**InJet® 388 TRIPLE CRRD**

- **STENCIL, MISPRINT, SQUEEGEE** cleaning
- **PUMPRINT** cleaning
- **PCB** cleaning
The InJet® 388 TRIPLE CRRD TECHNICAL DATA SHEET

GENERAL INFORMATION

The Injet 388 series cleaning systems represent unique vertical Spray-In-Air technology developed and manufactured by DCT.

The vertically installed Spray-In-Air device minimizes the shadowing effect commonly seen in horizontal cleaners, and maximizes the efficiency of the cleaning process as the cleaning fluid is sprayed directly onto the cleaned component.

The InJet® 388 TRIPLE CRRD, including a 100% closed loop, with cleaning, rinsing and drying technology processes.

All of the processes are fully automated, and take place in 3 process chambers, whereby the cleaning takes place in the first inlet chamber, after which the part which is being cleaned is automatically transported to a central chamber where the first rinsing process takes place. The third, and last, outlet chamber is designed for the final rinsing and the drying process.

All 3 chambers can be used in parallel, which increases the machine's capacity and reduces cross-contamination when compared with single-chamber devices.

Depending on your cleaning requirements, the DCT project manager, in collaboration with a local distributor, will advise you on a suitable water-based cleaning fluid and the correct setup of the entire process.
4 INDIVIDUAL PROCESSES

CLEANING
1st RINSING
2nd RINSING
DRYING

CLEANING PARAMETRES

<table>
<thead>
<tr>
<th>Application name</th>
<th>Recommended application</th>
<th>Recommended temperature</th>
<th>Recommended time</th>
<th>Capacity per 8 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stencil, misprint, squeegee</td>
<td>★★★</td>
<td>20 – 40°C</td>
<td>68 – 104 °F</td>
<td>20 min.</td>
</tr>
<tr>
<td>PumPrint</td>
<td>★★★</td>
<td>40 – 55°C</td>
<td>104 – 131 °F</td>
<td>20 min.</td>
</tr>
<tr>
<td>PCB</td>
<td>★★★</td>
<td>35 – 55°C</td>
<td>95 – 131 °F</td>
<td>32 min.</td>
</tr>
</tbody>
</table>

LEGEND: ★★★ highly recommended ★★ recommended ★ applicable
* PCB eurocards / per 8 hours (calculated for dimension of 100 x 160 mm / 3.94 x 6.3 in)
### TECHNICAL PARAMETERS

<table>
<thead>
<tr>
<th>Metric Units</th>
<th>Imperial Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (w x l x h)</td>
<td>1205 x 3200 x 1860 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>890 kg</td>
</tr>
<tr>
<td>Ø energy consumption per cycle</td>
<td>1.65 kWh</td>
</tr>
<tr>
<td>Cleaning and rinsing fluid consumption per cycle</td>
<td>0.05 – 0.3 L</td>
</tr>
<tr>
<td>Compressed air consumption per cycle</td>
<td>2 L / 5 Bar</td>
</tr>
<tr>
<td>Max. dimensions of the cleaned parts</td>
<td>100 x 810 x 740 mm</td>
</tr>
<tr>
<td>Exchangeable mechanical filter of cleaning and rinsing fluid</td>
<td>5 - 200 μm</td>
</tr>
<tr>
<td>Spraying pressure / 45 °C / 113 °F</td>
<td>2.4 Bar</td>
</tr>
<tr>
<td>Cleaning fluid flow rate</td>
<td>200 L / min</td>
</tr>
<tr>
<td>Temperature range setting of the cleaning and rinsing fluid</td>
<td>From ambient temperature to 60 °C</td>
</tr>
<tr>
<td>Conductivity range settings of the rinsing fluid in the tanks</td>
<td>0 – 2000 μS/cm * optional</td>
</tr>
<tr>
<td>Temperature range setting of the drying</td>
<td>From ambient temperature to 80 °C</td>
</tr>
<tr>
<td>Noise level</td>
<td>&lt; 70 dB</td>
</tr>
<tr>
<td>Device control</td>
<td>PLC + 8.4” touchscreen</td>
</tr>
</tbody>
</table>

### DIMENSIONS

- Dimensions: 1205 mm x 3200 mm x 1860 mm
- Weight: 890 kg
- Energy consumption: 1.65 kWh
- Cleaning fluid consumption: 0.05 – 0.3 L
- Compressed air consumption: 2 L / 5 Bar
- Maximum dimensions of the cleaned parts: 100 mm x 810 mm x 740 mm
- Exchangeable mechanical filter of cleaning and rinsing fluid: 5 - 200 μm
- Spraying pressure: 2.4 Bar
- Cleaning fluid flow rate: 200 L / min
- Temperature range: From ambient temperature to 60 °C
- Conductivity range: 0 – 2000 μS/cm
- Noise level: < 70 dB

### MINIMUM SERVICE SPACE AROUND THE MACHINE

- Open door: 450 mm x 177 mm
- Minimum service space: 600 mm x 236 mm x 236 mm

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INSTALLATION REQUIREMENTS

<table>
<thead>
<tr>
<th>metric units</th>
<th>Imperial units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>400 V, 32A, 50Hz (3+N+PE)</td>
</tr>
<tr>
<td>Pmax</td>
<td>16 kW</td>
</tr>
<tr>
<td>Connection to central air pressure</td>
<td>Pipe Ø 6 mm and Ø 10 mm</td>
</tr>
<tr>
<td>Recommended working pressure</td>
<td>5 Bar</td>
</tr>
<tr>
<td>Exhaust pipe diameter - 3x</td>
<td>Ø 100 mm</td>
</tr>
<tr>
<td>Exhaust pipe capacity</td>
<td>580 m³/h</td>
</tr>
<tr>
<td>Minimum liquid for first fill</td>
<td>2 x 75 L</td>
</tr>
<tr>
<td>Service space required around the device</td>
<td>600 mm</td>
</tr>
</tbody>
</table>

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STANDARD HARDWARE EQUIPMENT

3 process chamber - fully automated solution
100% closed loop fluid system
3 arm rotation - electric powered - cleaning
2 arm rotation - electric powered - rinsing
Cleaning and rinsing fluid heating
2 hot air blowers - drying
Chimney flap - electronically controlled
Pneumatic door lock
Emergency stop button
Manipulation wheels - lockable
Electronic monitoring of the fluid pressure
PLC controller + 8,4” touchscreen display
Spare parts (base kit)

STANDARD SOFTWARE EQUIPMENT

Electronic monitoring of fluid level
Electronic monitoring of fluid pressure
Electronic cycle counter
3 level of logging - operator, maintenance, technician
Spraying fluid pressure - continuous measurement
Standard software language mutation - CZ, ENG
Liquid and filter replacement notification - cycle counting
Possibility of 5 programs - setting option
Smart warning - low or high pressure level
Smart warning - low fluid level
OPTIONAL HARDWARE EQUIPMENT

- Common fluids draining - manual control
- Automatic cleaning fluid refilling (without pump)
- Automatic cleaning fluid discharging (without pump)
- Tanker 200 and 400 L - rinse fluid
- 2 PR sandwich filtration - integrated
- Sandwich filtration - external
  and other equipment ...

OPTIONAL SOFTWARE EQUIPMENT

- SW for CVA calculation (android, machine)
- Adjustable timer of cleaning fluid heating
- Upgrade machine for PROTON 69
- Language mutation (CZE, ENG, GER, POL, CHI, RUS, ITA, SPA, MAY, HUN)
- Online access to cleaning device
  and other equipment ...

OPTIONAL ACCESSORY – FRAMES AND OTHERS

- Mechanical carrier frame - PCB
- Mechanical carrier frame - frameless stencils
- Mechanical carrier frame - frame stencils
- Mechanical carrier frame - VectorGuard stencils
- Mechanical carrier frame - squeegees
- Mechanical carrier frame - frame and VG stencils (reduction)
  and other equipment ...

OPTIONAL TRACEABILITY

- Traceability OFF line, CSV to SD card
- Traceability OFF line, Reader, CSV to SD card
- Traceability ON line, PC WIN, file
- Traceability ON line, READER, PC WIN, file
- Traceability ON line, PC WIN, OPC Server CD, no file
- Traceability ON line, PC WIN, READER, OPC Server CD, no file
  and other options ...

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DCT QUALITY

All of the InJet®, AirJet® and Sonix® cleaning systems developed by DCT are characterised by the highest quality on the market, high reliability, ease of use, simple maintenance, an extremely long lifespan, and the longest warranty on the cleaning system market.

These afore-mentioned benefits are achieved by the precise manual production of the machines in the Czech Republic, and thanks to the superior quality of the used materials and components.

Cleaning systems boast a unique all-stainless-steel construction, which is welded manually from AISI 304 and AISI 316 stainless steel and then chemically passivated.

The cleaning systems are designed and manufactured with a focus on ease of use by operators, simple maintenance, and smart process parameter setting. They are equipped with industrial PLC IDEC, a well arranged colour touch display with 3-level access (operator, maintenance, engineer), and with 5 adjustable cleaning programmes as standard.

The device automatically and permanently checks all processes, operating fluid levels and process temperatures, and also gives timely notification of the need to replace individual consumables or fluids.

Monitoring of the cleaning process history, whether offline or online, is ensured by an optional traceability function.

A wide range of standard hardware and software equipment is available for every cleaning system. However, DCT also excels by its flexibility when resolving non-standard machines and their accessories.

Our machines, together with our cleaning fluids and local application and technical support, bring you a long-term reliable, powerful and stable cleaning process, even under the most demanding continuous operation conditions.

With all its cleaning systems, DCT offers a wide range of hardware and software equipment, special frames with hitches for the parts you want to clean, and countless variants in addition to the basic process monitoring options which use traceability.

STAINLESS STEEL DESIGN:

- main support frame
- storage tanks
- process chambers
- fluid and air distribution systems
- spray arms and nozzles
- mechanical high-capacity filters
- process chamber door frame and handle
- external shielding
- active filters for rinsing DI water

For more information, a list of options and a selection of suitable equipment, please contact a DCT specialist in your country or the manufacturer directly.

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InJet® is a registration trademark of DCT Czech s.r.o.

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