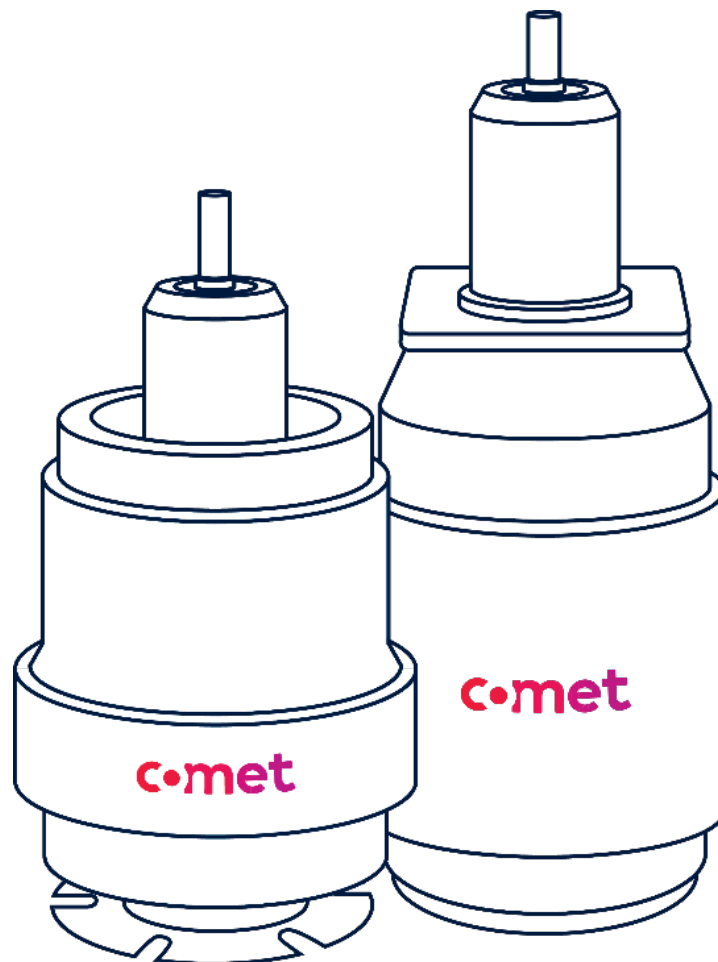


Maintenance / Repair of Water Chamber of Water-Cooled Variable Vacuum Capacitors



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The water-cooled vacuum capacitors with a lead screw mechanism like type CVMA-650EW/50-AAE, CVLA-1000BW/50-AAE-R, CVHA-1600AW/60-ABG-N etc. have established an excellent performance record in a multitude of applications. There are customers in broadcasting and in a variety of industrial applications who have skilled personnel available and who like to perform an overhaul of the water chamber of these capacitors if or before there is a water leak.

It is for these customers that the enclosed maintenance instruction has been written. If you use capacitors of the push-pull type, the overhaul is executed in a similar way. Please, write for our special maintenance instruction.

Gasket, O-rings and greases can be ordered from us. Please, indicate type of capacitor.

Quite often, before the overhaul of the water chamber, a replacement capacitor is installed in the equipment. So the overhauled component goes on the shelf. Prior to that, the capacitor should be dried internally using a vacuum pump in order to prevent corrosion. In our experience, any other method than vacuum drying has not been successful, please refers to our Service Bulletin SB-31.

1. Tools required

- 1 Plier "Seeger" ZGJ-3 ("Truarc" 0300) english version
- 1 Screwdriver 5 mm blade
- 2 Allen wrenches 2 and 4 mm
- 1 COMET drawing R-1.0 (see enclosure)

2. Replacement Parts

- 5 O-rings P/N 054-002/054-004/054-006 and 2 pieces 054-011
- Dust gasket P/N 054-022
- Grease COMET P/N 026-009 and 026-020

3. Disassembly of the water chamber

- 1) Protect the ceramic insulator of the capacitor with paper or plastic
- 2) Remove the 6 retaining screws P/N 056-029 on top of the chamber.
- 3) Remove the retaining ring P/N 056-049
- 4) Unscrew completely the lead screw (shaft) P/N 116-...
- 5) Remove the six set screws P/N 056-020
- 6) Remove aluminium cap P/N 117-...
- 7) Remove the 4 screws P/N 056-008 holding the water chamber
- 8) Lift off the water chamber P/N 122-..., carefully applying the force in the direction of the capacitor axis (avoid any side loading)
- 9) Remove the brass tube P/N 121-...
- 10) Remove washer "Seeger" P/N 056-088
- 11) Remove spacer ring P/N 122-057.
- 12) Remove the bearing system P/N 122-045
- 13) Remove all O-rings and the dust gasket P/N 054-022
- 14) Remove clips P/N 056-085 and the 2 half rings P/N 056-086, also the thrust (ball) bearing P/N 118-002 of the lead screw P/N 116-...

4. Cleaning

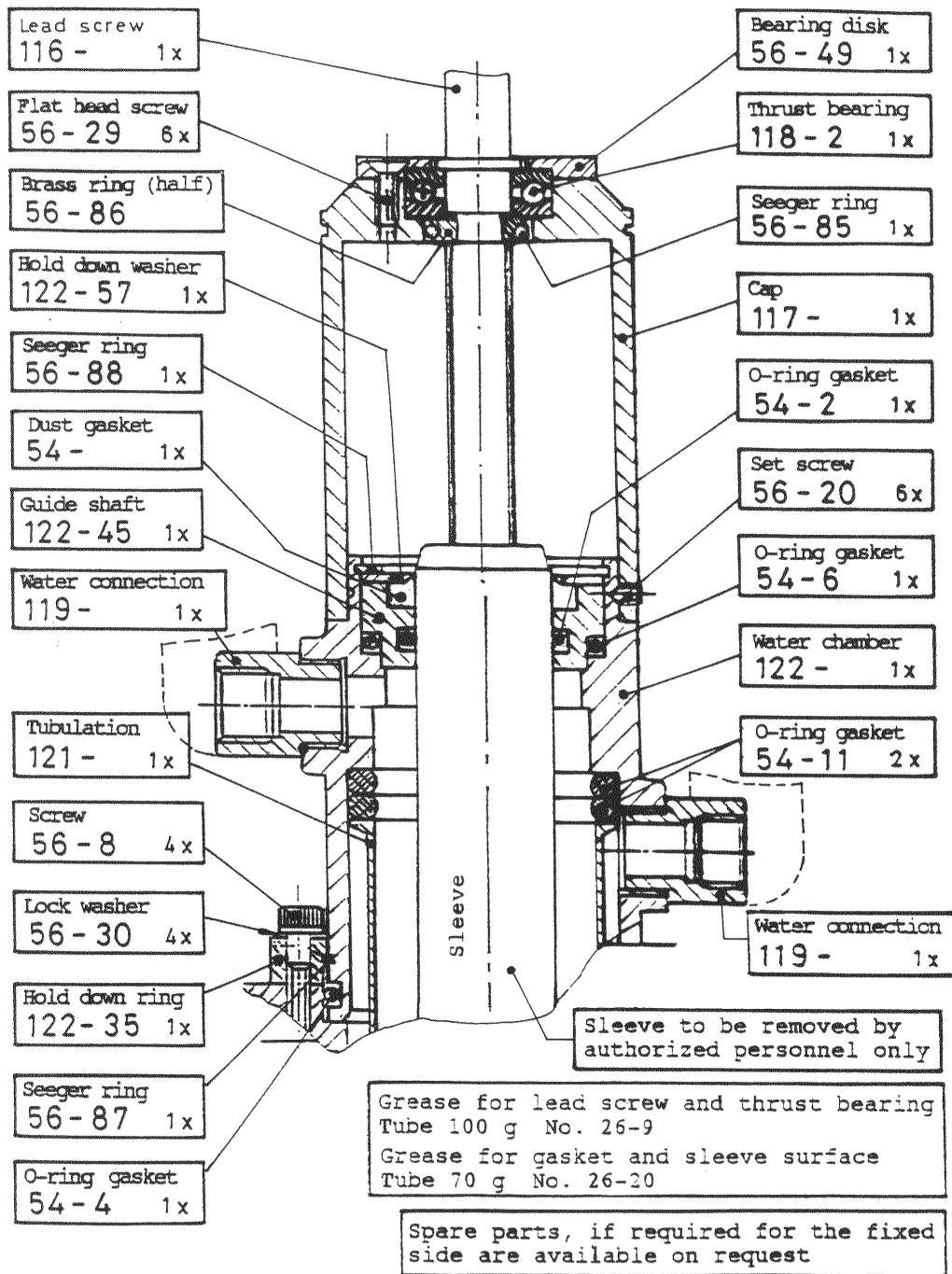
- 1) Clean all disassembled parts in alcohol (CH₃OH).
- 2) Clean also the polished chrome plated tube which sits on top of the capacitor as well as the pressure O-ring P/N 054-004 with alcohol.


Warning:

- Never clean the tubulation with an abrasive product!
- Make sure that no particles enter the holes in the tubulation and the capacitor.

5. Reassembly of water chamber

- 1) Install new O-rings P/N 054-004/054-006 and two P/N 054-011 using a film of grease P/N 026-020
- 2) Install O-ring P/N 054-002 with as much grease P/N 026-020 as possible.
- 3) Install dust gasket P/N 054-022
- 4) Mount bearing system P/N 122-045 into its place.
- 5) Add spacer ring P/N 122-057 and the washer "Seeger" P/N 056-088
- 6) Put a film of grease P/N 026-020 onto the chrome plated tube, sitting on the capacitor
- 7) Install brass tube P/N 121-... in the correct direction (see figure)
- 8) Mount water chamber onto the capacitor while turning it gently, applying adequate pressure permitting O-ring P/N 054-004 to seat properly (grease P/N 026-020).
- 9) Fix position of the water connections in the desired direction by turning water chamber
- 10) Attach water chamber with the 4 screws P/N 056-008 and with lock washers P/N 056-030. It is **important** to tighten the 4 screws progressively crosswise.
- 11) Remount thrust (ball) bearing P/N 118-002 onto lead screw P/N 116-... using grease P/N 026-020 as well as the 2 half rings P/N 056-086, securing same with clips P/N 056-085
- 12) Place a little grease P/N 026-009 onto thread of chromed tubing, as well as onto thread of lead screw P/N 116-...
- 13) Install aluminum cap. P/N 117-... and secure with the 6 set screws P/N 056-020
- 14) Mount lead screw P/N 116-... onto capacitor, turn to stop
- 15) Replace the retaining washer P/N 056-049
- 16) Attach washer with the six screws P/N 056-019.
- 17) Operate lead screw P/N 116-... by hand from maximum to minimum capacitance value and back to check mechanism
- 18) Place cooling course under one bar (15 PSI) of air pressure to check for leaks.
- 19) Remove paper or plastic protection from capacitor and clean same with alcohol.
- 20) If the capacitor has been in use prior to this maintenance procedure and will not be returned to service within a short period of time (approx. 2 weeks), dry the inside of the capacitor by means of a vacuum pump (cf. Service Bulletin SB-31).



Änderungen / Rev.:		Replacement for:	
Ersetzt durch:		Maßstab: Gez.: 11. 6. 92 zr	Gepr.:
<p>TYPICAL WATER CHAMBER VARIATION BY SCREW COMET HIGH VACUUM CAPACITOR</p>			
		<p>VAKUUM-KONDENSATOREN</p>	
		<p>Zeichnung Nr. / Drawing No.:</p> <p>R-1, 0</p>	

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