InJet® 888 CRRD – 2F

TECHNICAL DATA SHEET

REFLOW and SOLDERING PARTS cleaning
PCB cleaning
STENCIL, MISPRINT, SQUEEGEE cleaning
GENERAL INFORMATION

The InJet® 888 series cleaning systems represent unique horizontal Spray-In-Air technology developed and manufactured by DCT.

Systems with horizontal spraying technology excel in high pressure and high liquid flow. Thanks to their large process chamber they have a large capacity basket, which also facilitates loading and unloading of the cleaned parts.

The basket can be pulled out of the cleaning chamber on built-in rails or onto a separate loading and handling trolley.

The InJet® 888 CRRD-2F including 100% closed loop with processes of cleaning, pre-rinsing, rinsing and drying technologies. All of the processes are fully automated, and take place in one process chamber.

The InJet® 888 CRRD-2F is designed primarily for removing flux residues from soldered boards. It is possible to insert and clean a stencil or misprints at the same time.

The 2F designation refers to a 2-storey solution where smaller parts can be cleaned in two baskets simultaneously to maximize cleaning capacity. After easy removal of the rotation arm, large parts can be cleaned in one (lower) basket.

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
PRE-RINSING
RINSING
DRYING

CLEANING PARAMETRES

<table>
<thead>
<tr>
<th>Application name</th>
<th>Recommended application</th>
<th>Recommended temperature</th>
<th>Total cleaning process time</th>
<th>Capacity per 8 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflow and soldering parts</td>
<td>★★★</td>
<td>30 – 50°C</td>
<td>86 – 122 °F</td>
<td>40 min.</td>
</tr>
<tr>
<td>PCB</td>
<td>★★★</td>
<td>35 – 55°C</td>
<td>95 – 131 °F</td>
<td>60 min.</td>
</tr>
<tr>
<td>Stencil, misprint, squeegee</td>
<td>★</td>
<td>20 – 40°C</td>
<td>68 – 104 °F</td>
<td>20 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)
** Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12.6 x 19.7 x 1.97 in)
*** Stencils, pumpprints larger than 736 x 736 mm / 29 x 29 in
**TECHNICAL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Metric Units</th>
<th>Imperial Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (w x l x h)</td>
<td>1620 x 1350 x 2350* mm</td>
<td>63.8 x 53.1 x 92.5* in</td>
</tr>
<tr>
<td>Weight</td>
<td>795 kg</td>
<td>1753 lbs</td>
</tr>
<tr>
<td>Ø energy consumption per cycle</td>
<td>3.3 kWh</td>
<td>3.3 kWh</td>
</tr>
<tr>
<td>Cleaning and rinsing fluid consumption per cycle</td>
<td>0.2 – 0.5 l</td>
<td>0.05 – 0.13 gal</td>
</tr>
<tr>
<td>Compressed air consumption per cycle</td>
<td>1200 l / cycle / 4.5 bar</td>
<td>396.26 gal / cycle / 4.5 bar</td>
</tr>
<tr>
<td>Max. dimensions of the cleaned parts</td>
<td>850 x 800 x 600 mm</td>
<td>32.7 x 31 x 22.7 in</td>
</tr>
<tr>
<td>Exchangeable mechanical filter of cleaning and rinsing fluid</td>
<td>5 – 200 μm</td>
<td>5 – 200 μm</td>
</tr>
<tr>
<td>Spraying pressure / 45 °C / 113 °F</td>
<td>2.4 Bar</td>
<td>34.8 PSI</td>
</tr>
<tr>
<td>Cleaning fluid flow rate</td>
<td>210 l / min</td>
<td>55.5 gal / min</td>
</tr>
<tr>
<td>Temperature range setting of the cleaning and rinsing fluid</td>
<td>From ambient temperature to 60°C</td>
<td>From ambient temperature to 140°F</td>
</tr>
<tr>
<td>Conductivity range settings of the rinsing fluid in the tanks</td>
<td>0 – 2000 μS/cm * optional</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>
<td>From ambient temperature to 176°F</td>
</tr>
<tr>
<td>Noise level</td>
<td>&lt; 70 dB</td>
<td>&lt; 70 dB</td>
</tr>
<tr>
<td>Device control</td>
<td>PLC + 8,4” touchscreen</td>
<td>PLC + 8.4” touchscreen</td>
</tr>
<tr>
<td>Volume of storage tanks</td>
<td>85 l</td>
<td>22.4 gal</td>
</tr>
</tbody>
</table>

* Maximum dimension in operation condition

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**DIMENSIONS**

**MINIMUM SERVICE SPACE AROUND THE MACHINE**
INSTALLATION REQUIREMENTS

<table>
<thead>
<tr>
<th></th>
<th>metric units</th>
<th>imperial units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>400V, 32A, 50Hz (3+N+PE)</td>
<td>UL 400V, 32A, 60Hz* (3+N+PE)</td>
</tr>
<tr>
<td>Pmax</td>
<td>16 kW</td>
<td>16 kW</td>
</tr>
<tr>
<td>Compressed air connection</td>
<td>Pipe Ø 6 mm</td>
<td>Pipe ID 0.24 in</td>
</tr>
<tr>
<td>Recommended working pressure</td>
<td>4.5 – 6 Bar</td>
<td>65.25 – 87 PSI</td>
</tr>
<tr>
<td>Exhaust pipe diameter</td>
<td>Ø 150 mm</td>
<td>ID 5.91 in</td>
</tr>
<tr>
<td>Exhaust pipe capacity</td>
<td>580 m³/h</td>
<td>20450 ft³/h</td>
</tr>
<tr>
<td>Minimum liquid for first run</td>
<td>2 x 75 l</td>
<td>2 x 19.8 gal</td>
</tr>
<tr>
<td>Service space required around the device</td>
<td>600 mm</td>
<td>23.6 in</td>
</tr>
</tbody>
</table>

* When using frequency convertor
### STANDARD HARDWARE EQUIPMENT

- 1 process chamber – fully automated solution
- 100% closed loop fluid system
- 4 arm rotation – electric powered
- Cleaning and rinsing fluid heating
- High-capacity mechanical filtration on all cycles
- 75 litres external tank for pre-rinsing
- 2 hot air blowers – drying
- Chimney flap – electronically controlled
- Pneumatic door lock
- Emergency stop button
- Manipulation wheels – lockable
- PLC controller + 8.4" touchscreen display
- Spare parts (base kit)

### STANDARD SOFTWARE EQUIPMENT

- Electronic monitoring of fluid level
- Electronic monitoring of fluid pressure
- Electronic process cycle counter
- Adjustable pressure of cleaning and rinsing process
- 3 levels of logging – operator, maintenance, engineer
- 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 fluids refilling (without pump)
- Automatic fluids discharging (without pump)
- Tanker 200 a 400 l – cleaning or rinse fluid
- Filtration sandwich – external
- Conductivity measurement – pre-rinse / rinse circuit 0–2000 µS blocking optional
- Heating fluids in tanker
- and other equipment ...

OPTIONAL SOFTWARE EQUIPMENT

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

OPTIONAL ACCESSORY – FRAMES AND OTHERS

- Mechanical basket
- Mechanical basket – PCBs + 4 comb holders
- Mechanical basket – PCBs without comb holders
- Mechanical basket – soldering frames + palets
- Mechanical carrier stand – soldering frames + palets (5–12 holders)
- Mechanical comb holder (18 slots)
- Mechanical table holder – stencil or PCB carrier frame
- Mechanical manipulation trolley – one / two floor
- 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
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.

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.

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

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

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