Better Solutions

InJet®
SPRAY IN AIR
TECHNOLOGY

CHAMBER

4
INDIVIDUAL
PROCESSES

STAINLESS
STEEL
DESIGN
AISI 304/316

TECHNICAL DATA SHEET

InJet® 388 CRRD-1PR
CUSTOMLINE
Combo

APPLICATION		REMOVING
STENCIL, MISPRINT, SQUEEGEE	→	Solder pastes
PUMPRINT	→	SMT adhesives
CONFORMAL COATING	→	Coating removing
PCB	→	Flux

GENERAL INFORMATION

CUSTOMLINE CLEANING SYSTEM

The **Customline section** is meant for customers who have specific requirements.

Together we will configure the cleaning system to achieve the highest efficiency and quality of cleaning according to your wishes and expectations.

DEVELOPED AND INTENDENT FOR RECOMMENDED

APPLICATION		REMOVING
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CLEANING TECHNOLOGY

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 eff ect commonly seen in horizontal cleaners, and maximizes the effi ciency of the cleaning process as the cleaning fl uid is sprayed directly onto the cleaned component.

CHAMBERS & PROCESSES

1 PROCESS CHAMBER
4 PROCESSES - CLEANING, PRERINSING, RINSING, DRYING

PROCESS CONTROL

- **Real-time cleaning fluid pressure monitoring**
- **Control system of fluids limit pressures**
- **Liquid and filter replacement notification** - cycle counting
- **Minimum level warning** - cleaning and rinsing fluid
- **Conductivity measurement - rinse**

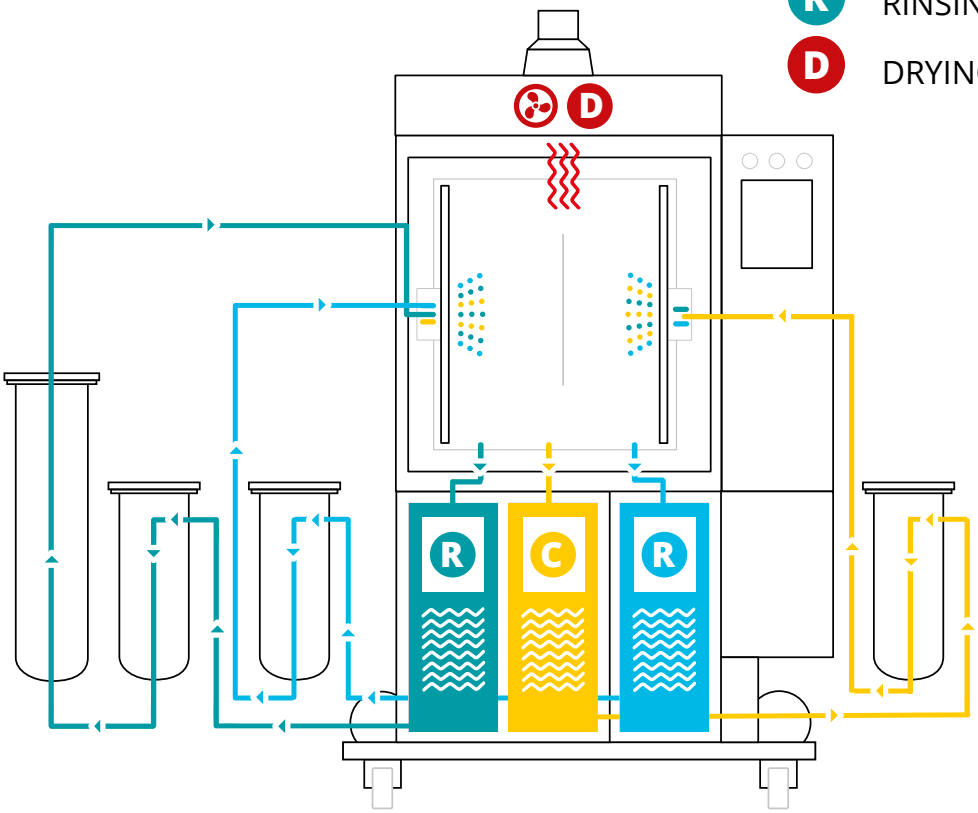
BENEFITS

- **3-arm controlled rotation** - for improving the quality of cleaning
- **Filtration 1PR sandwich - integrated with automatic regulation** - for improving the quality of rinsing.
- **Air Knife - swinging** - for improving the quality of drying
- **Common fluids draining** - manual control

1 PROCESS CHAMBER

4 PROCESSES

- C CLEANING
- R PRE–RINSING
- R RINSING
- D DRYING



CLEANING PARAMETRES

Cleaning Application	Suitability	Recommended processes temperature		Total usual 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

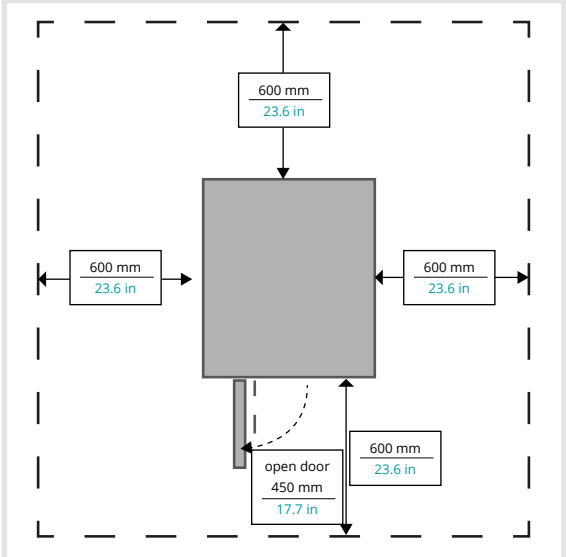
* PCB eurocards / per 8 hours (calculated for dimension of 100 x 160 mm / 3.94 x 6.3 in)
* * Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12,6 x 19,7 x 1,97 in)
* * * Stencils, pumpprints larger than 736 x 736 mm / 29 x 29 in

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
Consumption of cleaning agent per cycle - empty process chamber	0,1 – 0,3 l (15 min, 45°C)	0.02 – 0.08 gal (15 min, 113°F)
Consumption of rinsing fluid per cycle - empty process chamber	0,1 – 0,3 l (15 min, 45°C)	0.02 – 0.08 gal (15 min, 113°F)
Compressed air consumption per cycle	3 l / cycle	0.79 gal / cycle
Air consumption of Air knife - chemical resiude isolation	166 l / min	44 gal / min
Air consumption - chemical resiude isolation in process chamber	260 l / 45 sec	68.68gal / 45 sec
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 – 1,0 Bar	0,0 – 14.50 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	0 – 2000 µS/cm
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

DIMENSIONS

MINIMUM SERVICE SPACE AROUND THE MACHINE

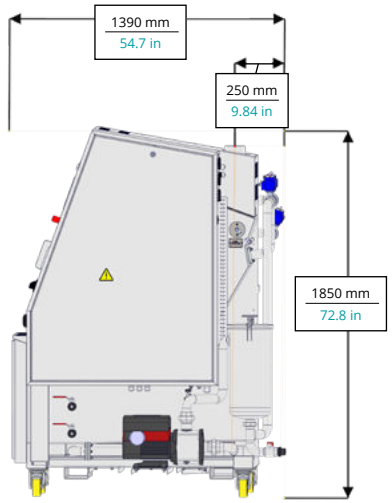


INSTALLATION REQUIREMENTS

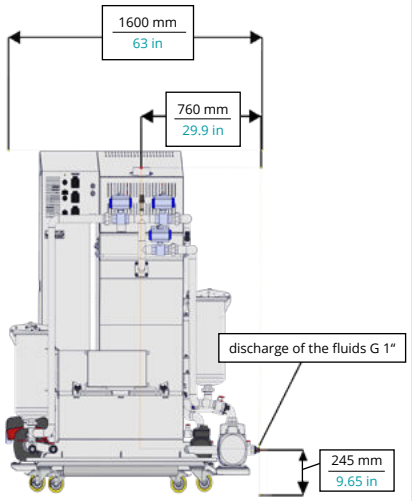
	metric units	imperial units
Power supply	400V, 32A, 50Hz (3+N+PE)	UL 400V, 32A, 60Hz* (3+N+PE)
Pmax	13 kW	13 kW
Compressed air connection	Pipe Ø 6 mm and Ø 10 mm - 5 m	Pipe ID 0.24 in and ID 0,39 in - 196,9 in
Recommended working pressure	4,5 – 6 Bar	65.25 – 87 PSI
Compressed air quality	3. Class **	3. Class **
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
** According to the norm ISO 8573-1

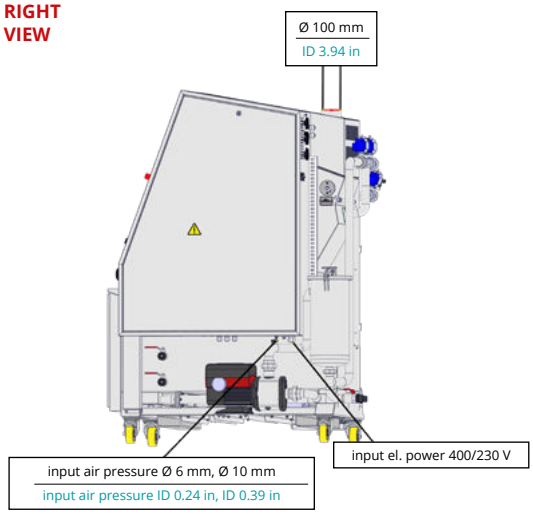
RIGHT VIEW



BACK VIEW



RIGHT VIEW



STANDARD EQUIPMENT

MECHANICAL EQUIPMENT

Filtration of mechanical particles
Consumption savings - Residue air-isolation
Chimney flap - automatic
Draft diverter with drip plate - 100 mm
Pressurized air coupling for external pump connection
Castor wheels with brakes - BLICKLE
Door lock - automatic
Manual air-bleeding for pumps
Mechanical filter lock
Glass level gauge in stainless steel housing
Spare parts (base kit)

ELECTRO EQUIPMENT

PLC controller + 8,4" touchscreen display - IDEC
Rotation - 3-arm driven rotation
Heating system - cleaning fluid, rinsing fluid
Drying system - hot air
Emergency stop button - EATON
ESD earthing point - for operator

SOFTWARE EQUIPMENT

Language version - Czech + English
Five programs with individually settable parameter
Three-level logging rights - operator, maintenance, engineer
Minimum level warning - cleaning, pre-rinsing and rinsing fluid
Liquid and filter replacement notification – cycle counting
Control system of fluids limit pressures
Real-time cleaning fluid pressure monitoring

MANDATORY EQUIPMENT

Status light main + acoustic signalization - IDEC
Conductivity measurement - pre-rinse 0-2000 µS - blocking optional
Conductivity measurement - rinse 0-2000 µS - blocking optional
Air Knife - swinging - drying
Filtration 1PR sandwich - integrated with automatic regulation
Common fluids draining- manual control

OPTIONAL EQUIPMENT

MECHANICAL EQUIPMENT

Automatic cleaning agent refilling (without pump-ready mix)
Automatic cleaning agent discharging (without pump)
Automatic pre-rinsing water refilling (without pump
Automatic pre -rinsing water discharging (without pump)
Automatic rinsing water refilling (without pump
Automatic rinsing water discharging (without pump)
Integrated pump for automatic discharge
Stainless steel drip tray - ESD floor protection
External portable pump
Integrated pump for manual discharge
Consumption savings - Residue air-isolation
Filtration sandwich - external
Drain valve with lock
Squeegee for reservoir tank maintenance

ELECTRO EQUIPMENT

Adjustable rotation arm speed (Combo)
Control of external exhaust ventilator - instalation at customer
Electronic control - drying spirals functionality
Frequency convertor
Transformer with/without UL

SOFTWARE EQUIPMENT

Fluid heating timer - cleaning, pre-rinsing and rinsing
Modification of cleaning system for 3rd class flammable liquid
Language mutation (CZE, ENG, GER, POL, CHI, RUS, ITA, SPA, MAY, HUN)

TRACEABILITY

Traceability OFF line
Traceability ON line

OPTIONAL EQUIPMENT

FRAMES EQUIPMENT

Frames for PCBs
Frames for frameless stencils
Frames for frame stencils
Frames for VectorGuard stencils
Frames for squeegees
Frames - reduction for stencils

TROLLEYS, STANDS, HOLDERS EQUIPMENT

Mechanical table holder for a mechanical carrier frames
Mechanical manipulation trolley of PCB holders - 10 positions
Mechanical manipulation trolley of PCB holders - 8positions

EXTERNAL TANKS AND ACCESSORIES

Tank - 200l - rinse fluid
Conductivity measurement
Tank - 200l - cleaning fluid (readymix)
Air-based fluid mixing
Heating the fluids in the tanker (200 L)
Tank - 200l - cleaning fluid (concentrate) + dosing pump
1000l IBC tank
Monitoring the level in discharge external tank - IBC 1000 l
Monitoring the level in external tank for DI water - IBC 1000 l
Water pump with pressure tank

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.

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 cleaning systems 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 3 or 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** cleaning systems and their accessories.

Our cleaning systems, 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 AISI 304/316

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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