Operating Instructions WA 6

1.9/2011

GB

Translation of the original operating instructions

www.DaltonsWadkin.com

1 Foreword

Please read these operating instructions carefully before commissioning the machine.

No liability will be accepted for any injury, damage or disruption to operations resulting from failure to comply with these operating instructions!

Persons operating this sliding table saw must have had sufficient instruction and be suitably qualified!

These operating instructions cannot be regarded as a binding type description as the manufacturer may have carried out technical modifications.

The operating instructions must always be available where the machine is being used. They must be read and heeded by any person performing the following activities at or on the machine:

- Operating including set-up, troubleshooting during operation, elimination of production waste, care, disposal of operating and auxiliary materials
- Maintenance, repair, inspection
- Transport

It is necessary to comply with national regulations on health and safety at work and environmental protection, in addition to the operating instructions.

The removal of safety devices, especially safety hoods for the saw blade cover and riving knives, will endanger the operator and may lead to accidents.

Safe work is only possible with a clean machine and a clean environment!

2 Identification

2.1 Machine identification

The type label attached to the machine stand is used to determine the machine identity and further important key data.

Meaning of the specified designations:

Fig. 2-1 Type label

Typ:	Machine designation
Nummer:	Machine-specific identification number
Baujahr:	Year of manufacture
Sägeblatt min Ø	Diameter of the smallest permitted saw blade
Sägeblatt max Ø	Diameter of the largest permitted saw blade
Führungsschlitzbreite des Spaltkeils:	Diameter of the guide pins for the riving knife in the riving knife holder

2.2 Certificates

Declaration of Conformity

ALTENDORF®

EC-Conformity Declaration

Manufacturer:

Wilhelm Altendorf GmbH&Co.KG
Wettinerallee 43/45
D-32429 Minden

Mr Rolf Tweer is authorised to compile the technical documentation.
Address:
Wettinerallee 43/45
D-32429 Minden

It is certified herewith, that the sliding table saw Type **WA 6** with the

Machine Serial Number: _____

conforms with all the relevant provisions of the EC-Directive 2006/42/EC (machinery directive).

The following harmonised standards were applied:
DIN EN 1870-1 August 2009

Minden, 04/01/2010

Herbert Oppenborn
Technical Director

EC prototype certificate

Europäisch notifizierte Stelle
Kenn-Nummer 0392

Deutsche Gesetzliche Unfallversicherung

Fachausschuss Holz
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT

Bescheinigung
Nr. **HO 101069**
vom 09.03.2010

EG-Baumusterprüfbescheinigung

Name und Anschrift des Bescheinigungsinhabers: (Auftraggeber)	**W. Altendorf GmbH & Co. KG** **Maschinenbau** Wettiner Allee 45 D 32429 Minden
Name und Anschrift des Herstellers:	siehe oben
Produktbezeichnung:	**Formatkreissägemaschine**
Typ:	WA 6
Bestimmungsgemäße Verwendung:	Bearbeiten von Holz und gleichartig zu bearbeitenden Werkstoffen.
Prüfgrundlage:	GS-HO-01 Grundsätze für die Prüfung und Zertifizierung von Holzbearbeitungsmaschinen, Ausgabe 09.2009 mit den Prüfgrundlagen in der Fassung 09.2009.
Zugehöriger Prüfbericht:	108116
Bemerkungen:	Mitgeprüftes Sonderzubehör: Vorritzsägeaggregat, Halter für Absaugschlauch.

Das geprüfte Baumuster entspricht den einschlägigen Bestimmungen der Richtlinie 2006/42/EG (**Maschinen**).

Diese Bescheinigung wird spätestens ungültig am: **08.03.2015**

Weiteres über die Gültigkeit, eine Gültigkeitsverlängerung und andere Bedingungen regelt die Prüf- und Zertifizierungsordnung vom September 2008.

Unterschrift (Dipl.-Ing. R. Kohler)

Prüf- und Zertifizierungsstelle DGUV Fachausschuss HO

Postadresse: Postfach 80 04 80 • 70504 Stuttgart • Hausadresse: Vollmoellerstraße 11 • 70563 Stuttgart
Telefon: 0711/1334-1116 • Telefax: 0711/1334-1111 • E-Mail: fa.holz@holz-bg.de • http://www.holzbau-portal.de/service/fa-holz.htm
Ts/Pz • Produktgruppe 009.3503

PZB02_D
09.08

GS certificate

Deutsche Gesetzliche Unfallversicherung

Fachausschuss Holz
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT

Bescheinigung
Nr. **HO 051114**
vom 22.06.2009

GS-Prüfbescheinigung

Name und Anschrift des Bescheinigungsinhabers: (Auftraggeber)	**W. Altendorf GmbH & Co. KG** **Maschinenbau** Wettiner Allee 45 D 32429 Minden
Name und Anschrift des Herstellers:	siehe oben
Produktbezeichnung:	**Formatkreissägemaschine**
Typ:	WA 6
Bestimmungsgemäße Verwendung:	Bearbeiten von Holz und gleichartig zu bearbeitenden Werkstoffen.
Prüfgrundlage:	GS-HO-01 Grundsätze für die Prüfung und Zertifizierung von Holzbearbeitungsmaschinen, Ausgabe 01.2004 mit den Prüfgrundlagen in der Fassung 01.2004.
Zugehöriger Prüfbericht:	105003
Bemerkungen:	Nachfolgebescheinigung zu Nr. 051114 vom 07.11.2005

Das geprüfte Baumuster stimmt mit den in § 7 Absatz 1 Satz 2 des Geräte- und Produktsicherheitsgesetzes genannten Anforderungen überein. Der Bescheinigungsinhaber ist berechtigt, das umseitig abgebildete GS-Zeichen an den mit dem geprüften Baumuster übereinstimmenden Produkten anzubringen. Der Bescheinigungsinhaber hat dabei die umseitig aufgeführten Bedingungen zu beachten.

Diese Bescheinigung einschließlich der Berechtigung zur Anbringung des GS-Zeichens wird spätestens ungültig am: **08.11.2010**.

Weiteres über die Gültigkeit, eine Gültigkeitsverlängerung und andere Bedingungen regelt die Prüf- und Zertifizierungsordnung vom April 2004.

Unterschrift (Dipl.-Ing. R. Kohler)

Postadresse: Postfach 80 04 80 • 70504 Stuttgart • Hausadresse: Vollmoellerstrasse 11 • 70563 Stuttgart
Telefon: 0711/1334-1116 • Telefax: 0711/1334-1111 • E-Mail: fa.holz@t-online.de • http://www.holz-bg.de/pages/service/fa-holz.htm
Ts/Pz • Produktgruppe 009.3503

Prüf- und Zertifizierungsstelle DGUV Fachausschuss HO

PZB04_D
09.08

DGUV Test - Certificate

DGUV Test
Prüf- und Zertifizierungsstelle
Fachausschuss Holz

Bescheinigung
Nr. **HO 111104**
vom 21.11.2011

DGUV Test Prüfbescheinigung

Name und Anschrift des Bescheinigungsinhabers: (Auftraggeber)	W. Altendorf GmbH & Co. KG Maschinenbau Wettiner Allee 45 32429 Minden
Name und Anschrift des Herstellers:	siehe oben
Produktbezeichnung:	Formatkreissägemaschine
Typ:	WA 6
Bestimmungsgemäße Verwendung:	Bearbeiten von Holz und gleichartig zu bearbeitenden Werkstoffen
Prüfgrundlage:	GS-HO-05 Grundsätze für die Prüfung und Zertifizierung des Teilaspektes Staubemission (Konzentrationsparameter) von Holzbearbeitungsmaschinen, Ausgabe 05.2010 mit den Prüfgrundlagen in der Fassung 05.2010
Zugehöriger Prüfbericht:	111033
Bemerkungen/ Zeichenzusatz:	Hinweis: Holzstaubgeprüft im Sinne von BGI 739-1. Dem DGUV Test-Zeichen muss der Vermerk "holzstaubgeprüft" angefügt werden. Mitgeprüfte Ausstattung: getrennt vom Spaltkeil befestigte obere Verdeckung

Das geprüfte Baumuster entspricht der oben angegebenen Prüfgrundlage.
Der Bescheinigungsinhaber ist berechtigt, das umseitig abgebildete DGUV Test-Zeichen an den mit dem geprüften Baumuster übereinstimmenden Produkten anzubringen, sofern zutreffend mit dem oben genannten Zeichenzusatz.

Diese Bescheinigung einschließlich der Berechtigung zur Anbringung des DGUV Test-Zeichens ist gültig bis: **08.03.2015**

Weiteres über die Gültigkeit, eine Gültigkeitsverlängerung und andere Bedingungen regelt die Prüf- und Zertifizierungsordnung vom September 2010.

Leiter der Prüf- und Zertifizierungsstelle
Frank Hagendorff

Postadresse: Postfach 80 04 80 • 70504 Stuttgart • Hausadresse: Vollmoellerstrasse 11 • 70563 Stuttgart
Telefon: 0711/1334-1117 • Telefax: 0711/1334-1111 • E-Mail: pz-ho@bghm.de •
http://www.bghm.de/arbeitsschutz/fachausschuesse/holz-pruef-und-zertifizierungsstelle.html
Wa • Produktgruppe 009.3503

PZB08Staub_D
06.11

C US certificate

TÜVRheinland®

Certificate

Certificate no. CU 72072997 03

License Holder:
Wilhelm Altendorf GmbH & Co. KG
Wettiner Allee 43-45

D-32429 Minden
Germany

Manufacturing Plant:
Altendorf Qinhuangdao Machinery
Manufacturing Co. Ltd.
No. 4 Hengshan Road

066004 Qinhuangdao
China

Test report no.: USA-UH 30573165 003
Client Reference: Rolf Tweer

Tested to: UL 987:1996 R9.00
C22.2 No. 73-1953 (R2004)
C22.2 No. 105-1953 (R2004)

Certified Product: Dimension Saw
License Fee - Units

Change:

Following Manufacturing Plant no longer valid:
Wilhelm Altendorf GmbH & Co. KG (K751297)
Altendorf Strasse 8
D-32609 Hüllhorst-Schnathorst Germany

Licensed Test mark:

TUV Rheinland of North America, Inc. C US

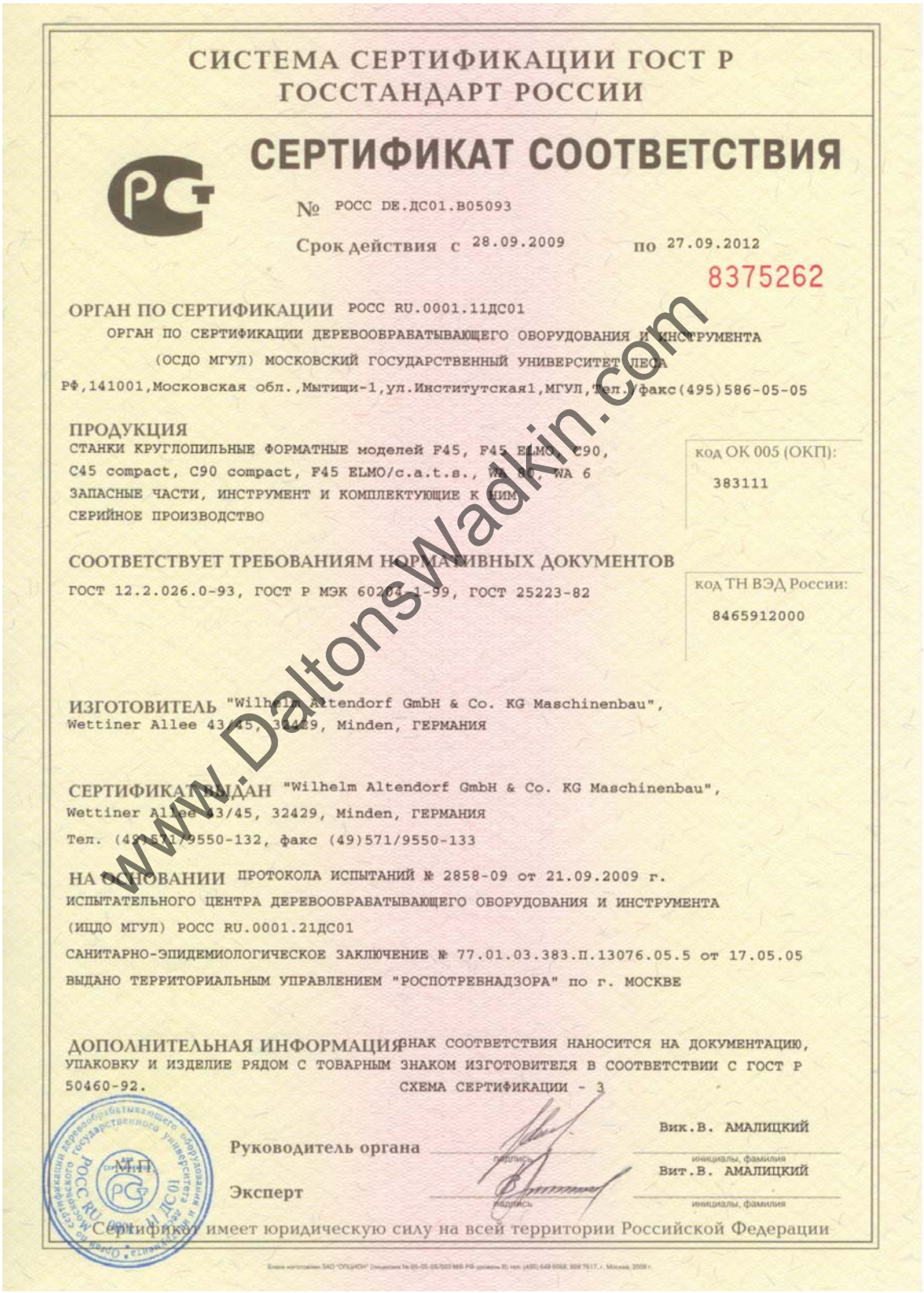
Signature

Dipl.-Ing. M. Raap
QA Certification Officer

Date of Issue (day/mo/yr)
14/07/2009

TUV Rheinland of North America, Inc., 12 Commerce Road, Newtown, CT 06470, Tel (203) 426-0888 Fax (203) 426-4009

GOST-certificate



СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС DE.ДС01.В05093

Срок действия с 28.09.2009 по 27.09.2012

8375262

ОРГАН ПО СЕРТИФИКАЦИИ РОСС RU.0001.11ДС01
ОРГАН ПО СЕРТИФИКАЦИИ ДЕРЕВООБРАБАТЫВАЮЩЕГО ОБОРУДОВАНИЯ И ИНСТРУМЕНТА
(ОСДО МГУЛ) МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ЛЕСА
РФ,141001,Московская обл.,Мытищи-1,ул.Институтская1,МГУЛ,Тел./факс(495)586-05-05

ПРОДУКЦИЯ
СТАНКИ КРУГЛОПИЛЬНЫЕ ФОРМАТНЫЕ моделей F45, F45 ELMO, C90,
C45 compact, C90 compact, F45 ELMO/c.a.t.s., WA 6, WA 6
ЗАПАСНЫЕ ЧАСТИ, ИНСТРУМЕНТ И КОМПЛЕКТУЮЩИЕ К НИМ
СЕРИЙНОЕ ПРОИЗВОДСТВО

код ОК 005 (ОКП):
383111

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ
ГОСТ 12.2.026.0-93, ГОСТ Р МЭК 60204-1-99, ГОСТ 25223-82

код ТН ВЭД России:
8465912000

ИЗГОТОВИТЕЛЬ "Wilhelm Altendorf GmbH & Co. KG Maschinenbau",
Wettiner Allee 43/45, 32429, Minden, ГЕРМАНИЯ

СЕРТИФИКАТ ВЫДАН "Wilhelm Altendorf GmbH & Co. KG Maschinenbau",
Wettiner Allee 43/45, 32429, Minden, ГЕРМАНИЯ
Тел. (49)571/9550-132, факс (49)571/9550-133

НА ОСНОВАНИИ ПРОТОКОЛА ИСПЫТАНИЙ № 2858-09 от 21.09.2009 г.
ИСПЫТАТЕЛЬНОГО ЦЕНТРА ДЕРЕВООБРАБАТЫВАЮЩЕГО ОБОРУДОВАНИЯ И ИНСТРУМЕНТА
(ИЦДО МГУЛ) РОСС RU.0001.21ДС01
САНИТАРНО-ЭПИДЕМИОЛОГИЧЕСКОЕ ЗАКЛЮЧЕНИЕ № 77.01.03.383.П.13076.05.5 от 17.05.05
ВЫДАНО ТЕРРИТОРИАЛЬНЫМ УПРАВЛЕНИЕМ "РОСПОТРЕБНАДЗОРА" по г. МОСКВЕ

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ ЗНАК СООТВЕТСТВИЯ НАНОСИТСЯ НА ДОКУМЕНТАЦИЮ,
УПАКОВКУ И ИЗДЕЛИЕ РЯДОМ С ТОВАРНЫМ ЗНАКОМ ИЗГОТОВИТЕЛЯ В СООТВЕТСТВИИ С ГОСТ Р
50460-92.
СХЕМА СЕРТИФИКАЦИИ - 3

Руководитель органа _____ Вик.В. АМАЛИЦКИЙ
подпись — инициалы, фамилия

М.П.

Эксперт _____ Вит.В. АМАЛИЦКИЙ
подпись — инициалы, фамилия

Сертификат имеет юридическую силу на всей территории Российской Федерации

2.3 Marks of conformity

CE mark	C US mark	GOST mark	DGUV-Test mark

3 Product description

3.1 Intended use

The WA6 sliding table saw and the workpiece guide equipment supplied with it are intended for cutting wood or similar substances such as:

- Laminated and unlaminated board materials (e.g. chipboard, coreboard, MDF board, ...)
- Solid wood
- Veneer with a suitable clamping device
- Gypsum plasterboard
- Cardboard
- Dimensionally stable plastics (thermosetting plastics, thermoplastics). Sawing these materials does not normally involve any risks in respect of dust, chips, and thermal degradation products.
- Aluminium and aluminium alloys

Tools:

- The chosen saw blade must be suitable both for the specific work cycle (e.g. longitudinal cutting or crosscutting) and for the specific material.
- Only circular blades which are solid chrome vanadium (CV) or tungsten carbide tipped (TCT) and have a diameter of min. 250 mm and max. 315 (350) mm as well as a maximum width of 20 mm are allowed for the main saw and milling/grooving cutter. The middle table strip and the cushioning disc must be removed when using a milling/grooving cutter.
- Blades with a maximum diameter of 120 mm are allowed for the scoring saw.
- ***Do not use saw blades made of high-alloy high-speed steel (HSS).***
- ***Do not use wobble units.***

Site of installation/use:

- The machine is not suitable for use outdoors, or in rooms that are subject to moisture or the risk of explosions.
- The intended use of the machine includes connection to a suitably dimensioned extraction system.
- Intended use also includes compliance with ALTENDORF's specified operating, maintenance and repair conditions and adherence to the safety information contained in the operating instructions.
- The WA 6 sliding table saw may only be used, set up and maintained by persons who are familiar with the machine and aware of the dangers.
- Observe all pertinent accident prevention regulations as well as any other generally recognised technical safety and industrial medicine rules.
- Repair work must be carried out by our own or an authorised customer service. Only original ALTENDORF spare parts are allowed to be used for this. ALTENDORF will assume no warranty for any damage that is caused by using non-original spare parts.

Machine workplaces:

The sliding table saw is intended to be operated from the following workplaces:

- On the left of the sliding table at the front of the machine, seen in the feed direction (main operator position).
- At the front cross-end of the machine on the right of the sliding table when working with the rip fence (make sure you do not move your body or parts of it into the blade rotation area).
- Workpiece removal is to be made at the rear cross-end of the machine behind the main table extension (under no circumstances in the sliding table traverse area)!

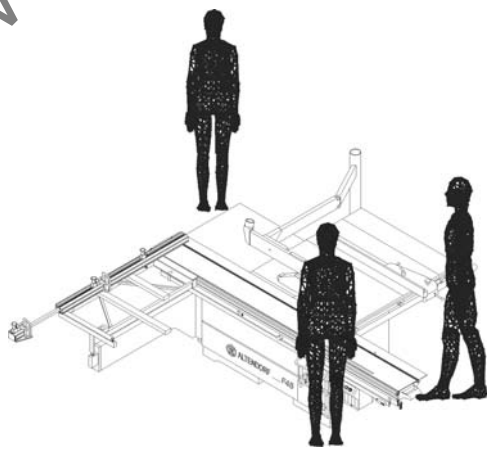


Fig. 3-1 Machine workplaces

Note!

Any use extending beyond this is deemed as unintended. ALTENDORF will not be liable for any injury or damage that may result from such unintended use; the risk shall be borne by the user alone.

Unauthorised modifications to the machine or its electrical components and the use of non-original parts on the machine exclude any liability by the manufacturer for any resulting injury or damage.

3.2 Auxiliary power/power requirements

Auxiliary power/power requirements

Motor [kW]	Voltage [V]	Frequency [Hz]	Nominal current [A] Without/with scoring blade
4	200 - 230	50	15.2 / 17.3
4	380 - 420	50	7.4 / 8.4
4	200 - 230	60	13.7 / 15.6
4	380 - 440	60	7.2 / 8.1
4	208 - 240	60	14.4 / 16.0
4	440 - 480	60	7.4 / 8.25
3	230 / 1Ph	60	18.7 / 20.3

The permissible tolerance for the specified mains voltage is +5% and -10%. Greater deviations will impair functionality.

Only connect the machine to a three-phase AC mains with phases L1, L2, L3 (exception - 3 kW). When using a frequency converter or phase converter in the supply line to the machine, this device or the brake module installed in the machine can be destroyed. Operating the machine together with phase converters, frequency converters or transformer-capacitor combinations will destroy the brake module or the frequency converter and power supply unit!

Screw-in fuse links of the type NEOZED D02 (operating class gL) should preferably be used as back-up fuses.

The supply lead should be dimensioned adequately to ensure that it will not be overloaded and the max. voltage drop is < 3% at nominal current.

The loop impedance and suitability of the overcurrent protection device must be inspected/tested at the machine installation site.

3.3 Emissions

3.3.1 Noise - characteristic values

Sound power level [dB (A)]	Emission sound pressure level at the workplace [dB (A)]	Tools
Idling_____L_{WA} = 98.3 Cutting__L_{WA} = 103.2	Idling_____L_{PA} = 91.0 Cutting__L_{PA} = 94.4	Circ.saw blade 315x3.2/60 WZ n = 4405 rpm

The noise emission values determined according to DIN EN ISO 3746 for the sound power level or DIN EN ISO 11202 for the sound pressure level at the workplace on the basis of the working conditions stated in ISO 7960 Appendix A are as listed in the table.

A measurement uncertainty allowance of K = 4 dB (A) applies to the stated emission values.

The stated values are emission levels and therefore not necessarily levels for safe working. Although there is a correlation between emission and immission levels, it cannot be reliably deduced from this whether or not additional precautionary measures are needed to protect operators.

Factors that influence the immission level at the workplace include the duration of exposure, room characteristics, other sources of noise such as the type and number of neighbouring machines, and other working processes involving noise emission.

3.3.2 Electromagnetic compatibility

EMC (Electromagnetic Compatibility) is the ability of an electrical device to function in its electromagnetic environment without disruptively influencing this environment, which also includes other devices, or being disturbed by it.

The machine complies with the requirements set out in the European electromagnetic compatibility directive 2004/108/EC (EMC directive).

3.3.3 Dust

The dust emission values – measured in accordance with the “Principles for Testing Dust Emission (Concentration Parameters) from Woodworking Machines” issued by the German trade association's technical committee for wood – are under 2 mg/m^3. When the machine is attached to a correctly functioning extraction system with an air speed of at least 20 m/s (measured after joining the two extraction connections) you can assume it is and will stay compliant with the technical reference concentration (TRK) limit for wood dust that is in force in Germany.

3.4 Ambient conditions

Transport and storage

The machine must not be used in an environment with explosive or corrosive gases.

The ambient temperatures for transport and storage range from - 25° C to + 55° C, and + 70° C is permissible for a short time.

The maximum air humidity must not exceed 90%, and condensation must be avoided in all cases.

3.5 Safety information

3.5.1 Operational safety

The operation of woodworking machines with manual feed involves a high risk in the event of incorrect handling. Therefore, always observe the safety information that is summarised in this chapter as well as government and other industrial safety regulations (e.g. accident prevention regulations)!

- Never operate the machine without the protective devices intended for the specific work cycle (also refer to “Working safely with the sliding table saw – working examples”), and do not make any changes that could impair safety.
- Before all work, make sure that the protective and working devices are securely fitted and are not damaged.
- Before changing a tool, rectifying any faults and carrying out repairs, make sure that the machine cannot be turned on accidentally, for example by padlocking the main switch.
- Only use saw blades and grooving tools that comply with European standard EN 847-1.
- Only fit saw blades with the dimensions described in the technical data. The diameter of the mounting hole must always measure 30 mm. Do not use loose intermediate rings.
- Select the rotational speed so that the maximum permissible rotational speed specified for the tool is not exceeded when using tungsten carbide tipped saw blades or grooving cutters.
- Do not use HSS saw blades and cracked or deformed saw blades.
- Always wear tight-fitting work clothes and do not wear rings, bracelets or watches.
- Make sure that the workplace is uncluttered, slip-proof and well lit.
- Do not cut workpieces that are too large or too small for the machine to handle.
- When working at the machine, always stand to the side of the saw blade outside a possible kick-back area.
- Remove any loose parts from the vicinity of the saw blade before switching on the machine.
- Only start cutting when the saw blade has reached its full rotational speed.
- Always use the top safety hood!
- Adjust the height of the top safety hood to the thickness of the workpiece to be cut.
- Always guide the workpiece safely and use the appropriate stops/fences.
- Use a push stick when cutting narrow workpieces (< 120 mm) at the rip fence.

- Crosscuts and longitudinal cuts in round wood are not permitted with the standard feeding aids or fences/stops.
- Always use the riving knife except for insert cuts. The riving knife must not be thicker than the cutting line width or thinner than the main blade. Adjust it so that it is at a distance of least 3 mm and at most 8 mm from the gear rim. The guide slot must be 13 + 0.5 mm wide. The riving knives supplied with the machine cover the respective range of diameters for the saw blades, which can be used – according to the machine equipment. With respect to their thickness, they match the cutting line widths of commercially available tungsten carbide tipped saw blades. If other saw blades, e.g. made of chrome vanadium (CV), are used, select a riving knife thickness that lies between the cutting line width and the main blade thickness. Such riving knives can be obtained from the trade or directly from ALTENDORF.
- Use an anti-kick device for insert cuts, e.g. the front of the clamping shoe. Fix this in the sliding table groove, ensuring that the sliding table is locked with its interlock to prevent movement. Following insert cutting, refit the riving knife and the top safety hood immediately.
- Only do angle cuts when the cross-slide is fixed to the sliding table. Make sure that small cut-off workpieces cannot be taken up by the gear rim and kicked out, for example by using a deflection wedge.
- For trimming, use the clamping shoe fixed to the sliding table to hold down the workpiece.
- When using a feeding unit, use at least the riving knife as an anti-kick device.
- Replace worn-out table strips immediately.
- Do not use wobble units or wobble cutting devices.
- Only use grooving tools with a maximum width of 20 mm that are approved for manual feeding. This is the case when tools have the inscription “MAN”.
- The sound pressure level at the workplace generally exceeds 85 dB(A). For this reason, wear hearing protection when working.
- Only qualified electricians are permitted to work on the electrical equipment of the machine.
- Regular cleaning of the machine and, in particular, the main table, sliding table and guides (e.g. rip fence) is an important safety factor. Before starting this work, make sure that the machine cannot be switched on unintentionally.
- The sawdust generated during cutting impairs visibility and is, in part, detrimental to health. The machine must therefore be connected to a chip extraction system with both extraction sockets. The minimum air speed at the lower extraction socket must be at least 20 m/s. When the machine is switched on, the extraction system must switch on at the same time.

Warning!

Always use a deflector wedge when small offcuts are produced during cutting that could be kicked out by the saw blade.

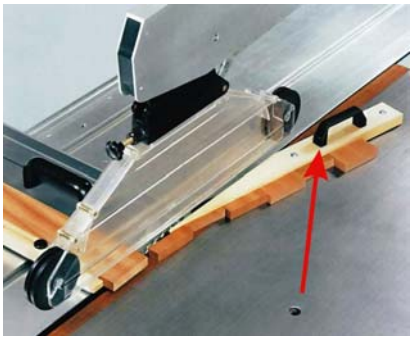


Fig. 3-2 Deflector wedge

3.5.2 Safety devices

Altendorf's sliding table saws have been developed in compliance with European standard EN 1870-1 "Safety of woodworking machines – circular sawing machines – circular saw benches (with and without sliding table) and dimension saws".

During the design stages great importance was attached to creating optimum working conditions, ranging from numerous mechanical and electrical safety devices to noise insulation and reduction of dust emission.

The machine is equipped with all the necessary safety devices to protect against operating risks that could not be eliminated by its design. These safety devices include, in particular:

- Rip fence with straight edge adjustable in the cutting direction. Can be pulled back to prevent offcuts from crosscut workpieces from jamming between the fence and the rising gear rim, or can be switched over to a low guide surface for cutting narrow and flat workpieces, allowing adequate space for the guide hand together with the possibility of lowering the top safety hood onto the workpiece.
- Trimming hold-down to clamp and hold down untrimmed solid wood to secure against slippage in the course of trimming.
- Electrical interlocking of the cover plate on the extraction duct beneath the machine table in the vicinity of the saw blades. It is not possible to switch on the machine when the cover plate is open, and if the cover plate is opened while the machine is running, the drives will switch off.
- Sliding table arresting device to prevent workpiece kick-back for insert cuts together with the cross-stop.
- Automatic brake which, after switching off, brings the main saw blade to a standstill in less than 10 seconds, regardless of the saw blade diameter and rotational speed.
- Ergonomic arrangement of the operating elements at readily accessible positions.
- EMERGENCY STOP button on all operating panels to allow all drives to be switched off quickly and safely.
- Favourable airflow design of the lower extraction duct and the top safety hood to reduce dust emission to below 2 mg/m³, providing the machine is connected at both extraction sockets to an extraction system having a min. air speed of 20 m/s.

3.5.3 Top safety hood/riving knife

For a max. tool diameter of 315 mm

- Top safety hood (fastened to the riving knife) made of polycarbonate to optimally cover the blade section not required for sawing above the machine table. The start slope integrated into the safety hood front facilitates the hood setting according to the respective workpiece thickness.
- 3 riving knives for saw blades between 250 and 315 mm diameter to avoid workpiece kick-back as a result of jamming in the cutting line.

Fig. 3-3 Upper protection hood

Fig. 3-4 Upper large protection hood

The large protection hood is available as an option.

3.5.4 Remaining risks

Even when the machine is operated in accordance with its intended use and all pertinent safety regulations, the following remaining risks may be encountered because of design changes caused by the intended use in question:

- Contact with the main saw blade and the scoring blade in the cutting area.
- Contact with the main saw blade and the scoring blade from beneath the table level when the sliding table is pushed fully forward or pulled fully back.
- Kick-back of workpiece or workpiece parts.
- Individual teeth spinning off tungsten carbide tipped blades.
- Breakage and hurling out of the saw blade.
- Crushing at the manual or motor-driven sliding table.
- Crushing between the motor-driven tilt movement of the saw blade and the rip fence or workpieces lying in the tilting area.
- Contact with live parts when the electrical installation area is open.
- Damage to hearing as a result of long-term work without hearing protection.
- Emission of health-endangering dust from operation without extraction.

Warning!

Avoid the potential dangers posed by these remaining risks by paying increased attention when setting up, operating and servicing the machine!

Strictly comply with the working positions when operating the machine!

3.6 Working safely with the dimension saw

3.6.1 Cross-slide/crosscut fence

The cross slide is fitted onto the end bolts of the swivel arm and the round bar of the top carriage and clamped with clamping screws. Depending on the dimension of the material to be processed, this can be carried out at any position on the top carriage. Two positions are provided on the cross slide to fit the crosscut fence.

Position 1: Cutting boards

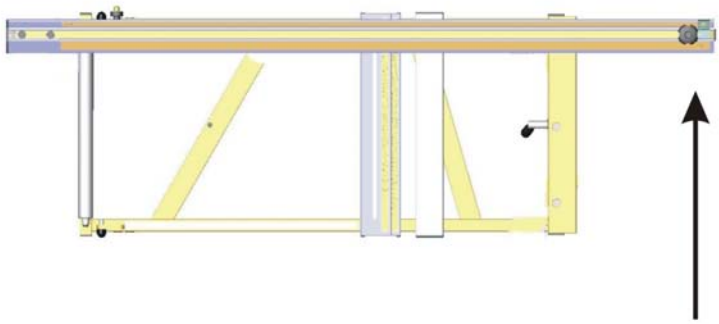


Fig. 3-5 Cutting boards

The operator presses the workpiece against the fence in the cutting direction.

Position 2: Cutting solid wood and boards up to 600 mm wide

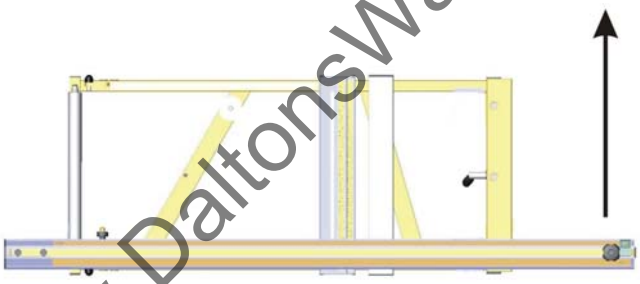


Fig. 3-6 Cutting solid wood

The operator pulls the workpiece along the fence opposite to the cutting direction.

Crosscut-mitre fence

Function description:

- Crosscut-mitre fence can be swung through 49°, angle indicated on scale
- Additional clamping at the 90° position
- Movable, fixable C section as an additional workpiece support

Changing the crosscut-mitre fence:

- Release the 90° clamping device (1)
- Undo the clamping screw for the degree scale
- Remove the clamping screw at the rotating point
- Push the crosscut-mitre fence to the 2nd position
- Tighten the clamping screws

Adjusting the angle:

- Release the 90° clamping device (1)
- Release the clamping screws
- Adjust the WGA to the angle and tighten the clamping screws

Note!

When dimensions need to be adjusted with the stop bar, make sure that the individual flip stop makes contact with the fence of the extension!

3.6.2 Rip fence

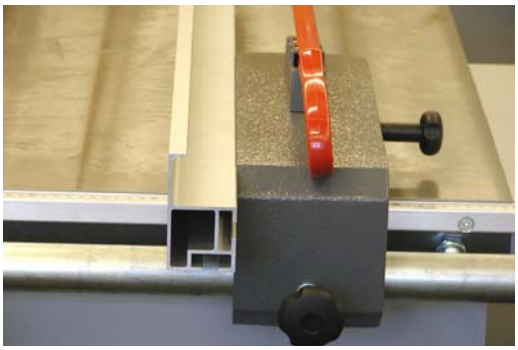


Fig. 3-7 Upright position of the stop fence

Setting

For cutting parallel, the rip fence is pushed to the required dimension. The set dimension can be read on the edge of the aluminium profile fence.

Danger!

Danger by contact with the saw blade!

This can cause injuries or the loss of limbs!

- When cutting widths of less than 120 mm, make sure that the material is fed with a push stick.
- Ensure that the stop fence is laid flat.

The dimension scale can be adjusted to the individual tool thickness after releasing the knurled screw. The stop fence of the rip fence can be adjusted in the cutting direction and to the profile height. Clamp it in the required position with the star grip screw. (not for the X model)

Crosscutting

For crosscutting short workpieces, for recessing (e.g. cutting tenons) or other work cycles during which offcuts can become jammed between the stop and the saw blade, the stop fence is moved forward until its rear end is in front of the saw blade.

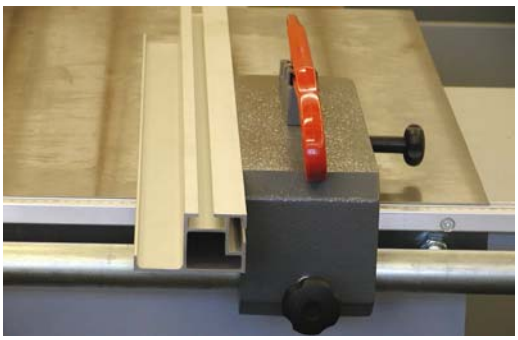


Fig. 3-8 Flat position of the stop fence

Flat and narrow workpieces

Use the flat fence when processing flat and narrow workpieces. This means there is more space for workpiece guidance and the fence can be moved closer to the saw blade, in particular when the saw blade is tilted, without hitting the safety hood.

3.6.3 Working examples

General

The Altendorf sliding table saw is a universal machine which can be used for different cutting jobs. To do this however it is necessary to equip the machine accordingly.

Tool

The first important point is to only use undamaged saw blades, to correctly adjust the riving knife and to move the upper safety hood so that it is positioned closely above the workpiece to be cut. This last point is also of great importance for correct functioning of the extraction facility mentioned above.

Speed

Note!

Ensure that the correct speed is set and after switching on the machine, only begin to push the workpiece forward when the saw blade has reached full speed.

Positions of hands

The hands lie flat with the fingers closed on the workpiece; the thumbs are adjacent with a sufficient safety margin to the saw blade.

You will find further notes on safe working in the following description of the individual work processes:.

Edge cutting (trimming)

Fig. 3-9 Edge cutting (trimming)

Tool: Ripping circular saw blade

Operation: Mount clamping shoe on the sliding table. Place workpiece hollow side down and press down with clamping shoe. The ball of the right hand is used to apply forwards pressure to the edge of the workpiece. Place hands at a suitable safe distance from the tool.

Ripping of narrow workpieces

Fig. 3-10 Ripping

Workpiece width < 120 mm

Tool: Ripping circular saw blade

Operation: Adjust rip fence to the desired cutting width. Lower the safety hood in accordance with the height of the workpiece. Move workpiece against the fence with the sliding table; Use the push stick in the area of the saw blade and push the separated workpiece until it is beyond the riving knife. For short workpieces use the push stick right from the start.

Cutting of strips

Fig. 3-11 Cutting of strips

Tool: Circular saw blade for fine cutting

Operation: Set the aluminum scale of the rip fence to the lower guide surface. Place the workpiece on the sliding table and use your left hand to push it against the rip fence. Move the workpiece forward with the sliding table, using the push block in the area of the saw blade and continue to push the strip until it is beyond the riving knife.

Crosscutting of wide workpieces

Fig. 3-12 Crosscutting

Tool: Circular saw crosscut blade

Operation: Place the workpiece against the mitre fence, use the left hand to press it firmly against the fence while moving it forward. When the flip stop is used, this is to be flipped up before pulling the workpiece back after cutting and the workpiece withdrawn from the saw blade or the workpiece is only to be removed beyond the rising blade tip.

Concealed cutting, rebating

Fig. 3-13 Concealed cutting

Tool: Circular saw blade for fine cutting

Operation: For rebating select the cutting sequence so that the strip cut out falls away on the side of the saw blade opposite to the fence. Lower the safety hood onto the workpiece and ensure good workpiece guidance (left hand pushes the workpiece against the rip fence.)

Concealed cutting, routing

Fig. 3-14 Routing

Tool: Milling router permitted for manual feeding (maximum width 20 mm).

Operation: Close the table opening by a table strip matched to the milling router. Set the tool to the desired routing depth. Leave the riving knife and the rear tool cover in place. On feeding push the workpiece firmly onto the table (otherwise there is the danger of an unintentional insert process).

For crossrouting of narrow workpieces always use the mitre fence.

Crosscutting against the rip fence

Fig. 3-15 Crosscutting

The material is laid against the mitre fence of the cross slide. The desired dimension is set on the rip fence, the extension fence is pulled back to in front of the saw blade after unclamping it and the item to be cut moved with the sliding table. With the extension fence withdrawn the workpiece cannot stick between saw blade and fence.

Crosscutting short and narrow workpieces

Fig. 3-16 Crosscutting

Tool: Circular saw blade for fine cutting.

Operation: Set the magnetic guide piece (not included with the machine) so that workpiece offcuts cannot come into contact with the rising part of the saw blade. Only feed the workpiece using the mitre fence. Do not remove fallen pieces from the vicinity of the tool with your hands.

Dividing up large boards

Fig. 3-17 Dividing up

With this operation the dimension can be set either at the rip fence or at the mitre fence. If you wish to cut out many pieces with the same dimensions from a larger board, the best way to proceed is to first cut off parallel strips at the rip fence and then cut these to the desired dimensions. However as soon as the part pieces are greater than the cutting width of the machine the dimension is set at the mitre fence of the machine.

4 Definitions

4.1 Description of machine

Fig. 4-1 WA 6

1	Machine stand	8	Safety hood
2	Swinging arm	9	Push stick
3	Telescopic tube	10	Main table width extension
4	Cross-slide	11	Rip fence
5	Crosscut-mitre fence	12	Height adjustment
6	Sliding table	13	Pull-back handle
7	Main table length extension	14	Sliding table interlock

4.2 Terms

Scoring

Making of a shallow cut in the surface of a workpiece, deep enough to pass through any coating on the workpiece, so as to prevent damage to the underside when the main saw blade makes its cut.

Scoring blade

A blade that is located in front of the sawing blade, is used to score the workpiece, and rotates along with the feed direction.

Grooves

Making of cuts in the surface of the workpiece not deep enough to pass through using the saw blade or a milling tool. The rules for grooving set out in EN 1870-1 only cover grooves with a width of at least 8 mm that have been made in one pass using a grooving tool.

Hand feed

Holding and/or guiding the workpiece manually. Hand feed includes the use of a hand-operated sliding table on which the workpiece is placed manually or clamped, as well as the use of a removable power feeding unit.

Safety appliance

Additional device that is not an integral part of the machine but helps the operator to feed the workpiece safely, e.g. a push block or push stick.

Riving knife

There is a riving knife to protect against workpiece kick-backs and unintentional contact with the rising gear rim. Sliding table saws on which saw blades of more than 250 mm diameter can be used are equipped with a force-guided riving knife.

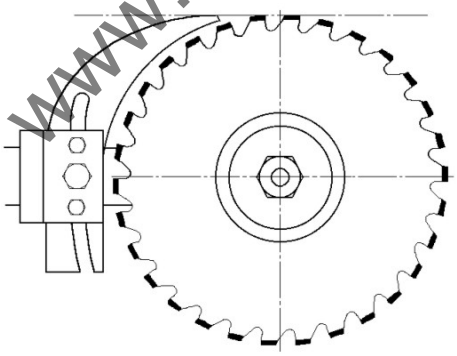


Fig. 4-2 Zwangsgeführter Riving knife

4.3 Symbols

		
Danger warning	Hand injury warning	Voltage warning
		
Explosive substance warning	Crush risk warning	Laser beam warning

5 Installation

5.1 Transport

When transporting the sliding table saw by elevating truck or fork lift truck (forks only with unchangeable length), only lift the machine up slightly and secure it against tipping!

Packaging

The type of packaging depends on the type of transport. Unless otherwise contractually agreed, the packaging corresponds to the HPE guidelines established by Bundesverband Holzmittel, Paletten, Exportverpackungen e.V. (the German Association for Wooden Materials, Pellets, Export Packaging) and the VDMA.Observe the symbols on the outside of the packaging!

Degree of dismantling

The degree of dismantling of the sliding table saw depends on the transport conditions and the options supplied with the machine.The sliding table is always shipped dismantled into several installation assemblies.

Sensitivity

Particular care must be taken when transporting the sliding table saw in order to avoid damage from force or poor loading and unloading.Knocks and condensation due to extreme temperature fluctuations must be avoided during transport.

Intermediate storage

If the sliding table saw or its assemblies are not installed immediately after delivery, make sure that they are stored in a protected location.They must be correctly covered to prevent any ingress of dust or moisture.Bare, non-surface-treated parts of the sliding table saw are protected with a conserving agent which will protect them for approx. 1 year. Reconservation is necessary if storage is to last longer than this period.

5.2 Safety measures before use/installation

Site of installation

No special foundations are required at the site of installation for the sliding table saw. The floor must have a load bearing strength suitable for the machine weight and should be flat and level.

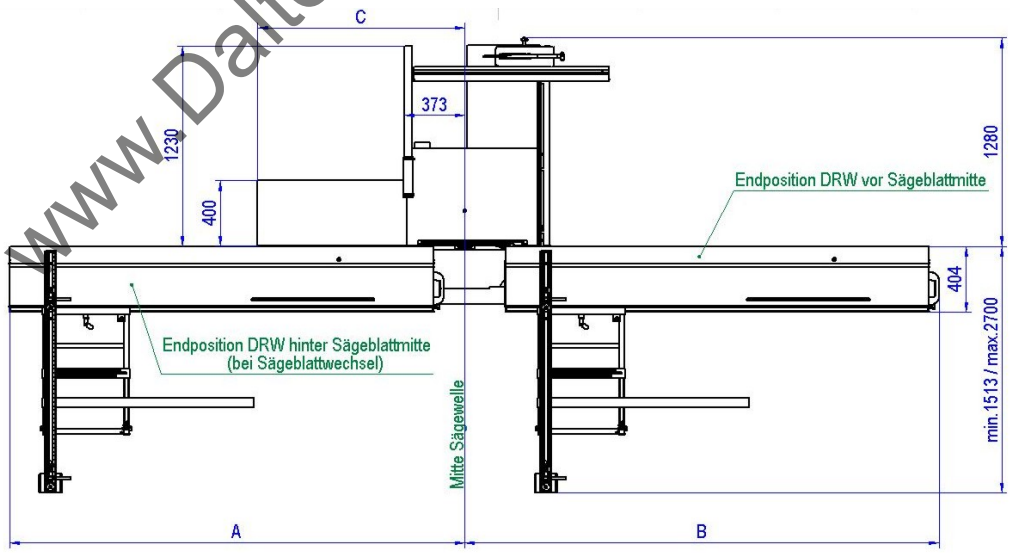
Select a site of installation that provides enough clearance around the sliding table saw, allowing for the space requirements shown in the figure and the size of the workpieces to be cut. In addition, observe the safety clearances to parts of the building and other machines in order to eliminate the risk of crushing the operator or other personnel.

Required space:

A Sliding table length + 220 mm for sliding tables 1600 mm and 2000 mm
Sliding table length + 290 mm for sliding table 2600 mm

B Sliding table length + 220 mm

C 873 mm for sliding tables 1600 mm and 2000 mm
1273 mm sliding table length + 220 mm for sliding table 2600 mm



5.3 Installation

5.3.1 Telescopic tube for swinging arm

Fig. 5-1 Installing the telescopic tube

[1] Undo the cheese head screw.
[2] Push in the telescopic tube from the front through the housing for the swinging arm.
[3] Insert and tighten the cheese head screw.

5.3.2 Main table length extension

- Guide the bolts of the main table length extension into the front holes in the main table.
- Loosely secure to the main table with the M10 nuts and U-shaped washers.
- If necessary, use setscrews to align the inclination.
- Tighten the M10 nuts.

5.3.3 Rip fence

- Guide the bolts of the table width extension into the front holes of the main table.
- Slightly tighten to the main table with two M10 nuts and U-shaped washers (1).
- If necessary, use setscrews (2) to align the inclination.
- Tighten the M10 nuts.

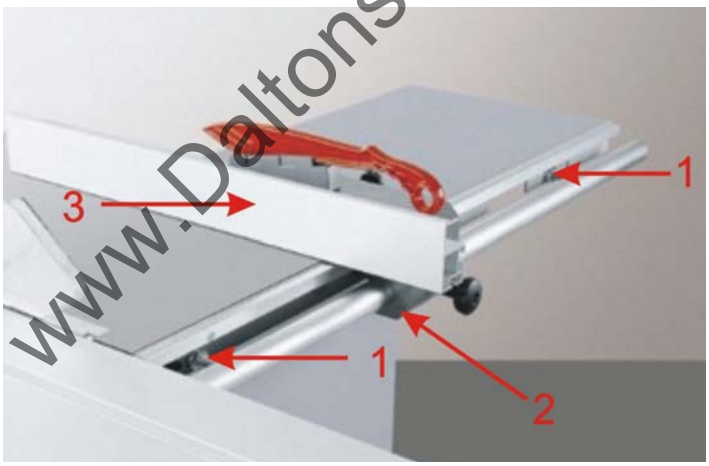


Fig. 5-2 Installing the rip fence

[1] Push the bolts (1) of the stop bar through the holes in the table top.
[2] Fit and tighten M20 nuts from the table top rear side.
[3] Fit the measuring bar.
[4] Carefully push the rip fence (2) from the RH to the LH side onto the stop bar.
[5] Fit the stop fence (3).

- Fit the measuring bar with M6x30 countersunk screws.
- Push the measuring bar in.
- Insert the knurled screw on the LH side for the clamping.

5.3.4 Cross-slide and crosscut fence

The cross-slide must be attached to every point of the outer-lying round bar of the sliding table, and must be clamped.

Fig. 5-3 Installing the cross-slide

[1] Fit the support tube of the cross slide (1) onto the bolt of the telescopic tube.
[2] Swivel the cross slide to the sliding table, suspend it and clamp using the cam lever (2).

Crosscut fence / Crosscut-mitre fence

- Place the crosscut-mitre fence on the rear fence surface.
- Fasten all clamping screws.
- Tighten all clamping screws.

5.3.5 Sliding table

- Place the bottom carriage on the machine frame and tighten the outer fastening screws using the 300 mm special key. Prior to completely tightening the screws, push the carriage against the stop screws.
- Place the middle carriage on the bottom carriage so that the interlock is pointing to the right.
- Push the middle carriage against the stop.
- **Carefully** push the top carriage in. Ensure that the sliding table is not jammed and the guide rods are carefully pushed onto the double rollers.
- Push the top carriage towards the left against the stop.
- Fit the rear stop. Check whether or not the stop in the top carriage and the stop on the bottom carriage makes contact simultaneously when in their end position, if necessary, re-adjust.
- Prior to commissioning/start-up, check the setting of the sub-rollers.

5.3.6 Electrical connection

Warning!

Dangerous electric voltage!

Only allow electricians to carry out work on the electrical system including connecting the machine to the power mains.

Always isolate the machine prior to starting work on the electrical machine equipment!

- The connection is carried out via a round plug-in device fitted beneath the sliding table. Use a rubber hose line (H07RN-F) as the supply line, cross section 5x 2.5 mm2.
- Once the supply line is connected, check the rotational direction of the main saw motor by starting it briefly and, if necessary, correct it by changing over the two outer conductors in the terminal box.
- Adhere to the rotational direction arrow on the saw blade cover!
- The customer must provide a protection against short-circuits!

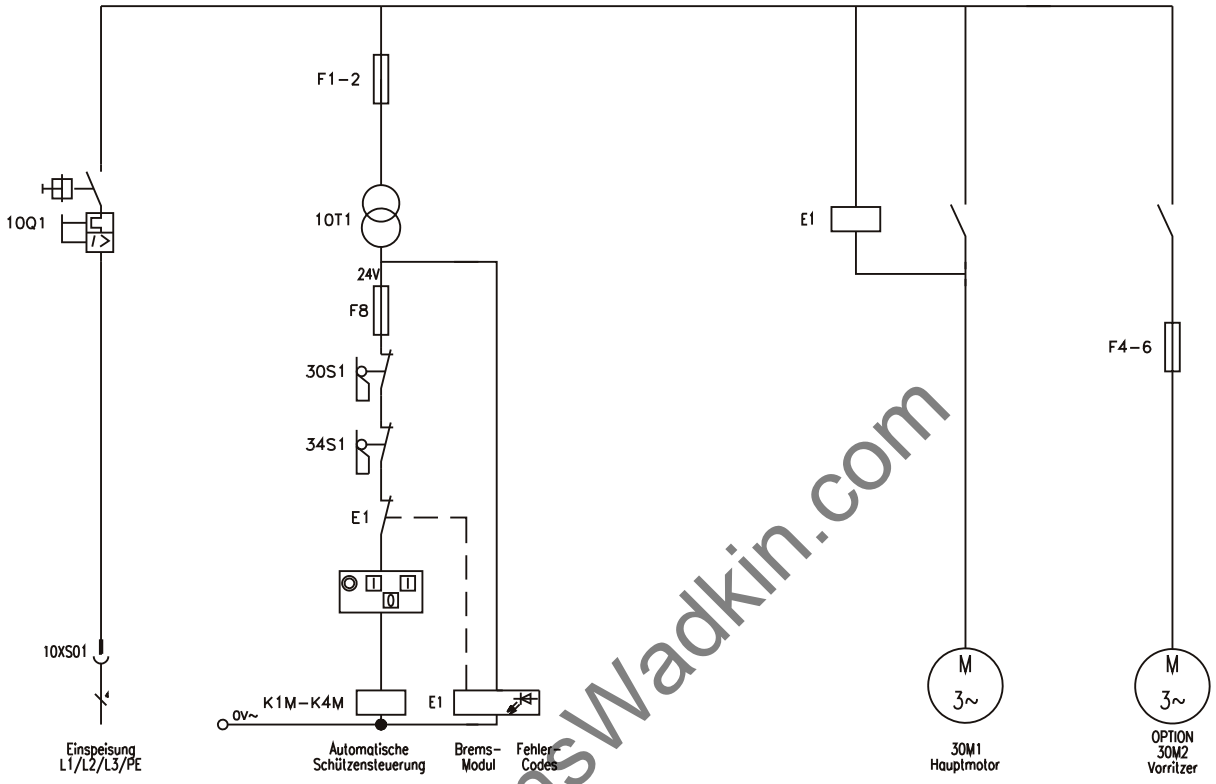


Fig. 5-4 Wiring diagram

Designation	Designation
10Q1	Switch
10EXTS1	EMERGENCY STOP button
30S1	Sliding table limit switch
34S1	Saw blade cover limit switch
10E1	Brake unit LCB
10F8	Fuse
30M1	Drive motor

5.3.7 Connecting the extraction system (customer side!)

The minimum air speed at the overall connection (D = 120 mm) must be 20 m/s. The sockets and hoses are not included in the delivery scope!

In addition, make sure that the extraction system is switched on with the machine.

Fig. 5-5 Extraction socket Ø 90 mm

5.4 Basic machine setting

5.4.1 Sub rollers on the sliding table

The basic machine settings are made in the works during final assembly. Dismantling various modules, transport and assembly at the installation site can mean that it is necessary to correct the machine settings. The machine parts to be checked are described below.

Checking the lower rollers

The lower rollers must move smoothly at the start and end of the running surface over the starting angle. They should be set so that they can be stopped manually by exerting a perceptible force and slide freely while the sliding table is moved.

Adjustment of the lower rollers

The lower rollers are supported eccentrically and adjustable. If they are set too tight the sliding table is hard to move.

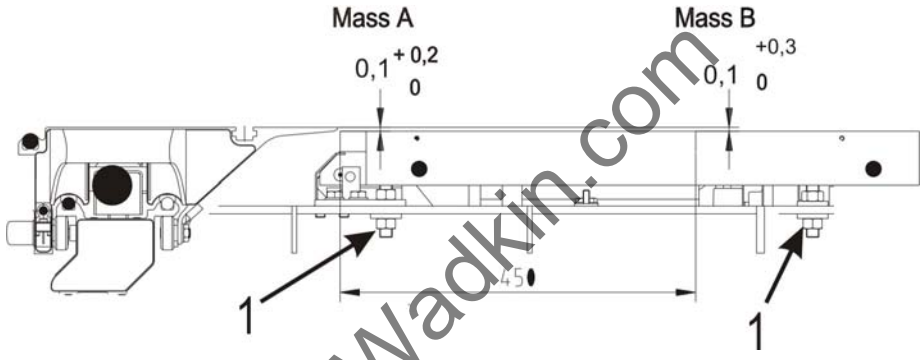
5.4.2 Main table

Checking the table plate

Place a straightedge on the sliding table, carriage in mid position. Move carriage backwards and forwards, Table plate must lie about 1/10mm lower.

Checking the table plate

Loosen the locknuts (1) on the 4 fixed bolts, adjust the table plate, tighten the nuts.



5.4.3 Swinging arm

Check

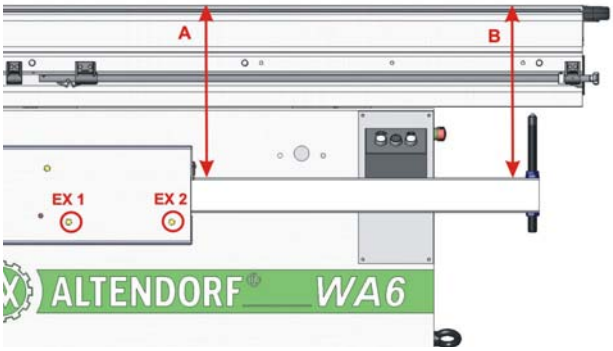


Fig. 5-6 Adjusting the swinging arm

Rest the swinging arm against the machine frame, fully extend the telescopic tube of the swinging arm and check dimensions A and B. Set dimensions A and B with a tolerance of 0.5 mm; if necessary correct the setting with EX 1 and EX 2.

The dimension between the bottom edge of the crosscut fence profile and the top edge of the top carriage profile (see fig. 2) is a feature for the tolerance of the swivel arm setting. The dimension must not exceed the cut length possible with the cross-slide between 0.1 and 0.9 mm (check with feeler gauge).

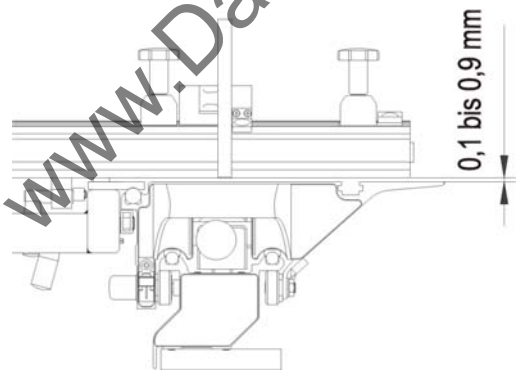


Fig. 5-7 Adjusting the swinging arm

5.4.4 Cross-slide height

Check

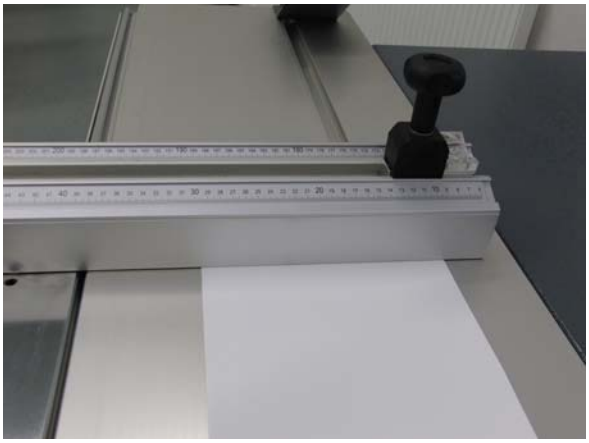


Fig. 5-8 Cross slide height check

Insert a card approx. 0.5 mm thick between the underside of the crosscut fence and the sliding table surface. The card must move freely in all positions. The crosscut fence must be parallel to the sliding table surface.

Adjustment

Fig. 5-9 Cross slide height adjustment

Adjust the height of the bolt at the end of the swinging arm and relock the nut. If the gap between the underside of the crosscut fence and the surface of the sliding table changes as the sliding table is moved, the parallelism of the telescopic part of the arm and the surface of the sliding table must be checked.

5.4.5 Setting free cut

Check: free cut, sliding table

Set the saw blade to maximum cutting height, and cut off a short test piece (if possible MDF) at the crosscut fence. The noise difference between the cutting and non-cutting teeth lets you identify whether the sliding table is correctly set. When the rising teeth pass, only a slight fluttering should be heard compared to the noise of the cutting teeth (cutting upward).

Setting

Release the sliding table mounting on one end **and** in the centre (if present). Release the lock nuts of the stop screws. Adjust them as required and fix them with lock nuts again. Then readjust the sliding table and retighten all screws.

Check: free cut, rip fence

Set the saw blade to maximum cutting height, and cut off a test piece of about 300 x 450 mm (if possible MDF) at the crosscut fence. The sound of the rising teeth must be the same as when cutting free on the left, with the sliding table correctly set.

Setting

Release the connection bolts between the main table width extension and the round bar. Then change the position of the round bar, and thus of the rip fence, by adjusting the middle lock nuts.

Fig. 5-10 Setting of free cuts, standard rip fence

Attention!

When using a scorer, make sure that both free cuts are set as equal as possible!

5.4.6 Angle cut

Checking the angle cut

Before checking the angle cut, check the settings of the sliding table (see operating instructions) and of the swinging arm, and correct them if necessary.

Check the angle cut at the crosscut fence as follows:

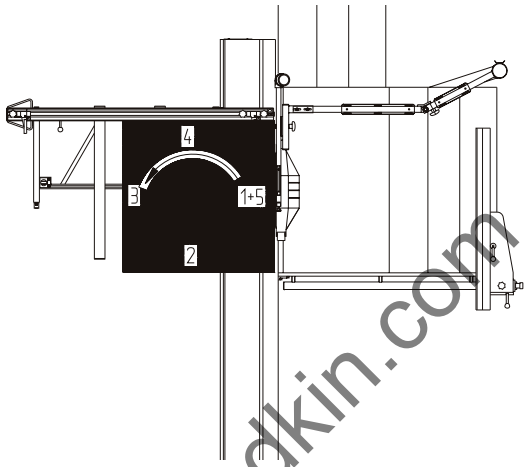


Fig. 5-11 Angle cut

Take a 1000 x 1000 mm large chipboard or MDF board with a thickness of at least 19 mm. Perform 5 cuts (see figure) and position the side cut last against the crosscut fence for the next cut (turn the board counter-clockwise). For the 5th cut, cut off a strip approx. 10 mm wide. Measure the thickness at both ends of the strip with a vernier caliper. The difference between the two dimensions divided by 4 gives the squareness error per metre cut length.

Check:

The angle cut must be checked at a minimum of 2 different positions on the cross-slide of the sliding table.

Factory setting:

The cross-slide is clamped to positions of approx. 300 mm and 1300 mm from the sliding table end. In these two positions, the angle cut is checked and adjusted as described above. The setting must not exceed the maximum permissible tolerance of **< 0.2 mm** (with the 5th cut (dimension 1 - dimension 2)).

5.4.7 0° setting of the saw blade

Check

Place to strips cut beforehand at the rip fence (approx. 70 mm wide, 400 mm long) **upright** in front of the crosscut fence, cut in this position and place the cut surfaces against each other. If the setting is correct, the cut surfaces should be parallel, i.e. no gap can be seen between the cut surfaces.

Fig. 5-12 Cutting a test piece

Fig. 5-13 Checking the 0° -setting

Setting

Recalibrate the machine!

Calibration is carried out by adjusting the screw on the 90° stop at the RH inner wall of the machine frame.

6 Operating

6.1 Adjustment of the main saw blade

Tilt adjustment

The swivel adjustment is actuated by turning the hand wheel on the machine end face. The swivel angle is displayed in the hand wheel centre.

Warning!

Prior to swivelling the saw blade, observe the following:

- Remove the workpiece from the table top in the swivelling area.
- When cutting widths < 130 mm, place the rip fence straight edge to flat position.
- Release the clamping.

Height adjustment

Turn the LH hand wheel to actuate the height adjustment.

6.2 Changing the main saw blade

The following points must always be observed:

- Do not fit any saw blades that are cracked or damaged in any way.
- Only use saw blades with a diameter between 250 and 315 mm.
- Check that the set rotational speed is suitable for the saw blade. For assembled saw blades, the maximum admissible rotational speed is stated on the blade as n max = ...

Please note that only saw blades with side holes (2 holes 10 mm ø with a gap of 60 mm) can be fitted. This is necessary to prevent the saw blade fastening becoming loose during braking.

Warning!

Check that the saw blade clamping system is tight before operating the machine!

Changing the saw blade

- Switch off the drives.
- Move the saw blade to its top height adjustment and swivel to 0°.
- Turn off the main switch.
- Move the top carriage to the middle of the saw shaft, and unlock the lock at the saw blade centre by pressing the knob on the middle carriage.
- Move the top carriage to the end position in the cutting direction.
- Raise the red cover plate.
- Use a ring spanner to undo the screw (1).
- Push the holding mandrel (2) through the table top and the saw shaft.
- Remove the nut (3) by turning it clockwise using a ring spanner, width across flats 55.

- Before fitting the new saw blade, remove any adhering chips and dust from both flanges.
- Place the saw blade and front flange onto the saw shaft, turn in by hand and tighten the nut (3) by turning it counter-clockwise using a ring spanner, width across flats 55.
- Check that the riving knife thickness and its distance to the saw blade is correct.
- Close the bottom protective cover and perform a brief test run to check that the saw blade runs correctly. Do this by lowering the top safety hood down to the table so that the saw blade is completely covered.

Warning!

Once the saw blade change is completed, always adjust the riving knife correctly!

- Ensure that the gap between riving knife and gear rim is between 3 and 8 mm.
- The highest point of the riving knife must be adjusted beneath the top tooth.
- Ensure that the riving knife thickness exceeds the master blade thickness by at least 0.2 mm.

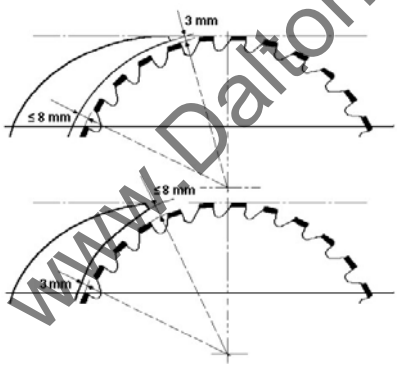


Fig. 6-1 Adjusting the riving knife

6.3 Saw blade recommendation

Material	Cutting speed [m/s]	Rough-cut saw blade D = 250 mm	Rough-cut saw blade D = 315 mm	Finished-cut saw blade D = 250 mm	Finished-cut saw blade D = 315 mm
Softwood, lengthwise	60 - 80	24 W	28 W	40 W	48 W
Softwood, crosscut	60 - 80	40 W	48 W	48 W	60 W
Hardwood, lengthwise	60 - 80	24 W	28 W	40 W	48 W
Hardwood, crosscut	60 - 80	40 W	48 W	48 W	60 W
Veneer	70 - 80	60 W	72 W	80 W	96 W
Pressed laminated wood	50 - 70	40 W	48 W	48 W	60 W
Coreboard	60 - 80	48 W	60 W	60 W	72 W
Plywood	50 - 80	40 W	48 W	60 W	72 W
Raw chipboard	60 - 80	48 W	60 W	60 W	72 W
Coated chipboard	60 - 80	60 TF	72 TF	80 TF	96 TF
Raw MDF boards	60 - 80	48 W	60 W	60 W	72 W
Coated MDF	60 - 80	60 W	72 W	80 W	96 W
Laminate flooring	50 - 70	60 TF	72 TF	80 TF	96 TF
Hardboard	60 - 80	60 W	72 W	80 W	96 W
PVC profiles *	40 - 60	60 TF	72 TF	48 DD	60 DD
Acrylic glass	40 - 50	60 W	72 W	80 WF	96 WF
Gypsum plasterboard	40 - 60	48 W	60 W	60 W	72 W
Aluminium profiles *	60 - 70	60 TF	72 TF	80 TF	96 TF

Abbreviations:

* Negative rake angle

W Top bevel tooth, TF Triple-chip tooth

- When selecting a tool, ensure that no tools are used that are blunt or damaged.
- Do not exceed the maximum admissible rotational speed stated on the tool.
- Do not use high-speed steel (HSS) saw blades!
- The tools must have a hole diameter of 30 mm and carrier holes of 10 mm Ø on a pitch circle of 60 mm Ø.
- Choosing the correct saw blade in accordance with the material to be cut and its thickness, alongside the correct cutting speed, is very important for a clean cut and low stress for the operator. A selection of saw blades for ALTENDORF sliding table saws is summarised in the table. This table does not claim to be complete. As some of the stated cutting speeds cover large ranges, it is indispensable to empirically determine the best speed for optimum cutting results.

Scoring blade

Scoring saw blade: D=120 mm, 24 teeth flat tooth, hole diameter 22 mm

Riving knives

The dimension of the supplied riving knives is suitable for the specified saw blade diameter range. The corresponding range is stated on the bottom end of the respective riving knife.

However, the riving knife thickness is only correct, if saw blades made of tungsten carbide in commercial version are used. Different riving knives are required for CV saw blades.

6.4 Table locking

Fig. 6-2 Locking system

The sliding table interlock automatically locks the sliding table in its end position, so that the cut material can be pushed against the crosscut fence without the easy-running sliding table being set in motion unintentionally. Unlocking is carried out by turning a handle at the end of the top carriage.

The additional locking position can be used to block the sliding table in its centre position by means of the carriage locking system.

Warning!

Do not apply oil or grease to the brake lining and the brake surface. Never use any solvents in the area of the brake lining. Non-observance will lead to malfunctions of the brake or destruction of the brake lining.

6.5 Main switch/Motor protection

Main switch

Before turning on the saw drives, the main switch must be moved to setting I. The main switch is BLACK, i.e. it does not have any EMERGENCY Stop function. When the machine is turned off with the main switch, the saw drives run down without braking.

Motor overload protection

A responding motor overload switch indicates that the motor is overloaded, and it is necessary to identify the cause and eliminate it before switching on again (e.g. drive blocking by jammed workpiece, excessive advance or failure of a mains phase).

The drive motor is protected against overload. This overload protection automatically switches the motor off if excessively heated. For machines with scorer, observe that the scorer drive is also switched off. Switching on again is only possible once the motor has cooled down. It may take several minutes (max. 10) for the motor to cool down!

6.6 Switching the drives on and off

Before switching on the machine, make sure that all protective devices required for the respective work cycle are attached and operative. In addition, check that the saw blades are correctly fitted and that there are no workpieces or other objects in their vicinity. Check that the circular saw blade is running in the correct direction by briefly switching on.

Make sure that the extraction system switches on at the same time as the machine.

Fig. 6-3 ON/OFF button, drives

6.7 Scoring saw

The Altendorf scoring unit was developed to be able to cut boards coated on both sides without break-outs. The scorer cuts into the material by only approx. 1-2 mm on the bottom side and then the main saw cuts through it. Make sure that the scoring blade is exactly in line with the main blade and is set to the corresponding width.

- We recommend using two-part scoring blades which can be set to the required blade thickness by inserting spacer discs. The cutting line of the scoring blade should be 1/10 mm wider than the main saw blade, i.e., 5/100 mm to each side. In addition, the two scoring blades should have carrier pins and their thickness should be marked on the spacer discs.
- The scoring saw can only be started after the main saw blade has reached its operating speed (after approx. 5 sec.). To do so press the push button I that is labelled with the scoring saw symbol on the panels.

Adjustment

Height and lateral adjustment is carried out mechanically and can be executed when the motor is running.

Fig. 6-4 Height adjustment, scoring blade

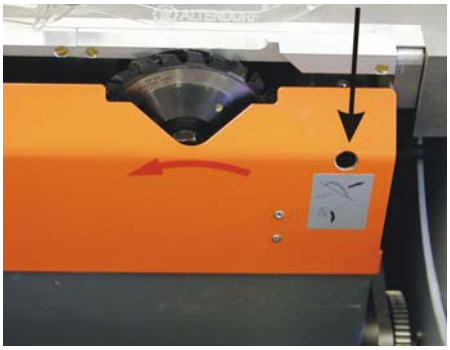


Fig. 6-5 Lateral adjustment, scoring blade

Lateral adjustment is carried out by means of the supplied Allen key on the marked position (black arrow).

Changing the saw blade

The description of the saw blade change applies to divided scoring saw blades and also to saw blades with infinitely variable cutting width adjustment. Only use saw blades with a diameter of 120 mm and a hole diameter of 22 mm!

- Switch off the drives.
- Move the scoring saw to its max. raised position.
- Move the sliding table in the cutting direction.
- Unlock the lock in the middle of the saw blade by pressing the knob on the middle carriage.
- Move the sliding table to the end position in the cutting direction.
- Raise the cover plate.
- Undo the fastening nut using the supplied tool.
- Before fitting the new scoring blade, remove any adhering chips from both flanges.
- Place the saw blade and front flange on the saw shaft, and tighten the nut clockwise.

The following must also be observed when using **RAPIDO** scoring blades with infinitely variable cutting width adjustment:

- Failure to comply with the operating instructions inadmissibly reduces Health and Safety at Work and excludes any claims for liability.
- max. speed =8200 rpm.
- Permissible cutting widths 2.8 - 3.8 mm
- Take particular care when unpacking and packing the adjustment unit, danger of injury!
- Only store the adjustment unit in the original packaging!
- Fit the scoring blade outside of the machine.
- Make sure that **all** connection elements are fitted.
- Only use original spare parts in the case of loss or damage to the connection elements!

Adjusting the saw blade width

Standard saw blade

- Insert spacer disks to achieve a scoring saw blade width that exceeds the main saw blade width by 0.1 mm.
- Align the scorer in relation to the main saw on the table top side first.
- Sample cut.
- Alignment on the LH side by adding or removing intermediate rings.

Saw blade with infinitely variable cutting width adjustment RAPIDO

Fig. 6-6 Release the clamping screw.

Fig. 6-7 Adjust the spindle.

Note!

Only use the supplied tools for adjustment work!

- Release the clamping screw, approx. 2 turns.
- Turn the spindle until the required dimension is reached (1 rotation = 0.5 mm).
- Tighten the clamping screw.
- Make a test cut and, if necessary, recorrect the cutting width as described above.

Replacing the saw blades for RAPIDO

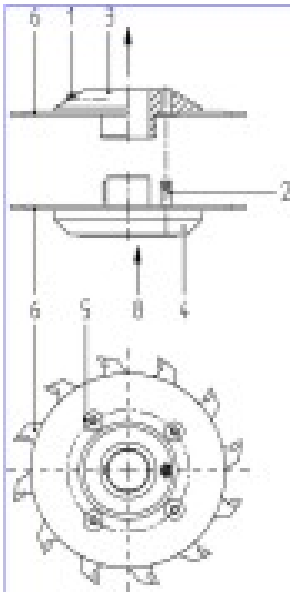


Fig. 6-8 RAPIDO saw blades

Remove the adjustment unit from the machine. It may be necessary to loosen the clamping screw because an excessively tight clamping screw can cause the adjustment unit to jam on the shaft!

Removal:

Using the Allen key:

•Release the clamping screw (1), turn the spindle (2) approx. 3 – 4 turns clockwise until the flange (3) can be removed from the holder (4).

Using the internal torx wrench:

- Undo the screws (5).
- Remove the circular saw blade (6).
- Carefully clean the flange (3) and screws (5). Make sure that the running and flange surfaces are dry and free of dust.
- Fit a new saw blade, paying attention to the rotational direction and hole pattern: The circular saw blade (6) is in full contact with the flange (3) and the shoulder on the circular saw blade must point to the contact surface.
- Turn in the screws (5) and tighten with a torque of 8.6 Nm.
- Proceed in the same manner for the other half of the adjustment unit.

Installation: Do not apply oil or grease!

- The clamping screw (1) is released.
- Fit the flange (3) vertically onto the holder (4) so that the spindle (2) engages in the threaded hole (7).
- Turn the spindle (2) counterclockwise with the Allen key. The flange (3) is drawn onto the holder (4); the force applied must not increase.
- Continue turning the spindle (2), until the two circular saw blade halves are in contact.
- Install the adjustment unit on the machine.
- Set the cutting width, see above.
- Slightly tighten the clamping screw (1).

6.8 Mitre fences

Double-sided mitre fence DUPLEX

Fig. 6-9 Double-sided mitre fence DUPLEX

The DUPLEX mitre fence can be infinitely adjusted from 0° to 90°. The circular scale with a radius of 350 mm has 0.25° graduation, allowing precise and fast setting of the mitre angle. This can be fitted at any position of the sliding table due to its eccentric clamping system.

The stop bar (2 throw-over stops) can be used in both stop profiles. It is possible to crosscut workpieces of up to 1350 mm in length or, when the extended stop fence is used, up to 2150 mm in length.

In addition, the DUPLEX mitre fence features a length compensation scale with which the length dimension is set in accordance with the mitre angle.

Basic setting of length compensation scales

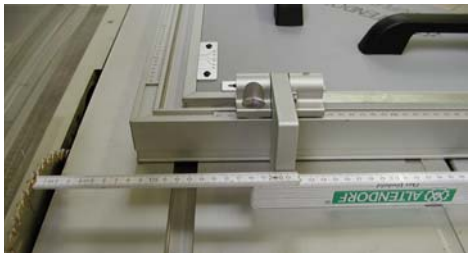


Fig.1-1 Test cut	Fig.1-2 Adjusting the fence stop
Swing the DUPLEX to a 90° angle and fix it.	Adjust the length scale so, that the mark in the magnifying glass corresponds to the cut dimension (the length scale can be adjusted by exerting slight pressure on its centre point and moving it).
Set the first stop to a distance 200 mm from the saw blade and fix it.	Adjust the throw-over stop to 200 mm.
Cut a test piece and measure it, e.g. 201 mm.	

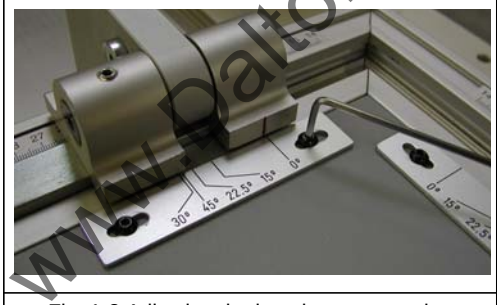
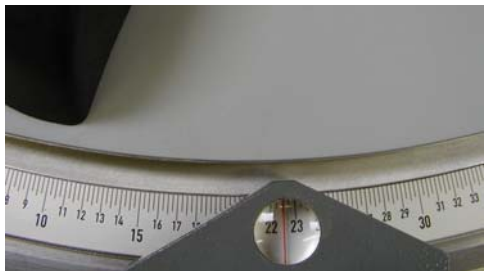
	

Fig. 1-3 Adjusting the length compensation scale	Fig. 1-4 Adjusting the angle
Release the screws of the length compensation scale with a 2.5 wrench.	Adjusting the cutting angle acc. to scale, e.g. 22.5°.
Move the length compensation scale so that the 0° mark corresponds to the mark on the throw-over stop.	
Tighten the screws.	

Note!

Run though this process for both sides of the fence!

	
Fig. 1-5 Adjusting the fence stop	Fig. 1-6 Adjusting the length compensation scale
Adjust the mark on the throw-over stop to the cutting angle of the degree scale.	Move the length scale so that the mark of the red “20” corresponds to the mark in the magnifying glass.
	The length scale has now been adjusted to the corresponding angle of 22.5°.
	Now the required measure of length can be adjusted.

7 Faults

Warning!

As a rule, overcoming trouble involves a higher risk.

For this reason, particularly ensure at this point that all measures required are executed safely.

- Turn the main switch off and secure against unintentional switching on again

Error/fault	Cause	Troubleshooting
The machine cannot be switched on.	The main switch is not turned on.	Turn the main switch to switch position “I”.
	Power failure or phase failure	Wait for power to be reinstated, or eliminate cause for loss of power, check factory fuses.
	Overload protection has responded.	Allow the motor to cool down
	Sliding table moved over saw blade centre line.	Return the sliding table to just in front of the saw blade centre line
	EMERGENCY STOP button pressed	Rearm the EMERGENCY STOP button again by pulling
The machine cannot be switched on.	Lower cover plate in front of the saw blades open	Close the cover plate
	Control circuit fuses defective	Turn off the main switch, open the switch cabinet and identify which of the fuses F1, F2, F8 is defective. Find and eliminate the cause. Replace defective fuses, only using fuses of the same rating!
The machine switches off automatically during operation.	Power failure in one or several phases due to triggering of factory fuses.	Eliminate cause of phase failure.

Error/fault	Cause	Troubleshooting
Workpiece jammed while feeding forward.	Overload protection has responded due to blunt saw blade or excessive feed speed.	Change saw blade or reduce feed speed. Allow the motor to cool down.
	Control circuit fuses defective	Turn off the main switch, open the switch cabinet and identify which of the fuses F1, F2, F8 is defective. Find and eliminate the cause. Replace defective fuses, only using fuses of the same rating!
	Blunt saw blade	Fit a sharp saw blade.
	Riving knife thickness does not match the saw blade used.	Fit the correct riving knife; it must be thicker than or equal to the thickness of the main saw blade.
The finished size of the cut workpiece does not match the cutting width set on the rip fence.	Dimension scale for cutting width display is misadjusted.	Reset the dimension scale: Cut a workpiece on the rip fence, measure the cut width and position the measuring scale so that the measured cutting width is displayed on the fence edge.
The finished size of the cut workpiece does not match the cutting width set on the crosscut stop.	Dimension scale for cutting width display is misadjusted.	Reset the dimension scale: Cut a workpiece at the crosscut stop, measure the cut width and position the measuring scale so that the magnifying glass display matches the measured cut width.
Swinging arm does not move smoothly.	Soiled telescopic tube or track rollers	Clean telescopic tube or track rollers; check wiper.
Sliding table has lateral play.	Sub-rollers incorrectly set.	Set the sub-rollers.
In its end positions, the sliding table is higher than the machine table.	Sub-rollers incorrectly set.	Set the sub-rollers.

Error/fault	Cause	Troubleshooting
Saw blade burns on the sliding table side.	Insufficient free cut on sliding table	Readjust the free cut.
	Excessive free cut on the rip fence	Readjust the rip fence.
Saw blade burns on the rip fence side.	Insufficient free cut on rip fence	Readjust the free cut.
Saw blade burns on both sides.	Incorrect free cut setting.	Readjust the free cuts.
	Workpiece jammed.	Insert a riving knife in the cutting line or use a wider riving knife.
	Operating error	Guide the workpiece either at the LH or the RH fence. Do not guide the workpiece on the rip fence when cutting with the sliding table.
Workpiece has burn marks.	Blunt saw blade	Change the saw blade.
	Feed too low	Increase the feed rate.
	Saw blade has too many teeth.	Change the saw blade.
	Incorrect free cut	Readjust the free cut.
Break-outs in spite of scorer	Scorer not aligned with main saw blade	Readjust free cuts; the free cut should be almost “0”.
	Scoring blade too narrow	Adjust saw width.
Workpiece rises when cut with the scorer.	Blunt scoring blade	Exchange the sawing blade.
	Cutting height too low	Set the scoring blade higher.

8 Maintenance / cleaning

Attention!

Danger of injuries!

- Prior to starting maintenance work, always turn off the main switch and secure against switching on again!

Regular cleaning prolongs the life of the machine and is also a prerequisite for perfect cutting results. For this reason, the sliding table saw should be cleaned at least once a week, depending on the degree of soiling. This particularly applies to:

- The machine table
- The sliding table
- The sliding table guides
- The tilt segments
- The round bar of the rip fence
- The machine interior
- The machine environment

Remove any chips and dust adhering to the machine with a vacuum cleaner. To remove resin residue, it is advisable to use a cleaning agent which dissolves resin. Parts treated in this way must subsequently be treated with an oil-impregnated cloth to prevent rusting.

Regularly clean the sliding table guides. If soiled with resin, clean the guides with petroleum and, if necessary, with large sponges. Do not use steel wool or grinding paper as the guideways will be irreparably damaged.

Note!

Before using solvents and cleaning agents, make sure that these substances do not cause damage to the painted, anodised or galvanised surfaces as well as plastic parts. For information on these substances, please refer to the safety data sheets available from the manufacturers of the solvents or cleaning agents.

Lubrication

- Clean and lubricate the swivel segments at regular intervals. The intervals (2 weeks) depend on the operating time.
- The bearings of the main saw shaft and scoring saw shaft are encapsulated and lubricated for life, making relubrication unnecessary.
- The electronic brake of the main saw unit is not subject to wear.

9 Technical data

9.1 Standard equipment

Main saw	Tool holder diameter Saw blade tilting range Idling speed	30 mm 0 - 46° 4200 rpm
Sliding table	Sliding table cutting length	see table
Crosscut-mitre fence	Crosscutting on the WGA	2600 mm
Rip fence	Cutting width at rip fence	1000 mm
Scoring saw	Saw blade ∅ Tool holder ∅ Idling speed	120 mm 22 mm 8000 rpm
Extraction	lower connection diameter upper connection diameter Overall vacuum connection ∅ 120 mm Air speed Minimum air volume	100mm 50 mm 1300 PA 20 m/s 565 m^3/h
Ambient conditions	Operating temperature Max. relative humidity ***Do not expose the machine to a gaseous environment which is explosive or may cause corrosion!***	10 - 40 °C 90 %, no condensation
Weight	Machine weight, dependent upon equipment	Approx. 450 kg
Electrical equipment	Voltage (V) +5%, -10% Main saw motor Scoring saw motor	see type plate 4 kW 0.37 kW

Sliding table cutting lengths

Maximum cutting length when inserting board on the crosscut-mitre fence.

Sliding table length [mm]	1600	2000	2600
Cutting length [mm] With or without scoring blade	1450	1850	2500

These cutting lengths refer to mechanical travel, i.e. from end stop to end stop on the sliding table.

Usable saw blades:

Saw blade diameter [mm]	250	300	315	350
Saw blade height, vertical [mm]	0 - 55	0 - 80	0 - 87	0 - 105
Saw blade height at 45° [mm]	0 - 38	0 - 56	0 - 60	0 - 73

10 Maintenance and repairs

10.1 General

Keeping a supply of the most important spare and wear parts on site is an important prerequisite for the constant functioning and operating capability of the sliding table saw. We only accept a guarantee for original spare parts supplied by us. We expressly point out that original spare parts and accessories not supplied by us have not been checked and released by us. Therefore, the fitting and/or use of such products may negatively influence the properties of the sliding table saw and thus impair its active and/or passive safety. Wilhelm Altendorf GmbH&Co. KG will not accept any liability or guarantee for damage resulting from the use of non-original spare parts and accessories.

Please note that special production and delivery specifications exist for our own and our suppliers' parts, and that we always supply spare parts that meet the latest state of the art and comply with the latest statutory regulations.

Please refer to the spare parts list when ordering spare parts.

For further information please refer to the spare parts drawings included in the spare parts list.

When ordering spare parts, please state the following information:

- Machine no.
- Article no.

10.2 Customer service addresses

Wilhelm Altendorf GmbH & Co KG
Service department

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