



HOW TO CLEAN COATING FRAMES FROM SILICONES the most effectively



WHAT IS THE CUSTOMER'S STORY?

Our customer struggled to find a company, which would provide an efficient solvent to remove silicone-based conformal coatings from coating frames.

Based on positive references from other customers, we were asked to find a functional cleaning agent for the cleaning of silicones. We have solved customer's problem by recommendation of our cleaning

agent **Proton[®] 703**. You can read the case study [HERE](#).



However, after a month our R&D team developed a cleaning agent even **more efficient and stronger** - **Proton[®] 705**. We agreed with the customer to test Proton[®] 705 as well and to compare the testing with the previous cleaning results with Proton[®] 703.



WHAT WE TESTED?

Our laboratory specialists were given **10 coating frames contaminated from the real process.**

Size of the samples: 40 x 40 x 5 cm.

Some of the frames contained stainless steel parts and some only steel parts, which is a very important difference as we observed during testing.



Components Before Cleaning





COMPLETE CLEANING SOLUTION BY DCT



Technical data sheet

Alcohol-based cleaning agent
Proton[®] 705



Technical data sheet

Cleaning system **InJet[®] 888 CRRD**
with the technology of horizontal
high-pressure Spray-In-Air



*In the combination of
Injet[®] 888 CRRD with
Proton[®] 705, excellent
results were observed!*



*All the silicone
residues vanished after
15–20 minutes!*



RECOMMENDED CLEANING PROCESS

Cleaning system: **InJet® 888 CRRD**

Technology:
horizontal high-pressure Spray-In-Air

Cleaning:
Proton® 705 / 20 min / 45°C / 2,5 bar

1st Rinsing: DI Water / 5 min / 30°C

2nd Rinsing: DI Water / 5 min / 30°C

Drying: hot air / 30 min / 60°C

**AFTER CLEANING
with Proton® 705,
WE RECOMMEND:**

First rinsing with DI or tap water

Second rinsing with DI water
with external filtration

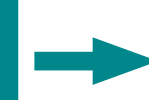




As **Proton® 705** is a very strong and effective cleaning agent, lesser compatibility may occur with some metal parts of the frames. Then we would recommend using acidic fluid **Decotron® ACW 115** for rinsing to prevent the corrosion. In any case, we strongly recommend testing the components in our DEMO center before real usage at a production as **we can customize the fluid** for you in terms of efficiency and compatibility.

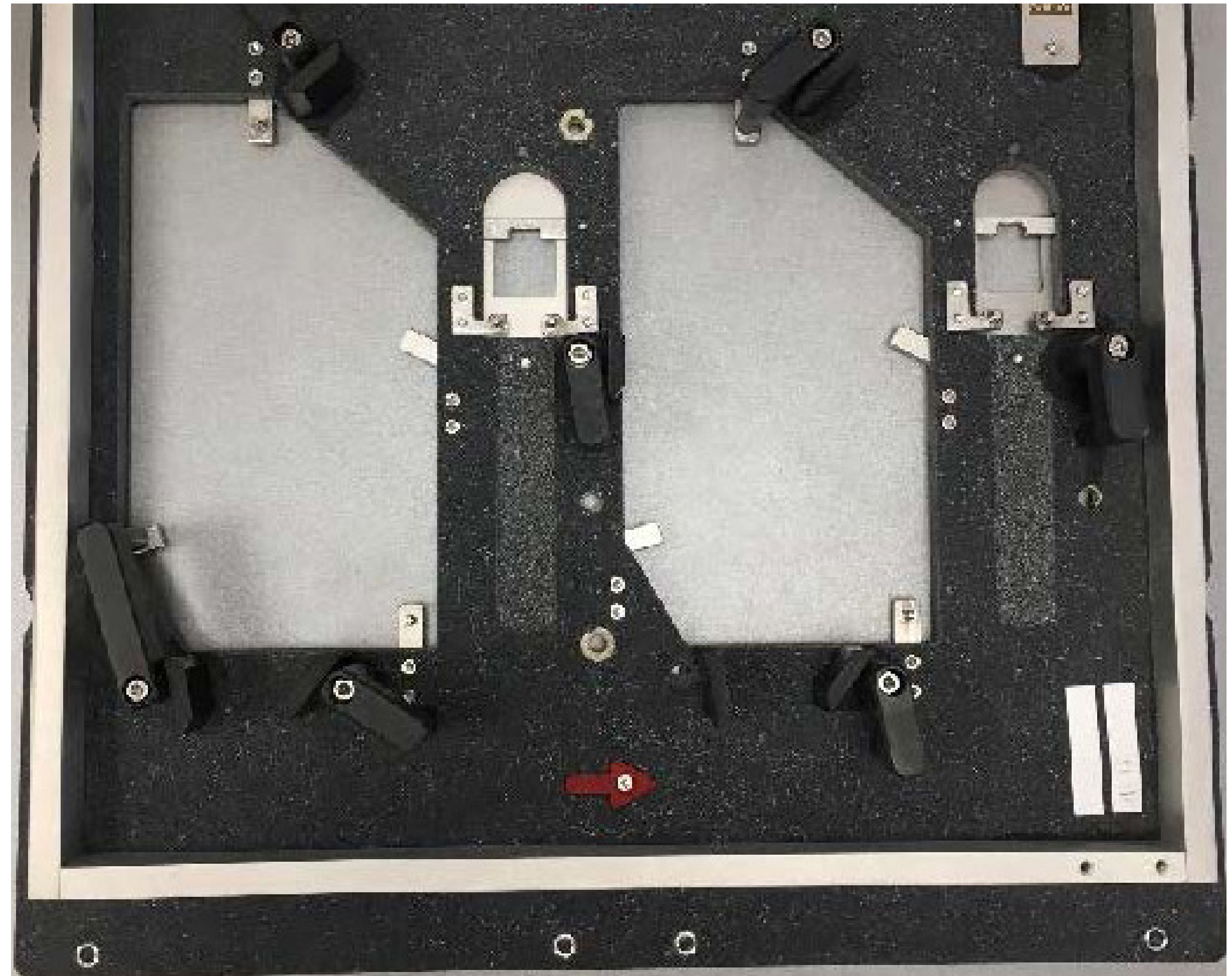
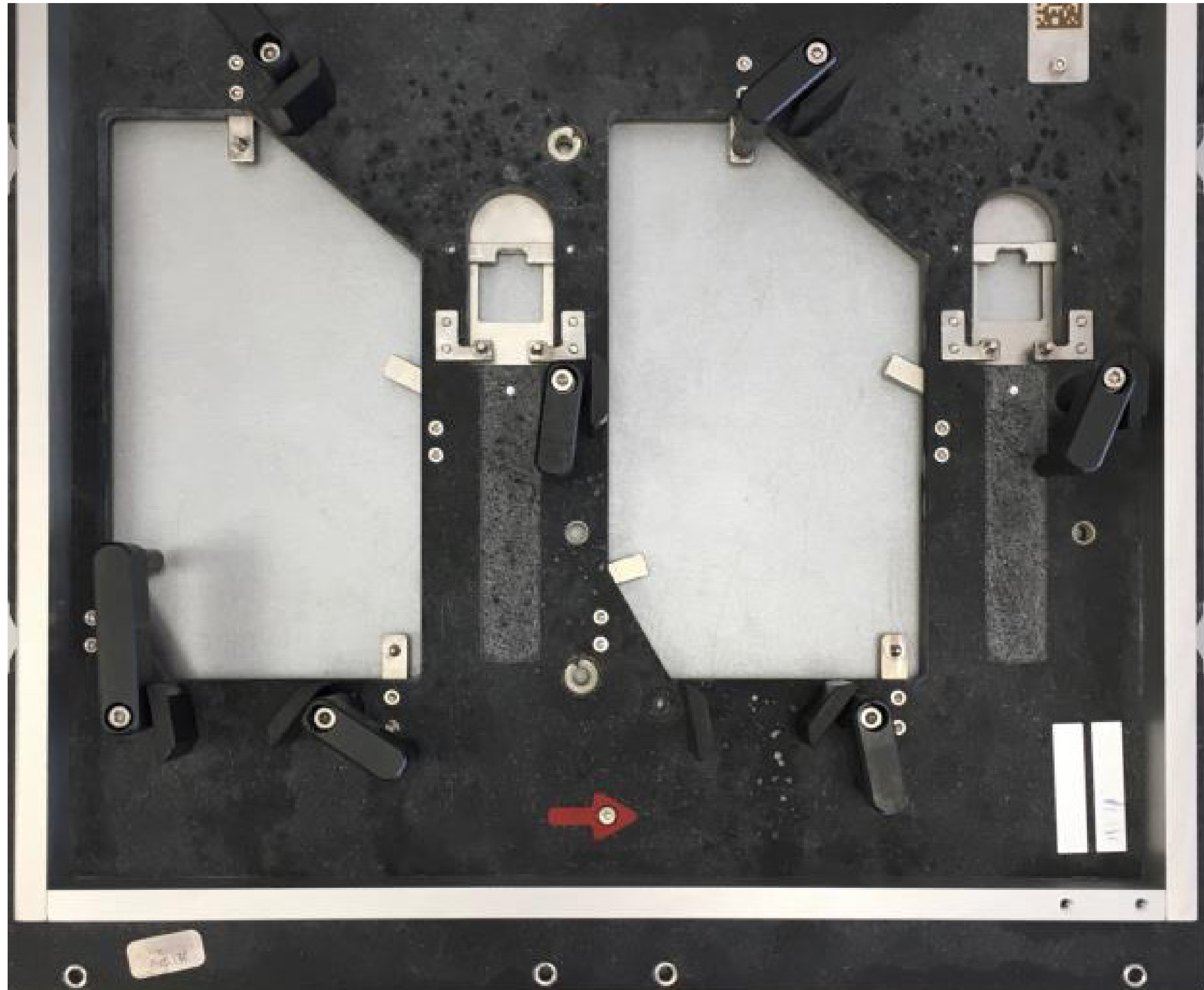
Coating Frames

BEFORE Cleaning



AFTER Cleaning

with Proton® 705

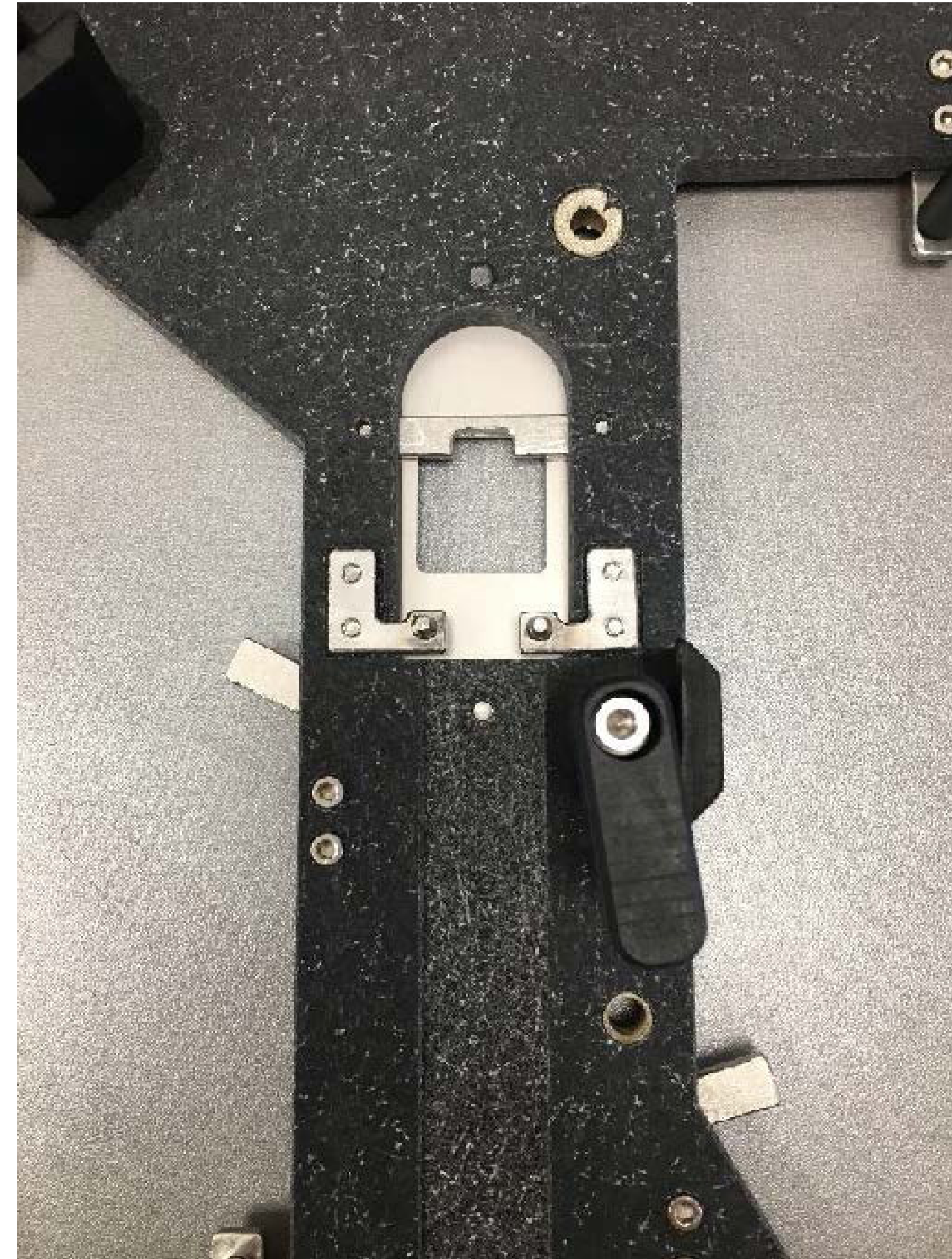


Coating Frames

BEFORE Cleaning →

AFTER Cleaning

with Proton® 705



Coating Frames

BEFORE Cleaning



AFTER Cleaning

with Proton® 705



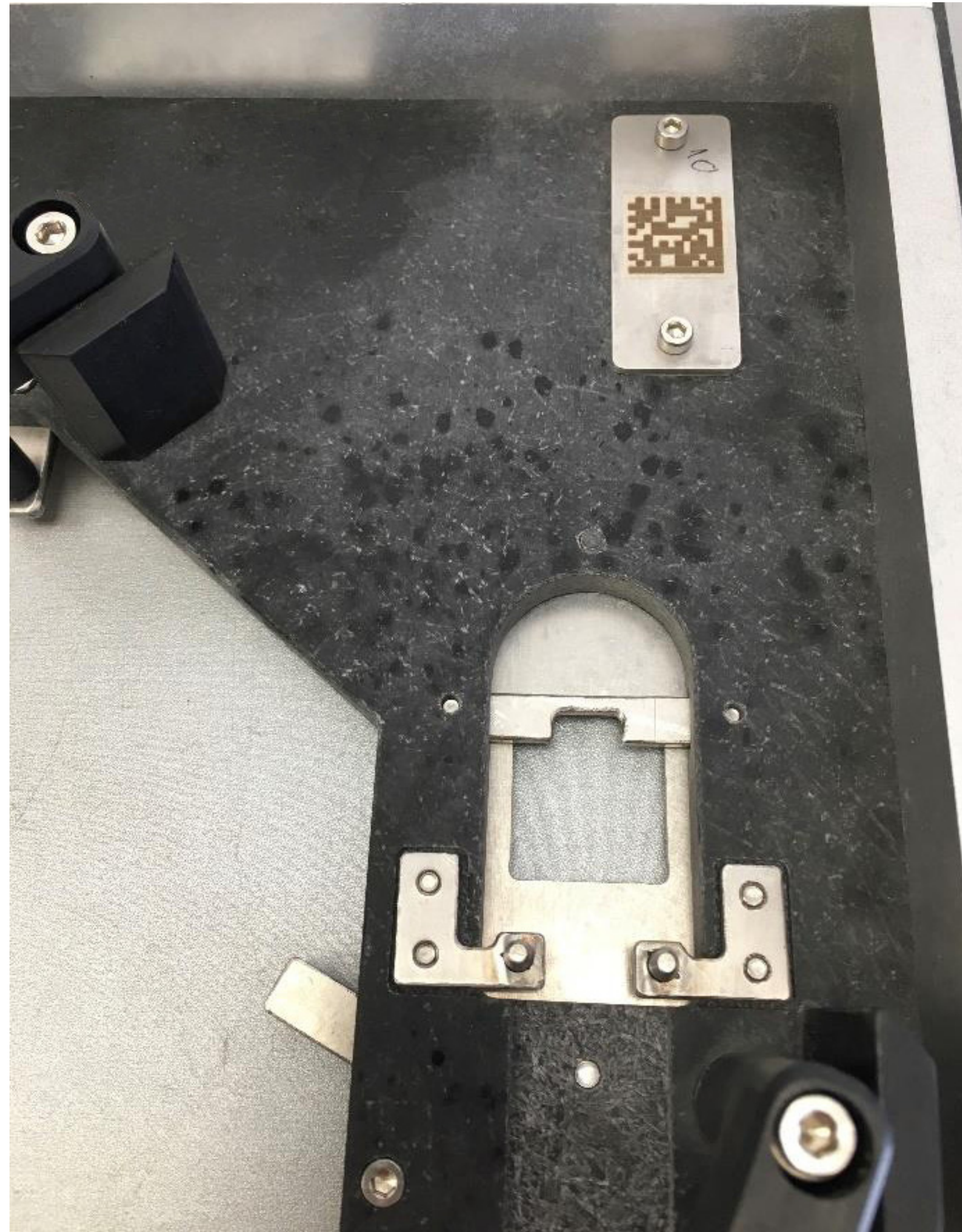
Coating Frames

BEFORE Cleaning



AFTER Cleaning

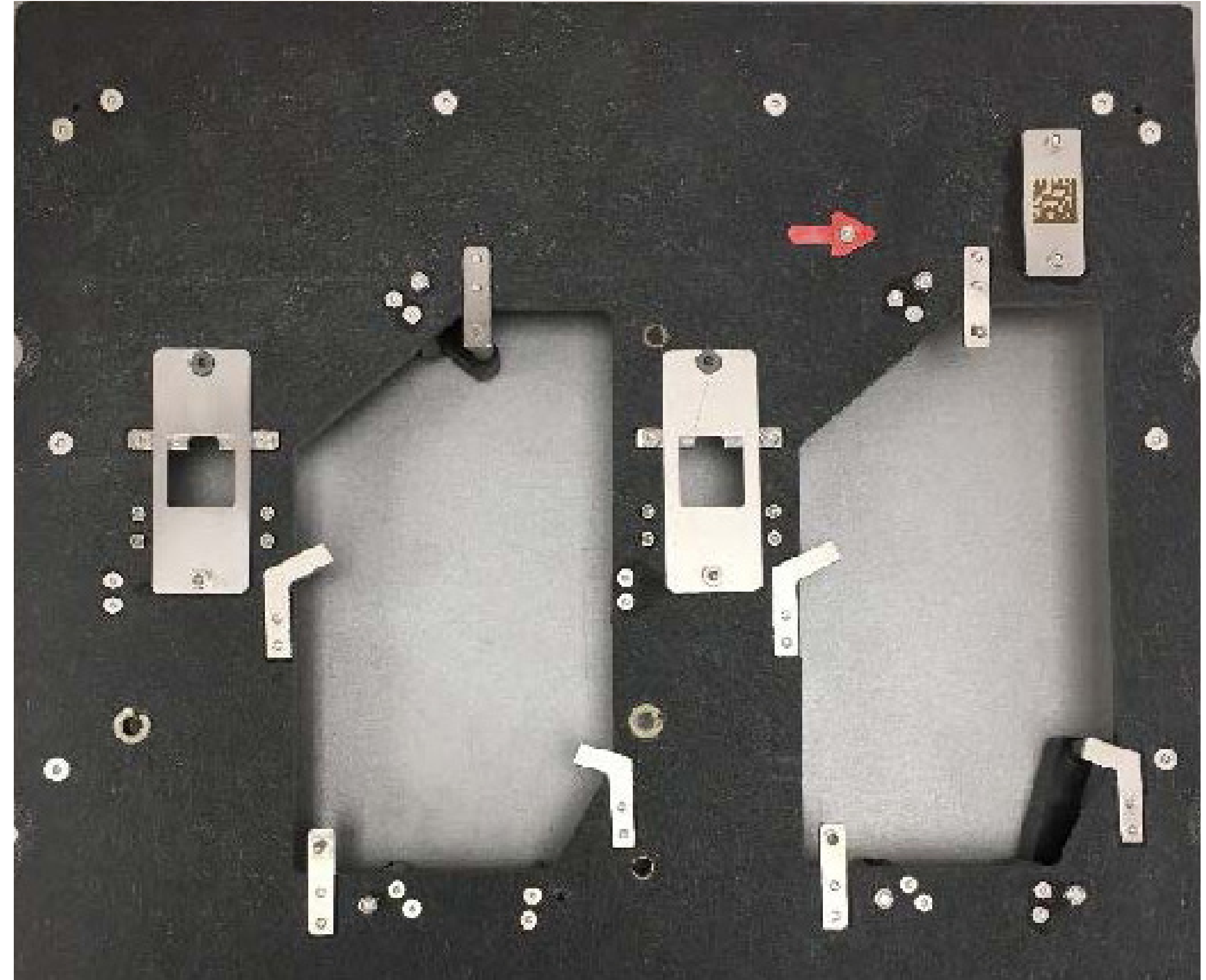
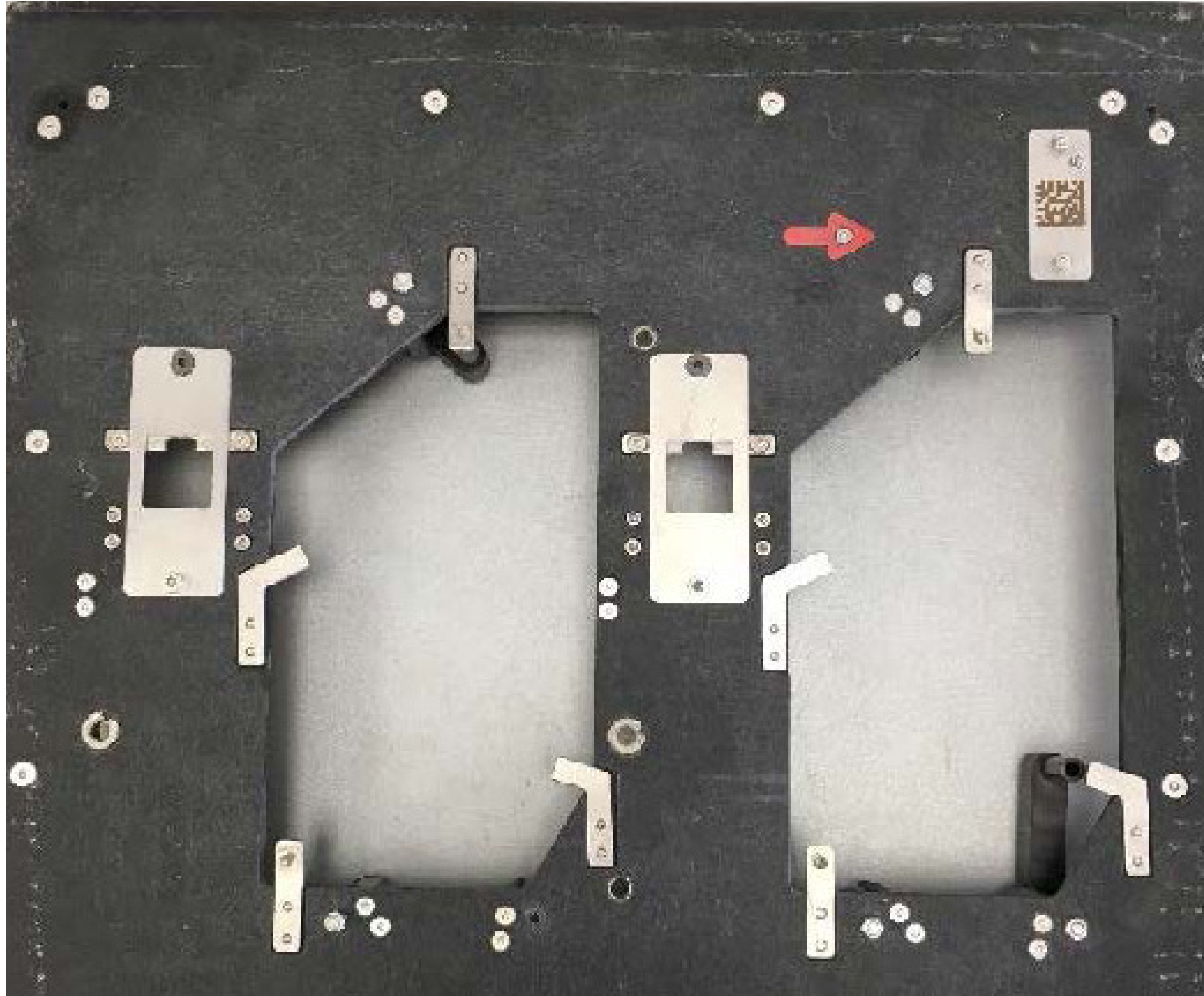
with Proton® 705



BEFORE Cleaning



AFTER Cleaning





RECOMMENDED CLEANING AGENT



Technical data sheet

Proton® 705

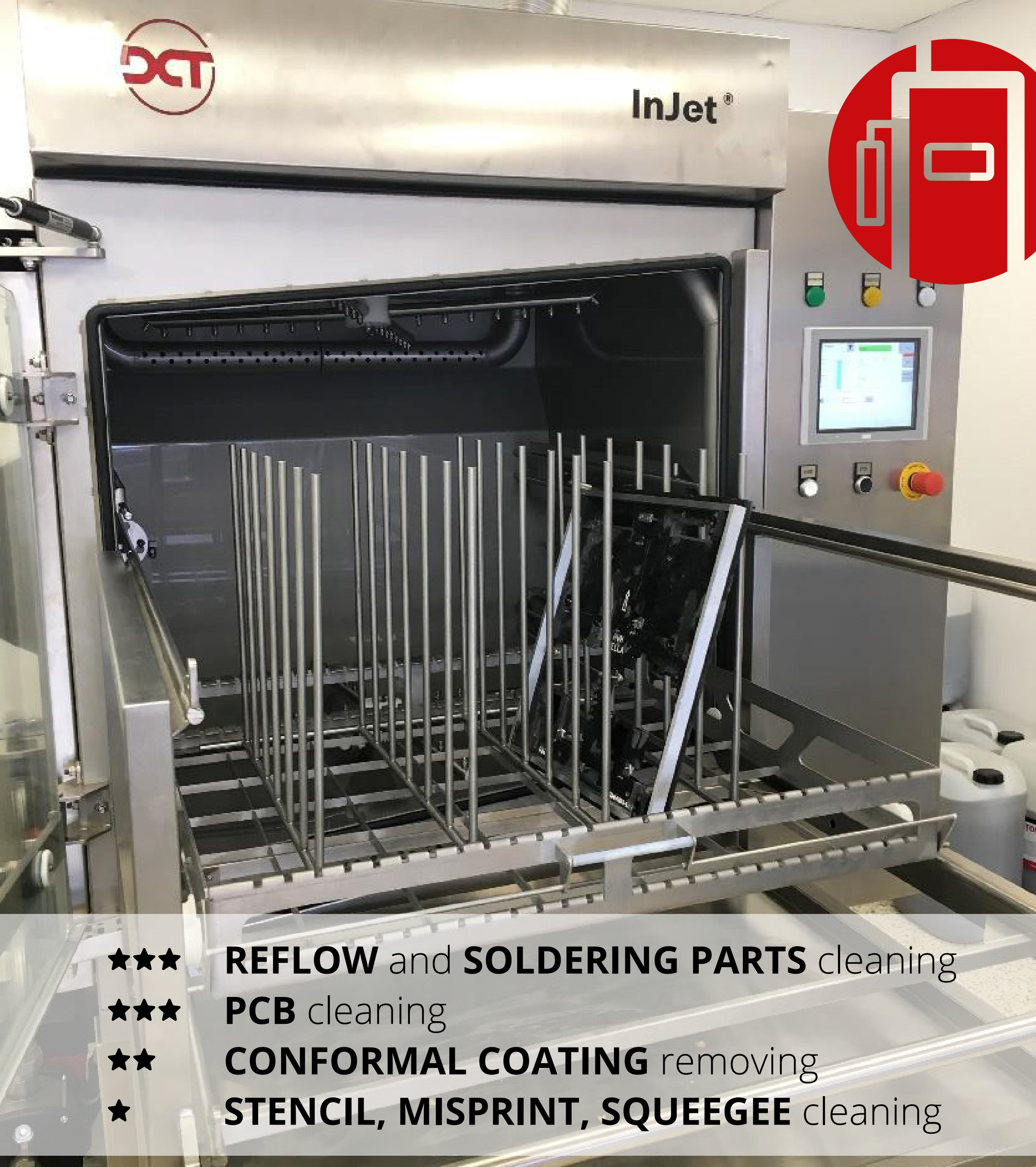
- ✓ Alcohol-based cleaning agent
- ✓ Determined to **remove cured/uncured silicone coatings**

 **15 times faster** than Proton® 703

- ✓ **Cleave silicon-oxygen bonds more efficiently**
- ✓ Environment-friendly, biodegradable
- ✓ Intended for use especially for high-pressure Spray-In-Air



Proton® 705 is our newest and the strongest cleaner for the removal of silicons from PCBs, coating frames, and components of coating machines parts.



RECOMMENDED CLEANING MACHINE

InJet® 888 CRRD



Technical data sheet



see our videoreport

We recommend cleaning machines with **closed cleaning processes** and mechanical filtration.

Especially InJet® 888 CRRD due to high efficiency of solvent.

*Please note that program of the cleaning machine has to be modified because of **flash point 65°C***

- ★★★★ **REFLOW** and **SOLDERING PARTS** cleaning
- ★★★★ **PCB** cleaning
- ★★ **CONFORMAL COATING** removing
- ★ **STENCIL, MISPRINT, SQUEEGEE** cleaning



COMPATIBILITY

As Proton® 705 has lower compatibility with some metal components, we observed that parts with **stainless steel** remained the same after cleaning and were **fully compatible with the cleaning process**, basic steel parts started to corrode.

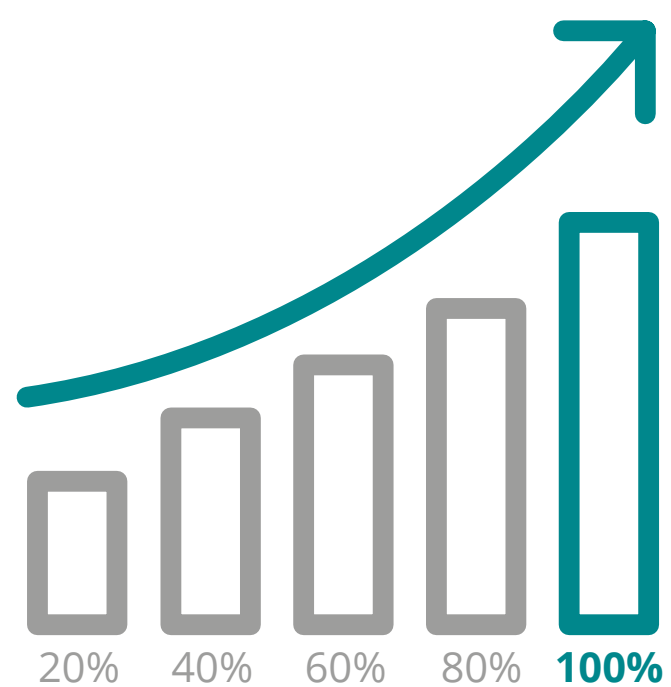
Nevertheless, the customer was so excited about Proton® 705 as it is so fast and effective, so their company developed new generation of coating frames containing only stainless steel, which are compatible with the cleaning process.

Stainless Steel After Cleaning



Steel After Cleaning





TEST RESULTS

Success rate: 100%



All the coating residues were removed after 15–20 minutes of the cleaning time.



The cleaning process was much more faster and efficient than with Proton® 703.

THE TIME REQUIRED for the silicone to dissolve completely from tested coating frames:

Proton® 703: 3 hours

Proton® 705: 15 minutes