

BETTETZ SOLUTIONS

InJet® SPRAY IN AIR **TECHNOLOGY**







InJet® 888 CRD-1F **CUSTOMLINE**



APPLICATION

- REFLOW AND SOLDERING PARTS SMELTING RESIDUES
- CONFORMAL COATING
- HANDLING

REMOVING

- FRAMES AND PART OF MACHINE
- DUST, RUST, GREASE CLEANING



GENERAL INFORMATION

CUSTOMLINECLEANING 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

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CLEANING TECHNOLOGY

The InJet® 888 series cleaning systems represent unique **horizontal Spray-In-Air technology** developed and manufactured by DCT. Horizontal Spray- In-Air technology excel in high pressure and high liquid/fluid flow.

CHAMBERS & PROCCESSES

1 PROCESS CHAMBER (1-FLOOR SOLUTION)
3 PROCESSES - CLEANING, 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









1 PROCESS CHAMBER



3 PROCESSES



CLEANING

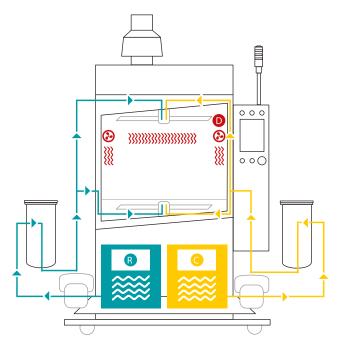


RINSING



DRYING







CLEANING PARAMETRES

Cleaning Application	Suitability	Recommended processes temperature		Total usual process time	Capacity per 8 hours
Reflow and soldering parts	*	30 – 50°C	86 – 122 °F	40 min.	240 **
Conformal coating	*	35 – 55°C	95 – 131 °F	55 min.	1100 *
Handling	*	20 – 40°C	68 – 104 °F	20 min.	24

LEGEND: ★ HIGHLY RECOMMENDED ★ RECOMMENDED ★ APPLICABLE

- * PCBA eurocards / per 8 hours (calculated for dimension of $100 \times 160 \text{ mm}$ / $3.94 \times 6.3 \text{ in}$)
- ** Parts in soldering coating 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



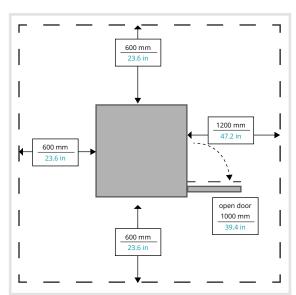
TECHNICAL PARAMETERS

	metric units	imperial units
Dimensions (w x l x h) ZKOUSK	1620 x 1400 x 2350 mm	63.8 x 55,1 x 92,5 in
Weight	660 kg	1455 lbs
Ø energy consumption per cycle	3,3 kWh	3.3 kWh
Cleaning and rinsing fluid consumption per cycle	0,2 - 0,5	0.05 – 0.13 gal
Compressed air consumption per cycle	1500 l / cycle	396.26 gal / cycle
Max. dimensions of the cleaned parts	850 x 800 x 600 mm	33.46 x 31 x 22.7 in
Exchangeable mechanical filter of cleaning and rinsing fluid	5 – 200 µm	5 – 200 μm
Operating pressures frequency converter	2,4 Bar	34.8 PSI
Cleaning fluid flow rate	210 l / min	55.5 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	85 l	22,4 gal

DIMENSIONS



MINIMUM SERVICE SPACE AROUND THE MACHINE

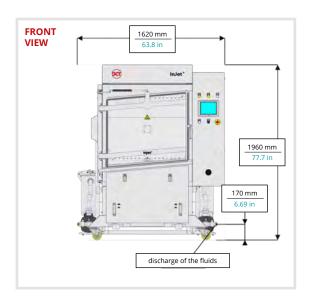


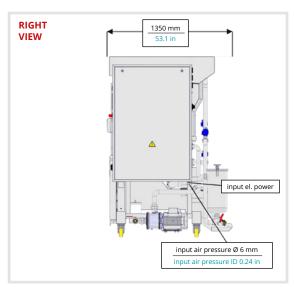


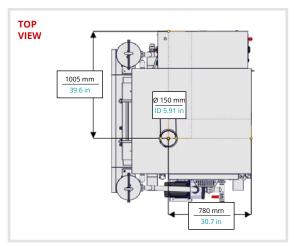
INSTALLATION REQUIREMENTS

	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 - 5 m	Pipe ID 0.24 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 150 mm	ID 5.91 in	
Exhaust pipe capacity	380 m³/h	13400 ft³/h	
Minimum liquid for first run	2 x 75 l	2 x 19,8 gal	
Service space required around the device	600 mm	23.6 in	

^{*} When using frequency convertor ** According to the norm ISO 8573-1







STANDARD EQUIPMENT



MECHANICAL EQUIPMENT

Filtration of mechanical particles

Chimney flap - automatic

Draft diverter with drip plate - 150 mm

Pressurized air coupling for external pump connection

Castor wheels with brakes

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 - 4 arms - electrically powered

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 and rinsing fluid

Liquid and filter replacement notification - cycle counting

Control system of fluids limit pressures

Real-time cleaning fluid pressure monitoring

MANDATORY EQUIPMENT



Mechanical drawer (without basket)

Status light main + acoustic signalization IDEC

Conductivity measurement - rinse 0-2000 μS - blocking optional

OPTIONAL EQUIPMENT



HARDWARE EQUIPMENT

Common fluids draining- manual control

Automatic cleaning agent refilling (without pump-ready mix)

Automatic cleaning agent discharging (without pump)

Automatic rinsing water refilling (without pump)

Automatic rinsing water discharging (without pump)

Integrated pump for automatic discharge

Integrated pump for manual discharge

Consumption savings - Residue air-isolation

Stainless steel drip tray - ESD floor protection

External portable pump

Filtration sandwich - external

Drain valve with lock

Squeegee for reservoir tank maintenance

Heating coil cover 888



ELECTRO EQUIPMENT

Frequency convertor

Transformer with/without UL

Control of external exhaust ventilator - instalation at customer

Electronic control - drying spirals functionality



SOFTWARE EQUIPMENT

Fluid heating timer

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



BASKETS, HOLDERS AND STANDS EQUIPMENT

Mechanical raster- trolley solution - soldering frame (8slots)

Mechanical raster - drawer solution - soldering frames (8 slots)

Mechanical carrier holder - trolley solution - PCB (18 slots)

Mechanical comb holder - drawer solution - PCB (18 slots)

Mechanical basket - trolley solution - PCB

Mechanical basket - drawer solution - PCB

Side guidance of PCB - trolley solution

Mechanical stand - trolley solution - solder. f.(8 slots) adjus.

Mechanical stand - drawer solution - solder. f. (8 slots) adjus.

Mechanical stand - drawer solution - soldering frames (8 slots)

Mechanical reduction - trolley+drawer sol. -stencil, squeeg, PCB

Mechanical comb holder - trolley solution - PCB (10 slots)

Mechanical mobile chassis - trolley solution - soldering frames

Mechanical carrier - trolley solution - soldering frame (5 slo.)



TROLLEYS EQUIPMENT

Mechanical handling trolley single deck with locking

Mechanical extension (without basket)



EXTERNAL TANKS AND ACCESSORIES

Tank - 200I - rinse fluid

Conductivity measurement

Tank - 200I - cleaning fluid (readymix)

Tank - 2001 - cleaning fluid (concentrate)

Air-based fluid mixing

Heating the fluids in the tanker (200 L)

Tank - 2001 - cleaning fluid (concentrate) + dosing pump

1000l IBC tank

Monitoring the level in discharge external tank - IBC 1000 I

Monitoring the level in external tank for DI water $\,$ - IBC 1000 I

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.



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

- 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: **10/2023 Injet®** is a registration trademark of DCT Czech s.r.o.

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