 50 kg
- Magnet adheres to the ground v-block base and the ground back
- Magnetic base W50 x D63 x H55 mm
- adjustable to many positions
- with fine adjustment
- Location hole Ø 8 mm
- Measuring column Ø 12 x 160 mm
- Transverse arm Ø 10 x 150 mm

Application

- for measuring and presetting tools and jigs on lathes, milling machines, coordinate tables, table drilling machines, pillar drilling machines, column drilling machines
- used for the testing of brake disks and wheel hubs for lateral runout



Magnetic measuring stand with central clamping

Item no. 11332

Price 39.90 € | 47.48 € incl. VAT

- central clamping of the measuring column enabling easy and fast fixing in almost every position
- mechanical clamping of the magnetic base
- the magnet can be switched on and off
- Holding force 80 kg
- Magnet adheres to the ground v-block base and the ground back
- Magnetic base B50 x T63 x H55 mm
- Articulated arm is fitted with a ball joint and can be rotated in all directions
- Location hole Ø 8 mm
- Total height 340 mm

Application

- for measuring and presetting tools and jigs on lathes, milling machines, coordinate tables, table drilling machines, pillar drilling machines, column drilling machines
- used for the testing of brake disks and wheel hubs for lateral runout



Magnetic measuring stand with dial gauge

Item no. 11335

Price 36.00 € | 42.84 € incl. VAT

included in delivery

- Magnetic measuring stand
description item no. 11333 on page 207
- Dial gauge
description item no. 11334 on page 206



Magnetic measuring stand with dial gauge and dial test indicator

Item no. 13162

Price 75.00 € | 89.25 € incl. VAT

included in delivery

- Magnetic measuring stand
description item no. 11333 on page 207
- Dial gauge
description item no. 11334 on page 206
- Dial test indicator
description item no. 13160 on page 206



Magnetic measuring stand with dial test indicator

Item no. 13161

Price 57.00 € | 67.83 € incl. VAT

included in delivery

- Magnetic measuring stand
description item no. 11333 on page 207
- Dial test indicator
description item no. 13160 on page 206



Magnetic measuring stand with central clamping with dial gauge

Item no. 11338

Price 55.00 € | 65.45 € incl. VAT

included in delivery

- Magnetic measuring stand with central clamping
description item no. 11332 on page 207
- Dial gauge
description item no. 11334 on page 206



Micrometer

- Item no. 11301
 Price 15.00 € | 17.85 € incl. VAT
- Measuring range 0 - 25 mm
 - Reading accuracy 0.01 mm
 - according to DIN 863
 - hardened and ground measuring surfaces



Micrometer set

- Item no. 11317
 Price 79.90 € | 95.08 € incl. VAT
- 4 pieces
 - Measuring ranges 0 - 25, 25 - 50, 50 - 75 and 75 - 100 mm
 - Reading accuracy 0.01 mm
 - according to DIN 863
 - hardened and ground measuring surfaces
 - using ground check gauges



Digital micrometers

- 5-digit LCD display
- Reading accuracy 0.001 mm
- reversible metric/inch
- according to DIN 863
- hardened and ground measuring surfaces
- using ground check gauges

Measuring range	Item no.	Price
0 - 25 mm	11392	65.00 € 77.35 € incl. VAT
25 - 50 mm	11393	75.00 € 89.25 € incl. VAT



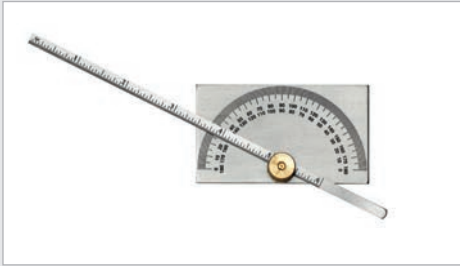
Holder for micrometer

- Item no. 11304
 Price 19.90 € | 23.68 € incl. VAT
- suitable for micrometers from 0 to 100 mm



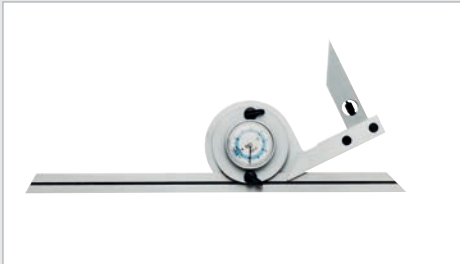
Straight edge

- Item no. 11311
 Price 30.00 € | 35.70 € incl. VAT
- 200 mm
 - Cross section 28 x 7 mm
 - Measuring edge hardened and ground
 - with isolation protection



Vernier protractor

- Item no. 13105
 Price 12.50 € | 14.88 € incl. VAT
- Rail length 150 mm
 - Measuring range 0 - 180°
 - Reading accuracy 1°
 - Clamp for rail and angle adjustment



Universal vernier protractor

- Item no. 11310
 Price 54.90 € | 65.33 € incl. VAT
- Rail length 300 mm
 - Measuring range 360°
 - easy read off 4 x 90°
 - Readout 5 min
 - hardened and ground
 - with additional angle 45° and 60° chamfered, reversible and slideable
 - Clamp for rail and angle adjustment

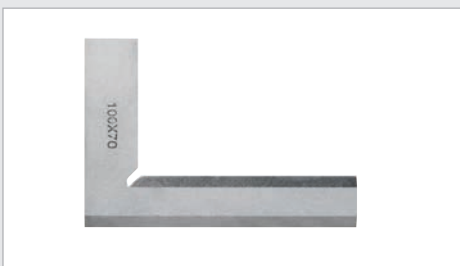


Universal angle plate set

- Item no. 11347
 Price 29.00 € | 34.51 € incl. VAT
- 30° - 45° - 60° - 90°
 - Hole Ø 8 mm
 - Width 6.35 mm
 - hardened and ground

Application

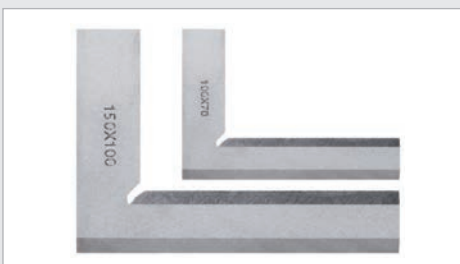
- for setting up, adjusting and measuring tools



Squares

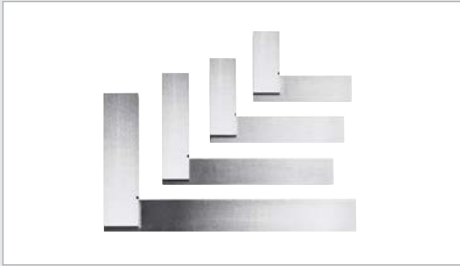
- hardened and ground
- 2 wedge-shaped knife measurement edges

Leg length	Item no.	Price
100 x 70 mm	13140	22.00 € 26.18 € incl. VAT
150 x 100 mm	13141	30.00 € 35.70 € incl. VAT



Square set

- Item no. 13143
 Price 50.00 € | 59.50 € incl. VAT
- 2 pieces
- included in delivery
- Square 100 x 70 mm
 - Square 150 x 100 mm
- hardened and ground
 2 wedge-shaped knife measurement edges

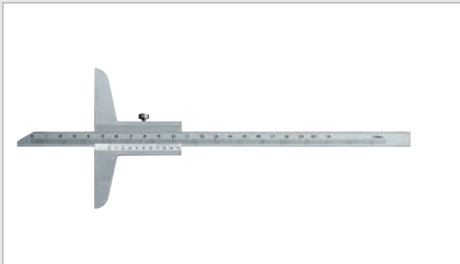


Try-square set

Item no. 13130

Price 39.00 € | 46.41 € incl. VAT

- 4 piece
- 70 x 50, 95 x 60, 120 x 80 and 175 x 100 mm
- hardened and ground



Vernier depth gauge

Item no. 11323

Price 28.00 € | 33.32 € incl. VAT

- Measuring range 200 mm
- Reading accuracy 0.05 mm
- Rest 100 mm
- with locking screw
- hardened and ground



Digital vernier depth gauge

Item no. 11327

Price 29.90 € | 35.58 € incl. VAT

- Measuring range 150 mm
- 5-digit LCD display
- Reading accuracy 0.01 mm
- reversible metric/inch
- Rest 100 mm
- with locking screw
- hardened and ground



Depth micrometer

Item no. 11324

Price 65.00 € | 77.35 € incl. VAT

- Measuring range 100 mm
- Reading accuracy 0.01 mm
- 4 replaceable inserts \varnothing 3 mm length 25 - 50 - 75 and 100 mm
- with locking screw and ratchet
- hardened and ground measuring surfaces



Telescopic gauge set

Item no. 11315
Price 49.00 € | 58.31 € incl. VAT

- 6 piece
- Measuring range 8-12.7, 12.7-19, 19-32, 32-54, 54-90, 90-150 mm
- hardened and ground

Application

- for internal measurements such as, e.g. bores and bearing seats
- The two feelers are expanded by pressure springs. The internal dimension of the bore is taken. The actual measurement is taken at both ends of the feelers by using a micrometer.



Bore gauge

Item no. 13121
Price 149.00 € | 177.31 € incl. VAT

- 15 piece
- Measuring range 20 - 200 mm
- Dial gauge
- 4 replaceable gauging pins - 4 extension rods
- Reading accuracy 0.01 mm
- hardened and ground measuring surfaces
- carbide-tipped measuring surfaces

Application

- for internal measurements such as, e.g. bores and bearing seats



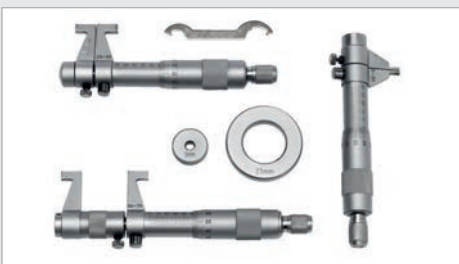
Inside micrometer set

Item no. 11316
Price 110.00 € | 130.90 € incl. VAT

- 11 pieces
- Measuring range 50 - 600 mm
- Micrometer 50 - 63 mm
with 6 extensions 13 - 25 - 50 - 100 - 150 - 200 mm
- Reading accuracy 0.01 mm
- Control gauge 50 mm
- hardened and ground measuring surfaces

Application

- for internal measurement such as, e.g. bores and bearing seats



Two point inside micrometer set

Item no. 13114
Price 150.00 € | 178.50 € incl. VAT

- 3 inside micrometers with measuring range 5 - 30, 25 - 50 mm and 50 - 75 mm
- Reading accuracy 0.01 mm
- according to DIN 863
- Measuring spindle 0.5 mm upwards
- hardened and ground measuring surfaces
- with locking screw and ratchet



Two point inside micrometers

- Reading accuracy 0.01 mm
- according to DIN 863
- Measuring spindle 0.5 mm upwards
- hardened and ground measuring surfaces
- with locking screw and ratchet
- carbide-tipped measuring surfaces

Measuring range	Item no.	Price
5 - 30 mm	13115	45.00 € 53.55 € incl. VAT
25 - 50 mm	13116	55.00 € 65.45 € incl. VAT
50 - 75 mm	13117	60.00 € 71.40 € incl. VAT
75 - 100 mm	13118	70.00 € 83.30 € incl. VAT



Gauge block set

Item no. 11345
Price 349.00 € | 415.31 € incl. VAT

- 87 pieces
- stainless, hardened and lapped
- made of hardened special steel with particular heat treatment
- individual blocks
 - 1.001-1.009 mm - 9 scale divisions - by 0.001 mm
 - 1.01-1.49 mm - 49 scale divisions - by 0.01 mm
 - 0.5-9.5 mm - 19 scale divisions - by 0.5 mm
 - 10-100 mm - 10 scale divisions - by 10.0 mm

Application

- for checking check gauges and check blocks
- for setting length measuring equipment
- for direct measurement and for setting dial comparators, gauges, measuring devices and tool machines



V-block adjustable

Item no. 11350
Price 65.00 € | 77.35 € incl. VAT

- 32 x 25 x 75 mm
- with scale and nonius
- Swivel range 0-60° and 0-30°
- hardened and ground

Application

- used as an underlay in the vice for machining workpieces under different working levels



Universal angle block set

Item no. 11340

Price 74.90 € | 89.13 € incl. VAT

- 9 pieces
- 0.5°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 30°
- hardened and ground

Application

- used as an underlay in the vice or under workpieces



V-block pairs

- PU: 2 pieces
- hardened V-blocks with clamping bracket
- all sides ground
- machined in pairs

Application

- for clamping, scribing, testing and drilling

Dimensions	Item no.	Price
44 x 41 x 35 mm clamping Ø up to 30 mm	11305	39.00 € 46.41 € incl. VAT
70 x 45 x 41 mm clamping Ø up to 42 mm	11308	49.00 € 58.31 € incl. VAT



V-block set

Item no. 11307

Price 42.00 € | 49.98 € incl. VAT

- PU: 2 pieces
- 1 V-block 44 x 41 x 35 mm clamping Ø up to 30 mm
- 1 V-block 70 x 45 x 41 mm clamping Ø up to 42 mm
- hardened V-blocks with clamping bracket
- all sides ground

Application

- for clamping, scribing, testing and drilling



Single V-blocks

- PU: 1 piece
- hardened V-block with clamping bracket
- all sides ground

Application

- for clamping, scribing, testing and drilling

Dimensions	Item no.	Price
44 x 41 x 35 mm clamping Ø up to 30 mm	11306	19.00 € 22.61 € incl. VAT
70 x 45 x 41 mm clamping Ø up to 42 mm	11309	24.00 € 28.56 € incl. VAT



Edge finder

Item no. 11330

Price 19.00 € | 22.61 € incl. VAT

- Clamping shank \varnothing 10 mm
- Total length approx. 85 mm
- Probe \varnothing 10 mm
- Alignment accuracy 0.01 mm
- hardened and ground

Application

- used for starting, i.e. to find position on the workpiece reference surfaces or edges



Edge finder with centering point

Item no. 11329

Price 19.00 € | 22.61 € incl. VAT

- Clamping shank \varnothing 10 mm
- Total length approx. 75 mm
- Probe \varnothing 4 mm and conical
- Alignment accuracy 0.01 mm
- hardened and ground

Application

- used for locating the center of a bore



Edge finder set

Item no. 11331

Price 38.00 € | 45.22 € incl. VAT

- 5 pieces
- Clamping shank \varnothing 10 and 12 mm
- Probe \varnothing 4, 10 and 12 mm and conical
- Alignment accuracy 0.01 mm
- hardened and ground

Application

- used for starting, i.e. to find position on the workpiece reference surfaces or edges



2D edge finder with LED display

Item no. 13172

Price 65.00 € | 77.35 € incl. VAT

- LED display
- acoustic signal sound with workpieces made of metal
- hardened probe ball \varnothing 10 mm
- Clamping shank \varnothing 20 mm
- Total length approx. ca. 100 mm
- Alignment accuracy 0.01 mm

Application

- used for starting, i.e. to find position on the workpiece reference surfaces or edges



Machine level

Item no. 11353

Price 79.90 € | 95.08 € incl. VAT

- Length 200 mm
- 0.02 mm/m accuracy
- with longitudinal and transverse lobes
- ground seating surface

Application

- used to level up horizontal surfaces and arbors without time-consuming adjustments



Frame level

Item no. 11354

Price 85.90 € | 102.22 € incl. VAT

- Length 200 mm
- 0.02 mm/m accuracy
- 2 prismatic sides - 1 flat side
- with longitudinal and transverse lobes
- ground seating surface

Application

- used to level up horizontal surfaces and arbors without time-consuming adjustments



Measurement and test board

Item no. 11395

Price 179.00 € | 213.01 € incl. VAT

- 450 x 450 x 75 mm
- black granite
- ground and lapped
- DIN 876/1
- without measuring tools
- Weigth without packaging 46.5 kg

Application

- suitable for marking, measuring and adjusting



Machine vice with quick adjustment

Item no. 40521

Price 15.00 € | 17.85 € incl. VAT

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpieces
- Trapezoidal thread spindle

Jaw width	Clamping width	Jaw height	Weight w/o pack.
60 mm	70 mm	28 mm	0.4 kg



Machine vice with quick adjustment

Item no. 40523

Price 25.00 € | 29.75 € incl. VAT

- with double pillar guide
- with rubber protective jaws
- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpieces
- Trapezoidal thread spindle

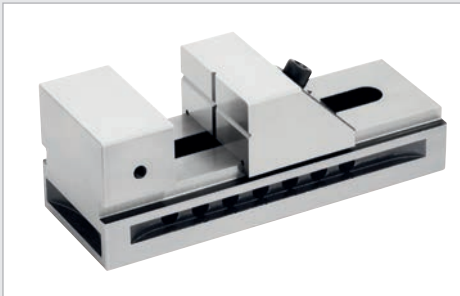
Jaw width	Clamping width	Jaw height	Weight w/o pack.
100 mm	100 mm	35 mm	1.6 kg



Machine vices made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpieces
- Trapezoidal thread spindle

Item no.	40526	40527	40528
Price without VAT	29.00 €	39.00 €	49.00 €
Price incl. VAT	34.51€	46.41 €	58.31 €
Jaw width	85 mm	100 mm	125 mm
Clamping width	70 mm	100 mm	125 mm
Jaw height	22 mm	29 mm	29 mm
Weight without packaging	2.4 kg	3.3 kg	4.6 kg



No. 40588

Toolmakers vices

- made of hardened steel
- all sides ground
- with prism jaw
- Workpiece machining on 4 different sides
- Pull-down clamping system for high accuracy
- Accuracy 0.005 mm

Item no.	40588	40590	40591	40592	40594
Price without VAT	36.00 €	62.00 €	72.00 €	105.00 €	175.00 €
Price incl. VAT	42.84 €	73.78 €	85.68 €	124.95 €	208.25 €
Jaw width	25 mm	48 mm	63 mm	88 mm	125 mm
Clamping width	20 mm	70 mm	87 mm	125 mm	160 mm
Jaw height	9 mm	25 mm	32 mm	40 mm	50 mm
Total length	65 mm	140 mm	175 mm	220 mm	285 mm
Total height	29 mm	50 mm	63 mm	85 mm	100 mm
Weight w/o pack.	0.2 kg	1.5 kg	2.8 kg	7.1 kg	14.7 kg



Sine vices swiveling

- made of hardened steel
- all sides ground
- with prism jaw
- swiveling by 45°
- Pull-down clamping system for high accuracy
- Accuracy 0.005 mm

Item no.	40709	40710
Price without VAT	114.00 €	135.00 €
Price incl. VAT	135.66 €	160.65 €
Jaw width	50 mm	73 mm
Clamping width	65 mm	105 mm
Jaw height	25 mm	35 mm
Total length	140 mm	190 mm
Total height	80 mm	103 mm
Weight without packaging	2.7 kg	6.5 kg



Machine vices

- made of hardened steel
- all sides ground
- with prism jaw
- Workpiece machining on 4 different sides
- Accuracy 0.005 mm

Item no.	40596	40597	40598
Price without VAT	73.00 €	99.00 €	119.00 €
Price incl. VAT	86.87 €	117.81 €	141.61 €
Jaw width	50 mm	73 mm	88 mm
Clamping width	67 mm	100 mm	125 mm
Jaw height	25 mm	35 mm	40 mm
Total length	155 mm	210 mm	250 mm
Total height	50 mm	71 mm	88 mm
Weight without packaging	2.1 kg	5.5 kg	9.0 kg



1-axis machine vice original Vertex

Item no. 40540

Price 149.00 € | 177.31 € incl. VAT

- made of high-quality cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 1 axis with degree scale
- rotating by 360°

Jaw width	Clamping width	Jaw height	Total length	Total height	Weight w/o pack.
100 mm	65 mm	36 mm	290 mm	115 mm	9.4 kg



Single prism jaw

Item no. 405401 - for item no. 40540

Price 55.00 € | 65.45 € incl. VAT

- with horizontal and vertical v-block for clamping round material

**1-axis machine vice original Vertex**

Item no. 40541

Price 195.00 € | 232.05 € incl. VAT

- made of high-quality cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 1 axis with degree scale
- rotating by 360°

Jaw width	Clamping width	Jaw height	Total length	Total height	Weight w/o pack.
125 mm	85 mm	38 mm	365 mm	135 mm	15.6 kg

**Single prism jaw**

Item no. 405411 - for item no. 40541

Price 55.00 € | 65.45 € incl. VAT

- with horizontal and vertical v-block for clamping round material

**1-axis machine vice**

Item no. 40585

Price 87.00 € | 103.53 € incl. VAT

- made of high-quality cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 1 axis with degree scale
- rotating by 360°

Jaw width	Clamping width	Jaw height	Total length	Total height	Weight w/o pack.
50 mm	50 mm	25 mm	195 mm	90 mm	3.3 kg

**2-axes machine vice**

Item no. 40599

Price 485.00 € | 577.15 € incl. VAT

- made of hardened steel
- all sides ground
- 2 axes with degree scales
- rotating by 360°
- ± 45° swiveling
- Accuracy 0.005 mm

Jaw width	Clamping width	Jaw height	Total length	Total height	Weight w/o pack.
70 mm	80 mm	30 mm	200 mm	145 mm	11.2 kg



2-axes machine vices

- made of high-quality gray cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 2 axes with degree scales
- rotating by 360°
- 90° horizontal-vertical swiveling

Item no.	40580	40581
Price without VAT	115.00 €	164.00 €
Price incl. VAT	136.85 €	195.16 €
Jaw width	50 mm	75 mm
Clamping width	50 mm	75 mm
Jaw height	23 mm	32 mm
Total length	200 mm	270 mm
Total height	90 mm	120 mm
Weight without packaging	3.5 kg	9.1 kg



3-axes machine vices

- made of high-quality cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 3 axes with degree scales
- rotating by 360°
- 90° horizontal-vertical swiveling
- 45° left-right swiveling each

Item no.	40567	40568	40569
Price without VAT	139.00 €	199.00 €	265.00 €
Price incl. VAT	165.41 €	236.81 €	315.35 €
Jaw width	50 mm	75 mm	100 mm
Clamping width	50 mm	75 mm	100 mm
Jaw height	25 mm	32 mm	40 mm
Total length	190 mm	260 mm	330 mm
Total height	120 mm	165 mm	195 mm
Weight without packaging	4.1 kg	10.9 kg	21.7 kg



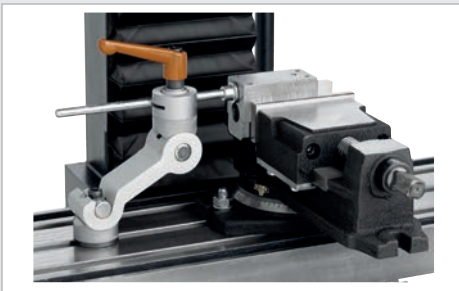
3-axes articulated vice

Item no. 40565

Price 135.00 € | 160.65 € incl. VAT

- made of high-quality cast iron
- with adjustable guides
- hardened and ground steel jaws
- ground guiding surface
- 3 axes with degree scales
- rotating by 360°
- 90° horizontal-vertical swiveling
- 45° left-right swiveling each
- the vice can be inclined or swiveled as required so that any position to the machine can be taken up

Jaw width	Clamping width	Jaw height	Total length	Total height	Weight w/o pack.
50 mm	50 mm	22 mm	170 mm	125 mm	3.8 kg



Work stop tool original Vertex

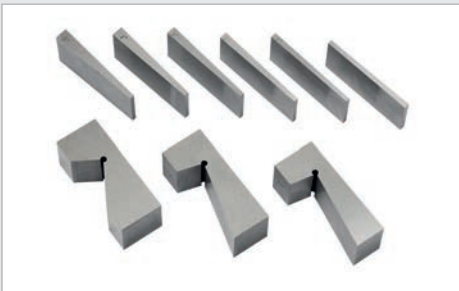
Item no. 40810

Price 149.00 € | 177.31 € incl. VAT

- anodized
- 5 axes infinitely rotatable and slidable
- rotating by 360°

Application

- for use on drilling and milling machines
- can be used as an inner and outer stop



Universal angle block set

Item no. 11340

Price 74.90 € | 89.13 € incl. VAT

- 9 pieces
- 0.5°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 30°
- hardened and ground

Application

- used as an underlay in the vice or under workpieces



V-block adjustable

Item no. 11350

Price 65.00 € | 77.35 € incl. VAT

- 32 x 25 x 75 mm
- with scale and vernier
- Swivel range 0-60° and 0-30°
- hardened and ground

Application

- used as an underlay in the vice for machining workpieces with different working angles



Parallels 6 pairs

Item no. 11659

Price 69.90 € | 83.18 € incl. VAT

- 6 pairs
- one pair each (dimensions in cross section):
4 x 10 - 4 x 15 - 4 x 20 - 4 x 25 - 4 x 30 - 4 x 35 mm
- Accuracy 0.01 mm
- Total length 120 mm
- hardened and ground

Application

- used as parallel support to fix workpieces in machine vices and as stops
- they are indispensable for parallel supporting of workpieces in machine vices or surface plates



Parallels 9 pairs

Item no. 11660

Price 99.00 € | 117.81 € incl. VAT

- 9 pairs
- one pair each (dimensions in cross section):
8.5 x 14 - 8.5 x 16 - 8.5 x 20 - 8.5 x 24 - 8.5 x 30 mm
8.5 x 32 - 8.5 x 36 - 8.5 x 40 and 8.5 x 44 mm
- Accuracy 0.01 mm
- Total length 150 mm
- hardened and ground

Application

- used as parallel support to fix workpieces in machine vices and as stops
- they are indispensable for parallel supporting of workpieces in machine vices or surface plates



Wave-shaped parallels

Item no. 11661

Price 40.00 € | 47.60 € incl. VAT

- 8 pairs
- 2 mm ascending from 9-23 mm, 0.5 mm thick
- Accuracy 0.01 mm
- Total length 110 mm
- hardened and ground

Application

- help to save time when clamping workpieces for grinding, milling, drilling etc.
- no swarfs remain on the contact surface



Step clamp sets

- 58 pieces
- included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts

Application

- for clamping the workpieces
- for all tables with T-slots such as milling table, drilling table, cross table, clamping table, coordinate table etc.

10 mm T-slot width and M8 thread suitable for

- WABECO drilling milling stands
- WABECO coordinate tables
- Dividing attachments Ø 110 and 150 mm

12 mm T-slot width and M10 thread suitable for

- WABECO milling machines

for T-slot width	Thread	Item no.	Price
10 mm	M 8	24417	58.00 € 69.02 € incl. VAT
12 mm	M 10	24413	59.00 € 70.21 € incl. VAT
14 mm	M 12	24418	69.00 € 82.11 € incl. VAT
16 mm	M 14	24419	89.00 € 105.91 € incl. VAT



Step clamp sets

- 10 pieces
- included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs

Application

- for clamping the workpieces
- for all tables with T-slots such as milling table, drilling table, cross table, clamping table, coordinate table etc.

10 mm T-slot width and M8 thread suitable for

- WABECO drilling milling stands
- WABECO coordinate tables
- Dividing attachments Ø 110 and 150 mm

12 mm T-slot width and M10 thread suitable for

- WABECO milling machines

for T-slot width	Thread	Item no.	Price
10 mm	M 8	24412	18.00 € 21.42 € incl. VAT
12 mm	M 10	24415	18.00 € 21.42 € incl. VAT



T-slot nuts

PU: 4 pieces

10 mm T-slot width and M8 thread suitable for

- WABECO drilling milling stands
- WABECO coordinate tables
- Dividing attachments Ø 110 and 150 mm

12 mm T-slot width and M10 thread suitable for

- WABECO milling machines

for T-slot width	Thread	Item no.	Price
10 mm	M 8	24429	8.00 € 9.52 € incl. VAT
12 mm	M 10	24411	8.00 € 9.52 € incl. VAT

Clamping angle 90°

- Cast version with lateral reinforcing ribs
- robust design
- both clamping surfaces are ground

Application

- for drilling, milling and marking work
- for clamping on the machine table of drilling machines, column drilling machines, table drilling machines, pillar drilling machines, milling machines etc. to clamp the workpieces and set-up at an angle to the vertical
- on marking tables, measuring tables, straightening tables, welding tables etc. to position workpieces vertically



Item no. 13500
Price 49.00 € | 58.31 € incl. VAT

Dimensions (W x D x H)	Longitudinal slots	Transverse slots	Weight w/o pack.
115 x 90 x 75 mm	3 x 12 mm	1 x 14 mm	2.1 kg



Item no. 13501
Price 69.00 € | 82.11 € incl. VAT

Dimensions (W x D x H)	Longitudinal slots	Transverse slots	Weight w/o pack.
150 x 130 x 115 mm	4 x 14 mm	4 x 14 mm	4.3 kg



Item no. 13502
Price 99.00 € | 117.81 € incl. VAT

Dimensions (W x D x H)	Longitudinal slots	Transverse slots	Weight w/o pack.
204 x 155 x 120 mm	4 x 18 mm	6 x 18 mm	6.7 kg



Parallel vice

Item no. 40503
 Price 15.00 € | 17.85 € incl. VAT

- rotating
- with steel jaws
- Trapezoidal thread screw
- made of gray cast iron
- Table clamp

Jaw width	Clamping width	Clamping depth	Clamping width of the clamp	Weight w/o pack.
50 mm	50 mm	32 mm	50 mm	1.4 kg



Workbench vices

- free of play adjustable guides
- hardened and ground steel jaws
- Groove for removal of swarfs
- large, ground anvil
- with pipe gripping jaws from jaw width 100 to 175 mm

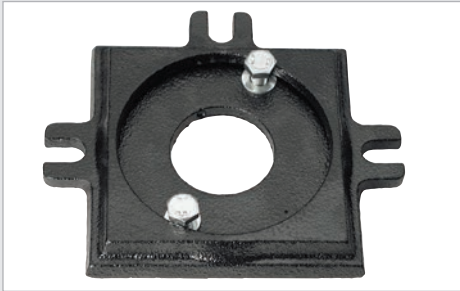
Item no.	40101	40102	40103	40104	40105
Price without VAT	42.00 €	47.00 €	69.00 €	86.00 €	93.00 €
Price incl. VAT	49.98 €	55.93 €	82.11 €	102.34 €	110.67 €
Jaw width	75 mm	100 mm	125 mm	150 mm	175 mm
Clamping width	75 mm	100 mm	125 mm	150 mm	175 mm
Clamping depth	45 mm	53 mm	67 mm	87 mm	87 mm
Anvil	70x45 mm	88x59 mm	116x80 mm	132x90 mm	132x90 mm
Weight w/o pack.	2.7 kg	5.2 kg	11.1 kg	15.7 kg	16.2 kg



Height adjuster for workbench vices

Item no. 40118
 Price 86.00 € | 102.34 € incl. VAT

- suitable for workbench vices item no. 40102, 40103 and 40104
- rotating by 360°
- Height adjustment by 300 mm
- Clamping plate 130 x 130 mm
- Clamping bore Ø 13 mm
- Center distance clamping bore 78 - 108 mm
- removeable lift insert with pressure spring
the spring is used to balance the weight of the vice
- Working height can be adapted quickly and easily to suit any person's height
- suitable for all workbenches



Swivel base for workbench vices

Item no. 40112 - suitable for workbench vice item no. 40102

Price 24.00 € | 28.56 € incl. VAT

Item no. 40113 - suitable for workbench vice item no. 40103

Price 26.00 € | 30.94 € incl. VAT

- the vice can be rotated by 360° on this swivel base
- can be fixed in any position



Plastic pipe and protective jaws

- PU: 2 pieces
- suitable for all types of vices
- with magnetic adhesion
- with horizontal and vertical v-block for round material

for jaw width	Item no.	Price
100 mm	40612	7.60 € 9.04 € incl. VAT
125 mm	40613	8.70 € 10.35 € incl. VAT
150 mm	40614	9.60 € 11.42 € incl. VAT



Aluminum pipe and protective jaws

- PU: 2 pieces
- suitable for all types of vices
- with horizontal v-block for round material

for jaw width	Item no.	Price
100 mm	40122	6.70 € 7.97 € incl. VAT
125 mm	40123	7.70 € 9.16 € incl. VAT
150 mm	40124	8.40 € 10.00 € incl. VAT



Workbench vice 100 mm with swivel base

Item no. 40136

Price 71.00 € | 84.49 € incl. VAT

included in delivery

- Workbench vice with jaw width 100 mm
technical data can be found on page 226
- Swivel base for 100 mm
the vice can be rotated by 360° on this swivel base
can be fixed in any position



Workbench vice 125 mm with swivel base

Item no. 40138

Price 98.00 € | 116.62 € incl. VAT

included in delivery

- Workbench vice with jaw width 125 mm
technical data can be found on page 226
- Swivel base for 125 mm
the vice can be rotated by 360° on this swivel base
can be fixed in any position



Workbench vice 100 mm with aluminum and plastic pipe and protective jaws 100 mm

Item no. 40130

Price 57.00 € | 67.83 € incl. VAT

included in delivery

- Workbench vice with jaw width 100 mm
technical data can be found on page 226
- Aluminum pipe and protective jaws for 100 mm
with horizontal v-block for round material
- Plastic pipe and protective jaws for 100 mm
with magnetic adhesion
with horizontal and vertical v-block for round material



Workbench vice 125 mm with aluminum and plastic pipe and protective jaws 125 mm

Item no. 40131

Price 81.00 € | 96.39 € incl. VAT

included in delivery

- Workbench vice with jaw width 125 mm
technical data can be found on page 226
- Aluminum pipe and protective jaws for 125 mm
with horizontal v-block for round material
- Plastic pipe and protective jaws for 125 mm
with magnetic adhesion
with horizontal and vertical v-block for round material



Workbench vice 150 mm with aluminum and plastic pipe and protective jaws 150 mm

Item no. 40132

Price 99.00 € | 117.81 € incl. VAT

included in delivery

- Workbench vice with jaw width 150 mm
technical data can be found on page 226
- Aluminum pipe and protective jaws for 150 mm
with horizontal v-block for round material
- Plastic pipe and protective jaws for 150 mm
with magnetic adhesion
with horizontal and vertical v-block for round material



Dividing attachment Ø 80 mm with 4-jaw lathe chuck Ø 70 mm

Item no. 11590

Price 189.00 € | 224.91 € incl. VAT

- 2 pieces

included in delivery

- Dividing attachment
table Ø 80 mm
true running accuracy 0.08 mm
vertical and horizontal clamping options
- 4-jaw lathe chuck Ø 70 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws

Technical data

- for the dividing attachment can be found on page 236



Dividing attachment Ø 100 mm

Item no. 11500

Price 145.00 € | 172.55 € incl. VAT

- Table Ø 100 mm
- True running accuracy 0.08 mm
- vertical and horizontal clamping options
- Indexing disks and tailstock are not available

Technical data

- can be found on page 236



Dividing attachments Ø 100 mm with lathe chuck and mounting flange

- 3 pieces

included in delivery

- Dividing attachment
table Ø 100 mm
true running accuracy 0.08 mm
vertical and horizontal clamping options
indexing disks and tailstock are not available
- Lathe chuck Ø 80 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment

Technical data

- for the dividing attachment can be found on page 236
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171

Lathe chuck	Item no.	Price
with 3-jaw lathe chuck	11525	269.00 € 320.11 € incl. VAT
with 4-jaw lathe chuck	11513	299.00 € 355.81 € incl. VAT



Dividing attachment Ø 110 mm

Item no. 11559

Price 179.00 € | 213.01 € incl. VAT

- Table Ø 110 mm
- **True running accuracy 0.04 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- can be found on page 236



Dividing attachments Ø 110 mm with lathe chuck and mounting flange

- 3 pieces

included in delivery

- Dividing attachment
table Ø 110 mm
true running accuracy 0.04 mm
vertical and horizontal clamping options
- Lathe chuck Ø 80 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- for the dividing attachment can be found on page 236
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171

Lathe chuck	Item no.	Price
with 3-jaw lathe chuck	11557	315.00 € 374.85 € incl. VAT
with 4-jaw lathe chuck	11558	360.00 € 428.40 € incl. VAT



Dividing attachment Ø 110 mm original Vertex

Item no. 11501
Price 279.00 € | 332.01 € incl. VAT

- Table Ø 110 mm
- **True running accuracy 0.02 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- can be found on page 237



Dividing attachments Ø 110 mm with lathe chuck and mounting flange

- 3 pieces

included in delivery

- Dividing attachment original Vertex table Ø 110 mm
true running accuracy 0.02 mm
vertical and horizontal clamping options
- Lathe chuck Ø 80 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- for the dividing attachment can be found on page 237
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171

Lathe chuck	Item no.	Price
with 3-jaw lathe chuck	11516	415.00 € 493.85 € incl. VAT
with 4-jaw lathe chuck	11506	460.00 € 547.40 € incl. VAT



Dividing attachments swiveling

- **True running accuracy 0.04 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- can be found on page 237

Dividing attachments	Item no.	Price
Table Ø 110 mm	11505	499.00 € 593.81 € incl. VAT
Table Ø 150 mm	11512	579.00 € 689.01 € incl. VAT



Dividing attachment Ø 150 mm

Item no. 11560

Price 219.00 € | 260.61 € incl. VAT

- Table Ø 150 mm
- **True running accuracy 0.04 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- can be found on page 237



Dividing attachments Ø 150 mm with lathe chuck and mounting flange

- 3 pieces

included in delivery

- Dividing attachment
table Ø 150 mm
true running accuracy 0.04 mm
vertical and horizontal clamping options
- 3- or 4-jaw lathe chuck Ø 100 or 125 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- for the dividing attachment can be found on page 237
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171

Lathe chuck	Item no.	Price
with 3-jaw chuck Ø 100 mm	11580	360.00 € 428.40 € incl. VAT
with 3-jaw chuck Ø 125 mm	11581	380.00 € 452.20 € incl. VAT
with 4-jaw chuck Ø 100 mm	11582	410.00 € 487.90 € incl. VAT
with 4-jaw chuck Ø 125 mm	11583	414.00 € 492.66 € incl. VAT



Dividing attachment Ø 150 mm with indexing disks

Item no. 11566

Price 293.00 € | 348.67 € incl. VAT

- 2 pieces

included in delivery

- Dividing attachment
table Ø 150 mm
true running accuracy 0.04 mm
vertical and horizontal clamping options
- Indexing disks for indirect indexing

Technical data

- for the dividing attachment can be found on page 237
- for indexing disks can be found on page 234



Dividing attachment Ø 150 mm original Vertex

Item no. 11510

Price 279.00 € | 332.01 € incl. VAT

- Table Ø 150 mm
- **True running accuracy 0.02 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- can be found on page 237



Dividing attachments Ø 150 mm with lathe chuck and mounting flange

- 3 pieces

included in delivery

- Dividing attachment original Vertex table Ø 150 mm
true running accuracy 0.02 mm
vertical and horizontal clamping options
- 3- or 4-jaw lathe chuck Ø 100 or 125 mm
centrally clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment

suitable accessories

- Indexing disks item no. 11514 on page 234
- Tailstock item no. 11565 on page 234

Technical data

- for the dividing attachment can be found on page 237
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171

Lathe chuck	Item no.	Price
with 3-jaw chuck Ø 100 mm	11519	425.00 € 505.75 € incl. VAT
with 3-jaw chuck Ø 125 mm	11507	445.00 € 529.55 € incl. VAT
with 4-jaw chuck Ø 100 mm	11508	475.00 € 565.25 € incl. VAT
with 4-jaw chuck Ø 125 mm	11509	479.00 € 570.01 € incl. VAT



Dividing attachment Ø 150 mm with indexing disks

Item no. 11518

Price 350.00 € | 416.50 € incl. VAT

- 2 pieces

included in delivery

- Dividing attachment original Vertex table Ø 150 mm
true running accuracy 0.02 mm
vertical and horizontal clamping options
- Indexing disks for indirect indexing

Technical data

- for the dividing attachment can be found on page 237
- for indexing disks can be found on page 234



Dividing attachments Ø 150 mm with indexing disks, lathe chuck and mounting flange

- 4 pieces
- included in delivery
- Dividing attachment original Vertex table Ø 150 mm
true running accuracy 0.02 mm
vertical and horizontal clamping options
- 3- or 4-jaw lathe chuck Ø 100 or 125 mm
centrically clamping
with turning and drilling jaws, clamping key and fastening screws
- Mounting flange
for mounting the lathe chuck on dividing attachment
- Indexing disks for indirect indexing

suitable accessories

- Tailstock item no. 11565 on page 234

Technical data

- for the dividing attachment can be found on page 237
- for the 3-jaw lathe chuck can be found on page 170
- for the 4-jaw lathe chuck can be found on page 171
- for indexing disks can be found on page 234

Lathe chuck	Item no.	Price
with 3-jaw chuck Ø 100 mm	11520	490.00 € 583.10 € incl. VAT
with 3-jaw chuck Ø 125 mm	11523	510.00 € 606.90 € incl. VAT
with 4-jaw chuck Ø 100 mm	11522	540.00 € 642.60 € incl. VAT
with 4-jaw chuck Ø 125 mm	11524	544.00 € 647.36 € incl. VAT



Indexing disks for indirect indexing

Item no. 11514
Price 79.00 € | 94.01 € incl. VAT

- **for dividing attachments with table Ø 110 and 150 mm**
- for degree and indirect indexing
- included in delivery are 3 indexing disks and 1 indexing crank
- Outer Ø 100 mm
- Number of bores
indexing disk A: 15, 16, 17, 18, 19, 20
indexing disk B: 21, 23, 27, 29, 31, 33
indexing disk C: 37, 39, 41, 43, 47, 49

Application

- e.g. for drill patterns and gear wheels



Tailstock with height adjustment

Item no. 11565
Price 105.00 € | 124.95 € incl. VAT

- **for dividing attachments with table Ø 110 and 150 mm**
- with center point for supporting long workpieces
- Height adjustment from 80-110 mm
- Adjustability of center point 15 mm
- Basic dimension 130 x 95 mm



Dividing attachment Ø 200 mm

Item no. 11502

Price 399.00 € | 474.81 € incl. VAT

- Table Ø 200 mm
- **True running accuracy 0.04 mm**
- vertical and horizontal clamping options

suitable accessories

- Indexing disks item no. 11511 on page 235

Technical data

- can be found on page 237



Indexing disks for indirect indexing

Item no. 11511

Price 109.00 € | 129.71 € incl. VAT

- **for dividing attachments with table Ø 200 mm**
- for degree and indirect indexing
- included in delivery are 2 indexing disks and 1 indexing crank
- Outer Ø 180 mm
- Number of bores
indexing disk A: 28, 32, 37, 39, 43, 46, 49, 53, 59
indexing disk B: 63, 69, 73, 79, 83, 89, 93, 99

Application

- e.g. for drill patterns and gear wheels



Dividing attachment Ø 200 mm with indexing disks

Item no. 11503

Price 499.00 € | 593.81 € incl. VAT

- 2 pieces

included in delivery

- Dividing attachment
table Ø 200 mm
true running accuracy 0.04 mm
vertical and horizontal clamping options
- Indexing disks for indirect indexing

Technical data

- for the dividing attachment can be found on page 237
- for indexing disks can be found on page 235



Dividing attachment vertical/horizontal

- for multi face machining
a dividing attachment is indispensable, if workpieces are to be spot faced or counter sunk around the circumference, which can also be circular, e. g. milling polygons, hole patterns on a circle, splined shafts, helical grooves and gear wheels

Construction features

- enclosed construction, prevents the ingress of dirt and swarf
- Quick clamping device

	11590	11500	11559
Clamping table			
∅	80 mm	100 mm	110 mm
swiveling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Number of T-slots	4	4	3
Width of T-slots	6 mm	8 mm	11 mm
rotating by	360°	360°	360°
with scale	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
hardened spindle bore	<input type="radio"/>	<input type="radio"/>	MT2
Accuracies			
True running accuracy	0.08 mm	0.08 mm	0.04 mm
Parallelism of the clamping surface with the base	0.08 mm	0.08 mm	0.04 mm
Dividing accuracy	1° and 10" per division	1° and 10" per division	45"
Technical data			
re-adjustable worm hardened and ground	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Transmission of the worm gear	36:1	36:1	90:1
Dimensions			
Basic dimension horizontal	105 x 85 mm	105 x 134 mm	139 x 130 mm
Basic dimension vertical	105 x 30 mm	134 x 55 mm	139 x 58 mm
Height	45 mm	55 mm	72 mm
Base plate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight			
Weight without packaging	3.3 kg	3.7 kg	8.5 kg
Subject to technical modifications		<input checked="" type="radio"/> yes <input type="radio"/> no	

11501	11505	11560	11510	11512	11502
110 mm	110 mm	150 mm	150 mm	150 mm	200 mm
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
3	3	4	3	3	4
11 mm	11 mm	11 mm	11 mm	11 mm	14 mm
360°	360°	360°	360°	360°	360°
<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
MT2	MT2	MT2	MT2	MT2	MT3
0.02 mm	0.04 mm	0.04 mm	0.02 mm	0.04 mm	0.04 mm
0.02 mm	0.02 mm	0.04 mm	0.02 mm	0.02 mm	0.04 mm
45°	45°	45°	45°	45°	45°
<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
90:1	90:1	90:1	90:1	90:1	90:1
139 x 130 mm	140 x 170 mm	180 x 170 mm	180 x 170 mm	180 x 195 mm	270 x 330 mm
139 x 58 mm	140 x 104 mm	205 x 80 mm	205 x 80 mm	180 x 110 mm	270 x 100 mm
72 mm	116 mm	80 mm	80 mm	125 mm	100 mm
<input type="radio"/>	approx. 146 x 149 mm	<input type="radio"/>	<input type="radio"/>	approx. 210 x 178 mm	<input type="radio"/>
7.0 kg	12.2 kg	11.1 kg	12.2 kg	19.6 kg	25.0 kg

yes no



Direct dividing attachment Ø 100 mm

Item no. 11504

Price 369.00 € | 439.11 € incl. VAT

- Table Ø 100 mm
- enclosed construction, prevents the ingress of dirt and swarf
- Quick clamping device
- vertical and horizontal clamping options
- 3-jaw lathe chuck Ø 100 mm
with turning and drilling jaws
bore 22 mm



Direct dividing attachment Ø 160 mm

Item no. 11526

Price 749.00 € | 891.31 € incl. VAT

- Table Ø 160 mm
- enclosed construction, prevents the ingress of dirt and swarf
- Quick clamping device
- vertical and horizontal clamping options
- 3-jaw lathe chuck Ø 160 mm
with turning and drilling jaws
bore 45 mm

	11504	11526
Clamping table		
∅	100 mm	160 mm
rotating by	360°	360°
with scale	●	●
Accuracies		
True running accuracy	0.02 mm	0.03 mm
Dividing accuracy	45"	1°
Technical data		
re-adjustable worm hardened and ground	●	○
Transmission of the worm gear	90:1	○
direct indexing	○	24 à 15°
6 indexing spacers for direct indexing	○	2, 3, 4, 6, 8 and 12
3-jaw lathe chuck		
∅	100 mm	160 mm
Basic dimension vertical	22 mm	45 mm
Height	140 mm	190 mm
Fixing measurements		
Base plate	approx. 146 x 149 mm	○
with 2 longitudinal slots	approx. 13 x 13 mm	○
for horizontal clamping	○	approx. 235 mm
for vertical clamping	○	approx. 170 mm
Weight		
Weight without packaging	9.9 kg	27.2 kg
Subject to technical modifications		● yes ○ no



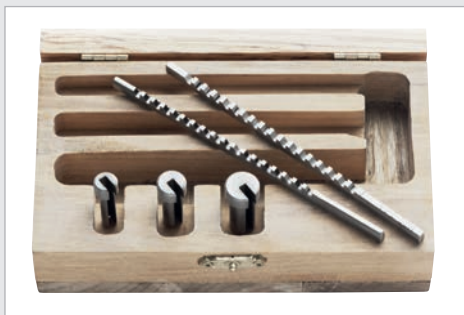
Arbor presses

- Body made of high-quality gray cast iron

Application

- for pressing in and out of ball bearings, bushings, mandrils, pins etc, straightening and bending, broaching with broaches.

Item no.	13400	13401
Price without VAT	69.00 €	144.00 €
Price incl. VAT	82.11 €	171.36 €
Press force	1t	2t
max. size of workpiece	145 mm	215 mm
Outreach	100 mm	142 mm
Ram size	25 x 25 mm	31 x 31 mm
Table Ø	120 mm	165 mm
Dimensions	130 x 260 x 320 mm	170 x 450 x 420 mm
Weight without packaging	14.6 kg	38.0 kg
Subject to technical modifications		



Keyway broaches HSS

Item no. 13410

Price 125.00 € | 148.75 € incl. VAT

- ground from solid

Application

- quick, precise production of exact keyways in bores (gear wheels, v-belt pulleys etc.)
- can be used on hand presses, arbor presses and broaching machines
- fast and exact broaching process
- a particularly ground toothing ensures clean surface
- by means of guide bushings and additional insets, exactly centered, accurate keyways can be produced
- suitable for the processing of steel, aluminum, brass etc.

Keyway	Total length	Guide bushings for bore Ø
2 x 2	130 mm	6 - 8 - 10 mm
3 x 3	130 mm	6 - 8 - 10 mm



Keyway broaches HSS

Item no. 13411

Price 369.00 € | 439.11 € incl. VAT

- ground from solid

Application

- quick, precise production of exact keyways in bores (gear wheels, v-belt pulleys etc.)
- can be used on hand presses, arbor presses and broaching machines
- fast and exact broaching process
- a particularly ground toothing ensures clean surface
- by means of guide bushings and additional insets, exactly centered, accurate keyways can be produced
- suitable for the processing of steel, aluminum, brass etc.

Keyway	Total length	Guide bushings for bore Ø
4 x 4	150 mm	12 - 14 - 15 - 16 mm
5 x 5	150 mm	12 - 14 - 15 - 16 mm
6 x 6	300 mm	18 - 19 - 20 - 22 mm
8 x 7	300 mm	25 - 26 - 28 - 30 mm



Folding presses

- for clamping in vices

Application

- for sheet metal working
- several folding operations with different distances possible without taking out the sheet
- easy and quick removal of a closed profile by removing the toggle screw

Item no.	55780	55785
Price without VAT	140.00 €	164.00 €
Price incl. VAT	166.60 €	195.16 €
Working range	450 mm	630 mm
Steel sheets	up to 1.2 mm	up to 1.2 mm
Aluminum sheets	up to 1.5 mm	up to 1.5 mm
Copper sheets	up to 1.5 mm	up to 1.5 mm
Bending angle	max 120°	max 120°
Weight without packaging	10.0 kg	13.0 kg



Folding presses with workbench vice

- 2 pieces
- included in delivery
- Folding press
- Workbench vice with jaw width 100 mm

Application

- for sheet metal working
- several folding operations with different distances possible without taking out the sheet
- easy and quick removal of a closed profile by removing the toggle screw

Technical data

- on folding presses can be found on page 241
- on workbench vices can be found on page 226

Folding press	Item no.	Price
Working range 450 mm	55781	180.00 € 214.20 € incl. VAT
Working range 630 mm	55784	205.00 € 243.95 € incl. VAT



Lever operated sheet metal shears

- for cutting of sheet metal and profiles
- high-quality cutting blades
- Base with four fixing bores
- infinitely adjustable holding-down device
- strong safety spring prevents the blade from accidental closing

Item no.	55790	55791	55792
Price without VAT	99.00 €	149.00 €	189.00 €
Price incl. VAT	117.81 €	177.31 €	224.91 €
Blade length	125 mm	200 mm	300 mm
Cutting power/round steel	11 mm	13 mm	13 mm
Cutting power/sheet metal/steel	6 mm	6 mm	6 mm
Weight without packaging	9.5 kg	17.2 kg	26.0 kg

WABECO
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Replacement blades

- replacement blades for lever operated sheet metal shears

Replacement blade	Item no.	Price
for item no. 55790	55793	35.00 € 41.65 € incl. VAT
for item no. 55791	55794	55.00 € 65.45 € incl. VAT
for item no. 55792	55795	95.00 € 113.05 € incl. VAT



Pin punch set

- Item no. 13290
 Price 14.00 € | 16.66 € incl. VAT
- 8 pieces
 - Ø 1.6 - 2.4 - 3.2 - 4.6 - 4.8 - 5.6 - 6.4 - 8.0
 - Total length 100 mm
 - 20 mm pin length



Auto center punch

- Item no. 13295
 Price 14.00 € | 16.66 € incl. VAT
- with spring mechanism for one hand operation
 - Punch force infinitely variable via knurled screw
 - Length 130 mm
 - Shank Ø 14 mm

Application

- To apply a hole that exactly matches the coordinates, a center mark is to be placed beforehand to center the drill.
- In order to do this, it is common to use a center punch, slammed with a hammer.
- For that both hands are needed.
- With the auto center punch the center mark is placed via the spring mechanism using one hand.



Telescopic magnetic pick-up tool

- Item no. 13980
 Price 7.00 € | 8.33 € incl. VAT
- telescopes up to approx. 615 mm
 - Magnet Ø approx. 12 mm



Universal multifunction holder

- Item no. 20140
 Price 10.00 € | 11.90 € incl. VAT
- suitable for all drill stands with Euronorm Ø 43 mm
 - Holder head swiveling or rotating
 - with table clamp
 - Width of table plate max. 45 mm

Application

- universally applicable e. g. for grinding or polishing work



Taps HSS

- high cutting performance
- Tap with polished flank angle of 60°
- DIN 352
- Tolerance 6H
- for metric right-hand threads
- for through bores

Thread	Pitch	Item no.	Price
M1	0.25 mm	30090	5.50 € 6.55 € incl. VAT
M1.5	0.3 mm	30091	5.50 € 6.55 € incl. VAT
M2	0.4 mm	30092	5.50 € 6.55 € incl. VAT
M2.5	0.45 mm	30093	5.50 € 6.55 € incl. VAT



Hand tap set HSS

- 3-piece set including a taper tap, second tap and plug tap
- the thread is drilled in three steps
- Taper tap (with 1 ring) with 6- to 8-turn cut
- Second tap (with 2 rings) with 4- to 5-turn cut
- Plug tap (no ring) with 2- to 3-turn cut
- high cutting performance
- Tap with polished flank angle of 60°
- DIN 352
- Tolerance 6H
- for metric right-hand threads



Thread	Pitch	Item no.	Price
for through bores			
M3	0.5 mm	30103	5.50 € 6.55 € incl. VAT
M4	0.7 mm	30104	5.50 € 6.55 € incl. VAT
M5	0.8 mm	30105	5.70 € 6.78 € incl. VAT
M6	1.0 mm	30106	6.20 € 7.38 € incl. VAT
for pocket hole bores			
M8	1.25 mm	30108	6.90 € 8.21 € incl. VAT
M10	1.50 mm	30110	7.50 € 8.93 € incl. VAT
M12	1.75 mm	30112	11.00 € 13.09 € incl. VAT



Adjustable tap wrench

Item no. 30600
Price 4.80 € | 5.71 € incl. VAT

- Size 1½
- for taps M3-M12 DIN 352

Application

- for clamping of tools with square, e.g. hand taps DIN 352 and hand reamers



for through bores

Single-cut taps HSS

- high cutting performance
- Tap with polished flank angle of 60°
- DIN 352
- Tolerance 6H
- for metric right-hand threads



for pocket hole bores

Thread	Pitch	Item no.	Price
for through bores			
M3	0.5 mm	30303	2.20 € 2.62 € incl. VAT
M4	0.7 mm	30304	2.30 € 2.74 € incl. VAT
M5	0.8 mm	30305	2.60 € 3.09 € incl. VAT
M6	1.0 mm	30306	2.70 € 3.21 € incl. VAT
for pocket hole bores			
M8	1.25 mm	30308	2.90 € 3.45 € incl. VAT
M10	1.50 mm	30310	3.20 € 3.81 € incl. VAT
M12	1.75 mm	30312	4.00 € 4.76 € incl. VAT



Round dies HSS

- Ø 25 mm
- high cutting performance
- DIN 223
- for metric right-hand threads

Thread	Pitch	Item no.	Price
M3	0.5 mm	30203	3.90 € 4.64 € incl. VAT
M4	0.7 mm	30204	3.90 € 4.64 € incl. VAT
M5	0.8 mm	30205	3.90 € 4.64 € incl. VAT
M6	1.0 mm	30206	3.90 € 4.64 € incl. VAT
M8	1.25 mm	30208	3.90 € 4.64 € incl. VAT
M10	1.50 mm	30210	3.90 € 4.64 € incl. VAT
M12	1.75 mm	30212	3.90 € 4.64 € incl. VAT



Die stock

Item no. 30500
Price 3.80 € | 4.52 € incl. VAT

- Ø 25 x height 9 mm
- DIN 225
- for holding round dies M3-M12 DIN 223



Tap wrench with ratchet

Item no. 32622 - for taps M3 up to M10

Price 12.00 € | 14.28 € incl. VAT

Item no. 32626 - for taps M5 up to M12

Price 15.00 € | 17.85 € incl. VAT

- 2-jaw clamping chuck for right- and left-hand turn and for rigid use
- All-steel construction - fully chromed
- with adjustable t-handle

Application

- for clamping of hand taps and hand reamers

for taps	Square clamping range	Length
M3 up to M10	2.6 - 5.5 mm	252 mm
M5 up to M12	4.9 - 7.0 mm	315 mm



Tap wrench with ratchet

Item no. 32702 - for taps M3 up to M10

Price 8.00 € | 9.52 € incl. VAT

Item no. 32707 - for taps M5 up to M12

Price 10.00 € | 11.90 € incl. VAT

- 2-jaw clamping chuck for right- and left-hand turn and for rigid use
- All-steel construction - fully chromed
- with adjustable t-handle

Application

- for clamping of hand taps and hand reamers

for taps	Square clamping range	Length
M3 up to M10	2.6 - 5.5 mm	85 mm
M5 up to M12	4.9 - 7.0 mm	110 mm



Tap and die set HSS

Item no. 35430

Price 49.90 € | 59.38 € incl. VAT

- 30 pieces
- 9 round dies
M1 - M1.1 - M1.2 - M1.4 - M1.6 - M1.8 - M2 - M2.2 - M2.5
- 18 taps M1-M2.5 (2 pieces each)
- 1 die stock
- 2 holders for clamping the hand taps



Tap and die set HSS

Item no. 35411
Price 68.00 € | 80.92 € incl. VAT

- 31 pieces
- DIN model
- Round dies HSS M3-4-5-6-8-10-12
- Hand taps HSS M3-4-5-6-8-10-12
(3-piece sets including a taper tap, second tap and plug tap)
- 1 die stock Ø 25 mm
- 1 adjustable tap wrench size 1½
- 1 screwdriver



Tap and die set HSS

Item no. 35501
Price 99.00 € | 117.81 € incl. VAT

- 44 pieces
- DIN model
- Round dies HSS M3-4-5-6-8-10-12
- Hand taps HSS M3-4-5-6-8-10-12
(3-piece sets including a taper tap, second tap and plug tap)
- Die stocks 20x5 - 20x7 - 25x9 - 30x11 - 38x14 mm
- Adjustable tap wrenches sizes 1 and 2
- Core hole drills HSS
Ø 2.5 - 3.3 - 4.2 - 5.0 - 6.8 - 8.5 - 10.2 mm
- Screw pitch gauge 24 blades
- 1 screwdriver



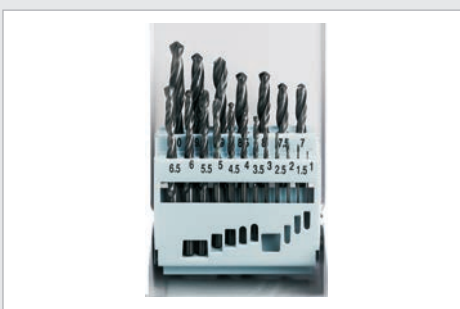
Tapping attachment

Item no. 35805
Price 30.00 € | 35.70 € incl. VAT

- suitable for all drilling stands with Euronorm Ø 43 mm
- included in delivery
- Tool holder for taps – clamping range 2.0 – 5.0 mm
 - Adjustable tap wrench size 1½
 - Adapter for Euronorm Ø 43 mm

Application

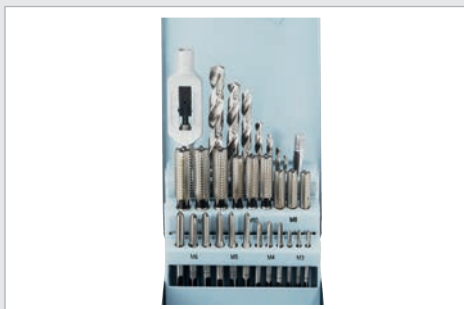
- for positioning the tap at an angle
- Thread depth can be adjusted using a positioning ring



Tapping drill set HSS

Item no. 35610
Price 24.00 € | 28.56 € incl. VAT

- 19 pieces
- with straight shank
- right-hand cutting
- Drilling range 1 - 10 mm
- Pitch 0.5 mm



Tapping drill and hand tap set HSS

Item no. 35600

Price 48.00 € | 57.12 € incl. VAT

- 29 pieces
- Hand taps M3-4-5-6-8-10-12
(3-piece sets including a taper tap, second tap and plug tap)
- 1 adjustable tap wrench size 1½
- Tapping drills HSS
with straight shank
right-hand cutting
drills Ø 2.5 - 3.3 - 4.2 - 5.0 - 6.8 - 8.5 - 10.2



Hand reamer set adjustable HSS

Item no. 13240

Price 149.90 € | 178.38 € incl. VAT

- 11 pieces
- with straight shank and square
- right-hand cutting

Application

- for reaming bores

Total length	Adjustable range Ø
138 mm	11.90 - 13.49 mm
145 mm	13.49 - 15.00 mm
163 mm	15.00 - 16.66 mm
170 mm	16.66 - 18.25 mm
175 mm	18.25 - 19.84 mm
185 mm	19.84 - 21.43 mm
200 mm	21.43 - 23.81 mm
225 mm	23.81 - 27.00 mm
250 mm	27.00 - 30.00 mm
275 mm	30.00 - 34.10 mm
300 mm	34.10 - 38.00 mm



Hand reamers adjustable HSS

- with straight shank and square
- right-hand cutting

Application

- for reaming bores

Total length	Adjustable range Ø	Item no.	Price
138 mm	11.90 - 13.49 mm	13241	23.00 € 27.37 € incl. VAT
145 mm	13.49 - 15.00 mm	13242	23.00 € 27.37 € incl. VAT
163 mm	15.00 - 16.66 mm	13243	23.00 € 27.37 € incl. VAT
170 mm	16.66 - 18.25 mm	13244	24.00 € 28.56 € incl. VAT
175 mm	18.25 - 19.84 mm	13245	25.00 € 29.75 € incl. VAT
185 mm	19.84 - 21.43 mm	13246	25.00 € 29.75 € incl. VAT
200 mm	21.43 - 23.81 mm	13247	26.00 € 30.94 € incl. VAT



Levelling elements

Item no. 10268

Price 16.00 € | 19.04 € incl. VAT

- PU: 1 piece
- Vibration pick-up and absorption element
- Ø 80 mm, thread M10
- prevents the machine base cabinet from moving
- for precise height adjustment on uneven grounds



T-slot covers original Vertex

- PU: 3 pieces
- Length per cover rail 400 mm
- anodized aluminum
- Swarf deflector, prevents swarfs from getting into the T-slots
- with bores for draining off coolant
- can be cut as necessary

Application

- T-slot covers may be used on milling tables, drilling tables etc.

for T-slot width	Item no.	Price
12 mm	11259	36.00 € 42.84 € incl. VAT
14 mm	11260	36.00 € 42.84 € incl. VAT



Push type gun

Item no. 11535
Price 25.00 € | 29.75 € incl. VAT

- for grease and oil
- for conical and ball-head grease nipples
- with a pointed- and a hollow- /universal mouthpiece



Universal coolant unit original Vertex

Item no. 13800
Price 270.00 € | 321.30 € incl. VAT

- suitable for all machine tools
- Weight without packaging 10 kg

included in delivery

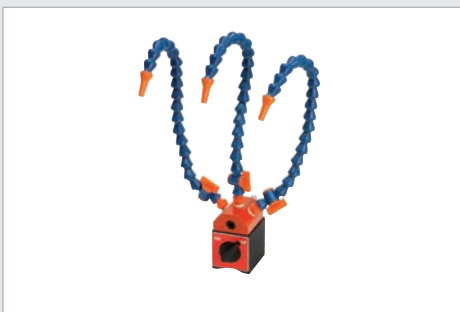
- Coolant pump 230 V, 50 Hz
- Flow rate 25 l/min
- Coolant tank L350 x W250 x H185 mm
- Content coolant: 16 liter
- Coolant hose 260 mm with magnetic base - magnetic power 30 kg
- flexible feed hose 1500 mm
- Draining hose
- ON/OFF switch



Coolant concentrate

Item no. 11550
Price 89.00 € | 105.91 € incl. VAT

- Content 5 liter
- High-performance cooling lubricant on mineral oil base
- Corrosion protection
- Solvent: 5% or 1:20 with water
- especially suitable for processing high-alloy, rust- and acid-resistant steels



Coolant hose with 3 nozzles

Item no. 13810
Price 65.00 € | 77.35 € incl. VAT

- with magnetic base
- Magnetic power 50 kg
- 3 variable coolant hoses with stop valve and spray nozzle
- Coolant hose 300 mm each
- Hose connection for Ø 10 mm
- suitable for all machine tools



Mist coolant system

Item no. 13815

Price 149.00 € | 177.31 € incl. VAT

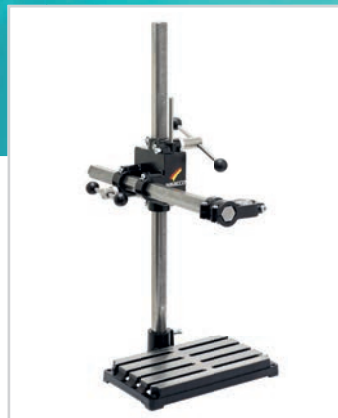
- with magnetic base
- Magnetic power 75 kg
- Working pressure 2 - 6 bar
- Connection for compressed air hose Ø 13 mm
- suitable for all machine tools

Application

- By means of compressed air very small quantities of oil or coolant are nebulised and exactly head to the workpiece or tool. The lubricant quantity is adjusted via the air and liquid regulator.

Drilling milling stands Coordinate tables

BF1240 | BF1242 | BF1243 | BF1244 | K400 | K600 | B1200 | B1230



drilling



milling





- ✓ unique multi-talented system, that home workers dream about and that impresses the professionals
- ✓ in-house design and manufacture
- ✓ especially suited for smaller workpieces
- ✓ a flexible and space-saving alternative to table drilling machines, pillar drilling machines and column drilling machines
- ✓ precise drilling and milling because the tools can be positioned precisely over the workpiece
- ✓ extensive accessories meet the most diverse customer requirements

Drilling milling stand BF1240

Unique multi-talented system,
that home workers dream about
and that impresses the professionals

Item no. 24400
Price 139.00 € | 165.41 € incl. VAT

Special features

- WABECO drilling milling stand for vertical and horizontal infeed
- the second infeed (transverse travel on the Y-axis) enables the performance of vertical and horizontal drilling and milling work

Design

- Solid steel column **500 mm**
- Hexagonal steel boom **350 mm**

Working range

- Travel Z-axis **250 mm**
- Travel Y-axis **175 mm**

Base plate

- made of gray cast iron with T-slots giving flexible and stable workpiece clamping

heavy duty design

- Weight 14.1 kg

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides, also suitable for processing large workpieces

Machine support

- for mounting drive units with Euronorm Ø 43 mm
- swiveling the machine support enables the drilling milling stand to be used for small turning work

Depth stop and retaining spring

- with depth stop and retaining spring for always drilling workpieces to exactly the same drilling depth

Application

- for processing metal, wood and plastic

Technical data

- can be found on page 274



Drilling milling stand BF1240 with work table

Item no. 24404
Price 164.00 € | 195.16 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Work table Ø 180 mm

- for rotating and swiveling workpieces
- can be rotated and swiveled through 360° in all directions
- e.g. for oblique drilling



Drilling milling stand BF1240 with clamping device

Item no. 24550
Price 153.00 € | 182.07 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1240 with 2nd machine support

Item no. 24552
Price 157.00 € | 186.83 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1240 with machine vice

Item no. 24556
Price 163.00 € | 193.97 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1240 with machine vice

Item no. 24436
Price 177.00 € | 210.63 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



Drilling milling stand BF1240 with clamping device and machine vice

Item no. 24435
Price 178.00 € | 211.82 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1240 with machine vice and 2nd machine support

Item no. 24554
Price 182.00 € | 216.58 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1240 with step clamp set 10 pieces

Item no. 24414
Price 156.00 € | 185.64 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Step clamp set 10 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



Drilling milling stand BF1240 with step clamp set 58 pieces

Item no. 24437
Price 196.00 € | 233.24 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

Step clamp set 58 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts



Drilling milling stand BF1240 with coordinate table K400

Item no. 24558
Price 296.00 € | 352.24 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276



Drilling milling stand BF1240 with coordinate table K400 and machine vice

Item no. 24416
Price 325.00 € | 386.75 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 85 mm
- Clamping width 70 mm
- Jaw height 22 mm
- Weight 2.4 kg



Drilling milling stand BF1240 with coordinate table K600 and machine vice

Item no. 24438
 Price 366.00 € | 435.54 € incl. VAT

Drilling milling stand BF1240

- Description can be found on page 254
- Technical data can be found on page 274

2-axis coordinate table K600

- Clamping surface 600 x 180 mm
- Longitudinal travel X-axis 520 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 278

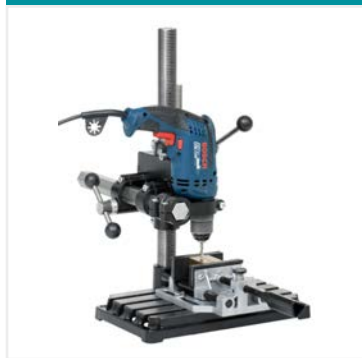
Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg

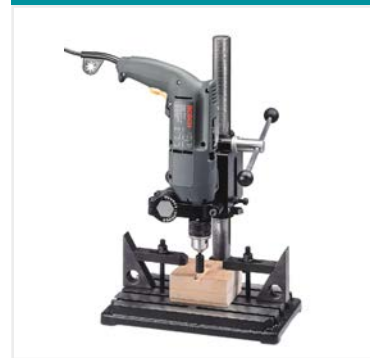
Pitch circle drilling with work table



Milling in brass



Milling in hardwood



Slot milling



Longitudinal turning



Horizontal drilling in a pitch circle





- ✓ unique multi-talented system, that home workers dream about and that impresses the professionals
- ✓ in-house design and manufacture
- ✓ for machining larger workpieces also outside to the working range of the base plate
- ✓ a flexible and space-saving alternative to table drilling machines, pillar drilling machines and column drilling machines
- ✓ precise drilling and milling because the tools can be positioned precisely over the workpiece
- ✓ extensive accessories meet the most diverse customer requirements

Drilling milling stand BF1242

Unique multi-talented system,
that home workers dream about
and that impresses the professionals

Item no. 24401
Price 150.00 € | 178.50 € incl. VAT

Special features

- WABECO drilling milling stand for vertical and horizontal infeed
- the second infeed (transverse travel on the Y-axis) enables the performance of vertical and horizontal drilling and milling work

Design

- Solid steel column **500 mm**
- Hexagonal steel boom **500 mm**

Working range

- Travel Z-axis **250 mm**
- Travel Y-axis **325 mm**

Base plate

- made of gray cast iron with T-slots giving flexible and stable workpiece clamping

heavy duty design

- Weight 15.0 kg

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides, also suitable for processing large workpieces

Machine support

- for mounting drive units with Euronorm Ø 43 mm
- swiveling the machine support enables the drilling milling stand to be used for small turning work

Depth stop and retaining spring

- with depth stop and retaining spring for always drilling workpieces to exactly the same drilling depth

Application

- for processing metal, wood and plastic

Technical data

- can be found on page 275



Drilling milling stand BF1242 with work table

Item no. 24408
Price 175.00 € | 208.25 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Work table Ø 180 mm

- for rotating and swiveling workpieces
- can be rotated and swiveled through 360° in all directions
- e.g. for oblique drilling



Drilling milling stand BF1242 with clamping device

Item no. 24580
Price 164.00 € | 195.16 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1242 with 2nd machine support

Item no. 24582
Price 168.00 € | 199.92 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1242 with machine vice

Item no. 24586
Price 174.00 € | 207.06 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1242 with machine vice

Item no. 24445
Price 188.00 € | 223.72 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



Drilling milling stand BF1242 with machine vice and clamping device

Item no. 24448
Price 189.00 € | 224.91 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1242 with machine vice and 2nd machine support

Item no. 24584
Price 193.00 € | 229.67 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1242 with step clamp set 10 pieces

Item no. 24446
Price 167.00 € | 198.73 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Step clamp set 10 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



Drilling milling stand BF1242 with step clamp set 58 pieces

Item no. 24447
Price 207.00 € | 246.33 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

Step clamp set 58 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts



Drilling milling stand BF1242 with coordinate table K400

Item no. 24588
Price 307.00 € | 365.33 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276



Drilling milling stand BF1242 with coordinate table K400 and machine vice

Item no. 24449
Price 336.00 € | 399.84 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 85 mm
- Clamping width 70 mm
- Jaw height 22 mm
- Weight 2.4 kg



**Drilling milling stand BF1242
with coordinate table K600
and machine vice**

Item no. 24450
Price 377.00 € | 448.63 € incl. VAT

Drilling milling stand BF1242

- Description can be found on page 260
- Technical data can be found on page 275

2-axis coordinate table K600

- Clamping surface 600 x 180 mm
- Longitudinal travel X-axis 520 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 278

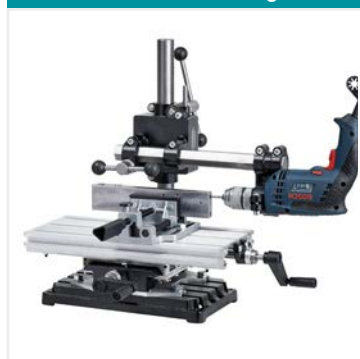
Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg

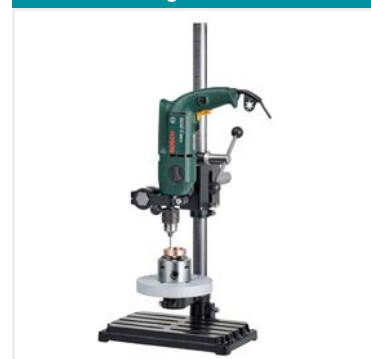
Vertical drilling



Horizontal drilling



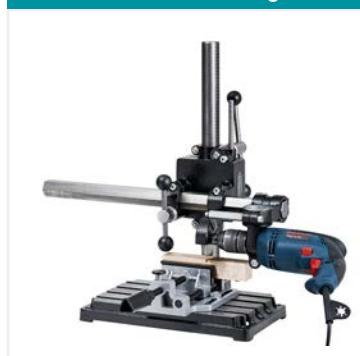
Vertical drilling with a work table



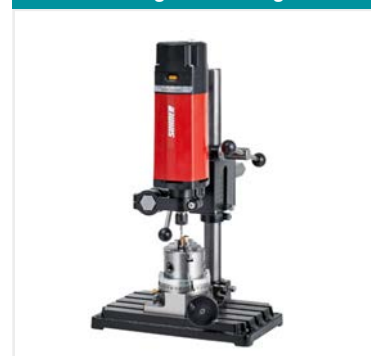
45° phase milling



Horizontal sawing



Hexagonal milling





- ✓ unique multi-talented system, that home workers dream about and that impresses the professionals
- ✓ in-house design and manufacture
- ✓ through total height of the steel column of 750 mm is particularly suitable for working with a coordinate table
- ✓ a flexible and space-saving alternative to table drilling machines, pillar drilling machines and column drilling machines
- ✓ precise drilling and milling because the tools can be positioned precisely over the workpiece
- ✓ extensive accessories meet the most diverse customer requirements

Drilling milling stand BF1243

Unique multi-talented system,
that home workers dream about
and that impresses the professionals

Item no. 24500
Price 172.00 € | 204.68 € incl. VAT

Special features

- WABECO drilling milling stand for vertical and horizontal infeed
- the second infeed (transverse travel on the Y-axis) enables the performance of vertical and horizontal drilling and milling work

Design

- Solid steel column **750 mm**
- Hexagonal steel boom **500 mm**

Working range

- **Travel Z-axis 500 mm**
- **Travel Y-axis 325 mm**

Base plate

- made of gray cast iron with T-slots giving flexible and stable workpiece clamping

heavy duty design

- Weight 16.7 kg

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides, also suitable for processing large workpieces

Machine support

- for mounting drive units with Euronorm \varnothing 43 mm
- swiveling the machine support enables the drilling milling stand to be used for small turning work

Depth stop and retaining spring

- with depth stop and retaining spring for always drilling workpieces to exactly the same drilling depth

Application

- for processing metal, wood and plastic

Technical data

- can be found on page 275



Drilling milling stand BF1243 with work table

Item no. 24504
Price 197.00 € | 234.43 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Work table Ø 180 mm

- for rotating and swiveling workpieces
- can be rotated and swiveled through 360° in all directions
- e.g. for oblique drilling



Drilling milling stand BF1243 with clamping device

Item no. 24510
Price 186.00 € | 221.34 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1243 with 2nd machine support

Item no. 24514
Price 189.00 € | 224.91 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm



Drilling milling stand BF1243 with machine vice

Item no. 24518
Price 196.00 € | 233.24 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1243 with machine vice

Item no. 24520
Price 209.00 € | 248.71 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



Drilling milling stand BF1243 with machine vice and clamping device

Item no. 24512
Price 211.00 € | 251.09 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1243 with machine vice and 2nd machine support

Item no. 24516
Price 215.00 € | 255.85 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

2nd machine support

- for the mounting of a second drive unit
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling milling stand BF1243 with step clamp set 10 pieces

Item no. 24522
Price 189.00 € | 224.91 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Step clamp set 10 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



Drilling milling stand BF1243 with step clamp set 58 pieces

Item no. 24524
Price 229.00 € | 272.51 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

Step clamp set 58 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts



Drilling milling stand BF1243 with coordinate table K400

Item no. 24526
Price 329.00 € | 391.51 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276



Drilling milling stand BF1243 with coordinate table K400 and machine vice

Item no. 24528
Price 358.00 € | 426.02 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

2-axis coordinate table K400

- Clamping surface 400 x 180 mm
- Longitudinal travel X-axis 320 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 276

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 85 mm
- Clamping width 70 mm
- Jaw height 22 mm
- Weight 2.4 kg



**Drilling milling stand BF1243
with coordinate table K600
and machine vice**

Item no. 24529
Price 399.00 € | 474.81 € incl. VAT

Drilling milling stand BF1243

- Description can be found on page 266
- Technical data can be found on page 275

2-axis coordinate table K600

- Clamping surface 600 x 180 mm
- Longitudinal travel X-axis 520 mm
- Transverse travel Y-axis 100 mm
- Description and technical data can be found on page 278

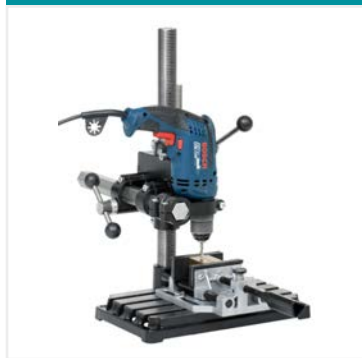
Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg

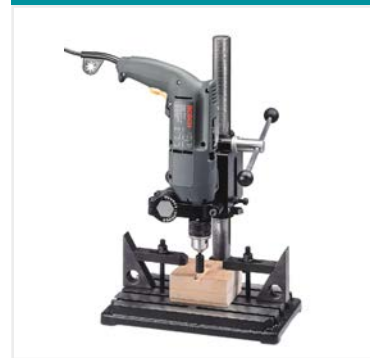
Pitch circle drilling with work table



Milling in brass



Milling in hardwood



Slot milling



Longitudinal turning



Horizontal drilling in a pitch circle





Made in
Germany

- ✓ unique multi-talented system, that home workers dream about and that impresses the professionals
- ✓ in-house design and manufacture
- ✓ through total height of the steel column of 1000 mm for example for long Forstner wood drill bit, for machining wooden draws, etc.
- ✓ a flexible and space-saving alternative to table drilling machines, pillar drilling machines and column drilling machines
- ✓ precise drilling and milling because the tools can be positioned precisely over the workpiece
- ✓ extensive accessories meet the most diverse customer requirements

Drilling milling stand BF1244

Unique multi-talented system,
that home workers dream about
and that impresses the professionals

Item no. 24454
Price 234.00 € | 278.46 € incl. VAT

Special features

- WABECO drilling milling stand for vertical and horizontal infeed
- the second infeed (transverse travel on the Y-axis) enables the performance of vertical and horizontal drilling and milling work

Design

- Solid steel column **1000 mm**
- Hexagonal steel boom **500 mm**

Working range

- **Travel Z-axis 750 mm**
- **Travel Y-axis 325 mm**

Base plate

- made of gray cast iron with T-slots giving flexible and stable workpiece clamping

heavy duty design

- Weight 18.3 kg

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides, also suitable for processing large workpieces

Machine support

- for mounting drive units with Euronorm Ø 43 mm
- swiveling the machine support enables the drilling milling stand to be used for small turning work

Depth stop and retaining spring

- with depth stop and retaining spring for always drilling workpieces to exactly the same drilling depth

Application

- for processing metal, wood and plastic

Technical data

- can be found on page 275



Drilling milling stand BF1244 with work table

Item no. 24457

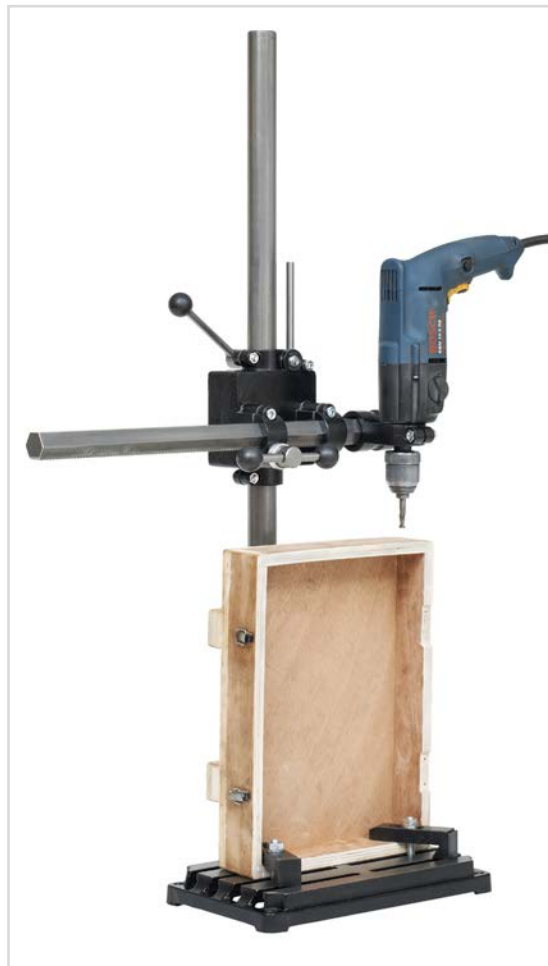
Price 259.00 € | 308.21 € incl. VAT

Drilling milling stand BF1244

- Description can be found on page 272
- Technical data can be found on page 275

Work table Ø 180 mm

- for rotating and swiveling workpieces
- can be rotated and swiveled through 360° in all directions
- e.g. for oblique drilling





	BF1240 24400
	Column 500 mm Boom 350 mm
Working range	
Vertical travel Z-axis	250 mm
Vertical drill stroke with retaining spring	55 mm
Transverse travel Y-axis	175 mm
Solid steel column	
toothed Ø	35 mm
Total height	500 mm
rotatable through 360°	●
Hexagonal steel boom	
toothed ●	30 mm
Total length	350 mm
Guide housing	
2 readjustable guide rollers	●
Depth stop for always drilling the workpieces to precisely the same depth	●
2 adjustable scale rings for vertical travel Z-axis and transverse travel Y-axis	●
Machine support	
for mounting drive units with Euronorm Ø 43 mm	●
swiveling through 360° with lock every 15°	●
Base plate	
from surface milled gray cast iron	300 x 180 mm
Number of slots	4
Width of slots for 10 mm T-slots or M10 hexagon bolts	●
Weight	
Weight without packaging	14.1 kg
Subject to technical modifications	● yes ○ no

BF1242 24401	BF1243 24500	BF1244 24454
Column 500 mm Boom 500 mm	Column 750 mm Boom 500 mm	Column 1000 mm Boom 500 mm
250 mm	500 mm	750 mm
55 mm	55 mm	55 mm
325 mm	325 mm	325 mm
35 mm	35 mm	35 mm
500 mm	750 mm	1000 mm
●	●	●
30 mm	30 mm	30 mm
500 mm	500 mm	500 mm
●	●	●
●	●	●
●	●	●
●	●	●
●	●	●
300 x 180 mm	300 x 180 mm	300 x 180 mm
4	4	4
●	●	●
15.0 kg	16.7 kg	18.3 kg

● yes ○ no



- ✓ in-house design and manufacture
- ✓ for precise drilling and milling work
- ✓ the workpiece can be precisely positioned by moving the X and Y axis
- ✓ the workpiece can be precisely positioned under the tools
- ✓ extensive accessories meet the most diverse customer requirements

2-axis coordinate table K400

Item no.	24410
Price	158.00 € 188.02 € incl. VAT

Special features

- suitable for all table drilling machines, pillar drilling machines, column drilling machines and drilling milling stands because the clamping feet can be adapted individually to each brand using the holes and/or longitudinal slots provided
- Conversion for left-handers
the X-axis hand crank can be converted to the left side of the coordinate table by removing, rotating and reinstalling the X-axis spindle

Working range

- Longitudinal travel X-axis **320 mm**
- Transverse travel Y-axis 100 mm
- Height 105 mm

Coordinate table

- Clamping surface **400 x 180 mm**
- 3 slots in the clamping surface
- 1 slot in the longitudinal side
- Width of slots for 10 mm T-slots or M10 horizontal bolts
- Trapezoidal thread spindle pitch 4 mm
- Scale rings reading accuracy 0.1 mm
- Adjustable v-block guidance

Dimensions and weight

- Dimensions W540 x D360 x H105 mm
- Weight without packaging 5.7 kg

Mountable digital vernier scales to 2-axis coordinate table K400

Item no.	<u>11363 for X-axis measuring length 300 mm</u>
Price	69.00 € 82.11 € incl. VAT

Item no.	<u>11360 for Y-axis measuring length 100 mm</u>
Price	39.00 € 46.41 € incl. VAT

Mounting kit for 2 axis and spindle Y-axis for mountable digital vernier scales

Item no.	<u>24499</u>
Price	74.90 € 89.13 € incl. VAT

- Drilled holes and threads must be added to the coordinate table by the customer

included in delivery

- Vernier scale mount and bracket for the mountable digital vernier scales X and Y-axis
- Extended spindle for the Y-axis to maintain the travel in the Y-axis and optimum distance between the hand crank and mountable digital vernier scale





2-axis coordinate table K400 with machine vice

Item no. 24432

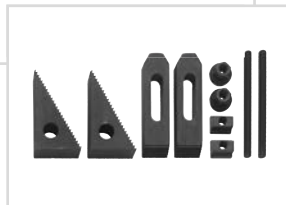
Price 196.00 € | 233.24 € incl. VAT

2-axis coordinate table K400

- Description can be found on page 276

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



2-axis coordinate table K400 with step clamp set 10 pieces

Item no. 24430

Price 175.00 € | 208.25 € incl. VAT

2-axis coordinate table K400

- Description can be found on page 276

Step clamp set 10 pieces

- for 10 mm T-slot and M8 thread included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



2-axis coordinate table K400 with step clamp set 58 pieces

Item no. 24431

Price 215.00 € | 255.85 € incl. VAT

2-axis coordinate table K400

- Description can be found on page 276

Step clamp set 58 pieces

- for 10 mm T-slot and M8 thread included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts



- ✓ in-house design and manufacture
- ✓ for precise drilling and milling work
- ✓ the workpiece can be precisely positioned by moving the X and Y axis
- ✓ the workpiece can be precisely positioned under the tools
- ✓ extensive accessories meet the most diverse customer requirements

2-axis coordinate table K600

Item no.	24610
Price	188.00 € 223.72 € incl. VAT

Special features

- suitable for all table drilling machines, pillar drilling machines, column drilling machines and drilling milling stands because the clamping feet can be adapted individually to each brand using the holes and/or longitudinal slots provided
- Conversion for left-handers
the X-axis hand crank can be converted to the left side of the coordinate table by removing, rotating and reinstalling the X-axis spindle

Working range

- Longitudinal travel X-axis **520 mm**
- Transverse travel Y-axis 100 mm
- Height 105 mm

Coordinate table

- Clamping surface **600 x 180 mm**
- 3 slots in the clamping surface
- 1 slot in the longitudinal side
- Width of slots for 10 mm T-slots or M10 horizontal bolts
- Trapezoidal thread spindle pitch 4 mm
- Scale rings reading accuracy 0.1 mm
- Adjustable v-block guidance

Dimensions and weight

- Dimensions W740 x D360 x H105 mm
- Weight without packaging 7.2 kg



Mountable digital vernier scales to 2-axis coordinate table K600

Item no.	<u>11365 for X-axis measuring length 500 mm</u>
Price	119.00 € 141.61 € incl. VAT
Item no.	<u>11360 for Y-axis measuring length 100 mm</u>
Price	39.00 € 46.41 € incl. VAT

Mounting kit for 2 axis and spindle Y-axis for mountable digital vernier scales

Item no.	<u>24499</u>
Price	74.90 € 89.13 € incl. VAT

- Drilled holes and threads must be added to the coordinate table by the customer

included in delivery

- Vernier scale mount and bracket for the mountable digital vernier scales X and Y-axis
- Extended spindle for the Y-axis to maintain the travel in the Y-axis and optimum distance between the hand crank and mountable digital vernier scale



2-axis coordinate table K600 with machine vice

Item no. 24632
Price 226.00 € | 268.94 € incl. VAT

2-axis coordinate table K600

- Description can be found on page 278

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



2-axis coordinate table K600 with step clamp set 10 pieces

Item no. 24630
Price 205.00 € | 243.95 € incl. VAT

2-axis coordinate table K600

- Description can be found on page 278

Step clamp set 10 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



2-axis coordinate table K600 with step clamp set 58 pieces

Item no. 24631
Price 245.00 € | 291.55 € incl. VAT

2-axis coordinate table K600

- Description can be found on page 278

Step clamp set 58 pieces

- for 10 mm T-slot and M8 thread
included in delivery
- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts

**Drilling stand B1200**

Item no. 22300
 Price 59.99 € | 71.39 € incl. VAT

Design

- Solid steel column \varnothing 30 mm
- for drilling of vertical holes

Working range

- **Travel Z-axis 260 mm**

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides. Also suitable for processing larger workpieces

Machine support

- for mounting drive units with Euronorm \varnothing 43 mm
- equipped with the WABECO clamping device (optional page 284) that enable drilling machines to also be clamped horizontally

Depth stop

- with a depth stop for drilling the workpiece to precisely the same drilling depth every time

Application

- for processing wood and plastic

Technical data

- can be found on page 283

**Drilling stand B1200 with machine vice**

Item no. 22305
 Price 69.50 € | 82.71 € incl. VAT

Drilling stand B1200

- Description can be found on this page above

Machine vice with quick adjustment

- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 60 mm
- Clamping width 70 mm
- Jaw height 28 mm
- Weight 0.4 kg



Drilling stand B1230

Item no. 22400
 Price 63.90 € | 76.04 € incl. VAT

Design

- Solid steel column \varnothing 35 mm
- for drilling of vertical holes

Working range

- **Travel Z-axis 260 mm**

Steel column rotates through 360°

- the steel column can be rotated through 360° in the base plate and can be locked in any position enabling work to be performed from all sides. Also suitable for processing larger workpieces

Machine support

- for mounting drive units with Euronorm \varnothing 43 mm
- equipped with the WABECO clamping device (optional page 284) that enable drilling machines to also be clamped horizontally

Depth stop

- with a depth stop for drilling the workpiece to precisely the same drilling depth every time

Application

- for processing wood and plastic

Technical data

- can be found on page 283



Drilling stand B1230 with work table

Item no. 22404
 Price 88.90 € | 105.79 € incl. VAT

Drilling stand B1230

- Description can be found on this page above

Work table \varnothing 180 mm

- for rotating and swiveling workpieces
- can be rotated and swiveled through 360° in all directions
- e.g. for oblique drilling



Drilling stand B1230 with machine vice

Item no. 22405
Price 88.00 € | 104.72 € incl. VAT

Drilling stand B1230

- Description can be found on page 281

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg



Drilling stand B1230 with machine vice

Item no. 22406
Price 101.00 € | 120.19 € incl. VAT

Drilling stand B1230

- Description can be found on page 281

Machine vice made of gray cast iron

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm
- Clamping width 100 mm
- Jaw height 29 mm
- Weight 3.3 kg



Drilling stand B1230 with machine vice and clamping device

Item no. 22407
Price 103.00 € | 122.57 € incl. VAT

Drilling stand B1230

- Description can be found on page 281

Clamping device

- for horizontal mounting of drive units
- suitable for all drive units with Euronorm Ø 43 mm

Machine vice with quick adjustment

- Double pillar guide
- Rubber protective jaws
- Horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of workpieces
- Trapezoidal thread spindle
- Jaw width 100 mm - clamping width 100 mm
- Jaw height 35 mm
- Weight 1.6 kg

	B1200 22300	B1230 22400
Working range		
Vertical travel Z-axis	260 mm	260 mm
Vertical drill stroke with retaining spring	60 mm	60 mm
Solid steel column		
toothed Ø	30 mm	35 mm
Total height	500 mm	500 mm
rotatable through 360°	●	●
Machine support		
for mounting drive units with Euronorm Ø 43 mm	●	●
Outreach	127 mm	127 mm
2 adjustable guides	●	●
Depth stop for always drilling the workpieces to precisely the same depth	●	●
Base plate		
Dimensions	185 x 270 mm	185 x 270 mm
Number of slots	4	4
Width of slots for 10 mm T-slots or M10 hexagon bolts	●	●
Weight		
Weight without packaging	4.7 kg	5.2 kg
Subject to technical modifications	● yes ○ no	



Work table

for rotating and swiveling workpieces

Item no. 22310

Price 25.00 € | 29.75 € incl. VAT

- Work table Ø 180 mm
- can be rotated and swiveled through 360° in all directions
- can be retrofitted for all drilling stands with columns-Ø 35 mm

Application

- e.g. for oblique drilling



Clamping device

for horizontal mounting of drive units

Item no. 22312

Price 15.00 € | 17.85 € incl. VAT

- suitable for all drive units with Euronorm Ø 43 mm
- suitable for all drilling stands with Euronorm Ø 43 mm



Machine support

for the mounting of a second drive unit

Item no. 24460

Price 19.00 € | 22.61 € incl. VAT

- suitable for all drive units with Euronorm Ø 43 mm
- suitable for all WABECO drilling milling stands



Machine vice with quick adjustment

for clamping on WABECO drilling stands

Item no. 40521

Price 15.00 € | 17.85 € incl. VAT

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpiece
- Trapezoidal thread spindle

Jaw width

Clamping width

Jaw height

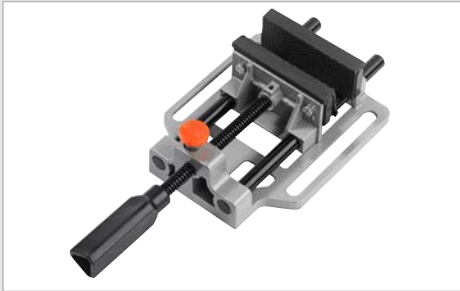
Weight w/o pack.

60 mm

70 mm

28 mm

0.4 kg



Machine vice with quick adjustment

for clamping on WABECO drilling stands, drilling milling stands, coordinate tables

Item no. 40523
 Price 25.00 € | 29.75 € incl. VAT

- with double pillar guide
- with rubber protective jaws
- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpiece
- Trapezoidal thread spindle

Jaw width	Clamping width	Jaw height	Weight w/o pack.
100 mm	100 mm	35 mm	1.6 kg



Machine vices made of gray cast iron

for clamping on WABECO drilling stands, drilling milling stands, coordinate tables

- with horizontal and vertical v-block for round material
- open base plate for clamping or through-drilling of the workpiece
- Trapezoidal thread spindle

Item no.	40526	40527
Price without VAT	29.00 €	39.00 €
Price incl. VAT	34.51€	46.41 €
Jaw width	85 mm	100 mm
Clamping width	70 mm	100 mm
Jaw height	22 mm	29 mm
Weight without packaging	2.4 kg	3.3 kg

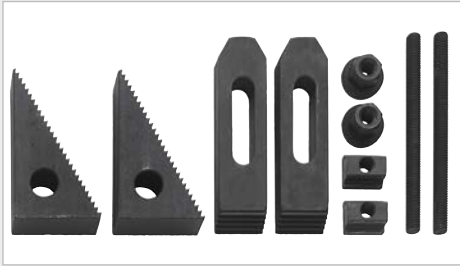


T-slot nuts

for clamping on WABECO drilling milling stands, coordinate tables

Item no. 24429
 Price 8.00 € | 9.52 € incl. VAT

- PU: 4 pieces
- for 10 mm T-slot and M8 thread



Step clamp set

for clamping on WABECO drilling milling stands, coordinate tables

Item no. 24412

Price 18.00 € | 21.42 € incl. VAT

- 10 pieces
- for 10 mm T-slot and M8 thread

included in delivery

- 2 step blocks with stepped teeth
- 2 step clamps
- 2 flange nuts
- 2 T-slot nuts
- 2 studs



Step clamp set

for clamping on WABECO drilling milling stands, coordinate tables

Item no. 24417

Price 58.00 € | 69.02 € incl. VAT

- 58 pieces
- for 10 mm T-slot and M8 thread

included in delivery

- 12 step blocks with stepped teeth
- 6 step clamps
- 6 flange nuts
- 6 T-slot nuts
- 24 studs
- 4 extension nuts



Tapping attachment

for positioning the tap at an angle

Item no. 35805

Price 30.00 € | 35.70 € incl. VAT

- Tool holder for taps - clamping range 2.0 - 5.0 mm
- Adjustable tap wrench size 1½
- Adapter for Euronorm Ø 43 mm
- suitable for all drilling stands with Euronorm Ø 43 mm
- Thread depth can be adjusted using a positioning ring

**Steel column 750 mm**

for a longer vertical working range

Item no. 24451

Price 52.00 € | 61.88 € incl. VAT

- Solid steel column toothed Ø 35 mm length 750 mm
- for a longer vertical travel of the Z-axis of 500 mm
- suitable for all WABECO drilling milling stands

**Steel column 1000 mm**

for a longer vertical working range

Item no. 24452

Price 78.00 € | 92.82 € incl. VAT

- Solid steel column toothed Ø 35 mm length 1000 mm
- for a longer vertical travel of the Z-axis of 750 mm
- suitable for all WABECO drilling milling stands

**Hexagonal steel boom 500 mm**

for larger horizontal travel

Item no. 24453

Price 33.00 € | 39.27 € incl. VAT

- Hexagonal steel boom toothed ● 30 mm length 500 mm
- for a longer transverse travel of the Y-axis of 325 mm
- suitable for all WABECO drilling milling stands

General Business Terms and Conditions (T&C) as of May 11, 2018

1. Sphere of Validity

Our General Business Terms and Conditions shall be valid both for entrepreneurs as well as also consumers in accordance with § 13 of the German Civil Code. Insofar as different provisions shall be valid for consumers and/or entrepreneurs, reference shall be expressly made to this fact. Our General Business Terms and Conditions shall be valid exclusively. We shall not recognize terms and conditions of our commercial customers which are opposing or deviate from our sales terms and conditions, unless we have expressly approved their validity in writing. By issuing its order and/or rendering its offer, the Customer hereby expressly recognizes the following General Business Terms and Conditions.

2. Conclusion of the Agreement

The Purchasing Agreement shall only then be considered to have been concluded through our confirmation of the order at the conditions specified on the order confirmation. Exceptions to this provision shall be purchasing agreements concluded on eBay; they shall be considered to have been concluded upon the rendering of the highest bid and/or selection of (clicking on) another type of sales method provided by eBay (such as, for example, clicking on the Immediate & New and/or Immediately Purchase symbols). In this regard, we make reference to the applicable provisions of eBay's General Business Terms and Conditions. After the conclusion of the agreement, you shall receive an advance payment invoice from us with the VAT indicated. Please only make the bank transfer after the receipt of our advance payment invoice, stating the Customer No. and Receipt No. as due to the numerous orders, it would not otherwise be possible to classify your bank transfer.

We ask our customers to keep in mind that our business is not staffed on weekends and public holidays.

3. Prices – Payment Terms and Conditions

The statutory VAT shall be included in our prices because the sale is also being made to a consumer. It shall be separately indicated on the invoice in the statutory amount on the invoicing date. The Customer shall not be entitled to deduct any discounts.

The purchase price shall become payable upon the conclusion of the agreement. Insofar as nothing to the contrary has been agreed in writing, the sale shall be made against advance payment. Except in the case of Internet transactions, a cash on delivery payment shall also be possible. Insofar as you have opted for this payment method, you shall pay the cash on delivery amount in cash, upon the surrendering of the goods to the carrier. In this case, we must also bill you a cash on delivery fee of 6.40 € incl. VAT. If the delivery is made on account, the Customer shall be considered to have automatically entered into payment default 30 days after receipt of the invoice (§ 286 of the German Civil Code). The statutory provisions shall remain unaffected based upon which payment default occurs earlier: Thus, payment default shall also be considered to have occurred upon the issuance of a warning letter by the creditor as well as upon the lapsing of the contractually-agreed payment timeframe or a contractually-agreed payment due date. The payment default interest rate in dealings with consumers shall amount to 5 percentage points above the respective base interest rate and 9 percentage points above the respective base interest rate in dealings with entrepreneurs (§ 288 of the German Civil Code).

4. Delivery

We shall endeavor to promptly fill each order. However, we wish to point out that our business is staffed only on work days. As a rule, orders and inquiries made on weekends and public holidays are responded to on the following workday. Insofar as a binding delivery timeframe has not been expressly agreed, our delivery timeframes and/or delivery deadlines shall be exclusively non-binding information. The beginning of the delivery timeframe which we have prescribed shall also require the proper fulfilment of the Customer's obligations.

5. Warranty/Liability for Defects

The statutory provisions regarding warranties/liability for defects shall be valid.

Only for entrepreneurs: Claims for defects asserted by entrepreneurs shall require that they have properly fulfilled their own obligations to examine and make notification of defects that are owed in accordance with § 377 of the German Commercial Code. If the goods are not being purchased for private use, but rather for independent or commercial work activities, the statutory claims for defects may be asserted only within one year's time after the delivery is made. All warranty claims must be submitted to:

6. Liability Limit

We shall be liable in unlimited fashion insofar as the cause of the damages is attributable to a contractual violation upon our part, upon the part of one of our representatives or upon the part of one of our vicarious agents which is based upon intentional wrongdoing or gross negligence.

Furthermore, we shall be liable for the violation of essential obligations which are based upon simple negligence. Essential obligations shall be considered to be obligations, the violation of which puts at risk the attainment of the contractual purpose or whose fulfillment only then enables the proper implementation of the agreement at all and upon whose fulfillment you regularly rely and may rely.

However, in this case, we shall be liable only for the foreseeable, contractually-typical damages. We shall not be liable for the violation of other obligations than those which are specified in the aforementioned clauses which are based upon simple negligence.

The aforementioned liability limits shall not be valid for the loss of life, physical injury or damage to health, for a defect which is covered by a warranty guaranteeing the quality features of our product and for defects which have been maliciously concealed. The liability prescribed by the German Product Liability Act shall likewise remain unaffected.

6. Liability Limit

Insofar as our liability is excluded or limited in accordance with the aforementioned provision, this shall also be valid for the personal liability upon the part of our employees, representatives and vicarious agents.

7. Right of Revocation for Consumers

Consumers shall be entitled to a right of revocation in accordance with the following provision whereby a consumer is considered to be any natural person who concludes a legal transaction for purposes which are primarily attributable neither to its commercial nor its independent professional work activities.

7.1 Instructions on the Right of Revocation

7.2 Right of Revocation

You shall have the right to revoke this agreement within fourteen days without being required to state reasons for so doing. The revocation timeframe shall amount to fourteen days after the day on which you and/or your designated third-party representative—who is not the carrier—has and/or have taken possession of the last set of goods. In order to exercise your right of revocation, you must notify us,

of your intention to revoke this agreement by means of a transparent declaration (e.g. a letter sent by post, fax or email). You may use the enclosed model revocation form. However, the use of this form is not mandatory.

You may also electronically fill out and submit the model revocation form or any other transparent declaration on our web site (www.wabeco-remscheid.de). If you utilize this option, we shall promptly send you (e.g. via email) a confirmation of the receipt of such a revocation.

In order to meet the revocation deadline, it is sufficient for you to send the notification of the exercising of the right of revocation before the revocation timeframe lapses.

7.3 Consequences of the Revocation

If you revoke this agreement, we shall repay to you all payments, which we have received from you including the delivery costs (with the exception of the additional costs which are created as the result of the fact that you chose another type of delivery than the cheapest standard delivery which we offer), promptly and by no later than within fourteen days after the day on which we received the notification of your revocation of this agreement. For this repayment, we shall use the same payment method which you used during the original transaction unless something to the contrary has been expressly agreed with you. In no case shall you be charged fees for this repayment.

We may refuse to make the repayment until we have received the goods back or you have submitted documentation that you have sent back the goods based upon which occurs first.

You must send back or surrender the goods promptly and, in any case, within fourteen days after the day on which you notify us of the revocation of this agreement. The deadline shall be considered to have been met if you send back the goods before the timeframe of fourteen days lapses. We shall assume the costs for the return shipment of the goods.

You must pay for any loss of value of the goods only if this loss of value is attributable to interventions with them upon your part which are not required for the inspection of the quality features, properties and functionality of the goods.

7.4 Exclusion of the Right of Revocation

A right of revocation shall not be valid for agreements for the supplying of goods which are not prefabricated and, for whose manufacturing, an individual selection or designation by the consumer shall be prevailing or which have been clearly customized to the consumer's personal requirements.

END OF THE INSTRUCTIONS ON THE RIGHT OF REVOCATION

8. Transfer of Risk and Transport

Insofar as nothing to the contrary has been agreed, for deliveries to entrepreneurs, delivery ex works shall be agreed. For deliveries to consumers, the place of performance shall be the consumer's place of residence. For commercial customers, transport damage claims shall only then be recognized if they are reported to us promptly, but by no later than 48 hours after the receipt of the goods, in writing or via email whereby the prompt sending of the notification shall suffice for meeting the deadline.

9. Reservation of Ownership

For deliveries made on account, we shall reserve the ownership rights to the purchased goods until we receive all payments from the Supply Agreement. In the event of a contractual violation upon the part of the Customer—particularly in the event of its payment default, we shall be entitled to demand the return of the goods. If we take back the purchased goods, this shall constitute a revocation of the agreement. After taking back the purchased goods, we shall be entitled to dispose of them (sell them to another party). The proceeds from such a disposal must be offset against the Customer's liabilities—less any appropriate disposal costs. The buyer shall be obliged to neither sell, pledge, lend nor otherwise dispose of the goods until payment in full has been rendered. Moreover, until payment in full has been rendered, the Customer shall be obliged to promptly notify us if the goods are seized.

10. Customs

If you order our products for delivery outside of the EU, you may be required to pay import duties and import taxes which shall be collected as soon as the goods reach the designated delivery destination. You must pay any additional fees for the customs clearance; we have no control over these fees. Customs regulations differ from country to country which is why you should contact your local customs authorities for more detailed information in this regard.

11. Choice of Laws and Legal Venue

1. The laws of the Federal Republic of Germany shall be valid for the contractual relationship between the Customer and us. The following shall be excepted from this choice of laws: The mandatory consumer protection directives of the country in which the Customer has its customary place of residence. The applicability of the United Nations Convention on Contracts for the International Sale of Goods shall be excluded.
2. The legal venue for all disputes arising from the contractual relationship between the Customer and us shall be our commercial residence in Remscheid insofar as the Customer is an entrepreneur, a juridical person under public law or a special foundation under public law.

12. Disputes

The European Commission provides a platform for online dispute resolution (DR) which you can find at <http://ec.europa.eu/consumers/odr/>. We shall not be obliged to participate in dispute resolution proceedings before an arbitration board and are also not in principle willing to do so. You can reach us via email at: info@wabeco-remscheid.de.

13. Miscellaneous

We reserve the exclusive copyrights to the illustrations, descriptions, user manuals and any other miscellaneous documents. All product and company names which we mention shall be considered to be trade names of the respective owners and/or manufacturers. Insofar as we enable access to other web sites from our Internet site via a link, we shall not be liable for the contents of such third-party web sites. In the event that an order is made electronically, we shall be entitled to save the Customer's data for the timeframe until the agreement has been definitively implemented and all warranty and revocation timeframes have lapsed. Any dissemination to third parties shall be excluded.

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PRECISION lathes, drilling and milling machines



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