#Better Solutions

InJet®

CHAMBER

TECHNICAL DATA SHEET

InJet® 388 CRRD

Combo



- ★★★ **STENCIL, MISPRINT, SQUEEGEE** cleaning
- ★★★ **PUMPRINT** cleaning
- ★★★ **CONFORMAL COATING** removing
- ★★★ **PCB** cleaning

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.

InJet® 388 CRRD *"Combo"* including 100% closed loop with processes of cleaning, pre-rinsing, final rinsing, and drying technologies.

All of the processes are fully automated, and take place in one process chamber.

The **InJet® 388 CRRD** *"Combo"* is developed primarily for precision PCBA.

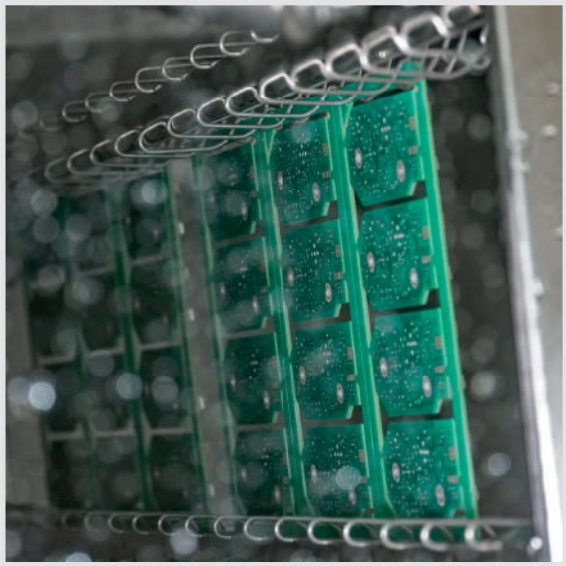
The cleaning system can also be used for high-quality removal of solder pastes and SMT adhesives from stencils, PumPrints, squeegees and misprints, or the aforementioned cleaning applications, along with PCBA.

The machine can also be used for the removal of cured conformal coatings.





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.





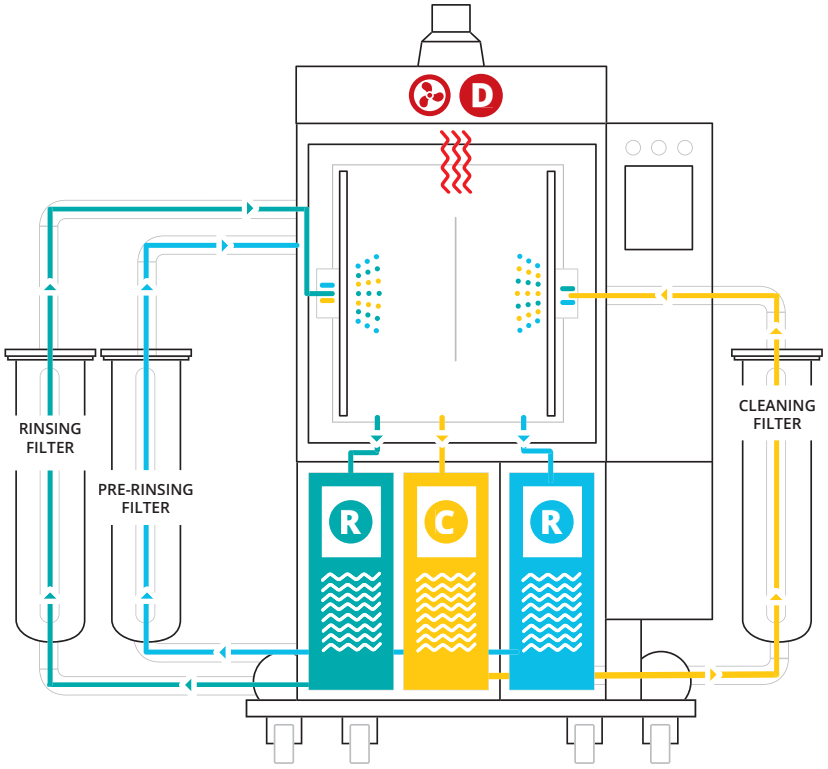
4 INDIVIDUAL PROCESSES

C CLEANING

R PRE–RINSING

R RINSING

D DRYING



CLEANING PARAMETRES

Application name	Recommended application	Recommended temperature		Total cleaning process time	Capacity per 8 hours
Stencil, misprint, squeegee	★★★	20 – 40°C	68 – 104 °F	18 min.	27
PumPrint	★★★	40 – 55°C	104 – 131 °F	18 min.	27
Conformal coating	★★★	40 – 55°C	104 – 131 °F	60 min.	192 * /16 **
PCB	★★★	35 – 55°C	95 – 131 °F	30 min.	384 *

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

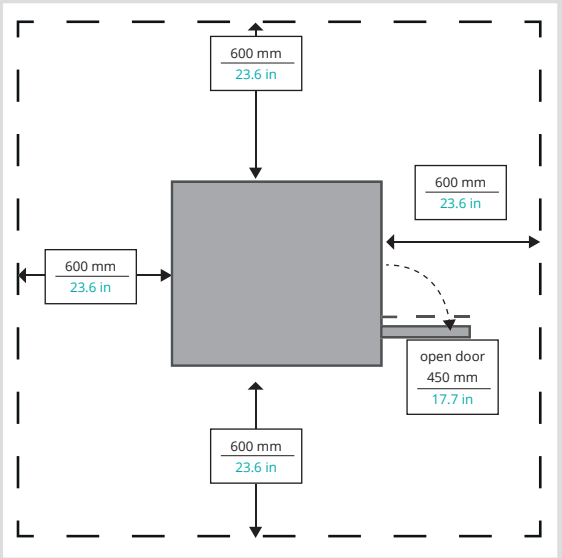
TECHNICAL PARAMETERS

	metric units	*imperial units*
Dimensions (w x l x h)	1410 x 1390 x 2400mm	55.5 x 54,7 x 94,4 in
Weight	560 Kg	1235 lbs
Ø energy consumption per cycle	1,65 kWh	1.65 kWh
Cleaning and rinsing fluid consumption per cycle	0,05 – 0,3 l	0.01 – 0.08 gal
Compressed air consumption per cycle	900 l / cycle	237.75 gal / cycle
Max. dimensions of the cleaned parts	190 x 800 x 760 mm	7,48 x 31,5 x 29,92 in
Max. dimensions of the cleaned part with used air knife	100 x 800 x 760 mm*	3,94 x 31,5 x 29,92 in
Exchangeable mechanical filter of cleaning and rinsing fluid	5 – 200 µm	5 – 200 µm
Spraying pressure / 45°C / 113°F	2,2 Bar**	31.9 PSI
Range pressure – cleaning / 45°C / 113°F	0,9 – 2,8 Bar**	13 – 40,6 PSI
Range pressure – pre rinse / 45°C / 113°F	0,0 – 1,5 Bar**	0,0 – 21,76 PSI
Range pressure – rinse / 45°C / 113°F	0,0 – 0,5 Bar**	0,0 – 7,25 PSI
Cleaning fluid flow rate	200 l / min	33 gal / min
Temperature range setting of the cleaning and rinsing fluid	From ambient temperature to 60°C	From ambient temperature to 140°F
Conductivity range settings of the rinsing fluid in the tanks.	0 – 2000 µS/cm * optional	0 – 2000 µS/cm * optional
Temperature range setting of the drying	From ambient temperature to 80°C	From ambient temperature to 176°F
Noise level	< 70 dB	< 70 dB
Device control	PLC + 8,4" touchscreen	PLC + 8.4" touchscreen
Volume of the storage tanks	60 l	15.9 gal

* Air knife is optional accessory
** Values may vary depending on equipment(filters, pumps)



DIMENSIONS



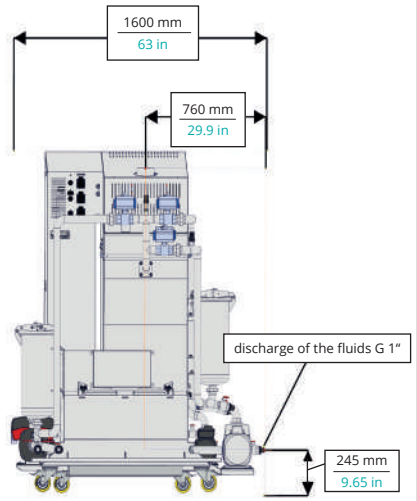
MINIMUM SERVICE SPACE AROUND THE MACHINE

INSTALLATION REQUIREMENTS

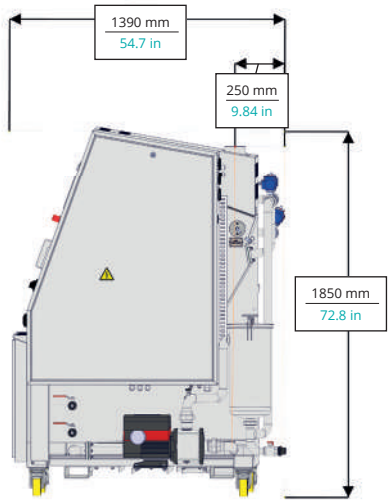
	metric units	*imperial units*
Power supply	400V, 32A, 50Hz (3+N+PE)	UL 400V, 32A, 60Hz* (3+N+PE)
Pmax	13 kW	13 kW
Compressed air connection	Pipe Ø 6 mm	Pipe ID 0.24 in
Recommended working pressure	4,5 – 6 Bar	65.25 – 87 PSI
Exhaust pipe diameter	Ø 100 mm	ID 3.94 in
Exhaust pipe capacity	380 m³/h	13400 ft³/h
Minimum liquid for first run	3 x 50 l	3 x 13.2 gal
Service space required around the device	600 mm	23.6 in

* When using frequency convertor

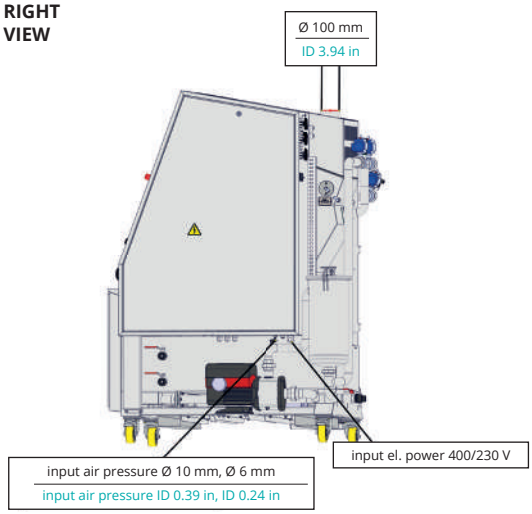
BACK VIEW



RIGHT VIEW



RIGHT VIEW



STANDARD HARDWARE EQUIPMENT

1 process chamber – fully automatted solution
100% closed loop fluid system
2 arm rotation – fluid powered - cleaning
2 arm rotation – fluid powered - rinsing
Cleaning and rinsing fluid heating
Mechanical filtration
2 hot air blowers – drying
Chimney flap – electronically controlled
Pneumatic door lock
Emergency stop button
Adjustable legs – 4 pcs
PLC controller + 8,4" touchscreen display
Spare parts (base kit)

STANDARD SOFTWARE EQUIPMENT

Electronic monitoring of fluid level
Electronic process cycle counter
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

Manipulation wheels – lockable
Common fluids draining – manual control
Automatic fluids refilling (without pump)
Automatic fluids discharging (without pump)
Tanker 200 l or 400 l – cleaning/rinse fluid
Filtration 1PR sandwich – integrated
Filtration sandwich – external
Air knife – swinging – drying chamber
Conductivity measurement – pre-rinse / rinse 0–2000 µS – blocking optional
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 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

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**



Date of issue: **3/2021**
InJet® is a registration trademark of DCT Czech s.r.o.

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