



CERTIFICATE NUMBER

DATE

09-HS476814B-3-PDA

23 June 2011

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

## CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
**MICRO MOTION INC. - BOULDER**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Coriolis Mass Flow Measuring System**

MODEL: **F & R Series**

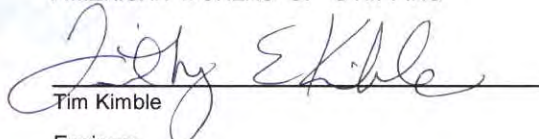
This Product Design Assessment (PDA) Certificate 09-HS476814B-3-PDA, dated 23/Jun/2011 remains valid until 22/Jun/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

  
Tim Kimble  
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).



CERTIFICATE NUMBER

09-HS476814E/1-PDA

DATE

15 July 2009

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

# CERTIFICATE OF Design Assessment

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PRODUCT: Coriolis Mass Flow Measuring System

MODEL: Elite Series CMF010M, CMF025M, CMF50M, CMF200M, CMF300M, CMF400M,

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-8-3/13.1, 4-8-4/27, 4-9-7/13.1, 4-9-7/13.5

OTHER STANDARD: Product Data Sheet: PS-00374, Rev. J Sept.2008);

AMERICAN BUREAU OF SHIPPING

*Hans P. Haengler*  
for Hans P. Haengler  
Engineering Type Approval Co-ordinator

AB258(07/03)

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of American Bureau of Shipping or a statutory, industrial or manufacturer's standard and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without ABS approval will result in this certificate becoming null and void. This certificate is governed by the terms and conditions on the reverse side hereof.

TX 05/05 5099A  
LTR 1000



CERTIFICATE NUMBER

DATE

09-HS476814C-2-PDA

27 April 2010

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

## CERTIFICATE OF DESIGN ASSESSMENT

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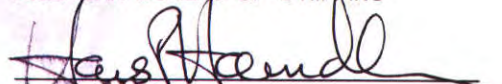
PRODUCT: Coriolis Mass Flow Measuring System

MODEL: CMFHC2M, CMFHC3M, CMFHC4M - Elite Series

ABS RULE: 2010 Steel Vessels Rules 1-1-4/7.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-8-3/13.1, 4-8-4/27, 4-9-7/13.1, 4-9-7/13.5

OTHER STANDARD: Product Data Sheet: PS-001041, Rev. F(Feb.2010);

AMERICAN BUREAU OF SHIPPING



Hans P. Haendler

Engineering Type Approval Co-ordinator

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CERTIFICATE NUMBER

09-HS476814D/1-PDA

DATE

15 July 2009

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

# CERTIFICATE OF Design Assessment

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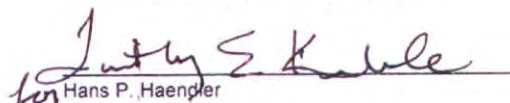
PRODUCT: Coriolis Mass Flow Measuring System

MODEL: Transmitters: 1700 & 2700

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-8-3/13.1, 4-8-4/27, 4-9-7/13.1, 4-9-7/13.5

OTHER STANDARD: Product Data Sheet: PS-00400, Rev.G (Sept.2008);

AMERICAN BUREAU OF SHIPPING

  
for Hans P. Haendler  
Engineering Type Approval Co-ordinator



CERTIFICATE NUMBER

09-HS476814A/1-PDA

DATE

15 July 2009

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

# CERTIFICATE OF Design Assessment

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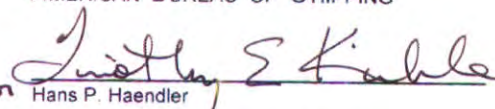
PRODUCT: Coriolis Mass Flow Measuring System

MODEL: Displays: 3300, 3350, 3500, 3700

ABS RULE: 2009 Steel Vessels Rules 1-1-4/7.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-8-3/13.1, 4-8-4/27, 4-9-7/13.1, 4-9-7/13.5

OTHER STANDARD: IEC 61010-1(Directive 2006/95/EC); Product Data Sheet: PS-00291, Rev.C (Mar.2008);

AMERICAN BUREAU OF SHIPPING

*for*   
Hans P. Haendler  
Engineering Type Approval Co-ordinator



CERTIFICATE NUMBER

12-HS878513-PDA

DATE

27 April 2012

ABS TECHNICAL OFFICE

Houston SED - Ship Systems

## CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
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PRODUCT: **Coriolis Mass Flow Measuring System**

MODEL: **1500 & 2500**

This Product Design Assessment (PDA) Certificate 12-HS878513-PDA, dated 27/Apr/2012 remains valid until 26/Apr/2017 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

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AMERICAN BUREAU OF SHIPPING



Tim Kimble

Engineer

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