

EUROMAP 84.10

**OPC UA interfaces for plastics and rubber
machinery – Extrusion – Part 10: Calibrator**

Release 2.00, 2022-06-08

**EUROMAP 84.10 (Release 2.00) is identical with
OPC 40084-10 (Release 2.00) and VDMA 40084-10:2022-08**

Contents

	Page
Foreword.....	6
1 Scope	7
2 Normative references	7
3 Terms, definitions and conventions	8
3.1 Overview	8
3.2 Conventions used in this document.....	8
3.3 Abbreviations	8
4 General information to OPC UA interfaces for plastics and rubber machinery and OPC UA	8
5 Use cases	8
6 Calibrator_InterfaceType	8
6.1 Calibrator_InterfaceType Definition.....	8
6.2 DeviceClass	9
6.3 PositionZ, PositionsX, PositionsY	9
6.4 PositionsPipeSupport	10
6.5 CalibrationZonesType	11
6.5.1 WaterFlowIn, WaterFlowOut	12
6.5.2 WaterTemperatureIn, WaterTemperatureOut.....	12
6.5.3 CalibrationZoneType	12
7 Profiles and Conformance Units	13
7.1 Conformance Units.....	13
7.2 Profiles	13
7.2.1 Profile list.....	13
7.2.2 Server Facets	13
8 Namespaces	14
8.1 Namespace Metadata	14
8.2 Handling of OPC UA Namespaces	14
Annex A (normative) OPC 40084-10 Namespace and mappings	16

Figures

Figure 1 – Calibrator_InterfaceType Overview	9
Figure 2 – Definition of the direction of the x-, y- and z-positions of the calibrator	10
Figure 3 – CalibrationZonesType Overview	11

Tables

Table 1 – Calibrator_InterfaceType Definition	9
Table 2 – CalibrationZonesType Definition	12
Table 3 – CalibrationZoneType Definition	12
Table 4 – Conformance Units for OPC 40084-10	13
Table 5 – Profile URIs for OPC 40084-10	13
Table 6 – OPC 40084-10 v2 Basic Server Profile	13
Table 7 – NamespaceMetadata Object for this Specification	14
Table 8 – Namespaces used in an OPC 40084-10 Server	15
Table 9 – Namespaces used in this specification	15

OPC Foundation / EUROMAP

AGREEMENT OF USE

COPYRIGHT RESTRICTIONS

- This document is provided "as is" by the OPC Foundation and EUROMAP.
- Right of use for this specification is restricted to this specification and does not grant rights of use for referred documents.
- Right of use for this specification will be granted without cost.
- This document may be distributed through computer systems, printed or copied as long as the content remains unchanged and the document is not modified.
- OPC Foundation and EUROMAP do not guarantee usability for any purpose and shall not be made liable for any case using the content of this document.
- The user of the document agrees to indemnify OPC Foundation and EUROMAP and their officers, directors and agents harmless from all demands, claims, actions, losses, damages (including damages from personal injuries), costs and expenses (including attorneys' fees) which are in any way related to activities associated with its use of content from this specification.
- The document shall not be used in conjunction with company advertising, shall not be sold or licensed to any party.
- The intellectual property and copyright is solely owned by the OPC Foundation and EUROMAP.

PATENTS

The attention of adopters is directed to the possibility that compliance with or adoption of OPC or EUROMAP specifications may require use of an invention covered by patent rights. OPC Foundation or EUROMAP shall not be responsible for identifying patents for which a license may be required by any OPC or EUROMAP specification, or for conducting legal inquiries into the legal validity or scope of those patents that are brought to its attention. OPC or EUROMAP specifications are prospective and advisory only. Prospective users are responsible for protecting themselves against liability for infringement of patents.

WARRANTY AND LIABILITY DISCLAIMERS

WHILE THIS PUBLICATION IS BELIEVED TO BE ACCURATE, IT IS PROVIDED "AS IS" AND MAY CONTAIN ERRORS OR MISPRINTS. THE OPC FOUNDATION NOR EUROMAP MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, WITH REGARD TO THIS PUBLICATION, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF TITLE OR OWNERSHIP, IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE. IN NO EVENT SHALL THE OPC FOUNDATION NOR EUROMAP BE LIABLE FOR ERRORS CONTAINED HEREIN OR FOR DIRECT, INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, RELIANCE OR COVER DAMAGES, INCLUDING LOSS OF PROFITS, REVENUE, DATA OR USE, INCURRED BY ANY USER OR ANY THIRD PARTY IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE OF THIS MATERIAL, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

The entire risk as to the quality and performance of software developed using this specification is borne by you.

RESTRICTED RIGHTS LEGEND

This Specification is provided with Restricted Rights. Use, duplication or disclosure by the U.S. government is subject to restrictions as set forth in (a) this Agreement pursuant to DFARs 227.7202-3(a); (b) subparagraph (c)(1)(i) of the Rights in Technical Data and Computer Software clause at DFARs 252.227-7013; or (c) the Commercial Computer Software Restricted Rights clause at FAR 52.227-19 subdivision (c)(1) and (2), as applicable. Contractor / manufacturer are the OPC Foundation, 16101 N. 82nd Street, Suite 3B, Scottsdale, AZ, 85260-1830

COMPLIANCE

The combination of EUROMAP and OPC Foundation shall at all times be the sole entities that may authorize developers, suppliers and sellers of hardware and software to use certification marks, trademarks or other special designations to indicate compliance with these materials as specified within this document. Products developed using this specification may claim compliance or conformance with this specification if and only if the software satisfactorily meets the certification requirements set by EUROMAP or the OPC Foundation. Products that do not meet these requirements may claim only that the product was based on this specification and must not claim compliance or conformance with this specification.

TRADEMARKS

Most computer and software brand names have trademarks or registered trademarks. The individual trademarks have not been listed here.

GENERAL PROVISIONS

Should any provision of this Agreement be held to be void, invalid, unenforceable or illegal by a court, the validity and enforceability of the other provisions shall not be affected thereby.

This Agreement shall be governed by and construed under the laws of Germany.

This Agreement embodies the entire understanding between the parties with respect to, and supersedes any prior understanding or agreement (oral or written) relating to, this specification.

Foreword

This specification was created by a joint working group of the OPC Foundation and EUROMAP. It is adopted identically as VDMA Specification.

Compared with the previous version, the following changes have been made:

Version	Changes
OPC 40084-10, version 2.00 (identical with VDMA 40084-10:2022-02 and EUROMAP 84.10, version 2.00)	Use of OPC UA for machinery / version 2.00 of OPC 40084-1 : <ul style="list-style-type: none">– Changed entry point from <i>DeviceSet</i> to <i>Machines Object</i>– Use of updated <i>ExtrusionDeviceType</i> (see OPC 40084-1) with:<ul style="list-style-type: none">– replaced <i>MachineInformation</i> (<i>MachineInformationType</i> from OPC 40083) with <i>Identification</i> (<i>MachineIdentificationType</i> from OPC 40001-1),– replaced <i>LineStatus</i> by <i>MachineryItemState</i> and <i>MachineryOperationMode</i> <p>Security Policy deleted because included in part 1</p> <p>Conformance units and profiles adjusted</p>

EUROMAP

EUROMAP is the European umbrella association of the plastics and rubber machinery industry which accounts for annual sales of around 13.5 billion euro and a 40 per cent share of worldwide production. Almost 75 per cent of its European output is shipped to worldwide destinations. With global exports of 10.0 billion euro, EUROMAP's around 1,000 machinery manufacturers are market leaders with nearly half of all machines sold being supplied by EUROMAP members.

EUROMAP provides technical recommendations for plastics and rubber machines. In addition to standards for machine descriptions, dimensions and energy measurement, interfaces between machines feature prominently. The provision of manufacturer independent interfaces ensures high levels of machine compatibility.

OPC Foundation

OPC is the interoperability standard for the secure and reliable exchange of data and information in the industrial automation space and in other industries. It is platform independent and ensures the seamless flow of information among devices from multiple vendors. The OPC Foundation is responsible for the development and maintenance of this standard.

OPC UA is a platform independent service-oriented architecture that integrates all the functionality of the individual OPC Classic specifications into one extensible framework. This multi-layered approach accomplishes the original design specification goals of:

- Platform independence: from an embedded microcontroller to cloud-based infrastructure
- Secure: encryption, authentication, authorization and auditing
- Extensible: ability to add new features including transports without affecting existing applications
- Comprehensive information modelling capabilities: for defining any model from simple to complex

1 Scope

OPC 40084-10 describes the data exchange interface for calibrators as part of an extrusion line. The interface is used by

- MES (Manufacturing Execution System) for collecting the information generated by extrusion lines at a central point for easier quality assurance and job and dataset management.
- Line controllers to monitor and set process parameters.

Safety related signals like emergency stop are not included.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies

OPC 10000-1, *OPC Unified Architecture - Part 1: Overview and Concepts*

<http://www.opcfoundation.org/UA/Part1/>

OPC 10000-3, *OPC Unified Architecture - Part 3: Address Space Model*

<http://www.opcfoundation.org/UA/Part3/>

OPC 10000-4, *OPC Unified Architecture - Part 4: Services*

<http://www.opcfoundation.org/UA/Part4/>

OPC 10000-5, *OPC Unified Architecture - Part 5: Information Model*

<http://www.opcfoundation.org/UA/Part5/>

OPC 10000-6, *OPC Unified Architecture - Part 6: Mappings*

<http://www.opcfoundation.org/UA/Part6/>

OPC 10000-7, *OPC Unified Architecture - Part 7: Profiles*

<http://www.opcfoundation.org/UA/Part7/>

OPC 10000-8, *OPC Unified Architecture - Part 8: Data Access*

<http://www.opcfoundation.org/UA/Part8/>

OPC 10000-100, *OPC Unified Architecture - Part 100: Devices*

<http://www.opcfoundation.org/UA/Part100/>

OPC 40001-1, *OPC UA for Machinery - Part 1: Basic Building Blocks*

<http://www.opcfoundation.org/UA/Machinery/>

OPC 40083: *OPC UA interfaces for plastics and rubber machinery – General Type definitions*

<http://www.opcfoundation.org/UA/PlasticsRubber/GeneralTypes>

OPC 40084-1: *OPC UA interfaces for plastics and rubber machinery – Extrusion – Part 1: General Type Definitions*

http://www.opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/GeneralTypes/

3 Terms, definitions and conventions

3.1 Overview

It is assumed that basic concepts of OPC UA information modelling are understood in this specification. This specification will use these concepts to describe the OPC 40084-10 Information Model. For the purposes of this document, the terms and definitions given in the documents referenced in Clause 2 apply.

Note that OPC UA terms and terms defined in this specification are *italicized* in the specification.

3.2 Conventions used in this document

The conventions described in OPC 40083 apply.

3.3 Abbreviations

MES Manufacturing Execution System

4 General information to OPC UA interfaces for plastics and rubber machinery and OPC UA

For general information on OPC UA interfaces for plastics and rubber machinery and OPC UA see OPC 40083.

5 Use cases

OPC 40084-10 describes the data exchange interface for calibrators as part of an extrusion line. The interface is used by

- MES (Manufacturing Execution System) for collecting the information generated by extrusion lines at a central point for easier quality assurance and job and dataset management.
- Line controllers to monitor and set process parameters.

6 Calibrator_InterfaceType

6.1 Calibrator_InterfaceType Definition

This OPC UA *ObjectType* is used for the root *Object* representing a calibrator as part of an extrusion line. It is based on the *ExtrusionDeviceType* (defined in OPC 40084-1) and formally defined in Table 1.

The instance(s) of *Calibrator_InterfaceType* shall be located under the *Machines Object* of the Server (see OPC UA for Machinery).

NOTE: If the OPC UA server is implemented in the control of the calibrator so only one instance of *Calibrator_InterfaceType* will be created. But it is also possible that one OPC UA server is connected to several machine controls as one interface to the MES. In this case several instances of *Calibrator_InterfaceType* will be created.

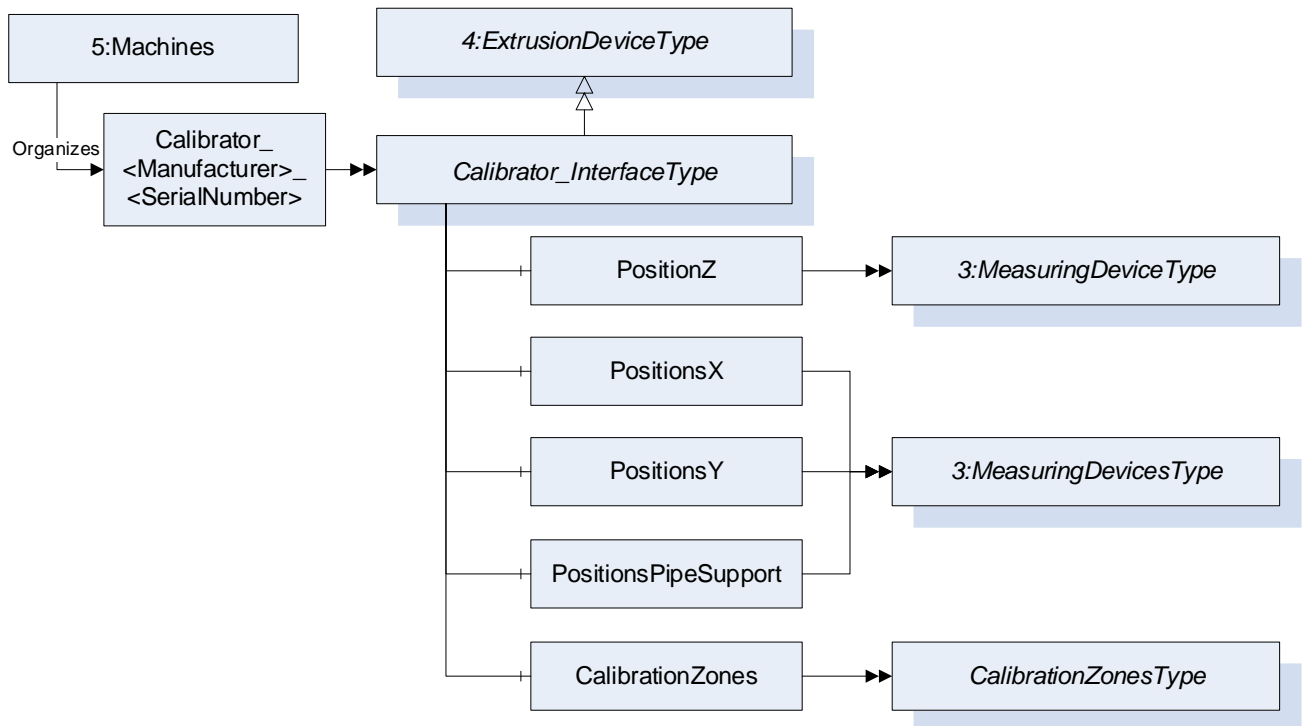


Figure 1 – Calibrator_InterfaceType Overview

Table 1 – Calibrator_InterfaceType Definition

Attribute	Value				
BrowseName	Calibrator_InterfaceType				
IsAbstract	False				
References	Node Class	BrowseName	DataType	TypeDefinition	Other
Subtype of 4:ExtrusionDeviceType (defined in OPC 40084-1)					
0:HasComponent	Object	PositionZ		3:MeasuringDeviceType	O
0:HasComponent	Object	PositionsX		3:MeasuringDevicesType	O
0:HasComponent	Object	PositionsY		3:MeasuringDevicesType	O
0:HasComponent	Object	PositionsPipeSupport		3:MeasuringDevicesType	O
0:HasComponent	Object	CalibrationZones		CalibrationZonesType	M
Conformance Units					
OPC 40084-10 Basic					

The *BrowseName* of the object instance shall be “Calibrator_<Manufacturer>_<SerialNumber>”.

Example: “Calibrator_battenfeld_0123456”.

6.2 DeviceClass

The *DeviceClass* Property in the *Identification* Object inside the *ExtrusionDeviceType* shall have the value “Calibrator”.

6.3 PositionZ, PositionsX, PositionsY

These *Objects* represent the z-position and the several x- and y-positions of the calibrator. The *MeasuringDeviceType* and *MeasuringDeviceType* are defined in OPC 40083.

Definition of directions (from extruder output):

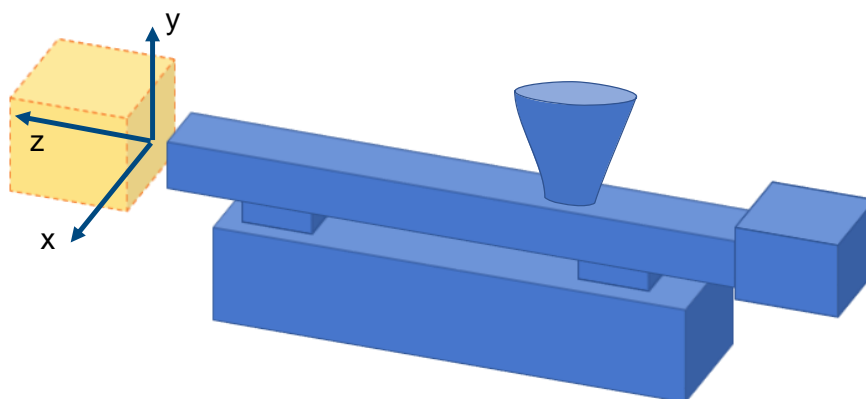


Figure 2 – Definition of the direction of the x-, y- and z-positions of the calibrator

6.4 PositionsPipeSupport

This *Object* represents the positions of a pipe support. The *MeasuringDeviceType* is defined in OPC 40083.

6.5 CalibrationZonesType

This *Object* is a container for the calibration zones but gives also information about the total water flow and water temperature.

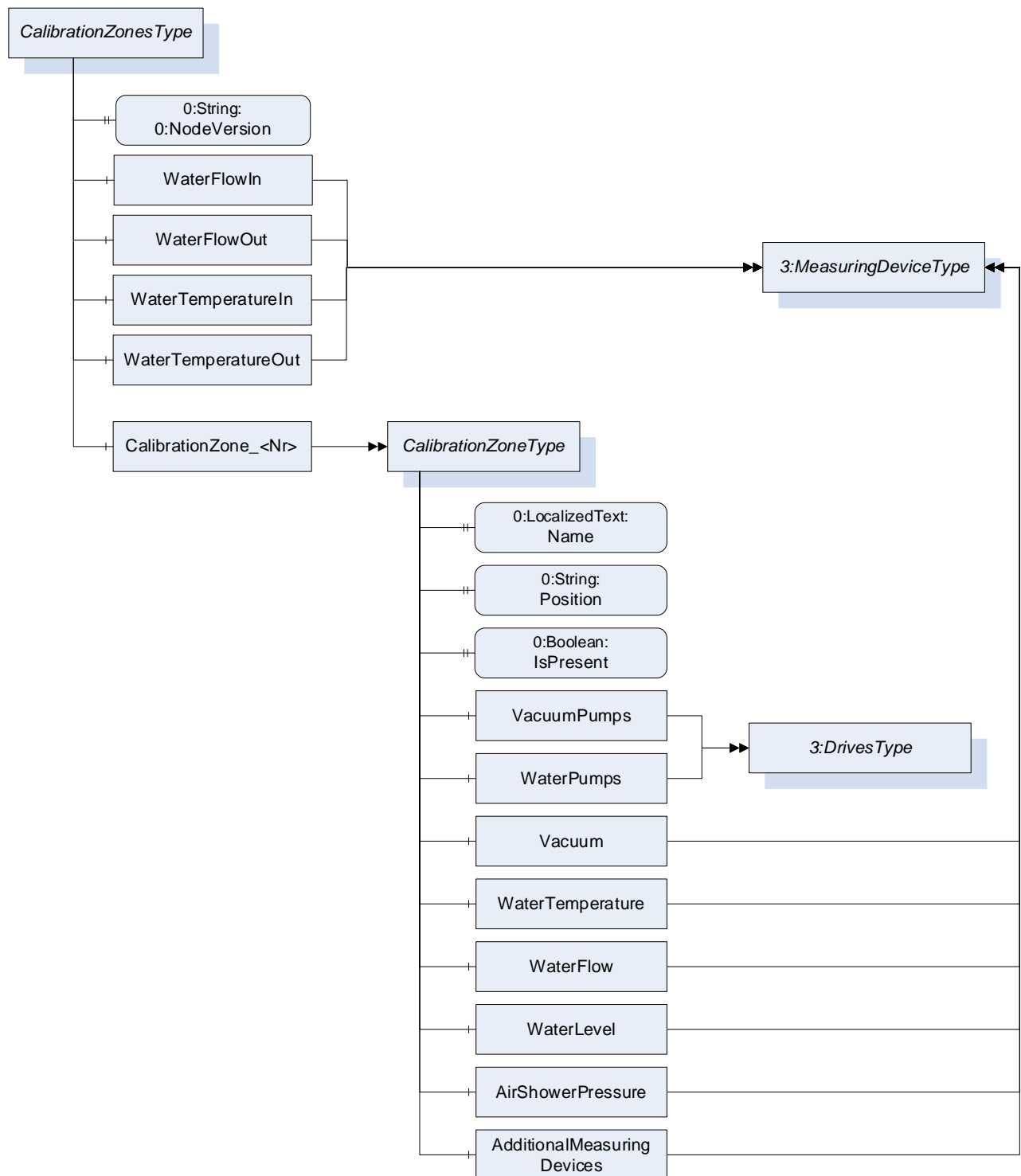


Figure 3 – CalibrationZonesType Overview

Table 2 – CalibrationZonesType Definition

Attribute	Value				
BrowseName	CalibrationZonesType				
IsAbstract	False				
References	Node Class	BrowseName	Data Type	TypeDefinition	Other
Subtype of 0:BaseObjectType defined in OPC 10000-5					
0:HasProperty	Variable	0:NodeVersion	0:String	0:PropertyType	M, RO
0:HasComponent	Object	WaterFlowIn		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterFlowOut		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterTemperatureIn		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterTemperatureOut		3:MeasuringDeviceType	O
0:HasComponent	Object	CalibrationZone_<Nr>		CalibrationZoneType	OP
0:GeneratesEvent	ObjectType	GeneralModelChangeEvent			
Conformance Units					
OPC 40084-10 Basic					

6.5.1 WaterFlowIn, WaterFlowOut

In and out Flow rate (in volume per time) of the water in the calibration zone. The used *MeasuringDeviceType* is defined in OPC 40083.

6.5.2 WaterTemperatureIn, WaterTemperatureOut

In and out temperature of the water in the calibration zone. The used *MeasuringDeviceType* is defined in OPC 40083.

6.5.3 CalibrationZoneType

This *Object* represents information about a single calibration zone.

Table 3 – CalibrationZoneType Definition

Attribute	Value				
BrowseName	CalibrationZoneType				
IsAbstract	False				
References	Node Class	BrowseName	Data Type	TypeDefinition	Other
Subtype of 0:BaseObjectType defined in OPC 10000-5					
0:HasProperty	Variable	Name	0:LocalizedText	0:PropertyType	M, RW
0:HasProperty	Variable	Position	0:String	0:PropertyType	O, RO
0:HasProperty	Variable	IsPresent	0:Boolean	0:PropertyType	M, RO
0:HasComponent	Object	VacuumPumps		3:DrivesType	O
0:HasComponent	Object	WaterPumps		3:DrivesType	O
0:HasComponent	Object	Vacuum		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterTemperature		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterFlow		3:MeasuringDeviceType	O
0:HasComponent	Object	WaterLevel		3:MeasuringDeviceType	O
0:HasComponent	Object	AirShowerPressure		3:MeasuringDeviceType	O
0:HasComponent	Object	AdditionalMeasuringDevices		3:MeasuringDevicesType	O
Conformance Units					
OPC 40084-10 Basic					

6.5.3.1 Name

Name of the calibration zone.

6.5.3.2 Position

Position of the calibration zone.

6.5.3.3 IsPresent

Indication if the calibration is present/used in the process

6.5.3.4 VacuumPumps

Information about the vacuum pumps in the calibration zone. The *DrivesType* is defined in OPC 40083.

6.5.3.5 WaterPumps

Information about the water pumps in the calibration zone. The *DrivesType* is defined in OPC 40083.

6.5.3.6 WaterTemperature

Measurement of the water temperature in the calibration zone. The *MeasuringDevicesType* is defined in OPC 40083.

6.5.3.7 WaterFlow

Measurement of the water flow in the calibration zone. The *MeasuringDevicesType* is defined in OPC 40083.

6.5.3.8 Water level

Measurement of the water level in the calibration zone. The *MeasuringDevicesType* is defined in OPC 40083.

6.5.3.9 AirShowerPressure

Measurement of the pressure of the air shower in the calibration zone. The *MeasuringDevicesType* is defined in OPC 40083.

6.5.3.10 AdditionalMeasuringDevices

Container for any other measured values in the calibration zone.

7 Profiles and Conformance Units**7.1 Conformance Units**

This chapter defines the corresponding *Conformance Unit* for OPC 40084-10.

Table 4 – Conformance Units for OPC 40084-10

Category	Title	Description
Server	OPC 40084-10 Basic	Support of <i>Calibrator_InterfaceType</i> and all mandatory child elements giving information on the melt pump and its status. There is at least one instance of the <i>Calibrator_InterfaceType</i> in the <i>Machines Object</i> .

7.2 Profiles**7.2.1 Profile list**

Table 5 lists all Profiles defined in this document and defines their URIs.

Table 5 – Profile URIs for OPC 40084-10

Profile	URI
OPC 40084-10 v2 Basic Server Profile	http://opcfoundation.org/UA-Profile/PlasticsRubber/Extrusion_v2/Calibrator/Server/Basic

7.2.2 Server Facets

This version of OPC 40084-10 defined only one *Profile*.

Table 6 – OPC 40084-10 v2 Basic Server Profile

Group	Conformance Unit / Profile Title	Mandatory / Optional
Extrusion	4:Extrusion v2 Extrusion Device Basic Server Profile	M
Extrusion	OPC 40084-10 Basic	M

NOTE: OPC 40084-1 includes the Facet “Extrusion v2 Production Dataset Management Server Facet” which indicates that the server supports the *3:ProductionDatasetManagementType* (defined in OPC 40083) with all its mandatory *InstanceDeclarations* and that there is the component *ProductionDatasetManagement* available in the instance of the *Calibrator_InterfaceType*.

NOTE: The names of the supported profiles are available in the *Server Object* under *ServerCapabilities.ServerProfileArray*

8 Namespaces

8.1 Namespace Metadata

Table 7 defines the namespace metadata for this specification. The *Object* is used to provide version information for the namespace and an indication about static *Nodes*. Static *Nodes* are identical for all *Attributes* in all *Servers*, including the *Value Attribute*. See Part 5 for more details.

The information is provided as *Object* of type *NamespaceMetadataType*. This *Object* is a component of the *Namespaces Object* that is part of the *Server Object*. The *NamespaceMetadataType Object* and its *Properties* are defined in Part 5.

The version information is also provided as part of the *ModelTableEntry* in the *UANodeSet XML* file. The *UANodeSet XML* schema is defined in Part 6.

Table 7 – NamespaceMetadata Object for this Specification

Attribute	Value	
BrowseName	http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/Calibrator/	
Property	DataType	Value
NamespaceUri	String	http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/Calibrator/
NamespaceVersion	String	2.00
NamespacePublicationDate	DateTime	2022-05-01
IsNamespaceSubset	Boolean	False
StaticNodeIdTypes	IdType[]	0
StaticNumericNodeIdRange	NumericRange[]	
StaticStringNodeIdPattern	String	

8.2 Handling of OPC UA Namespaces

Namespaces are used by OPC UA to create unique identifiers across different naming authorities. The *Attributes NodeId* and *BrowseName* are identifiers. A *Node* in the *UA AddressSpace* is unambiguously identified using a *NodeId*. Unlike *NodeIds*, the *BrowseName* cannot be used to unambiguously identify a *Node*. Different *Nodes* may have the same *BrowseName*. They are used to build a browse path between two *Nodes* or to define a standard *Property*.

Servers may often choose to use the same namespace for the *NodeId* and the *BrowseName*. However, if they want to provide a standard *Property*, its *BrowseName* shall have the namespace of the standards body although the namespace of the *NodeId* reflects something else, for example the *EngineeringUnits Property*. All *NodeIds* of *Nodes* not defined in this document shall not use the standard namespaces.

Table 8 provides a list of mandatory and optional namespaces used in an OPC 40084-10 OPC UA *Server*.

Table 8 – Namespaces used in an OPC 40084-10 Server

NamespaceURI	Description	Use
http://opcfoundation.org/UA/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in the OPC UA specification. This namespace shall have namespace index 0.	Mandatory
Local Server URI	Namespace for nodes defined in the local server. This may include types and instances used in a device represented by the server. This namespace shall have namespace index 1.	Mandatory
http://opcfoundation.org/UA/DI/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in OPC 10000-100. The namespace index is server specific.	Mandatory
http://opcfoundation.org/UA/PlasticsRubber/GeneralTypes/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in OPC 40083. The namespace index is server specific.	Mandatory
http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/GeneralTypes/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in OPC 40084-1. The namespace index is server specific.	Mandatory
http://opcfoundation.org/UA/Machinery/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in OPC 40001-1. The namespace index is server specific.	Mandatory
http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/Calibrator/	Namespace for <i>NodeIds</i> and <i>BrowseNames</i> defined in this specification. The namespace index is server specific.	Mandatory
Vendor specific types and instances	A server may provide vendor specific types like types derived from <i>MachineType</i> or <i>MachineStatusType</i> or vendor specific instances of devices in a vendor specific namespace.	Optional

Table 9 provides a list of namespaces and their index used for *BrowseNames* in this specification. The default namespace of this specification is not listed since all *BrowseNames* without prefix use this default namespace.

Table 9 – Namespaces used in this specification

NamespaceURI	Namespace Index	Example
http://opcfoundation.org/UA/	0	0:NodeVersion
http://opcfoundation.org/UA/DI/	2	2:DeviceClass
http://opcfoundation.org/UA/PlasticsRubber/GeneralTypes/	3	3:MachineInformationType
http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/GeneralTypes/	4	4:ExtrusionDeviceType
http://opcfoundation.org/UA/Machinery/	5	5:Machines

Annex A (normative)

OPC 40084-10 Namespace and mappings

A.1 Namespace and identifiers for OPC 40084-10 Information Model

This appendix defines the numeric identifiers for all of the numeric *NodeIds* defined in this specification. The identifiers are specified in a CSV file with the following syntax:

<SymbolName>, <Identifier>, <NodeClass>

Where the *SymbolName* is either the *BrowseName* of a *Type Node* or the *BrowsePath* for an *Instance Node* that appears in the specification and the *Identifier* is the numeric value for the *NodeId*.

The *BrowsePath* for an *Instance Node* is constructed by appending the *BrowseName* of the instance *Node* to the *BrowseName* for the containing instance or type. An underscore character is used to separate each *BrowseName* in the path. Let's take for example, the *MachineInformationType ObjectType Node* which has the *ControllerName Property*. The **Name** for the *ControllerName InstanceDeclaration* within the *MachineInformationType* declaration is: *MachineInformationType_ControllerName*.

The *NamespaceUri* for all *NodeIds* defined here is
http://opcfoundation.org/UA/PlasticsRubber/Extrusion_v2/Calibrator/

The CSV released with this version of the specification can be found here:

- http://www.opcfoundation.org/UA/schemas/PlasticsRubber/Extrusion_v2/Calibrator/2.00/NodeIds.csv

NOTE: The latest CSV that is compatible with this version of the specification can be found here:

- http://www.opcfoundation.org/UA/schemas/PlasticsRubber/Extrusion_v2/Calibrator/NodeIds.csv

A computer processible version of the complete Information Model defined in this specification is also provided. It follows the XML Information Model schema syntax defined in Part 6.

The Information Model Schema released with this version of the specification can be found here:

- http://www.opcfoundation.org/UA/schemas/PlasticsRubber/Extrusion_v2/Calibrator/2.00/Opc.Ua.PlasticsRubber.Extrusion_v2.Calibrator.NodeSet2.xml

NOTE: The latest Information Model schema that is compatible with this version of the specification can be found here:

- http://www.opcfoundation.org/UA/schemas/PlasticsRubber/Extrusion_v2/Calibrator/Opc.Ua.PlasticsRubber.Extrusion_v2.Calibrator.NodeSet2.xml
-