

# Connection Verification Aid (CVA)

133



Reliable Connections

The Connection Verification Aid provides reliable process monitoring for Oetiker Quick Connectors in a space-efficient system, at vehicle point of assembly.

## Benefits

- Quick Haptic Feedback
- Process Monitoring
- Compact Ergonomic Design



## PRODUCT DESCRIPTION

Featuring Oetiker QuickSense® technology, the Connection Verification Aid (CVA) provides **tube to quick connector connection verification** in a space-efficient manner to be integrated in final vehicle assembly. The CVA confirms a proper tube to quick connector connection via **haptic feedback** to the operator and an **electronic signal to a PLC** connected control box, while being compact and ergonomically designed.

## ADVANTAGES

### Production

- Vibratory haptic provides verified connection feedback to operator
- Device validated for PG 201 / 210 Oetiker quick connectors
- Low application force
- Ease of use
- Can communicate with PLC interface

### Quality

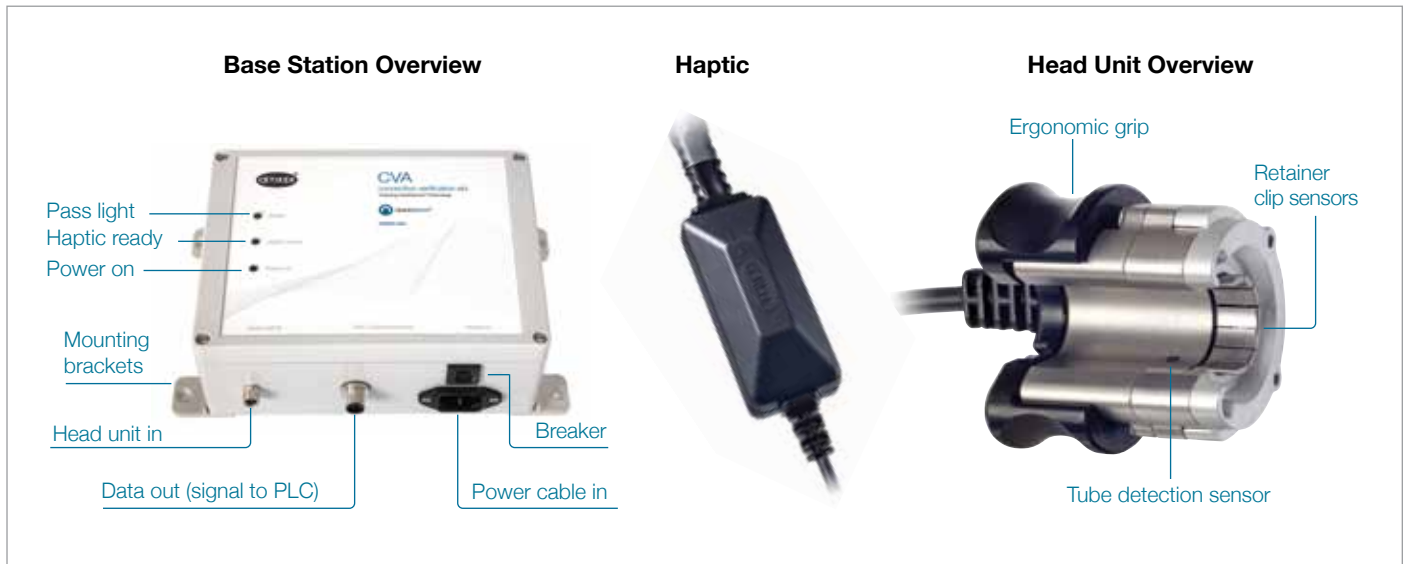
- Reliable and secure connection guarantee
- Attributes to FMEA risk reduction
- Recordability (warranty and traceability)



QuickSense®

[www.oetiker.com](http://www.oetiker.com)

CONNECTION VERIFICATION AID OVERVIEW



**Mounting Brackets:** base unit is wall or table mountable

**Ergonomic Grip:** compact and ergonomic head unit for easy use in tight spaces

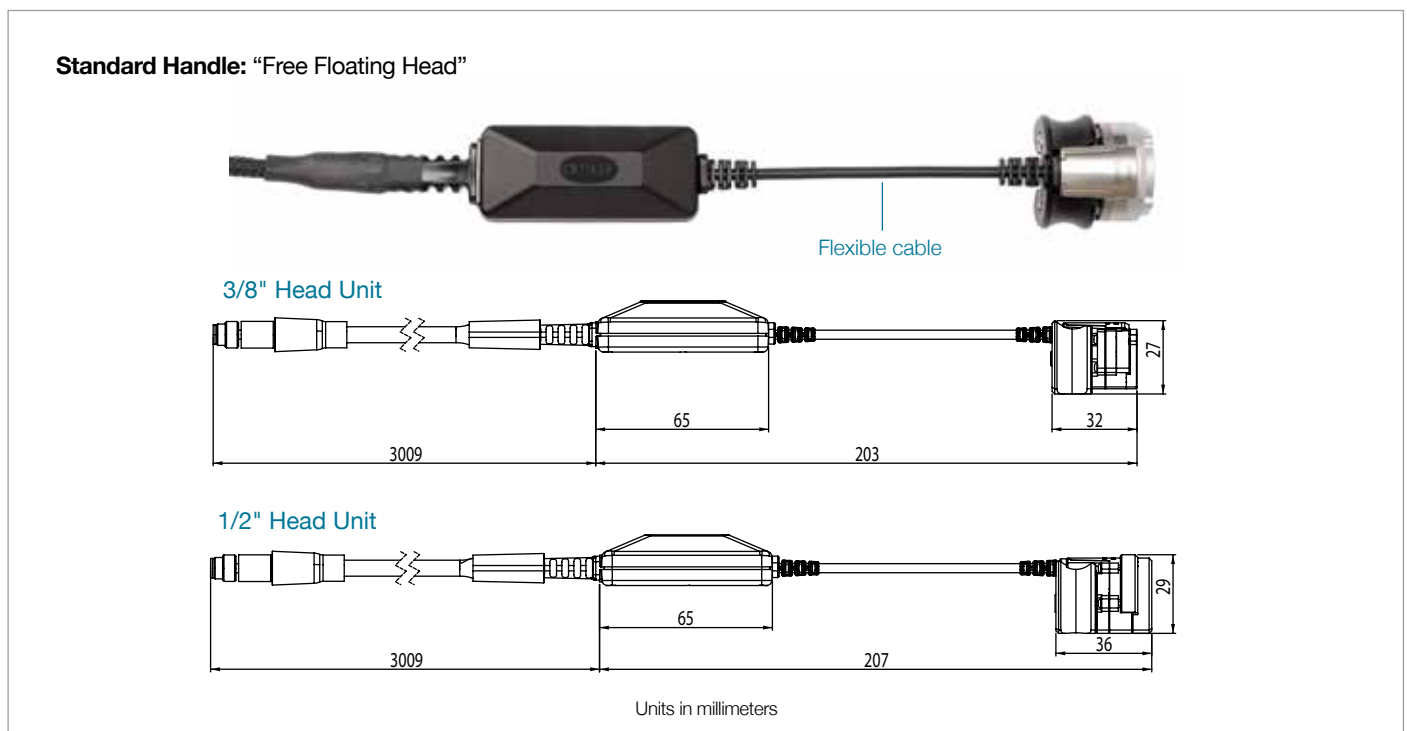
**Retainer Clip Sensors:** detect a proper tube to quick connector connection

**Tube Sensor:** verifies tube presence

**Haptic:** provides vibratory feedback to user that check is complete

**Data Out:** interface to PLC allows for connection to be documented and/or tied to line

STANDARD HANDLE AND ACCESSORY OPTIONS (accessory handles are purchased separately)



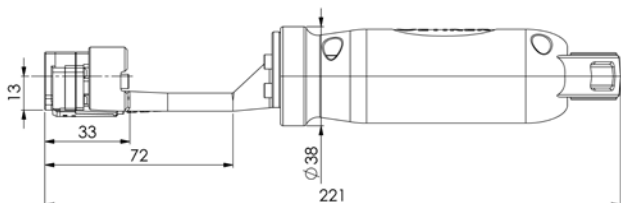
**Note:** Dimensions are expressed nominally in metric units unless specified otherwise. This data is intended for reference only. Rights to make technical changes are reserved.

HANDLE ACCESSORIES

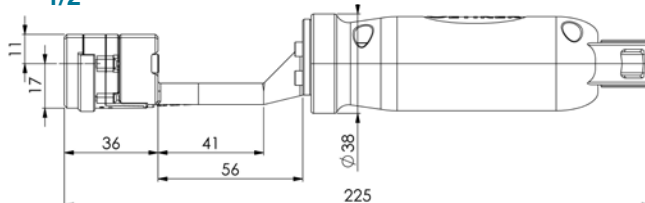
**Straight Handle with integrated haptic**



3/8"



1/2"

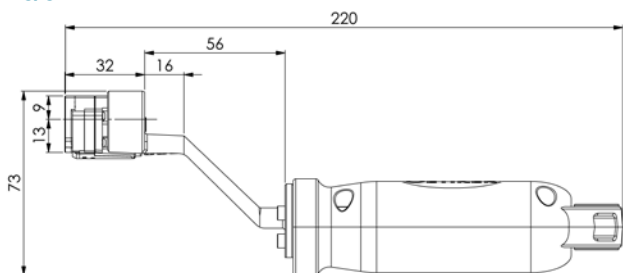


Units in millimeters

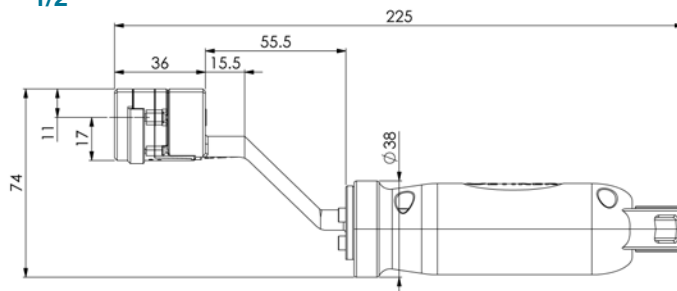
**45° Handle with integrated haptic**



3/8"



1/2"

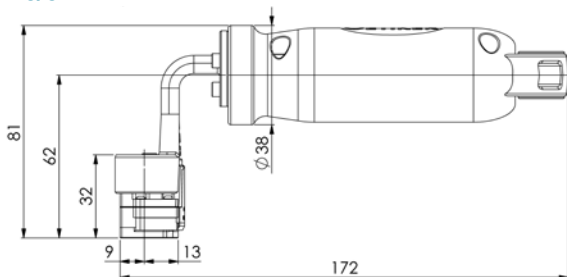


Units in millimeters

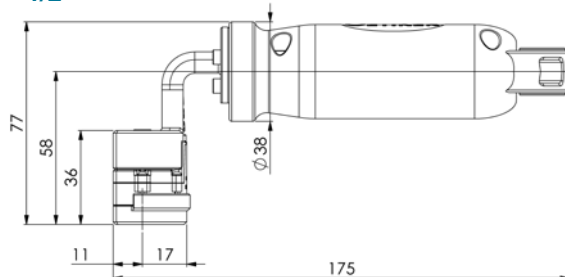
**90° Handle with integrated haptic**



3/8"



1/2"

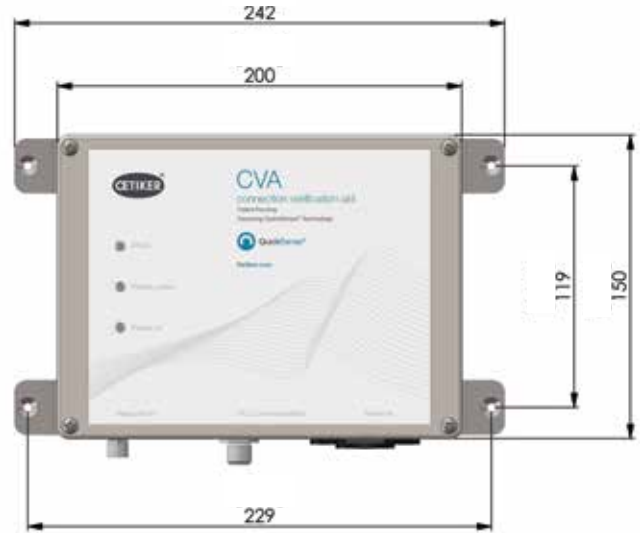


Units in millimeters

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BASE STATION

Base station works with both 3/8" and 1/2" applications



Units in millimeters

**Technical data**

Power supply:	85-230 V / 45-65 Hz
Power requirement:	30 VA (Fuse 10 A)
External base station dimensions:	200 x 150 x 75 mm
Weight:	653 g

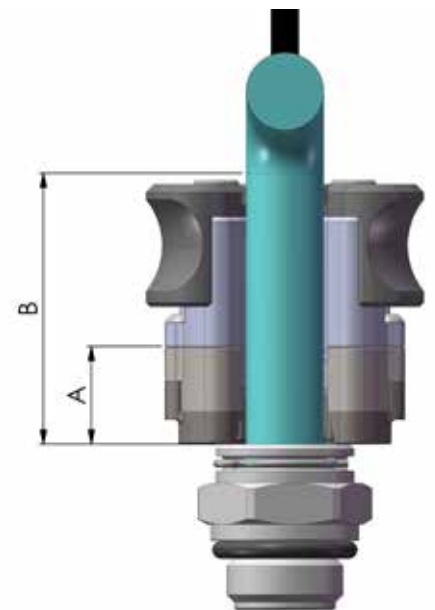
**Delivery scope**

Control unit item no. 13300024
USB drive with operating instructions
Connection cables included except PLC interface cable
Country-specific power cable

**Note:** CVA is only compatible with Oetiker branded and specified 3/8" and 1/2" aluminum and steel quick connects and tube line sets.

**Compatible connector dimensions**

Application dimensions required	3/8"	1/2"
"A" - Minimum distance until tube bend	13 mm	15 mm
"B" - Distance needed to operate head unit	45 mm	45 mm
"C" - Max outside diameter	34 mm	34 mm
"D" - Max tube diameter	10.4 mm	13.2 mm



**Note:** Tube bends may increase the tube diameter which may interfere with the tube fitting into the head unit.

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## CONNECTION VERIFICATION AID OPERATION



1. User installs Oetiker quick connector per **“Quick Connectors PG 201 & 210 Assembly/Disassembly Procedures”** (08905017).
2. Position head unit against tube and flush with connector.
3. Apply light force with head unit against quick connector to initiate verification check.
4. Upon successful verification, haptic will vibrate and PLC communication shall transmit.

## PERFORMANCE

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Detect “proper tube to Quick Connector” 100% of the time

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Less than 13.5 N (3 lbs.) of force required to activate passing signal (activation force)

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Less than 1 second for response time for a “good” passing condition

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Meets North American Safety Norms and Standards (European CE coming soon) (Japan PSE certification coming soon)

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Communication with customer PLC (24V with signal with 500 millisecond on pulse) see operating manual for further details

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Reliability tested (MSA 1)

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Durable performance proven over 1,000,000 cycles (laboratory setting)

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All CVA component materials are UL certified

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