# Service Request Vacuum Capacitors

4. May 2020

Please insert as much information as possible, to allow an efficient workflow and a high quality of analysis! Submission of form only possible, when all mandatory fields (marked with *) are filled. The form will be sent to COMET csr-pct@comet.ch. If required, please attach pictures to the e-mail generated. Please be aware that this form uses JavaScript.

Capacitor Type*:

Serial #*:

Material #:

Delivered to end customer*: ○ yes ○ no

Customer/Buyer*:

Please insert delivery address for return / replacement...

Sender's reference #:

Number of pieces: 1

Multiple VCs only, if same VC-type!

Invoice address different to delivery address?: ○ yes ○ no

**Date specifications [d.mm.yy]**

Receipt from factory:

Test prior to commissioning:

Failure*:

Commissioning:

Failure description / remarks:

**Operating conditions**

Operating hours*: select/insert value...

Cycles performed:

Equipment:

Output [kW]:

Orientation of installation: select value...

Peak RF working V [kV]:

Peak RF working V DC [kV]:

| **Operational range** | min: | max: | Changes/day: |
|---|---|---|---|
| Temperature in [C°]: | | | |
| Frequency [MHz]: | | | |

I confirm that I have read and understood all provisions, terms and conditions on the following page and fully accept their content ☐

Send Form

COMET

COMET AG, Head Office
Flamatt, Switzerland

COMET Technologies USA
San José / CA, USA

COMET Mechanical Equipment
Shanghai, PR China

COMET Technologies
Suwon-si, Korea (South)

Yxlon International
Aachen, Germany

www.comet-pct.com

Date: 5. Mai 2020

# Terms and Conditions for Vacuum Capacitors Returns

**Damage in Transit**
Each capacitor is subjected to electrical, mechanical and visual inspection prior to leaving the factory. It has to be examined by Customer immediately upon receipt. If the capacitor has been damaged during transport, COMET or its agent (hereinafter referred to as "the Seller") must be notified thereof immediately in writing. If insurance coverage for damage during transport has been arranged by the recipient (hereinafter referred to as "the Customer"), an insurance claim should be filed at the receiving end. In case insurance coverage for damage during transport was provided by COMET, COMET will take the necessary steps after receipt of respective written notification.

**Handling and Storage**

- All capacitors, but especially variable capacitors, must be stored in a clean, dry environment and in vertical position.
- Residual water and/or humidity in conjunction with oxygen and air pollution can cause erosion of the bellows. The capacitor must be stored in a plastic bag, preferably with activated silica gel. Close the bag tightly.
- For water-cooled capacitors:
    - All water courses are carefully leak-checked in the factory using elevated gas pressure.
    - Avoid using water to test for water leaks.
    - If a water-cooled capacitor has been used and must be stored over a longer period of time, the water course must be dried carefully. This can best be accomplished with the use of a vacuum pump, then follow storing recommendations as described above.

**Health and Safety Hazards**
***High Voltage:***
Operating voltages of vacuum capacitors range from a few hundred Volts to more than 50'000 Volts. Since these voltages can be lethal, the equipment, in which the vacuum capacitors are enclosed, must be manufactured to assure that no personnel can come into contact with high voltage circuits. All equipment must be designed to include safety enclosures for high voltage circuits.
Never bypass or "cheat" interlock switches!
Guard against residual capacitor charges by simultaneously touching both ends of capacitor with a grounding bar prior to handling.

***X-ray Radiation:***
All high voltage devices operating above 10 kV produce progressively more dangerous X-ray radiation as the voltage is increased. Moreover, the X-ray radiation level may increase significantly with life and gradual deterioration due to changing leakage path over time. It is imperative to assure adequate shielding of capacitors based on measurements and in accordance with the applicable laws covering X-ray radiation.

***RF Radiation (under 300 MHz):***
Personnel must not be exposed to excessive RF radiation and must avoid exposure even at relatively low frequencies. Proper enclosures and efficient coupling of the RF energy to the load will minimize the hazard, and shall be in accordance with tool manufacturer guidelines and local regulations.

**Warranty and Liability**
COMET warranties and liabilities are subject to the Comet General Terms and Conditions (https://www.comet-pct.com/services). The warranty does not extend to any COMET capacitor which has been subjected to any misuse, or has been operated in abnormal conditions or conditions which are not within the scope of the technical specification of the product.
If the warranty expired or if the analysis will not show any manufacturing, material or handling failure by COMET, COMET reserves the right to charge 200 CHF, 190 EUR, 220 USD or 150 GBP per failure analysis.

**Return procedure for warranty claims**
Where no obvious or external visible fault exists, make sure the capacitor actually is inoperable before returning it.

1. If the capacitor was obtained from a COMET representative or OEM, it should be returned to them and not to COMET. Be sure to enclose a completed service report.
2. If the capacitor was purchased directly from the factory, proceed as follows:
   Complete the SERVICE REPORT form overleaf, giving all the data asked for and hand it in to COMET Customer Service & Export (csr-pct@comet.ch). Customer Service will issue an RMA number. The performance of any warranty services or any credit issued is always subject to a completed SERVICE REPORT which must be submitted with the capacitor.
    a. Pack the capacitor carefully and in the same way it was packaged originally for shipment, preferably using the original packaging.
    b. For shipments, variable capacitors must be set to minimum capacitance. This minimizes the leverage on the variable electrode stack.
    c. The RMA number must be clearly visible on the packaging. Without the RMA number, the package will not be accepted in the factory.
    d. Ship via PREPAID Freight to the factory. The sender and the shipping agency must assume responsibility for damage from improper packing or handling. Any insurance charges for returned goods must be borne by the sender.
3. Customer retains title of material returned for evaluation until COMET acknowledges adjustment/replacement responsibility in writing.
4. If COMET finds the capacitor has been returned without cause and is still serviceable, the Customer will be notified and the capacitor returned to it at its expense.
5. If COMET finds that a replacement or credit allowance is in order, the Customer will be notified. In case of a replacement, a new capacitor will be shipped prepaid. In case of credit, the amount will be calculated based on the original charge to the COMET Representative or OEM and can only be issued through them.
6. It is often necessary to dismantle an inoperative capacitor in connection with the failure analysis. In returning a capacitor, the Customer grants permission to dismantle at the discretion of COMET.
7. If no fault in workmanship or material is found as the cause of capacitor failure, no warranty adjustment will be made. Such unserviceable capacitors will be scrapped 14 days after notice of evaluation results is sent to the Customer. If the Customer desires return of an unserviceable capacitor, he should notify COMET within that time and the capacitor will be returned at his expense.

***MAKE SURE TO PROVIDE AS MUCH INFORMATION AS POSSIBLE IN THE SERVICE REQUEST ABOVE!***

***Flamatt, 4. May 2020***