

# Konica-Minolta KM512

## Print Head Recovery Quick Guide

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### Step 1. Flush the internal mesh of the print head

If your print head comes from Seiko Colorpainter 64s, HP 9000s, HP 10000s or Oce CS6060, it may have one of the input ports permanently plugged. In this case, open that port with a small drill. Install print head on the adapter, fill the recovery fluid so that the nozzle plate of the print head is submerged in fluid by 3mm. Close the Relief Valve. Set temperature to 30°C. Start Syphon cycle. If pressure rises higher than 0.1 MPa / 15 psi, adjust it with the Relief Valve. One cycle (25-30min) is enough to clean the internal mesh of the print head.

### Step 2. Reverse Flush the print head

This step is required for severely clogged print heads. You may skip this step and get back to it later if you don't have a satisfactory results from the Forward Flushing methods.

If you have a Reverse Flushing cap, set up your print head for reverse flushing as shown on the picture in this document. If you don't have RF Cap, use a suction method of reverse flushing as shown here. Run Syphon cycle. After it's completed, set up your print head for Forward Flushing and run it with Syphon cycle again. Use fluid # 1UV if you are cleaning a UV print head, or fluid # 1X for solvent print head, or fluid # 1W for water-based one. Temperature can be 30°-35°C. Do not exceed Max Temperature indicated on the picture.

### Step 3. Forward Flush the print head

Set up your print head for forward flushing as shown on the picture below. If the fluid is foamy, run Syphon cycle only. For non-foamy fluids you can run Normal (F1) cycle. Start with temperature of 30°C. After the cycle has been finished, run Drain cycle (to turn on the pumps) and check nozzles. If there is improvement, repeat the cycle with a slightly higher temperature. Do not exceed Maximum Temperature.

### Step 4. Proceed with Forward Flushing

If you don't see improvements in the nozzles condition, move on to the next fluid (the fluid with the next number). When changing fluids, follow instructions from our videos. Set temperature to 30°C and go to Step 3.

### Step 5. If you have a Sonic Reverse Flushing cap, run Forward Flushing with a Sonic RF cap.

A Sonic RF cap allows even more powerful flushing without over-pressurizing the print head. A Sonic RF cap connects to the input filter (see picture). Make sure to remove the small screw on the side of the RF cap that plugs the vent hole. This hole must be clear to allow the fluid to enter the RF cap. Run the F6 cycle and keep the pressure under 8 psi. The membrane in the Sonic RF cap allows the ultrasound to get to the nozzles and help unclog them better.

After the print head has been recovered, fill it with the flushing solution that comes with your ink.

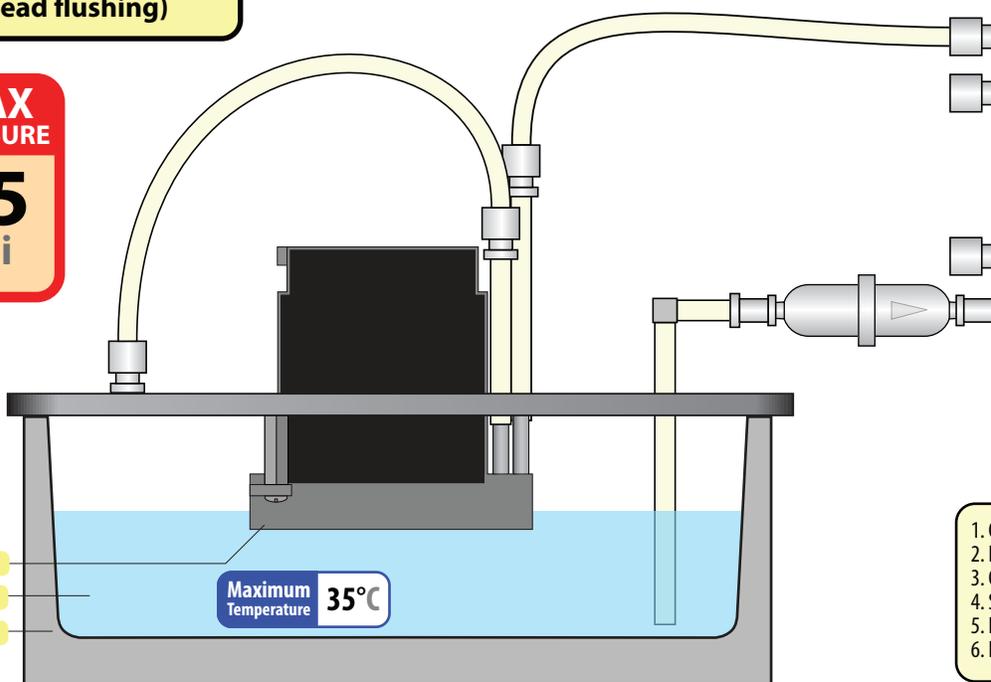
**Important:** do not leave recovery fluids with number higher than 1 inside the machine overnight. They will affect the pumps. Always drain the fluid and run distilled water through the machine for 1 minute, then purge the water out by allowing the machine to suck in the air and by running the AR cycle for a few seconds.

### Flushing the Mesh of KM512 Print Head (thru-head flushing)

**MAX PRESSURE**  
**15 psi**

Print Head  
Recovery Fluid  
Tank

Maximum Temperature **35°C**



**Outputs**

Pressure at zero

**Inputs**

Relief valve closed

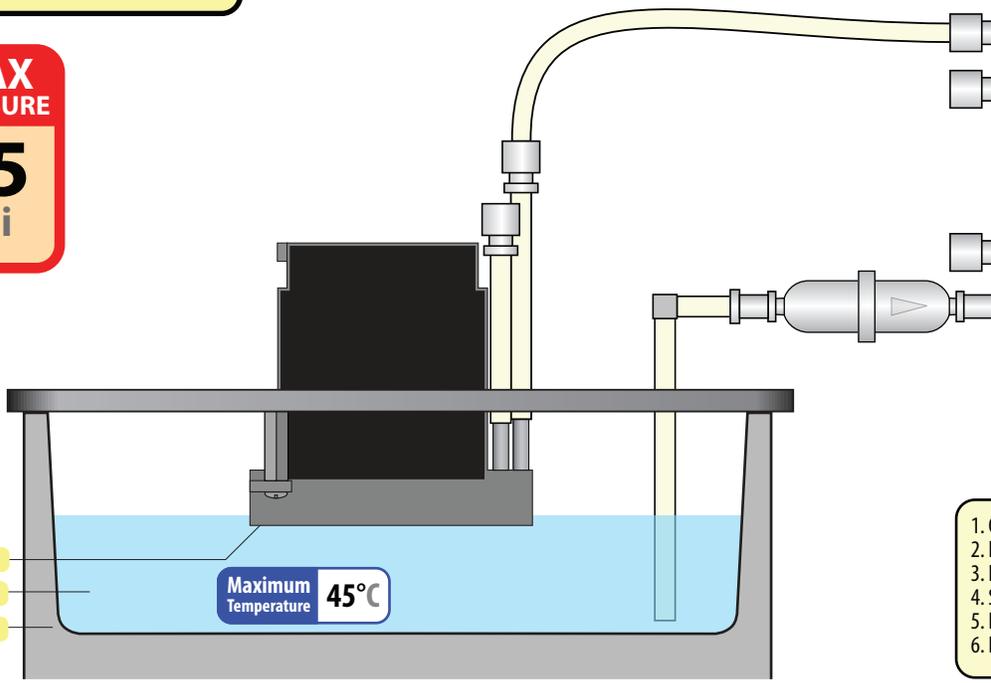
1. Connect print head as shown.
2. Install input filter(s)
3. Close the Relief Valve.
4. Start Syphon or Pulsonic cycle.
5. Do not exceed Max Pressure.
6. Do not exceed Max Temperature.

### Forward Flushing KM512 Print Head

**MAX PRESSURE**  
**15 psi**

Print Head  
Recovery Fluid  
Tank

Maximum Temperature **45°C**



**Outputs**

Maximum pressure 15 psi

**Inputs**

Adjust pressure with Relief Valve

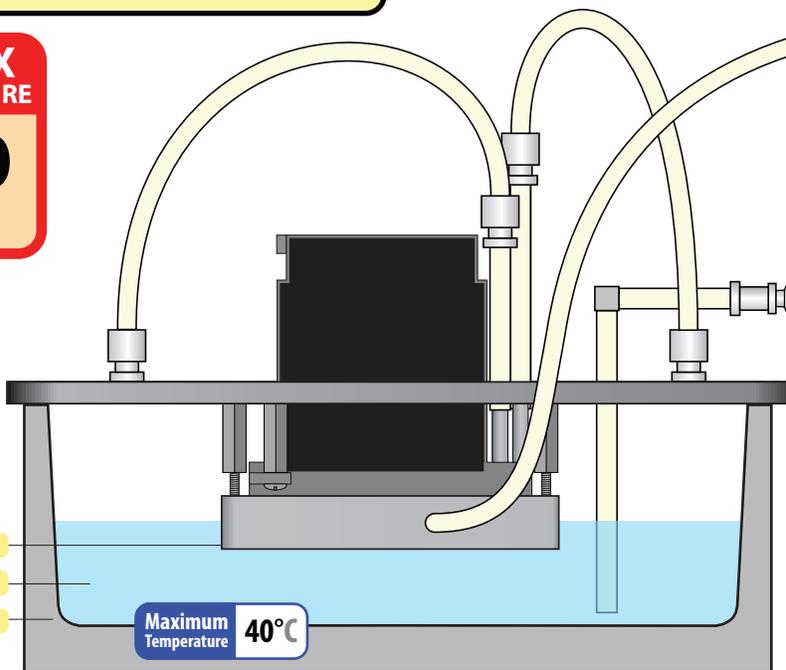
1. Connect print head as shown.
2. Install input filter(s)
3. Partially open the Relief Valve.
4. Start Syphon or Normal cycle.
5. Keep pressure within limits.
6. Do not exceed Max Temperature.

## Reverse Flushing KM512 print head using Reverse Flushing cap

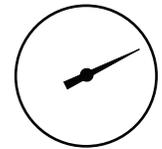
**MAX  
PRESSURE**  
**20  
psi**

RF Cap  
Recovery Fluid  
Tank

Maximum  
Temperature **40°C**



Outputs



Maximum pressure  
**20 psi**

Inputs



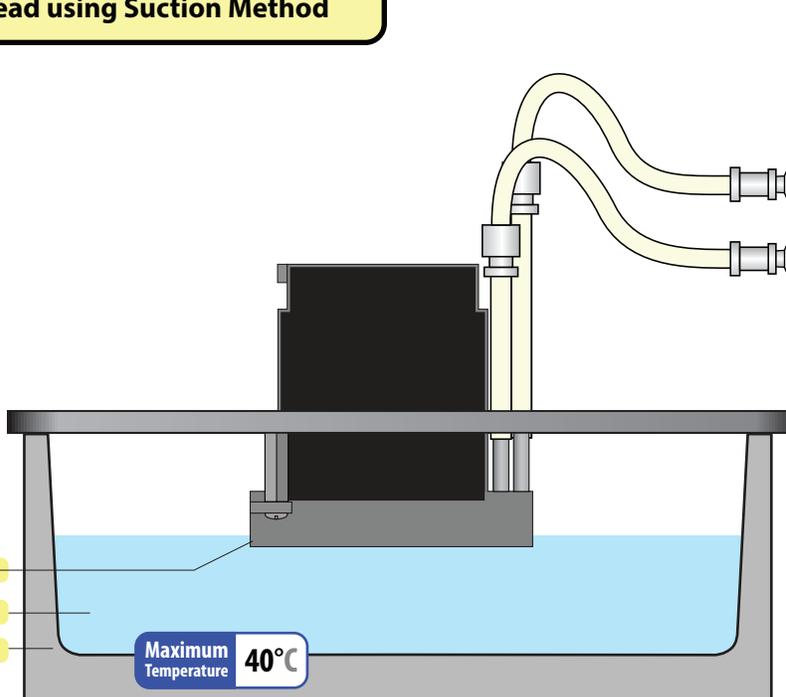
Adjust pressure  
with Relief Valve

1. Install Reverse Flushing cap.
2. Install 1st stage filter(s).
3. Connect RF cap tubing to output.
4. Plug the second output port.
5. Connect print head to adapter.
6. Run LPRF cycle.
7. Keep pressure within limits.

## Reverse Flushing KM512 print head using Suction Method

Print Head  
Recovery Fluid  
Tank

Maximum  
Temperature **40°C**



Outputs



Pressure at zero

Inputs



Relief valve open

1. Fluid and tank must be clean.
2. Plug both output ports.
3. Open Relief Valve (one turn).
4. Fluid must reach Print head.
5. Connect print head as shown.
6. Run Syphon cycle.

## Forward Flushing KM512 print head using a Sonic Reverse Flushing cap

**MAX  
PRESSURE**

**8  
psi**

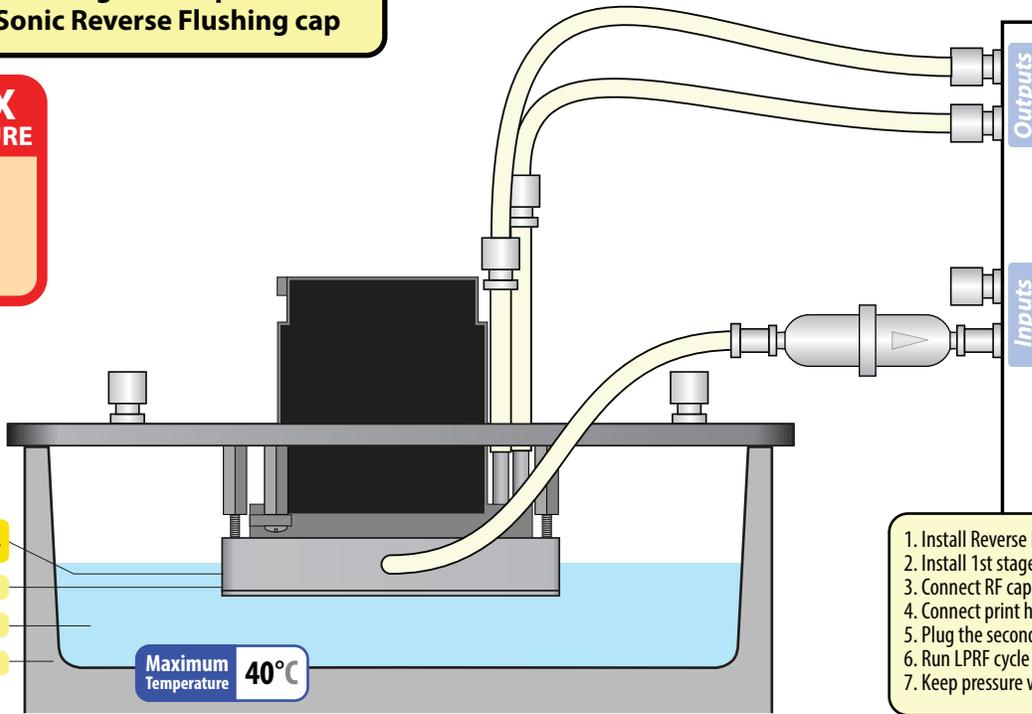
Remove the  
plugging screw

Sonic RF Cap

Recovery Fluid

Tank

Maximum  
Temperature **40°C**



Outputs



Maximum pressure  
8 psi

Inputs



Adjust pressure  
with Relief Valve

1. Install Reverse Flushing cap.
2. Install 1st stage filter.
3. Connect RF cap tubing to the filter.
4. Connect print head to output port.
5. Plug the second output port.
6. Run LPRF cycle or F6 with Sonic RF.
7. Keep pressure within limits.