



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx SIR 20.0026U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-01-04

Applicant: **MINCO PRODUCTS INC.**  
7300 Commerce Lane NE  
Minneapolis, MN 55432  
**United States of America**

Ex Component: CH504 and CH506 Connection Heads

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Flameproof "db" and Dust Protection by Enclosure "tb"**

Marking: Ex db IIC Gb  
Ex tb IIIC Db  
Ta = -50°C ≤ Ta ≤ +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Neil Jones**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**SIRA Certification Service**  
**CSA Group**  
**Unit 6, Hawarden Industrial Park**  
**Hawarden, Deeside, CH5 3US**  
**United Kingdom**





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Manufacturer: **MINCO PRODUCTS INC.**  
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**United States of America**

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

#### STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

#### TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/SIR/ExTR20.0231/00](#)

Quality Assessment Report:

[NL/DEK/QAR12.0028/06](#)



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## Ex Component(s) covered by this certificate is described below:

The Minco CH504 and CH506 Connection Heads are compact component enclosures which feature the same geometry but are constructed from different materials. The CH504 is available in aluminium or powder coated aluminium versions; whereas the CH506 is constructed from stainless steel grade 316. The connection heads feature either two 1/2" NPT or 3/4" NPT entries and an M85 cover joint.

The Connection Heads have been separately tested against the requirements of IEC 60529 and they meet IP66 with a cover O-ring and IP64 without a cover O-ring.

The Minco CH504Pabc and CH506Pabc connection heads:

### a - connection threads

SENSOR THREAD A	CONDUIT THREAD B
P1 = 3/4 - 14 NPT	1/2 - 14 NPT
P2 = 3/4 - 14 NPT	3/4 - 14 NPT
P3 = 1/2 - 14 NPT	1/2 - 14 NPT
P4 = 1/2 - 14 NPT	3/4 - 14 NPT
P5 = 1/2 - 14 NPT	M20 x 1.5 - 6H*
P6 = 3/4 - 14 NPT	M20 x 1.5 - 6H*

### b - type of and number of connection points

W0 = Empty enclosure (no connection points); W6 = 6 wire nuts; W8 = 8 wire nuts

T0 = Screws package for Minco temperature transmitter mounting

T8 = Standard fiberglass terminal board with 8 connection points

H8 = Standard fiberglass terminal board, tropicalized for humid conditions, with 8 connection points

### c - external surface finish

Blank = None (bare aluminum or stainless steel)

P = Polyester powder coated finish (aluminium CH504 connection heads only)

\* For options P5 and P6, where the conduit threads are M20 x 1.5, this is achieved by using a suitable equipment certified thread adapter provided by the manufacturer.

## SCHEDULE OF LIMITATIONS:

1. Component enclosures are not assigned a temperature class. However, these enclosures exhibit a surface temperature rise of 7 K with a 1.5 W load (1.35 W including 10% safety factor) in a 60°C ambient.
2. The enclosures feature two entries, these may be 1/2" or 3/4" NPT.
3. Oil filled circuit breakers and contactors shall not be used with these enclosures.
4. The ambient temperature rating of the final equipment shall be within the range of -50°C ≤ Ta ≤ + 60°C.
5. Internal parts may be placed in any arrangement provided that an area of at least 40 % of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm. The Minco Fiberglass terminal board with 8 connection points is considered suitable for this application.
6. With reference to point 5, the maximum obtained reference pressure when testing with baffle plates in accordance with the listed standards was 10.96 bar (159.0 lbf/in<sup>2</sup>). Based on overpressure testing carried out by CSA, the connection heads are considered suitable for reference pressures up to 12.3 bar (178.3 lbf/in<sup>2</sup>).