JPW INDUSTRIES

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CATALOGUE 2019/20

TRADES CRAFTS INDUSTRY

PROMAC®

PROFESSIONAL METAL WORKING

PROFESSIONAL METAL WORKING

PROMAC

Professional metal working

For more than 30 years, Promac has been offering machines for the metal working industry that are both reliable and easy-to-use. When it comes to drilling, milling, turning, sanding, sawing or vacuum cleaning, Promac offers a comprehensive range of products and accessories for all requirements.

These benefits make Promac your partner of choice:

- Reliability – high-quality products you can rely upon
- Ease of use – simple and easy to use for optimum working results
- Complete range – the perfect machine and suitable accessories for each application
- Good cost/performance ratio – quality does not have to be expensive
- Customized pre-sales and after-sales service – our well-trained staff will be glad to assist you

About us

Dear customer

The JPW Industries Group is a global leader in the field of wood and metal processing machines. The tools manufactured for us feature maximum robustness and precision. You benefit from both these outstanding performance features and the tools' affordable price.

Thanks to its global network of sales organisations and partner companies, JPW is able to offer local assistance to customers in every single market. High availability and professional, excellently trained personnel guarantee the best possible service – before, during and after purchase.

After Sales Service

Always ready to serve you

With a portfolio of more than 400 different machines, devices and associated accessories, our customers need a service centre they can rely on.

We do our best to quickly offer technical support, effective solutions by using specialised technicians and maintaining a well-stocked warehouse of replacement parts. We are equipped to respond competently to any problems that may arise, from mechanical and electric repairs to fixing electronics and control technology issues. We can also work on old machines; our archive of replacement parts allows us to service aged products. We are happy to offer you an experienced, problem-free service.

JPW Industries Europe

JPW – ALWAYS READY TO SERVE YOU

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

DRILLING
ACCESSORIES **P.39**

Benchtopf drill presses | Page 5

Floorstanding drill presses | Page 22

Magnetic drilling machines | Page 34

MILLING
ACCESSORIES **P.56**

Page 45

TURNING
ACCESSORIES **P.82**

Page 60

SAWING
ACCESSORIES **P.122**

Metal band saws | Page 86

Metal circular saws | Page 112

GRINDING
ACCESSORIES **P.144**

Page 127

INDUSTRIAL SUPPLIES
ACCESSORIES **P.166**

Vacuum cleaners | Page 148

Electric hoists | Page 163

TABLES

Page 174

DRILLING

BENCHTOP DRILL PRESSES

Page 5

ACCESSORIES

Page 39

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BENCHTOP DRILL PRESS

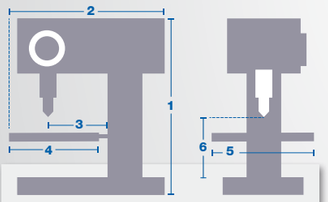
ACCESSORIES **P.39**

210A

1000-000-741

- Belt-type speed change
- With 13-mm key chuck, transparent guard and emergency stop button
- Table with parallel slots

DIMENSIONS



1	Overall height:	585 mm
2	Overall depth:	400 mm
3	Throat:	105 mm
4	Table depth:	165 mm
5	Width:	280 mm
6	Distance, spindle to base:	308 mm

TECHNICAL DATA

Motor (V/kW)	230/0.25
Morse taper DIN	B16
Cutting capacity for steel (ø-mm)	10
Spindle stroke (mm)	53
Gear ranges	5
Speed range (min^{-1})	600–2'600
Table load (kg)	20
Slot width (mm)	12
Weight (kg)	18

Other technical data and accessories you will find in the manual.

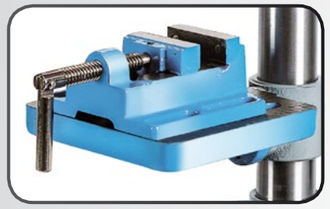
BENCHTOP DRILL PRESS

ACCESSORIES **P.39**

210Z

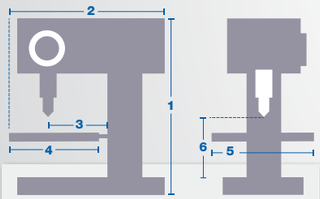
1000-027-278

- Belt-type speed change
- With 13-mm key chuck, transparent guard and emergency stop button
- Table with parallel slots



Incl. vise

DIMENSIONS



1	Overall height:	585 mm
2	Overall depth:	400 mm
3	Throat:	105 mm
4	Table depth:	165 mm
5	Width:	280 mm
6	Distance, spindle to base:	308 mm

TECHNICAL DATA

Motor (V/kW)	230/0.25
Morse taper DIN	B16
Cutting capacity for steel (ø-mm)	10
Spindle stroke (mm)	53
Gear ranges	5
Speed range (min^{-1})	600–2'600
Table load (kg)	20
Slot width (mm)	12
Weight (kg)	18

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

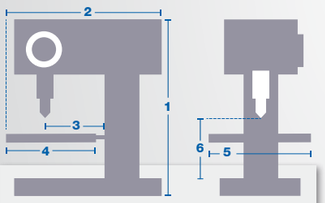
ACCESSORIES **P.39**

211

1000-001-231

- Belt-type speed change
- Table with parallel slots
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button

DIMENSIONS



1	Overall height:	720 mm
2	Overall depth:	420 mm
3	Throat:	130 mm
4	Table depth:	205 mm
5	Width:	240 mm
6	Distance, spindle to base:	430 mm

TECHNICAL DATA

Motor (V/kW)	230/0.25
Morse taper DIN	B16
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	60
Gear ranges	5
Speed range (min^{-1})	600–2'600
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	32

Other technical data and accessories you will find in the manual.

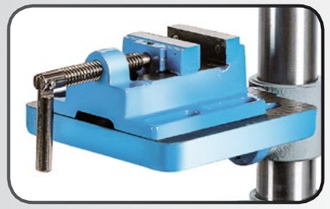
BENCHTOP DRILL PRESS

ACCESSORIES **P.39**

211Z

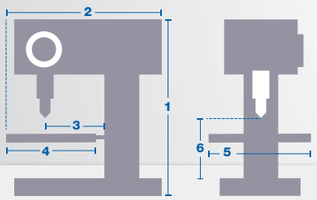
1000-027-279

- Belt-type speed change
- Table with parallel slots
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button



Incl. vise

DIMENSIONS



1	Overall height:	720 mm
2	Overall depth:	420 mm
3	Throat:	130 mm
4	Table depth:	205 mm
5	Width:	240 mm
6	Distance, spindle to base:	430 mm

TECHNICAL DATA

Motor (V/kW)	230/0.25
Morse taper DIN	B16
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	60
Gear ranges	5
Speed range (min^{-1})	600–2'600
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	32

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

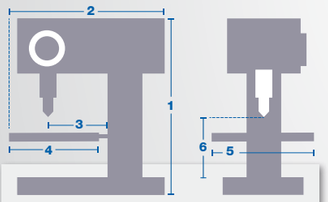
ACCESSORIES **P.39**

212

1000-000-074

- Belt-type rotation speed change
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Switch with start-interlock coil
- Cover with interlock safety switch
- Drilling table with 4 T-slots swiveling
- Table height adjustable via rack

DIMENSIONS



1	Overall height:	970 mm
2	Overall depth:	560 mm
3	Throat:	168 mm
4	Table depth:	265 mm
5	Width:	320 mm
6	Distance, spindle to base:	640 mm

TECHNICAL DATA

Motor (V/kW)	230/0.37
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	80
Gear ranges	5
Speed range (min^{-1})	490–2'510
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	45

Other technical data and accessories you will find in the manual.

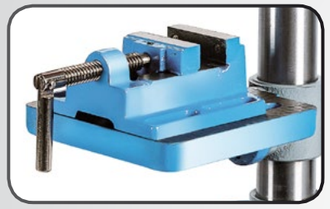
BENCHTOP DRILL PRESS

ACCESSORIES **P.39**

212Z

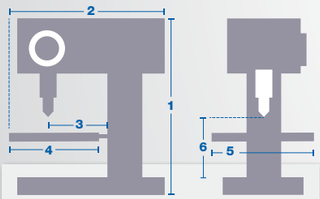
1000-027-280

- Belt-type rotation speed change
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Switch with start-interlock coil
- Cover with interlock safety switch
- Drilling table with 4 T-slots swiveling
- Table height adjustable via rack



Incl. vise

DIMENSIONS



1	Overall height:	970 mm
2	Overall depth:	560 mm
3	Throat:	168 mm
4	Table depth:	265 mm
5	Width:	320 mm
6	Distance, spindle to base:	640 mm

TECHNICAL DATA

Motor (V/kW)	230/0.37
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	80
Gear ranges	5
Speed range (min^{-1})	490–2'510
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	45

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

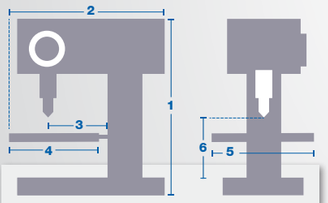
ACCESSORIES **P.39**

212VLB

1000-003-373

- DC motor with variable speed control by means of full wave electronics
- 13-mm auto-clamping chuck, emergency stop button
- Chip guard with safety switch
- Switch with start-interlock coil
- Table height adjustable via rack
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	970 mm
2	Overall depth:	560 mm
3	Throat:	170 mm
4	Table depth:	290 mm
5	Width:	320 mm
6	Distance, spindle to base:	640 mm

TECHNICAL DATA

Motor (V/kW)	230/0.75
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	80
Speed range (min^{-1})	450–2'000, variable
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	50

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

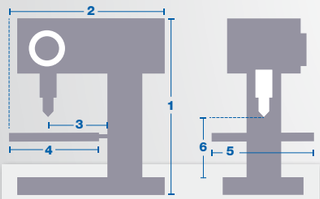
ACCESSORIES **P.39**

370ELB

1000-003-341

- Belt-type speed change
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Switch with start-interlock coil
- Table height adjustable via rack
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'140 mm
2	Overall depth:	660 mm
3	Throat:	180 mm
4	Table depth:	265 mm
5	Width:	325 mm
6	Distance, spindle to base:	540 mm

TECHNICAL DATA

Motor (V/kW)	230/0.75
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	85
Gear ranges	12
Speed range (min^{-1})	290–2'300
Table load (kg)	40
Slot width (mm)	12
Weight (kg)	74

Other technical data and accessories you will find in the manual.

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BENCHTOP DRILL PRESS

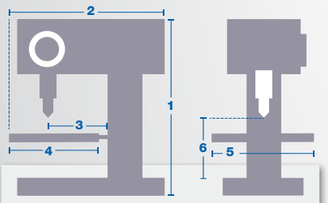
ACCESSORIES **P.39**

371ELB

1000-003-342

- Belt-type speed change
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Belt cover and chip guard with safety switch
- Table height adjustable via rack
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'140 mm
2	Overall depth:	660 mm
3	Throth:	180 mm
4	Table depth:	265 mm
5	Width:	325 mm
6	Distance, spindle to base:	540 mm

TECHNICAL DATA

Motor (V/kW)	400/0.75
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	85
Gear ranges	12
Speed range (min^{-1})	290–2'300
Table load (kg)	40
Slot width (mm)	12
Weight (kg)	74

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

ACCESSORIES **P.39**

372E

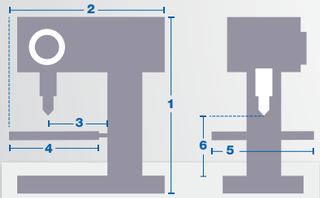
1000-027-196

- Belt-type speed change
- 16-mm auto-clamping chuck, emergency stop button
- Belt cover with safety switch
- Switch with start-interlock coil
- Table height adjustable via rack
- Incl. stand with integrated storage compartment

373E

1000-027-197

DIMENSIONS



1	Overall height:	1'840 mm
2	Overall depth:	730 mm
3	Throth:	180 mm
4	Table depth:	330 mm
5	Width:	390 mm
6	Distance, spindle to base:	635 mm

TECHNICAL DATA

Model	372E	373E
Motor (V/kW)	230/0.55	400/0.55
Morse taper DIN	MT2	MT2
Cutting capacity for steel (ø-mm)	16	16
Spindle stroke (mm)	85	85
Gear ranges	12	12
Speed range (min^{-1})	290–2'300	290–2'300
Table load (kg)	100	100
T-Slot width (mm)	12	12
Weight (kg)	98	98

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

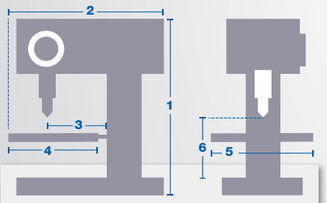
ACCESSORIES **P.39**

378VLB

1000-003-360

- DC motor with variable speed control
- Digital speed display
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Switch with start-interlock coil
- Drill table with cross slots adjustable via rack
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'075 mm
2	Overall depth:	570 mm
3	Throat:	185 mm
4	Table depth:	290 mm
5	Width:	290 mm
6	Distance, spindle to base:	650 mm

TECHNICAL DATA

Motor (V/kW)	230/1.5
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	85
Speed range (min^{-1})	200–2'100, variable
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	79

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

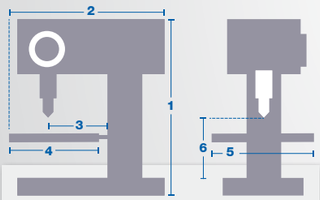
ACCESSORIES **P.39**

378CLB

1000-003-359

- 2-speed motor
- With 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Switch with start-interlock coil
- Cover with interlock safety switch
- Drill table with cross slots adjustable via rack
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'075 mm
2	Overall depth:	600 mm
3	Throat:	165 mm
4	Table depth:	290 mm
5	Width:	290 mm
6	Distance, spindle to base:	650 mm

TECHNICAL DATA

Motor (V/kW)	400/0.55
Morse taper	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	85
Gear ranges	24
Speed range (min^{-1})	145–1'165/290–2'330
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	71

Other technical data and accessories you will find in the manual.

BENCHTOP DRILL PRESS

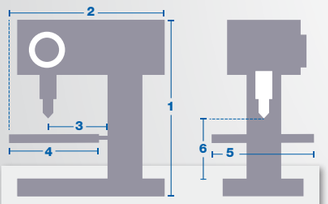
ACCESSORIES **P.39**

BX-825VT

1000-027-281

- DC motor with variable speed control
- Digital speed display
- CW/CCW rotation of the spindle enables threads to be realized
- Table height adjustable via rack
- With 16-mm auto-clamping chuck, transparent guard

DIMENSIONS



1	Overall height:	1'190 mm
2	Overall depth:	850 mm
3	Throat:	180 mm
4	Table depth:	282 mm
5	Width:	350 mm
6	Distance, spindle to base:	670 mm

TECHNICAL DATA

Motor (V/kW)	400/0.55
Morse taper	MT3
Cutting capacity for steel (ø-mm)	25
Spindle stroke (mm)	100
Speed range (min^{-1})	270–2'700, variable
Table load (kg)	30
Slot width (mm)	12
Weight (kg)	115

Other technical data and accessories you will find in the manual.

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OVERVIEW

BENCHTOP DRILL PRESSES

Model	210A	210Z	211	211Z
Art. No. SAP	1000-000-741	1000-027-278	1000-001-231	1000-027-279
Page	6	7	8	9
Motor (V/kW)	230/0.25	230/0.25	230/0.25	230/0.25
Morse taper DIN	B16	B16	B16	B16
Cutting capacity for steel (ø-mm)	10	10	16	16
Spindle stroke (mm)	53	53	60	60
Gear ranges	5	5	5	5
Speed range (min^{-1})	600–2'600	600–2'600	600–2'600	600–2'600
Table load (kg)	20	20	30	30
Slot width (mm)	12	12	12	12
Dimensions (mm)	585×280×400	585×280×400	720×240×420	720×240×420
Weight (kg)	18	18	32	32
Delivered with	▪ Key chuck, 13mm	▪ Key chuck, 13mm ▪ Incl. vise	▪ Auto-clamping chuck, 13mm	▪ Auto-clamping chuck, 13mm ▪ Incl. vise

Model	370ELB	371ELB	372E	373E
Art. No. SAP	1000-003-341	1000-003-342	1000-027-196	1000-027-197
Page	13	14	15	15
Motor (V/kW)	230/0.75	400/0.75	230/0.55	400/0.55
Morse taper DIN	MT2	MT2	MT2	MT2
Cutting capacity for steel (ø-mm)	16	16	16	16
Spindle stroke (mm)	85	85	85	85
Gear ranges	12	12	12	12
Speed range (min^{-1})	290–2'300	290–2'300	290–2'300	290–2'300
Table load (kg)	40	40	100	100
Slot width (mm)	12	12	12	12
Dimensions (mm)	1'140×325×660	1'140×325×660	1'840×390×730	1'840×390×730
Weight (kg)	74	74	98	98
Delivered with	▪ Auto-clamping chuck, 16mm ▪ LED machine light	▪ Auto-clamping chuck, 16mm ▪ LED machine light	▪ Auto-clamping chuck, 16mm ▪ LED machine light ▪ Stand	▪ Auto-clamping chuck, 16mm ▪ LED machine light ▪ Stand

Other technical data and accessories you will find in the manual.

Model	212	212Z	212VLB
Art. No. SAP	1000-000-074	1000-027-280	1000-003-373
Page	10	11	12
Motor (V/kW)	230/0.37	230/0.37	230/0.75
Morse taper DIN	MT2	MT2	MT2
Cutting capacity for steel (ø-mm)	16	16	16
Spindle stroke (mm)	80	80	80
Gear ranges	5	5	–
Speed range (min^{-1})	490–2'510	490–2'510	450–2'000, variable
Table load (kg)	30	30	30
Slot width (mm)	12	12	12
Dimensions (mm)	970×320×560	970×320×560	970×320×560
Weight (kg)	45	45	50
Delivered with	▪ Auto-clamping chuck, 16mm	▪ Auto-clamping chuck, 16mm ▪ Incl. vise	▪ Auto-clamping chuck, 13mm ▪ LED machine light

Model	378VLB	378CLB	BX-825VT
Art. No. SAP	1000-003-360	1000-003-359	1000-027-281
Page	16	17	18
Motor (V/kW)	230/1.5	400/0.55	400/0.55
Morse taper DIN	MT2	MT2	MT3
Cutting capacity for steel (ø-mm)	16	16	25
Spindle stroke (mm)	85	85	100
Gear ranges	–	24	–
Speed range (min^{-1})	200–2'100, variable	145–1'165/290–2'330	270–2'700, variable
Table load (kg)	30	30	30
Slot width (mm)	12	12	12
Dimensions (mm)	1'075×290×570	1'075×290×600	1'190×350×850
Weight (kg)	79	71	115
Delivered with	▪ Auto-clamping chuck, 16mm ▪ LED machine light	▪ Auto-clamping chuck, 16mm ▪ LED machine light	▪ Auto-clamping chuck, 16mm

Other technical data and accessories you will find in the manual.

DRILLING

FLOORSTANDING DRILL PRESSES

Page 22

ACCESSORIES

Page 39

FLOORSTANDING DRILL PRESS

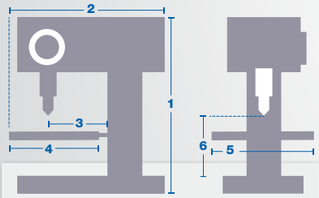
ACCESSORIES P.39

213A

1000-004-012

- Tilting table 0 – 45°
- Table with slots arranged in a cross pattern
- With 16 mm auto-clamping chuck, transparent guard and emergency stop button

DIMENSIONS



1	Overall height:	1'625 mm
2	Overall depth:	680 mm
3	Throat:	180 mm
4	Table depth:	235 mm
5	Width:	360 mm
6	Distance, spindle to base:	1'235 mm

TECHNICAL DATA

Motor (V/kW)	230/0.37
Morse taper DIN	MT2
Cutting capacity for steel (ø-mm)	16
Spindle stroke (mm)	80
Gear ranges	12
Speed range (min^{-1})	260–2'900
Table load (kg)	20
Slot width (mm)	12
Weight (kg)	58

Other technical data and accessories you will find in the manual.

PROMAC

FLOORSTANDING DRILL PRESS

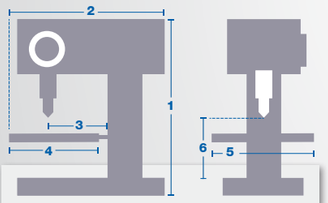
ACCESSORIES **P.39**

214AB

1000-003-340

- Belt-type speed change
- 16-mm key-type chuck, emergency stop button
- Switch with start-interlock coil
- Belt cover and chip guard with safety switch
- Drill table with parallel slots adjustable via rack

DIMENSIONS



1	Overall height:	1'750 mm
2	Overall depth:	840 mm
3	Throat:	280 mm
4	Table depth:	280 mm
5	Width:	460 mm
6	Distance, spindle to base:	1'220 mm

TECHNICAL DATA

Motor (V/kW)	400/0.75
Morse taper	MT3
Cutting capacity for steel (ø-mm)	26
Spindle stroke (mm)	115
Gear ranges	12
Speed range (min^{-1})	150–2'840
Table load (kg)	60
T-Slot width (mm)	12
Weight (kg)	164

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

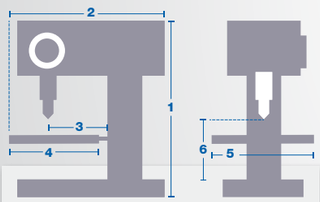
ACCESSORIES **P.39**

930E

1000-027-282

- 2-speed motor
- Swivel drilling table
- Including lubrication system
- 16-mm auto-clamping chuck, transparent guard and emergency stop button
- Incl. vise
- Switch with start-interlock coil

DIMENSIONS



1	Overall height:	1'745 mm
2	Overall depth:	750 mm
3	Throat:	210 mm
4	Table depth:	290 mm
5	Width:	450 mm
6	Distance, spindle to base:	1'200 mm

TECHNICAL DATA

Motor (V/kW)	400/0.75
Morse taper	MT3
Cutting capacity for steel (ø-mm)	30
Spindle stroke (mm)	125
Gear ranges	18
Speed range (min^{-1})	105–2'650
Table load (kg)	60
T-Slot width (mm)	14
Jaw width (mm)	120
Clamping capacity (mm)	75
Weight (kg)	216

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

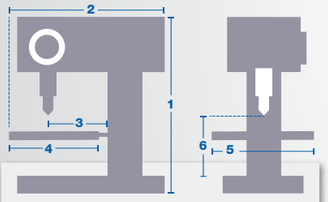
ACCESSORIES **P.39**

930ELB

1000-003-362

- 2-speed motor
- Belt-type speed change
- 16-mm auto-clamping chuck, emergency stop button
- Swivel table with integrated vise
- Including lubrication system
- Switch with start-interlock coil
- Belt cover and chip guard with safety switch
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'755 mm
2	Overall depth:	800 mm
3	Throat:	254 mm
4	Table depth:	350 mm
5	Width:	600 mm
6	Distance, spindle to base:	1'060 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Spindle stroke (mm)	125
Gear ranges	12
Speed range (min^{-1})	150–2'500
Table load (kg)	60
T-Slot width (mm)	14
Jaw width (mm)	120
Clamping capacity (mm)	75
Weight (kg)	200

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

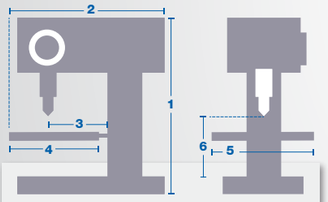
ACCESSORIES **P.39**

930VLB

1000-003-363

- DC motor with variable speed control
- Digital speed display
- 16-mm auto-clamping chuck, emergency stop button
- Tapping device
- Table with parallel slots, with vise
- Including lubrication system
- Switch with start-interlock coil
- Belt cover and chip guard with safety switch
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	2'040 mm
2	Overall depth:	930 mm
3	Throat:	254 mm
4	Table depth:	350 mm
5	Width:	540 mm
6	Distance, spindle to base:	1'060 mm

TECHNICAL DATA

Motor (V/kW)	400/1.12
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Tapping capacity	M12
Spindle stroke (mm)	125
Speed range (min^{-1})	100–2'800, variable
Table load (kg)	60
T-Slot width (mm)	14
Jaw width (mm)	120
Clamping capacity (mm)	75
Weight (kg)	180

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

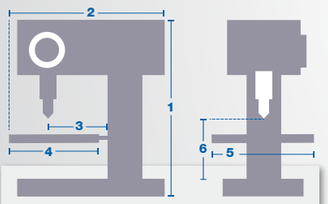
ACCESSORIES **P.39**

BX-834V

1000-027-283

- Electronic variable speed control
- Digital speed display
- Tapping device with reversal of rotation
- Incl. vise
- Tilting table 180°
- Including lubrication system
- Transparent guard and emergency stop button

DIMENSIONS



1	Overall height:	1'810 mm
2	Overall depth:	880 mm
3	Throat:	220 mm
4	Table depth:	320 mm
5	Width:	660 mm
6	Distance, spindle to base:	1'130 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Tapping capacity	M16
Spindle stroke (mm)	140
Speed range (min^{-1})	80–1'000/230–2'500, variable
Table load (kg)	70
T-Slot width (mm)	14
Jaw width (mm)	120
Clamping capacity (mm)	75
Weight (kg)	290

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

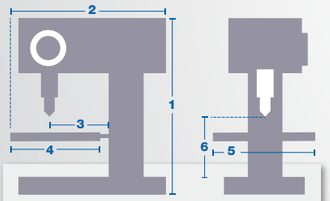
ACCESSORIES **P.39**

BX-834VLB

1000-003-361

- Electronic variable speed control
- Digital speed display
- Tapping device with reversal of rotation
- Independent motor ventilation
- Lubrication system
- Switch with start-interlock coil
- With spindle guard and emergency stop switch, belt cover and chip guard with safety switch
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'860 mm
2	Overall depth:	915 mm
3	Throat:	204 mm
4	Table depth:	360 mm
5	Width:	460 mm
6	Distance, spindle to base:	1'120 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Tapping capacity	M19
Spindle stroke (mm)	135
Speed range (min^{-1})	120–2'500, variable
Table load (kg)	50
T-Slot width (mm)	14
Weight (kg)	240

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

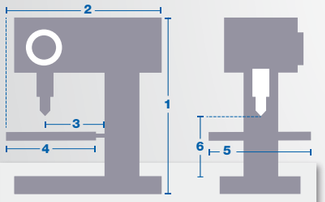
ACCESSORIES **P.39**

BX-840VADTL

1000-004-237

- Powerful drill with stepless speed control
- 2-stage reduction gearbox
- Digital speed display
- Tapping device with reversal of rotation
- Automatic spindle lowering (micrometric, 0.05/0.1/0.2 mm)
- Automatic 3-stage spindle feed
- Independent motor ventilation
- Including lubrication system
- Switch with start-interlock coil
- Belt cover and chip guard with safety switch, transparent guard and emergency stop button
- Externally mounted LED machine light

DIMENSIONS



1	Overall height:	1'970 mm
2	Overall depth:	915 mm
3	Throat:	264 mm
4	Table depth:	475 mm
5	Width:	560 mm
6	Distance, spindle to base:	1'132 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Morse taper	MT4
Cutting capacity for steel (ø-mm)	40
Spindle stroke (mm)	150
Tapping capacity	M20
Speed range (min^{-1})	65–2'000, variable
Table load (kg)	70
T-Slot width (mm)	16
Weight (kg)	385

Other technical data and accessories you will find in the manual.

FLOORSTANDING DRILL PRESS

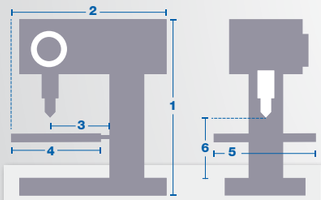
ACCESSORIES **P.39**

BX-840VB

1000-027-284

- Electronic variable speed control
- Digital speed display
- Tapping device with reversal of rotation
- Including lubrication system
- Transparent guard and emergency stop button

DIMENSIONS



1	Overall height:	1'870 mm
2	Overall depth:	790 mm
3	Throat:	300 mm
4	Table depth:	400 mm
5	Width:	540 mm
6	Distance, spindle to base:	1'150 mm

TECHNICAL DATA

Motor (V/kW)	400/2.2
Morse taper	MT4
Cutting capacity for steel (ø-mm)	40
Tapping capacity	M20
Spindle stroke (mm)	145
Speed range (min^{-1})	70–680/190–2'000, variable
Table load (kg)	50
T-Slot width (mm)	16
Weight (kg)	330

Other technical data and accessories you will find in the manual.

OVERVIEW

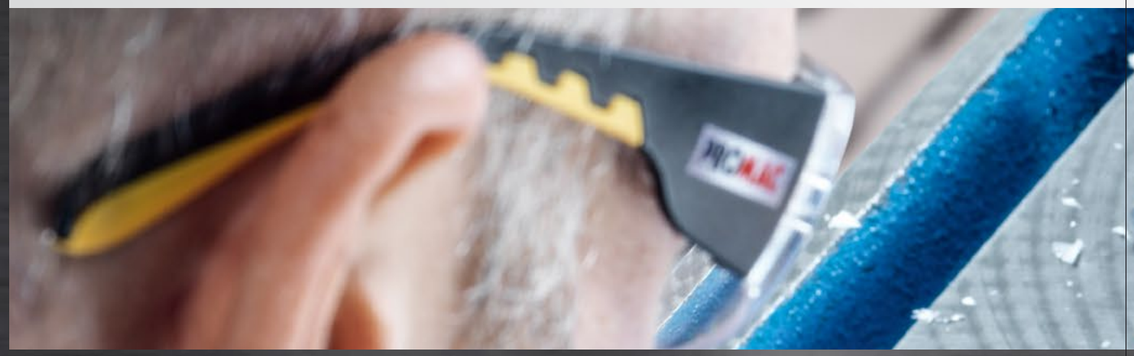
FLOORSTANDING DRILL PRESSES

Model	213A	214AB	930E	930ELB	930VLB
Art. No. SAP	1000-004-012	1000-003-340	1000-027-282	1000-003-362	1000-003-363
Page	23	24	25	26	27
Motor (V/kW)	230/0.37	400/0.75	400/0.75	400/1.1	400/1.2
Morse taper DIN	MT2	MT3	MT3	MT3	MT3
Cutting capacity for steel (ø-mm)	16	26	30	32	32
Spindle stroke (mm)	80	115	125	125	125
Tapping capacity	–	–	–	–	M12
Gear ranges	12	12	18	12	–
Speed range (min^{-1})	260–2'900	150–2'840	105–2'650	150–2'500	100–2'800, variable
Table load (kg)	20	60	60	60	60
T-Slot width (mm)	12	12	14	14	14
Jaw width (mm)	–	–	120	120	120
Clamping capacity (mm)	–	–	75	75	75
Dimensions (mm)	1'625×360×680	1'750×460×840	1'745×450×750	1'755×600×800	2'040×540×930
Weight (kg)	58	164	216	200	180
Delivered with	▪ Auto-clamping chuck, 16mm	▪ Key chuck, 16mm	▪ Auto-clamping chuck, 16mm	▪ Auto-clamping chuck, 16mm ▪ LED machine light ▪ Vise	▪ Auto-clamping chuck, 16mm ▪ LED machine light ▪ Vise

Other technical data and accessories you will find in the manual.

Model	BX-834V	BX-834VLB	BX-840VADTL	BX-840VB
Art. No. SAP	1000-027-283	1000-003-361	1000-004-237	1000-027-284
Page	28	29	30	31
Motor (V/kW)	400/1.5	400/1.5	400/1.5	400/2.2
Morse taper	MT3	MT3	MT4	MT4
Cutting capacity for steel (ø-mm)	32	32	40	40
Spindle stroke (mm)	140	135	150	145
Tapping capacity	M16	M19	M20	M20
Gear ranges	–	–	–	–
Speed range (min^{-1})	80–2'500, variable	120–2'500, variable	65–2'000, variable	70–2'000, variable
Table load (kg)	70	50	70	50
T-Slot width (mm)	14	14	16	16
Jaw width (mm)	120	–	–	–
Clamping capacity (mm)	75	–	–	–
Dimensions (mm)	1'810×660×880	1'860×460×915	1'970×560×915	1'870×540×790
Weight (kg)	290	240	385	330
Delivered with	▪ Vise	▪ LED machine light	▪ LED machine light	–

Other technical data and accessories you will find in the manual.



DRILLING

MAGNETIC DRILLING MACHINE
Page 34

ACCESSORIES
Page 39

MAGNETIC DRILLING MACHINE

ACCESSORIES P.43

MDA-35

1000-027-484

- Magnetic drill with a maximum capacity of 35 mm for drilling and 13 mm for drilling
- 9'000 N of magnetic force with a minimum thickness of 6 mm
- Integrated lubrication system
- Delivered in a case

APPLICATIONS

Up to ø35 mm | ø10–40 mm | Up to ø13 mm

TECHNICAL DATA

Input (kW)	1.1
On-load speed (rpm)	450
Tool holder	19 mm Weldon
Coolant supply	Internal
Voltage (V/Hz)	230, 50/60
Magnetic adhesion: Tool force (on 10 mm steel) (N)	9'000, 2'100
Cutting ø max. in steel (mm)	Core cutters: 12–35 short Twist drills: 1–13 (DIN 1897) with Weldon drill chuck
Counterboring (ø-mm)	10–40
Cutting depth (mm)	50
Stroke (mm)	120
Size of magnetic base (mm)	70×185
Min. material thickness (mm)	6
Weight (kg)	10.6
Noise emission (dB(A))	92 at 300 mm distance from the motor
Vibration on the handle (mm/s² and mm/s)	AC=3.5 and VC=3.2

Other technical data and accessories you will find in the manual.

PROMAC

MAGNETIC DRILLING MACHINE

ACCESSORIES **P.43**

MDA-35QC

1000-027-485

- Magnetic drill with a maximum capacity of 35 mm for drilling and 13 mm for drilling
- 9'000 N of magnetic force with a minimum thickness of 6 mm
- Integrated lubrication system
- Delivered in a case

APPLICATIONS

Up to ø35 mm | ø10–40 mm | Up to ø13 mm

TECHNICAL DATA

Input (kW)	1.1
On-load speed (rpm)	450
Tool holder	19 mm Weldon quick-release chuck
Coolant supply	Internal
Voltage (V/Hz)	230, 50/60
Magnetic adhesion: Tool force (on 10 mm steel) (N)	9'000, 2'100
Cutting ø max. in steel (mm)	Core cutters: 12–35 Twist drills: 1–13 (DIN 1897) with Weldon drill chuck
Counterboring (ø-mm)	10–40
Cutting depth (mm)	50
Stroke (mm)	120/+ 90 with adjustable motor slide
Size of magnetic base (mm)	70×185
Min. material thickness (mm)	6
Weight (kg)	11.5
Noise emission (dB(A))	92 at 300 mm distance from the motor
Vibration on the handle (mm/s² and mm/s)	AC=3.5 and VC=3.2

Other technical data and accessories you will find in the manual.

MAGNETIC DRILLING MACHINE

ACCESSORIES **P.43**

MDA-50QC

1000-027-486

- Magnetic drilling machine with a maximum capacity of 50 mm for core drilling and 20 mm for drilling
- 12'000 N of magnetic force with a minimum thickness of 6 mm
- Lubrication system by tool holder
- Delivered in a case

APPLICATIONS

Up to ø50 mm | ø10–40 mm | Up to ø20 mm

TECHNICAL DATA

Input (kW)	1.2
On-load speed (rpm)	250/450
Tool holder	MT2 with Weldon quick-release chuck
Coolant supply	Via tool holder
Voltage (V/Hz)	230, 50/60
Magnetic adhesion: Tool force (on 10 mm steel) (N)	12'000, 3'500
Cutting ø max. in steel (mm)	Core cutters: 12–50 Twist drills: 1–16 with MT2 drill chuck/ max. 20 with MT2 direct
Counterboring (ø-mm)	10–40
Cutting depth (mm)	50
Stroke (mm)	190/+ 100 with adjustable motor slide
Size of magnetic base (mm)	92×220
Min. material thickness (mm)	6
Weight (kg)	15
Noise emission (dB(A))	92 at 300 mm distance from the motor
Vibration on the handle (mm/s² and mm/s)	AC=3.5 and VC=3.2

Other technical data and accessories you will find in the manual.

MAGNETIC DRILLING MACHINE

ACCESSORIES **P.43**

MDA-80Q

1000-027-487

- Magnetic drilling machine with a maximum capacity of 80 mm for core drilling and 32 mm for drilling
- 16'000 N of magnetic force with a minimum thickness of 6 mm
- Lubrication system by tool holder
- Delivered in a case

APPLICATIONS

Up to ø80 mm | ø10–55 mm | Up to ø32 mm

TECHNICAL DATA

Input (kW)	1.8
On-load speed (rpm)	110/175/245/385
Tool holder	MT3 with Weldon quick-release chuck
Coolant supply	Via tool holder
Voltage (V/Hz)	230, 50/60
Magnetic adhesion: Tool force (on 10 mm steel) (N)	16'000, 4'000
Cutting ø max. in steel (mm)	Core cutters: 12–80 Twist drills: 1–16 with MT3 drill chuck/max. 32 with MT3 direct
Counterboring (ø-mm)	10–55
Cutting depth (mm)	–
Stroke (mm)	190/+ 100 with adjustable motor slide
Size of magnetic base (mm)	92×220
Min. material thickness (mm)	10
Weight (kg)	21.8
Noise emission (dB(A))	92 at 300 mm distance from the motor
Vibration on the handle (mm/s² and mm/s)	AC=3.5 and VC=3.2

Other technical data and accessories you will find in the manual.

DRILLING

ACCESSORIES
Page 39

ACCESSORIES

DRILLING

Machine vise (with jaw width)

1000-000-083	9082	Jaw width 85 mm
1000-000-084	9083	Jaw width 105 mm
1000-000-032	2025	Jaw width 156 mm

Quick-clamp vise (with jaw width)

1000-000-778	2021	Jaw width 105 mm
1000-000-820	2022	Jaw width 156 mm

Automatic clamping chuck

1000-000-152	9473	0.5–13 mm, B16
1000-000-145	9457	1–16 mm, B18

Reducer

1000-002-695	2040	MT2/MT1
1000-000-067	2087	MT3/MT2
1000-000-068	2088	MT4/MT2
1000-000-489	9841	MT4/MT3

Clamping wedge range

1000-000-307	9763	NW12, M10, 52-pcs.
1000-000-302	9728	NW14, M12, 52-pcs.
1000-000-007	10026	NW16, M14, 52-pcs.

T-nut

1000-000-117	9249	NW12
1000-000-131	9336	NW14
1000-000-132	9337	NW16

Milling set

7000-000-024	2209	MT2, conical mandrel (9164), keyless chuck (9457), collet set (2166), 52-pcs. clamping tool. (9763), vise (9908)
7000-000-025	9982	MT3, conical mandrel (9165), keyless chuck (9457), collet set (9667), clamping tool 52-pcs. (9728), vise (9908)

Cross table with vise

1000-001-210	2167	Cross table with vise

Pedestal (for bench-top drill presses)

1000-000-049	2046-TK	350×550×800 mm

Overflow mandrel

1000-000-066	2086	Overflow mandrel

Overflow mandrel

1000-000-084	9083	Jaw width 105 mm
1000-000-085	9098	Jaw width 130 mm

Machine light

1000-000-532	9897	230V, magnetic base

Vise

1000-002-986	2284	3 positions, jaw width 100mm

Machine screw tap set

1000-001-477	D-15	15-pcs.

Metal drill bits set, HSS 4241, DIN338

1000-001-344	D-19GS	19-pcs., ground
1000-001-342	D-19RW	19-pcs., rollforged
1000-001-345	D-25GS	25-pcs., ground

HSS-Basic Cutters-Set

2000-024-545	1907125	Cutting depth 30 mm
2000-024-546	1907001025	Cutting depth 30 mm
2000-024-547	1907001050	Cutting depth 50 mm
2000-024-548	1907003025	Cutting depth 30 mm
2000-024-549	1907003050	Cutting depth 50 mm

HSS-Basic Cutters

2000-024-550	1907012025	ø 12.0 mm, cutting depth 30 mm
2000-024-551	1907012050	ø 12.0 mm, cutting depth 50 mm
2000-024-552	1907013025	ø 13.0 mm, cutting depth 30 mm
2000-024-553	1907013050	ø 13.0 mm, cutting depth 50 mm
2000-024-554	1907013525	ø 13.5 mm, cutting depth 30 mm
2000-024-555	1907013550	ø 13.5 mm, cutting depth 50 mm
2000-024-556	1907014025	ø 14.0 mm, cutting depth 30 mm
2000-024-557	1907014050	ø 14.0 mm, cutting depth 50 mm
2000-024-558	1907015025	ø 15.0 mm, cutting depth 30 mm
2000-024-559	1907015050	ø 15.0 mm, cutting depth 50 mm
2000-024-560	1907015525	ø 15.5 mm, cutting depth 30 mm
2000-024-561	1907015550	ø 15.5 mm, cutting depth 50 mm
2000-024-563	1907016025	ø 16.0 mm, cutting depth 30 mm
2000-024-564	1907016050	ø 16.0 mm, cutting depth 50 mm
2000-024-565	1907017025	ø 17.0 mm, cutting depth 30 mm
2000-024-566	1907017050	ø 17.0 mm, cutting depth 50 mm
2000-024-567	1907017525	ø 17.5 mm, cutting depth 30 mm
2000-024-568	1907017550	ø 17.5 mm, cutting depth 50 mm
2000-024-569	1907018025	ø 18.0 mm, cutting depth 30 mm
2000-024-570	1907018050	ø 18.0 mm, cutting depth 50 mm
2000-024-571	1907019025	ø 19.0 mm, cutting depth 30 mm
2000-024-572	1907019050	ø 19.0 mm, cutting depth 50 mm
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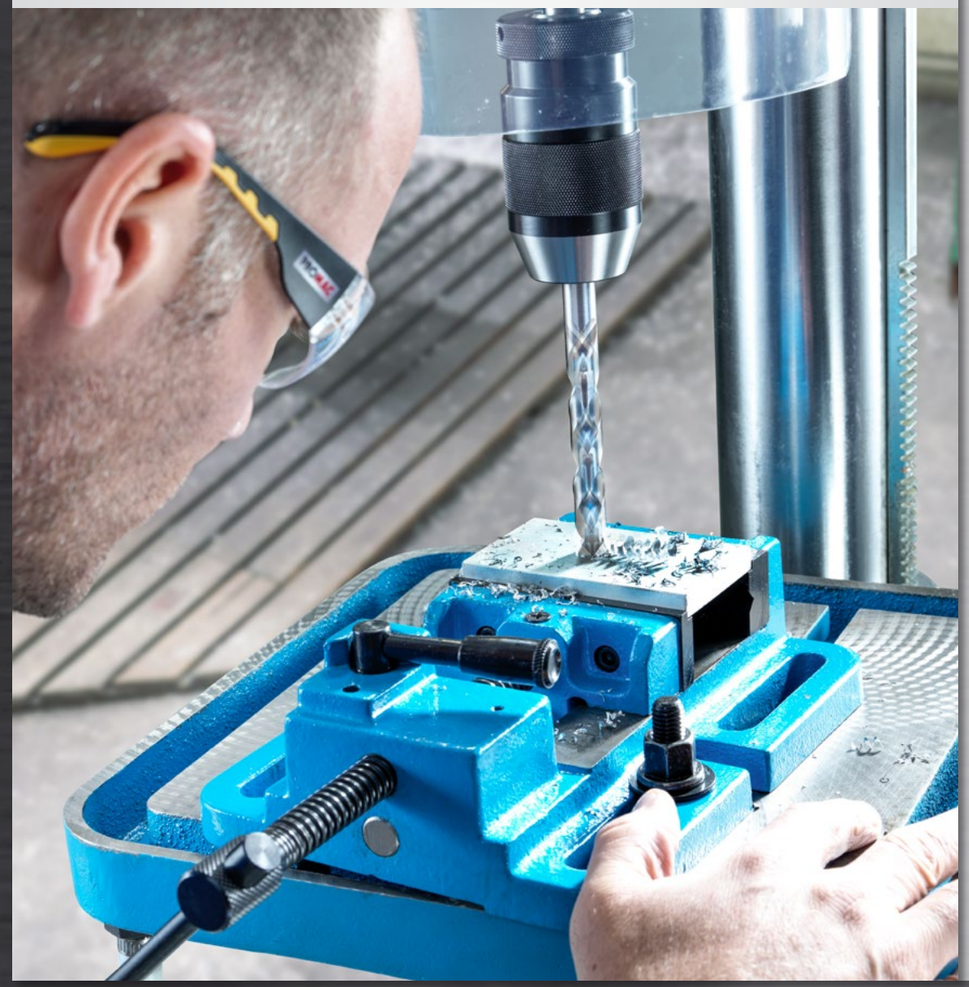
2000-024-579	1907022025	ø 22.0 mm, cutting depth 30 mm
2000-024-580	1907022050	ø 22.0 mm, cutting depth 50 mm
2000-024-581	1907023025	ø 23.0 mm, cutting depth 30 mm
2000-024-582	1907023050	ø 23.0 mm, cutting depth 50 mm
2000-024-583	1907024025	ø 24.0 mm, cutting depth 30 mm
2000-024-584	1907024050	ø 24.0 mm, cutting depth 50 mm
2000-024-585	1907025025	ø 30.0 mm, cutting depth 30 mm
2000-024-586	1907025050	ø 30.0 mm, cutting depth 50 mm
2000-024-587	1907026025	ø 26.0 mm, cutting depth 30 mm
2000-024-588	1907026050	ø 26.0 mm, cutting depth 50 mm
2000-024-589	1907026525	ø 26.5 mm, cutting depth 30 mm
2000-024-590	1907026550	ø 26.5 mm, cutting depth 50 mm
2000-024-591	1907027025	ø 27.0 mm, cutting depth 30 mm
2000-024-592	1907027050	ø 27.0 mm, cutting depth 50 mm
2000-024-593	1907028025	ø 28.0 mm, cutting depth 30 mm
2000-024-594	1907028050	ø 28.0 mm, cutting depth 50 mm
2000-024-595	1907029025	ø 29.0 mm, cutting depth 30 mm
2000-024-596	1907029050	ø 29.0 mm, cutting depth 50 mm
2000-024-597	1907030025	ø 30.0 mm, cutting depth 30 mm
2000-024-598	1907030050	ø 30.0 mm, cutting depth 50 mm
2000-024-599	1907031025	ø 31.0 mm, cutting depth 30 mm
2000-024-600	1907031050	ø 31.0 mm, cutting depth 50 mm
2000-024-601	1907032025	ø 32.0 mm, cutting depth 30 mm
2000-024-602	1907032050	ø 32.0 mm, cutting depth 50 mm
2000-024-603	1907033025	ø 33.0 mm, cutting depth 30 mm
2000-024-604	1907033050	ø 33.0 mm, cutting depth 50 mm
2000-024-605	1907034025	ø 34.0 mm, cutting depth 30 mm
2000-024-606	1907034050	ø 34.0 mm, cutting depth 50 mm
2000-024-607	1907035025	ø 35.0 mm, cutting depth 30 mm
2000-024-608	1907035050	ø 35.0 mm, cutting depth 50 mm
2000-024-609	1907036025	ø 36.0 mm, cutting depth 30 mm
2000-024-610	1907036050	ø 36.0 mm, cutting depth 50 mm
2000-024-611	1907037025	ø 37.0 mm, cutting depth 30 mm
2000-024-612	1907037050	ø 37.0 mm, cutting depth 50 mm
2000-024-613	1907038025	ø 38.0 mm, cutting depth 30 mm
2000-024-614	1907038050	ø 38.0 mm, cutting depth 50 mm
2000-024-615	1907039025	ø 39.0 mm, cutting depth 30 mm
2000-024-616	1907039050	ø 39.0 mm, cutting depth 50 mm
2000-024-617	1907040025	ø 40.0 mm, cutting depth 30 mm

ACCESSORIES

DRILLING

2000-024-618	1907040050	ø 40.0 mm, cutting depth 50 mm
2000-024-619	1907041025	ø 41.0 mm, cutting depth 30 mm
2000-024-620	1907041050	ø 41.0 mm, cutting depth 50 mm
2000-024-621	1907042025	ø 42.0 mm, cutting depth 30 mm
2000-024-622	1907042050	ø 42.0 mm, cutting depth 50 mm
2000-024-623	1907043025	ø 43.0 mm, cutting depth 30 mm
2000-024-624	1907043050	ø 43.0 mm, cutting depth 50 mm
2000-024-625	1907044025	ø 44.0 mm, cutting depth 30 mm
2000-024-626	1907044050	ø 44.0 mm, cutting depth 50 mm
2000-024-627	1907045025	ø 45.0 mm, cutting depth 30 mm
2000-024-628	1907045050	ø 45.0 mm, cutting depth 50 mm
2000-024-630	1907046025	ø 46.0 mm, cutting depth 30 mm
2000-024-631	1907046050	ø 46.0 mm, cutting depth 50 mm
2000-024-632	1907047025	ø 47.0 mm, cutting depth 30 mm
2000-024-633	1907047050	ø 47.0 mm, cutting depth 50 mm
2000-024-634	1907048025	ø 48.0 mm, cutting depth 30 mm
2000-024-635	1907048050	ø 48.0 mm, cutting depth 50 mm
2000-024-636	1907049025	ø 49.0 mm, cutting depth 30 mm
2000-024-637	1907049050	ø 49.0 mm, cutting depth 50 mm
2000-024-638	1907050025	ø 50.0 mm, cutting depth 30 mm
2000-024-639	1907050050	ø 50.0 mm, cutting depth 50 mm
2000-024-640	1907051050	ø 51.0 mm, cutting depth 50 mm
2000-024-641	1907052025	ø 52.0 mm, cutting depth 30 mm
2000-024-642	1907052050	ø 52.0 mm, cutting depth 50 mm
2000-024-643	1907053050	ø 53.0 mm, cutting depth 50 mm
2000-024-644	1907054050	ø 54.0 mm, cutting depth 50 mm
2000-024-645	1907055025	ø 55.0 mm, cutting depth 30 mm
2000-024-646	1907055050	ø 55.0 mm, cutting depth 50 mm
2000-024-647	1907056050	ø 56.0 mm, cutting depth 50 mm
2000-024-648	1907057050	ø 57.0 mm, cutting depth 50 mm
2000-024-649	1907058050	ø 58.0 mm, cutting depth 50 mm
2000-024-650	1907059050	ø 59.0 mm, cutting depth 50 mm
2000-024-651	1907060025	ø 60.0 mm, cutting depth 30 mm
2000-024-652	1907060050	ø 60.0 mm, cutting depth 50 mm



ACCESSORIES

MAGNETIC DRILLING MACHINES

Adaptor

2000-024-539	20202	For FEIN thread to Weldon

Ejector pin

2000-024-540	20203	For adaptor 20202

Extension adapter

2000-024-543	20206	Extension adaptor

Adaptor

2000-024-538	20201	Weldon to FEIN Thread
2000-024-541	20204	Weldon to FEIN Quick-In
2000-024-542	20205	Weldon to NITTO One-Touch
2000-024-544	20210	For FEIN Quick-In to Weldon

Adaptor

2000-024-653	060WD	For the use with TCT hole saws

Weldon drill Chuck

2000-024-523	18107	For twist drills short (DIN 1897) (for MDA-35, MDA-35QC)

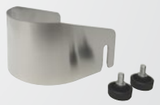
Tool holder with internal cooling

2000-024-533	18003	AMK-2, MT2
2000-024-534	18025	AMK-3, MT3
2000-024-535	18025L	AMK-3, MT3 long
2000-024-536	18650	RQ, MT2
2000-024-537	18651	RQ, MT3

Drill chuck

2000-024-524	18008	MT2 for twist drills 1–16 mm (for MDA-50QC)
2000-024-525	18009	MT3 for twist drills 1–16 mm (for MDA-80Q)

Safety guard



2000-024-654	189311293	Incl. 2 × fixing screws 189601096 (for MDA-35, MDA-35QC)
2000-024-655	189412050	Incl. 2 × fixing screws 189601096 (for MDA-50QC)
2000-024-656	189412053	Incl. 2 × fixing screws 189601096 (for MDA-80Q)

ACCESSORIES

MAGNETIC DRILLING MACHINES

Cooling Unit

2000-024-521	189311241	For RB35B
2000-024-522	189412029	For Piccolo 35/50B, RB50B, 80X

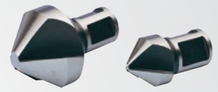
Drill Chuck for twist drills

2000-024-523	18107	1–16mm, with Weldon Shank
2000-024-524	18008	1–16mm, with MT2 support
2000-024-525	18009	1–16mm, with MT3 support

Pipe Clamp

2000-024-526	18019	With 1 tightening, chain
2000-024-527	18020	With 2 tightening, chains
2000-024-528	18021	With 2 tightening, straps

Countersink and deburring tool



2000-024-529	18533	90° DiN 335C, with Weldon shank ø 25mm
2000-024-530	18534	90° DiN 335C, with Weldon shank ø 40mm
2000-024-531	18536	90° DiN 335C, with Weldon shank ø 30mm
2000-024-532	18537	90° DiN 335C, with Weldon shank ø 55mm

MILLING

DRILLING & MILLING MACHINES

Page 45

ACCESSORIES

Page 56

DRILLING & MILLING MACHINE

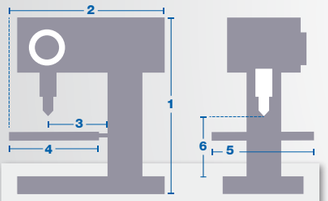
ACCESSORIES **P.56**

JMD-1-M

1000-002-676

- DC motor with variable speed control
- Two gear ranges thanks to mechanical gearbox
- CCW/CW operation
- Vertical column, swiveling angle of 45° to each side
- Compound table with 3 parallel T-slots
- Micrometric spindle lowering
- With adapter, 1–10-mm auto-clamping chuck and M10 draw bar, transparent guard, emergency stop switch

DIMENSIONS



1	Overall height:	630 mm
2	Overall depth:	450 mm
3	Throat:	140 mm
4	Table depth:	240 mm
5	Width:	145 mm
6	Distance, spindle to base:	165/265 mm

TECHNICAL DATA

Motor (V/kW)	230/0.15
Morse taper	MT2
Cutting capacity for steel (ø-mm)	10
Spindle stroke (mm)	30
Max. milling plan/groove cutter (mm)	20/10
Speed range (min^{-1})	100–1'000/200–2'000, variable
X axis, longitudinal stroke (mm)	190
Y axis, transverse stroke (mm)	100
Tilting head	45° right, 45° left
Throat (mm)	140
Table dimensions (mm)	145×240
T-Slot width (mm)	8
Weight (kg)	40

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

DRILLING & MILLING MACHINE

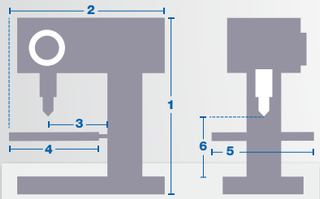
ACCESSORIES **P.56**

PBM-1839V

1000-004-068

- DC motor
- Variable rotation speed of the spindle
- Gray cast iron structure for high-precision machining
- Digital display of the drilling or milling depth
- Digital speed display
- With 1–13-mm auto-clamping chuck, transparent guard, MT2 Morse taper, emergency stop switch, chuck guard

DIMENSIONS



1	Overall height:	780 mm
2	Overall depth:	610 mm
3	Throat:	180 mm
4	Table depth:	130 mm
5	Width:	610 mm
6	Distance, spindle to base:	320 mm

TECHNICAL DATA

Motor (V/kW)	230/0.52
Morse taper	MT2
Cutting capacity for steel (ø-mm)	13
Spindle stroke (mm)	168
Max. milling plan/groove cutter (mm)	30/16
Speed range (min^{-1})	50–2'500, variable
X axis, longitudinal stroke (mm)	250
Y axis, transverse stroke (mm)	160
Z axis, vertical stroke (mm)	260
Throat (mm)	180
Table dimensions (mm)	595×140
T-Slot width (mm)	12
Weight (kg)	127

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

ACCESSORIES **P.56**

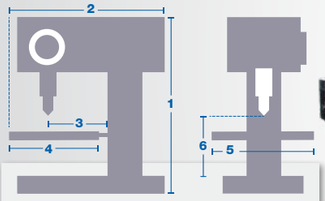
PBM-1839BDV

1000-004-112

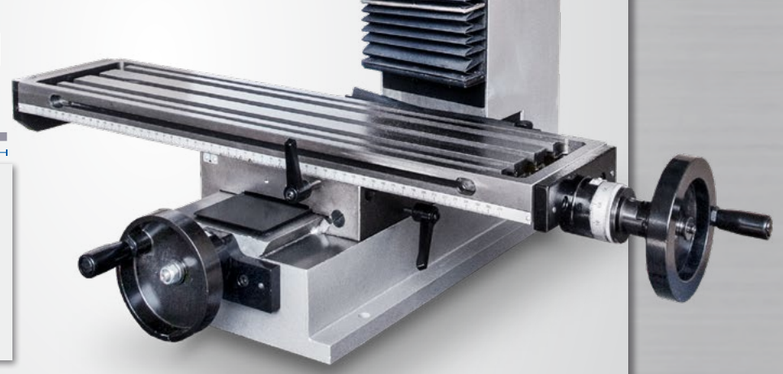
- Powerful, smooth, brushless DC motor with variable speed control
- Digital display of the drilling or milling depth
- Electronically switchable thread cutting device
- Variable rotation speed of the spindle
- Large work table 700 × 160 mm
- Chuck protection and emergency stop button
- Solid, vibration-damping cast iron case (GG-20)

Promac
Bohr-/Fräsmaschine PBM-1839BDV
Oberklasse **1,5** **MOTOR & MASCHINE** 4/2017
Preis/Leistung: ***sehr gut***

DIMENSIONS



1	Overall height:	880 mm
2	Overall depth:	620 mm
3	Throat:	140 mm
4	Table depth:	145 mm
5	Width:	725 mm
6	Distance, spindle to base:	165/265 mm



TECHNICAL DATA

Motor (V/kW)	230/0.75
Morse taper	MT3
Cutting capacity for steel (ø-mm)	20
Spindle stroke (mm)	70
Max. milling plan/groove cutter (mm)	50/16
Speed range (min^{-1})	100–2'000, variable
X axis, longitudinal stroke (mm)	400
Y axis, transverse stroke (mm)	190
Z axis, vertical stroke (mm)	290
Tapping capacity max.	M12
Spindle taper (mm)	370
Throat (mm)	190
Table dimensions (mm)	700 × 160
T-Slot width (mm)	12
Weight (kg)	110

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

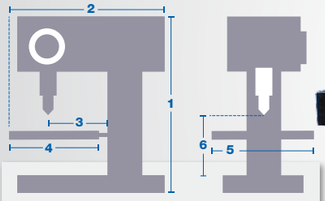
ACCESSORIES **P.56**

JMD-3M

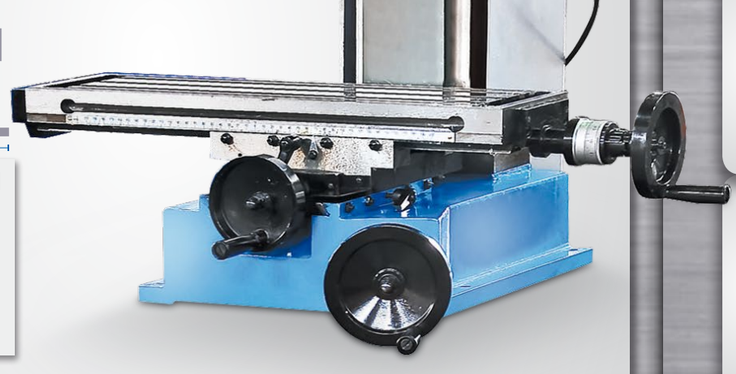
1000-002-677

- Electronic variable speed control
- Fine adjustment of the drilling spindle with digital depth display
- Tilting head, tiltable by 45° to the right/90° to the left
- Micrometric spindle lowering
- Chuck guard
- CCW/CW operation (M12)
- With adapter, 1–13-mm auto-clamping chuck and M12 draw bar, emergency stop switch

DIMENSIONS



1	Overall height:	990 mm
2	Overall depth:	760 mm
3	Throat:	230 mm
4	Table depth:	160 mm
5	Width:	720 mm
6	Distance, spindle to base:	410 mm



TECHNICAL DATA

Motor (V/kW)	230/1.0
Morse taper	MT3
Cutting capacity for steel (ø-mm)	20
Spindle stroke (mm)	70
Max. milling plan/groove cutter (mm)	50/16
Speed range (min^{-1})	100–1'750, variable
X axis, longitudinal stroke (mm)	400
Y axis, transverse stroke (mm)	150
Z axis, vertical stroke (mm)	300
Tapping capacity max.	M12
Tilting head	90° left, 45° right
Throat (mm)	230
Table dimensions (mm)	550 × 160
T-Slot width (mm)	12
Weight (kg)	165

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

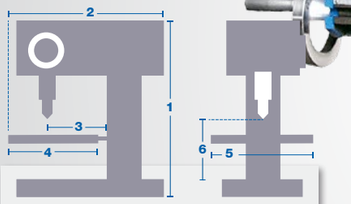
ACCESSORIES **P.56**

FX-820VA

1000-003-075

- DC motor with variable speed control
- CCW/CW operation
- Digital display of the drilling or milling depth
- Vertical column, swiveling angle of 45° to each side
- Micrometric spindle lowering
- Compound table with 2 parallel T slots
- With adapter, 3–13-mm key-clamping chuck and M10 draw bar, transparent guard, emergency stop switch

DIMENSIONS



1	Overall height:	860 mm
2	Overall depth:	550 mm
3	Throat:	160 mm
4	Table depth:	180 mm
5	Width:	860 mm
6	Distance, spindle to base:	350 mm

TECHNICAL DATA

Motor (V/kW)	230/0.75
Morse taper	MT2
Cutting capacity for steel (ø-mm)	20
Spindle stroke (mm)	50
Max. milling plan/groove cutter (mm)	60/20
Speed range (min^{-1})	300–2'300, variable
Tilting head	45° right, 45° left
X axis, longitudinal stroke (mm)	480
Y axis, transverse stroke (mm)	175
Z axis, vertical stroke (mm)	280
Throat (mm)	160
Table dimensions (mm)	700×180
T-Slot width (mm)	12
Weight (kg)	122

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

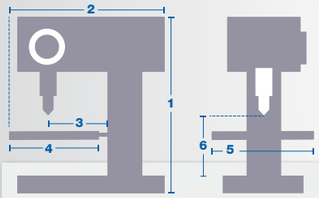
ACCESSORIES **P.56**

FX-383V

1000-001-533

- Variable speed control
- Digital speed display
- CCW/CW operation
- Compound table with 3 parallel T-slots
- Head downward and upward movement
- Chuck guard and emergency stop switch
- Lubrication system
- With pedestal

DIMENSIONS



1	Overall height:	2'100 mm
2	Overall depth:	910 mm
3	Throat:	150 mm
4	Table depth:	210 mm
5	Width:	1'100 mm
6	Distance, spindle to base:	500 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Spindle stroke (mm)	150
Max. milling plan/groove cutter (mm)	75/20
Speed range (min^{-1})	150–2'500, variable
X axis, longitudinal stroke (mm)	370
Y axis, transverse stroke (mm)	170
Z axis, vertical stroke (mm)	340
Tapping capacity max.	M16
Throat (mm)	150
Table dimensions (mm)	730×210
T-Slot width (mm)	16
Weight (kg)	280

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

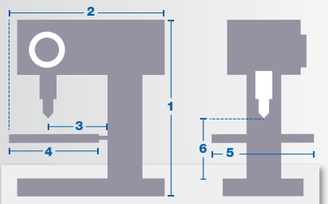
ACCESSORIES **P.56**

JMD-45PFD-T

1000-002-685

- Automatic spindle lowering
- Equipped with monitoring function for 3 axes (X, Y, Z) with glass scale
- 2 gear motor
- CW/CCW rotation of the spindle enables threads to be realized
- Automatic downward movement of the spindle
- Compound table with parallel T slots (16 mm)
- Tilting head, tiltable by 30° to the right and 90° to the left
- With MT2/B16 adapter, M12 draw bar, 1–13-mm auto-clamping chuck, chuck guard and emergency stop switch

DIMENSIONS



1	Overall height:	1'300 mm
2	Overall depth:	1'010 mm
3	Throth:	250 mm
4	Table depth:	240 mm
5	Width:	1'300 mm
6	Distance, spindle to base:	460 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Spindle stroke (mm)	250
Max. milling plan/groove cutter (mm)	30/20
Gear ranges	12
Speed range (min^{-1})	50–2'500
X axis, longitudinal stroke (mm)	520
Y axis, transverse stroke (mm)	210
Z axis, vertical stroke (mm)	460
Tilting head	90° left, 30° right
Throat (mm)	250
Table dimensions (mm)	240×825
T-Slot width (mm)	16
Weight (kg)	165

Other technical data and accessories you will find in the manual.

DRILLING & MILLING MACHINE

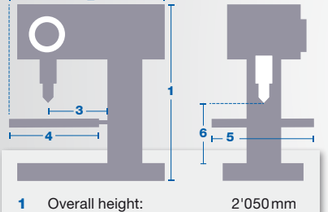
ACCESSORIES **P.56**

FX-388D

1000-000-620

- Six gear ranges thanks to mechanical gearbox
- Tilting head, tiltable by 30° to the right and 90° to the left
- CW/CCW rotation of the spindle enables threads to be realized
- Head upward and downward movement in dovetail gib
- Compound table with parallel T slots (16 mm)
- With chuck guard and emergency stop switch
- Lubrication system
- Incl. stand with chip tray
- Removable control box

DIMENSIONS



1	Overall height:	2'050 mm
2	Overall depth:	850 mm
3	Throth:	275 mm
4	Table depth:	210 mm
5	Width:	875 mm
6	Distance, spindle to base:	442 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Morse taper	MT3
Cutting capacity for steel (ø-mm)	32
Spindle stroke (mm)	120
Max. milling plan/groove cutter (mm)	75/20
Gear ranges	12
Speed range (min^{-1})	50–1'250/100–2'500
X axis, longitudinal stroke (mm)	410
Y axis, transverse stroke (mm)	285
Z axis, vertical stroke (mm)	450
Tapping capacity	M16
Throat (mm)	275
Table dimensions (mm)	240×820
Tilting head	90° left, 30° right
T-Slot width (mm)	16
Weight (kg)	405

Other technical data and accessories you will find in the manual.

OVERVIEW

DRILLING & MILLING MACHINES

Model	JMD-1-M	PBM-1839V	PBM-1839BDV	JMD-3M
Art. No. SAP	1000-002-676	1000-004-068	1000-004-112	1000-002-677
Page	46	47	48	49
Motor (V/kW)	230/0.15	230/0.52	230/0.75	230/1.0
Morse taper	MT2	MT2	MT3	MT3
Cutting capacity for steel (ø-mm)	10	13	20	25
Spindle stroke (mm)	30	168	160	70
Tapping capacity	–	–	M12	M12
Max. milling plan/ groove cutter (mm)	20/10	30/16	50/16	50/16
Gear ranges	–	–	–	–
Speed range (min^{-1})	100–1'000/200–2'000, variable	50–2'500, variable	100–2'000, variable	100–1'750, variable
X axis, longitudinal stroke (mm)	190	250	400	400
Y axis, transverse stroke (mm)	100	160	190	150
Z axis, vertical stroke (mm)	–	260	290	300
Throat (mm)	140	180	190	230
Tilting head	45° right, 45° left	–	–	90° left, 45° right
T-Slot width (mm)	8	12	12	12
Table dimensions (mm)	145×240	595×140	700×160	550×160
Dimensions (mm)	630×145×450	780×610×610	880×725×620	990×760×720
Weight (kg)	40	127	110	165
Delivered with	▪ Auto-clamping chuck, 10mm	▪ Auto-clamping chuck, 13mm	▪ Auto-clamping chuck, 16mm	▪ Auto-clamping chuck, 13mm

Other technical data and accessories you will find in the manual.

Model	FX-820VA	FX-383V	JMD-45PFD-T	FX-388D
Art. No. SAP	1000-003-075	1000-001-533	1000-002-685	1000-000-620
Page	50	51	52	53
Motor (V/kW)	230/0.75	400/1.5	400/1.1	400/1.1
Morse taper	MT2	MT3	MT3	MT3
Cutting capacity for steel (ø-mm)	20	32	32	32
Spindle stroke (mm)	50	150	250	120
Tapping capacity	–	M16	–	M16
Max. milling plan/ groove cutter (mm)	60/20	75/20	30/20	75/20
Gear ranges	–	–	12	12
Speed range (min^{-1})	300–2'300, variable	150–2'500, variable	50–2'500	50–1'250 / 100–2'500
X axis, longitudinal stroke (mm)	480	370	520	410
Y axis, transverse stroke (mm)	175	170	210	285
Z axis, vertical stroke (mm)	280	340	460	450
Throat (mm)	160	150	250	275
Tilting head	45° right, 45° left	–	90° left, 30° right	90° left, 30° right
T-Slot width (mm)	12	16	16	16
Table dimensions (mm)	700×180	730×210	240×825	240×820
Dimensions (mm)	860×860×550	2'100×1'100×910	1'300×1'300×1'010	2'050×875×850
Weight (kg)	122	280	165	405
Delivered with	▪ Key chuck, 13mm	▪ Stand	▪ Auto-clamping chuck, 13mm ▪ Monitoring function	▪ Stand

Other technical data and accessories you will find in the manual.

MILLING

ACCESSORIES

Page 56

ACCESSORIES

DRILLING & MILLING MACHINES

Clamping wedge range

1000-000-307	9763	NW12, M10, 52-pcs.
1000-000-302	9728	NW14, M12, 52-pcs.
1000-000-007	10026	NW16, M14, 52-pcs.

Collet set MT2 with chuck

1000-002-181	50000027	3/4/5/6/8/10mm, Anzuggewinde: M10, (JMD-1)

Metal drill bits set, HSS 4241, DIN338

1000-001-344	D-19GS	19-pcs., ground
1000-001-342	D-19RW	19-pcs., rollforged
1000-001-345	D-25GS	25-pcs., ground

Auto-clamping chuck

1000-000-152	9473	0.5–13mm, B16
1000-000-145	9457	1–16mm, B18

Machine vise

1000-002-963	50000025-B	50mm (JMD-1)

Machine vise

1000-002-964	50000036-B	55mm (JMD-1)
1000-002-959	50000058-B	80mm (JMD-3)

Milling vise

1000-000-533	9908	Jaw width 100mm, drehbar

Milling vise

1000-000-534	9909	Jaw width 152mm, drehbar
1000-000-574	9984	Jaw width 127mm, drehbar

Indexing plate with round table

1000-002-180	50000026	100mm (JMD-1)
1000-002-194	50000065	150mm (JMD-3)

Indexing plate set

1000-002-183	50000029	For indexing unit 50000026 (JMD-1)
1000-002-195	50000066	For indexing unit 50000065 (JMD-3)

ACCESSORIES

DRILLING & MILLING MACHINES

Mounting adapter

1000-002-184	50000031	To indexing unit 50000026 (JMD-1)
1000-002-196	50000067	To indexing unit 50000065 (JMD-3)

Mounting adapter

1000-002-185	50000032	50000033/34 to indexing unit 50000026 (JMD-1)
1000-002-197	50000068	50000915/16 to indexing unit 50000065 (JMD-3)

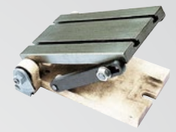
3-jaw chuck

1000-002-186	50000033	80 mm (JMD-1)

4-jaw chuck

1000-002-187	50000034	80 mm, independently (JMD-1)
1000-002-264	50000915	100 mm, without plan spiral (BD-7, BD-8), with flange

Rectangular table



1000-002-960	50000063-B	Adjustable angle (JMD-3)

Working table

1000-002-190	50000057	For horizontal milling and drilling (JMD-3)

Closed pedestal

1000-002-703	350045-G	Grey for JMD-45PFD-T

TURNING

METAL LATHES
Page 60

ACCESSORIES
Page 82

METAL LATHE

ACCESSORIES **P.82**

BD-3-M

1000-027-194

- Electronic variable speed control
- Gray cast iron frame for vibration-free machining
- Ground bed guide
- Cross slide with adjustable guides
- Lathe chuck protection, emergency stop switch

TECHNICAL DATA

Motor (V/kW)	230/0.15
Center height (mm)	50
Center distance (mm)	150
Swing over bed (ø-mm)	100
Swing over carriage (ø-mm)	50
Spindle bore (mm)	10
Speed range (min^{-1})	100–3'800, variable
Cross slide, stroke (mm)	50
Lead screw (ø-mm)	10
Lead screw thread pitch (mm)	1
Morse taper of tailstock, stroke (mm)	23
Max. tool size (mm)	10
3-jaw chuck (mm)	50
Dimensions (mm)	440×270×210
Weight (kg)	13

Other technical data and accessories you will find in the manual.

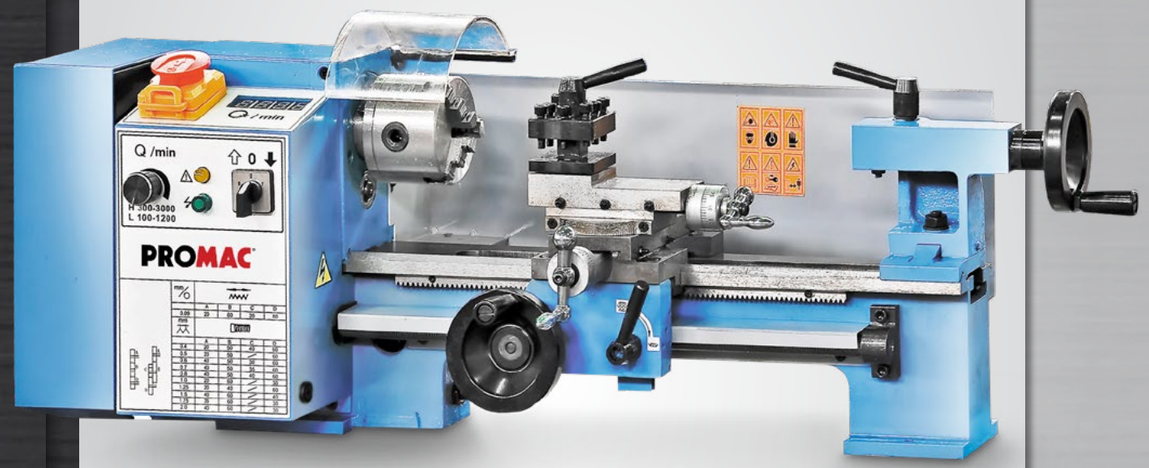
METAL LATHE

ACCESSORIES **P.82**

BD-7-M

1000-002-675

- Gray cast iron frame for vibration-free machining
- Spindle supported in ball bearings
- CW/CCW rotation of the spindle enables threads to be realized
- Digital speed display
- Lathe chuck protection, emergency stop switch



TECHNICAL DATA

Motor (V/kW)	230/0.35
Center height (mm)	90
Center distance (mm)	300
Swing over bed (ø-mm)	180
Swing over carriage (ø-mm)	110
Spindle bore (mm)	20
Morse taper of headstock	MT3
Speed range (min^{-1})	100–3'000, variable
Cross slide, stroke (mm)	65
Top slide, stroke (mm)	50
Lead screw (ø-mm)	16
Lead screw thread pitch (mm)	1.5
Range of metric threads (mm)	0.4–2.0
Range of inch threads (TPI)	12–52
Longitudinal feed (mm/U)	0.09
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	40
Max. tool size (mm)	8
3-jaw chuck (mm)	80
Dimensions (mm)	870×300×290
Weight (kg)	44

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

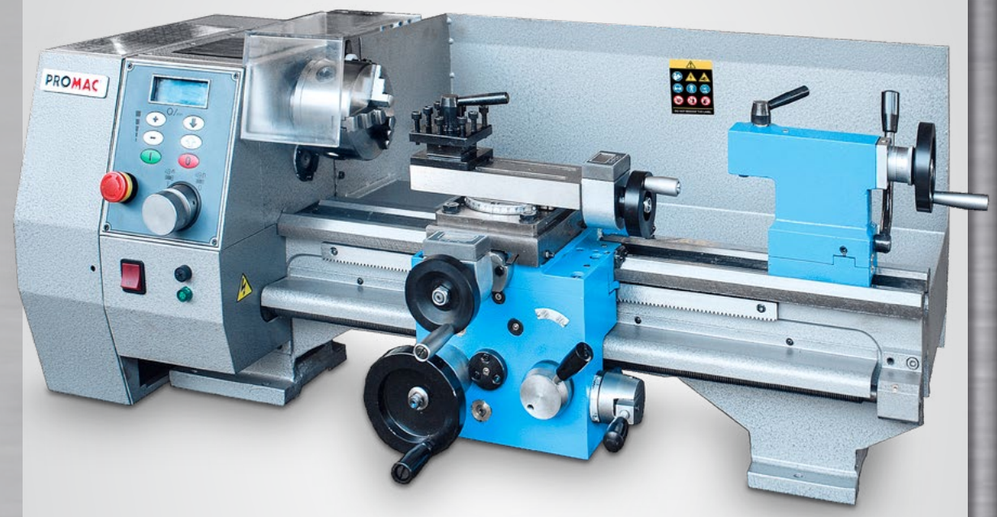
METAL LATHE

ACCESSORIES **P.82**

BD-8-M

1000-027-285

- Gray cast iron frame for vibration-free machining
- Spindle supported in ball bearings
- CW/CCW rotation of the spindle enables threads to be realized
- Digital speed display
- Lathe chuck protection, emergency stop switch



TECHNICAL DATA

Motor (V/kW)	230/1.0
Center height (mm)	105
Center distance (mm)	450
Swing over bed (ø-mm)	210
Swing over carriage (ø-mm)	135
Spindle bore (mm)	20
Morse taper of headstock	MT3
Speed range (min^{-1})	100–2'000, variable
Cross slide, stroke (mm)	100
Top slide, stroke (mm)	70
Range of metric threads (mm)	0.25–3.0
Range of inch threads (TPI)	8–24
Longitudinal feed (mm/U)	0.045–0.126
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	40
Max. tool size (mm)	10
3-jaw chuck (mm)	100
Dimensions (mm)	1'000×550×400
Weight (kg)	94

Other technical data and accessories you will find in the manual.

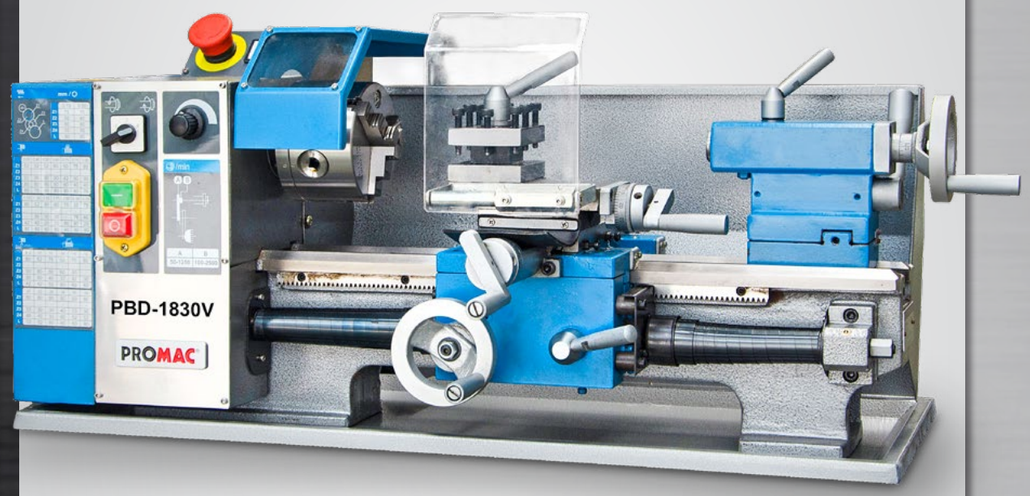
METAL LATHE

ACCESSORIES **P.82**

PBD-1830V

1000-004-070

- Gray cast iron frame for vibration-free machining
- Electronic variable speed control
- Automatic longitudinal feed
- CW/CCW rotation of the spindle enables threads to be realized
- Lathe chuck protection, emergency stop switch



TECHNICAL DATA

Motor (V/kW)	230/0.6
Center height (mm)	90
Center distance (mm)	300
Swing over bed (ø-mm)	180
Swing over carriage (ø-mm)	110
Spindle bore (mm)	21
Morse taper of headstock	MT3
Speed range (min^{-1})	50–1'250/100–2'500, variable
Cross slide, stroke (mm)	85
Top slide, stroke (mm)	75
Range of metric threads (mm)	0.25–3.0
Longitudinal feed (mm/U)	0.1–0.2
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	40
Max. tool size (mm)	10
3-jaw chuck (mm)	100
Dimensions (mm)	800×460×400
Weight (kg)	65

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

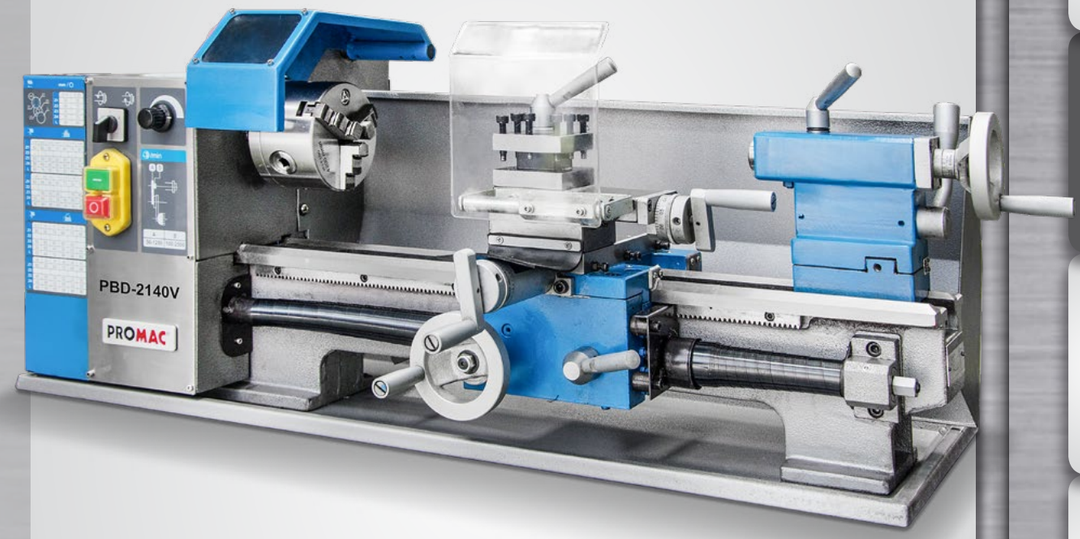
METAL LATHE

ACCESSORIES **P.82**

PBD-2140V

1000-004-071

- Gray cast iron frame for vibration-free machining
- Electronic variable speed control
- Automatic longitudinal feed
- CW/CCW rotation of the spindle enables threads to be realized
- Lathe chuck protection, emergency stop switch



TECHNICAL DATA

Motor (V/kW)	230/1.1
Center height (mm)	105
Center distance (mm)	450
Swing over bed (ø-mm)	210
Swing over carriage (ø-mm)	135
Spindle bore (mm)	21
Morse taper of headstock	MT3
Speed range (min^{-1})	50–1'250/100–2'500
Cross slide, stroke (mm)	100
Top slide, stroke (mm)	75
Range of metric threads (mm)	0.25–3.0
Range of inch threads (TPI)	8–24
Longitudinal feed (mm/U)	0.045/0.125
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	40
Max. tool size (mm)	10
3-jaw chuck (mm)	100
Dimensions (mm)	1'000×550×400
Weight (kg)	94

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

PBD-2555V

1000-004-027

- Gray cast iron frame for vibration-free machining
- Electronic variable speed control
- CW/CCW rotation of the spindle enables threads to be realized
- Lathe chuck protection, emergency stop switch

TECHNICAL DATA

Motor (V/kW)	230/1.1
Center height (mm)	125
Center distance (mm)	550
Swing over bed (ø-mm)	250
Swing over carriage (ø-mm)	140
Spindle bore (mm)	26
Morse taper of headstock	MT4
Speed range (min^{-1})	50–2'500, variable
Cross slide, stroke (mm)	100
Top slide, stroke (mm)	75
Range of metric threads (mm)	0.2–4.0
Range of inch threads (TPI)	8–56
Longitudinal feed (mm/U)	0.07/0.4
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	60
Max. tool size (mm)	12
3-jaw chuck (mm)	125
Dimensions (mm)	1'200×560×580
Weight (kg)	156

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

PBD-2870V

1000-004-114

- Automatic longitudinal feed
- Electronic variable speed control
- Gray cast iron frame for vibration-free machining
- Lubrication system
- With work light
- Incl. pedestal, lathe chuck protection, emergency stop switch

TECHNICAL DATA

Motor (V/kW)	230/1.1
Center height (mm)	140
Center distance (mm)	700
Swing over bed (ø-mm)	280
Swing over carriage (ø-mm)	170
Spindle bore (mm)	26
Morse taper of headstock	MT4
Speed range (min^{-1})	150–2'000, variable
Cross slide, stroke (mm)	160
Top slide, stroke (mm)	60
Range of metric threads (mm)	0.2–3.5
Range of inch threads (TPI)	8–56
Longitudinal feed (mm/U)	0.07/0.4
Morse taper of tailstock	MT2
Morse taper of tailstock, stroke (mm)	85
Max. tool size (mm)	12
3-jaw chuck (mm)	125
Dimensions (mm)	1'390×700×1'285
Weight (kg)	282

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

PBD-3069

1000-004-028

- Electronic variable speed control
- Automatic longitudinal feed
- Gray cast iron frame for vibration-free machining
- Lathe chuck protection, emergency stop switch

TECHNICAL DATA

Motor (V/kW)	230/1.1
Center height (mm)	150
Center distance (mm)	750
Swing over bed (ø-mm)	300
Swing over carriage (ø-mm)	170
Spindle bore (mm)	38
Morse taper of headstock	MT5
Speed range (min^{-1})	150–2'000, variable
Cross slide, stroke (mm)	170
Top slide, stroke (mm)	90
Range of metric threads (mm)	0.2–0.4
Range of inch threads (TPI)	8–56
Longitudinal feed (mm/U)	0.085/0.13/0.17/0.21/0.35/0.40/0.50/0.83
Morse taper of tailstock	MT3
Morse taper of tailstock, stroke (mm)	80
Max. tool size (mm)	16
3-jaw chuck (mm)	160
Dimensions (mm)	1'400×700×700
Weight (kg)	357

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

961V

1000-027-193

- Electronic variable speed control by frequency converter
- Automatic longitudinal and traverse feed
- Reversal of direction CCW/CW
- Incl. footbreak

TECHNICAL DATA

Motor (V/kW)	400/1.47
Center height (mm)	153
Center distance (mm)	1'000
Swing over bed (ø-mm)	305
Swing over carriage (ø-mm)	186
Spindle bore (mm)	40
Morse taper of headstock	MT5
Spindle taper	CAMLOCK D1-4 (DIN 55029)
Speed range (min^{-1})	40–365/210–2'000, variable
Cross slide, stroke (mm)	170
Top slide, stroke (mm)	90
Longitudinal feed (mm/U)	0.067–1.485
Crossfeed (mm/U)	0.033–0.742
Range of metric threads (mm)	0.2–4.0
Range of inch threads (TPI)	8–56
Morse taper of tailstock	MT3
Morse taper of tailstock, stroke (mm)	40
Max. tool size (mm)	16
3-jaw chuck (mm)	200
Dimensions (mm)	1'550×750×700
Weight (kg)	400

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

METAL LATHE

ACCESSORIES **P.82**

GHB-1330-DRO

1000-003-455

- Equipped with monitoring function for 3 axes (X, Y, Z)
- Automatic longitudinal and traverse feed
- Reversal of direction CCW/CW
- All gears running permanently in an oil bath

TECHNICAL DATA

Motor (V/kW)	400/1.5
Center height (mm)	165
Center distance (mm)	750
Swing over bed (ø-mm)	330
Swing over carriage (ø-mm)	198
Spindle bore (mm)	38
Morse taper of headstock	MT5
Spindle taper	CAMLOCK D1-4 (DIN 55029)
Gear ranges	8
Speed range (min^{-1})	70–2'000
Cross slide, stroke (mm)	160
Top slide, stroke (mm)	68
Range of metric threads (mm)	0.45–10.0
Range of inch threads (TPI)	31/4–80
Longitudinal feed (mm/U)	0.052–0.696
Morse taper of tailstock	MT3
Morse taper of tailstock, stroke (mm)	105
Max. tool size (mm)	16
3-jaw chuck (mm)	160
Dimensions (mm)	1'650× 760×1'200
Weight (kg)	610

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

GHB-1340-DRO

1000-027-482

- Equipped with digital display panel for X, Y and Z axes
- CW/CCW rotation of the spindle enables threads to be realized

TECHNICAL DATA

Motor (V/kW)	400/1.5
Center height (mm)	165
Center distance (mm)	1'000
Swing over bed (ø-mm)	330
Swing over carriage (ø-mm)	197
Spindle bore (mm)	38
Morse taper of headstock	MT5
Spindle taper	CAMLOCK D1-4 (DIN 55029)
Speed range (min^{-1})	70–2'000, variable
Cross slide, stroke (mm)	160
Top slide, stroke (mm)	68
Longitudinal feed (mm/U)	0.037–0.989
Crossfeed (mm/U)	0.01–0.268
Range of metric threads (mm)	0.45–10
Range of inch threads (TPI)	31/4–80
Morse taper of tailstock	MT3
Morse taper of tailstock, stroke (mm)	105
Max. tool size (mm)	16
3-jaw chuck (mm)	160
Dimensions (mm)	1'905×760×1'200
Weight (kg)	650

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

METAL LATHE

ACCESSORIES **P.82**

GH-1440K-T

1000-027-172

- Equipped with digital display panel for X, Y and Z axes
- All gears running permanently in an oil bath
- Reversal of direction CCW/CW
- Automatic longitudinal and traverse feed
- Foot brake with electrical switch
- Halogen work light
- Automatic longitudinal and traverse feed
- Gray cast iron frame for vibration-free machining

TECHNICAL DATA

Motor (V/kW)	400/2.2
Center height (mm)	178
Center distance (mm)	1'015
Swing over bed (ø-mm)	356
Swing over carriage (ø-mm)	216
Spindle bore (mm)	38
Morse taper of headstock	MT5
Spindle taper	CAMLOCK D1-4 (DIN 55029)
Gear ranges	12
Speed range (min^{-1})	40–1'800
Cross slide, stroke (mm)	162
Top slide, stroke (mm)	89
Number of threads	22
Range of metric threads (mm)	0.4–7.0
Range of inch threads (TPI)	4–56
Longitudinal feed (mm/U)	0.04–0.6
Morse taper of tailstock	MT3
Morse taper of tailstock, stroke (mm)	120
Max. tool size (mm)	10
3-jaw chuck (mm)	160
Bed width (mm)	260
Dimensions (mm)	1'873× 750×1'200
Weight (kg)	945

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

GH-1640ZX-T

1000-002-679

- Equipped with monitoring function for 3 axes (X, Y, Z)
- Prismatic frame made of gray-cast iron, induction hardened
- Reversal of direction CCW/CW
- Automatic longitudinal and traverse feed
- Foot brake with electrical switch
- Incl. emergency stop switch

TECHNICAL DATA

Motor (V/kW)	400/5.5
Center height (mm)	200
Center distance (mm)	1'015
Swing over bed (ø-mm)	406
Swing over carriage (ø-mm)	254
Spindle bore (mm)	80
Morse taper of headstock	MT7
Spindle taper	CAMLOCK D1-8 (DIN 55029)
Gear ranges	12
Speed range (min^{-1})	25–1'800
Cross slide, stroke (mm)	228
Top slide, stroke (mm)	130
Range of metric threads (mm)	0.5–20.0
Range of inch threads (TPI)	75–15/8
Longitudinal feed (mm/U)	0.038–2.3
Crossfeed (mm/U)	0.015–0.9
Morse taper of tailstock	MT4
Morse taper of tailstock, stroke (mm)	124
Max. tool size (mm)	25
3-jaw chuck (mm)	250
Dimensions (mm)	2'462×1'016×1'220
Weight (kg)	2'120

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

METAL LATHE

ACCESSORIES **P.82**

GH-1860ZX-T

1000-027-192

- Equipped with monitoring function for 3 axes (X, Y, Z)
- Prismatic frame made of gray-cast iron, induction hardened
- Reversal of direction CCW/CW
- Automatic longitudinal and traverse feed
- Incl. emergency stop switch

TECHNICAL DATA

Motor (V/kW)	400/5.6
Center height (mm)	230
Center distance (mm)	1'524
Swing over bed (ø-mm)	460
Swing over carriage (ø-mm)	280
Spindle bore (mm)	80
Morse taper of headstock	MT7
Spindle taper	CAMLOCK D1-8 (DIN 55029)
Speed range (min^{-1})	25–1'800, variable
Cross slide, stroke (mm)	228
Top slide, stroke (mm)	130
Range of metric threads (mm)	0.5–20.0
Range of inch threads (TPI)	72–15/8
Longitudinal feed (mm/U)	0.038–2.3
Morse taper of tailstock	MT5
Morse taper of tailstock, stroke (mm)	124
Max. tool size (mm)	25
3-jaw chuck (mm)	250
Dimensions (mm)	2'960×1'016×1'241
Weight (kg)	2'628

Other technical data and accessories you will find in the manual.

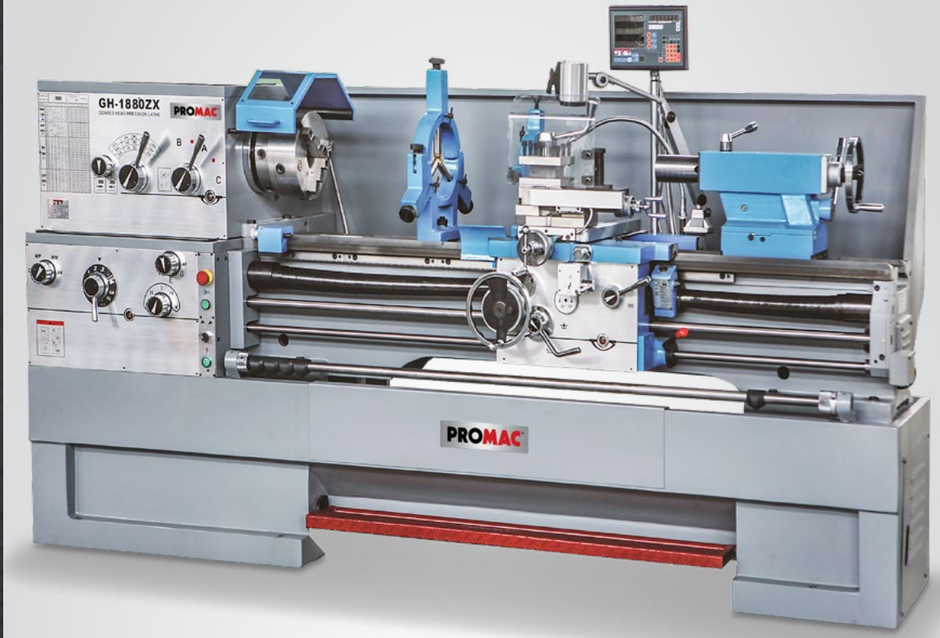
METAL LATHE

ACCESSORIES **P.82**

GH-1880ZX-T

1000-002-682

- Equipped with monitoring function for 3 axes (X, Y, Z)
- Prismatic frame made of gray-cast iron, induction hardened
- Reversal of direction CCW/CW
- Automatic longitudinal and traverse feed
- Incl. emergency stop switch



TECHNICAL DATA

Motor (V/kW)	400/5.6
Center height (mm)	230
Center distance (mm)	2'030
Swing over bed (ø-mm)	460
Swing over carriage (ø-mm)	280
Spindle bore (mm)	80
Morse taper of headstock	MT7
Spindle taper	CAMLOCK D1-8 (DIN 55029)
Speed range (min^{-1})	25–1'800
Cross slide, stroke (mm)	228
Top slide, stroke (mm)	130
Range of metric threads (mm)	0.5–20.0
Range of inch threads (TPI)	72–15/8
Longitudinal feed (mm/U)	0.038–2.3
Morse taper of tailstock	MT5
Morse taper of tailstock, stroke (mm)	150
Max. tool size (mm)	25
3-jaw chuck (mm)	250
Dimensions (mm)	3'458×1'016×1'120
Weight (kg)	2'980

Other technical data and accessories you will find in the manual.

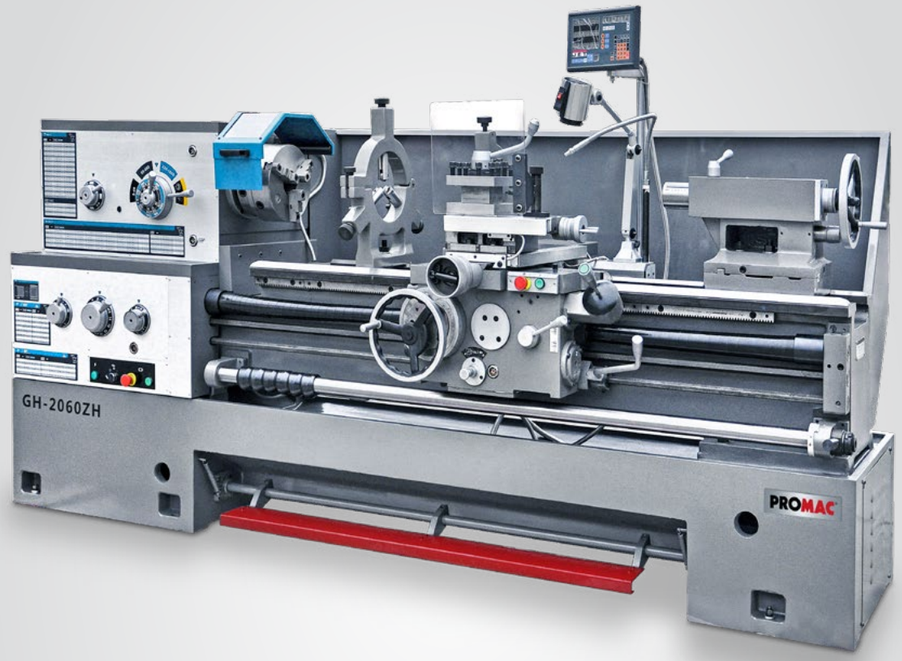
METAL LATHE

ACCESSORIES **P.82**

GH-2060ZH-DRO

1000-027-286

- Prismatic frame made of gray-cast iron, induction hardened
- Smooth start
- Hardened and ground gears
- Equipped with monitoring function for 3 axes (X, Y, Z)
- Incl. emergency stop switch



TECHNICAL DATA

Motor (V/kW)	400/7.5
Center height (mm)	250
Center distance (mm)	1'530
Swing over bed (ø-mm)	500
Swing over carriage (ø-mm)	720
Spindle bore (mm)	80
Morse taper of headstock	MT7
Spindle taper	CAMLOCK D1-8 (DIN 55029)
Speed range (min^{-1})	9–1'600
Cross slide, stroke (mm)	310
Top slide, stroke (mm)	145
Range of metric threads (mm)	1.0–224
Longitudinal feed (mm/U)	0.063–6.43
Crossfeed (mm/U)	0.027–2.73
Morse taper of tailstock	MT5
Max. tool size (mm)	32
3-jaw chuck (mm)	250
Dimensions (mm)	2'500×1'280×1'300
Weight (kg)	3'000

Other technical data and accessories you will find in the manual.

METAL LATHE

ACCESSORIES **P.82**

GH-2680ZH-T

1000-002-683

- Equipped with monitoring function for 3 axes (X, Y, Z)
- Headstock with mechanical coupling for smooth speed change
- Smooth start goes easy on the motor and reduces wear of reducer and belts
- Prismatic frame made of gray-cast iron, induction hardened
- All gears running permanently in an oil bath
- Reversal of direction CCW/CW
- Automatic longitudinal and traverse feed
- Incl. emergency stop switch

TECHNICAL DATA

Motor (V/kW)	400/7.5
Center height (mm)	330
Center distance (mm)	2'030
Swing over bed (ø-mm)	660
Swing over carriage (ø-mm)	420
Spindle bore (mm)	105
Morse taper of headstock	MT7
Spindle taper	CAMLOCK D1-8 (DIN 55029)
Speed range (min^{-1})	36–1'600
Cross slide, stroke (mm)	310
Top slide, stroke (mm)	145
Range of metric threads (mm)	1–14
Range of inch threads (TPI)	28–2
Longitudinal feed (mm/U)	0.063–2.52
Morse taper of tailstock	MT5
Morse taper of tailstock, stroke (mm)	150
Max. tool size (mm)	25
3-jaw chuck (mm)	325
Dimensions (mm)	3'500×1'100×1'450
Weight (kg)	3'870

Other technical data and accessories you will find in the manual.

OVERVIEW

METAL LATHES

Model	BD-3-M	BD-7-M	BD-8-M	PBD-1830V	PBD-2140V	PBD-2555V	PBD-2870V	PBD-3069	961V
Art. No. SAP	1000-027-194	1000-002-675	1000-027-285	1000-004-070	1000-004-071	1000-004-027	1000-004-114	1000-004-028	1000-027-193
Page	61	62	63	64	65	66	67	68	70
Motor (V/kW)	230/0.15	230/0.35	230/1.0	230/0.6	230/0.6	230/1.1	230/1.1	230/1.1	400/1.47
Center height (mm)	50	90	105	90	105	125	140	150	153
Center distance (mm)	150	300	450	300	450	550	700	750	1'000
Swing over bed (ø-mm)	100	180	210	180	210	250	280	300	305
Swing over carriage (ø-mm)	50	110	135	110	135	140	170	170	186
Spindle bore (mm)	10	20	20	21	21	26	26	38	40
Morse taper of headstock	–	MT3	MT3	MT3	MT3	MT4	MT4	MT5	MT5
Spindle taper	–	–	–	–	–	–	–	–	CAMLOCK D1-4 (DIN 55029)
Gear ranges	–	–	–	–	–	–	–	6	–
Speed range (min^{-1})	100–3'800, variable	100–3'000, variable	100–2'000, variable	50–1'250/ 100–2'500, variable	50–1'250/ 100–2'500	50–2'500, variable	150–2'000, variable	150–2'000	40–365/ 210–2'000, variable
Cross slide, stroke (mm)	50	65	100	85	100	100	160	170	170
Top slide, stroke (mm)	–	50	70	75	75	75	60	90	90
Range of metric threads (mm)	–	0.4–2.0	0.25–3.0	0.25–3.0	0.25–3.0	0.2–4.0	0.2–3.5	0.2–0.4	0.2–4.0
Range of inch threads (TPI)	–	12–52	8–24	–	8–24	8–56	8–56	8–56	8–56
Longitudinal feed (mm/U)	–	0.09	0.045–0.126	0.1–0.2	0.045/0.125	0.07/0.4	0.07/0.4	0.085/0.13/ 0.17/0.21/0.35/ 0.40/0.50/0.83	0.067–1.485
Crossfeed (mm/U)	–	–	–	–	–	–	–	–	0.033–0.742
Morse taper of tailstock	–	MT2	MT2	MT2	MT2	MT2	MT2	MT3	MT3
Morse taper of tailstock, stroke (mm)	23	40	40	40	40	60	85	80	40
Max. tool size (mm)	10	8	10	10	10	12	12	16	16
3-jaw chuck (mm)	50	80	100	100	100	125	125	160	200
Dimensions (mm)	440× 270×210	870× 300×290	1'000× 550×400	800× 460×400	1'000× 550×400	1'200× 560×580	1'390× 700×1'285	1'400× 700×700	1'550× 750×700
Weight (kg)	13	44	94	65	94	156	282	357	400
Delivered with									
Simple support	×								
4-position tool post		×	×	×	×	×	×	×	×
3-jaw chuck (ø-mm)	100	100	100	100	100	100	125	160	200
Stationary center for tailstock		MT2, MT3	MT2, MT3	MT2, MT3	MT2, MT3	MT2	MT2		MT3
Follow center for tailstock				MT2	MT2	MT2	MT2	MT2, MT3	
Slotted disk (ø-mm)				170	170				
Round plate for workpiece (ø-mm)									
Driver disc (ø-mm)									
Morse taper									MT3, MT5
Reducer									
Stationary steady rest									
Follow rest									
Monitoring function									
LED machine lamp						×	×	×	
Pedestal						×	×	×	

Other technical data and accessories you will find in the manual.

Model	GHB-1330-DRO	GHB-1340-DRO	GH-1440K-T	GH-1640ZX-T	GH-1860ZX-T	GH-1880ZX-T	GH-2060ZH-DRO	GH-2680ZH-T
Art. No. SAP	1000-003-455	1000-027-482	1000-027-172	1000-002-679	1000-027-192	1000-002-682	1000-027-286	1000-002-683
Page	71	72	73	74	75	76	77	78
Motor (V/kW)	400/1.5	400/1.5	400/2.2	400/5.5	400/5.6	400/5.6	400/7.5	400/7.5
Center height (mm)	165	165	178	200	230	230	250	330
Center distance (mm)	750	1'000	1'015	1'015	1'524	2'030	1'530	2'030
Swing over bed (ø-mm)	330	330	356	406	460	460	500	660
Swing over carriage (ø-mm)	198	197	216	254	280	280	720	420
Spindle bore (mm)	38	38	38	80	80	80	80	105
Morse taper of headstock	MT5	MT5	MT5	MT7	MT7	MT7	MT7	MT7
Spindle taper	CAMLOCK D1-4 (DIN 55029)	CAMLOCK D1-4 (DIN 55029)	CAMLOCK D1-4 (DIN 55029)	CAMLOCK D1-8 (DIN 55029)	CAMLOCK D1-8 (DIN 55029)	CAMLOCK D1-8 (DIN 55029)	CAMLOCK D1-8 (DIN 55029)	CAMLOCK D1-8 (DIN 55029)
Gear ranges	8	–	12	12	–	–	–	–
Speed range (min^{-1})	70–2'000	70–2'000, variable	40–1'800	25–1'800	25–1'800, variable	25–1'800	9–1'600	36–1'600
Cross slide, stroke (mm)	160	160	162	228	228	228	310	310
Top slide, stroke (mm)	68	68	89	130	130	130	145	145
Range of metric threads (mm)	0.45–10.0	0.45–10	0.4–7.0	0.5–20.0	0.5–20.0	0.5–20.0	1.0–224	1–14
Range of inch threads (TPI)	31/4–80	31/4–80	4–56	75–15/8	72"–15/8"	72"–15/8"	–	28–2
Longitudinal feed (mm/U)	0.052–0.696	0.037–0.989	0.04–0.6	0.038–2.3	0.038–2.3	0.038–2.3	0.063–6.43	0.063–2.52
Crossfeed (mm/U)	–	0.01–0.268	–	0.015–0.9	–	–	0.027–2.73	–
Morse taper of tailstock	MT3	MT3	MT3	MT4	MT5	MT5	MT5	MT5
Morse taper of tailstock, stroke (mm)	105	105	120	124	124	150		150
Max. tool size (mm)	16	16	10	25	25	25	32	25
3-jaw chuck (mm)	160	160	160	250	250	250	250	325
Dimensions (mm)	1'650× 760×1'200	1'905× 760×1'200	1'873× 750×1'200	2'462× 1'016×1'220	2'960× 1'016×1'241	3'458× 1'016×1'120	2'980× 1'280×1'410	3'500× 1'100×1'450
Weight (kg)	610	650	945	2'120	2'628	2'980	3'000	3'870
Delivered with								
Simple support								
4-position tool post	×	×	×	×	×	×	×	×
3-jaw chuck (ø-mm)	160	160	160	250	250	250	200	325
Stationary center for tailstock	MT3	MT3	MT3	MT4	MT4	MT4	MT5	MT5
Follow center for tailstock				MT4	MT4	MT4	MT5	MT5
Slotted disk (ø-mm)	300	300	300	300	300	300		630
Round plate for workpiece (ø-mm)			200	300	300	300	325	400
Driver disc (ø-mm)								250
Morse taper	MT3, MT5	MT3, MT5	MT3, MT5					
Reducer				MT5, MT7	MT5, MT7	MT5, MT7	MT5, MT7	113mm/MT5
Stationary steady rest	×	×	×	×	×	×	×	×
Follow rest	×	×	×	×	×	×	×	×
Monitoring function	×		×	×	×	×	×	×
LED machine lamp			×	×	×	×	×	×
Pedestal								

Other technical data and accessories you will find in the manual.

TURNING

ACCESSORIES
Page 82

ACCESSORIES

METAL LATHES

Stationary steady rest

1000-002-955	50000906	(BD-7)
1000-002-952	50000086-B	(BD-8)
1000-001-184	2175	947

Follow rest

1000-002-956	50000907-B	(BD-7)
1000-002-958	50000087-B	(BD-8)
1000-001-183	2174	947

Dead center

1000-002-266	50000917	MT2 special type (BD-7)

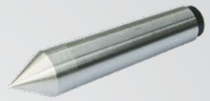
Dead center

1000-002-176	465302	(GHB-1330/GHB-1340A)

Live center for tailstock

1000-002-177	465303	Following, MT3

Stationary center



1000-002-267	50000918	MT2 special type (BD-7)

Tool changer

1000-002-259	50000912	With 3 holders (BD-7)

Turning tools

1000-002-198	50000071	HM set 11-pcs., 8×8mm
1000-002-210	50000094	HM set 11-pcs., 10×10mm (BD-8)

Vertical slide with vise

1000-002-957	50000920-B	With vise (BD-7)

Reducer

1000-002-695	2040	MT2/MT1
1000-000-067	2087	MT3/MT2
1000-000-068	2088	MT4/MT2
1000-000-489	9841	MT4/MT3

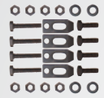
ACCESSORIES

METAL LATHES

Set of collets

1000-002-269	50000921	Col. 4/6/8/10/12/14/16mm (BD-7)
1000-002-209	50000093	Col. 4/6/8/10/12/14/16mm (BD-8)

Clamping tools set for round plate



1000-002-258	50000911	Face plate 50000910 (BD-7)
1000-002-206	50000089	Face plate 50000088 (BD-8)

Round plate for workpiece clamping

1000-002-205	50000088	(BD-8)
1000-000-944	2173	240mm, 947

3-jaw chuck

1000-002-265	50000916	100mm with flange (BD-7, BD-8)
1000-000-843	321449	160mm, D1-4

4-jaw chuck

1000-002-264	50000915	100mm without plan spiral (BD-7, BD-8), with flange
1000-002-628	321430	200mm without plan spiral (GHB-1330/GHB-1340/GH-1440)

Clamping wedge range

1000-000-307	9763	NW12, M10, 52-pcs.
1000-000-302	9728	NW14, M12, 52-pcs.
1000-000-007	10026	NW16, M14, 52-pcs.

Metal bits set, HSS 4241, DIN338

1000-001-344	D-19GS	19-pcs., ground
1000-001-342	D-19RW	19-pcs., rollforged
1000-001-345	D-25GS	25-pcs., ground

Conical mandrel

1000-000-108	9165	MT3/B18
1000-000-522	9877	MT4/B18

Multifix tool holder

1000-002-548	956600A	Size A, AD 2090, turret 956600 + insert 956634
1000-002-549	956602A	Size B, with tool holder BD 25120, 956602 + insert

Tool holder

1000-002-550	956634	Size A Multifix AD 2090, external (GHB-1340/GH-1440-3)
1000-002-551	956638	Size B Multifix BD 25120, external (ZX-models)

Tool holder

1000-002-552	956656	Size A Multifix AH-2085, innen
1000-002-553	956659	Size B Multifix BH 32130, innen (ZX-models)

Tool holder

1000-002-554	956666	30mm Multifix AJ-3080 for morse taper tools
1000-002-555	956669	Size B Multifix BJ 40120 for morse taper tools (ZX-models)

Multifix-type sleeve for tool holder

1000-002-556	956715	30mm, MT1 AL-130
1000-002-557	956716	MT2 AL 230

5C collet chuck

1000-002-230	50000191	D1-4 (Camlock)

5C 16 collet set

1000-002-229	50000190	16-pcs. 3–25mm

Collet set

1000-002-181	50000027	MT2 with chuck: 3/4/5/6/8/10mm, specify thread: M10, (JMD-1)

Round plate for workpiece clamping

1000-002-257	50000910	160mm (BD-7)

SAWING

METAL BAND SAWS

Page 86

ACCESSORIES

Page 122

METAL BAND SAW

ACCESSORIES P.122

347V

1000-003-351

- Electronic variable speed control
- 45° right-hand cut by means of bow rotation
- Blade guides with rolling contact bearings
- Supplied with sawing band

CUTTING CAPACITIES

90°	105 mm
45° right	65 mm

90°	100 mm
45° right	65 mm

90°	105 × 100 mm
45° right	60 × 65 mm

TECHNICAL DATA

Motor (V/kW)	230/0.85
Blade speed (m/min^{-1})	30–80
Blade dimension (mm)	1'330 × 13 × 0.65
Tilting head, tiltable by	45°
Vise opening (mm)	115
Dimensions (mm)	650 × 310 × 450
Weight (kg)	19

Other technical data and accessories you will find in the manual.

METAL BAND SAW

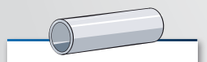
ACCESSORIES P.122

348C

1000-027-191

- Pivoting saw bow 45°
- Blade guided by ball bearings
- Quick-clamping vise
- Lowering assisted by adjustable spring with 3 positions
- Supplied with sawing band

CUTTING CAPACITIES



90°	100 mm
45° right	75 mm

90°	100 mm
45° right	75 mm

TECHNICAL DATA

Motor (V/kW)	230/0.38
Blade speed (m/min^{-1})	45
Blade dimension (mm)	1'470 × 13 × 0.64
Tilting head, tiltable by	45°
Vise opening (mm)	190
Dimensions (mm)	350 × 800 × 450
Weight (kg)	23

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES P.122

349V

1000-001-337

- Electronic variable speed control
- Pivoting saw bow 60° to the right
- Blade guides with rolling contact bearings
- Supplied with sawing band

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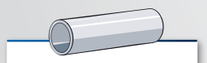
CUTTING CAPACITIES



90°	125 mm
45° right	85 mm
60° right	50 mm

90°	125 mm
45° right	85 mm
60° right	50 mm

TECHNICAL DATA

Motor (V/kW)	230/1.0
Blade speed (m/min^{-1})	25–80
Blade dimension (mm)	1'440 × 12.7 × 0.64
Tilting head, tiltable by	60°
Vise opening (mm)	190
Dimensions (mm)	375 × 724 × 446
Weight (kg)	19.5

Other technical data and accessories you will find in the manual.

METAL BAND SAW

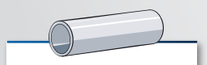
ACCESSORIES **P.122**

351V

1000-002-748

- Electronic variable speed control
- Pivoting saw bow 60° to the right
- Blade guides with ball bearings
- Quick-clamping vise
- Supplied with sawing band

CUTTING CAPACITIES



90°	170 mm
45° right	125 mm
60° right	75 mm

90°	170 mm
45° right	125 mm
60° right	70 mm

TECHNICAL DATA

Motor (V/kW)	230/1.6
Blade speed (m/min^{-1})	25–80
Blade dimension (mm)	2'035×20×0.9
Tilting head, tiltable by	60°
Vise opening (mm)	205
Dimensions (mm)	550×600×1'100
Weight (kg)	35

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-815DA

1000-027-287

- Pivoting saw bow 60° to the right
- Blade guides with ball bearings
- Quick-clamping vise
- Incl. pedestal and sawing band

CUTTING CAPACITIES

90°	150 mm
45° right	120 mm
60° right	100 mm

90°	170×150 mm
45° right	120×90 mm
60° right	100×90 mm

TECHNICAL DATA

Motor (V/kW)	230/0.38
Blade speed (m/min^{-1})	65
Blade dimension (mm)	1'735×12.7×0.64
Tilting head, tiltable by	60°
Vise opening (mm)	150
Working height (mm)	880
Dimensions (mm)	370×1'020×1'650
Weight (kg)	52

Other technical data and accessories you will find in the manual.

METAL BAND SAW

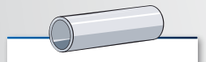
ACCESSORIES **P.122**

SX-815DVP

1000-027-288

- Electronic variable speed control
- Pivoting saw bow 60° to the right
- Quick-clamping vise
- Supplied with sawing band
- Incl. pedestal and lubrication system

CUTTING CAPACITIES



90°	150 mm
45° right	125 mm
60° right	100 mm

90°	150 mm
45° right	120 mm
60° right	100 mm

90°	170 × 150 mm
45° right	120 × 90 mm
60° right	100 × 90 mm

TECHNICAL DATA

Motor (V/kW)	230/1.1
Blade speed (m/min^{-1})	20–65
Blade dimension (mm)	1'735 × 12.7 × 0.64
Tilting head, tiltable by	60°
Vise opening (mm)	160
Working height (mm)	880
Dimensions (mm)	970 × 560 × 1'590
Weight (kg)	105

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-815DVPB

1000-003-353

- Electronic variable speed control
- Pivoting saw bow 60° to the right
- Supplied with sawing band
- Incl. pedestal and lubrication system

CUTTING CAPACITIES

90°	150 mm
45° right	90 mm
60° right	65 mm

90°	140 mm
45° right	90 mm
60° right	65 mm

90°	150 × 140 mm
45° right	100 × 90 mm
60° right	65 × 70 mm

TECHNICAL DATA

Motor (V/kW)	230/1.5
Blade speed (m/min^{-1})	30–80
Blade dimension (mm)	1'735 × 13 × 0.9
Tilting head, tiltable by	60°
Vise opening (mm)	190
Working height (mm)	880
Dimensions (mm)	430 × 1'000 × 1'480
Weight (kg)	108

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES P.122

SX-818DV

1000-001-849

- Electronic variable speed control
- Manual or servo-assisted lowering of the saw bow
- Emergency stop switch
- Pivoting saw bow 60° to the right
- Supplied with sawing band
- Blade guides with ball bearings
- Including lubrication system
- Blade tension gauge
- Quick-clamping vise and pedestal

CUTTING CAPACITIES

90°	180 mm
45° right	110 mm
60° right	70 mm

90°	180 mm
45° right	110 mm
60° right	70 mm

90°	210 × 150 mm

TECHNICAL DATA

Motor (V/kW)	230/2.0
Blade speed (m/min^{-1})	30–80
Blade dimension (mm)	2'080 × 20 × 0.9
Tilting head, tiltable by	60°
Vise opening (mm)	230
Working height (mm)	910
Dimensions (mm)	1'350 × 715 × 1'320
Weight (kg)	200

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES P.122

SX-821DA

1000-027-190

- 2-speed motor
- Manual or servo-assisted lowering of the saw bow
- Including lubrication system
- Pivoting saw bow 60° to the right
- Blade tension gauge
- Quick-clamping vise, sawing band and pedestal

CUTTING CAPACITIES

90°	225 mm
45° right	160 mm
60° right	90 mm

90°	200 mm
45° right	140 mm
60° right	90 mm

90°	240 × 160 mm
45° right	150 × 115 mm

TECHNICAL DATA

Motor (V/kW)	400/2.0
Blade speed (m/min^{-1})	36/70
Blade dimension (mm)	2'455 × 27 × 0.9
Tilting head, tiltable by	60°
Vise opening (mm)	240
Working height (mm)	980
Dimensions (mm)	1'500 × 1'100 × 1'750
Weight (kg)	220

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-822DB-M

1000-027-187

- 2-speed motor
- With thermal protection against overload and emergency stop button
- Pivoting saw bow 60° to the right
- Quick-clamping vise
- Including lubrication system
- Blade guides with rolling contact bearings and carbide guides
- Blade tension gauge with immediate stop in case of blade breakage
- Incl. pedestal and sawing band

CUTTING CAPACITIES

90°	225 mm
45° right	160 mm
60° right	100 mm

90°	225 mm
45° right	160 mm
60° right	100 mm

90°	245 × 160 mm
45° right	160 × 100 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Blade speed (m/min^{-1})	40/90
Blade dimension (mm)	2'480 × 27 × 0.9
Tilting head, tiltable by	60°
Vise opening (mm)	260
Working height (mm)	980
Dimensions (mm)	935 × 1'500 × 1'570
Weight (kg)	265

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-823DG

1000-027-289

- 2-speed motor
- Pivoting saw bow 60° to the right and 45° to the left
- Quick-clamping vise
- Supplied with sawing band
- Blade guides with rolling contact bearings
- Blade tension gauge
- With emergency stop button
- Including lubrication system

CUTTING CAPACITIES

90°	225 mm
45° right	145 mm
60° right	85 mm

90°	200 mm
45° right	120 mm
60° right	85 mm

90°	245 × 160 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Blade speed (m/min^{-1})	36/72
Blade dimension (mm)	2'455 × 27 × 0.9
Tilting head, tiltable by	60° right
Vise opening (mm)	260
Working height (mm)	900
Dimensions (mm)	1'100 × 1'800 × 1'700
Weight (kg)	390

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-823DGB

1000-003-355

- 2-speed motor
- Manual or servo-assisted lowering of the saw bow
- With thermal protection against overload and emergency stop button
- Right-hand and left-hand by means of bow rotation
- Blade guides with rolling contact bearings
- Including lubrication system
- Blade tension gauge
- Supplied with sawing band and pedestal

CUTTING CAPACITIES

90°	225 mm
45° right	145 mm
60° right	85 mm

90°	200 mm
45° right	120 mm
60° right	85 mm

90°	240 × 160 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Blade speed (m/min^{-1})	35/70
Blade dimension (mm)	2'456 × 27 × 0.9
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	230
Working height (mm)	890
Dimensions (mm)	1'350 × 700 × 1'326
Weight (kg)	320

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

SX-823DGVI

1000-001-423

- Electronic variable speed control through frequencycontrol
- With thermal protection against overload and emergency stop button
- Right-hand and left-hand cut by means of bow rotation
- Quick-clamping vise
- Blade guides with rolling contact bearings Manual or servo-assisted lowering of the saw bow
- Blade tension gauge with immediate stop in case of blade breakage
- Including lubrication system
- Supplied with sawing band and pedestal

CUTTING CAPACITIES

90°	227 mm
45° right	150 mm
45° left	110 mm
60° right	90 mm

90°	220 mm
45° right	145 mm
45° left	110 mm
60° right	85 mm

90°	260 × 110 mm
45° right	200 × 125 mm
45° left	160 × 110 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Blade speed (m/min^{-1})	20–85
Blade dimension (mm)	2'460 × 27 × 0.9
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	390
Working height (mm)	890
Dimensions (mm)	749 × 1'500 × 1'900
Weight (kg)	280

Other technical data and accessories you will find in the manual.

METAL BAND SAW

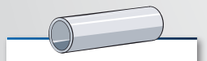
ACCESSORIES **P.122**

SX-823DGSVI

1000-027-290

- Hydraulically controlled semi-automatic machine
- Electronic variable speed control through frequency control
- Right-hand and left-hand cut by means of bow rotation
- Quick-clamping vise
- Including lubrication system
- Blade guides with rolling contact bearings and carbide guides
- Blade tension gauge
- Supplied with sawing band

CUTTING CAPACITIES



90°	227 mm
45° right	150 mm
45° left	110 mm
60° right	90 mm

90°	220 mm
45° right	145 mm
45° left	110 mm
60° right	85 mm

90°	260 × 110 mm
45° right	200 × 125 mm
45° left	160 × 110 mm

TECHNICAL DATA

Motor (V/kW)	400/1.1
Blade speed (m/min^{-1})	20–85
Blade dimension (mm)	2'455 × 27 × 0.9
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	260
Working height	900
Dimensions (mm)	1'100 × 1'800 × 1'700
Weight (kg)	390

Other technical data and accessories you will find in the manual.

METAL BAND SAW

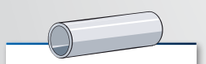
ACCESSORIES **P.122**

SX-824DG

1000-002-996

- 2-speed motor
- Manual or servo-assisted lowering of the saw bow
- Blade tension gauge
- Fast and easy vise adjustment for left-hand and right-hand miter cutting
- Easy saw bow pivoting for miter cutting
- Including lubrication system
- Blade guides with rolling contact bearings and carbide guides
- Supplied with sawing band

CUTTING CAPACITIES



90°	240 mm
45° right	200 mm
45° left	160 mm
60° right	125 mm

90°	240 mm
45° right	200 mm
45° left	150 mm
60° right	125 mm

TECHNICAL DATA

Motor (V/kW)	400/1.2
Blade speed (m/min^{-1})	35/70
Blade dimension (mm)	2'730 × 0.9 × 27
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	300
Working height	920
Dimensions (mm)	715 × 1'900 × 1'800
Weight (kg)	310

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

MBS-56CS-M

1000-027-292

- Pivoting saw bow 60° to the right
- Belt-type speed change
- Manual or servo-assisted lowering of the saw bow
- Blade guides with ball bearings
- With thermal protection against overload and emergency stop button
- Quick-clamping vise
- Supplied with sawing band

CUTTING CAPACITIES

90°	125 mm
45° right	95 mm
60° right	44 mm

90°	125 mm
60° right	75 mm

90°	150 × 125 mm

TECHNICAL DATA

Motor (V/kW)	230/0.65
Blade speed (m/min^{-1})	20/29/50
Blade dimension (mm)	1'635 × 12.7 × 0.65
Tilting head, tiltable by	60°
Vise opening (mm)	150
Working height (mm)	755
Dimensions (mm)	1'060 × 980 × 385
Weight (kg)	78

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

METAL BAND SAW

ACCESSORIES **P.122**

SX-827DGVI

1000-001-425

- Electronic variable speed control through frequency control
- With thermal protection against overload and emergency stop button
- Right-hand and left-hand cut by means of bow rotation
- Manual or servo-assisted lowering of the saw bow
- Quick-clamping vise
- Including lubrication system
- Blade guides with rolling contact bearings
- Blade tension gauge with immediate stop in case of blade breakage
- Supplied with sawing band and pedestal

CUTTING CAPACITIES

90°	270 mm
45° right	240 mm
45° left	210 mm
60° right	160 mm

90°	260 mm
45° right	220 mm
45° left	180 mm
60° right	150 mm

90°	350 × 220 mm
45° right	240 × 160 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Blade speed (m/min^{-1})	20–85
Blade dimension (mm)	3'160 × 27 × 0.9
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	355
Working height (mm)	900
Dimensions (mm)	749 × 1'880 × 1'715
Weight (kg)	360

Other technical data and accessories you will find in the manual.

METAL BAND SAW

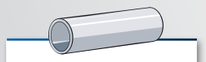
ACCESSORIES P.122

SX-827DGSVI

1000-001-424

- Hydraulically controlled semi-automatic machine
- Electronic variable speed control
- Right-hand and left-hand cut by means of bow rotation
- Blade guides with rolling contact bearings
- Blade tension gauge with immediate stop in case of blade breakage
- Including lubrication system
- Supplied with sawing band, emergency stop switch and start pedal

CUTTING CAPACITIES



90°	270 mm
45° right	240 mm
45° left	210 mm
60° right	160 mm

90°	260 mm
45° right	220 mm
45° left	180 mm
60° right	150 mm

90°	350 × 220 mm
45° right	240 × 160 mm

TECHNICAL DATA

Motor (V/kW)	400/1.5
Blade speed (m/min^{-1})	20–85
Blade dimension (mm)	3'160 × 27 × 0.9
Tilting head, tiltable by	60° right, 45° left
Vise opening (mm)	360
Working height (mm)	900
Dimensions (mm)	749 × 1'880 × 1'715
Weight (kg)	460

Other technical data and accessories you will find in the manual.

METAL BAND SAW

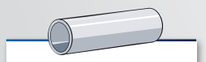
ACCESSORIES **P.122**

HVBS-712K-T

1000-002-692

- 45° right-hand cut by means of vise jaw rotation
- Blade guides with rolling contact bearings
- Lowering assisted by hydraulic cylinder with limit switch
- With lubrication system
- Supplied with sawing band and pedestal

CUTTING CAPACITIES



90° 180 mm
45° left 110 mm

90° 180 mm
45° left 110 mm

90° 65 × 300 mm
45° left 180 × 110 mm

TECHNICAL DATA

Motor (V/kW)	400/0.75
Blade speed (m/min^{-1})	20/33/45/65
Blade dimension (mm)	2'360 × 20 × 0.9
Tilting head, tiltable by	45°
Vise opening (mm)	270
Working height (mm)	590
Dimensions (mm)	520 × 1'250 × 970
Weight (kg)	137

Other technical data and accessories you will find in the manual.

METAL BAND SAW

ACCESSORIES **P.122**

917C

1000-000-111

917M

1000-021-294

- Quick-clamping vise
- Blade guides with rolling contact bearings and carbide guides
- Pivoting saw bow 45° to the right
- Lowering assisted by hydraulic cylinder with limit switch
- Thermal protection against overload and with emergency stop button
- Cutting line visualized by means of a laser device
- With lubrication system
- Supplied with sawing band and pedestal (moveable thanks to casters)

CUTTING CAPACITIES

90° 180 mm
45° right 105 mm

90° 160 mm

90° 180 × 260 mm
45° right 120 × 105 mm

TECHNICAL DATA

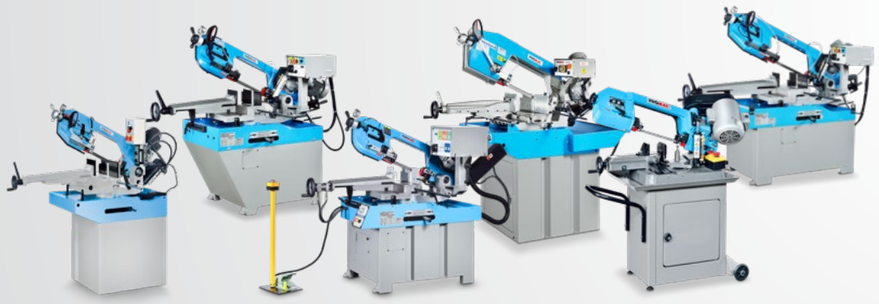
Model	917C	917M
Motor (V/kW)	400/0.75	230/0.75
Blade speed (m/min^{-1})	22/33/45/65	22/33/45/65
Blade dimension (mm)	2'360 × 20 × 0.9	2'360 × 20 × 0.9
Tilting head, tiltable by	45°	45°
Vise opening (mm)	290	290
Working height (mm)	780	780
Dimensions (mm)	570 × 1'280 × 1'060	570 × 1'280 × 1'060
Weight (kg)	180 kg	180 kg

Other technical data and accessories you will find in the manual.

OVERVIEW

METAL BAND SAWS

Model	347V	348C	349V	351V	SX-815DA	SX-815DVP
Art. No. SAP	1000-003-351	1000-027-191	1000-001-337	1000-002-748	1000-027-287	1000-027-288
Page	87	88	89	90	91	92
Motor (V/kW)	230/0.85	230/0.38	230/1.0	230/1.6	230/0.38	230/1.1
Blade speed (m/min^{-1})	30–80	45	25–80	25–80	65	20–65
Blade dimension (mm)	1'330×13×0.65	1'470×13×0.64	1'440×12.7×0.64	2'035×20×0.9	1'735×12.7×0.64	1'735×12.7×0.64
Tilting head, tiltable by	45°	45°	60°	60°	60°	60°
Vise opening (mm)	115	190	190	205	150	160
Working height (mm)	–	–	–	–	880	880
Dimensions (mm)	650×310×450	350×800×450	375×724×446	550×600×1'100	370×1'020×1'650	970×560×1'590
Weight (kg)	19	23	19.5	35	52	105
Delivered with	▪ Sawing band	▪ Sawing band	▪ Sawing band	▪ Sawing band	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal



Model	SX-823DGB	SX-823DGVI	SX-823DGSVI	SX-824DG	MBS-56CS-M	SX-827DGVI
Art. No. SAP	1000-003-355	1000-001-423	1000-027-290	1000-002-996	1000-027-292	1000-001-425
Page	98	99	102	103	104	105
Motor (V/kW)	400/1.1	400/1.5	400/1.1	400/1.2	230/0.65	400/1.5
Blade speed (m/min^{-1})	35/70	20–85	20–85	35/70	20/29/50	20–85
Blade dimension (mm)	2'456×27×0.9	2'460×27×0.9	2'455×27×0.9	2'730×0.9×27	1'635×12.7×0.65	3'160×27×0.9
Tilting head, tiltable by	60° right, 45° left	60° right, 45° left	60° right, 45° left	60° right, 45° left	60°	60°
Vise opening (mm)	230	390	260	300	150	355
Working height (mm)	890	890	900	920	755	900
Dimensions (mm)	1'350×700×1'326	749×1'500×1'900	1'100×1'800×1'700	715×1'900×1'800	1'060×980×385	749×1'880×1'715
Weight (kg)	320	280	390	310	78	360
Delivered with	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal

Other technical data and accessories you will find in the manual.

Model	SX-815DVPB	SX-818DV	SX-821DV	SX-822DB-M	SX-823DG
Art. No. SAP	1000-003-353	1000-001-849	1000-027-190	1000-027-187	1000-027-289
Page	93	94	95	96	97
Motor (V/kW)	230/1.5	230/2.0	400/2.0	400/1.1	400/1.1
Blade speed (m/min^{-1})	30–80	30–80	36/70	40/90	36/72
Blade dimension (mm)	1'735×13×0.9	2'080×20×0.9	2'455×27×0.9	2'480×27×0.9	2'455×27×0.9
Tilting head, tiltable by	60°	60°	60°	60°	60° right
Vise opening (mm)	190	230	230	260	260
Working height (mm)	880	910	980	980	900
Dimensions (mm)	430×1'000×1'480	1'350×715×1'320	1'500×1'100×1'750	935×1'500×1'570	1'100×1'800×1'700
Weight (kg)	108	200	220	265	390
Delivered with	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal

Model	SX-827DGSVI	HVBS-712K-T	917C	917M
Art. No. SAP	1000-001-424	1000-002-692	1000-000-111	1000-021-294
Page	106	108	109	109
Motor (V/kW)	400/1.5	400/0.75	400/0.75	230/0.75
Blade speed (m/min^{-1})	20–85	20/33/45/65	22/33/45/65	22/33/45/65
Blade dimension (mm)	3'160×27×0.9	2'360×20×0.9	2'360×20×0.9	2'360×20×0.9
Tilting head, tiltable by	60° right, 45° left	45°	45°	45°
Vise opening (mm)	360	270	290	290
Working height (mm)	900	590	780	780
Dimensions (mm)	749×1'880×1'715	520×1'250×970	570×1'280×1'060	570×1'280×1'060
Weight (kg)	460	137	180 kg	180 kg
Delivered with	▪ Sawing band ▪ Pedestal	▪ Sawing band ▪ Pedestal (mobile)	▪ Sawing band ▪ Pedestal (mobile)	▪ Sawing band ▪ Pedestal (mobile)

Other technical data and accessories you will find in the manual.

SAWING

METAL CIRCULAR SAWS

Page 112

ACCESSORIES

Page 122

METAL CIRCULAR SAW

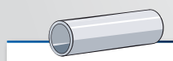
ACCESSORIES P.122

SY-225V

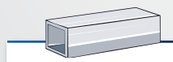
1000-001-799

- Electronic variable speed control
- For right-hand miter cutting
- With lubrication system
- Supplied with saw blade

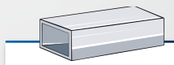
CUTTING CAPACITIES



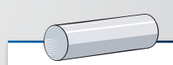
90° 67 mm
45° right 60 mm



90° 65 mm
45° right 60 mm



90° 70 × 56 mm
45° right 60 × 50 mm



90° 30 mm
45° right 25 mm

TECHNICAL DATA

Motor (V/kW)	230/1.5
Blade speed (m/min^{-1})	17.5–60
Blade dimensions (mm)	225 × 2 × 32
Toothing (T)	180
Vise opening (mm)	75
Dimensions (mm)	330 × 510 × 430
Weight (kg)	20

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

ACCESSORIES P.122

SY-250A

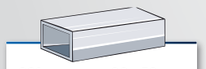
1000-001-320

- 2-speed motor
- Thermal protection against overload and with emergency stop button
- For left-hand/right-hand miter cutting
- With lubrication system
- Supplied with saw blade, without pedestal (option)
- Quick clamping vise

CUTTING CAPACITIES

90°	75 mm
45° right	65 mm
45° left	65 mm

90°	65 mm
45° right	55 mm
45° left	55 mm



90°	90 × 50 mm
45° right	60 × 50 mm
45° left	60 × 50 mm

90°	30 mm
45° right	30 mm
60° right	30 mm

TECHNICAL DATA

Motor (V/kW)	400/0.95
Blade speed (m/min^{-1})	45/90
Blade dimensions (mm)	250 × 2 × 32
Toothing (T)	160
Vise opening (mm)	100
Working height (mm)	980
Dimensions (mm)	935 × 960 × 1'573
Weight (kg)	120

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

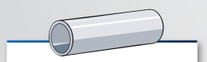
ACCESSORIES P.122

MCS-275-T

1000-002-684

- 2-speed motor
- Thermal protection against overload and with emergency stop button
- For left-hand/right-hand miter cutting
- With lubrication system
- Without saw blade, without pedestal (option)
- Quick clamping vise

CUTTING CAPACITIES



90°	80 mm
45° right	65 mm
45° left	65 mm

90°	100 × 50 mm
45° right	70 × 50 mm
45° left	70 × 50 mm

90°	30 mm
45° right	25 mm
45° left	25 mm

TECHNICAL DATA

Motor (V/kW)	400/0.93
Blade speed (m/min^{-1})	41/84
Blade dimensions (mm)	275 × 32
Toothing (T)	80
Vise opening (mm)	100
Dimensions (mm)	550 × 900 × 800
Weight (kg)	105

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

ACCESSORIES **P.122**

SY-315

1000-000-744

- 2-speed motor
- Thermal protection against overload and with emergency stop button
- Quick-clamping vise
- For left-hand/right-hand miter cutting
- With lubrication system
- Heavy stand for a strong stability and a large chip tray for cleanliness start pedal
- Supplied with saw blade

CUTTING CAPACITIES

90°	100 mm
45° right	90 mm
45° left	90 mm

90°	82 mm
45° right	80 mm
45° left	80 mm

90°	100 × 70 mm
45° right	85 × 70 mm
45° left	85 × 70 mm

90°	50 mm
45° right	50 mm
45° left	50 mm

TECHNICAL DATA

Motor (V/kW)	400/1.3
Blade speed (m/min^{-1})	44/88
Blade dimensions (mm)	315 × 2 × 32
Toothing (T)	180
Vise opening (mm)	120
Working height (mm)	960
Dimensions (mm)	990 × 1'020 × 1'830
Weight (kg)	160

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

ACCESSORIES **P.122**

SY-315L

1000-001-130

- 2-speed motor
- Reduced speed for cutting alloyed steels and solid material
- Thermal protection against overload and with emergency stop button
- Quick-clamping vise
- For left-hand/right-hand miter cutting
- With lubrication system
- Heavy stand for a strong stability and a large chip tray for cleanliness start pedal
- Supplied with saw blade

CUTTING CAPACITIES

90°	100 mm
45° right	90 mm
45° left	90 mm

90°	82 mm
45° right	80 mm
45° left	80 mm

90°	100 × 70 mm
45° right	85 × 70 mm
45° left	85 × 70 mm

90°	50 mm
45° right	50 mm
45° left	50 mm

TECHNICAL DATA

Motor (V/kW)	400/1.3
Blade speed (m/min^{-1})	22/44
Blade dimensions (mm)	315 × 2 × 32
Toothing (T)	120
Vise opening (mm)	120
Working height (mm)	960
Dimensions (mm)	990 × 1'020 × 1'830
Weight (kg)	160

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

ACCESSORIES **P.122**

SY-350V

1000-001-882

- Electronic variable speed control through frequency control
- Thermal protection against overload and with emergency stop button
- Rotation of the head by 90° for notching
- Quick-clamping vise
- For left-hand/right-hand miter cutting
- Including lubrication system
- Heavy stand for a strong stability and a large chip tray for cleanliness start pedal
- Supplied with saw blade

CUTTING CAPACITIES

90°	120 mm
45° right	100 mm
45° left	100 mm

90°	105 mm
45° right	85 mm
45° left	85 mm

90°	160 × 90 mm
45° right	85 × 70 mm
45° left	85 × 70 mm

90°	85 mm
45° right	75 mm
45° left	75 mm

TECHNICAL DATA

Motor (V/kW)	400/2.25
Blade speed (m/min^{-1})	24–120
Blade dimensions (mm)	350 × 32 × 2.5
Toothing (T)	120
Vise opening (mm)	170
Working height (mm)	985
Tank capacity (l)	5
Dimensions (mm)	990 × 1'200 × 1'720
Weight (kg)	250

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

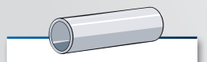
ACCESSORIES **P.122**

308C

1000-000-737

- For fast cutting of steel, stainless steel, aluminum and non-ferrous metals without lubrication
- With cross-cutting disk

CUTTING CAPACITIES



90°	120 mm

90° right	108 mm

90° right	241 × 64 mm

TECHNICAL DATA

Motor (V/kW)	230/2.2
Speed range (min^{-1})	3'900
Disk dimensions (mm)	355 × 3.0 × 25.4
Dimensions (mm)	300 × 600 × 700
Weight (kg)	17

Other technical data and accessories you will find in the manual.

METAL CIRCULAR SAW

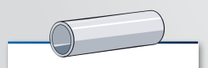
ACCESSORIES P.122

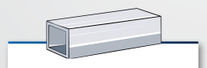
309C

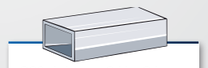
1000-000-075

- For fast cutting of steel, stainless steel, aluminum and non-ferrous metals without lubrication
- Supplied with carbide-tipped blade with 72 teeth

CUTTING CAPACITIES


90° 120 mm


90° right 108 mm


90° right 241 × 64 mm

TECHNICAL DATA

Motor (V/kW)	230/2.2
Speed range (min⁻¹)	1'300
Blade dimensions (mm)	355 × 3.0 × 25.4
Toothing (T)	72
Dimensions (mm)	330 × 630 × 630
Weight (kg)	24

Other technical data and accessories you will find in the manual.

PROMAC

OVERVIEW

METAL CIRCULAR SAWS

Model	SY-225V	SY-250A	MCS-275-T	SY-315
Art. No. SAP	1000-001-799	1000-001-320	1000-002-684	1000-000-744
Page	113	114	115	116
Motor (V/kW)	230/1.5	400/0.95	400/0.93	400/1.3
Speed range (min⁻¹)	–	–	–	–
Blade speed (m/min⁻¹)	17.5–60	45/90	42/84	44/88
Blade dimensions (mm)	225 × 2 × 32	250 × 2 × 32	275 × 32	315 × 2 × 32
Disk dimensions (mm)	–	–	–	–
Toothing (T)	180	160	80	180
Vise opening (mm)	75	100	100	120
Working height (mm)	–	980	–	960
Tank capacity (l)	–	–	–	–
Dimensions (mm)	330 × 510 × 430	935 × 960 × 1'573	550 × 900 × 800	990 × 1'020 × 1'830
Weight (kg)	20	120	105	160
Delivered with	▪ Blade	▪ Blade	–	▪ Blade ▪ Pedestal

Model	SY-315L	SY-350V	308C	309C
Art. No. SAP	1000-001-130	1000-001-882	1000-000-737	1000-000-075
Page	117	118	119	120
Motor (V/kW)	400/1.3	400/2.25	230/2.2	230/2.2
Speed range (min⁻¹)	–	–	3'900	1'300
Blade speed (m/min⁻¹)	22/44	24–120	–	–
Blade dimensions (mm)	315 × 2 × 32	350 × 32 × 2.5	–	355 × 3.0 × 25.4
Disk dimensions (mm)	–	–	355 × 3.0 × 25.4	–
Toothing (T)	120	120	–	72
Vise opening (mm)	120	170	–	–
Working height (mm)	960	985	–	–
Tank capacity (l)	–	5	–	–
Dimensions (mm)	990 × 1'020 × 1'830	990 × 1'200 × 1'720	300 × 600 × 700	330 × 630 × 630
Weight (kg)	160	250	17	24
Delivered with	▪ Blade ▪ Pedestal	▪ Blade ▪ Pedestal	▪ Disk	▪ Carbide saw blade (72T)

Other technical data and accessories you will find in the manual.

SAWING

ACCESSORIES
Page 118

ACCESSORIES

METAL BAND SAWS AND METAL CIRCULAR SAWS

Metal saw blade

1000-001-880	2228	225×1.9×32mm, 200T, for INOX
1000-000-086	9120	200×1.8×32mm, 120T
1000-000-087	9121	200×1.8×32mm, 160T
1000-000-088	9122	200×1.8×32mm, 200T
1000-000-089	9123	225×1.9×32mm, 120T
1000-000-090	9124	225×1.9×32mm, 160T
1000-000-091	9125	225×1.9×32mm, 200T
1000-000-092	9126	250×2.0×32mm, 120T
1000-000-093	9127	250×2.0×32mm, 160T
1000-000-094	9128	250×2.0×32mm, 200T
1000-000-095	9129	275×2.5×32mm, 120T
1000-000-096	9130	275×2.5×32mm, 160T
1000-000-097	9131	275×2.5×32mm, 200T
1000-000-098	9132	300×2.5×32mm, 120T
1000-000-099	9133	300×2.5×32mm, 160T
1000-000-100	9134	300×2.5×32mm, 200T
1000-000-305	9756	315×2.5×32mm, 80T
1000-000-101	9135	315×2.5×32mm, 120T
1000-000-102	9136	315×2.5×32mm, 160T
1000-000-103	9137	315×2.5×32mm, 200T
1000-000-104	9138	350×2.5×32mm, 120T
1000-000-105	9139	350×2.5×32mm, 160T
1000-000-106	9140	350×2.5×32mm, 200T
1000-000-306	9757	350×2.5×32mm, 80T

Carbide tip blade

1000-000-303	9753	305×2.2×25.4mm, 60T
1000-000-304	9754	305×2.2×25.4mm, 80T
1000-000-568	9962	355×2.4×25.4mm, 80T
1000-000-008	10030	355×2.6×25.4mm, 72T
1000-000-009	10031	355×2.6×25.4mm, 90T

Saw band

1000-002-798	2253	2'035×20×0.9mm, 5/8T, M42
1000-002-799	2254	2'035×20×0.9mm, 4/6T, M42
1000-000-123	9292	2'844×27×0.9mm, 6/10T, M42
1000-000-124	9293	2'844 x 27 x 0.9mm, 5/8T, M42
1000-000-125	9294	2'844×27×0.9mm, 4/6T, M42
1000-000-150	9468	2'970×20×0.9mm, 4/6T, M42
1000-000-484	9834	3'235×27×0.9mm, 10/14T, M42
1000-000-485	9835	3'235×27×0.9mm, 6/10T, M42
1000-000-486	9836	3'235×27×0.9mm, 5/8T, M42
1000-000-487	9837	3'235×27×0.9mm, 4/6T, M42
1000-000-488	9838	3'235×27×0.9mm, 3/4T, M42

2 saw bands

1000-003-007	2285	1'640×13×0.65mm, 6/10T, M42
1000-003-008	2286	1'640×13×0.65mm, 8/12T, M42
1000-003-009	2287	1'640×13×0.65mm, 10/14T, M42
1000-003-010	2288	1'640×13×0.65mm, 18T, M42

5 saw bands

1000-027-299	2203/5	1'440×13×0.65mm, 8/12T, M42
1000-027-300	2202/5	1'440×13×0.65mm, 10/14T, M42
1000-027-301	2201/5	1'440×13×0.65mm, 14T, M42
1000-027-302	10050/5	1'470×13×0.65mm, 8/12T, M42
1000-027-303	10051/5	1'470×13×0.65mm, 10/14T, M42
1000-027-304	10052/5	1'470×13×0.65mm, 14T, M42
1000-027-361	9989/5	1'638×13×0.65mm, 8/12T, M42
1000-027-362	9990/5	1'638×13×0.65mm, 10/14T, M42
1000-027-363	9992/5	1'638×13×0.65mm, 14/18T, M42
1000-027-364	2153/5	1'740×13×0.65mm, 6, M42
1000-027-305	2154/5	1'740×13×0.65mm, 6/10T, M42
1000-027-306	2155/5	1'740×13×0.65mm, 8/12T, M42
1000-027-307	2156/5	1'740×13×0.65mm, 10/14T, M42
1000-027-308	2157/5	1'740×13×0.65mm, 18T, M42
1000-027-365	2352/5	2'000×20×0.9mm, 6/10T, M42
1000-027-366	2353/5	2'000×20×0.9mm, 8/12T, M42
1000-027-309	2514/5	2'035×20×0.9mm, 10/14T, M42
1000-027-310	2515/5	2'035×20×0.9mm, 8/12T, M42
1000-027-311	2516/5	2'035×20×0.9mm, 6/10T, M42
1000-027-367	9882/5	2'060×20×0.9mm, 3/4T, M42
1000-027-368	9881/5	2'060×20×0.9mm, 4/6T, M42
1000-027-369	9880/5	2'060×20×0.9mm, 5/8T, M42
1000-027-370	9879/5	2'060×20×0.9mm, 6/10T, M42
1000-027-371	9878/5	2'060×20×0.9mm, 10/14T, M42
1000-027-312	2072/5	2'080×20×0.9mm, 10/14T, M42
1000-027-313	2073/5	2'080×20×0.9mm, 6/10T, M42
1000-027-314	2074/5	2'080×20×0.9mm, 5/8T, M42
1000-027-315	2075/5	2'080×20×0.9mm, 4/6T, M42
1000-027-316	2076/5	2'080×20×0.9mm, 4T, M42
1000-027-372	2427/5	2'170×20×0.9mm, 10/14T, M42
1000-027-317	9460/5	2'360×20×0.9mm, 10/14T, M42
1000-027-318	9461/5	2'360×20×0.9mm, 6/10T, M42
1000-027-319	9462/5	2'360×20×0.9mm, 5/8T, M42
1000-027-320	9463/5	2'360×20×0.9mm, 4/6T, M42
1000-027-373	9464/5	2'360×20×0.9mm, 3/4T, M42
1000-027-321	9720/5	2'455×27×0.9mm, 10/14T, M42
1000-027-322	9721/5	2'455×27×0.9mm, 6/10T, M42
1000-027-323	9722/5	2'455×27×0.9mm, 5/8T, M42
1000-027-324	9723/5	2'455×27×0.9mm, 4/6T, M42
1000-027-325	9724/5	2'455×27×0.9mm, 2/3T, M42
1000-027-374	2354/5	2'455×27×0.9mm, 8/12T, M42
1000-027-326	2079/5	2'480×27×0.9mm, 10/14T, M42
1000-027-327	2080/5	2'480×27×0.9mm, 6/10T, M42
1000-027-328	2081/5	2'480×27×0.9mm, 5/8T, M42
1000-027-329	2082/5	2'480×27×0.9mm, 4/6T, M42
1000-027-330	2083/5	2'480×27×0.9mm, 3/4T, M42
1000-027-375	2518/5	2'565×27×0.9mm, 6/10T, M42
1000-027-376	2355/5	2'700×27×0.9mm, 3/4T, M42
1000-027-377	2356/5	2'700×27×0.9mm, 4/6T, M42
1000-027-378	2357/5	2'700×27×0.9mm, 5/8T, M42
1000-027-379	2358/5	2'700×27×0.9mm, 6/10T, M42
1000-027-331	2513/5	2'730×27×0.9mm, 6/10T, M42
1000-027-332	2512/5	2'730×27×0.9mm, 5/8T, M42
1000-027-333	2511/5	2'730×27×0.9mm, 3/4T, M42
1000-027-334	2510/5	2'730×27×0.9mm, 4/6T, M42
1000-027-380	2359/5	2'800×27×0.9mm, 3/4T, M42
1000-027-381	2360/5	2'800×27×0.9mm, 4/6T, M42
1000-027-382	2361/5	2'800×27×0.9mm, 5/8T, M42
1000-027-383	2362/5	2'800×27×0.9mm, 6/10T, M42
1000-027-384	2363/5	2'825×27×0.9mm, 3/4T, M42
1000-027-385	2364/5	2'825×27×0.9mm, 4/6T, M42
1000-027-386	2365/5	2'825×27×0.9mm, 5/8T, M42
1000-027-387	2366/5	2'825×27×0.9mm, 6/10T, M42
1000-027-388	2367/5	2'845×27×0.9mm, 3/4T, M42
1000-027-389	2368/5	2'845×27×0.9mm, 4/6T, M42
1000-027-390	2369/5	2'845×27×0.9mm, 5/8T, M42
1000-027-391	2370/5	2'845×27×0.9mm, 6/10T, M42
1000-027-392	2371/5	2'910×27×0.9mm, 3/4T, M42
1000-027-393	2372/5	2'910×27×0.9mm, 4/6T, M42
1000-027-394	2373/5	2'910×27×0.9mm, 5/8T, M42
1000-027-395	2374/5	2'910×27×0.9mm, 6/10T, M42
1000-027-396	10022	2'925×27×0.9mm, 6/10T, M42
1000-027-397	2375/5	2'950×27×0.9mm, 3/4T, M42
1000-027-398	2376/5	2'950×27×0.9mm, 4/6T, M42
1000-027-399	2377/5	2'950×27×0.9mm, 5/8T, M42
1000-027-400	2378/5	2'950×27×0.9mm, 6/10T, M42
1000-027-401	2379/5	3'010×27×0.9mm, 2/3T, M42
1000-027-402	2380/5	3'010×27×0.9mm, 3/4T, M42
1000-027-403	2381/5	3'010×27×0.9mm, 4/6T, M42
1000-027-404	2382/5	3'010×27×0.9mm, 5/8T, M42
1000-027-405	2383/5	3'010×27×0.9mm, 6/10T, M42
1000-027-406	2384/5	3'010×27×0.9mm, 8/12T, M42
1000-027-407	9666/5	3'035×27×0.9mm, 2/3T, M42
1000-027-408	2385/5	3'035×27×0.9mm, 3/4T, M42
1000-027-335	9665/5	3'035×27×0.9mm, 4/6T, M42
1000-027-336	9664/5	3'035×27×0.9mm, 5/8T, M42
1000-027-337	9663/5	3'035×27×0.9mm, 6/10T, M42
1000-027-409	9662/5	3'035×27×0.9mm, 10/14T, M42
1000-027-338	2129/5	3'080×27×0.9mm, 3/4Z, M42
1000-027-339	2130/5	3'080×27×0.9mm, 4/6Z, M42
1000-027-340	2131/5	3'080×27×0.9mm, 5/8Z, M42
1000-027-341	2132/5	3'080×27×0.9mm, 10/14Z, M42
1000-027-410	2386/5	3'100×27×0.9mm, 3/4T, M42
1000-027-411	2387/5	3'100×27×0.9mm, 4/6T, M42
1000-027-412	2388/5	3'100×27×0.9mm, 5/8T, M42
1000-027-413	2389/5	3'100×27×0.9mm, 6/10T, M42
1000-027-414	2390/5	3'120×27×0.9mm, 3/4T, M42
1000-027-415	2391/5	3'120×27×0.9mm, 4/6T, M42
1000-027-416	2392/5	3'120×27×0.9mm, 5/8T, M42
1000-027-417	2393/5	3'120×27×0.9mm, 6/10T, M42
1000-027-338	2129/5	3'160×27×0.9mm, 3/4T, M42
1000-027-339	2130/5	3'160×27×0.9mm, 4/6T, M42
1000-027-340	2131/5	3'160×27×0.9mm, 5/8T, M42
1000-027-341	2132/5	3'160×27×0.9mm, 6/10T, M42
1000-027-342	2135/5	3'160×27×0.9mm, 10/14T, M42
1000-027-418	2394/5	3'180×27×0.9mm, 2/3T, M42
1000-027-419	2395/5	3'180×27×0.9mm, 3/4T, M42
1000-027-420	2396/5	3'180×27×0.9mm, 4/6T, M42
1000-027-421	2397/5	3'180×27×0.9mm, 5/8T, M42
1000-027-422	2398/5	3'180×27×0.9mm, 6/10T, M42
1000-027-423	2399/5	3'270×27×0.9mm, 3/4T, M42
1000-027-424	2400/5	3'270×27×0.9mm, 4/6T, M42
1000-027-425	2401/5	3'270×27×0.9mm, 5/8T, M42
1000-027-426	2402/5	3'270×27×0.9mm, 6/10T, M42
1000-027-343	2067/5	3'300×27×0.9mm, 10/14T, M42
1000-027-344	2068/5	3'300×27×0.9mm, 6/10T, M42
1000-027-345	2069/5	3'300×27×0.9mm, 5/8T, M42
1000-027-346	2070/5	3'300×27×0.9mm, 4/6T, M42
1000-027-347	2071/5	3'300×27×0.9mm, 3/4T, M42
1000-027-427	2425/5	3'320×27×0.9mm, 5/8T, M42
1000-027-348	9860/5	3'345×27×0.9mm, 10/14T, M42
1000-027-349	2404/5	3'345×27×0.9mm, 6/10T, M42
1000-027-350	9862/5	3'345×27×0.9mm, 5/8T, M42
1000-027-351	9863/5	3'345×27×0.9mm, 4/6T, M42
1000-027-352	9864/5	3'345×27×0.9mm, 3/4T, M42
1000-027-428	10020/5	3'430×27×0.9mm, 2/3T, M42
1000-027-429	2405/5	3'430×27×0.9mm, 3/4T, M42
1000-027-430	10019/5	3'430×27×0.9mm, 4/6T, M42
1000-027-431	10018/5	3'430×27×0.9mm, 5/8T, M42
1000-027-432	10017/5	3'430×27×0.9mm, 6/10T, M42
1000-027-433	10016/5	3'430×27×0.9mm, 10/14T, M42
1000-027-434	2406/5	3'485×27×0.9mm, 2/3T, M42
1000-027-353	2217/5	3'485×27×0.9mm, 3/4T, M42
1000-027-354	2218/5	3'485×27×0.9mm, 4/6T, M42
1000-027-355	2219/5	3'485×27×0.9mm, 5/8T, M42
1000-027-435	2407/5	3'485×27×0.9mm, 6/10T, M42
1000-027-356	2220/5	3'485×27×0.9mm, 10/14T, M42
1000-027-357	2408/5	3'660×27×0.9mm, 3/4T, M42
1000-027-436	2409/5	3'660×27×0.9mm, 4/6T, M42
1000-027-437	2410/5	3'660×27×0.9mm, 5/8T, M42
1000-027-438	2411/5	3'660×27×0.9mm, 6/10T, M42
1000-027-439	3118/5	3'800×27×0.9mm, M42
1000-027-440	2412/5	4'100×34×1.1mm, 2/3T, M42
1000-027-358	2055/5	4'100×34×1.1mm, 3/4T, M42
1000-027-359	2054/5	4'100×34×1.1mm, 4/6T, M42
1000-027-360	2053/5	4'100×34×1.1mm, 5/8T, M42
1000-027-441	3119/5	4'160×34×1.1mm, 4/6T, M42
1000-027-460	2576/5	3'400×34×1.1mm, 2/3T, M42
1000-027-461	2577/5	3'400×34×1.1mm, 3/4T, M42
1000-027-452	2352	3'400×34×1.1mm, 4/6T, M42
1000-027-462	2578/5	3'400×34×1.1mm, 5/8T, M42
1000-027-463	2579/5	3'400×34×1.1mm, 6/10T, M42
1000-027-442	2413/5	4'530×34×1.1mm, 2/3T, M42
1000-027-443	2414/5	4'530×34×1.1mm, 3/4T, M42
1000-027-444	2415/5	4'530×34×1.1mm, 4/6T, M42

ACCESSORIES

METAL BAND SAWS AND METAL CIRCULAR SAWS

1000-027-445	2416/5	4'530×34×1.1 mm, 5/8T, M42
1000-027-464	2580/5	5'070×34×1.1 mm, 2/3T, M42
1000-027-465	2581/5	5'070×34×1.1 mm, 3/4T, M42
1000-027-466	2582/5	5'070×34×1.1 mm, 4/6T, M42
1000-027-467	2583/5	5'070×34×1.1 mm, 5/8T, M42
1000-027-468	2584/5	5'070×34×1.1 mm, 6/10T, M42
1000-027-446	2417/5	5'200×34×1.1 mm, 2/3T, M42
1000-027-447	2418/5	5'200×34×1.1 mm, 3/4T, M42
1000-027-448	2419/5	5'200×34×1.1 mm, 4/6T, M42
1000-027-449	2420/5	5'200×34×1.1 mm, 5/8T, M42

1200kg roller carriage

1000-000-027	2002	Adjustable from 560–830mm, width 365mm
1000-000-028	2003-TK	Adjustable from 800–1'160mm, width 365mm

Carriage

1000-000-872	2146	580–950mm adjustable, 400mm width
1000-000-873	2147	640-940mm adjustable, 400mm width, 5 rollers
1000-000-874	2148	560–940mm adjustable, 330mm width

HRS-V carriage with rollers for heavy loads

1000-002-291	52000100	Width ø 52×140mm, height 600–950mm

Feeding carriage

1000-001-252	2017C	360×2'000mm, adjustable from 650– 1'000mm
1000-000-046	2041	460×2'000mm, adjustable from 750–850mm, width 460mm

Digital ruler

1000-001-516	2020-D3	3m, for perfect measurement and precise positioning on the supports 2020

Carriage

1000-003-066	2020-D6	360×6'000mm,with digital ruler, height adjustable from 650 to 950mm

GRINDING

GRINDING MACHINES

Page 127

ACCESSORIES

Page 144

BELT SANDER

ACCESSORIES **P.144**

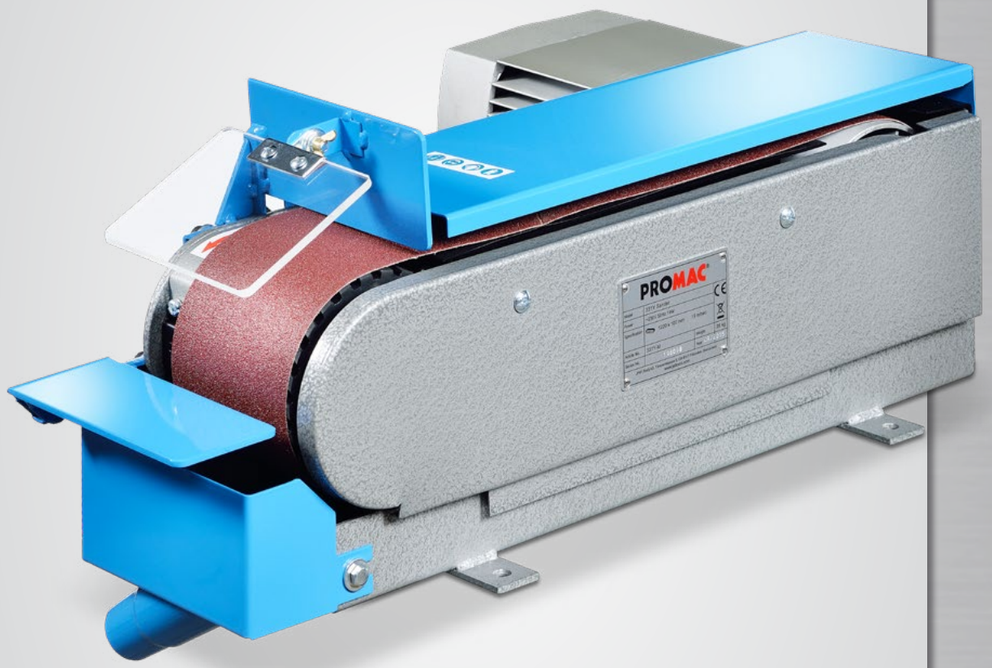
331Y

1000-001-216

- With contact roller
- With belt protection
- With thermal protection against overload
- Incl. grinding wheel G100

331C

1000-027-199



TECHNICAL DATA

Model	331Y	331C
Motor (V/kW)	230/0.75	400/0.75
Belt dimensions (mm)	100×1'220	100×1'220
Band speed (m/s)	19	19
Sanding surface (mm)	100×320	100×320
Extraction outlet (ø-mm)	36	36
Dimensions (mm)	440×640×280	440×640×280
Weight (kg)	28	28

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

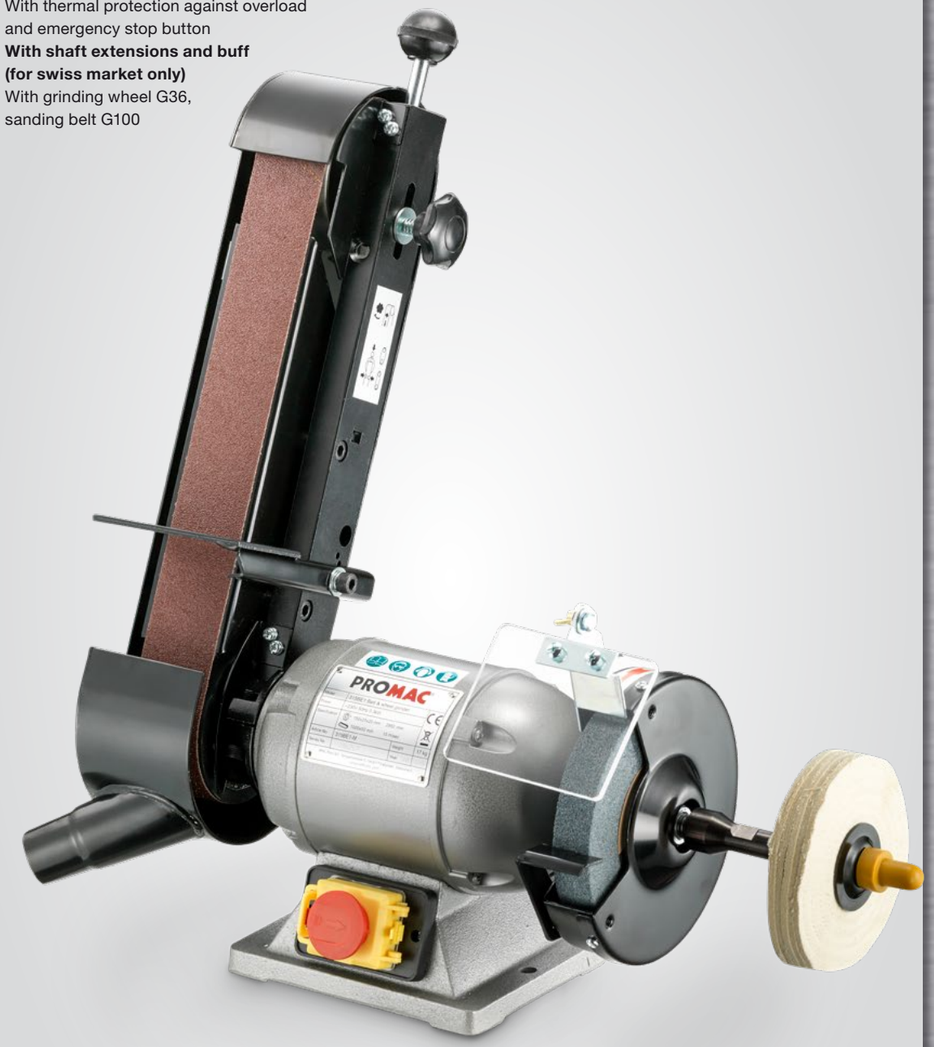
BELT SANDER

ACCESSORIES **P.144**

315BE1

1000-002-635

- Low vibration motor with ball bearings
- Switch with start-interlock coil
- With thermal protection against overload and emergency stop button
- **With shaft extensions and buff (for swiss market only)**
- With grinding wheel G36, sanding belt G100



TECHNICAL DATA

Motor (V/kW)	230/0.3
Belt dimensions (mm)	50×1'000
Dimensions of grinding wheel (mm)	150×25×20
Speed range (min^{-1})	2'850
Band speed (m/s)	15
Extraction outlet (ø-mm)	36
Dimensions (mm)	450×250×570
Weight (kg)	14

Other technical data and accessories you will find in the manual.

BELT SANDER

ACCESSORIES **P.144**

322BE1

1000-002-636

- Low vibration motor with ball bearings
- Switch with start-interlock coil
- With thermal protection against overload and emergency stop button
- **With shaft extensions and buff (for swiss market only)**
- With grinding wheel G36, sanding belt G100

TECHNICAL DATA

Motor (V/kW)	400/0.55
Belt dimensions (mm)	100×1'000
Dimensions of grinding wheel (mm)	200×25×20
Speed range (min^{-1})	2'850
Band speed (m/s)	15
Extraction outlet (ø-mm)	36
Dimensions (mm)	550×310×580
Weight (kg)	29

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

BELT SANDER

ACCESSORIES **P.144**

326BE

1000-000-079

- Low vibration motor with ball bearings
- Switch with start-interlock coil
- Chip guard made of plexiglas
- Emergency stop switch
- Incl. pedestal, sanding belt G100 and grinding wheel G46

TECHNICAL DATA

Motor (V/kW)	400/1.4
Belt dimensions (mm)	100×1'150
Dimensions of grinding wheel (mm)	250×38×25.4
Speed range (min^{-1})	2'850
Band speed (m/s)	30
Extraction outlet (ø-mm)	36/100
Dimensions (mm)	660×500×580
Weight (kg)	50

Other technical data and accessories you will find in the manual.

BELT SANDER

ACCESSORIES **P.144**

335E

1000-000-942

- With rubber rollers for better tape drive
- Stand with dedusting system
- Adjustable grinding arm angle
- With abrasive belt cover and emergency stop button
- With thermal motor protection
- Incl. sanding belt G80

TECHNICAL DATA

Motor (V/kW)	400/2.25
Belt dimensions (mm)	75×2'000
Band speed (m/s)	30
Sanding surface (mm)	75×750
Extraction outlet (ø-mm)	75
Dimensions (mm)	430×950×1'050
Weight (kg)	85

Other technical data and accessories you will find in the manual.

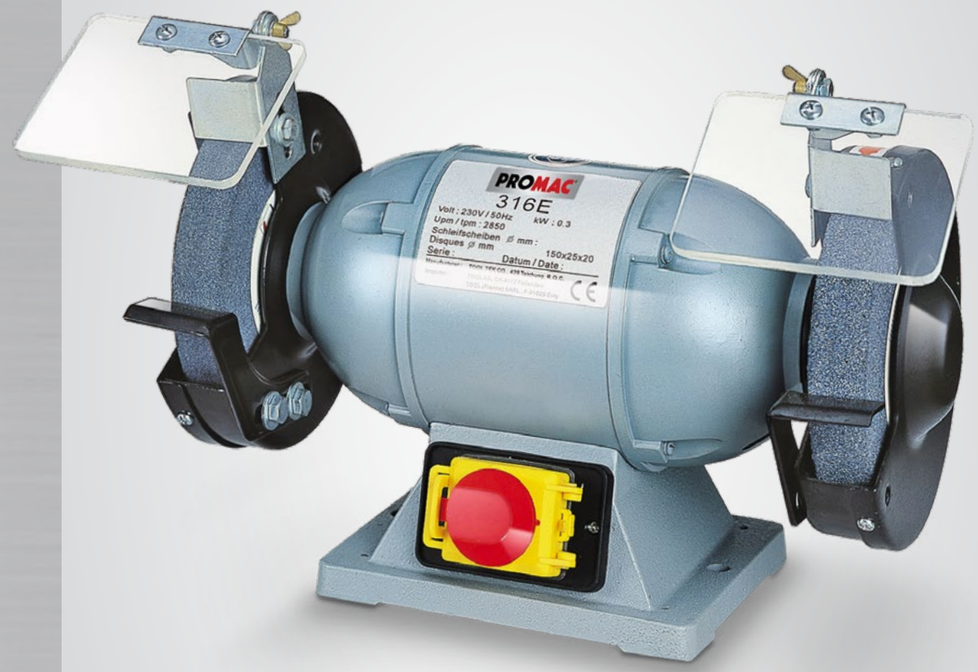
DISC SANDER

ACCESSORIES **P.144**

316E

1000-000-076

- Switch with start-interlock coil
- With emergency stop switch
- With grinding wheels G36 and G60
- With adjustable tool holder



TECHNICAL DATA

Motor (V/kW)	230/0.3
Dimensions of grinding wheel (mm)	150×25×20
Speed range (min^{-1})	2'850
Dimensions (mm)	400×190×270
Weight (kg)	12

Other technical data and accessories you will find in the manual.

DISC SANDER

ACCESSORIES **P.144**

324E

1000-000-077

- Switch with start-interlock coil
- With emergency stop button
- With grinding wheels G36 and G60
- With adjustable tool holder

TECHNICAL DATA

Motor (V/kW)	230/0.45
Dimensions of grinding wheel (mm)	200×25×20
Speed range (min^{-1})	2'850
Extraction outlet (ø-mm)	36
Dimensions (mm)	480×300×290
Weight (kg)	21

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

DISC SANDER

ACCESSORIES **P.144**

324F

1000-000-879

- Switch with start-interlock coil
- With emergency stop button
- With adjustable tool holder
- Incl. wire brush and grinding wheel

TECHNICAL DATA

Motor (V/kW)	230/0.45
Dimensions of grinding wheel (mm)	200×25×20
Dimensions of metal brush (mm)	200×25×16
Speed range (min^{-1})	2'850
Extraction outlet (ø-mm)	36/100
Dimensions (mm)	490×300×290
Weight (kg)	24

Other technical data and accessories you will find in the manual.

DISC SANDER

ACCESSORIES **P.144**

325E

1000-000-078

- Switch with start-interlock coil
- With emergency stop button
- Incl. grinding wheel G46 and G60
- With adjustable tool holder

TECHNICAL DATA

Motor (V/kW)	400/0.45
Dimensions of grinding wheel (mm)	200×25×20
Speed range (min^{-1})	2'850
Extraction outlet (ø-mm)	36
Dimensions (mm)	480×300×290
Weight (kg)	21

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

DISC SANDER

ACCESSORIES **P.144**

325F

1000-000-878

- Switch with start-interlock coil
- With emergency stop button
- With adjustable tool holder
- Incl. wire brush and grinding wheel

TECHNICAL DATA

Motor (V/kW)	400/0.45
Dimensions of grinding wheel (mm)	200×25×20
Dimensions of metal brush (mm)	200×25×16
Speed range (min^{-1})	2'850
Extraction outlet (ø-mm)	36/100
Dimensions (mm)	490×300×290
Weight (kg)	20

Other technical data and accessories you will find in the manual.

DISC SANDER

ACCESSORIES **P.144**

326F

1000-027-293

- Switch with start-interlock coil
- With emergency stop button
- Incl. wire brush and grinding wheel G36
- With adjustable tool holder

TECHNICAL DATA

Motor (V/kW)	400/0.75
Dimensions of grinding wheel (mm)	250×38×20
Dimensions of metal brush (mm)	250×20×36
Speed range (min^{-1})	2'850
Extraction outlet (ø-mm)	36/100
Dimensions (mm)	610×440×380
Weight (kg)	44

Other technical data and accessories you will find in the manual.

DISC SANDER

ACCESSORIES **P.144**

330D

1000-027-185

- Grinding wheel stand with workshop pedestal
- Vibration-free motor supported in ball bearings
- Switch with start-interlock coil
- Incl. 2 grinding wheels ø 300×50 mm G36 and G60
- Incl. pedestal

TECHNICAL DATA

Motor (V/kW)	400/1.5
Dimensions of grinding wheel (mm)	300×50×25.4
Speed range (min^{-1})	1'420
Extraction outlet (ø-mm)	36
Dimensions (mm)	740×475×1'200
Weight (kg)	105

Other technical data and accessories you will find in the manual.

DRILL SHARPENER

ACCESSORIES **P.144**

313

1000-001-866

- Sharpening precision +/- 0.05 mm
- Fast sharpening of the bezel angle and of the point angle in one set-up
- Easy and precise adjustment of the drill bit position for a precise cutting angle
- Powerful motor with continuous speed for ultra-fine sharpened surfaces
- Easy replacement of the sharpening wheel
- Provided with ER20 collet chucks: 3/4/5/6/7/8/9/10/11/12/13 mm
- Supplied with CBN sharpening wheel for longer life

TECHNICAL DATA

Motor (V/kW)	230/0.25
Sharpening capacity (ø-mm)	2–13
Thread angle	90–140°
Speed range (min^{-1})	5'100
Dimensions (mm)	282×185×110
Weight (kg)	9.8

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

DRILL SHARPENER

ACCESSORIES **P.144**

314

1000-001-867

- Sharpening precision +/- 0.05 mm
- Fast sharpening of the bezel angle and of the point angle in one set-up
- Easy and precise adjustment of the drill bit position for a precise cutting angle
- Powerful motor with continuous speed for ultra-fine sharpened surfaces
- Easy replacement of the sharpening wheel
- Provided with ER40 collet chucks: 12/13/14/15/16/17/18/19/20/21/22/23/24/25 mm
- Deliverable as option: Chuck ER40 8/9/10/11/26/27/28/29/30 mm
- Supplied with CBN sharpening wheel for longer life

TECHNICAL DATA

Motor (V/kW)	230/0.35
Sharpening capacity (ø-mm)	12–25 (8–30 optional)
Thread angle	100–136°
Speed range (min^{-1})	5'300
Dimensions (mm)	380×240×200
Weight (kg)	23.8

Other technical data and accessories you will find in the manual.

ÜBERSICHT

GRINDING MACHINES

Model	331Y	331C	315BE1	322BE1	326BE
Art. No. SAP	1000-001-216	1000-027-199	1000-002-635	1000-002-636	1000-000-079
Page	128	128	129	130	131
Motor (V/kW)	230/0.75	400/0.75	230/0.3	400/0.55	400/1.4
Belt dimensions (mm)	100×1'220	100×1'220	50×1'000	100×1'000	100×1'150
Dimensions of grinding wheel (mm)	–	–	150×25×20	200×25×20	250×38×25.4
Dimensions of metal brush (mm)	–	–	–	–	–
Sanding surface (mm)	100×320	100×320	–	–	–
Speed range (min^{-1})	–	–	2'850	2'850	2'850
Band speed (m/s)	19	19	15	15	30
Extraction outlet (ø-mm)	36	36	36	36	36/100
Dimensions (mm)	440×640×280	440×640×280	450×250×570	550×310×580	660×500×580
Weight (kg)	28	28	14	29	50
Delivered with	▪ Grinding belt	▪ Grinding belt	▪ Grinding wheel G36 ▪ Grinding belt G100 ▪ Wave extension ▪ Buff	▪ Grinding wheel G36 ▪ Grinding belt G100 ▪ Wave extension ▪ Buff	▪ Grinding wheel G46 ▪ Grinding belt G100 ▪ Pedestal

Model	325E	325F	326F	330D
Art. No. SAP	1000-000-878	1000-000-078	1000-000-078	1000-027-185
Page	136	137	138	139
Motor (V/kW)	400/0.45	400/0.45	400/0.75	400/1.5
Belt dimensions (mm)	–	–	–	–
Dimensions of grinding wheel (mm)	200×25×20	200×25×20	250×38×20	300×50×25.4
Dimensions of metal brush (mm)	–	200×25×16	250×20×36	–
Sanding surface (mm)	–	–	–	–
Speed range (min^{-1})	2'850	2'850	2'850	1'420
Band speed (m/s)	–	–	–	–
Extraction outlet (ø-mm)	36	36/100	36/100	36
Dimensions (mm)	480×300×290	490×300×290	610×440×380	740×475×1'200
Weight (kg)	21	20	44	105
Delivered with	▪ Grinding wheels G46 and G60	▪ Grinding wheel ▪ Wire brush	▪ Grinding wheel G36 ▪ Wire brush	▪ Grinding wheels G36 and G60 ▪ Pedestal

Other technical data and accessories you will find in the manual.

Model	335E	316E	324E	324F
Art. No. SAP	1000-000-942	1000-000-076	1000-000-077	1000-000-879
Page	132	133	134	135
Motor (V/kW)	400/2.25	230/0.3	230/0.45	230/0.45
Belt dimensions (mm)	75×2'000	–	–	–
Dimensions of grinding wheel (mm)	–	150×25×20	200×25×20	200×25×20
Dimensions of metal brush (mm)	–	–	–	200×25×16
Sanding surface (mm)	75×750	–	–	–
Speed range (min^{-1})	–	2'850	2'850	2'850
Band speed (m/s)	30	–	–	–
Extraction outlet (ø-mm)	75	–	36	36/100
Dimensions (mm)	430×950×1'050	400×190×270	480×300×290	490×300×290
Weight (kg)	85	12	29	24
Delivered with	▪ Grinding belt	▪ Grinding wheels G36 and G60	▪ Grinding wheels G36 and G60	▪ Grinding wheel ▪ Drahtbürste

Model	313	314
Art. No. SAP	1000-001-866	1000-001-867
Page	140	141
Motor (V/kW)	230/0.25	230/0.35
Sharpening capacity (ø-mm)	2–13	12–25 (8–30 optional)
Thread angle	90–140°	100–136°
Speed range (min^{-1})	5'100	5'300
Dimensions (mm)	282×185×110	380×240×200
Weight (kg)	9.8	23.8
Delivered with	▪ Chuck ER20: 3/4/5/6/7/8/9/10/11/12/13 mm ▪ Grinding wheel	▪ Chuck ER40: 12/13/14/15/16/17/18/19/20/21/22/23/24/25 mm ▪ Grinding wheel

Other technical data and accessories you will find in the manual.

GRINDING

ACCESSORIES
Page 144

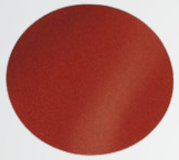
ACCESSORIES

GRINDING MACHINES

Rigid base

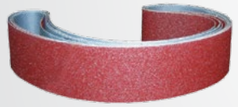
1000-000-029	2004	Robust, with large foot
1000-000-143	9399	290×300×830mm

5 sanding papers (Velcro)



1000-000-033	2026	G40, 305mm
1000-000-034	2027	G60, 305mm
1000-000-035	2028	G80, 305mm
1000-000-036	2029	G100, 305mm
1000-000-037	2030	G120, 305mm
1000-000-038	2031	G150, 305mm

5 sanding belts



1000-000-050	2048	G60, 150×2'000mm
1000-000-051	2049	G80, 150×2'000mm
1000-000-052	2050	G100, 150×2'000mm
1000-000-053	2051	G120, 150×2'000mm
1000-000-054	2052	G180, 150×2'000mm
1000-001-401	2204	G60, 100×1'100mm
1000-001-402	2205	G80, 100×1'100mm
1000-001-403	2206	G100, 100×1'100mm
1000-001-404	2207	G120, 100×1'100mm
1000-001-405	2208	G180, 100×1'100mm
1000-000-126	9306	G60, 50×1'000mm
1000-000-127	9307	G80, 50×1'000mm
1000-000-128	9308	G100, 50×1'000mm
1000-000-129	9309	G120, 50×1'000mm
1000-000-130	9310	G180, 50×1'000mm
1000-000-137	9346	G60, 100×1'000mm
1000-000-138	9347	G80, 100×1'000mm
1000-000-139	9348	G100, 100×1'000mm
1000-000-140	9349	G120, 100×1'000mm
1000-000-141	9350	G180, 100×1'000mm
1000-000-478	9829	G60, 75×2'000mm
1000-000-479	9830	G80, 75×2'000mm
1000-000-481	9831	G100, 75×2'000mm
1000-000-482	9832	G120, 75×2'000mm
1000-000-483	9833	G150, 75×2'000mm
1000-000-517	9869	G60, 100×1'220mm
1000-000-518	9870	G80, 100×1'220mm
1000-000-519	9871	G100, 100×1'220mm
1000-000-520	9872	G120, 100×1'220mm
1000-000-521	9873	G180, 100×1'220mm
1000-000-560	9945	G60, 100×1'150mm
1000-000-561	9946	G80, 100×1'150mm
1000-000-562	9947	G100, 100×1'150mm
1000-000-563	9948	G120, 100×1'150mm
1000-000-564	9949	G180, 100×1'150mm
1000-000-570	9969	G100, 100×1'500mm
1000-000-571	9970	G80, 100×1'500mm
1000-000-572	9971	G60, 100×1'500mm
1000-000-573	9972	G40, 100×1'500mm
1000-000-000	100119	G100, 100×914mm
1000-000-001	100120	G80, 100×914mm
1000-000-002	100121	G60, 100×914mm

Grinding wheel

1000-000-071	2098	G36, 150×20×12.7mm
1000-000-072	2099	G60, 150×20×12.7mm
1000-000-073	2101	G36, 205×20×15mm
1000-000-113	9191	G46, 150×25×20mm
1000-000-116	9197	G60, 150×25×20mm
1000-000-134	9340	G46, 205×25×20mm
1000-000-135	9341	G46, 205×25×20mm
1000-000-308	9772	G46, 305×50×25mm
1000-000-309	9773	G60, 305×50×25mm
1000-000-565	9950	G46, 250×38×25.4mm

CBN sharpening wheel

1000-001-874	2224	55308, for drill sharpener 313

ACCESSORIES

GRINDING MACHINES

Diamond grinding wheel

1000-001-876	2225	For sharpening drill machine 313

Diamond dressing tool

1000-002-659	2231	For grinding wheels

CBN sharpening wheel

1000-001-875	2226	53569 for sharpening drill machine 314

Chuck ER40

2000-019-910	PM-314-108	8 mm
2000-021-139	PM-314-109	9 mm
2000-021-144	PM-314-110	10 mm
2000-021-145	PM-314-111	10–11 mm
2000-021-422	PM-314-113	12–13 mm
2000-021-417	PM-314-115	14–15 mm
2000-021-146	PM-314-126	26 mm
2000-021-140	PM-314-127	27 mm
2000-021-141	PM-314-128	28 mm
2000-021-142	PM-314-129	29 mm
2000-021-143	PM-314-130	30 mm

Diamond grinding wheel

1000-001-877	2227	50175 for sharpening drill machine 314

INDUSTRIAL SUPPLIES

VACUUM CLEANERS
Page 148

ELECTRIC HOIST
Page 163

ACCESSORIES
Page 166

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-27TB-R

1000-003-416

- Inox container
- Safety tube, 2.5 m
- Internal socket with automatic switch for electronic tools (total power: vacuum + electronic tool = 2.300 watts)

1 motor

additional socket

APPLICATIONS

Dry

Wet

Industry

Construction

Automobile

Assembly

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.5
Container (material)	Inox
Storage capacity (lt.)	27
Water column (mm)	2'230
Suction capacity (m^3/h)	255
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Filter system	Paper cartridge/polyester
Filter class	M
Automatic switch	Yes
Dimensions (mm)	306×360×610
Weight (kg)	8
Accessories (ø-mm)	36

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-32TB

1000-003-417

- Inox container
- Safety tube, 2.5 m
- Cloth filter with NANO technology eliminates microorganisms: bacteria, viruses, yeasts, fungi

1 motor

APPLICATIONS

Dry

Wet

Industry

Construction

Automobile

Assembly

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.5
Container (material)	Inox
Storage capacity (lt.)	32
Water column (mm)	2'230
Suction capacity (m^3/h)	255
Negative pressure max. (mbar)	218.68
Noise level (dB)	69
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	No
Dimensions (mm)	360×360×720
Weight (kg)	9.6
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-33TB-R

1000-003-458

- Inox container
- Safety tube, 2.5 m
- Internal socket with automatic switch for electronic tools (total power: vacuum + electronic tool = 2.300 watts)

1 motor

additional socket

APPLICATIONS

Dry
Wet
Industry
Construction
Automobile
Assembly

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.5
Container (material)	Inox
Storage capacity (lt.)	32
Water column (mm)	2'230
Suction capacity (m^3/h)	255
Negative pressure max. (mbar)	218.68
Noise level (dB)	69
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	Yes
Dimensions (mm)	360×360×720
Weight (kg)	9.6
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-50TB

1000-003-420

- Inox container
- Safety tube, 2.5 m
- Cloth filter with NANO technology eliminates microorganisms: bacteria, viruses, yeasts, fungi

1 motor

APPLICATIONS

Dry
Wet
Industry
Construction
Automobile

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.5
Container (material)	Inox
Storage capacity (lt.)	50
Water column (mm)	2'230
Suction capacity (m^3/h)	255
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	No
Dimensions (mm)	500×500×870
Weight (kg)	13
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-50-2TB

1000-003-419

- Inox container
- Safety tube, 2.5 m
- Cloth filter with NANO technology eliminates microorganisms: bacteria, viruses, yeasts, fungi

2 motors

APPLICATIONS

Dry, Wet, Industry, Construction, Automobile

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Inox
Storage capacity (lt.)	50
Water column (mm)	2'230
Suction capacity (m^3/h)	510
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	No
Dimensions (mm)	500×500×870
Weight (kg)	17.5
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-62-2TB

1000-003-421

- Inox container
- Latest FLOWMIX technology offers strong suction power of 2.380 mm water column
- Equipped with oil-resistant anti-static tube
- Simple draining of residual water via drain tube

2 motors

APPLICATIONS

Dry, Wet, Industry, Construction, Flooding

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Inox
Storage capacity (lt.)	62
Water column (mm)	2'680
Suction capacity (m^3/h)	400
Negative pressure max. (mbar)	233.39
Noise level (dB)	82
Filter system	Paper cartridge/polyester
Filter class	M
Automatic switch	No
Dimensions (mm)	580×740×930
Weight (kg)	26
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES P.166

VAC-360-2TB

1000-003-418

- Plastic container
- 2 high-performance motors
- Safety tube, 2.5 m
- Cloth filter with NANO technology eliminates microorganisms: bacteria, viruses, yeasts, fungi

2 motors

APPLICATIONS

Dry, Wet, Industry, Construction, Automobile

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Plastic/PVC
Storage capacity (lt.)	62
Water column (mm)	2'230
Suction capacity (m^3/h)	510
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	No
Dimensions (mm)	550×700×920
Weight (kg)	22
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET VACUUM CLEANER

ACCESSORIES P.166

VAC-65TPB

1000-003-422

- With integrated water pump for automatic draining, discharge head of up to 7 m
- GEKA water drainage supports, 32 mm
- Drain valve for residual water
- Large wheels

2 motors, additional socket, integrated pump

Integrated pump

APPLICATIONS

Wet, Flooding

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Plastic/PVC
Storage capacity (lt.)	50
Water column (mm)	2'230
Suction capacity (m^3/h)	510
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Dimensions (mm)	600×600×990
Weight (kg)	28
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET/DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-78-2TB

1000-003-423

- Inox container
- Suction tube ø 38 mm, length 2.5 m, incl. couplings
- Tilting pan for simple draining of residual water
- Large wheels

2 motors

tiltable

APPLICATIONS

Dry
Wet
Industry
Construction
Flooding

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Inox
Storage capacity (lt.)	70
Water column (mm)	2'230
Suction capacity (m^3/h)	510
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Filter system	Cloth filter/polyester
Filter class	L
Automatic switch	No
Dimensions (mm)	600×600×990
Weight (kg)	24
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

WET VACUUM CLEANER

ACCESSORIES **P.166**

VAC-78-2TPB

1000-003-424

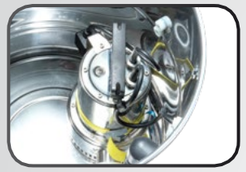
- With integrated water pump for automatic draining, discharge head of up to 7 m
- STORZ 55 water drainage supports
- Suction tube ø 38 mm, length 2.5 m, incl. couplings
- Tilting pan for simple draining of residual water
- Large wheels

2 motors

additional socket

tiltable

integrated pump



Integrated pump

APPLICATIONS

Wet
Industry
Construction
Flooding

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/2.2
Container (material)	Inox
Storage capacity (lt.)	70
Water column (mm)	2'230
Suction capacity (m^3/h)	510
Negative pressure max. (mbar)	218.68
Noise level (dB)	72
Automatic switch	Yes
Dimensions (mm)	600×600×990
Weight (kg)	29
Accessories (ø-mm)	38

Other technical data and accessories you will find in the manual.

DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-FOX-B

1000-003-446

- Containers made of impact-resistant plastic
- Small and easy to handle, portable for mobile use
- With a filter shaker for simple and tidy cleaning of the filter during operation

1 motor

APPLICATIONS

Dry, Office, Automobile, Assembly

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.2
Container (material)	Plastic/PVC
Storage capacity (lt.)	6
Water column (mm)	1'940
Suction capacity (m^3/h)	107.4
Negative pressure max. (mbar)	190.24
Noise level (dB)	75
Filter system	Paper cartridge/paper
Filter class	L
Automatic switch	No
Dimensions (mm)	210 × 270 × 400
Weight (kg)	4.5
Accessories (ø-mm)	32

Other technical data and accessories you will find in the manual.

DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-12-H

1000-027-207

- Extra robust and durable design
- For professional applications in offices and hotels
- Impact-resistant housing made of 70% recycled plastic
- Suction tube, 2.5 m
- 12 m cable
- Strong suction power
- Minimum noise, just 62 dB(A)

1 motor

APPLICATIONS

Dry, Hotel, Office, Automobile

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/0.87
Container (material)	Plastic/PVC
Storage capacity (lt.)	12
Water column (mm)	2'420
Suction capacity (m^3/h)	183
Negative pressure max. (mbar)	242
Noise level (dB)	62
Filter system	Paper cartridge/paper
Filter class	M
Automatic switch	No
Dimensions (mm)	400 × 400 × 330
Weight (kg)	6
Accessories (ø-mm)	36

Other technical data and accessories you will find in the manual.

DRY VACUUM CLEANER

ACCESSORIES **P.166**

VAC-200H

8000-000-048

- Professional fine particulate vacuum for extreme conditions
- Permitted for the BIA K1 and H2 categories
- Eliminates fine particulate and hazardous dust
- Automatic switch
- Teflon-coated pipe-canal filter system with a filter area of 80 m²
- Vacuum gauge monitors drop in performance
- Pressure compensation valve for cleaning the filter during operation
- HEPA filter, 1.1 m², filters 99.97% of dust
- Vacuum hose 4 m, highly resistant and anti-static

1 motor

APPLICATIONS

Dry

Industry

Construction

DELIVERED WITH

TECHNICAL DATA

Motor (V/kW)	230/1.2
Container (material)	Plastic/PVC
Storage capacity (lt.)	16
Water column (mm)	2'500
Suction capacity (m³/h)	215
Negative pressure max. (mbar)	250
Noise level (dB)	69
Filter system	Channel filter/paper cartridge HEPA
Filter class	H
Automatic switch	Yes
Dimensions (mm)	425×425×780
Weight (kg)	15
Accessories (ø-mm)	40

Other technical data and accessories you will find in the manual.

AIR CLEANER

ACCESSORIES **P.166**

VAC-250

1000-001-253

- Clean solution for indoor use
- Extracts dust-laden air from the construction area and returns the purified air to the environment
- Thanks to the vacuum in the structural part, the dust can-not reach the environment
- The primary air filter and the HEPA filter (H-13 class) re-move all dust particles up to 99.97%
- Small investment for saving cleaning cost
- Suitable for premises of up to 70 m³ with an air circulation of more than 6 times per hour
- Provided with a wear-resistant hose with ø 125 mm and a length of 5 m

TECHNICAL DATA

Motor (V/kW)	230/0.17
Suction capacity (m³/h)	425
Noise level (dB)	53
Suction hose length (m)	5
Negative pressure max. (mbar)	400
Noise level (dB)	53
Dimensions (mm)	350×435×380
Weight (kg)	23

Other technical data and accessories you will find in the manual.

PEDESTAL W. EXTRACTION SYSTEM

ACCESSORIES **P.166**

300Z

1000-001-897

- Pedestal with motor-powered extraction system for metal sanding machines
- With emergency stop switch
- Comprising:
  1 × cover ø 100 mm
  1 × Y-type adapter ø 100 mm
  2 × flexible aluminum pipe ø 100 mm × 1.8 m
  2 × adaptaters ø 36 × 100 mm
  4 × flange ø 100 mm
  2 × flange ø 36 mm

TECHNICAL DATA

Motor (V/kW)	230/0.38
Speed range (min^{-1})	2'850
Dimensions (mm)	450 × 450 × 842
Weight (kg)	37

Other technical data and accessories you will find in the manual.

DRILLING
MILLING
TURNING
SAWING
GRINDING
INDUSTRIAL SUPPLIES
TABLES

ELECTRIC HOIST

990G 250 KG

1000-001-339

991G 500 KG

1000-001-340

992G 1'000 KG

1000-001-341

- Automatic stop at upper stroke limit
- Thermal protection against overload
- With fastening flanges and lifting block pulley
- With safety breaker for avoiding unfavorable cable winding
- Collar dimensions 45 × 45 mm

TECHNICAL DATA

Model	990G	991G	992G
Motor (V/kW)	230/0.5	230/0.9	230/1.6
Payload (kg)	125/250	250/500	500/999
Lifting speed (m/min^{-1})	10/5	10/5	10/5
Lifting speed (m)	12	12	11
Lifting height (m)	6	6	5.5
Cable length (m)	12	12	12
Cable (ø-mm)	3	4.2	5.6
Dimensions (mm)	130 × 160 × 315	155 × 363 × 220	185 × 480 × 220
Weight (kg)	11.5	17	31

Other technical data and accessories you will find in the manual.

OVERVIEW

VACUUM CLEANERS

Model	VAC-27TB-R	VAC-32TB	VAC-33TB-R	VAC-50TB	VAC-50-2TB
Art. No. SAP	1000-003-416	1000-003-417	1000-003-458	1000-003-420	1000-003-419
Page	148	149	150	151	152
Motor (V/kW)	230/1.5	230/1.5	230/1.5	230/1.5	230/2.2
Container (material)	Inox	Inox	Inox	Inox	Inox
Storage capacity (lt.)	27	32	32	50	50
Water column (mm)	2'230	2'230	2'230	2'230	2'230
Suction capacity (m³/h)	255	255	255	255	510
Negative pressure max. (mbar)	218.68	218.68	218.68	218.68	218.68
Noise level (dB)	72	69	69	72	72
Filter system	Paper cartridge/ polyester	Cloth filter/ polyester	Cloth filter/ polyester	Cloth filter/ polyester	Cloth filter/ polyester
Filter class	M	L	L	L	L
Automatic switch	Yes	No	Yes	No	No
Dimensions (mm)	306×360×610	360×360×720	360×360×720	500×500×870	500×500×870
Weight (kg)	8	9.6	9.6	13	17.5
Accessories (ø-mm)	36	38	38	38	38

Model	VAC-FOX-B	VAC-12-H	VAC-200H
Art. No. SAP	1000-003-446	1000-027-207	8000-000-048
Page	158	159	160
Motor (V/kW)	230/1.2	230/0.87	230/1.2
Container (material)	Plastic/PVC	Plastic/PVC	Plastic/PVC
Storage capacity (lt.)	6	12	16
Water column (mm)	1'940	2'420	2'500
Suction capacity (m³/h)	107.4	183	215
Negative pressure max. (mbar)	190.24	242	250
Noise level (dB)	75	62	69
Filter system	Paper cartridge/paper	Paper cartridge/paper	Channel filter/ paper cartridge HEPA
Filter class	L	M	H
Automatic switch	No	No	Yes
Dimensions (mm)	210×270×400	400×400×330	425×425×780
Weight (kg)	4.5	6	15
Accessories (ø-mm)	32	36	40

Other technical data and accessories you will find in the manual.

Model	VAC-62-2TB	VAC-360-2TB	VAC-65TPB	VAC-78-2TB	VAC-78-2TPB
Art. No. SAP	1000-003-421	1000-003-418	1000-003-422	1000-003-423	1000-003-424
Page	153	154	155	156	157
Motor (V/kW)	230/2.2	230/2.2	230/2.2	230/2.2	230/2.2
Container (material)	Inox	Plastic/PVC	Plastic/PVC	Inox	Inox
Storage capacity (lt.)	62	62	50	70	70
Water column (mm)	2'680	2'230	2'230	2'230	2'230
Suction capacity (m³/h)	400	510	510	510	510
Negative pressure max. (mbar)	233.39	218.68	218.68	218.68	218.68
Noise level (dB)	82	72	72	72	72
Filter system	Paper cartridge/ polyester	Cloth filter/ polyester	–	Cloth filter/ polyester	–
Filter class	M	L	–	L	–
Automatic switch	No	No	–	No	Yes
Dimensions (mm)	580×740×930	550×700×920	600×600×990	600×600×990	600×600×990
Weight (kg)	26	22	28	24	29
Accessories (ø-mm)	38	38	38	38	38

APPLICATIONS

	VAC-27TB-R	VAC-32TB	VAC-33TB-R	VAC-50TB	VAC-50-2TB	VAC-62-2TB	VAC-360-2TB	VAC-65TPB	VAC-78-2TB	VAC-78-2TPB	VAC-FOX-B	VAC-12-H	VAC-200H	
Page	148	149	150	151	152	153	154	155	156	157	158	159	160	
2 motors					×	×	×	×	×	×				
Additional socket	×		×					×		×				
Tiltable								×	×	×				
Integrated pump								×		×				
Dry	×	×	×	×	×	×	×				×	×	×	
Wet	×	×	×	×	×	×	×	×	×	×				
Industry	×	×	×	×	×	×	×		×	×			×	
Construction	×	×	×	×	×	×	×		×	×			×	
Hotel												×		
Office											×	×		
Automobile	×	×	×	×	×	×	×				×	×		
Flooding						×		×	×	×				
Assembly	×	×	×								×			

Other technical data and accessories you will find in the manual.

INDUSTRIAL SUPPLIES

ACCESSORIES

Vacuum Cleaners

● Delivered with
× Accessories optional

	Art. No. SAP	Model	Description
	1000-001-837	VAC-84674025	Inlet filter for water aspirators, with terminal strip
	1000-002-852	VAC-1033	Pleated filter (dust class L)
	1000-000-694	VAC-3020	Filter flange to comb filter
	1000-000-777	VAC-84675006	HEPA comb filter H13
	1000-000-706	VAC-5023	HEPA comb filter paper 10 µm
	1000-000-691	VAC-3006	HEPA comb filter polyester 5 µm
	1000-000-776	VAC-84671111	Channel filter
	1000-001-804	VAC-3031	PolyCarbon fine dust filter 12 micron for cloth filter
	1000-001-805	VAC-3033	PolyCarbon fine dust filter 12 micron for cloth filter
	1000-001-803	VAC-3030	PolyCarbon particulate filter 12 micron for comb filter
	1000-000-713	VAC-5039	Polyester filter
	1000-000-707	VAC-5025	Polyester filter (dust class L 23 micron)
	1000-000-681	VAC-1610	Polyester filter set complete
	1000-000-714	VAC-5040	Polyester filter set complete
	1000-000-845	VAC-5051	Polyester filter set complete
	1000-001-491	VAC-5052	Polyester filter set complete
	1000-001-492	VAC-5053	Polyester filter set complete
	2000-023-997	VAC-27TBR306	Paper cartridge
	1000-001-007	VAC-1628	Paper cartridge dust class M
	1000-000-712	VAC-5037-03	2 pcs. brush inserts L = 610 mm
	1000-000-703	VAC-5004-01	Brush strips 400 mm (2)
	1000-000-894	VAC-85460038	Brush strips 400 mm (2)

VAC-27TB-R 1000-003-416	VAC-32TB 1000-003-417	VAC-33TB-R 1000-003-458	VAC-50TB 1000-003-420	VAC-50-2TB 1000-003-419	VAC-62-2TB 1000-003-421	VAC-360-2TB 1000-003-418	VAC-65TPB 1000-003-422	VAC-78-2TB 1000-003-423	VAC-78-2TPB 1000-003-424	VAC-FOX-B 1000-003-446	VAC-12-H 1000-027-207	VAC-200H 8000-000-048
P.148	P.149	P.150	P.151	P.153	P.153	P.154	P.155	P.156	P.157	P.158	P.159	P.160
×	×	×	×	×	×	×	×	×	×			
										●		
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												×

ACCESSORIES

Vacuum Cleaners

- ● Delivered with
- × Accessories optional

	Art. No. SAP	Model	Description	VAC-27TB-R 1000-003-416 P.148	VAC-32TB 1000-003-417 P.149	VAC-33TB-R 1000-003-458 P.150	VAC-50TB 1000-003-420 P.151	VAC-50-2TB 1000-003-419 P.153	VAC-62-2TB 1000-003-421 P.153	VAC-360-2TB 1000-003-418 P.154	VAC-65TPB 1000-003-422 P.155	VAC-78-2TB 1000-003-423 P.156	VAC-78-2TPB 1000-003-424 P.157	VAC-FOX-B 1000-003-446 P.158	VAC-12-H 1000-027-207 P.159	VAC-200H 8000-000-048 P.160
	2000-024-466	VAC-12-H1002	Round brush ø 36 mm												●	
	1000-002-942	VAC-1037	Round brush ø 32 mm											×		
	1000-000-677	VAC-1606	Round brush ø 36 mm	●												
	1000-000-716	VAC-5043	Round brush ø 38 mm		●	●	●	●	●	●		●				●
	1000-002-941	VAC-1036	Carpet brush ø 32 mm											×		
	2000-024-470	VAC-12-H1006	Carpet brush ø 36 mm												●	
	1000-000-674	VAC-1603	Carpet brush ø 36 mm	●												
	1000-001-839	VAC-5009	Floor nozzle 450 mm ø 38 mm								●					
	1000-000-689	VAC-3003	Floor nozzle wet 300/400 mm, ø 38 mm		●	●	●	●		●		●	●			
	1000-000-700	VAC-5003	Floor nozzle wet 300/400 mm, ø 38 mm						●							
	1000-000-709	VAC-5036	Wet floor nozzle L = 610 mm, with castors							×	×		×			
	1000-000-679	VAC-1608	Floor nozzle ø 36 mm	●												
	1000-000-688	VAC-3002	Floor nozzle dry 400 mm, ø 38 mm		●	●	●	●		●		●				
	1000-000-702	VAC-5004	Floor nozzle dry 400 mm, ø 38 mm					●								
	1000-000-775	VAC-84383620	Floor nozzle dry 400 mm, ø 40 mm													●
	1000-000-711	VAC-5037	Floor nozzle dry 610 mm, with rollers							●						
	1000-000-772	VAC-80343604	Flat nozzle													×
	1000-000-678	VAC-1607	Flat nozzle ø 36 mm	●												
	1000-002-853	VAC-1032	Crevice nozzle + suction brush											●		
	2000-024-469	VAC-12-H1005	Crevice nozzle ø 36 mm												●	
	1000-000-675	VAC-1604	Crevice nozzle ø 36 mm	●												
	1000-000-684	VAC-2006	Crevice nozzle ø 38 mm		●	●	●	●	●	●	●	●	●			●

INDUSTRIAL SUPPLIES

ACCESSORIES

Vacuum Cleaners

- ● Delivered with
- × Accessories optional

	Art. No. SAP	Model	Description	VAC-27TB-R 1000-003-416 P.148	VAC-32TB 1000-003-417 P.149	VAC-33TB-R 1000-003-458 P.150	VAC-50TB 1000-003-420 P.151	VAC-50-2TB 1000-003-419 P.153	VAC-62-2TB 1000-003-421 P.153	VAC-360-2TB 1000-003-418 P.154	VAC-65TPB 1000-003-422 P.155	VAC-78-2TB 1000-003-423 P.156	VAC-78-2TPB 1000-003-424 P.157	VAC-FOX-B 1000-003-446 P.158	VAC-12-H 1000-027-207 P.159	VAC-200H 8000-000-048 P.160
	1000-000-695	VAC-3024	Replacement suction hose antistatic, black, ø 38 mm, per meter		×	×	×	×	2.5	×		×	×			
	1000-020-847	VAC-FOX-B-0I	Replacement suction hose with bow and connection, ø 32 mm											×		
	1000-001-802	VAC-81563810	Replacement suction hose ø 40 mm, 0.5 m													0.5
	1000-000-774	VAC-84543809	Replacement suction hose ø 40 mm, 4 m													4.0
	1000-003-459	VAC-1600B	Replacement suction hose ø 36 mm, red, per meter	3												
	1000-021-189	VAC-4002	Replacement suction hose ø 36 mm, black, length: 2.5 m												2.5	
	1000-003-460	VAC-5030B	Replacement suction hose ø 38 mm, red, per meter		2.5	2.5	2.5	2.5		2.5	4.0	2.5	2.5			
	1000-000-932	97090	Fabric water hose 52 mm, 15 m, with Storz coupling 66								×					
	1000-000-933	97091	Fabric water hose 52 mm, 30 m, with Storz coupling 66								×					
	1000-003-461	VAC-5055B-AS	Suction hose anti-static kit, 36 mm, 5 pcs.	×												
	1000-003-462	VAC-5056B-AS	Suction hose anti-static kit, 38 mm, 4 pcs.		×	×	×	×	×	×		×				
	1000-003-043	VAC-1038-01	Hose connection 32 mm, boiler side											●		
	1000-000-699	VAC-5002-02	Hose connection 38 mm						●							
	1000-001-020	VAC-81563800	Hose connection on the boiler side ø 38 mm													●
	2000-024-468	VAC-12-H1004	Hose connection on the boiler side ø 36 mm												●	
	1000-000-672	VAC-1600-01	Hose connection on the boiler side ø 36 mm	●												
	1000-000-697	VAC-5001-01	Hose connection on the boiler side ø 38 mm		●	●	●	●	●	●		●	●			
	1000-001-153	VAC-81563802	Hose connection pipe side ø 38 mm													●
	1000-001-177	VAC-5002-03	Hose connection pipe side ø 38 mm		●	●	●	●		●		●	●			
	1000-000-676	VAC-1605	Suction tube ø 36 mm	●												
	1000-000-687	VAC-3001	Suction tube ø 38 mm		●	●	●	●		●		●	●			
	1000-000-698	VAC-5002	Suction tube ø 38 mm					●								

INDUSTRIAL SUPPLIES

ACCESSORIES

Vacuum Cleaners

- ● Delivered with
- × Accessories optional

	Art. No. SAP	Model	Description	VAC-27TB-R 1000-003-416 P.148	VAC-32TB 1000-003-417 P.149	VAC-33TB-R 1000-003-458 P.150	VAC-50TB 1000-003-420 P.151	VAC-50-2TB 1000-003-419 P.153	VAC-62-2TB 1000-003-421 P.153	VAC-360-2TB 1000-003-418 P.154	VAC-65TPB 1000-003-422 P.155	VAC-78-2TB 1000-003-423 P.156	VAC-78-2TPB 1000-003-424 P.157	VAC-FOX-B 1000-003-446 P.158	VAC-12-H 1000-027-207 P.159	VAC-200H 8000-000-048 P.160
	1000-002-940	VAC-1035	Suction tube telescope ø 32mm, length 570-1000mm											×		
	2000-024-467	VAC-12-H1003	Suction tube telescope ø 36mm, length 590-980mm												●	
	1000-000-683	VAC-2003	Suction tube chrome-plated ø 38mm						●		●					
	1000-000-773	VAC-80522160	Suction tube, chromed ø 40mm													●
	2000-024-351	VAC-12-H1000	Vacuum cleaner bag, 1 pc.												●	
	1000-003-087	VAC-5022P	Vacuum cleaner bag, class M, 8 pcs.				●	●	●	●		●				
	1000-003-086	VAC-5029P	Vacuum cleaner bag, class M, 8 pcs.	●	●	●										
	1000-001-517	VAC-84640033	1 pcs. filter bag for fine dust													●
	1000-000-704	VAC-5006	Coupling ID 45mm - OD 36mm			●										
	1000-000-682	VAC-1611	Clutch ø 36mm	×											×	
	1000-000-686	VAC-2091	Coupling ø 38mm		×	×	×	×	×	×	×	×	×			
	1000-000-693	VAC-3009	Reduction ø 38 - 44mm for round brush		●	●	●	●		●	●	●				
	1000-000-664	VAC-1009	Reduction adapter for connection to various power tools				×	×								
	1000-000-710	VAC-5036-03	2 rubber lips L = 610mm							×						
	1000-000-701	VAC-5003-01	2 rubber lips 300/400		×	×	×	×	×	×	×	×	×			
	1000-002-854	VAC-1034	Sling											●		
	2000-024-376	VAC-12-H1001	Bow handle ø 36mm												●	
	1000-000-692	VAC-3007	Bow handle ø 38mm		●	●	●	●		●		●	●			
	1000-000-680	VAC-1609	Bow handle ø 36mm	●												

DIAMETER OF DRILLING FOR PUNCHING OF TAPS / THREADS

Standard metric thread DIN 336

Nominal inclination ø	Inclination P	Pilot hole-(drilling-)-ø	Core diameter Nuts	
	mm	mm	min. mm	max. mm
M 1	0.25	0.75	0.729	–
M 1,1	0.25	0.85	0.829	–
M 1,2	0.25	0.95	0.929	–
M 1,4	0.30	1.10	1.075	–
M 1,6	0.35	1.25	1.221	1.321
M 1,8	0.35	1.45	1.421	1.521
M 2	0.40	1.60	1.567	1.679
M 2,2	0.45	1.75	1.713	1.838
M 2,5	0.45	2.05	2.013	2.138
M 3	0.50	2.50	2.459	2.599
M 3,5	0.60	2.90	2.850	3.010
M 4	0.70	3.30	3.242	3.422
M 4,5	0.75	3.70	3.688	3.878
M 5	0.80	4.20	4.134	4.334
M 6	1.00	5.00	4.917	5.153
M 7	1.00	6.00	5.917	6.153
M 8	1.25	6.80	6.647	6.912
M 9	1.25	7.80	7.647	7.912
M 10	1.50	8.50	8.376	8.676
M 11	1.50	9.50	9.376	9.676
M 12	1.75	10.20	10.106	10.441
M 14	2.00	12.00	11.835	12.210
M 16	2.00	14.00	13.835	14.210
M 18	2.50	15.50	15.294	15.744
M 20	2.50	17.50	17.294	17.744
M 22	2.50	19.50	19.294	19.744
M 24	3.00	21.00	20.752	21.252
M 27	3.00	24.00	23.752	24.252
M 30	3.50	26.50	26.211	26.771
M 33	3.50	29.50	29.211	29.771
M 36	4.00	32.00	31.670	32.270
M 39	4.00	35.00	34.670	35.270
M 42	4.50	37.50	37.129	37.799
M 45	4.50	40.50	40.129	40.799
M 48	5.00	43.00	42.578	43.297
M 52	5.00	47.00	46.587	47.287
M 52	5.00	47.00	46.587	47.287

Metric thread DIN 336 (ISO 5864)

Nominal inclination ø	Inclination P	Pilot hole-(drilling-)-ø	Core diameter Nuts	
	mm	mm	min. mm	max. mm
No. 1	64	1.50	1.425	1.582
No. 2	56	1.85	1.694	1.872
No. 3	48	2.10	1.941	2.146
No. 4	40	2.35	2.385	2.156
No. 5	40	2.65	2.697	2.487
No. 6	32	2.85	2.642	2.896
No. 8	32	3.50	3.302	3.531
No. 10	24	3.90	3.683	3.962
No. 12	24	4.50	4.343	4.597
1/4	20	5.10	4.976	5.268
5/16	18	6.60	6.411	6.734
3/8	16	8.00	7.805	8.164
7/16	14	9.40	9.149	9.550
1/2	13	10.80	10.584	11.013
9/16	12	12.20	11.996	12.456
5/8	11	13.50	13.376	13.868
3/4	10	16.50	16.299	16.833
7/8	9	19.50	19.169	19.748
1	8	22.25	21.963	22.598
1 1/8	7	25.00	24.648	25.349
1 1/4	7	28.00	27.823	28.524
1 3/8	6	30.75	30.343	21.120
1 1/2	6	34.00	33.518	34.295
1 3/4	5	39.50	38.951	39.814
2	4.5	45.00	44.689	45.598

Fine metric ISO thread DIN 336

Nominal inclination ø		Inclination P	Pilot hole-(drilling-)-ø	Core diameter Nuts	
		mm	mm	min. mm	max. mm
M 2,5	x	0.35	2.15	2.121	2.221
M 3	x	0.35	2.65	2.621	2.721
M 3,5	x	0.35	3.15	3.121	3.221
M 4,0	x	0.50	3.50	3.459	3.599
M 4,5	x	0.50	4.00	3.959	4.099
M 5,0	x	0.50	4.50	4.459	4.599
M 5,5	x	0.50	5.00	4.959	5.099
M 6,0	x	0.75	5.20	5.188	5.378
M 7,0	x	0.75	6.20	6.188	6.378
M 8,0	x	0.75	7.20	7.188	7.378
M 8,0	x	1.00	7.00	6.917	7.153
M 9,0	x	0.75	8.20	8.188	8.378
M 9,0	x	1.00	8.00	7.917	8.153
M 10	x	0.75	9.20	9.188	9.378
M 10	x	1.00	9.00	8.917	9.153
M 10	x	1.25	8.80	8.647	8.912
M 11	x	0.75	10.20	10.188	10.378
M 11	x	1.00	10.00	9.917	10.153
M 12	x	1.00	11.00	10.917	11.153
M 12	x	1.25	10.80	10.647	10.912
M 12	x	1.50	10.50	10.376	10.676
M 14	x	1.00	13.00	12.917	13.153
M 14	x	1.25	12.80	12.647	12.912
M 14	x	1.50	12.50	12.376	12.676
M 15	x	1.00	14.00	13.917	14.153
M 15	x	1.50	13.50	13.376	13.676
M 16	x	1.00	15.00	14.197	15.153
M 16	x	1.50	14.50	14.376	14.676
M 17	x	1.00	16.00	15.917	16.153
M 17	x	1.50	15.50	15.376	15.676
M 18	x	1.00	17.00	16.917	17.153
M 18	x	1.50	16.50	16.376	16.676
M 18	x	2.00	16.00	15.835	16.210
M 20	x	1.00	19.00	18.917	19.153
M 20	x	1.50	18.50	18.376	18.676
M 20	x	2.00	18.00	18.835	18.210
M 22	x	1.00	21.00	20.917	21.153
M 22	x	1.50	20.50	20.376	20.676
M 22	x	2.00	20.00	19.835	20.210
M 24	x	1.00	23.00	22.917	23.153
M 24	x	1.50	22.50	22.376	22.676
M 24	x	2.00	22.00	21.835	22.210
M 25	x	1.00	24.00	23.917	24.153
M 25	x	1.50	23.50	23.376	23.676
M 25	x	2.00	23.00	23.835	23.210
M 27	x	1.00	26.00	25.917	26.153
M 27	x	1.50	25.50	25.376	25.676
M 27	x	2.00	25.00	24.835	25.210
M 28	x	1.00	27.00	26.917	27.153
M 28	x	1.50	26.50	26.376	26.676
M 28	x	2.00	26.00	25.835	26.210
M 30	x	1.00	29.00	28.917	29.153
M 30	x	1.50	28.35	26.376	28.676
M 30	x	2.00	28.00	27.835	28.210
M 30	x	3.00	27.00	26.752	27.252
M 32	x	1.50	30.50	30.376	30.676
M 32	x	2.00	30.00	29.835	30.210
M 33	x	1.50	31.50	31.376	31.676
M 33	x	2.00	31.00	30.835	31.210
M 33	x	3.00	30.00	29.752	30.252
M 35	x	1.50	33.50	33.376	33.676
M 36	x	1.50	34.00	34.376	34.676

*** Tolerance margin of the core diameter for the thread (according to ISO 13, part 50)**

For reasons of tensile strength, it's not necessary to maintain a tolerance class 6H for the tolerance of the core diameter; the tolerance class 7H is sufficient in order to have a tightening tension of bolts and nuts not lower than 0.32 × P. Furthermore, the threads formed usually have a higher durability than the machined threads owing to the uninterrupted alignment of the fibers and owing to work hardening.

CUTTING SPEEDS AND NUMBER OF REVOLUTIONS WITH THE SPEED OF THE THREAD CUTTING SPEED

Cutting speeds (v) for divers materials								
Materials,main group	Materials, sub-group	Tensile strength	Cutting speeds					
		N/mm²	A	m/min	B	m/min	C	m/min
Highly resistant materials, elastic and resistant to a tensile force of Rm 400 N/mm²	Unalloyed steel	< 400	15–20		20–40		30–100	
	Unalloyed free cutting steels	< 400	15–20		20–40		30–100	
	Unalloyed copper	< 400	20–35		20–40		30–45	
	Brass 60 – 63	< 400	20–30		20–40		30–45	
	Pure nickel	< 400	10–15		15–25		25–35	
	Unalloyed Al/Mg	< 400	20–40		20–60		30–100	
	Alloyed Al Si < 0,5%	< 400	20–40		20–60		30–100	
	Alloyed Al Si > 0,5%	< 400	20–30		20–40		30–60	
	Thermoplastics	< 400	20–30		–		–	
	Malleable bronze	< 400	20–30		20–40		30–60	
Highly resistant materials, elastic and resistant to a tensile force of Rm 400–1100 N/mm²	Unalloyed, alloyed steels	> 400–1'100	10–15		15–30		20–50	
	Unalloyed, alloyed free cutting steels	> 400–1'100	10–15		15–30		20–50	
	Unalloyed, alloyed case hardenable steels	> 400–1'100	10–15		15–30		20–50	
	Nitrided steel	> 400–1'100	8–12		15–20		20–40	
	Unalloyed, alloyed hardened steels	> 400–1'100	8–12		15–20		20–40	
	Medium cold work tool steels, unalloyed	> 400–1'100	8–12		12–20		20–40	
	Cast steel	> 400–1'100	6–10		10–20		15–30	
Stainless steels, resistant to acids and refractories	Stainless steels, austenitic	> 500–700	5–8		–		10–20	
	Stainless steels, martensitic	> 400–700	3–6		–		10–20	
	Refractory steels, ferritic, perlitic	> 900	3–6		–		10–20	
Alloys based on nickel and steels ultra-resistant to a tensile force of Rm 900–1500 N/mm²	High-quality hardened steels	> 900	2–4		4–8		8–12	
	Cold work spring steels	> 900	2–4		4–8		8–12	
	High-speed steels	> 900	3–6		5–10		10–15	
	Cold work tool steels, high-alloyed	> 900	3–6		5–10		10–15	
	Hot work tool steels	> 900	3–6		5–10		10–15	
	Nickel-based alloys	–	2–3		–		3–5	
Brittle materials with short chipslike GG, GGG, bronze etc.	Cast iron < 180 HB	–	8–12		15–20		20–40	
	Cast iron > 180 HB	–	6–10		10–15		20–40	
	Black ductile cast iron, spheroidal graphite cast iron	–	10–15		15–20		20–40	
	Brass with short chips (Ms58)	–	25–30		25–45		30–60	
	Hard bronze	–	15–20		15–30		30–60	
	Duroplastic plastics	–	5–20		10–30		20–40	
	Alloyed Al Si > 10%	–	–		–		–	
	Mg alloys	–	8–12		–		15–20	
Titan and titan alloys, fiber reinforced polymers, Cu-Al-Fe alloys	Pure titan	–	5–10		–		8–15	
	Titan alloys	–	2–5		–		5–10	
	Titan alloys (Fero-tic)	–	2–3		–		5–8	
	Cu-Al-Fe alloys (Ampco)	–	2–3		–		5–8	
	Fiber reinforced polymers	–	3–5		–		10–20	

Coatings A = Non-coated taps B = TiN-coated taps C = TiCN-coated taps

Rotation speed (rpm) for the cutting speeds v of 1–60 m/min																
V =	1	2	3	4	5	6	8	10	12	15	20	25	30	40	50	60
Rotation speed ø rpm																
1	318	637	955	1274	1592	1910	2548	3185	3822	4777	6396	7962	9554	12739	25924	19108
2	159	318	478	637	796	955	1274	1592	1911	2388	3185	3981	4777	6369	7962	9554
3	106	212	318	425	531	637	849	1062	1274	1592	2123	2654	3185	4246	5308	6369
4	80	159	239	318	398	478	637	796	955	1194	1592	1990	2389	3185	3981	4777
5	64	127	191	255	318	382	510	637	764	955	1274	1592	1911	2548	3185	3822
6	53	106	159	212	265	318	425	531	637	796	1062	1327	1592	2123	2653	3185
8	40	80	119	159	199	239	318	398	478	597	796	955	1194	1592	1990	2388
10	31	64	96	127	159	191	255	318	382	478	637	796	955	1274	1592	1911
12	26	53	80	106	133	159	212	265	318	398	531	663	796	1062	1327	1592
14	23	45	68	91	114	136	182	227	273	341	455	569	682	910	1137	1365
16	20	40	60	80	100	119	159	199	239	299	398	498	597	796	995	1194
18	18	35	53	71	88	106	142	177	212	265	354	442	531	708	885	1062
20	16	32	48	64	80	96	127	159	191	239	318	398	478	637	796	955
25	13	25	38	51	64	76	102	127	153	191	255	318	382	510	637	764
30	11	21	32	42	53	64	85	106	127	159	212	265	318	425	531	637
35	9	18	27	36	45	55	73	91	109	136	182	227	273	364	455	546
40	8	16	24	32	40	48	64	80	96	119	159	199	239	318	398	478
45	7	14	21	28	35	42	57	71	85	106	142	177	212	283	354	425
50	6	13	19	25	32	38	51	64	76	96	127	159	191	255	318	382

v = cutting speed m/min
n = rotation speed rpm
d = ø mm

Calculation: $n = \frac{v \times 1'000}{d \times \pi}$

Example: $n = \frac{28 \times 1'000}{12 \times 3.14} = 743$ U/min

GRINDING WHEEL WORKING AND ROTATION SPEED

For the diameters of grinding wheels and working speeds, the rotation speed can be taken from the following table:

Rotation speed (m/s)														
ø mm	12	16	20	25	32	35	40	45	50	63	80	100	125
3	7690	101860	127320	195160	203720	222810	–	–	–	–	–	–	–
6	38200	50290	63360	79580	101860	114410	127320	143240	159160	200540	254650	–	–
8	28650	38200	47750	59680	76390	83560	95490	107430	119370	150400	190990	238730	–
10	22920	30560	38200	47750	61120	66850	76390	85940	95490	120320	152790	190990	238730
13	17630	23510	29380	36730	47010	51420	58770	66110	73460	92560	117530	146910	183640
16	14320	19100	23870	29840	38200	41780	47750	53710	59680	75200	95490	119340	149210
20	11460	15270	19100	23870	30560	33420	38200	42970	47750	60160	76390	95490	119340
25	9170	12220	15280	19100	24450	26740	30560	34380	38200	48130	61120	76390	95490
32	7160	9550	11940	14920	19100	20890	23870	26860	29840	37600	47750	59680	74600
40	5730	7640	9550	11940	15280	16710	19100	21490	23870	30080	38200	47750	59680
50	4580	6110	7640	9550	12220	13370	15280	17190	19100	24060	30560	38200	47750
63	3640	4850	6060	7580	9700	10610	12130	13640	15160	19100	24250	30320	37890
80	2870	3820	4780	5970	7640	8360	7550	10740	11940	15040	19100	23870	29840
100	2290	3060	3820	4780	6110	6680	7640	8590	9550	12030	15280	19100	23870
125	1830	2440	3060	3820	4890	5350	6110	6875	7640	9630	12220	15280	19100
150	1530	1040	2550	3180	4070	4460	5090	5730	6370	8020	10190	12730	15920
175	1310	1850	2180	2730	3490	3820	4370	4910	5460	6880	8730	10910	13640
180	1270	1700	2120	2650	3400	3710	4240	4775	5310	6680	8490	10610	13260
200	1150	1150	1910	2390	3060	3340	3820	4230	4780	6020	7640	9550	11940
230	1000	1330	1660	1080	2660	2910	3320	3740	4150	5230	6640	8300	10380
250	920	1230	1530	1910	2440	2670	3060	3440	3820	4810	6110	7640	9550
300	765	1020	1270	1590	2040	2230	2550	2865	3180	4010	5090	6370	7960
350	655	875	1090	1365	1745	1910	2180	2455	2730	3440	4370	5460	6820
400	575	765	955	1195	1530	1670	1910	2150	2390	3010	3820	4780	5970
450	510	680	850	1060	1360	1485	1700	1910	2120	2670	3400	4240	5300
500	460	610	765	955	1220	1335	1530	1720	1910	2410	3060	3820	4780
600	380	510	640	795	1020	1115	1590	1430	1590	2000	2550	3180	2980
650	–	470	588	735	940	1030	1180	1320	1470	1850	2350	2940	–
700	–	473	546	682	873	955	1090	1230	1360	1720	2180	2730	–
750	–	407	509	637	815	891	1020	1150	1270	1300	2040	2550	–
800	–	328	477	597	764	836	955	1070	1190	1500	1910	2390	–
900	–	340	424	531	679	743	849	955	1060	1340	1700	2120	–
1060	–	288	360	450	577	631	721	811	901	1140	1440	1800	–
1250	–	245	305	380	488	534	610	685	760	960	1020	1525	–

v = rotation speed (m/s)
n = rotation speed (rpm)
d = ø grinding wheel (mm)

The rotation speed is calculated bymeans of the following formula:

$v = \frac{d \cdot \pi \cdot n}{60000}$ $n = \frac{60000 \cdot n}{d \cdot \pi}$

GRAIN SIZE AND HARDNESS

The grain numbers corresponding to the specific grain sizes are defined according to an international standard (see table). Very fine grains (micrograins: from grain size 230) are obtained by means of sludge.

Grain no.	Dimensions mm	Dimensions mm	Size of grain
	from	to	
8	2.83	2.00	very coarse
10	2.38	1.68	
12	2.00	1.41	
14	1.68	1.19	
16	1.41	1.00	coarse
20	1.19	0.84	
24	0.84	0.60	
30	0.71	0.50	
36	0.60	0.42	
46	0.42	0.30	medium
54	0.35	0.25	
60	0.30	0.21	
70	0.25	0.18	
80	0.21	0.15	
90	0.18	0.13	fine
100	0.15	0.11	
120	0.13	0.09	
150	0.11	0.06	
180	0.09	0.05	
220	0.075	0.045	
240	0.047	0.043	very fine
280	0.038	0.035	
320	0.031	0.028	
400	0.018	0.016	
500	0.014	0.012	
600	0.010	0.008	
800	0.008	0.006	
1000	0.005	0.004	
1200	0.004	0.003	

The roughness of the surface during sanding depends more on the grinding and dressing processes than on the selected grain size. The grinding wheels which were machined for perfect handling are powerful but produce rougher surfaces.
When sanding profiles or small radiuses, the grain size has direct influence on the selection of the specification. Therefore, the dressing process must be taken into account.

Cutting power		Durability of edges / surface finish	
coarse	medium	fine	very fine
20 – 36	46 – 80	90 – 220	240 – 600

Cutting power → Durability of edges / surface finish

HARDNESS

The concept of «wheel hardness» does not apply to the abrasive material but on the contrary characterizes the bonding strength compared to the breaking of the abrasive grains. In other words, with a softer grinding wheel, the grains break more easily than with a harder wheel. The code letters from A to Z indicate the degree of hardness. Here, the letter A represents the softest wheel and the letter Z the hardest (see table).

Code letter	Degree of hardness
A/B/C/D	extremely soft
E/F	very soft
G/H	soft
J/K/L	medium
M/N/O/P	hard
Q/R/S/T	very hard
U/V/W/X/Y/Z	extremely hard

The hardness of the wheel also depends on the grain size and the porosity. With wheels of the same hardness (e.g. hardness F), the grinding wheels consisting of small grains and having low porosity are «harder» during the sanding thana grinding wheel with coarse grains and high porosity.

MACHINING AND CHIPPING OF STEELS HSS

Values for drilling with HSS twist drills (according to Titex Plus and Garant)

Material	Examples	Cutting speed v_c (m/min)	Drilling diameter d (mm)					
			2	4	6	8	10	20
			Drive f (mm)					
Low-alloy steel and cast steel up to 700 N/mm²	S235JR; C10+A; GE200; C35; C10E+A; 16MnCr5+A; 20MnCr5+A	20–50	0,03–0,05	0,06–0,10	0,08–0,15	0,07–0,20	0,13–0,23	0,25–0,375
Low-alloy steel and cast steel > 700 up to 1.000 N/mm²	E360; C45+QT; 60S22; 36Mn5+QT; C45E+QT; 34Cr4+QT	20–36	0,02–0,05	0,04–0,1	0,06–0,15	0,08–0,20	0,10–0,23	0,175–0,34
Low-alloy steel and cast steel > 1.000 up to 1.300 N/mm²	G46MnSi4; 36CrNiMo4+QT; 42CrMo4+QT; 50CrMo4+QT	8–22	0,02–0,035	0,04–0,065	0,06–0,105	0,08–0,14	0,10–0,16	0,175–0,24
Steel from 1.300 to 1.600 N/m², cold work spring steel. Wear-resistant steel 360–440 HB	60SiMn5; 55NiCrMoV6+QT; 58CrV4; 16CrMo5–2	4–19	0,030	0,04–0,06	0,06–0,09	0,06–0,12	0,10–0,135	0,175–0,205
Hardened tool steel, unalloyed	C110U; C135U; C85U	10–26	0,02–0,04	0,4–0,08	0,06–0,12	0,08–0,16	0,10–0,18	0,175–0,27
Tool steel, low-alloy, hardened, steel ball bearing, hardened	51CrV4; 60WCrV8; 55NiCrMoV6; 100Cr6	8–24	0,02–0,04	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,18	0,175–0,27
Tool steel, high-alloy, hardened	HS6-5–2C; X210Cr12; X38CrMo16; X37CrMoV5–1	6–17	0,02–0,04	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,18	0,175–0,27
Stainless steel, resistant to acids and refractories, cast steel	X6CrAl13; X12Cr13; GX7CrNiMo12-2; X46Cr13+A; X17CrNi16-2	10–17	0,02–0,045	0,04–0,09	0,06–0,13	0,08–0,17	0,10–0,2	0,175–0,3
Stainless steel, resistant to acids and refractories, cast steel, austenitic, sulphurized	X8CrNiS18-9	10–20	0,02–0,03	0,04–0,06	0,06–0,09	0,08–0,12	0,10–0,135	0,175–0,205
Stainless steel, resistant to acids and refractories, cast steel (Ni > 4%), austenitic	X5CrNi18-10; GX10CrNi18-8; X6CrNiTi18-10	9,5–14	0,020	0,040	0,060	0,080	0,091–0,10	0,175–0,145

Values for drilling with HSS twist drills (according to Titex Plus and Garant)

Material	Examples	Cutting speed v_c (m/min)	Drilling diameter d (mm)					
			2	4	6	8	10	20
			Drive f (mm)					
Low-alloy steel and cast steel up to 700 N/mm²	S235JR; C10+A; GE200; C35; C10E+A; 16MnCr5+A; 20MnCr5+A	31–67	0,03–0,06	0,06–0,12	0,10–0,18	0,11–0,24	0,14–0,275	0,275–0,41
Low-alloy steel and cast steel > 700 up to 1.000 N/mm²	E360; C45+QT; 60S22; 36Mn5+QT; C45E+QT; 34Cr4+QT	25–60	0,02–0,06	0,04–0,12	0,06–0,18	0,09–0,24	0,11–0,275	0,187–0,41
Low-alloy steel and cast steel > 1.000 up to 1.300 N/mm²	G46MnSi4; 36CrNiMo4+QT; 42CrMo4+QT; 50CrMo4+QT	7,5–42	0,02–0,04	0,04–0,08	0,06–0,12	0,09–0,16	0,11–0,18	0,187–0,27
Steel from 1.300 to 1.600 N/m², cold work spring steel. Wear-resistant steel 360–440 HB	60SiMn5; 55NiCrMoV6+QT; 58CrV4; 16CrMo5–2	6–19	0,02–0,025	0,04–0,05	0,06–0,075	0,09–0,1	0,11– 0,115	0,185–0,17
Hardened tool steel, unalloyed	C110U; C135U; C85U	13–45	0,02–0,05	0,04–0,1	0,06–0,15	0,09–0,2	0,11–0,23	0,187–0,34
Tool steel, low-alloy, hardened, steel ball bearing, hardened	51CrV4; 60WCrV8; 55NiCrMoV6; 100Cr6	10–45	0,050	0,04–0,1	0,06–0,15	0,09–0,2	0,11–0,23	0,187–0,34
Tool steel, high-alloy, hardened	HS6-5–2C; X210Cr12; X38CrMo16; X37CrMoV5–1	7,5–28	0,050	0,04–0,1	0,06–0,15	0,09–0,2	0,11–0,23	0,187–0,34
Stainless steel, resistant to acids and refractories, cast steel	X6CrAl13; X12Cr13; GX7CrNiMo12-2; X46Cr13+A; X17CrNi16-2	13–28	0,02–0,06	0,04–0,12	0,06–0,18	0,240	0,11– 0,275	0,187–0,41
Stainless steel, resistant to acids and refractories, cast steel, austenitic, sulphurized	X8CrNiS18-9	13–34	0,02–0,035	0,04–0,065	0,06–0,105	0,140	0,11–0,16	0,187–0,24
Stainless steel, resistant to acids and refractories, cast steel (Ni > 4%), austenitic	X5CrNi18-10; GX10CrNi18-8; X6CrNiTi18-10	10–19	0,02–0,025	0,04–0,05	0,060–0,075	0,100	0,11–0,115	0,187–0,17

MACHINING AND CHIPPING OF STEELS HM

Values for drilling with HSS twist drills (according to Titex Plus and Garant)							
Material	Examples	Cutting speed v_c (m/min)	Drilling diameter d (mm)				
			4	6	8	10	20
			Drive f (mm)				
Low-alloy steel and cast steel up to 700 N/mm²	S235JR; C10+A; GE200; C35; C10E+A; 16MnCr5+A; 20MnCr5+A	60–200	0,06–0,18	0,08–0,24	0,10–0,29	0,13–0,39	0,20–0,57
Low-alloy steel and cast steel > 700 up to 1.000 N/mm²	E360; C45+QT; 60S22; 36Mn5+QT; C45E+QT; 34Cr4+QT	60–130	0,06–0,17	0,09–0,23	0,11–0,29	0,15–0,39	0,20–0,57
Low-alloy steel and cast steel > 1.000 up to 1.300 N/mm²	G46MnSi4; 36CrNiMo4+QT; 42CrMo4+QT; 50CrMo4+QT	50–80	0,06–0,17	0,09–0,23	0,11–0,28	0,15–0,37	0,20–0,50
Steel from 1.300 to 1.600 N/m², cold work spring steel. Wear-resistant steel 360–440 HB	60SiMn5; 55NiCrMoV6+QT; 58CrV4; 16CrMo5–2	26–50	0,03–0,09	0,05–0,12	0,06–0,14	0,07–0,18	0,10–0,25
Hardened tool steel, unalloyed	C110U; C135U; C85U	70–110	0,04–0,11	0,05–0,19	0,07–0,20	0,09–0,27	0,13–0,40
Tool steel, low-alloy, hardened, steel ball bearing, hardened	51CrV4; 60WCrV8; 55NiCrMoV6; 100Cr6	70–80	0,04–0,12	0,05–0,20	0,07–0,21	0,09–0,28	0,13–0,41
Tool steel, high-alloy, hardened	HS6-5–2C; X210Cr12; X38CrMo16; X37CrMoV5–1	60–70	0,04–0,13	0,05–0,21	0,07–0,22	0,09–0,29	0,13–0,42
Stainless steel, resistant to acids and refractories, cast steel	X6CrAl13; X12Cr13; GX7CrNiMo12-2; X46Cr13+A; X17CrNi16-2	50–80	0,04–0,14	0,05–0,22	0,07–0,23	0,09–0,30	0,13–0,43
Stainless steel, resistant to acids and refractories, cast steel, austenitic, sulphurized	X8CrNiS18-9	50–70	0,03–0,12	0,05–0,18	0,06–0,21	0,07–0,25	0,10–0,38
Stainless steel, resistant to acids and refractories, cast steel (Ni > 4%), austenitic	X5CrNi18-10; GX10CrNi18-8; X6CrNiTi18-10	40–60	0,03–0,10	0,05–0,14	0,05–0,17	0,05–0,22	0,07–0,32

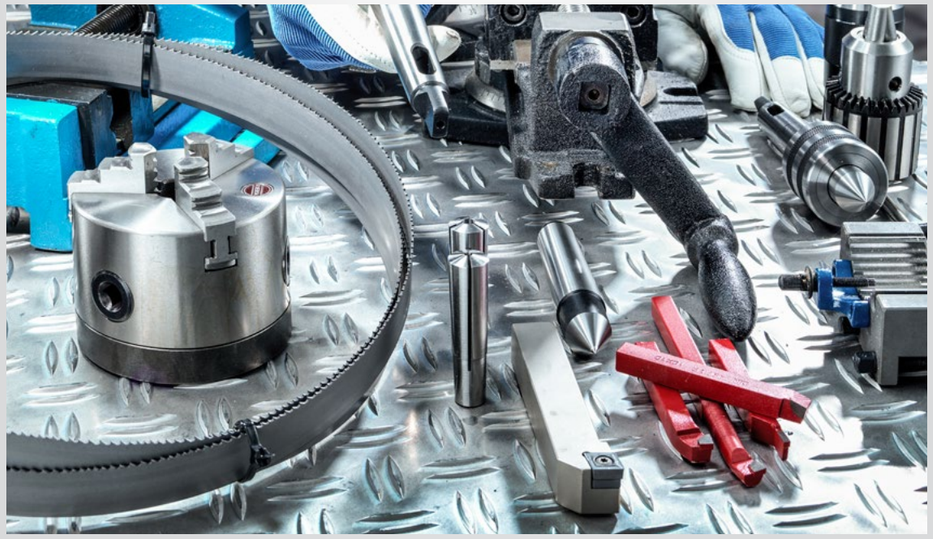


TABLE OF MEAN VALUES OF DRILLING

Values for the cutting speed v_c (m/min)							
Material	Cutting material	Drilling (twist drill)	Reaming (3rd cut)	Reaming (Reamer)	Reaming 90 (tipped drills)	Rubbing (Reamer)	Thread cutting (tap)
Drilling ratio		3/3	2/3	2/3	1/3	1/3	1/3
Steel up to 500 N/mm²	HSS	25	16	16	8	8	8
	HSS TiN	33	21	21	11	11	11
	HM	100	64	64	32	32	32
Steel from 500–800 N/mm²	HSS	18	12	12	6	6	6
	HSS TiN	24	16	16	8	8	8
	HM	72	48	48	24	24	24
Steel froml 800–1200 N/mm²	HSS	12	8	8	4	4	4
	HSS TiN	15	10	10	6	6	6
	HM	48	36	36	16	16	16
Stainless steel	HSS	8	5	5	3	3	3
	HSS TiN	11	7	7	4	4	4
	HM	32	20	20	12	12	12
Tool steel	HSS	12	8	8	4	4	4
	HSS TiN	15	10	10	6	6	6
	HM	48	36	36	16	16	16
Cast iron	HSS	18	12	12	6	6	6
	HSS TiN	24	16	16	8	8	8
	HM	72	48	48	24	24	24
Brass (CuZn) Bronze (CuSn)	HSS	50	35	35	17	17	17
	HSS TiN	70	50	50	35	35	35
	HM	280	188	188	92	92	92
Aluminum alloys	HSS	70	50	50	35	35	35
	HSS TiN	93	63	63	31	31	31
	HM	280	188	188	92	92	92
Polymer (PVC)	HSS	45	32	32	15	15	15
	HSS TiN	60	43	43	20	20	20
	HM	180	128	128	60	60	60

MEAN VALUES FOR TURNING TOOLS

Values for the cutting speed v_c (m/min)					
Material	Cutting material	Roughing Length/Plane	Simple Length/Plane	Inserting, cutting	Cutting the thread
Rotation speed (rpm)		0.3	0.1	Hand	Rise
Steel up to 500 N/mm²	HSS	30	40	25	5
	HSS TiN	40	50	30	
	HM	100	120	90	
Steel from 500–800 N/mm²	HSS	25	30	20	
	HSS TiN	30	40	25	
	HM	90	100	80	
Steel froml 800–1200 N/mm²	HSS	20	25	15	
	HSS TiN	25	30	20	
	HM	80	90	70	
Stainless steel	HSS	15	20	12	
	HSS TiN	20	25	15	
	HM	70	80	60	
Tool steel	HSS	15	20	12	
	HSS TiN	20	25	15	
	HM	70	80	60	
Cast iron	HSS	25	30	20	
	HSS TiN	30	40	25	
	HM	90	100	80	
Brass (CuZn) Bronze (CuSn)	HSS	60	80	40	
	HSS TiN	80	100	50	
	HM	200	240	120	
Aluminum alloys	HSS	100	120	80	
	HSS TiN	120	150	100	
	HM	360	450	240	
Polymer (PVC)	HSS	40	50	30	
	HSS TiN	50	60	40	
	HM	120	180	100	

TABLE OF MEAN VALUES MILLING CUTTERS, HSS AND HM

Values for the cutting speed v_c (m/min)									
Material	**Cutting material**	**Rough end mill**	**Simple end mill**	**Milling cutter (drill-reamer)**	**Rough face cutter**	**Rough face cutter**	**Side milling cutter**	**HSS TiN cutter head**	**HM cutter head**
Steel up to 500 N/mm²	HSS TiN							40	
	HM								100
Steel from 500–800 N/mm²	HSS	22	25	25	22	25	20		
	HSS TiN							35	
	HM								80
Stahl 800–1200 N/mm²	HSS	18	20	20	18	20	18		
	HSS TiN							30	
	HM								60
Stainless steel	HSS	10	12	12	10	12	10		
	HSS TiN							15	
	HM								50
Tool steel	HSS	10	12	12	10	12	10		
	HSS TiN							15	
	HM								50
Cast iron	HSS	20	22	22	20	22	20		
	HSS TiN							30	
	HM								75
Brass (CuZn) Bronze (CuSn)	HSS	50	60	60	50	60	50		
	HSS TiN							80	
	HM								130
Aluminum alloys	HSS	80	100	100	80	100	80		
	HSS TiN							140	
	HM								300
Polymer (PVC)	HSS	60	80	80	60	80	60		
	HSS TiN							100	
	HM								300

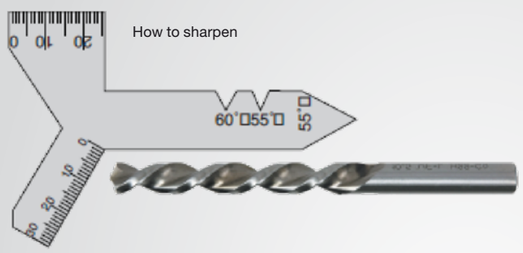
HM CUTTER HEAD

SHARPENING OF FLANKS

Twist drills must be sharpened on flanks only. They must be sharpened until the wear on the cutting edges and chamfers has been removed completely. If traces of wear remain on the chamfers, the drill will get stuck in the drillhole. The thickness of the drilling core is increased progressively in the sharpening operations. The drilling core is sharpened in order to reduce the thrust force.

You can save storage space by using a range of drilling and sanding devices. This range of simple devices for manual drilling and sanding is used in automated machines.

Sharpening must always be carried out when the diameter has reached 10 mm.

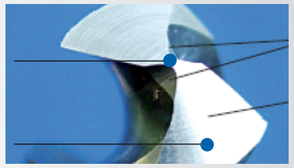


Manual drill sharpening must becarried out only for secondary drilling operations.

Wear of drill tip

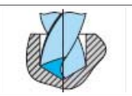
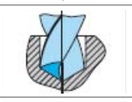
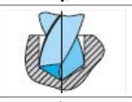
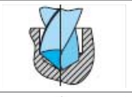
Sharpening

Flank



Sharpened drill

POSSIBLE SANDING FAULTS

Sharpening	Result	
Minimum relief or no relief at all.	The drill doesn't cut and breaks.	
The relief angle is too large.	The drill cuts in. The cutting edges/blades break.	
The cutting edges have different lengths, the tip is not aligned with the drill axis.	The cutting edges are loaded only on one side. Thedrill-hole is too large.	
Different angles with regard to the drilling axis.	Drilling inaccurate.Use of Morse taper inappropriate.	
The edges have different lengths and angles.	The drill-hole is too large.	
Pointed only on one side.	The drill is jammed.	

All sanding faults affect the service life.

CATALOGUE 2019/20

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