

Assembly and Operating Manual

WAGNER

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PrimaTech with Touch Screen

 **DANGER**



High Voltage!
Turn power off
before servicing!

 **CAUTION**

Read rules for safe
operation and
instructions
carefully!




3127523

Hardware



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This manual describes the installation of a PrimaTech system (control cabinet, electrical connections and preparation for initial start up).

This operating manual is to be used alongside the operating manual PrimaTech "Software", which describes the procedure for the initial start up of an entire PrimaTech system.

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This manual contains information and hints for the service, repair and maintenance of the equipment. The user must obey all the rules of operation found in this manual; failure to do so will render the warranty invalid.

Wagner powder systems are designed to meet the most stringent safety requirements. They can be operated in compliance with generally applicable safety codes and applicable national safety regulations.

Please pay particular attention to the parts marked by the following symbols. Follow the instructions exactly, in the interests of both your own safety and the correct functioning of the unit.



Warning

This symbol draws attention to the fact that if the operating instructions, working instructions, prescribed working sequences etc. are not followed exactly; this can lead to injury or even fatal accidents.



Caution

This symbol indicates that failure to follow the operating instructions, working instructions, prescribed working sequences etc. exactly can lead to material damage.



Hint

This symbol draws your attention to useful additional information and tips. Failure to observe these instructions can cause malfunctions.

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1. Disclaimer

1.1 Hardware

Any amendments by the user or any third party to the structure of the control cabinet delivered by J. WAGNER GmbH, in particular in respect of the electric control, require the written permission of J. WAGNER GmbH.

Any amendments, which were not permitted, immediately lead to the exclusion of all warranty, liability and guarantee claims by the manufacturer.

1.2 Software

The production of copies of the software for the purpose of selling it or installing it in proprietary systems or controls of the end user for the purpose of selling these or for own use requires the written permission of J. WAGNER GmbH.

Any amendments by the user or third parties of the software delivered by J. WAGNER GmbH, requires the written permission of J. WAGNER GmbH.

Any amendments, which were not permitted, immediately lead to the exclusion of all warranty, liability and guarantee claims by the manufacturer.

2. Safety regulations

2.1 Safety hints



Warning

This equipment can be dangerous if it is not operated in accordance with this operating manual!

There might be additional regulations to be observed, put into effect by governmental, state or other official agencies or local security (fire) departments!



Warning

Under no circumstance may persons with a cardiac pacemaker come close to the area between the tip of the spray gun and the work piece to be coated!

The following rules must be observed in order to ensure a safe and efficient use of the equipment:

- The user has to observe particularly the safety guidelines of the VdS, the local professional and security institutions and to the operational regulations valid for the relevant country (see BGI 764).
- The user has to make sure, that the average powder/air concentration does not exceed 50% of the LEL (maximum allowed concentration of powder in air). If a reliable LEL value is not available, the average powder/air concentration may not exceed 10 g/m³.
- The main power connection for operation of the Wagner powder equipment **must** be electrically interlocked with the exhaust system of the powder coating booth.
- All individual system components **must** be grounded according to the regulations.
- **Grounding cables must** be checked regularly for **proper functioning** (see EN 60204)!
- In the event of faults or defects, repair work is to be performed at the user's discretion.
- Specially trained personnel may only carry out repairs.
- Repairs must never be performed in an explosion-hazard area.
- The work area **must** have an electrostatically conductive floor (measured in accordance with EN 1081).
- All conductive parts in the work area **must** be electrostatically grounded (work area = 1 m around every spray location or opening in the booth).
- All persons inside the work area **must** wear electrostatically conductive footwear.
- Gloves are not to be worn! If gloves are used they **must** be made of conductive material.
- For removal of powder deposits use only mobile industry vacuum cleaners of protection class 1 (see ZH 1/487 for C-powder).
- Suitable fire extinguishing equipment should be provided and maintained in perfect working order in rooms or areas where there is a risk of fire.

- **Wear suitable work clothing**
- **Use breathing protection or a visor for work which produces powder and when developing solvent steams:**
Avoid health dangers by inhalation and skin contacts of solvent steams and lacquer aerosols, Cornea injuries by splashes in the eye.
- **Check the equipment for damage:**
Before operating the system, check if slightly damaged parts still function correctly. Check whether the moving parts operate properly, whether they jam and whether parts are damaged.
Damaged parts should be repaired or replaced by a Wagner customer service.
- **Risk of injury in crushing and shearing points in the work area:**
Avoid risk of injury from cuts and stabs from components or modules with sharp or pointed edges.
- **Risk of explosion:**
No plug connections may be undone during operations!
Mechanical interlocks for plug connections **must** be reinstalled prior to start up!
Doors of control cabinets, clamp sockets, plugs, lamps and other electrical components must remain closed during operation.
- **Guideline 94/9/EG:** The device is suited for the applications it was designed for, even in explosion-hazard areas.



Warning

For your own safety, use only accessories and equipment listed in the operating manual. The use of individual parts other than those recommended in the operating manual may create a hazard to personal safety.

Use only original Wagner replacement parts!

Alteration or repair of Wagner original spare parts may cause fatal accidents or explosions in the coating system!

2.2 Safety features

Plates bearing information for the user have been attached to the work openings of the powder coating booth. The following symbols have been used:

The plate size corresponds to the standard category \varnothing 100 mm.

The label plates, which must be attached, are shown below.



High voltage
In the control cabinet:
(25 mm) voltage before
main switch



Forbidden for
unauthorized persons



Explosive atmosphere



Follow the instructions in the operating manual



Wear electrostatically conductive footwear



Forbidden for persons with a cardiac pacemaker



Fire, open light and smoking prohibited

2.3 Grounding

For security reasons the system must be properly grounded. Wagner recommends the use of a copper cable of at least 16 mm² with sufficient mechanical resistance for connection to the System Ground. Also refer to the operating manual of the powder spray gun.

0203_.doc

Good grounding of the **workpiece** is also necessary for optimum powder coating.

A poorly grounded workpiece causes:

- dangerous electric charging of the workpiece
- back-spray onto spray gun and user
- uneven coating
- very bad wrap around



Warning


Sparks between workpiece and conveyor hooks (hangers) can occur if hooks or other hanger parts are not completely cleaned!

These sparks can cause heavy radio frequency interference.

Conditions for good grounding as well as coating are:

- Good grounding of the workpiece to be coated and of conveyors and hangers.
- Ground the powder spray booth, conveyors and hangers with the installation of a minimum 16 mm² copper conductor to the system ground.
- Regular cleaning of hangers from powder residues.
- The grounding resistance of the workpiece must not exceed 1 MΩ (Mega Ohm).
- A grounding cable must be connected to the control module or control cabinet.

2.4 EC Declaration of conformity

 Wagner hereby declares that the unit described in these operating instructions has been designed and manufactured according to the provisions of EU Directives 98/37/ EG, 94/9/ EG, 73/23 EWG und 89/336 EWG.

The following **European** standards were applied:

EN 12100-1/-2	EN 50281-1-1/-2	EN 61000-6-1
EN 61000-6-2	EN 61000-6-3	EN 60204-1
EN 50053-2	EN 50050	

The following **German** standards and/or Guidelines were applied:

BGI 764

The product includes the:

EC declaration of conformity certificate no. **3127523**

This can be ordered again if necessary from your WAGNER dealer by giving details of the product and serial number involved.

3. Assembly of the PrimaTech system



PrimaTech rack

With 16 EPG 2008 / EPG Prima
(maximum equipment)

The rack is ready assembled and must only
be electrically and pneumatically connected.

Also refer to chapter:

[3.1 "Connect PrimaTech Rack"](#)

Prior to assembly and before beginning with the electrical connections, a check should be performed as to whether all necessary components are available.

The parts list of the electric circuit diagram lists all control cabinet components. The parts list is project-related and should be kept in a safe place.



Control cabinet

Also refer to chapter:

[3.2 "Electrical connections in the control cabinet"](#)

3.1 Connect PrimaTech Rack

3.1.1 Assembly instructions

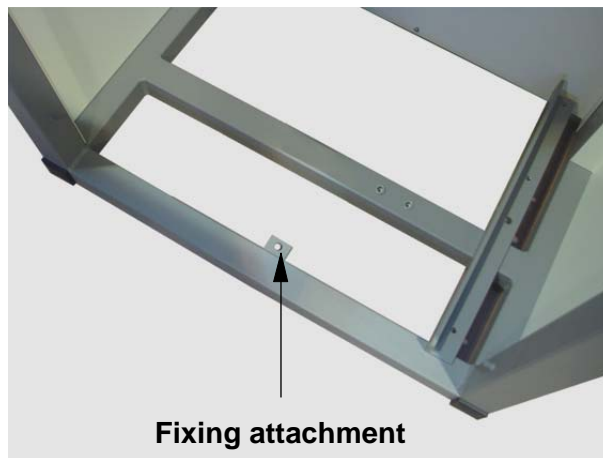


Caution

Danger of tipping!

Secure the rack against tipping while it is being transported.

Screw rack to base on the fixing attachment at the installation site.



P_00349

3.1.2 Components



Rack:

..... No. 0360093

The rack includes:

Distributor block, complete..... No. 0360252
 consisting of:

Fitting straight, pluggable No. 9992106

Stopper..... No. 9998201

Grounding cable, complete No. 0264332

Base rack with eight storage spaces for a maximum of sixteen EPG 2008 / EPG Prima control units



EPG 2008:

Europa edition..... No. 0360010

USA edition (FM approved) No. 0360031

Universal control unit for Corona or Tribo powder spray guns.

One EPG 2008 is required per gun.

Spare parts see operating manual of the control unit



P_00732

EPG Prima:

Europa edition..... No. 0360030

USA edition (FM approved) No. 0360032

Universal control unit for Corona or Tribo powder spray guns.

One EPG Prima is required per gun.

Spare parts see operating manual of the control unit

The control units EPG 2008 and EPG Prima are technically to each other compatible.



Metal sheet:

..... No. 0360238

To close free spaces when the rack is not fully fitted.

The metal sheet consists of:

- Star washer No. 9922101
- Fillister head screw No. 9903328
- Hex nut..... No. 9910108



Connection EPG 2008 / EPG Prima / Connection box:

..... No. 0263092

Consisting of:

- Connection cable 1.2 m..... No. 0263214
- Mains cable 0.55 m No. 0241269



Grounding cable 0.75 m:

..... No. 0264332

Grounding cable between the **control units**



Hose 6/8 black:

..... No. 9982078

Hose connection between the **air diffuser** of the rack and the **control units**



Control connection to EPG 2008 / EPG Prima:

PrimaTech interface for 8 EPG No. 0263080

**Control cable to the PrimaTech interface:**

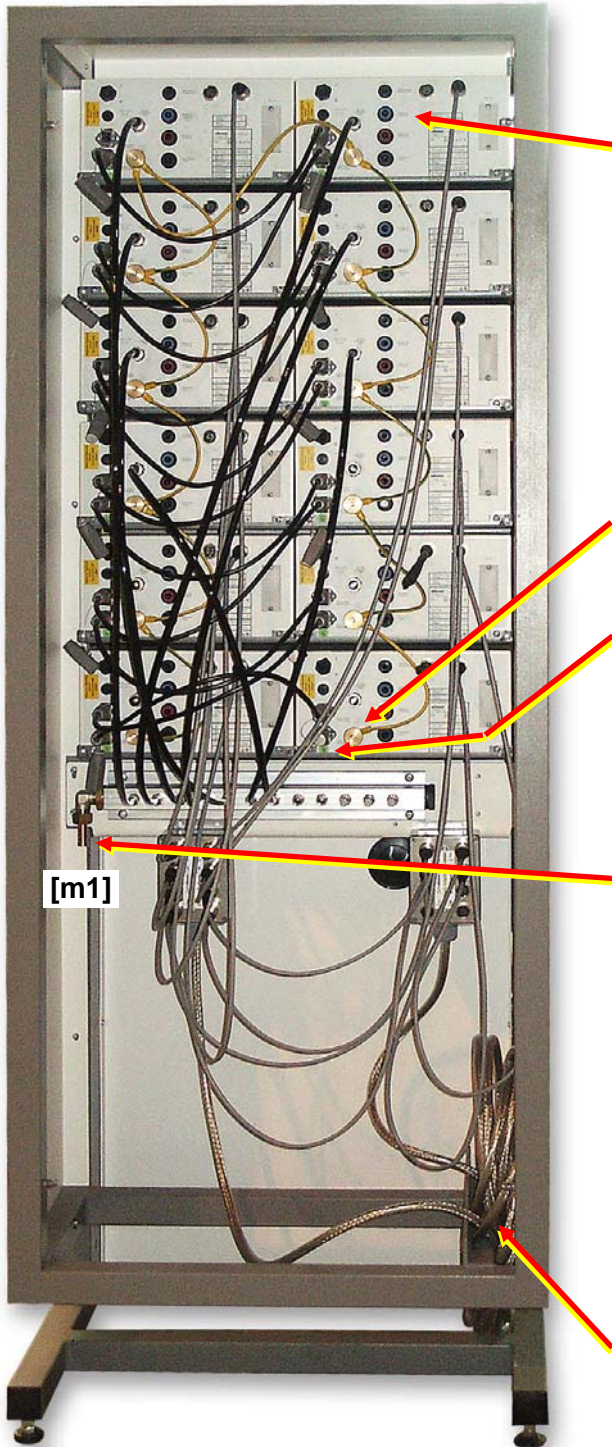
Shielded cable
by the meter 12 x 0.5 mm²-CY No. 3127495

**Power supply cable to the first EPG 2008 / EPG Prima:**

10 m (with plug to the EPG) No. 0360263

3.1.3 Connections between the control cabinet and rack

Illustration with maximum equipment, with twelve EPG 2008 / EPG Prima



- Connect spray guns:
see operating manual of the control unit **EPG 2008 / EPG Prima**
Connection cables: see "[Hoses for the connection of the rack with the gun and injector](#)"
 - Connect grounding cable (0264332) to first **EPG 2008** and system ground
 - Connect supply voltage cable (0360263) to the clamp strip = **EPG-X2** in the control cabinet:
see chapter [3.2.4](#) item **7b**
 - Connect assembly kit 1 (article no. see chapter [3.1.2](#) to distributor block (1/2") using the hose clamp
-
- [m1]
- Connect compressed air 87 – 116 psi (6 ... 8 bar) to assembly kit 1 (1")
 - Connect control voltage cable to the clamp strip = **EPG-X3** in the control cabinet:
see chapter [3.2.4](#) item **6b**
-

3.1.4 Hoses for the connection of the rack with the gun and injector

	<p>Hose 4/6 black: No. 9982079</p> <p>Hose connection between EPG 2008 / EPG Prima and spray gun</p>
	<p>Hose 6/8 red: No. 9982063</p> <p>Feed air hose from EPG 2008 / EPG Prima to powder injector</p>
	<p>Hose 6/8 blue: No. 9982062</p> <p>Dosing air hose from EPG 2008 / EPG Prima to powder injector</p>
	<p>Special hose: Powder hose from the powder injector to the spray gun</p> <p>Inner diameter</p> <p>10 mm No. 9987080 11 mm No. 9987081 12 mm No. 9987082</p>
	<p>Assembly kit 1: No. 3120195</p> <p>Adapter for the compressed air connection at the distributor block in the rack</p> <p>Connection of a max. of 12 EPG 2008 / EPG Prima</p>



Assembly kit 2:

..... No. 3120196

Connection to the second or third rack

Assembly kit 2 is connected to assembly kit 1 of the first rack and assembly kit 1 of the second rack.

Connection of a max. of 36 **EPG 2008 / EPG Prima**

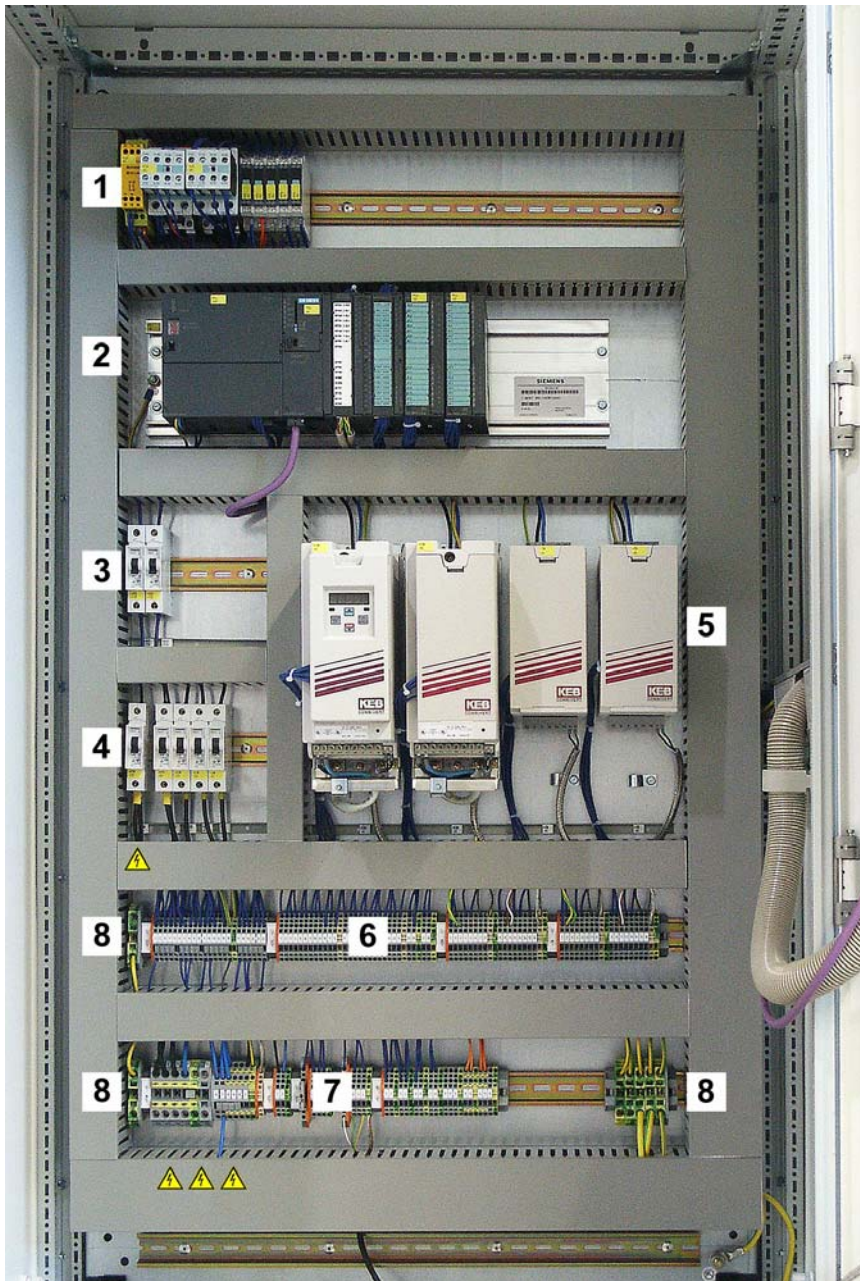
3.2 Electrical connections in the control cabinet

3.2.1 Overview

Abbreviations in the PrimaTech circuit diagram

Abbreviation	Term (German)	Term (English)
ASS	Aufbaupläne	Assembly
POW	Lastspannung	Power
PLC	SPS-Steuerung	PLC-Control
TP	Bedienpanel	Touch-Panel
DCD	Gleichspannung	DC-Distribution
ESD	Not-Aus-Schaltgerät	Emergency-Stop device
ENC	Encoder/Taktgeber	Encoder
LC	Lichtvorhang Kontur	Light Curtain Kontur
LB	Lichtschanke SCAN	Light Barrier SCAN
ILS	Signalaustausch	Interlock-Signals
CTL	Steuerung	Control
EPG	Pistolen Steuergerät	Electrostatic Power Generator
EBA/KHG	Hubgeräte	Reciprocator
ZW	Zustellwagen	Sliding Tables
CON	Klemmenplan	Terminal Connection Diagram
CAB	Kabel-Übersichtsplan	Diagram of Cable Strip
PAR	Stückliste	Part List

Illustration with maximum equipment (see circuit diagram = ASS sheet no. 6)



1. Control components

2. PLC

3. 24 VDC fuses

4. 230 VAC fuses

5. Frequency converter for movement technique

Reciprocators EBA/KHG
sliding table ZW
(if available)

6. Clamp strips

24 VDC general distribution
24 VDC guns
24 VDC reciprocators
EBA / KHG
24 VDC sliding table
ZW (if available)

7. Clamp strips

230/400 VAC
230 VAC EPG (guns)
24 VDC pulse generators
24 VDC light curtain SCAN
external interlock

8. Ground wire clamps

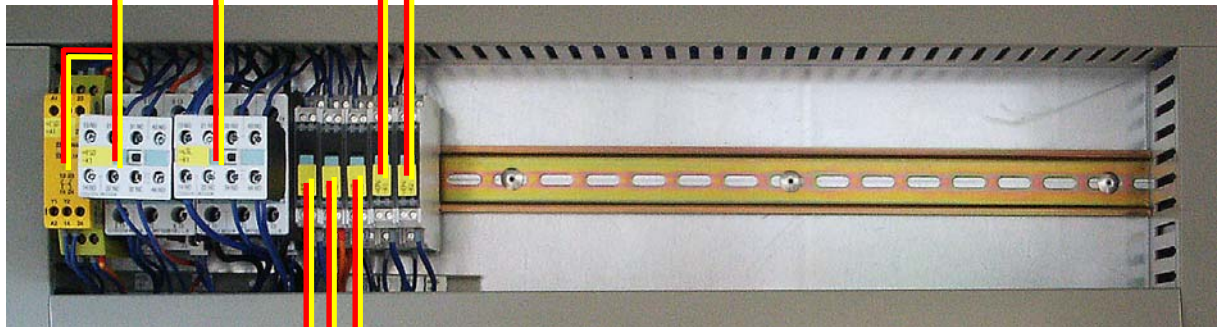
3.2.2 Control components / PLC

1 Control components see circuit diagram:

= ESD sheet 1

= CTL sheet 1

= EPG sheet 1

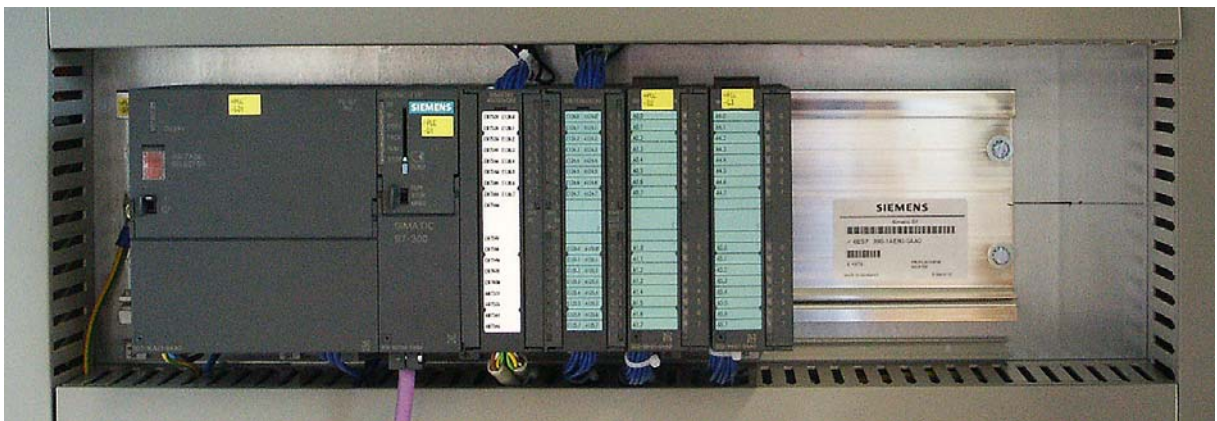


= CTL sheet 2

= ILS sheet 1

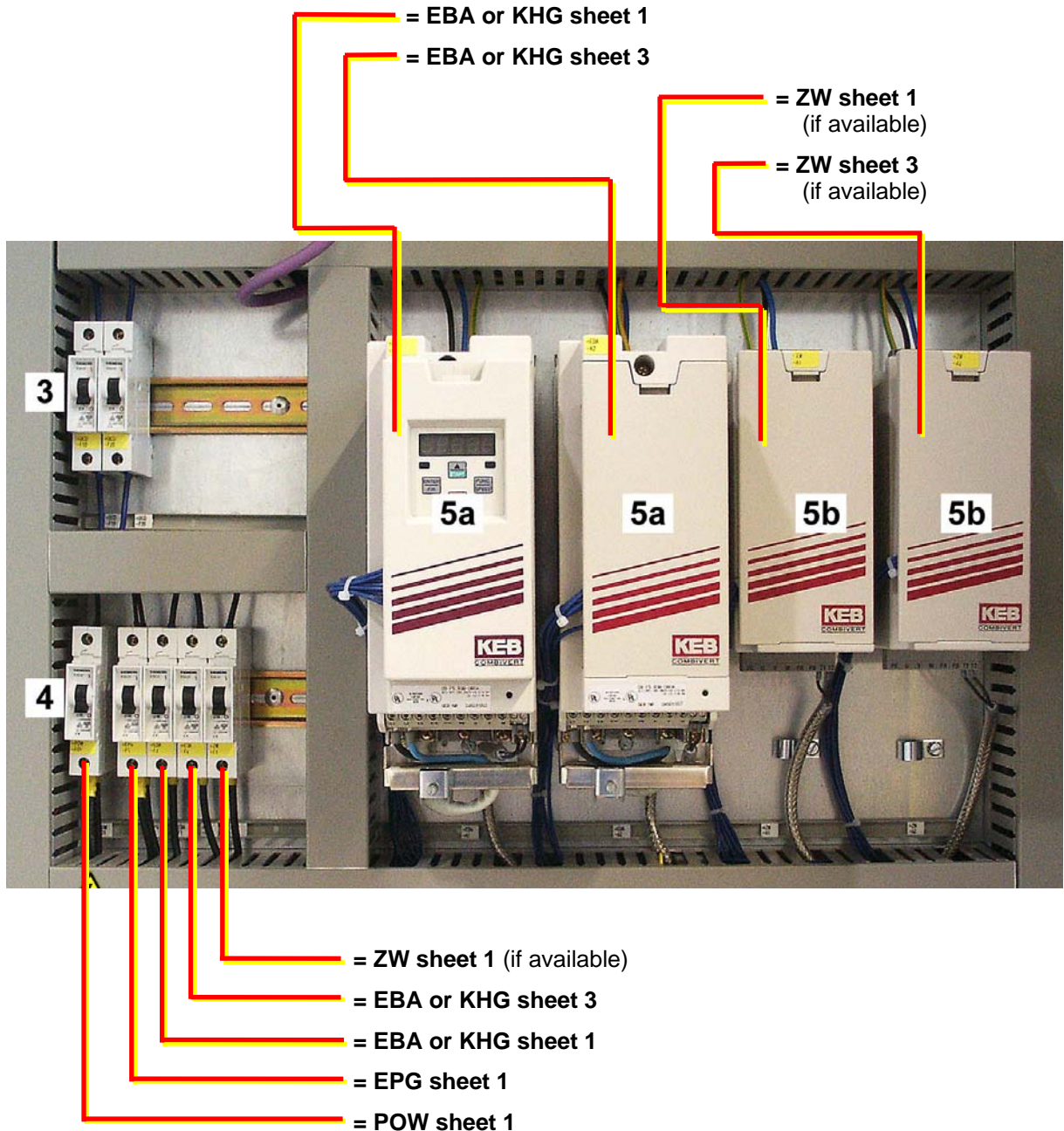
2 PLC see circuit diagram:

= PLC sheets 1 to 3



3.2.3 Fuses/Frequency converters

- 3 24 VDC fuses see circuit diagram: = DCD sheet 1
- 4 230 VAC fuses
- 5 Frequency converters for movement technique
 - a Long stroke reciprocators EBA/Oscillators KHG
 - b Sliding table ZW (if available)



3.2.4 Clamp strips

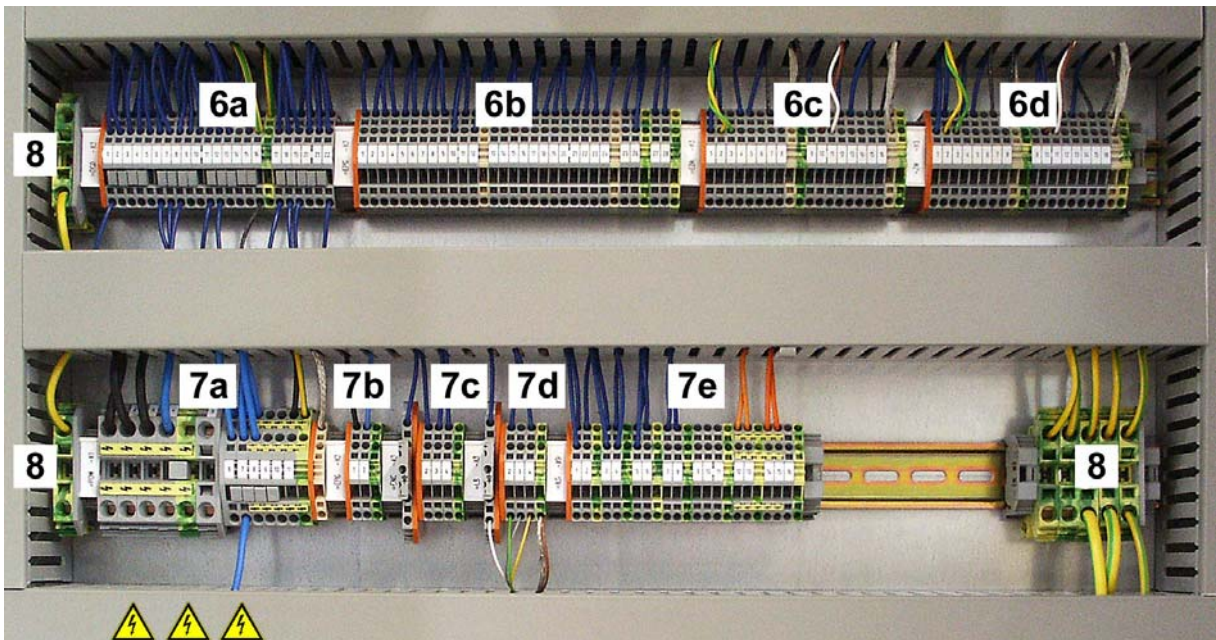
6 Clamp strips

a = DCD-X3	General distribution	= CON sheet 2
b = EPG-X3	Spray guns	= CON sheet 7
c = EBA/KHG-X3	Reciprocators EBA/KHG	= CON sheet 8
d = ZW-X3	Sliding table ZW	= CON sheet 9
	(is not installed if no ZW available)	

7 Clamp strips

a = POW-X1	230/400 VAC	= CON sheet 1
b = EPG-X2	230 VAC EPG (spray guns)	= CON sheet 6
c = ENC-X3	24 VDC Pulse generator	= CON sheet 3
d = LB-X3	24 VDC Light curtain SCAN	= CON sheet 4
e = ILS-X3	External interlock	= CON sheet 5

8 Ground wire clamp strips see circuit diagram: = ASS sheet 6



3.3 Connections Pulse generator and light curtains

3.3.1 Connections between the control cabinet and pulse generator



Pulse generator:

Incremental encoder 28I/U No. 3125588



Bracket set for pulse generator:

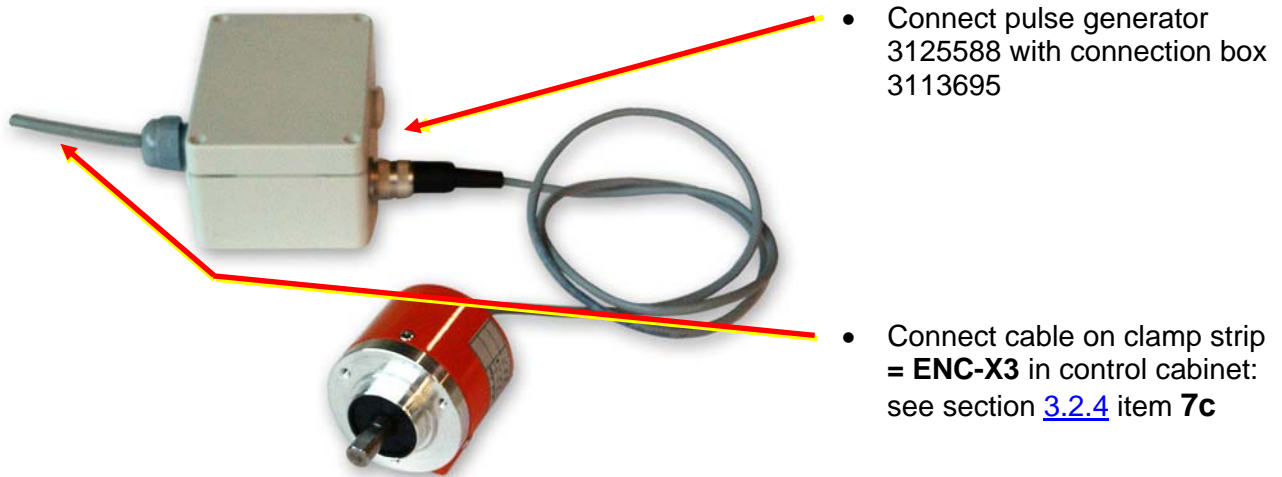
..... No. 3104680



Connection box for pulse generator:

Connection box No. 3113695

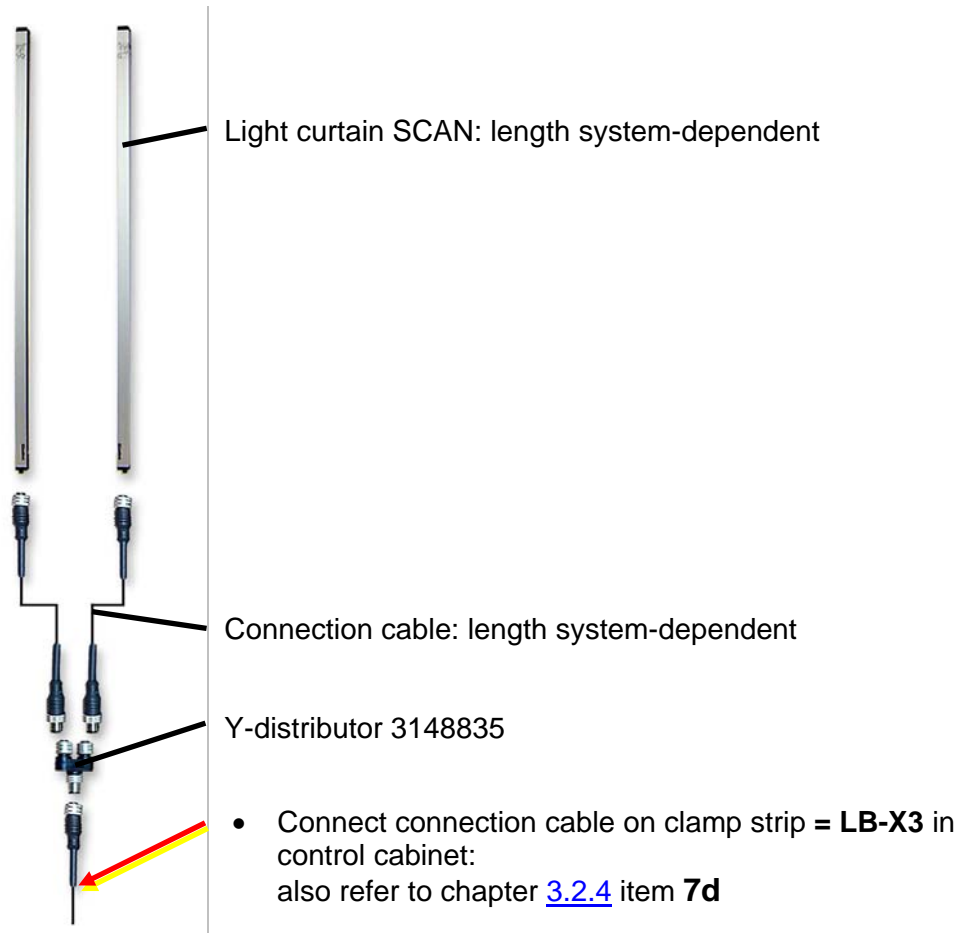
Cable to the connection box for incremental encoder
by the meter 5x1.5 mm² No. 3087381



- Connect pulse generator 312558 with connection box 3113695
- Connect cable on clamp strip = ENC-X3 in control cabinet: see section [3.2.4](#) item 7c

3.3.2 Connections between control cabinet and light curtains SCAN

	<p>Light curtain SCAN (resolution 25 mm):</p> <p>Length</p> <p>450 mm No. 3148826</p> <p>1200 mm No. 3148827</p> <p>1650 mm No. 3148828</p> <p>2025 mm No. 3148829</p> <p>2400 mm No. 3148830</p>
	<p>Y-distributor for connection cables light curtain SCAN:</p> <p>..... No. 3148835</p>
	<p>Connection cable for light curtain SCAN via Y-distributor to the control cabinet:</p> <p>Length</p> <p>0.5 m No. 3148831</p> <p>2.0 m No. 3148832</p> <p>5.0 m No. 3148833</p> <p>10.0 m No. 3148834</p>



3.3.3 Connections between control cabinet and light curtains



Light curtain "Kontur 2": Resolution 20/40 mm

Length	Resolution 20 mm	Resolution 40 mm
320 mm.....	No. 3158584.....	No. 3127544
480 mm.....	No. 3158585.....	No. 3127327
640 mm.....	No. 3158586.....	No. 3127549
960 mm.....	No. 3158587.....	No. 3127552
1280 mm.....	No. 3158588.....	No. 3127555
1600 mm.....	No. 3158589.....	No. 3127024
1920 mm.....	No. 3158590.....	No. 3127328
2240 mm.....	No. 3158591.....	No. 3127689
2560 mm.....	No. 3158592.....	No. 3127564
2880 mm.....	No. 3158593.....	No. 3127567
3200 mm.....	No. 3158594.....	No. 3127598



Connection cable for light curtain to control unit Quattro-DP:

Length

- 2.5 m No. 3158597
- 5 m No. 3158598



Control unit Kontur-Quattro-DP for light curtain:

..... No. 3158596



Power supply cable to light curtain:

by the meter 3x1.0 mm² No. 3052605



Connection cable for control unit Quattro-DP contour to PLC:

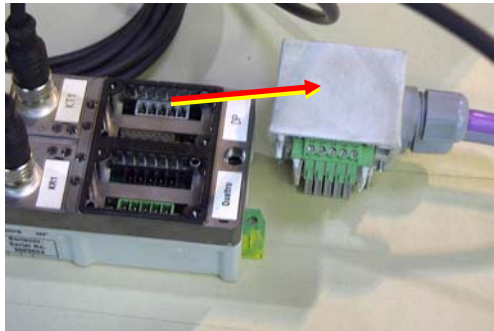
by the meter 2x0.34 mm² No. 3132707
 Plug to PLC No. 3114748

3.3.4 Information on the installation of the light curtain "Kontur 2"



Caution

To avoid malfunctions of the light curtains through electrostatic influences, the following points should be taken into account for every system!

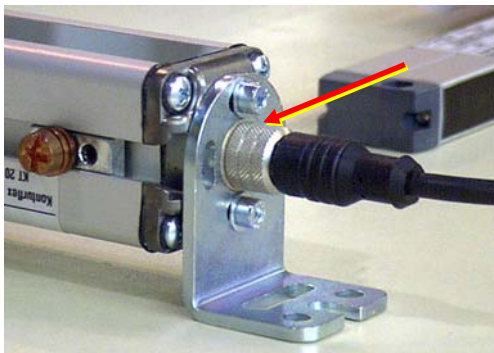


1. **Never** plug in or pull live light curtain connection cables at the light curtains or the control unit Quattro.

First switch off 24 VDC supply or remove connection box at control unit Quattro.



2. A brass ring can be found at the connection thread of every light curtain. This ring finishes level with the fastening bracket. Ensure that the brass ring exists.



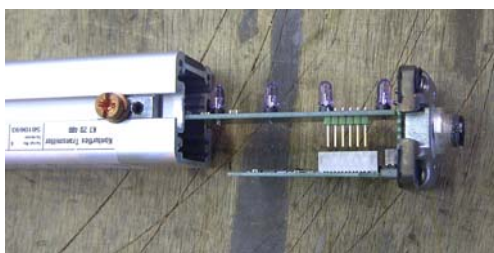
3. The metal ring of the connector must be fully screwed onto the thread.

It is important that the metal ring of the plug contacts the brass ring of the light curtain.



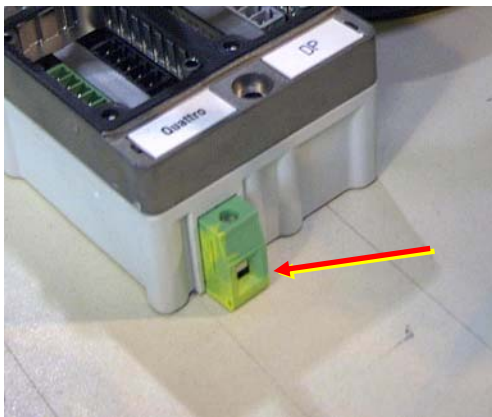
No. 3120357 (end piece 426610 KR)

4. If the thread of the light curtain is damaged, so that the metal ring cannot be fully screwed on, the end piece of the light curtain must be replaced.

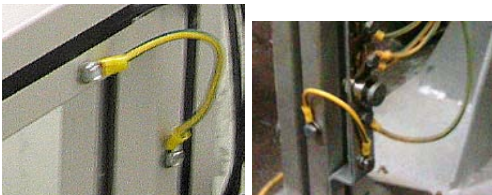


No. 3120358 (end piece 426610 KT)

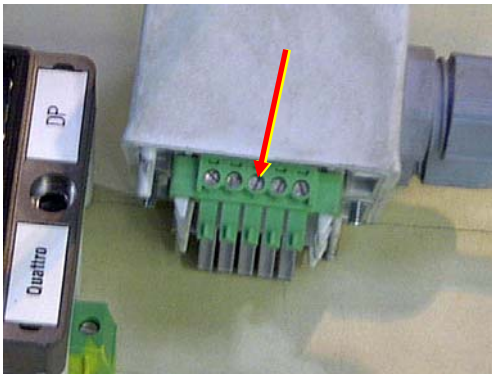
5. All light curtains must be connected directly with an equipotent busbar from the grounding screw via a grounding cable. The bar is ideally fastened to the light grid portal. A grounding cable is laid from the equipotent busbar to the ground of the control cabinet.



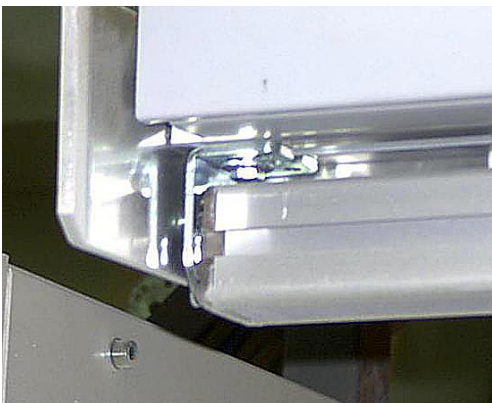
6. The control unit Quattro also has a grounding clamp. It must not be forgotten to lay a grounding cable from this clamp to the equipotent busbar.



7. As the portal profiles are made of anodized aluminum, grounding via sliding blocks is insufficient. All profiles should be connected with each other via short grounding cables and then with the equipotent busbar.



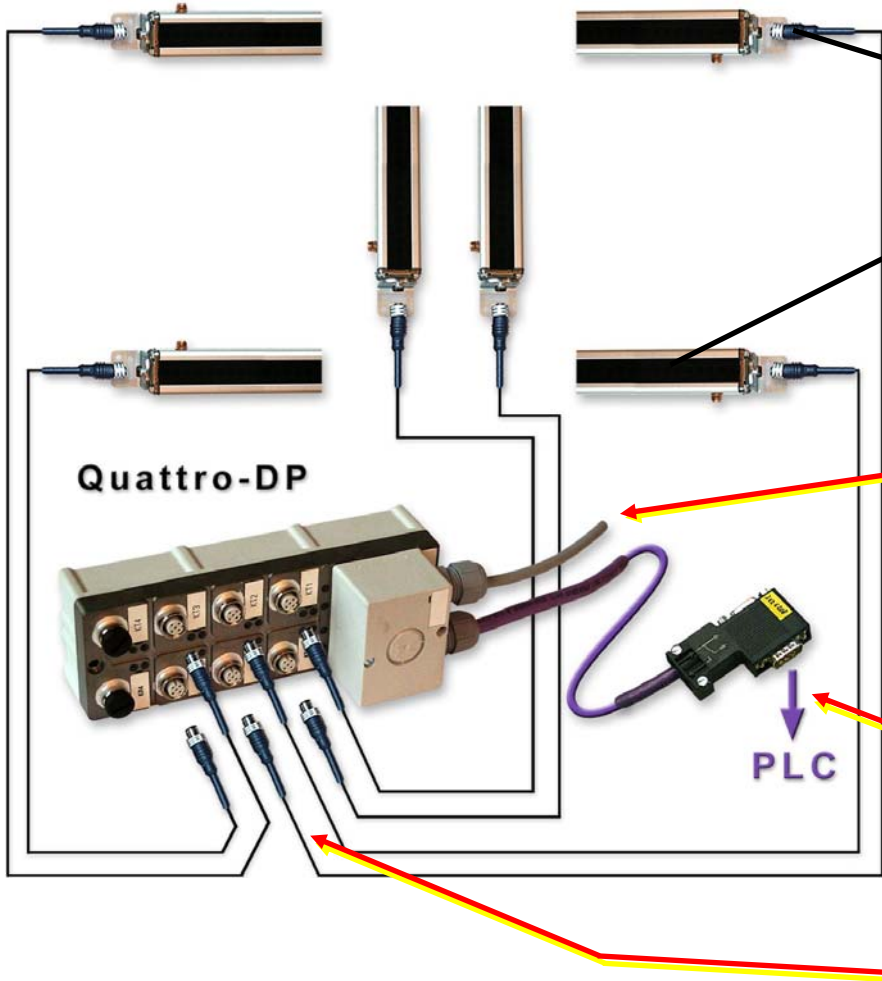
8. The shield of the Profibus cable must be connected with pin 3 of the green plug of control unit Quattro.



9. Additional information:

To keep the gap in the sensing field at the feed slot as small as possible the fastening brackets of the upper light curtains should be turned inwards.

3.3.5 Connection diagram of the light curtain "Kontur 2"



Connection cables Kontur:
length system-dependent

Light curtain "Kontur 2":
length system-dependent

- Connect supply voltage cable (3052605) on the clamp strip = **DCD-X3** in the control cabinet: see chapter [3.2.4](#) item **6a**
- Connect plug at PLC in control cabinet: see chapter [3.2.2](#) item **2**
- Connect connection cables at control unit Quattro-DP

1



2



3



3.4 Connection of the movement technique

3.4.1 Overview



Connection cable combination for movement technique:

One cable combination is required per movement element (EBA, ZW).

- Length 15 m No. 3113675
- Length 25 m No. 3113676
- Length 35 m No. 3114411



Control cable to oscillator KHG 350-F:

One cable is required per movement element (KHG).

- Shielded cable by the meter 7 x 1.5 mm²-CY No. 3124426



Long stroke reciprocator EBA 1:

EBA 1 is the base reciprocator model. It is designed for simple automatic coatings with a maximum of 4 guns per movement system.



Long stroke reciprocator EBA 6N:

The reciprocator EBA 6N is designed for more sophisticated automatic coatings with a maximum of 12 guns.



Oscillator KHG 350-F:

The oscillator with its vertical gun arrangement is the ideal supplement for short booths.

Reciprocator and lower speed of the KHG 350-F can be smoothly adjusted via a PLC control.



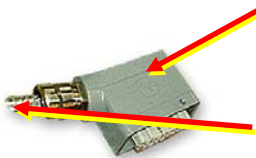
Sliding table ZW-1:

The Sliding table is responsible for the horizontal positioning of the reciprocator. It regulates the space between the spray guns and the object to be coated.

Features:

- In/Out positioning 600 / 900 / 1200 mm
- Set/Actual position can be read at the control cabinet

3.4.2 Connections between the control cabinet and movement technique



- Connect 16-pin plug (control) to the movement technique connector:
see operating manual for movement technique
- Connect cable (control) to the corresponding clamp strip = **EBA/KHG-X3** and/or = **ZW-X3** in the control cabinet:
see chapter [3.2.4](#) item **6c** and/or **6d**



- Connect 6-pin plug (supply voltage) to the movement technique connector:
see operating manual for movement technique
- Connect cable (supply voltage) to corresponding frequency converter in control cabinet:
see chapter [3.2.3](#) **EBA/KHG** item **5a** and/or **ZW** item **5b**

3.5 Assembly material electrical

Ensure that the following small components depicted are not lost.



Small components:

For the assembly of the mechanical components and to connect electric cables and similar

System-dependent, consisting of:

screws, washers, nuts, connections, end sleeves etc.



Grounding cable for potential equalization:

by the meter 16 mm² No. 3058460

4. Commissioning



Caution

Prior to the initial start up of the system, all fuses and the main switch must be switched off!

Please proceed in the sequence described below!

1. Add supply voltage "externally"
2. Check supply voltage



Caution

If the neutral wire is missing, the frequency converters will be destroyed!

Check the supply voltage 230/400 V and PE at the clamps = POW – X1: 1,2,3,4 N.

3. **Switch main switch on**
Main switch = POW – Q1 ON
4. **Switch on remaining fuses one after the other**
5. **Switch ventilator on and wait for booth OK**
Booth OK is affected after 60 seconds for Wagner booth controls.
6. **Check control units EPG**
Check gun air for correct allocation:
 - Is the feed air, dosage air and atomizing air received by the correct injector and corresponding gun?Check high voltage for correct allocation:
 - When selecting a gun, is the high voltage received by the correct gun?
7. **Check input signals**
 1. Fire monitoring (if available)
if the message Fire OK is missing, then the system cannot be operated.
 2. If the message Booth OK is missing, then no gun may commence operation.
 3. "Conveyor is operating":
In automatic mode, the guns are stopped if this signal is not given.
8. **Check output signals**
 - If the signal "Applications OK" is missing, the conveyor must be stopped.

5. Technical data

5.1 Control cabinet

5.1.1 Control unit

The control of the system is based on a relay / PLC control. It features the following peculiarities:

- Gap *, Height *, Depth *, Recipe
- Safety features
- E/A interface, external

* System-dependent

5.1.2 General connection data

Type:	PrimaTech
Serial number	see name plate
Year of construction	see name plate
Voltage:	400 / 230 V
Frequency:	50 Hz
Output:	max. 7.5 kW
External fuse:	35 A
Supply cable:	5x10.0 mm ² and/or 4x10 mm ²
Protection class:	IP 54

Dimensions:

Width:	800 mm
Height:	1760 mm
Depth:	500 mm
Weight:	approx. 160 kg on max. upgrade

5.1.3 Input signals external interface

Signal	Function	Clamp strip	Clamp	Contact /Signal type
Fire detection EMERGENCY OFF	Fire detection EMERGENCY OFF	= ILS – X9	1/2/PE	Potential-free NCC
Booth OK	Booth OK	= ILS / X9	3/4/PE	Potential-free NOC
Conveyor operating	Conveyor operating	= ILS – X9	5/6/PE	Potential-free NOC
Powder center OK	Powder center OK	= ILS – X9	7/8/PE	Potential-free NOC

5.1.4 Output signals external interface

Signal	Function	Clamp strip	Clamp	Contact /Signal type
EMERGENCY OFF external	Standard	= ILS – X9	12/13/PE	Potential-free NOC
Esta OK	Release to conveyor tech- nology	= ILS – X9	14/15/ 16/PE	Potential-free NOC

5.2 PrimaTech Rack

5.2.1 Rack

Dimensions:

Width:	630 mm
Height:	1670 mm
Depth:	660 mm
Weight:	approx. 150 kg
	e.g. if equipped with 12 EPG 2008 / EPG Prima

5.2.2 Individual control unit EPG 2008 / EPG Prima

Dimensions:

Width:	270 mm
Height:	136 mm
Depth:	340 mm
Weight:	approx. 5.5 kg

Electrical:

Mains: (AC)	85 VAC to 250 VAC
Frequency:	47 Hz to 440 Hz
Input power:	max. 25 W
Protection class:	IP 64

Further details: see operating manual of the control unit EPG 2008 / EPG Prima

Pneumatic:

Input air:	87 ... 116 psi (6 ... 8 bar)
Air quantity:	max. 20 m ³ /h

Further details: see operating manual of the control unit EPG 2008 / EPG Prima

Required compressed air quality:

Quality class	Compressed air quality according to ISO 8573.1	
5	Max. residual water: (pressure dew point in °C at 700 kPa / in °F at 100 psi)	+7 °C / +44.6 °F
2	Max. oil contents:	0,1 mg oil/m ³ / 0.1 oz/ft ³
3	Max. concentration:	5 mg/m ³ / 5 oz/ft ³
3	Max. particle size:	5 μm / 5 microns

Ambient conditions:

Operating temperature of the control unit: 41 to 113 °F (5 to 45 °C)
 If low temperature powders are used, the ambient temperature may have to be lower than 86 °F / 30 °C (refer to the powder specifications).

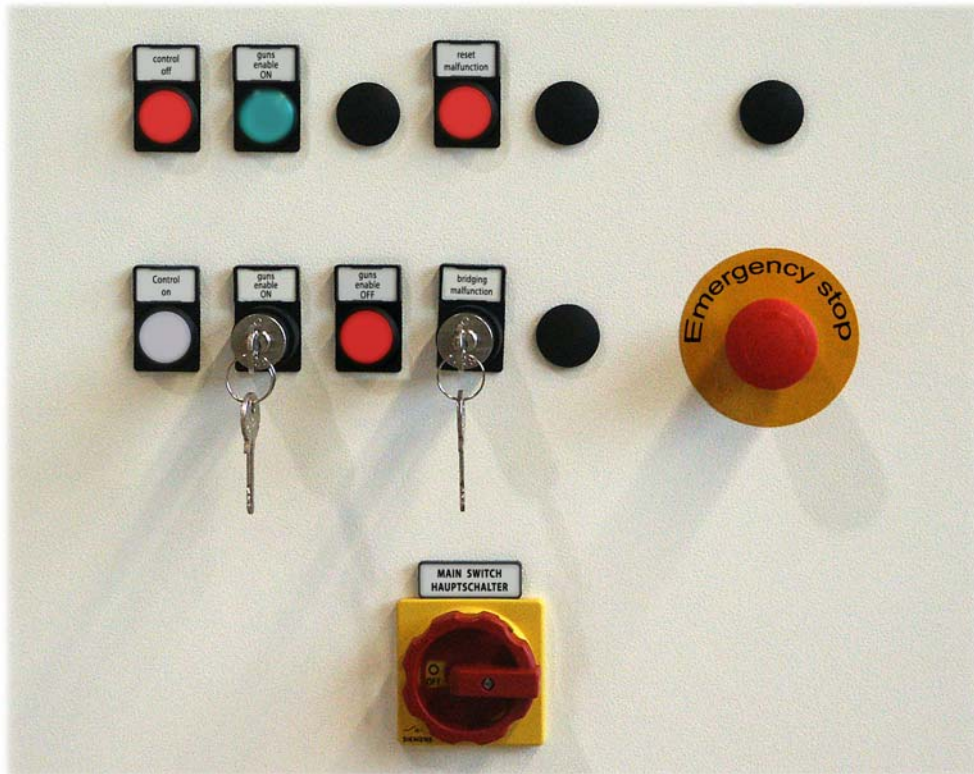


Volume measures:

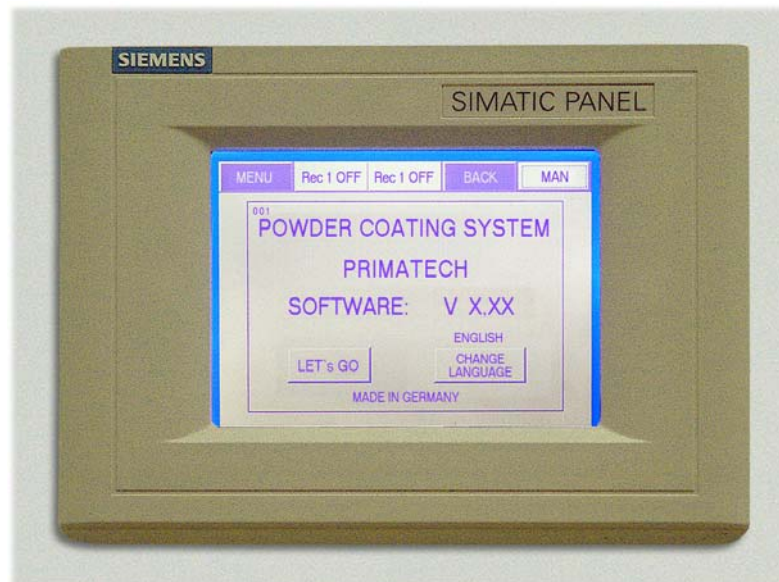
All volume indications (m³/h) are Nm³/h (norm cubic meters per hour). One cubic meter of a gas at 0 °C / 32 °F and 1.013 bar is called norm cubic meter.

1 Nm³/h = 35.3 ft³/h; 1 bar = 14.504 psi

6. Control elements in the control cabinet door



6.1 Dialog unit

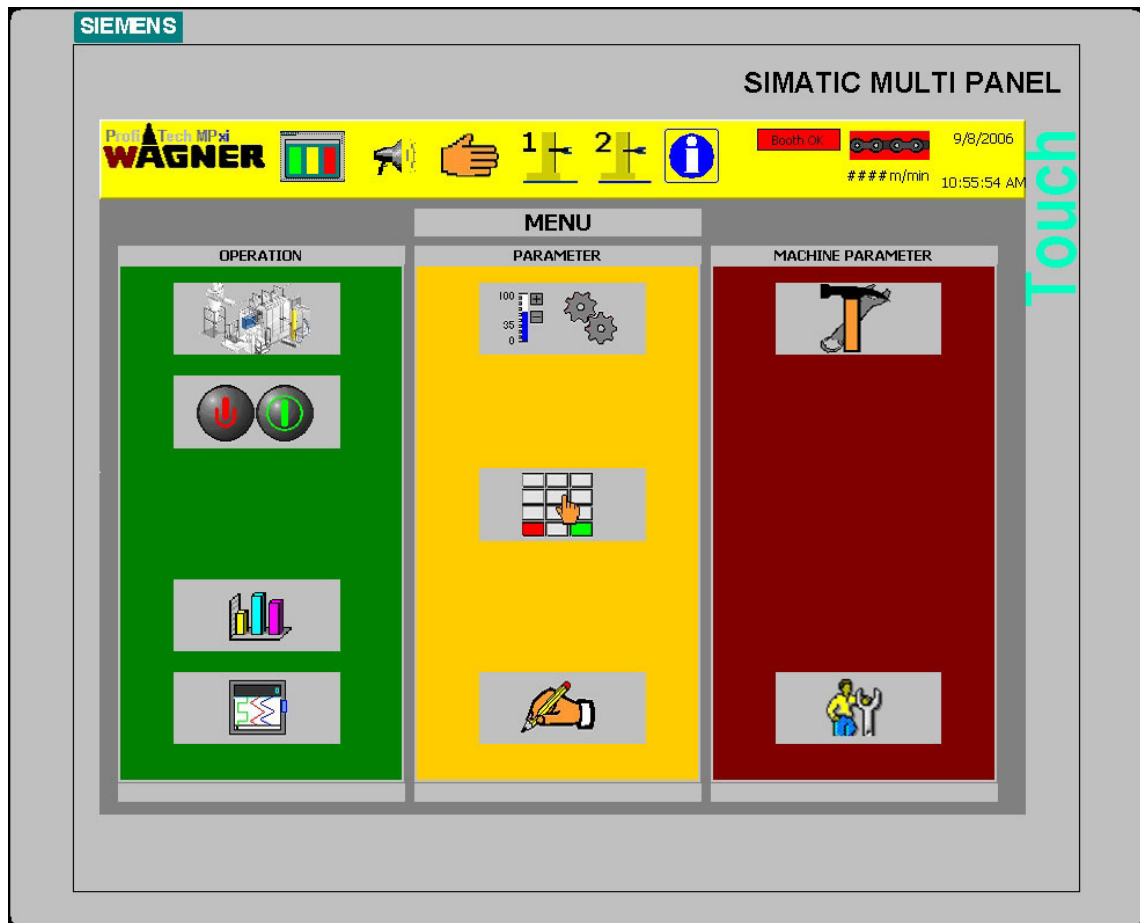


The dialog unit consists of a display with 320 x 240 pixels and a resistive touch screen. The display is monochrome (optional color). The brightness or contrast can be set so that the display can easily be read in all environments.

Special, interchangeable protective film (article no. 3120160) is available for rough industrial use in dirty environments.

The separate software-operating manual provides an accurate overview of the operating and observation functions of the dialog unit.

Dialog unit 12" touch screen (optional)



The dialog unit consists of a display with 800 x 600 pixels and a resistive touch screen. The display is colored. The brightness or contrast can be set so that the display can easily be read in all environments.





Special, interchangeable protective film (article no. 3120595) is available for rough industrial use in dirty environments.

The separate software-operating manual provides an accurate overview of the operating and observation functions of the dialog unit.

6.2 The operating and reporting elements

Element	Description / Article No.
 <p>Main switch</p>	<p>"Main switch" (= POW-Q1) Switching of the mains supply.</p> <p>Emergency Off main switch No. 3157626 Clamp cover No. 3126367</p>
 <p>Emergency stop</p>	<p>"EMERGENCY STOP" (= ESD-ES1) The control voltage is disrupted and all PLC outputs are reset.</p> <p>Mushroom-formed pressure switch red..... No. 3143502 Switching element 1 NCC No. 3143503</p>
 <p>Red Pressure switch</p>	<p>"Control Off" (= CTL-S2) The control for the outputs is switched off.</p> <p>Plate holder, complete (blank) No. 3114977 Pressure switch red..... No. 3143496 Switching element 1 NCC No. 3143503</p>
 <p>White Illuminated pressure switch</p>	<p>"Control On" (= CTL-S1/H1) The control voltage for the outputs is switched on. After Emergency stop, the system must be switched on again.</p> <p>Plate holder, complete (blank) ¹⁾ No. 3114977 Illuminated pressure switch white No. 3143494 Switching element 1 NOC No. 3143504 Lamp fitting with integrated LED white..... No. 3126387</p>
 <p>Green Indicator lamp</p>	<p>"Guns enable ON" (= EPG-H1) Indicates the complete release of high voltage and pneumatics.</p> <p>Plate holder, complete (blank) ¹⁾ No. 3114977 Indicator lamp green..... No. 3143499 Lamp fitting with integrated LED green..... No. 3126382</p>

1) Please always supply text when ordering replacements

Element	Description / Article No.
 <p data-bbox="296 692 427 723">Key switch</p>	<p data-bbox="528 320 951 351">"Guns enable ON" (= EPG-S1)</p> <p data-bbox="528 369 1430 400">General switch for the entire release of high voltage and pneumatics.</p> <p data-bbox="528 423 1430 454">Plate holder, complete (blank) ¹⁾ No. 3114977</p> <p data-bbox="528 459 1430 490">Key switch 0-1 key switching No. 3148363</p> <p data-bbox="528 495 1430 526">Switching element 1 NOC No. 3143504</p>
 <p data-bbox="336 925 384 956">Red</p> <p data-bbox="320 978 400 1010">Switch</p>	<p data-bbox="528 759 967 790">"Guns enable OFF" (= EPG-S2)</p> <p data-bbox="528 808 1430 840">General switch for the entire release of high voltage and pneumatics.</p> <p data-bbox="528 862 1430 893">Plate holder, complete (blank) ¹⁾ No. 3114977</p> <p data-bbox="528 898 1430 929">Pressure switch red No. 3143496</p> <p data-bbox="528 934 1430 965">Switching element 1 NCC No. 3143503</p>
 <p data-bbox="336 1209 384 1240">Red</p> <p data-bbox="240 1263 480 1330">Illuminated pressure switch</p>	<p data-bbox="528 1043 1015 1075">"Reset malfunction" (= CTL-S4/H4)</p> <p data-bbox="528 1093 1374 1160">After rectification of the fault, the error message can be re-set by operating this button.</p> <p data-bbox="528 1182 1430 1214">Plate holder, complete (blank) ¹⁾ No. 3114977</p> <p data-bbox="528 1218 1430 1249">Illuminated pressure switch red No. 3143495</p> <p data-bbox="528 1254 1430 1285">Switching element 1 NOC (2x) No. 3143504</p> <p data-bbox="528 1290 1430 1321">Lamp fitting with integrated LED red No. 3126379</p>
 <p data-bbox="296 1740 427 1771">Key switch</p>	<p data-bbox="528 1364 1015 1395">"Bridging malfunction" (= CTL-S3)</p> <p data-bbox="528 1413 1382 1480">This switch can be used to bridge the contact for the output of the error message.</p> <p data-bbox="528 1503 1430 1534">Plate holder, complete (blank) ¹⁾ No. 3114977</p> <p data-bbox="528 1538 1430 1570">Key switch 0-1 locking No. 3143500</p> <p data-bbox="528 1574 1430 1606">Switching element 1 NOC (2x) No. 3143504</p>

1) Please always supply text when ordering replacements

7. Spare parts lists

7.1 How to order spare parts

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Faulty and unserviceable parts are replaced in accordance with our General Terms and Conditions of Delivery.

In order to be able to guarantee safe and smooth spare parts delivery, the following information is necessary:

- **Invoicing address**
- **Delivery address**
- **Name of contact persons for check back**
- **Type of delivery**
- **Quantity ordered, article number and designation**

7.2 Spare parts recommendation for the control cabinet

The parts list of the electric circuit diagram lists all control cabinet components.

Light curtains or frequency converters are order-related.



Priority 1:

Components that **must** be on the spare parts list.

Priority 2:

Components that are recommended for the spare parts list.

Priority 3:

All other components that are not necessarily recommended for the spare parts list.

Art. No.	Quantity	Designation	Priority
3125588	1	Incremental encoder 28I/U	3
2303174	1	Control panel TP177B ***	2
3120285	1	CPU S7 - 314C-2DP	3
3127269	1	Power supply SIEMENS S7 230V/24VDC 10A	2
3158780	1 *	Frequency converter F5 0.75KW with EMV filter	2
3158778	1 **	Frequency converter F5 1.50KW with EMV filter	2
3158596	1	Control unit Kontur-Quattro-DP	2
3145128	1	Power protection S0 11KW	2
3125549	1	Diode combination S0	2
3120430	1	Relay socket with relay compl.	1

* for EBA 1, KHG 350F and ZW

** for EBA 6N

*** When replacing TP 170B it is necessary to update the software (contact Wagner service)

8. Maintenance and disposal

- Regular check of the grounding of the spray booth and the mounting points of the workpieces to be coated.
- Prior to the commencement of work in the spraying area or of cleaning work:
 1. Switch high voltage supply off and secure against switching on.
 2. Technical ventilation must be switched on and effective.
 3. Ensure that the discharge energy does not exceed 0.24 mJ when using flammable solvents in cleaning (additional measures when cleaning plastics should be determined separately).
 4. Use only electrically conducting and grounded containers for cleaning liquids.
 5. Observe manufacturer's information on cleaning (e.g. intervals for the exchange of filters or cleaning of exhaust air pipes).
- Maintenance and repairs are always to be executed in line with the information provided by the manufacturer or a special work schedule.
- Store any machine equipment, tools, resources and working equipment (e.g. cleaning rag) at the appropriate places.
- Collect paint and solvent rests, any working equipment impregnated with these as well as any empty containers in appropriate receptacles (hazardous waste).



Risks of non-observance

Health risks:

Injuries, diseases, material damage through fire, explosions etc.

9. Warranty

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What is covered by this warranty?

Faulty or defective parts are replaced according to our general delivery conditions.

Within the applicable warrant period, Wagner will repair or replace, at our option, defective parts without charge if such parts are returned with transportation charges prepaid to the nearest authorized service center. If Wagner is unable to repair this product so as to conform to this Limited Warranty after a reasonable number of attempts, Wagner will provide, at our option, either a replacement for this product or a full refund of the purchase price of this product.

These remedies are the sole and exclusive remedies available for breach of express and implied warranties.

What is not covered by this warranty?

This warranty does not cover any of the following damages or defects:

1. Damages or defects caused by use or installation of repair or replacement parts or accessories not manufactured by Wagner,
2. Damages or defects caused by repair performed by anyone other than a Wagner authorized service center, or
3. Damages or defects caused by or related to abrasion, corrosion, abuse, misuse, negligence, accident, normal wear, faulty installation or tampering in a manner which impairs normal operation.

Limitation of remedies:

IN NO CASE SHALL WAGNER BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS, INCLUDING TRANSPORTATION COSTS, WHETHER SUCH DAMAGES ARE BASED UPON A BREACH OF EXPRESS OR IMPLIED WARRANTIES, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY.

Disclaimer of implied warranties:

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

No ability to transfer:

This warranty is extended to the original purchaser only and is not transferable.

Your rights under state law:

Some states do not allow limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights; you may also be entitled to other rights, which vary from state to state.

10. Additional operating manuals

Depending on the equipment of the system, the following operating manuals are required to operate the entire system.

These operating manuals:

- Give important information required for the connection and start up of the respective component.
- Give important information required for the use (e.g. change of color) of the respective component.
- Contain the very important section on "**Maintenance and cleaning**" of the respective component.
- Describe troubleshooting for the respective component.
- List spare parts, wearing parts and accessories.

Designation		Operating manual	Language
Control unit	EPG 2008	0360890	German
		0360891	English
		0360892	French
		0360893	Italian
		0360923	Spanish
Control unit	EPG Prima	0360972	German
		0360973	English
		0360974	French
		0360975	Italian
		0360976	Spanish
Powder injector	PI-P1	0241890	German
		0241891	English
		0241892	French
		0241893	Italian
		0241897	Spanish
Automatic spray gun	PEA-C4-HiCoat	0390822	German
		0390829	English
		0390836	French
		0390840	Italian
		0390851	Spanish
Automatic spray gun	PEA-C4XL-HiCoat	0390823	German
		0390830	English
		0390837	French
		0390841	Italian
		0390855	Spanish
Tribo automatic spray gun	PEA-T3	0351873	German
		0351874	English
		0351875	French
		0351876	Italian
		0351877	Spanish

Designation		Operating manual	Language
Tribo automatic spray gun	PEA-T3XL	0351700	German
		0351701	English
		0351702	French
		0351703	Italian
		0351721	Spanish
Long stroke reciprocator	EBA 1	0238810	German
		0238811	English
		0238813	French
		0238812	Italian
		0238816	Spanish
Long stroke reciprocator	EBA 6N	0373820	German
		0373821	English
		0373822	French
		0373823	Italian
		0373826	Spanish
Oscillator	KHG 350F	0365800	German
		0365801	English
		0365802	French
		0365803	Italian
Sliding table	ZW	0365804	Spanish
		0224820	German
		0224821	English
		0224822	French
		0224823	Italian
		0224833	Spanish



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