



komax ims 295 Series

Operating Manual

Notes

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	Valid from Serial Number:	Year of construction:
Komax ims 295 BC	53000	from 2009
Komax ims 295 MC	93000	from 2009
Komax ims 295 BS	96000	from 2010

WIEDENBACH APPARATEBAU GMBH
Industriepark 312
78244 Gottmadingen
Germany

Tel: +49 (0) 77 31 / 799 11 - 0
Fax: +49 (0) 77 31 / 799 11 - 90
infoservice@wiedenbach.com

www.wiedenbach.com

Translation of the original operating manual

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1 Use

1.1 Use for the intended Purpose

The WIEDENBACH ink jet printers serve exclusively for non-contact labelling and marking of object surfaces of any shape.

Only WIEDENBACH inks should be used and the make-up and wash approved for the ink.

1.2 Improper Use

Use of the ink jet printer

- in explosion-proof rooms
- outside industrial premises
- in the vicinity of electrical devices, naked lights, radiators and other sources of heat and sparks
- for printing red hot or extremely heated objects

1.3 Additional Documents

Additional information can be found on the enclosed CD.

2 Technical Specifications

		ims 295 BC	ims 295 MC / BS	
Ink type	Dye based ink	●	●	●
	Light pigmented ink	●	●	
	Heavy pigmented ink		●	
Power supply	100-240V, 50-60Hz, 100W	●	●	
Cabinet / Protection	Stainless steel / IP 54	●	●	
Printing speed	Up to 10 m/s	●	●	
Temperature range	+5°C to +35°C, ink dependent	●	●	
	Up to 90% rH, non-condensing	●	●	
Ink capacity	1,00 Litre	●	●	
Make-up capacity	1,25 Litre	●	●	
Compressed air	6 bar		●	
Weight	26,4 kg	●		
	30,3 kg		●	
Dimensions (printer)	H x W x D 630 x 418 x 325 mm	●	●	
Space required (printer)	H x W x D 630 x 700 x 325 mm	●	●	
Dimensions (print-head)	Ø 40 mm; L 252 mm	●	●	
Bending radius (Print-head conduit)	100 mm (min)	●	●	

3 Safety Instructions

3.1 Observe the Instructions in the Operating Manual

The basic precondition for safe handling and trouble-free operation of the inkjet printer is the knowledge of the basic safety instructions and safety regulations. This operating manual contains the most important instructions for safe operation of the inkjet printer.

This operating manual, especially the safety instructions, must be observed by all persons who work on the inkjet printer. In addition, the rules and regulations for the prevention of accidents applicable at the respective application site must be observed.

3.2 Obligation of the Owner

The owner is obliged to only allow persons to work on the ink jet printer who

- are familiar with the basic regulations governing work safety and the prevention of accidents and are instructed in the handling of the inkjet printer,
- have read and understood the chapter on safety and the warning notes in this operating manual and have given signed confirmation thereof,
- have read the WIEDENBACH safety data sheets (MSDS) with specific information for inks, “Make-Up” and “Wash” fluids. Safety data sheets can be requested at MSDS@wiedenbach.com.

3.3 Obligation of the Personnel

All persons employed to work on the inkjet printer are obliged, before beginning work on the inkjet printer:

- to observe the basic regulations on work safety and the prevention of accidents,
- to read the safety chapter and the warning notes in this operating manual and give signed confirmation that they have understood these,
- to read the WIEDENBACH safety data sheets (MSDS) with specific information for inks, "Make-Up" and "Wash" fluids.

WIEDENBACH will be glad to answer any other questions you may have.

3.4 Dangers when handling the Printer

The ink jet printer conforms to current technology and safety requirements. Nevertheless, damage to the life and limb of the user or third persons or damage to the inkjet printer or other property may occur during its use. The inkjet printer may only be used

- for the intended purpose, see chapter 1.1,
- in a perfectly safe technical condition.

Faults which could impair the safety must be repaired immediately.

See the notes on possible dangers and first aid measures in the safety data sheets.

3.5 Representation of Safety Instructions



DANGER

This symbol in connection with the signal word „Danger“ indicates an immediate danger for the life and health of persons.

Failure to heed these instructions can result in serious damage to health and even fatal injury.



WARNING

This symbol in connection with the signal word „Warning“ indicates a possible danger to the life and health of persons.

Failure to heed these instructions can result in serious damage to health and even fatal injury.



CAUTION

This symbol in connection with the signal word „Caution“ indicates a possibly dangerous situation.

Failure to heed these instructions can lead to minor injury or property damage.

IMPORTANT

This symbol provides important instructions for the proper handling of the machine.

Failure to heed these instructions can lead to faults on the machine or in the vicinity.

3.6 **Danger of Fire**

 DANGER
<p>There is a danger of fire when using inks and "Make-Up". Observe the measures for fire fighting in the safety data sheets!</p> <p>Before commissioning the printer, make sure that all the components are tight and there is no residue ink / "Make-UP" in liquid or dry form in the printer or it's vicinity vicinity (e.g. also in the openings of the optional aircon units).</p> <p>The owner of the inkjet printer is obliged to provide at least one fire extinguisher which is suitable for extinguishing the existing materials and substances, a fire extinguishing blanket and an eyewash bottle.</p>

3.7 **Electrical Safety**

 DANGER
<p>Work on the electrical supply may only be carried out by a qualified electrician or the local KOMAX representative.</p> <p>Check the electrical equipment of the inkjet printer regularly. Fix loose connections and repair damaged cables immediately. The inkjet printer must always be kept closed</p>

3.8 **Mechanical and electrical Interfaces**

Danger areas at interfaces between the inkjet printer and the customer's machines must be secured by the owner.
The owner must provide proper connections at these interfaces.

3.9 **Dangers due to electromagnetic Fields**

The electromagnetic behaviour of the inkjet printer can be affected by all kinds of additions and modifications. Therefore do not make modifications or additions to electrical/electronic components without the written permission of WIEDENBACH.

3.10 Conversions / Modifications to the Inkjet Printer

Modifications to the inkjet printer and the electrical equipment without the express written permission of WIEDENBACH can affect the operational safety of the inkjet printer. For this reason, conversion is only permissible with the written consent of WIEDENBACH.

Replace parts of the printer which are not in perfect condition immediately.

Only use original spare and wear parts.

With parts purchased elsewhere there is no guarantee that they have been designed and manufacturer to the same load and safety specifications.

3.11 Protective Devices

All the protective devices and covers must be fitted and functioning properly before starting the machine.

Protective devices and covers may only be removed when the inkjet printer is switched off.

The housing of the inkjet printer may not be used as a resting place for objects.

3.12 Informal Safety Measures

The operating manual and the safety data sheets must be kept at the inkjet printer at all times. The generally valid and local regulations for the prevention of accidents and protection of the environment must be provided and observed additionally.

All safety and danger signs on the inkjet printer and containers must be kept legible and renewed if necessary.

3.13 Safety Measures for Use of Inks, “Make-Up” and “Wash”

Changing the ink type to another type of ink requires detailed knowledge of the printer and therefore should only be undertaken by qualified personnel. Please contact your local Komax representative. Only WIEDENBACH inks should be used as these inks have been specially developed for the WIEDENBACH ink jet printer. Only the “Make-Up” and “Wash” approved for the ink may be used. Use of non-WIEDENBACH inks can adversely impact the ink jet printer.



WARNING

Inks, “Make-Up” and ink jet printers may never be kept or placed in the vicinity of electrical equipment, naked flames, radiators and other sources of heat and sparks. Using cellular phones and smoking in the offing of the ink jet printer is forbidden.

IMPORTANT

Use and mixture of other, non-approved inks, “Make-Up” and “Wash” are therefore strictly prohibited and any guarantee is excluded.

See the special instructions in the safety data sheets!

3.14 Safety for Maintenance and Troubleshooting

Carry out prescribed setting, maintenance and inspection work on schedule. Maintenance and troubleshooting may only be performed by qualified service personnel. Check loosened screw connections for tight fit.

Check the function of safety devices after finishing the maintenance work.

3.15 Cleaning the Machine and Disposal

Handle used substances and materials properly and dispose of in an environmentally friendly way.

3.16 Use of Inks in Connection with Foodstuffs

Observe the valid hygiene regulations in the foodstuff area.

For direct labelling of foodstuffs only

- inks of the “foodstuff class” may be used,
- printers are operated with inks of the “foodstuff class”. The printers have never been used for any other purpose beforehand.

3.17 Training of Personnel

Only trained and instructed personnel may work on the inkjet printer. The responsibilities of the personnel must be clearly defined for operation, maintenance and service.

Personnel being trained may only work on the inkjet printer under the supervision of an experienced person.

The operator must

- be instructed in the operation,
- have proven his ability to operate the machine,
- be expressly appointed to operate the machine,
- have read and understood and must observe the operating manual and safety data sheets.

3.18 Personal Safety Equipment

The necessary personal safety equipment must be provided by the owner.

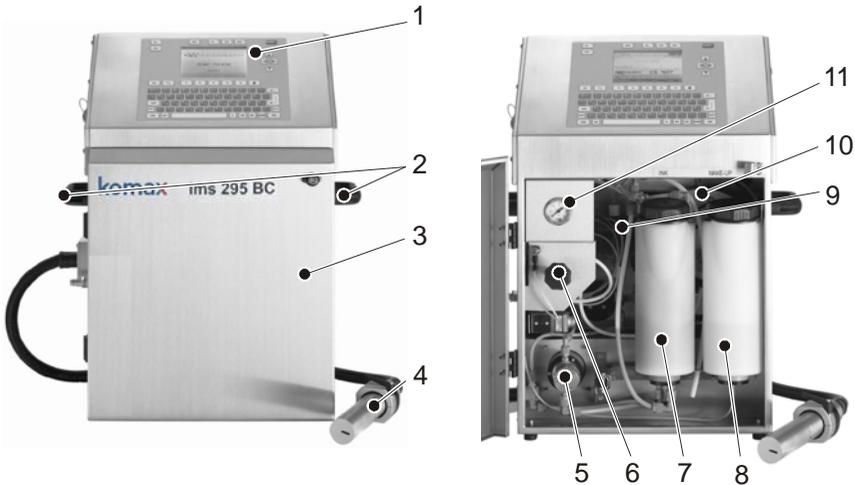
 CAUTION	
	<p>Wear protective gloves! Ink and “Make-Up” can cause skin burns. Wear protective gloves whenever there is a danger of coming into contact with ink or “Make-Up”.</p>
	<p>Wear protective glasses! Ink and “Make-Up” can cause irritation of the eyes. Wear protective glasses whenever there is a danger of ink or “Make-Up” splashing or evaporating.</p>

3.19 Noise of the Inkjet Printer

The continuous sound pressure level emanating from the inkjet printer is < 70 dB(A). A higher sound pressure level may occur depending on the local conditions.

4 Structure and Function

4.1 Cabinet View – Komax ims 295 MC / BS



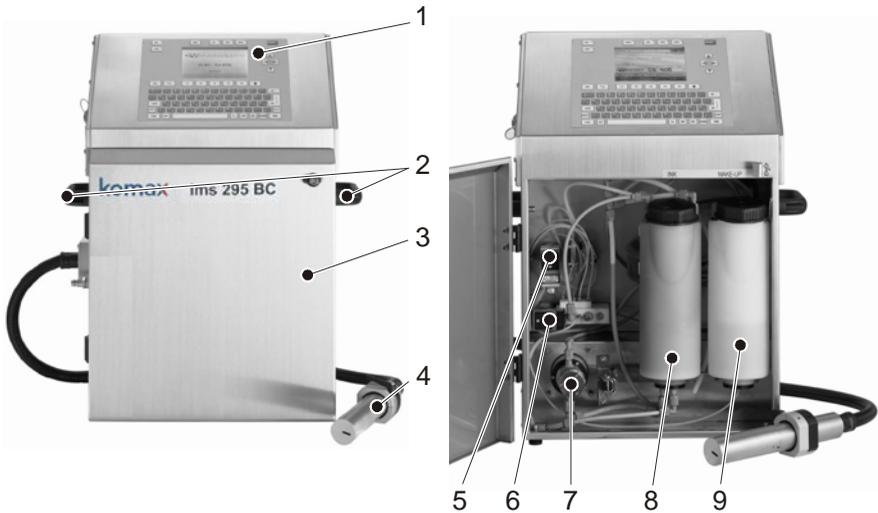
Cabinet View

- 1 Data input and control panel
- 2 Transport handle
- 3 Hydraulic cover
- 4 Print head

Return- and dosing pump behind manometer cover

- 5 Pressure pump (Toothed wheel pump head)
- 6 Pressure regulator
- 7 Ink tank
- 8 "Make-Up" tank
- 9 Main filter
- 10 Diaphragm tank
- 11 Pressure gauge: system pressure

4.2 Cabinet View – Komax ims 295 BC



Cabinet View

- | | | | |
|---|------------------------------|---|---|
| 1 | Data input and control panel | 6 | Return pump |
| 2 | Transport handle | 7 | Pressure pump (Toothed wheel pump head) |
| 3 | Hydraulic cover | 8 | Ink tank |
| 4 | Print head | 9 | "Make-Up" tank |
| 5 | Dosing pump | | |

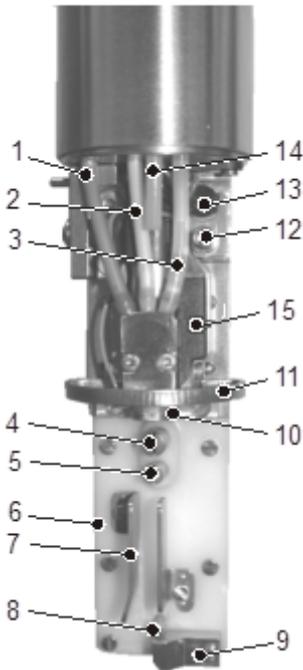
4.3 Structure of the CP-Print Head

The printers are equipped with the CP printing head in the versions 84 kHz / 60 µm as standard (ims 295 BS = 120 kHz / 40µ).



WARNING

The printer may not be used without print head cover.



- 1 Supply line ink, red
- 2 Air separator vent line ink, yellow
- 3 Flushing line "Make-Up", transparent
- 4 Charge electrode
- 5 Control electrode
- 6 Basis element
- 7 Deflection plates
- 8 Flight time electrode
- 9 Gutter pipe block
- 10 Nozzle
- 11 Mounting bracket for print head cover
- 12 Locking screw for inkjet adjustment
- 13 Excentric
- 14 Print head ventilation, blue
- 15 Heating element

IMPORTANT

The print head and the supply hose must be fixed firmly and without vibrations, so that no persons can get caught.
The print head must remain accessible for cleaning and maintenance work, commissioning and shutdown.

4.4 Recommended Pressure Settings (depending on ink type)

Nozzle	Frequency	Pressure
60 µm	84 kHz	3,2 – 3,8 bar
40µm	120 kHz	3,6 – 4,5 bar

Nozzle	Frequency	Pressure	from SW-Version:
60 µm	84 kHz	2,7 – 3,3 bar	V13.3.9
40µm	120 kHz	3,7 – 4,3 bar	V13.3.8

5 Transport and Storage

5.1 Safety Instructions for Transport

 WARNING	
	Two persons have to unpack the printer and carry it together, to avoid backache. Before transporting the printer fasten connection cable and print head hose with cable straps at the transport handle, to avoid stumbling.
	Transport means must have the appropriate load capacity (see chapter 2).

IMPORTANT	
	Observe the transport instructions on the packing. Transport the printer upright, vibration-free and protected against frost with suitable means of transport (pallet, transport box).

5.2 Preparation for Transport

- Switch off the printer and disconnect it from the power supply.
- Disconnect the compressed air supply.
- Completely empty the printer or attach transport locks to a full printer (see chapter 5.3).
- Close the hydraulic cover.
- Bundle the connecting cables and head hose with cable ties or adhesive tape and hang on the handle.
- Protect the printer and printing head with suitable packaging.
- Mark the packing with “this way up” signs.

5.3 Transport Locks on full Printers



WARNING

Excess pressure in the liquid tanks.
Excess pressure may build up in the liquid tanks during transport due to temperature fluctuations.
Open the tank cap carefully to allow for pressure compensation!

Printers which are delivered filled with ink and “Make-Up” are fitted with transport locks.
Remove the transport locks before commissioning.

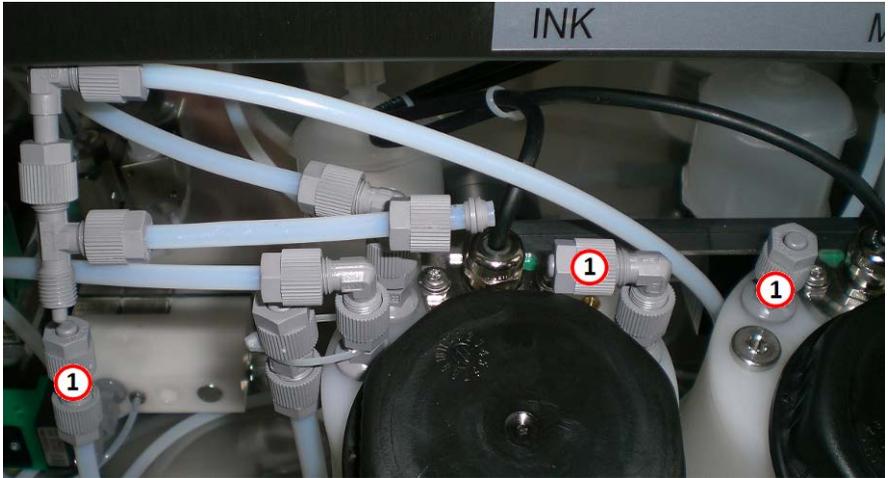
IMPORTANT

Keep the transport locks in a safe place.
Fit the transport locks before every transport or remove the ink and “Make-Up” from the tanks.

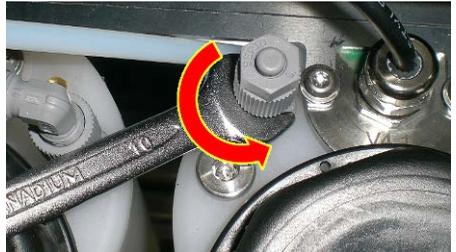
5.3.1 Transport Protections

Proceed as follows to remove the protections:

- Open the hydraulic cover.
- Remove the 3 stoppers (1).



12 mm



10 mm





12 mm

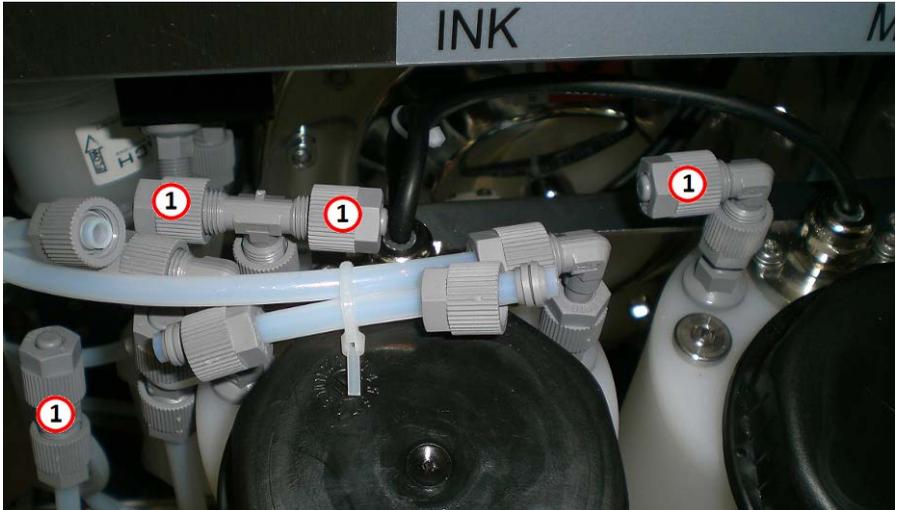


For mounting the protections proceed in reverse order.

5.3.2 Transport locks in condenser

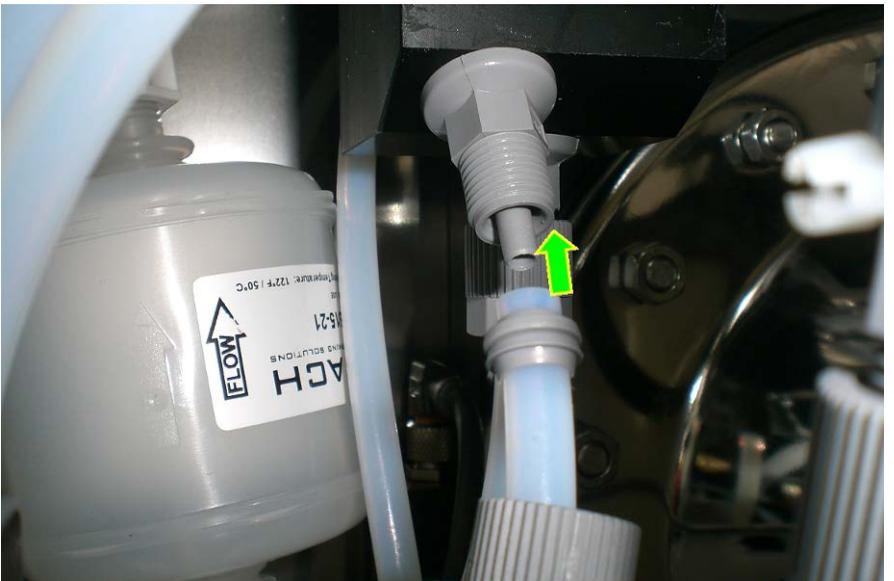
Proceed as follows to remove the transport locks:

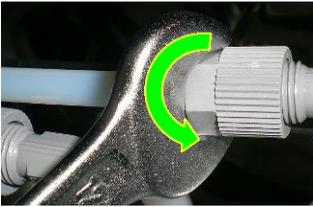
- Open the hydraulic cover.
- Remove the 4 stoppers (1).



12 mm







12 mm



Proceed in the reverse order to install the transport locks.

5.4 Storage



DANGER

Danger of fire!

Danger of fire when storing inks, “Make-Up” and “Wash”.

- Only store these liquids in specially provided dry, cool and sufficiently aired stores.
- The store room must close tightly and be easily accessible for the fire brigade.
- Do not store these liquids together with highly inflammable solids.
- Observe the instructions in the safety data sheets.

Observe the locally valid regulations for the storage of volatile, inflammable solvent-based materials.

IMPORTANT

Store printers upright and protected from frost and heat.

Protect against moisture.

Leave the printer in the packaging until final installation.

6 Commissioning



DANGER

Electrical hazard!

Work on electrical installations may only be carried out by a qualified electrician.



CAUTION

Initial commissioning may only be carried out by trained service personnel.

IMPORTANT

Observe the safety instructions in chapter 3 and the safety data sheets for all work on the inkjet printer.

6.1 Prerequisites



CAUTION

- The printer must be installed in well aired rooms.
- The printer must be set up stable. If the printer is set on a WIEDENBACH wheeled underframe, it has to be fastened with safety elements on the surface.
- The power connector on the printer housing is used as a safety separator acc. to IEC60950 and must be easily accessible
- Lay down print head hose and connection cable so that no persons can get caught.
- The difference in height between the printer and the printing head may be a maximum 3 m.
- The floor must be sealed liquid-tight and resistant to solvents.
- There must be a washing facility close to the inkjet printer.
- Space requirement see chapter 2.

6.2 External Connections



WARNING

Electrostatic charging

Protect inkjet printers against electrostatic charging.

Equipotential bonding is guaranteed by a connection between the earth connection on the outside of the printer and the surrounding metal parts. The metal parts must be earthed (e.g. connect to the foundation earth).



- Unpack the inkjet printer and check for visible signs of damage.
- Place the printer on a suitable base and fasten the printing head.

IMPORTANT

Lay the printing head hose and all connecting cables so that no-one can trip over them.

- Open the hydraulic cover (see chapter 4.1) and check whether connections have come loose during transport.
- Remove the transport locks and install the exhaust air filter and hose connections provided (see chapter 5.3).
- Connect the printer electrically and pneumatically (connections see below; connection values see chapter 2).



WARNING

The printer may only be operated with the printing head hood closed.

- Fill the printer with ink if necessary (see chapter 6.3).

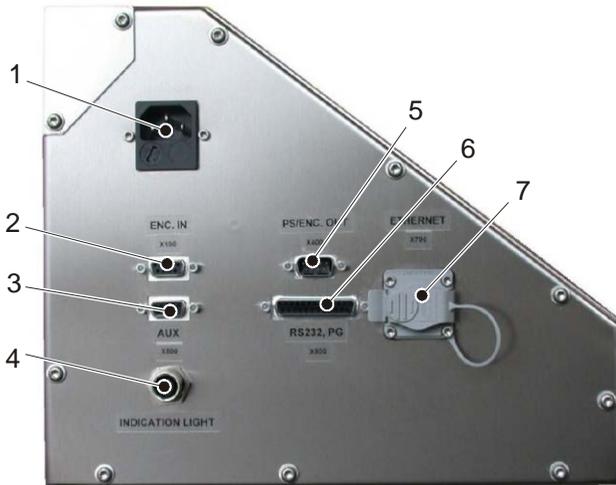
IMPORTANT

	In printer ims 295 MC / BS use input pressure regulator and set pressure to 6 bar. Increase the system pressure slowly to the nominal pressure of 3-3,8 bar with the system pressure regulator (ims 295 BS 3,6-4,5 bar).
--	--

- Press the red **POWER** key on the keyboard for 1 second.
- Start up the printer (see chapter 7.2).

IMPORTANT

	Check all the connections for leaks during the start phase.
--	---



External connections

- | | | |
|---|-----------------------------------|---|
| 1 | Power supply | 100-240V |
| 2 | Shaft encoder connection (input) | Rotation impulse transmitter for controlling the printing speed. |
| 3 | Additional connection | -- |
| 4 | Indication light (optional) | A three-coloured signal lamp (optionally with horn) can also be connected as an option. |
| 5 | Shaft encoder connection (output) | Rotation impulse transmitter for controlling the printing speed. |
| 6 | RS232 Interface | The inkjet printer is addressed via the RS232 interface for remote operation with the Komax-machines. |
| 7 | Ethernet interface | The printer can be connected to a network via the Ethernet interface. |

6.3 First Filling and new Filling

IMPORTANT

Only WIEDENBACH inks may be used because these have been specially developed for WIEDENBACH inkjet printers. Only the respective "Make-Up" approved for the ink may be used. Using other inks can have a detrimental effect on the printing functions.

- Shut down the printer (see chapter 7.7).
- Remove the head cover of the print head. Turn the print head cover anticlockwise.
- Place funnel bottle below the print head.
- Open hydraulic cover.
- Infill ink and make-up (see chapter 10.2).
- Start up the printer (see chapter 7.2).
- Shut down the printer.

IMPORTANT

This procedure is necessary to ensure that all hydraulic components are completely filled with ink and "Make-Up".

- Close the head cover of the print head and the hydraulic cover. Start up the printer.



CAUTION

Ink and "Make-Up" can cause skin burns and irritation of the eyes. Never point the printing head towards persons. Avoid abrupt movement of the printing head when the jet is on.



DANGER

Some dried inks are highly flammable!

- Do not allow inks to dry up
- Avoid spillage during filling of ink and 'Make-Up'.
- Immediately wipe off spilled ink.
- Spilled ink must be disposed of with suitable materials under observation of safety for personnel involved.
- Should spilled or leaked ink have entered any cavities (e.g. the openings of the optional aircon unit) these cavities must be cleaned and sufficiently aired immediately, in order to avoid any explosive atmospheres. Every source of ignition must be kept away.

7 Operation



DANGER

Electrical hazard!

Work on electrical installations may only be carried out by a qualified electrician.

All protective devices and covers must be fitted and functioning properly before starting the inkjet printer.



CAUTION

Ink and "Make-Up" can cause skin burns and irritation of the eyes.

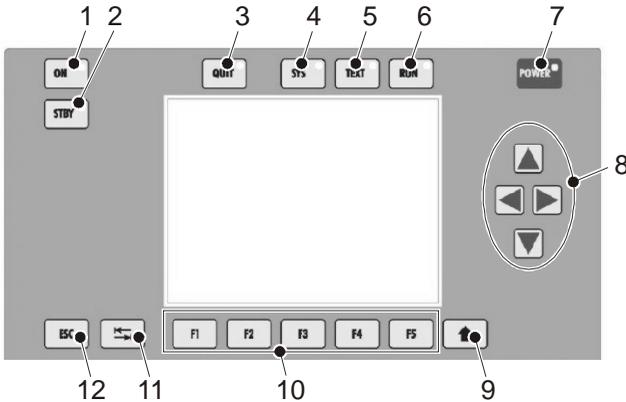
Never point the printing head towards persons. Avoid abrupt movement of the printing head when the jet is on.

IMPORTANT

Observe the safety instructions in chapter 3 and the safety data sheets for all work on the inkjet printer.

Always clean the front face of the nozzle before starting the printer.

7.1 Operating Elements



Control panel with display

- | | | |
|---|---|---|
| 1 | ON key | ON-key switches to normal operation from stand-by
The activated LED indicates that the device is ready for operation |
| |  | |
| 2 | STBY key | Switching the device to stand-by
The activated LED indicates that the device is ready for operation |
| |  | |
| 3 | QUIT key | Quit error messages
Switch to alarm menu
Stop alarm signal |
| |  | |
| 4 | SYS key | From the standby menu the SYS key switches into the system settings menu
From the regular menu the SYS key switches into system menu |
| |  | |
| 5 | TEXT key | From the standby menu the TEXT key switches into edit menu
From the regular menu the TEXT key switches into text menu |
| |  | |

6 **RUN** key Switch over to printing status, if the printer is ready



7 **POWER** key Switch on the printer



8 **Arrow keys** Cursor control
Selection of functions in a menu
Selection of characters in a printing data record
Home and End function in the Edit function

9 Function key Open the menu of the second level

F-SHIFT



10 Function keys With the functions keys **F1-F5** the functions can be
F1 – F5 started

If the function keys are pressed at the same time as the **F- SHIFT** the menus of the second level can be reached

11 **TAB** keys Jump between setting boxes in the menu

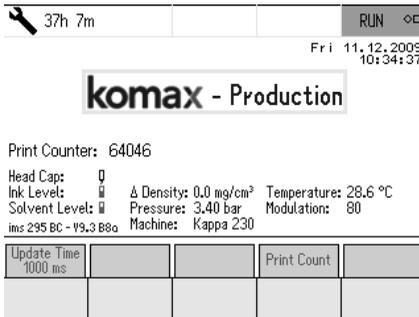


12 **ESC** key Exit or reject menu or text input



7.2 Switching on

- Connect compressed air supply and set system pressure (see chapter 6.2).
- Press the red **POWER**-key for 1 second. The power supply is activated and the „boot“ process starts. After a view seconds the display shows „StandBy“ mode.
- Press the **ON** key. The start process lasts approx. 2 to 3 min. The LED of the **ON** lights steadily and the main menu appears in the display:



The screenshot shows the printer's main menu. At the top left, it displays '37h 7m' next to a wrench icon. At the top right, it shows 'RUN' with a square icon. Below this, the date and time are 'Fri 11.12.2009 10:34:37'. The central part of the screen features the 'komax - Production' logo. Below the logo, the 'Print Counter' is '64046'. Further down, various status parameters are listed: 'Head Cap: 0', 'Ink Level: 0', 'Solvent Level: 0', 'Δ Density: 0,0 mg/cm³', 'Temperature: 28,6 °C', 'Pressure: 3,40 bar', and 'Modulation: 80'. At the bottom left, it shows 'ims 295 BC - v9.3 B8a' and 'Machine: Kappa 230'. At the very bottom, there is a table with five columns: 'Update Time 1000 ms', three empty columns, and 'Print Count'.

37h 7m				RUN ◻
Fri 11.12.2009 10:34:37				
komax - Production				
Print Counter: 64046				
Head Cap: 0				
Ink Level: 0	Δ Density: 0,0 mg/cm³	Temperature: 28,6 °C		
Solvent Level: 0	Pressure: 3,40 bar	Modulation: 80		
ims 295 BC - v9.3 B8a	Machine: Kappa 230			
Update Time 1000 ms			Print Count	

- Then the display shows the text in the printing output.

7.3 Sample Print

For functional tests the user can print a default text upon pressing a key. Directly afterwards the eprinter is ready in production mode again. Further information can be found in the Reference Book – Text- and System Menu on the enclosed CD.

5h 4m		TEXT	◀▶
Text List:		Wed 23.11.2011 08:30:30	
Default Text	TestText06		
TestText01	TestText07		
TestText02	TestText08		
TestText03	TestText09		
TestText04	TestText10		
TestText05	TestText11		
		WP 1 / 1	P 7 226
\$TYPE\$: # \$SERIAL\$ \$PRESSURE\$ \$HV\$			
Texts	Symbols		
Start Sample		Single Sample Print	

7.4 Switching off

IMPORTANT

	Always run down the printer with the STBY key or with the POWER key. Otherwise the return suction lines could get blocked.
--	--

- Press the **STBY** key.
The message “The printer is being stopped...” appears. The LED in the **STBY** key flashes. (The shutdown procedure lasts 2 to 3 minutes.)
If the **STBY** key LED lights steadily, the printer is in standby mode.
- Switch the printer off:
 - Press the **POWER** button about 3 seconds.
 - A message appears with the question, whether the printer should be shut down.
 - Confirm with **ENTER**. The printer is now shut down regularly and afterwards switched off automatically.

IMPORTANT

	For maintenance purpose the printer has also to be without current by taking out the main cable!
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	If the printer has been switched off by a power failure or improperly, restart the device as quickly as possible by pressing the ON key and run it down as described above.
--	--

	If the option Condensierer is installed, the printer must be in operation for at least 5 – 6 hours continuously. The flushing solvent cannot evaporate faster. (Do not switch printer off, or StandBy, during lunch break).
--	---

7.5 Starting up after a long Period out of Operation

After long periods out of operation, the printer has to be vented. This may only be done by trained service personnel. See information on enclosed CD. See chapter “Bleeding” in Reference Book Text- and System Menu.

7.6 Shutdown for extended idle Periods

CP Print head

- Press **STBY** button.
- Ink jet will be stopped.
Rinse the gutter tube with 10 ml of “Make-Up”.



8 Faulty Printing Quality



WARNING

Settings for the printing quality may only be done by trained service personnel.
Upon touching the print head a risk of burns may be present with a defective heating element (see chapter 4.3).

The following points must be checked before searching for further causes of faults:

- Is the charge electrode slit perfectly clean?
- Are the deflector plates and basis unit perfectly clean?
- Is modulation/drop separation set correctly?
- Is alignment of the ink jet in the charge electrode parallel/central?
- Is system pressure set correctly (see chapter 6.2)?
- Does the ink jet hit the gutter tube?
- Correct ink density?

IMPORTANT

See also the enclosed CD for further information about printing quality faults.

Correctly set printing quality:

ABCDEFGHIJKLMN OPQRSTUVWXYZ

Omitted or double drops. The horizontal and vertical drops do not form a line.

System pressure too low. Modulation not adjusted correctly.

ABCDEFGHIJKLMN OPQRSTUVWXYZ

No straight lines to characters. The vertical drops overlap the horizontal drops.

System pressure too high. Modulation not adjusted correctly.

ABCDEFGHIJKLMN OPQRSTUVWXYZ

Printed characters slope too much to the left or right.
Print head not at 90 degrees to the printing direction.

ABCDEFGHIJKL MNOPQRSTUVWXYZ

Print image dissolves vertically, the drops are spread too far apart.
Print head is too far away from the surface being printed.

ABCDEFGHIJKL MNOPQRSTUVWXYZ

Print image interrupted.
Poorly set drop separation. The single drops are not charged correctly.

ABCDEFGHIJKL MNOPQRSTUVWXYZ

Incomplete print image, drops missing.
Jet too far towards the centre of the gutter pipe. Drops formed on the gutter pipe. High voltage too low.

ABCDEFGHIJKL MNOPQRSTUVWXYZ

9 Alarm Messages

If a warning or a slight error occurs, the printer continues printing and at the left upper side of the display an error code is shown.

At all other errors a short error message is shown in the display.

Displaying error information:

F1 key: Open „**Info**“ menu.

Displaying subsequent errors:

F2 key: Open „**Next**“ menu

If several errors occur simultaneously, this command switches between the messages.

Deleting error messages:

The error has to be recovered before printing can be continued.

F3-Taste: Deletes the error message and the error code.

Stop Ink Stream:

F4 key: Open the '**Stop Ink**' menu, the display shows the information: „Stop Ink Stream“ ink stream can be activated again with

F5 key '**Start Ink**'.

9.1 List of Error Messages and their Remedies

 WARNING	
	Some error messages may only be remedied by trained service personnel. The grey shaded error codes can be remedied by the operator himself.

Code	Message	Reason	Remedy
112	Incorrect shutdown	Printer was switched off without a correct shutdown	Restart
135	Temperature to high	Housing filter defective Filter mat soiled	Replace housing filter Change filter mat
203	Hall sensors error (only for ims 295 BC)	Sensors defective	Replace motor of driving unit Check motor cable
206	Sensor interrupt (only for ims 295 BC)	Sensors defective	Replace sensors Check sensor cable
208	Ink level: too high (printer changes to protected mode)	Ink tank was overloaded Too much "Make-Up" was added	Reduce ink
212	Ink sensor error	Ink sensor defective	Replace ink sensor Check sensor cable
213	Solvent sensor error	"Make-Up" sensor defective	Replace "Make-Up" sensor Check sensor cable
214	DPR-DOS Connection	Connection between printer and DPR-DOS and printer is interrupted DPR-DOS defective	Check DPR-DOS Stop printer if necessary

Code	Message	Reason	Remedy
218	Ink tank empty	Ink tank is empty	Refill ink tank
219	Solvent tank empty	“Make-Up” tank is empty	Refill “Make-Up” tank
221	Ink level: MAX	Ink tank is over flowing Too much “Make-Up” was added	Turn printer to alarm mode Remove ink
222	Ink level: MIN 30 minutes → StandBy	Ink tank is nearly empty	Refill ink tank
223	Solvent level: MAX	“Make-Up” tank is over flowing	Remove “Make-Up”, until the upper sensor is free
224	Solvent level: MIN 30 minutes → StandBy	“Make-Up” tank is nearly empty	Refill “Make-Up” tank
302	HV error	Deflection plates are dirty <ul style="list-style-type: none"> - High voltage flashover - No modulation High voltage too small	Clean print head Contact your Komax representative
307	Gutter suction error	Gutter sensor in the print head did not identify the ink	Check ink jet adjustment If the error remains, contact your Komax representative
325	Gutter suction warning	Gutter sensor in the print head did not identify the ink	Check ink jet adjustment If the error remains, contact your Komax representative
326	High voltage off	Print head holster was removed	Put the print head holster on again
407	Cancel during printer start	ESC key was pressed during start process	Clean print head Clean deflection plates

Code	Message	Reason	Remedy
			or Contact your Komax representative
501-509	Corr values missing	Printer configuration wrong	Choose correct frequency / nozzle values

10 Maintenance



DANGER

Switch off the inkjet printer before carrying out any maintenance work. Work on the electrical equipment may only be carried out by persons with electrical qualifications.

You may only carry out the maintenance work listed here on the inkjet printer. Any other maintenance and repair work may only be carried out by WIEDENBACH or companies authorized by WIEDENBACH.

IMPORTANT

	Observe the safety instructions in chapter 3 and the safety data sheets for all work on the inkjet printer.
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	Catch ink droplets which occur during maintenance with an earthed container of conductive material.
--	---



CAUTION

	Wear protective gloves!
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	Ink and "Make-Up" can cause skin burns. Wear protective gloves for all maintenance work.
--	---

	Wear protective glasses!
--	---------------------------------

	Ink and "Make-Up" can irritate the eyes. Wear protective glasses for all maintenance work.
--	---

10.1 Maintenance and Inspection Intervals

IMPORTANT

Please bear in mind that ink may only be filled into the printer until the expiry date on the bottle.
The printing quality is only guaranteed under ambient conditions like those described in chapter 2 “Technical Data”.



WARNING

Maintenance work may only be carried out by trained service personnel. The grey shaded visual inspections can be performed by the operator himself.

Element	Interval	Action
Flight time electrode Charge electrode Deflection plates Gutter pipe block Nozzle	yearly	Visual checks on print head settings (after opening the cover) if necessary cleaning
Tanks Filter Fittings Pumps	monthly	Visual checks on hydraulic system (after opening the hydraulic cover)
Dye-based ink	yearly	Change (*)
Pigmented ink	six-monthly	Change (*)
Housing filter	weekly	Visual check, if necessary change
Headfilter (Filter element, sieve filter) Ims 295 BC / MC = 25µm Ims 295 BS = 15µm	six-monthly	Change (*)
Ink filter (Filter element 20µm)	six-monthly	Change (*)
Make-up filter (Filter element, sieve filter)	six-monthly	Change (*)

Element	Interval	Action
Diaphragm tank (ims 295 MC / BS)	six-monthly	Retighten the connecting screws (16 pcs.) with 10 Nm
Inlet filter at the make-up tank (Inlet / Outlet filter)	six-monthly	Change (*)
Condenser filter (Filter element 20µm)	six-monthly	Change (*)
Lithium cell of board PMB 906	every 2 years	Change (*)

(*) see Reference Book Maintenance and Parts on the enclosed CD

 CAUTION	
	<p>Danger of explosion by inexpertly treatment of the battery on the main board PMB906.</p> <p>If the battery has to be replaced it must be disposed of according to local environmental and safety regulations.</p>

10.2 Refilling Ink or “Make-Up”

IMPORTANT	
	<p>Refill ink into ink tank and “Make-Up” into “Make-Up” tank only. Check content before refilling.</p>

 DANGER	
	<p>Should spilled or leaked ink have entered any cavities (e.g. the openings of the optional aircon unit) these cavities must be cleaned and sufficiently aired immediately, in order to avoid any explosive atmospheres. Every source of ignition must be kept away.</p>

Ink and “Make-Up” can be refilled during operation without having to shut down the ink jet printer.

- See that the ink density is correct and adjust it if necessary (see information on enclosed CD).
- Open the hydraulic cover.

-
- Open tank cap.
 - Fill ink or “Make-Up” up to the maximum mark. (For ims 295 MC / BS fill only up to approx. 70% below the maximum mark)
 - Replace caps of tanks and close securely.
 - Close the hydraulic cover.

11 Disposal



DANGER

- Some dried inks are highly inflammable.
- Do not allow ink to dry up. Wipe off spilled ink immediately.
- Avoid splashing when filling and pouring ink and “Make-Up”.
- Spilled or leaked ink must be cleared up immediately with suitable material with regard for the safety of personnel.
- Special attention must be paid not to allow spilled ink or cleaning residue to get into plug holes or drains.
- Inks and associated fluids, contaminated cleaning materials and changed filters must be disposed of according to local regulations.
- See also safety data sheets.
- Should spilled or leaked ink have entered any cavities (e.g. the openings of the optional aircon unit) these cavities must be cleaned and sufficiently aired immediately, in order to avoid any explosive atmospheres. Every source of ignition must be kept away.

12 EC Declaration of Conformity

Manufacturer

WIEDENBACH APPARATEBAU GmbH
Industriepark 312
78244 Gottmadingen
Germany

Object of the declaration

Product name: Inkjet Printer
Model: ims 295 BC / ims 295 MC / ims 295 BS
Komax ims 295 BC / Komax ims 295 MC / Komax ims 295 BS
Serial numbers: from 53800 / from 93600 / from 96100
Brand Name: Komax

The above named products meet the basic requirements defined in the directives of the Commission for Standardization of Legal Specifications regarding electromagnetic compatibility (2004/108/EC), electrical equipment for use within certain voltage limits (2006/95/EC), and the restriction of the use of certain hazardous substances (2011/65/EU).

They are conformant with the requirements of the following documents:

- EN 55022:2010
Information Technology Equipment – Radio disturbance characteristics –
- EN 55024:2010
Information Technology Equipment – Immunity characteristics –
- EN 61000-6-2:2005
Electromagnetic Compatibility (EMC) – Immunity for industrial environments –
- EN 61000-3-2:2006+A1:2009+A2:2009
Electromagnetic Compatibility (EMC) – Limits for harmonic current emissions –
- EN 61000-3-3:2008
Electromagnetic Compatibility (EMC) – Limitation of voltage changes, voltage fluctuations and flicker –
- EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Information Technology Equipment – Safety –
- EN 50581:2012
Assessment of electrical and electronic products – Restriction of hazardous substances –

CE marking affixed in year: 15

Date: 10th December 2015



Michael Wöhrmann
Managing Director



Siegbert Baude
Head of Development

Notes

This instruction manual describes how to operate the Wiedenbach printer. We refer you to the Maintenance, Text and System Menu manuals on the CD-ROM for further details.

Komax AG
Professionals in Advanced Automation
Industriestr. 6
6036 Dierikon / LU
Switzerland

Tel. +41 (0)41 455 0 455
Fax +41 (0)41 450 4 266

info.din@komaxgroup.com
<http://www.komaxgroup.com>

Article number 14-080411-03 Operating Manual
US, Korean, Japanese