



BETTER SOLUTIONS

TECHNICAL DATA SHEET

Sonix® 355 CRRD



- ★★ **Conformal coating** removing
- ★ **PCB** cleaning



GENERAL INFORMATION

The Sonix® cleaning systems are a unique ultrasonic technology developed and manufactured by DCT.

In the past, machines with ultrasonic technology were used for PCBA, which is no longer used or recommended due to component sensitivity, miniaturization, higher rinsing quality requirements, etc.

We recommend Sonix® cleaning systems mainly for special cleaning applications to effectively remove cured conformal coating.

Exceptionally, they can be used for **board cleaning** if the boards are compatible with ultrasonic technology. They are also suitable for **degreasing processes** of metal components.

It can also be used for “dual” application – one chamber for cleaning of coating frame and pallets, second for cleaning of reflow oven and wave soldering machine parts.

Sonix® 355 CRRD including **100% separated processes** of cleaning, pre-rinsing, final rinsing and drying technologies.

All processes are automated and take place in 4 separate process chambers, which are also storage tanks.

Cleaning takes place in the first inlet chamber, where the operator places the basket with parts. Then the operator manually moves the basket with the cleaned parts into the secondary pre-rinse chamber. The operator then moves the basket to the final rinse chamber and finally to the last drying chamber.

All 4 chambers can be used in parallel, which increases the machine’s cleaning capacity, reduces cross-contamination when compared with single-chamber devices and optimizes rinsing with two rinsing chambers. **Sonix® 355 CRRD** is designed to remove cured conformal coatings from coating frames, coating machine parts or coated PCBs for repair and subsequent coating.

In certain cases, **Sonix® 355 CRRD** may also be recommended for **PCB cleaning** or for **degreasing of metal components**.

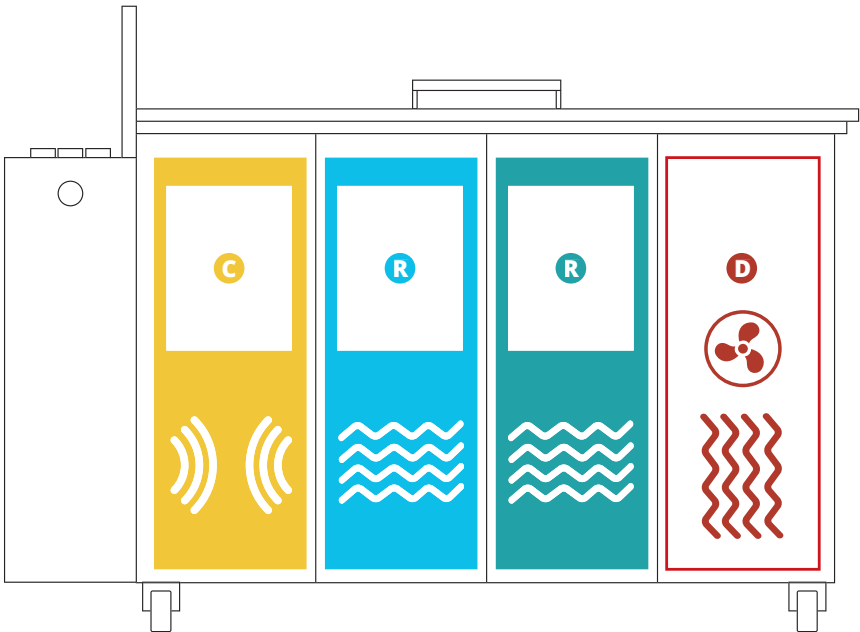


Depending on your cleaning requirements, the DCT project manager, in collaboration with a local distributor, will advise you on a suitable water-based cleaning fluid and the correct setup of the entire process.



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
Conformal coating removing	★★	40 – 55°C	104 – 131 °F	60 min.	960 * / 80 *
PCB	★	35 – 55°C	95 – 131 °F	35 min.	1440 **

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

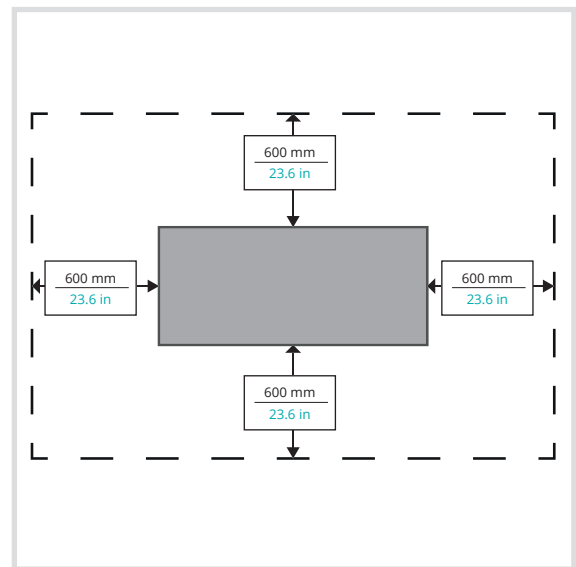


TECHNICAL PARAMETERS

	<i>metric units</i>	<i>imperial units</i>
Dimensions (w x l x h)	1740 x 1220 x 1210 mm	68.5 x 48 x 47.6 in
Weight	400 kg	882 lbs
Ø energy consumption per cycle	1.92 kWh	1.92 kWh
Cleaning and rinsing fluid consumption per cycle	0,05 – 0,3 l	0.01 – 0,08 gal
Compressed air consumption per cycle	83 l / 5 Bar	21.9 gal / 72.5 PSI
Dimensions of carrier basket	270 x 530 x 620 mm	10.6 x 20.8 x 24.4 in
Max. dimensions of the cleaned parts	280 x 540 x 630 mm	11,2 x 21,2 x 24,8 in
Temperature range setting of the cleaning and rinsing fluid	From ambient temperature to 60°C	From ambient temperature to 140°F
Ultrasound frequency	35 kHz	35 kHz
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 + 5,7" touchscreen	PLC + 5.7" touchscreen
Volume of the storage tanks	120 l	31,7 gal



DIMENSIONS



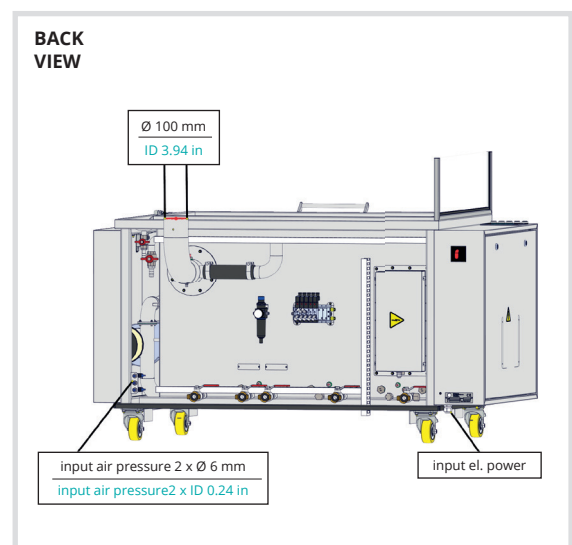
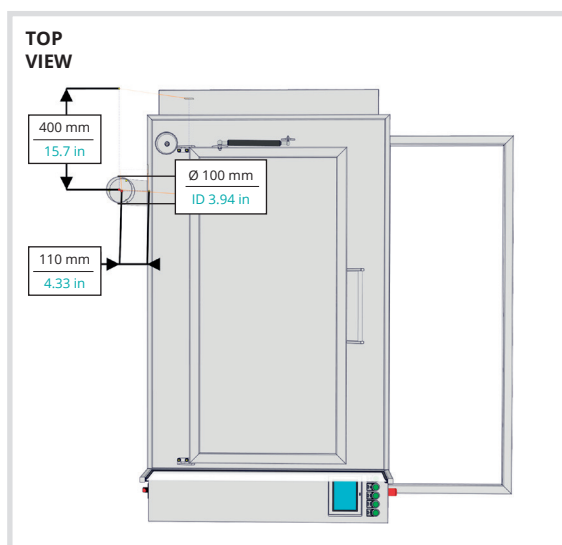
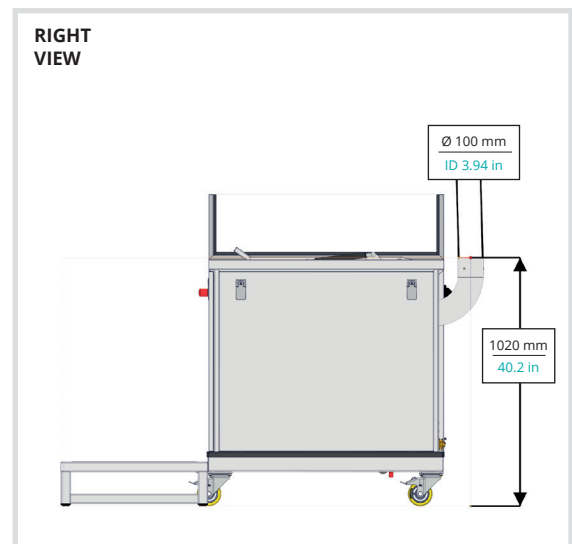
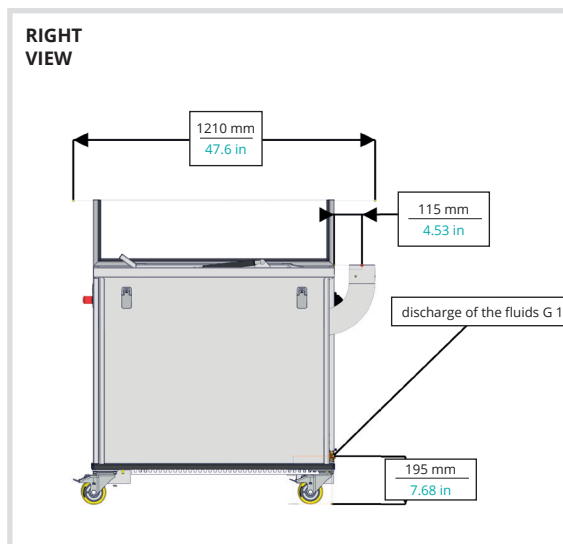
**MINIMUM SERVICE SPACE
AROUND THE MACHINE**



INSTALLATION REQUIREMENTS

	<i>metric units</i>	<i>imperial units</i>
Power supply	400V, 32A, 50Hz (3+N+PE)	UL 400V, 32A, 60Hz* (3+N+PE)
P _{max}	15 kW	15 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	580 m ³ /h	20450 ft ³ /h
Minimum liquid for first run	3 x 100 l	3 x 26.4 gal
Service space required around the device	600 mm	23.6 in

* When using frequency convertor





STANDARD HARDWARE EQUIPMENT

4 process chambers – manual solution

100% closed loop fluid system

Cleaning and rinsing fluid heating

Mechanical filtration

Hot air drying

Emergency stop button

Adjustable legs – 4 pcs

PLC controller + 5,7" touchscreen display

Spare parts (base kit)



STANDARD SOFTWARE EQUIPMENT

Standard software language mutation – CZ, ENG

Fluid and filter replacement notification – cycle counting

Possibility of 5 programs – setting option



OPTIONAL HARDWARE EQUIPMENT

Manipulation wheels – lockable

Conductivity measurement – rinse 0–2000 µS – blocking optional

Conductivity measurement – pre-rinse 0–2000 µS – blocking optional

Control of external exhaust ventilator

External filtration

Stainless steel dip tray

and other equipment ...



OPTIONAL SOFTWARE EQUIPMENT

Adjustable timer of cleaning fluid heating

Language mutation (CZE, ENG, GER, POL, CHI, RUS, ITA, SPA, MAY, HUN)

ONLINE access to cleaning device

Upgrade machine for PROTON



OPTIONAL ACCESSORY – FRAMES AND OTHERS

Mechanical holder for basket

Mechanical basket



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.

DCT Czech s.r.o., Tovární 85, 679 21 Černá Hora, Czech republic
e-mail: info@dct.cleaning, www.dct.cleaning