



**Integrated Drive combined with reliable
Vacuum Capacitors**

Universal Motorized Capacitors

Comet Motorized Capacitors offer the latest integrated drive technology for vacuum capacitors at best price-performance ratio. A single communication protocol for RS232 and RS485 provides flexibility in a wide range of applications.

Motorized Capacitors ensure highest accuracy and simplify procurement with an easy-to-install subsystem. The core component of the Universal Motorized Capacitor is a Comet Variable Vacuum Capacitor, mounted with an insulating cover, coupler and stepper-motor. A durable, backlash-free Comet-coupler connects the capacitor to the drive system. Integrated flanges ensure easy mounting in the system. Appropriate high-voltage insulation between the capacitor and the flanges is also included.

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Features

- One driver PCB for new Integrated Drives (ID-400 and ID-1200)
- Same communication Comet protocol RS232 and RS485
- Flexible baud rate between 9.600 and 115.200 Bd
- Connect up to 32 modules in RS485 mode
- Readout of full-step, micro-step and capacitance position
- Capacitance table with higher resolution on request

Benefits

- Improved capacitance positioning accuracy and repeatability (vs UA4)
- Increased capacitance resolution (position control) to 0.01 pF
- Accurate alignment of variable vacuum capacitor and stepper-motor and a durable, backlash-free coupling result in long, consistent lifetime
- Assembled solution for easy installation
- Lower total cost of ownership
- Efficient use of matchbox space



Led by experience. Driven by curiosity.

Product specifications

Supply voltage	+24 VDC
Supply current	$I_p < 1.1 \text{ A}$ (ID-400) $I_p < 2.8 \text{ A}$ (ID-1200)
Full-step angle	1.8°
Motor speed	up to 600 rpm
Micro-stepping	16 micro-steps
Operating temperature	0 – +50 °C
Available interfaces	RS232, RS485
Address range (RS485)	0x21 – 0x40
Baud rate	9.600 – 115.200 Bd



Typical application areas

- Semiconductor
- Display and Flat Panel
- Solar
- MEMS

Motorized Capacitors

Two sizes of integrated drive systems are available for different capacitor series. Some examples:



Uni-Con Uni-Select

ID-400

Hexa-Con Power-Con Tetra-Con Maxi-Con

ID-1200

Visit our website for more information.
pct.comet.tech

Switzerland (Head Office)

Comet AG
Flamatt

China

Comet Mechanical Equipment
(Shanghai) Co. Ltd., Shanghai

Germany

Comet Yxlon GmbH
Aachen

Japan

Comet Technologies Japan KK
Yokohama

Korea

Comet Technologies
Korea Co., Ltd., Suwon-si

Malaysia

Comet Technologies
Malaysia Sdn Bhd, Penang

Taiwan

Comet Solutions Taiwan Ltd.
Hsinchu

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Comet Technologies USA, Inc.
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Integrated drive solutions

Capacitor tuning

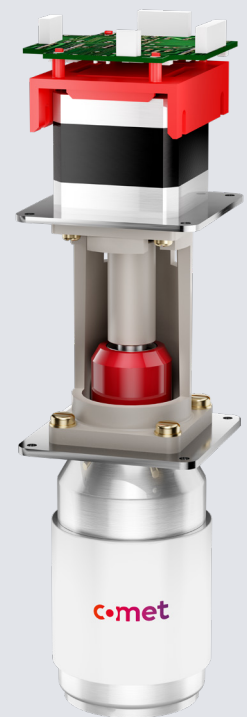
Using a stepper-motor, the capacitance of the variable capacitor can be tuned precisely between user selectable limits.

High-level commands

The module can be controlled from a PC or a control board using high-level commands (RS232, RS485).

The communication protocol allows the execution of the following commands:

- Precise motion control by setting full-step, micro-step or capacitance position
- Set idle and drive current, speed and slave address within allowed range
- Read out of actual full-step, micro-step and capacitance position
- Read out of characteristic capacitance curve (C-Curve)
- Read out of various parameters such as firmware version, serial number and all customer and factory limits
- Comprehensive RX responses (ACK, NAK):
 - ACK for all commands
 - ACK for «movement-started» resp. «movement completed»
 - NAK e.g. check-sum error, index out of range
- Baud rate can be set within 9.600 to 115.200 Bd
- Set user limits (C_{min} and C_{max}) within factory limits
- Store up to 10 user selectable positions



Technical information can be found in Service Bulletins SB-60, SB-63, SB-64 and SB-70:

pct.comet.tech/service-bulletins