

## **Beschreibung der Datenstruktur von b2bOptic**

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---

**Chapter**



---

# 1 introduction

## 1.1 Lens-manufacturer

the following manufacturers are able to receive data in this fileformat.

CZ = Carl Zeiss

ROD = Rodenstock

SEI = Seiko

---

# Chapter



---

## 2 XML-Struktur

### 2.1 ToDo-Liste

Beispiel-Bestellungen.

## 2.2 overview

### [Rotelement b2bOptic](#)

simple types

[AdditionRefractionMethod](#)

[AngleDimension](#)

[BevelPosType](#)

[BevelTypes](#)

[EdgingType](#)

[ChamferIntensity](#)

[ChamferPos](#)

[CoatingTypes](#)

[EdgingType](#)

[FrameMaterials](#)

[Gender](#)

[HeightReferences](#)

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[MsgTypes](#)

[OCReferences](#)

[Roles](#)

[Sides](#)

[SidesSimple](#)

[SoftwareTypes](#)

[ThicknessReferences](#)

[TracerBinaryFormat](#)

[TracerType](#)

complex types

[Account](#)

[Address](#)

[Bevel](#)

[Centration](#)

[Coating](#)

[ContactInfo](#)

[CPoint](#)

[Curve](#)

[Cylinder](#)

[Decentration](#)

[Diameter](#)

[DrillHoles](#)

[Edging](#)

[Frame](#)

[FrameSize](#)

[GeometryType](#)

[Header](#)

[IProfilerData](#)

[IProfilerMap](#)

[IProfilerResult](#)

[Item](#)

[Lens](#)

[Pair](#)

[Patient](#)

---

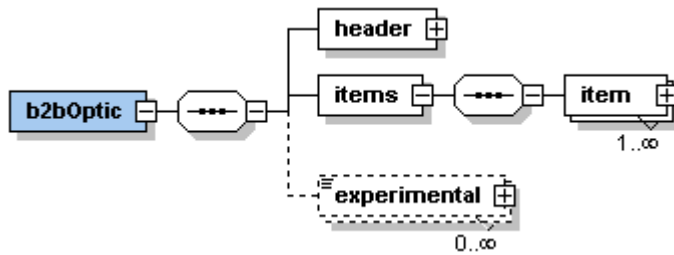


---

[PPoint](#)  
[Prism](#)  
[ProductCatalog](#)  
[RXDataTypeSimple](#)  
[RXDataType](#)  
[RXDataType4SL](#)  
[Shape](#)  
[Software](#)  
[StockLens](#)  
[TimeStamps](#)  
[TracerData](#)  
[Zernikes](#)  
[Zernikes7](#)  
[Zernikes8](#)  
[Zernikes9](#)  
[Zernikes10](#)  
[Zernikes11](#)  
[Zernikes12](#)

---

## 2.3 rootelement "b2bOptic"



### Elemente

#### header

type: [Header](#)  
 occurs: 1  
 description:

#### items

type: sequence of item  
 occurs: 1  
 description:

#### item

type: [Item](#)  
 occurs: 1..n  
 description:

#### experimental

type: anyType  
 occurs: 0..n  
 description:

### XSD

```
<xs:element name="b2bOptic">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="header" type="Header"/>
      <xs:element name="items">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="item" type="Item" maxOccurs="unbounded"
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="experimental" type="xs:anyType" minOccurs="0" maxOccurs="unbounded"
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

## 2.4 Simple Types

simple types

[AngleDimension](#)

[BevelPosType](#)

[BevelTypes](#)

[EdgingType](#)

[FrameMaterials](#)

[Gender](#)

[HeightReferences](#)

[MsgStates](#)

[MsgSteps](#)

[MsgTypes](#)

[OCReferences](#)

[Roles](#)

[Sides](#)

[SoftwareTypes](#)

[ThicknessReferences](#)

[TracerBinaryFormat](#)

### 2.4.1 AdditionRefractionMethod

Used in

[Patient](#)

---

#### Simple Type

**type:** string

**possible values:** FRONT  
BACK  
ASWORN  
PHOROPTER

**description:**

---

#### XSD

```
<xs:simpleType name="AdditionRefractionMethod">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="FRONT" />  
    <xs:enumeration value="BACK" />  
    <xs:enumeration value="ASWORN" />  
    <xs:enumeration value="PHOROPTER" />  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.2 AngleDimension

Used in  
[Frame PPoint](#)

---

### Simple Type

**type:** string

**possible values:** DEG  
RAD  
MM

**description:** (todo: Wann und bei wem wird RAD verwendet. Sollte RAD entfernt werden?)  
ROD,ZEI,SEI: RAD ignored

---

### XSD

```
<xs:simpleType name="AngleDimension">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="DEG" />  
    <xs:enumeration value="RAD" />  
    <xs:enumeration value="MM" />  
  </xs:restriction>  
</xs:simpleType>
```

### 2.4.3 BevelPosType

Used in

[Bevel](#)

---

#### Simple Type

**type:** string

**possible values:** AUTO  
FRONT  
BACK  
RELATION  
FRAMECURVATURE  
FRAMEBASE

**description:** AUTO: LagDe: Optimiert nach Fassungsscheibenwinkel und Basiskurve.  
Freilaufende Facette.

verlegen FRONT: unity = mm -> distance to front todo:Beschreibung nach Bevel

verlegen BACK: unity = mm -> distance to back. todo:Beschreibung nach Bevel

Glases. RELATED: unity = percente -> Prozentualer Abstand zur Frontseite des

FRAMECURVATURE: todo: Beschreibung folgt  
FRAMEBASE: todo: Beschreibung folgt

---

#### XSD

```
<xs:simpleType name="BevelPosType">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="AUTO"/>  
    <xs:enumeration value="FRONT"/>  
    <xs:enumeration value="BACK"/>  
    <xs:enumeration value="RELATION"/>  
    <xs:enumeration value="FRAMECURVATURE"/>  
    <xs:enumeration value="FRAMEBASE"/>  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.4 BevelTypes

Used in

[Bevel](#)

---

### Simple Type

**type:** string

**possible values:** BEVEL LngDe:-> Entspricht Spitzfacette  
FLAT  
GROOVED

**description:**

---

### XSD

```
<xs:simpleType name="BevelTypes">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="BEVEL"/>  
    <xs:enumeration value="FLAT"/>  
    <xs:enumeration value="GROOVED"/>  
  </xs:restriction>  
</xs:simpleType>
```

## 2.4.5 ChamferIntensity

Used in

[Edging](#)

---

### Simple Type

**type:** string

**possible values:** THIN  
MEDIUM  
LARGE

**description:**

---

### XSD

```
<xs:simpleType name="ChamferIntensity">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="THIN" />  
    <xs:enumeration value="MEDIUM" />  
    <xs:enumeration value="LARGE" />  
  </xs:restriction>  
</xs:simpleType>
```

---



## 2.4.6 ChamferPos

Used in

[Edging](#)

---

### Simple Type

**type:** string

**possible values:** BOTH  
FRONT  
BACK

**description:**

---

### XSD

```
<xs:simpleType name="ChamferPos">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="BOTH"/>  
    <xs:enumeration value="FRONT"/>  
    <xs:enumeration value="BACK"/>  
  </xs:restriction>  
</xs:simpleType>
```

## 2.4.7 CoatingTypes

Used in

[Coating](#)

---

### Simple Type

**type:** string

**possible values:** COLOR  
UV  
ANTIREFLEX  
HARD  
CLEAN  
OTHER

**description:**

---

### XSD

```
<xs:simpleType name="CoatingTypes">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="COLOR" />  
    <xs:enumeration value="UV" />  
    <xs:enumeration value="ANTIREFLEX" />  
    <xs:enumeration value="HARD" />  
    <xs:enumeration value="CLEAN" />  
    <xs:enumeration value="OTHER" />  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.8 EdgingType

Used in

[Edging](#)

---

### Simple Type

**type:** string

**possible values:** ROUGHING  
ONSHAPE  
GIVENFRAME  
ORDEREDFRAME

**description:** ROUGHING: LngDe: Vorschliff  
ONSHAPE: Mitgesendete Randungsdaten werden verwendet.  
GIVENFRAME: Fassung wird vom Kunden zur Verglasung eingeschickt  
ORDEREDFRME: Gläser werden mit Fassung zusammen bestellt (Fassung des Glasherstellers)

**info:** CZ, SEI, ROD: ROUGHING ignored.

---

### XSD

```
<xs:simpleType name="EdgingType">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="ROUGHING" />  
    <xs:enumeration value="ONSHAPE" />  
    <xs:enumeration value="GIVENFRAME" />  
    <xs:enumeration value="ORDEREDFRAME" />  
  </xs:restriction>  
</xs:simpleType>
```

## 2.4.9 FrameMaterials

Used in  
[Frame](#)

### Simple Type

**type:** string

**possible values:** METAL  
 PLASTIC  
 OPTYL  
 NYLOR  
 DRILLED  
 SPECIAL

**description:**

<b>info:</b>	SEI:	OPTYL:	Wird bei SEIKO nicht benutzt und auch nicht ausgewertet, da nichts anfangen können.
			die Randungsautomaten mit diesem Parameter
		SPECIAL	Wird für alle Sonderfassungen, die eine Sonderbehandlung wie spezielle Nutbreite, Nuttiefe oder spezielle Größenvorgaben erfordern verwendet.
			Hat (bei SEIKO) auch Auswirkungen auf die Preisermittlung für
	ROD	OPTYL: SPECIAL	Ignored Ignored
	CZ:	SPECIAL	LngDe: Wird für spezielles Material verwendet.
	Z.B. für Horn. In diesem Fall „tracerData“		wird der Wert „adjustion“, der jetzt direkt unter steht, berücksichtigt

### XSD

```
<xs:simpleType name="FrameMaterials">
  <xs:restriction base="xs:string">
    <xs:enumeration value="METAL"/>
    <xs:enumeration value="PLASTIC"/>
    <xs:enumeration value="OPTYL"/>
    <xs:enumeration value="NYLOR"/>
    <xs:enumeration value="DRILLED"/>
    <xs:enumeration value="SPECIAL"/>
  </xs:restriction>
</xs:simpleType>
```

## 2.4.10 Gender

Used in  
[Patient](#)

---

### Simple Type

**type:** string

**possible values:** male  
female

**description:**

---

### XSD

```
<xs:simpleType name="Gender">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="MALE" />  
    <xs:enumeration value="FEMALE" />  
  </xs:restriction>  
</xs:simpleType>
```

---

### 2.4.11 HeightReferences

Used in  
[Centration](#)

---

#### Simple Type

<b>type:</b>	string
<b>possible values:</b>	OVERBOX OVERSHAPE
<b>description:</b>	OVERBOX = Kastenmass OVERSHAPE = Messlinienverfahren
<b>info:</b>	SEI: OVERSHAPE not used

---

#### XSD

```
<xs:simpleType name="HeightReferences">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="OVERBOX" />  
    <xs:enumeration value="OVERSHAPE" />  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.12 MsgStates

Used in

[Header](#)

---

### Simple Type

**type:** string

**possible values:** NEW  
UPDATE  
CANCEL

**description:**

---

### XSD

```
<xs:simpleType name="MsgStates">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="NEW" />  
    <xs:enumeration value="UPDATE" />  
    <xs:enumeration value="CANCEL" />  
  </xs:restriction>  
</xs:simpleType>
```

---

### 2.4.13 MsgSteps

Used in  
[TimeStamps](#)

---

#### Simple Type

<b>type:</b>	string
<b>possible values:</b>	CREATE TRANSFER RECEIPT
<b>description:</b>	CREATE: LngDe: Zeitpunkt der Erzeugung der XML-Datei. TRANSFER: LngDe: Zeitpunkt der Übertragung der XML-Datei RECEIPT: LngDe: Empfangszeit der XML-Datei
<b>info:</b>	TRANSFER: Ignored by CZ RECEIPT: Ignored by CZ

---

#### XSD

```
<xs:simpleType name="MsgSteps">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="CREATE" />  
    <xs:enumeration value="TRANSFER" />  
    <xs:enumeration value="RECEIPT" />  
  </xs:restriction>  
</xs:simpleType>
```

---



## 2.4.14 MsgTypes

Used in  
[Header](#)

---

### Simple Type

<b>type:</b>	string
<b>possible values:</b>	ORDER REQUEST CALCULATION VALIDATION
<b>description:</b>	LngDe: ORDER =Bestellung/Auftrag LngDe: REQUEST =Statusabfrage eines gesendeten Auftrages LngDe: CALCULATION =Übertragung von Glasdaten zur Berechnug LngDe: VALIDATION = Abfrage ob Bestellung möglich ist.
<b>info:</b>	ROD: REQUEST, CALCULATION and VALIDATION are currently ignored.
	CZ: REQUEST, CALCULATION and VALIDATION are currently ignored.
	SEI: VALIDATION are currently ignored.

---

### XSD

```
<xs:simpleType name="MsgTypes">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="ORDER"/>  
    <xs:enumeration value="REQUEST"/>  
    <xs:enumeration value="CALCULATION"/>  
    <xs:enumeration value="VALIDATION"/>  
  </xs:restriction>  
</xs:simpleType>
```

### 2.4.15 OReferences

Used in  
[Centration](#)

---

#### Simple Type

**type:** string

**possible values:** FAR  
NEAR

**description:**

---

#### XSD

```
<xs:simpleType name="OReferences">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="FAR" />  
    <xs:enumeration value="NEAR" />  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.16 Roles

Used in  
[Header Item](#)

---

### Simple Type

<b>type:</b>	string
<b>possible values:</b>	ORIGINATOR SUPPLIER SHIPTO CARRIER INVOICETO PAIDBY MANUFACTURER
<b>description:</b>	ORIGINATOR LngDe: Erzeugt den Auftrag. SUPPLIER: LngDe: Lieferant SHIPTO: LngDe: Lieferadresse CARRIER: LngDe: Frachtunternehmer INVOICETO: LngDe: Rechnungsempfänger PAIDBY: LngDe: Gezahlt von. MANUFACTURER: LngDe: Hersteller
<b>info:</b>	ROD: SUPPLIER,CARRIER, INVOICETO, PAIDBY, MANUFACTURER are currently ignored
	CZ: SUPPLIER,CARRIER, PAIDBY, MANUFACTURER are currently ignored
	CZ: SUPPLIER,CARRIER, INVOICETO, PAIDBY, MANUFACTURER are currently ignored

---

### XSD

```
<xs:simpleType name="Roles">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ORIGINATOR" />
    <xs:enumeration value="SUPPLIER" />
    <xs:enumeration value="SHIPTO" />
    <xs:enumeration value="CARRIER" />
    <xs:enumeration value="INVOICETO" />
    <xs:enumeration value="PAIDBY" />
    <xs:enumeration value="MANUFACTURER" />
  </xs:restriction>
</xs:simpleType>
```

### 2.4.17 Sides

Used in

[Bevel Frame](#) [IProfilerResult](#) [Item](#) [Lens](#)

---

#### Simple Type

**type:** string

**possible values:** RIGHT  
LEFT  
UNDEFINED

**description:**

**info:** SEI: UNDEFINED not used

---

#### XSD

```
<xs:simpleType name="Sides">
  <xs:restriction base="xs:string">
    <xs:enumeration value="RIGHT"/>
    <xs:enumeration value="LEFT"/>
    <xs:enumeration value="UNDEFINED"/>
  </xs:restriction>
</xs:simpleType>
```

---

## 2.4.18 SidesSimple

Used in  
[Frame](#)

---

### Simple Type

**type:** string

**possible values:** RIGHT  
LEFT

**description:**

**info:**

---

### XSD

```
<xs:simpleType name="Sides">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="RIGHT"/>  
    <xs:enumeration value="LEFT"/>  
  </xs:restriction>  
</xs:simpleType>
```

## 2.4.19 SoftwareTypes

Used in

[Software](#)

---

### Simple Type

**type:** string

**possible values:** ORIGINATOR  
VERIFIER  
SENDER

**description:** ORIGINATOR: LngDe: Erzeuger der XML  
VERIFIER: LngDe: Prüfsoftware  
SENDER: LngDe: Sender der XML

---

### XSD

```
<xs:simpleType name="SoftwareTypes">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="ORIGINATOR" />  
    <xs:enumeration value="VERIFIER" />  
    <xs:enumeration value="SENDER" />  
  </xs:restriction>  
</xs:simpleType>
```

---

## 2.4.20 ThicknessReferences

Used in  
[GeometryType](#)

---

### Simple Type

<b>type:</b>	string
<b>possible values:</b>	REDUCEWITHSHAPE CENTER EDGE DRILLHOLE
<b>description:</b>	REDUCEWITHSHAPE = MDM CENTER = Mindestmittendicke EDGE = Mindestranddicke DRILLHOLE = Mindestdicke am Bohrloch

---

### XSD

```
<xs:simpleType name="ThicknessReferences">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="REDUCEWITHSHAPE"/>  
    <xs:enumeration value="CENTER"/>  
    <xs:enumeration value="EDGE"/>  
    <xs:enumeration value="DRILLHOLE"/>  
  </xs:restriction>  
</xs:simpleType>
```

## 2.4.21 TracerBinaryFormat

Used in  
[TracerData](#)

### Simple Type

**type:** string

**possible values:** DLL Briot  
 DVI  
 GT3000  
 MO1  
 NIDEK  
 OMA3.02  
 PHI  
 T4  
 WECO

**description:**

**additional info:**

Brand	Model	Description	Interface	AdditionalInfos
BRIOT	SCANNET	Scannet 2 Shapes Reader	OMA 3,02	512 radius, with z values
ESSILOR	PHI	Essilor Phi Shapes Reader	PHI	400 radius, with 200 z values
		Essilor Phi Shapes Reader	OMA 3,02	512 radius, with z values
	KAPPA	Essilor Kappa Tracer and Blocker	PHI	400 radius, with 200 z values
		Essilor Kappa Tracer and Blocker	OMA 3,02	512 radius, with 512 z values
WECO	Trace 1/2	Old Weco Tracer	DVI?	512 Radius
		Old Weco Tracer	Nidek	1000 Radius
HOYA	GT1000	Hoya GT1000	GT3000	500 radius
			OMA 3,02	512 radius, z values has to be clarified
HOYA	GT3000	Hoya GT3000	GT3000	500 radius
			OMA 3,02	512 radius, z values has to be clarified
NIDEK	LT 900SX	LT 900 SX Shapes Reader	Nidek	1000 Radius
SCHOENE	INDO	Schoene INDO Shapes Reader	Nidek	1000 Radius



Priority	Brand	Model	Description	Interface	Information	Implemented
3	BRIOT	SCANFROM	Scanform 1 Shapes Reader	DLL BRIOT	1024 radius	no
1	BRIOT	AXCEL	Blocker with Tracer	OMA 3,02	512 radius, with 512 z values	no
3	OPTRONIC	T4	Optronics T4 Shapes Reader	T4	400 radius, with 400 z values	no
1	WECO	TRACER 3	Weco Tracer 3 Shapes Reader	OMA 3,02	512 radius, with 512 z values	no
1	WECO	CAD 5	Blocker with Tracer from WECO	OMA 3,02	512 radius, with 512 z values	no
1	NIDEK	SX 9000	SX 9000 Edger	DVI	500 Radius	no
3	NIDEK	SX 7070	SX 7070 Edger	DVI	500 Radius	no
1	NIDEK	LT 900 SX	LT 900 SX Shapes Reader	DVI	500 Radius	no
3	NIDEK	LT 700 SX	LT 700 SX Shapes Reader	DVI	500 Radius	no
1	NIDEK	LT 900 SX VCA	LT 900 SX VCA Shapes Reader	OMA 3,02	1000 Radius	no
1	R.O.M.	PIETRO	FBK	NIDEK	1000 Radius	no

## XSD

```

<xs:simpleType name="TracerBinaryFormat">
  <xs:restriction base="xs:string">
    <xs:enumeration value="DLL BRIOT" />
    <xs:enumeration value="DVI" />
    <xs:enumeration value="GT3000" />
    <xs:enumeration value="MO1" />
    <xs:enumeration value="NIDEK" />
    <xs:enumeration value="OMA3.02" />
    <xs:enumeration value="PHI" />
    <xs:enumeration value="T4" />
    <xs:enumeration value="WECO" />
  </xs:restriction>
</xs:simpleType>

```

## 2.4.22 TracerType

Used in  
[TracerData](#)

---

### Simple Type

**type:** string

**possible values:**

Hoya 3DFT  
Hoya GT1000  
Hoya GT3000  
Hoya GT3000 OMA  
Hoya UT1000  
Essilor Gamma  
Essilor PHI PCCOM  
Essilor PHI OMA  
Essilor Kappa PCCOM  
Essilor Kappa OMA  
National Optronics 4T  
Briot ScanfomNet I  
Briot ScanfomNet II  
Weco 3DFT+  
Weco Trace II  
Weco Trace III  
Nidek LT700  
Nidek LT900  
Nidek LT900 OMA  
Nidek LT1000  
Indo NDK  
Indo OMA  
Topcon FR50  
Takubomatic FD80  
Unknown

**description:**

---

### XSD

```
<xs:simpleType name="TracerType">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Hoya 3DFT" />  
    <xs:enumeration value="Hoya GT1000" />  
    <xs:enumeration value="Hoya GT3000" />  
    <xs:enumeration value="Hoya GT3000 OMA" />  
    <xs:enumeration value="Hoya UT1000" />  
    <xs:enumeration value="Essilor Gamma" />  
    <xs:enumeration value="Essilor PHI PCCOM" />  
    <xs:enumeration value="Essilor PHI OMA" />  
    <xs:enumeration value="Essilor Kappa PCCOM" />  
    <xs:enumeration value="Essilor Kappa OMA" />  
    <xs:enumeration value="National Optronics 4T" />  
  </xs:restriction>  
</xs:simpleType>
```

---

```
<xs:enumeration value="Briot ScanfomNet I" />
<xs:enumeration value="Briot ScanfomNet II" />
<xs:enumeration value="Weco 3DFT+" />
<xs:enumeration value="Weco Trace II" />
<xs:enumeration value="Weco Trace III" />
<xs:enumeration value="Nidek LT700" />
<xs:enumeration value="Nidek LT900" />
<xs:enumeration value="Nidek LT900 OMA" />
<xs:enumeration value="Nidek LT1000" />
<xs:enumeration value="Indo NDK" />
<xs:enumeration value="Indo OMA" />
<xs:enumeration value="Topcon FR50" />
<xs:enumeration value="Takubomatic FD80" />
<xs:enumeration value="Unknown" />
</xs:restriction>
</xs:simpleType>
```

## 2.5 Complex Types

complex types

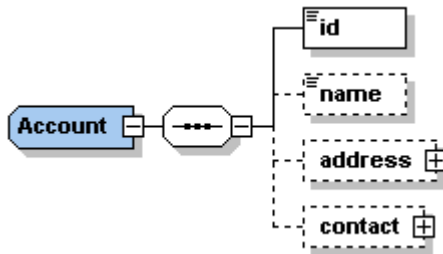
[Account](#)  
[Address](#)  
[Bevel](#)  
[Centration](#)  
[Coating](#)  
[ContactInfo](#)  
[CPoint](#)  
[Curve](#)  
[Cylinder](#)  
[Cylinder](#)  
[Decentration](#)  
[Diameter](#)  
[DrillHoles](#)  
[Edging](#)  
[Frame](#)  
[FrameSize](#)  
[GeometryType](#)  
[Header](#)  
[IProfilerData](#)  
[IProfilerMap](#)  
[IProfilerResult](#)  
[Item](#)  
[Lens](#)  
[Pair](#)  
[Patient](#)  
[PPoint](#)  
[Prism](#)  
[ProductCatalog](#)  
[RXDataType](#)  
[RXDataType4SL](#)  
[Shape](#)  
[Software](#)  
[StockLens](#)  
[TimeStamps](#)  
[TracerData](#)  
[Zernikes](#)  
[Zernikes7](#)  
[Zernikes8](#)  
[Zernikes9](#)  
[Zernikes10](#)  
[Zernikes11](#)  
[Zernikes12](#)

---

## 2.5.1 Account

Used in

[Header Item Pair](#)



### Elemente

#### id

**type:** string

**attribute:** memberShipID (Type long, default=1)

**occurs:** 1

**description:** (LngDe) Kundennummer

**info:** (LngDe) CZ: memberShipID -> Zusatz zur Kundennummer bei Zeiss. Standard "Zeiss" verwenden.

Wird verwendet um die Kundennummern von Zeiss, Sola und AO beizubehalten.

1=Zeiss

2=Sola

3=AO

#### name

**type:** string

**occurs:** 0..1

**description:**

**info:** CZ: ignored

#### adress

**type:** [Address](#)

**occurs:** 0..1

**description:**

**info:** CZ: ignored

#### contact

**type:** [ContactInfo](#)

**occurs:** 0..1

**description:**

**info:** CZ: ignored

### XSD

```
<xs:complexType name="Account">
```

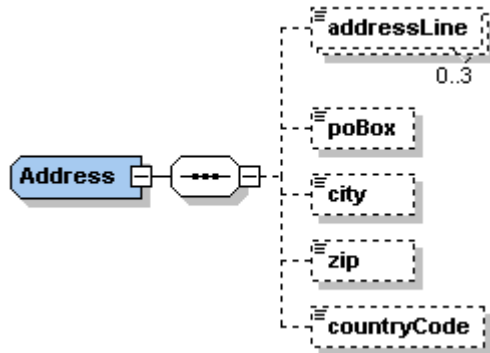
```
<xs:sequence>
  <xs:element name="id">
    <xs:complexType>
      <xs:simpleContent>
        <xs:extension base="xs:string">
          <xs:attribute name="memberShipID" type="xs:long"
use="optional" default="1"/>
        </xs:extension>
      </xs:simpleContent>
    </xs:complexType>
  </xs:element>
  <xs:element name="name" type="xs:string" minOccurs="0"/>
  <xs:element name="address" type="Address" minOccurs="0"/>
  <xs:element name="contact" type="ContactInfo" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
```



## 2.5.2 Address

Used in

[Account](#)



### Elemente

#### addressLine

type: string

occurs: 0..3

description:

#### poBox

type: string

occurs: 0..1

description:

#### city

type: string

occurs: 0..1

description:

#### zip

type: string

occurs: 0..1

description:

#### countryCode

type: string

occurs: 0..1

description:

### XSD

```
<xs:complexType name="Address">
  <xs:sequence>
    <xs:element name="addressLine" type="xs:string" minOccurs="0" maxOccurs="3" />
    <xs:element name="poBox" type="xs:string" minOccurs="0" />
  
```



---

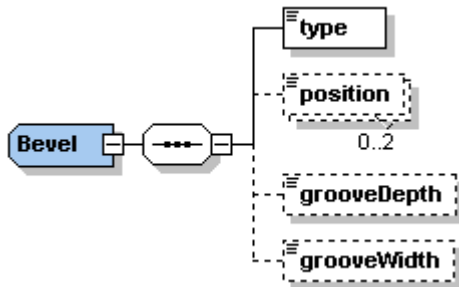
```
<xs:element name="city" type="xs:string" minOccurs="0"/>
<xs:element name="zip" type="xs:string" minOccurs="0"/>
<xs:element name="countryCode" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
```

---



### 2.5.3 Bevel

Used in  
[Edging](#)



#### Elemente

##### type

type: [BevelTypes](#)  
occurs: 1  
description:

##### position

type: float  
unity: mm / % / dpt  
attribute: posType ([BevelPosType](#))  
attribute: side ([Sides](#))  
occurs: 0..2  
description:  
info: SEI: FRONT/BACK: Werte von 0,1mm bis 2,00 mm  
SEI: RELATED: Werte von 30% bis 70%

##### grooveDepth

type: float  
unity: mm  
occurs: 0..1  
description:  
info: CZ: ignored

##### grooveWidth

type: float  
unity: mm  
occurs: 0..1  
description:  
info: CZ: (LngDe) Rillen Normal 0,6 Rillen Breit 1,2

#### XSD

```

<xs:complexType name="Bevel">
  <xs:sequence>
    <xs:element name="type" type="BevelTypes"/>
    <xs:element name="position" minOccurs="0" maxOccurs="2">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:float">
            <xs:attribute name="posType" type="BevelPosType
" use="optional" default="AUTO"/>
            <xs:attribute name="side" type="Sides" use="
optional"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="grooveDepth" type="xs:float" minOccurs="0"/>
    <xs:element name="grooveWidth" type="xs:float" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

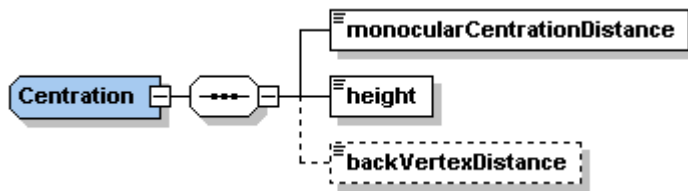
```



## 2.5.4 Centration

Used in

[Lens](#)



### Elemente

#### monocularCentrationDistance

**type:** float

**unity:** mm

**attribute:** reference ([OCReferences](#))

**occurs:** 1

**description:** monokularer Zentrierabstand Dies entspricht dem Wert z der Zentrierdaten in der folgenden Graphik Rechts / Links wird über „lens“ Attribut „side“ gesteuert. Über das Attribut „reference“ wird der Bezug des monokularen Zentrierabstands festgelegt.

Bei „FAR“ bezieht er sich auf den Fernbezugspunkt P(R/L), bei NEAR auf den Nahbezugspunkt N(R/L).

**info:** CZ: Attribut reference: Currently only FAR supported, NEAR will be ignored!

#### height

**type:** float

**unity:** mm

**attribute:** reference ([OCReferences](#))

**attribute:** referenceHeight ([HeightReferences](#))

**occurs:** 1

**description:** Höhe des Fernbezugspunkt Y(R/L) oder Nahteilhöhe „Height“ ist doppeldeutig und die Bedeutung wird über das zugehörige Attribut „reference“ gesteuert.

Attribut reference:

FAR: in „height“ steht die Höhe des Fernbezugspunktes, in der Zeichnung oben als Y(R/L) zu sehen. Dies ist bei Einstärken- und Gleitsichtgläsern der Fall.

NEAR: in „height“ steht die Nahteilhöhe, in der Zeichnung unten als hL zu sehen. Bei Bifo/Trifoggläsern wird in der Regel statt der Höhe des Fernbezugspunktes die Nahteilhöhe vom gefordert.

Attribut referenceHeight: Werte: „OVERBOX“ und „OVERSHAPE“.

Bei „OVERBOX“ wird die Höhe von der Box aus gemessen, wie beide Zeichnungen zeigen.

Bei „OVERSHAPE“ wird die Höhe von der Fassung aus gemessen (Messliniensystem) und

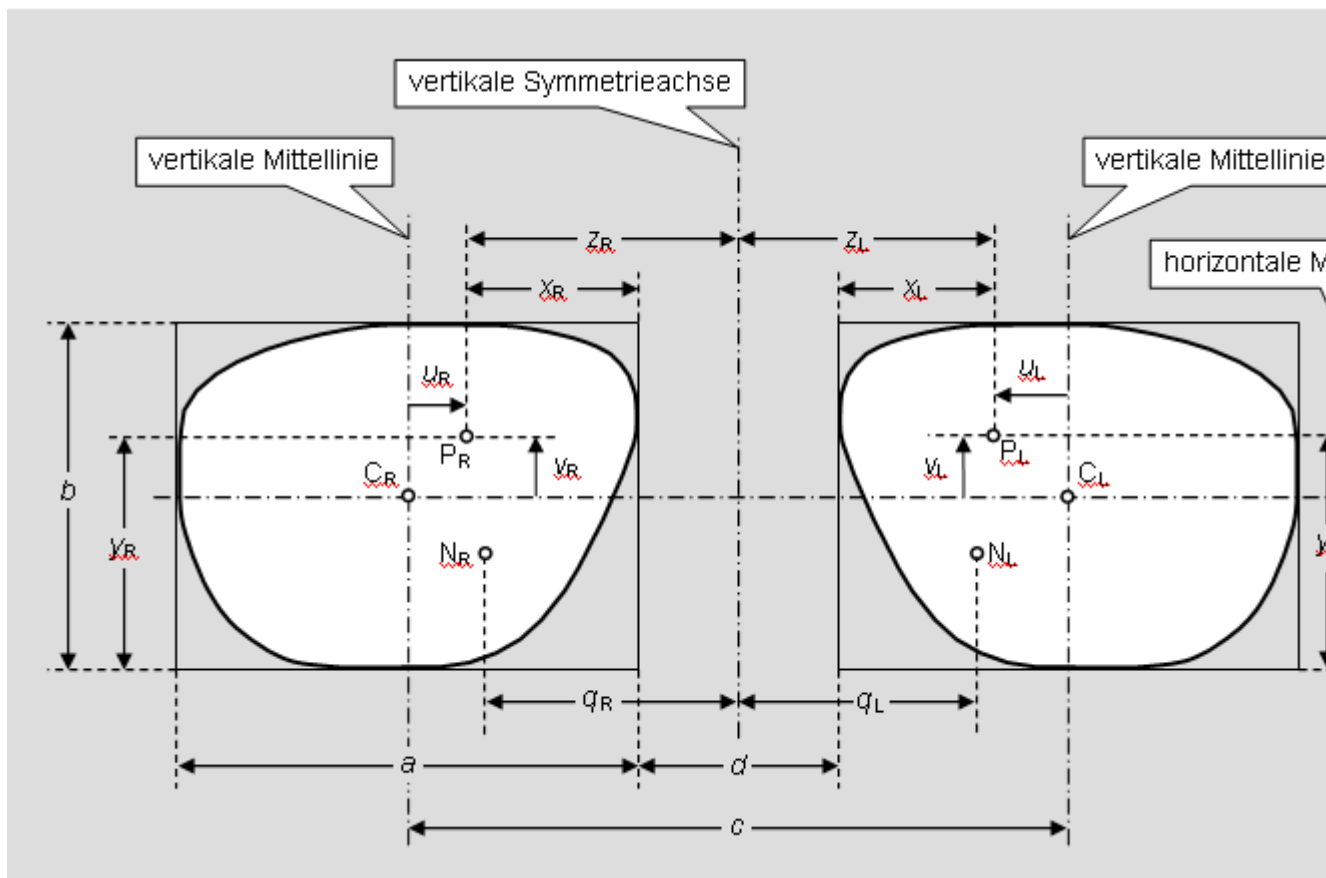
zwar bei Einstärken- und Gleitsichtgläsern von der Stelle an der die Senkrechte durch

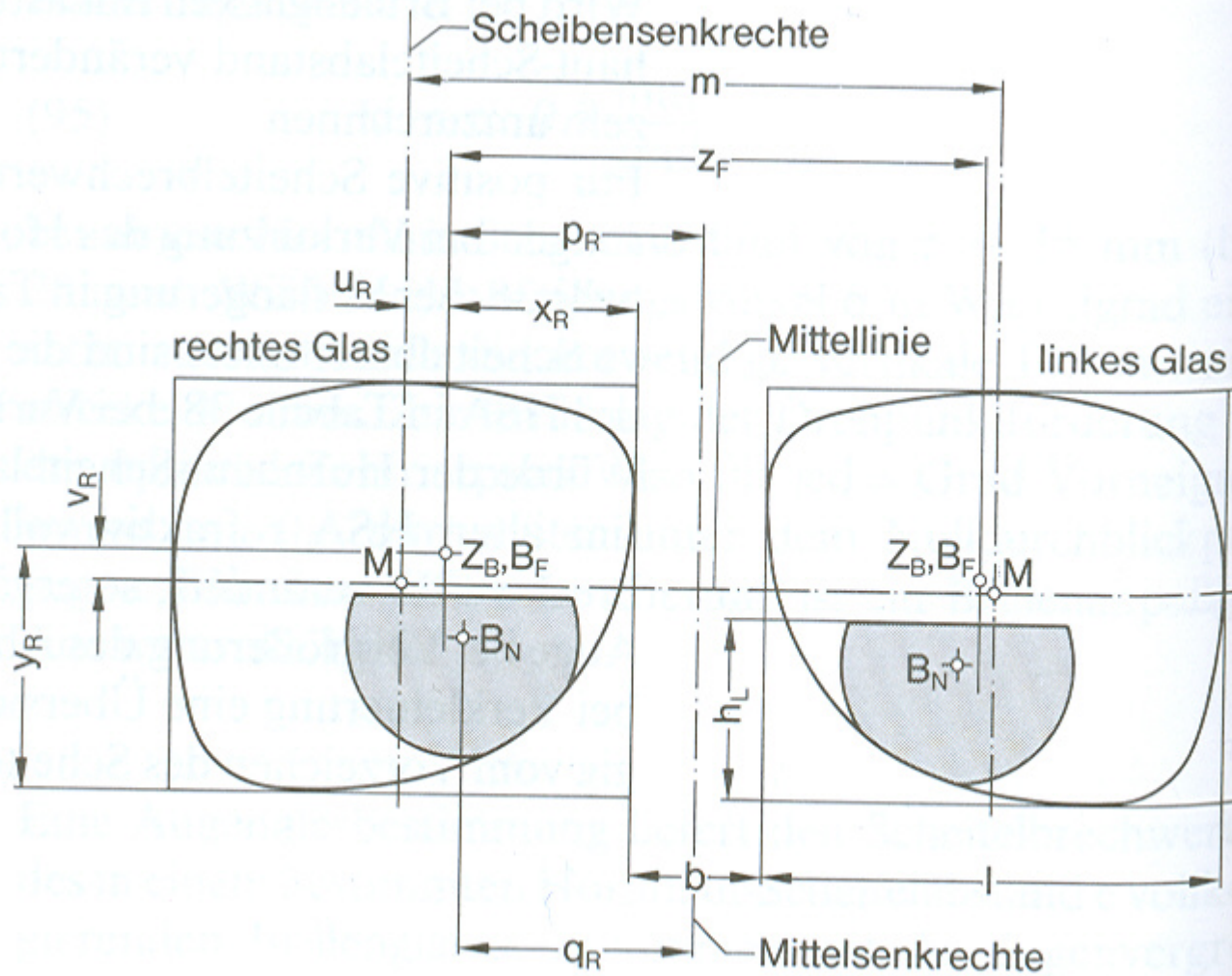
Senkrechte durch den Fernbezugspunkt die Fassung kreuzt und bei Bifo- Trifgläsern wo die durch die Mitte des Nahtteils bzw. durch den höchsten Punkt des Nahtteils die Fassung kreuzt.

**info:** CZ: Attribut reference: FAR -> Y Near -> H

### backVertexDistance

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Hornhautscheitelabstand





## XSD

```

<xs:complexType name="Centration">
  <xs:sequence>
    <xs:element name="monocularCentrationDistance">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:float">
            <xs:attribute name="reference" type="
  OReferences" use="required"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="height">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:float">

```



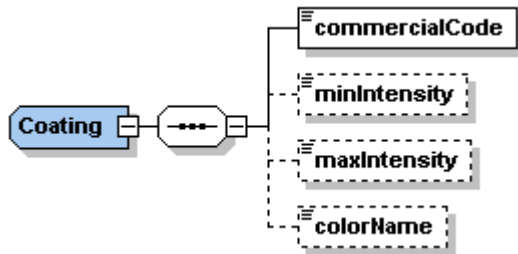
```
OCReferences" use="required" />
HeightReferences" use="required" />
</xs:extension>
</xs:simpleContent>
</xs:complexType>
</xs:element>
<xs:element name="backVertexDistance" minOccurs="0">
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float" />
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
```



## 2.5.5 Coating

Used in

[Lens](#) [StockLens](#)



### Attribute

#### coatingType

**type:** CoatingTypes

**use:** required

**description:**

**info:** LngDe:

- Verwendet wird mindestens COLOR bei Farben, für alles andere OTHER.
- Werden die Daten doch ausgefüllt legt man bei Mehrschichten folgende Priorität fest: ANTIREFLEX, COLOR, HARD, CLEAN, UV, OTHER .

### Elemente

#### commercialCode

**type:** string

**occurs:** 1

**description:**

#### minIntensity

**type:** integer

**unity:** percentage

**occurs:** 0..1

**description:** Minimum color intensity for tinting as a percentage

**info:** CZ: ignored

#### maxIntensity

**type:** integer

**unity:** percentage

**occurs:** 0..1

**description:** Maximum color intensity for tinting as a percentage

**info:** CZ: ignored

#### colorName

**type:** String

**occurs:** 0..1  
**description:** LngDe: Beschreibende Bezeichnung einer Farbe. Nur gültig in Verbindung des entsprechenden EDV-Codes für Freie Farbe des Herstellers.  
**info:** CZ: ignored

---

XSD

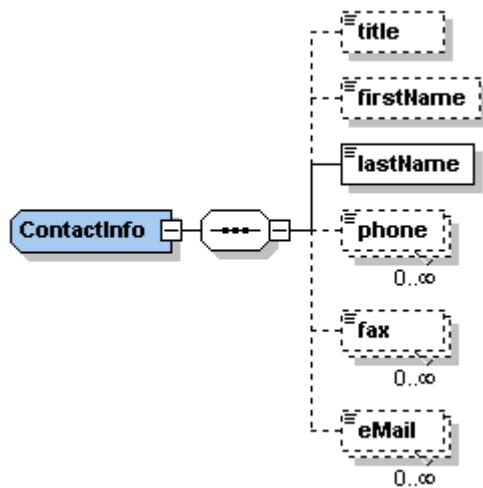
.

---

## 2.5.6 ContactInfo

Used in

[Account](#)



### Elemente

#### title

type: string

occurs: 0..1

description:

#### firstName

type: string

occurs: 0..1

description:

#### lastName

type: string

use: required

occurs: 1

description:

#### phone

type: string

occurs: 0..n

description:

#### fax

type: string

occurs: 0..n

description:

#### eMail

type: string

**occurs:** 0..n  
**description:**

---

## XSD

```
<xs:complexType name="ContactInfo">
  <xs:sequence>
    <xs:element name="title" type="xs:string" minOccurs="0" />
    <xs:element name="firstName" type="xs:string" minOccurs="0" />
    <xs:element name="lastName" type="xs:string" />
    <xs:element name="phone" type="xs:string" minOccurs="0" maxOccurs="unbounded" />
  </xs:sequence>
  <xs:element name="fax" type="xs:string" minOccurs="0" maxOccurs="unbounded" />
  <xs:element name="eMail" type="xs:string" minOccurs="0" maxOccurs="unbounded" />
</xs:complexType>
```

---

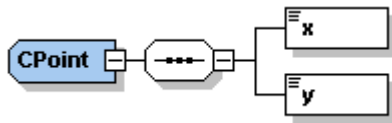


## 2.5.7 CPoint

Used in

[Shape](#)

---



### Elemente

#### x

**type:** float

**unity:** mm

**occurs:** 1

**description:**

#### y

**type:** float

**unity:** mm

**occurs:** 1

**description:**

---

### XSD

```
<xs:complexType name="CPoint">
  <xs:sequence>
    <xs:element name="x" type="xs:float"/>
    <xs:element name="y" type="xs:float"/>
  </xs:sequence>
</xs:complexType>
```

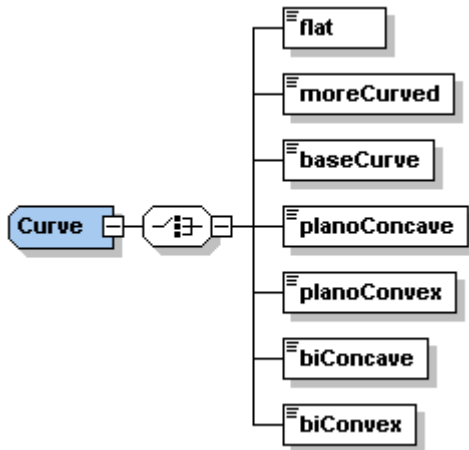
---





## 2.5.8 Curve

Used in  
[GeometryType](#)



### Elemente

#### flat

**type:** boolean  
**occurs:** 1  
**description:** nächste flachere Basiskurve verwenden

#### moreCurved

**type:** boolean  
**occurs:** 1  
**description:** nächste gebogenere Basiskurve verwenden  
**info:** CZ: ignored

#### baseCurve

**type:** float  
**unity:** dpt  
**occurs:** 1  
**description:** LngDE: Basiskurve  
**info:** CZ: ignored

#### planoConcave

**type:** boolean  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

#### planoConvex

**type:** boolean  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

**biConcave**

**type:** boolean  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

**biConvex**

**type:** boolean  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

---

**XSD**

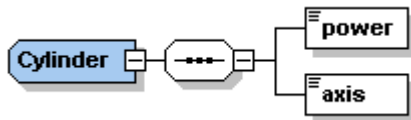
```
<xs:complexType name="Curve">  
  <xs:choice>  
    <xs:element name="flat" type="xs:boolean" />  
    <xs:element name="moreCurved" type="xs:boolean" />  
    <xs:element name="baseCurve" type="xs:float" />  
    <xs:element name="planoConcave" type="xs:boolean" />  
    <xs:element name="planoConvex" type="xs:boolean" />  
    <xs:element name="biConcave" type="xs:boolean" />  
    <xs:element name="biConvex" type="xs:boolean" />  
  </xs:choice>  
</xs:complexType>
```



## 2.5.9 Cylinder

Used in

[RefractionSimple](#) [RXDataType](#) [RXDataType4SL](#)



### Elemente

#### power

**type:** float  
**unity:** dpt  
**occurs:** 1  
**description:**

#### axis

**type:** float  
**unity:** degree  
**minValue:** 0.0  
**maxValue:** 360.0  
**occurs:** 1  
**description:** Bis zur Version 1.2.3 war der Name des Feldes "base"

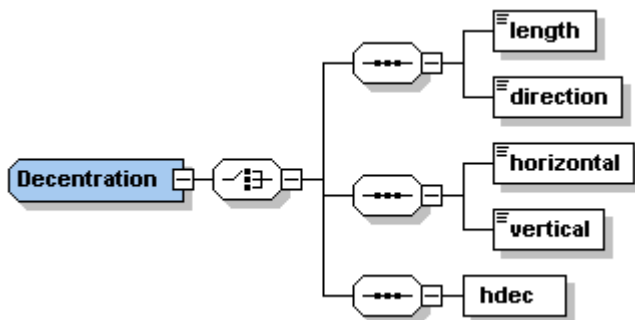
### XSD

```
<xs:complexType name="Cylinder">
  <xs:sequence>
    <xs:element name="power" type="xs:float" />
    <xs:element name="axis">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.0" />
          <xs:maxInclusive value="360.0" />
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```



## 2.5.10 Decentration

Used in  
[GeometryType](#)



### Elemente

#### length

**type:** float  
**unity:** mm  
**min Value:** 0.1  
**max Value:** 40.0  
**occurs:** 1  
**description:** Länge des Verschiebevektors bei Polarkoordinaten

#### direction

**type:** integer  
**unity:** degree  
**min Value:** 0  
**max Value:** 360  
**occurs:** 1  
**description:** Richtung der Verschiebung bei Polarkoordinaten

#### horizontal

**type:** float  
**unity:** mm  
**occurs:** 1  
**description:** LngDe: horizontale Verschiebung bei kartesischen Koordinaten. positive Werte dezentrieren nach innen (Richtung nasal)  
**info:** CZ, ROD: currently ignored - use length - direction instead!

#### vertical

**type:** float  
**unity:** mm  
**occurs:** 1  
**description:** Lng:De vertikale Verschiebung bei kartesischen Koordinaten. positive Werte dezentrieren nach oben  
**info:** CZ, ROD,SEI: currently ignored - use length - direction instead!

#### hdec

**type:** float

<b>unity:</b>	mm
<b>occurs:</b>	1
<b>description:</b>	LngDe: horizontaler Versatz des Durchblickpunktes oder anders ausgedrückt Erhöhung ausnutzbarer Durchmesser Dieses Feld mit dem Namen "horizontal decentration centring point" (HDEC) wird hauptsächlich bei Sport und
	freesign Gläsern angewandt zur Erhöhung des ausnutzbaren Durchmessers. Da es nur horizontal wirkt, ist keine Richtungsangabe notwendig, plus Werte dezentrieren nach innen (nasal).
<b>info:</b>	currently used only by ROD, SEI

---

## XSD

```

<xs:complexType name="Decentration">
  <xs:choice>
    <xs:sequence>
      <xs:element name="length">
        <xs:simpleType>
          <xs:restriction base="xs:float">
            <xs:minInclusive value="0.1"/>
            <xs:maxInclusive value="40.0"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="direction">
        <xs:simpleType>
          <xs:restriction base="xs:integer">
            <xs:minInclusive value="0.0"/>
            <xs:maxInclusive value="360.0"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="horizontal" type="xs:float"/>
      <xs:element name="vertical" type="xs:float"/>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="hdec" type="xs:float"/>
    </xs:sequence>
  </xs:choice>
</xs:complexType>

```

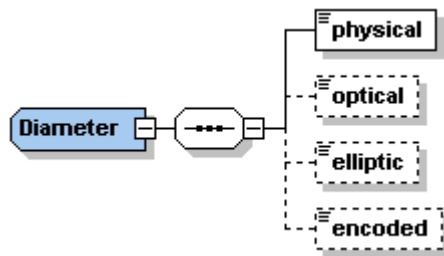
---



## 2.5.11 Diameter

Used in

[StockLens GeometryType](#)



### Elemente

#### physical

type: integer

unity: mm

min Value: 1

max Value: 99

occurs: 1

description:

info: Bei vordezentrierten Gläsern der physikalsche (kleinere) Durchmesser

#### optical

type: integer

unity: mm

min Value: 1

max Value: 99

occurs: 0..1

description:

info: Bei vordezentrierten Gläsern der optisch wirksame (größere) Durchmesser

#### elliptic

type: boolean

occurs: 0..1

description:

info:

#### encoded

type: string

occurs: 0..1

description:

info:

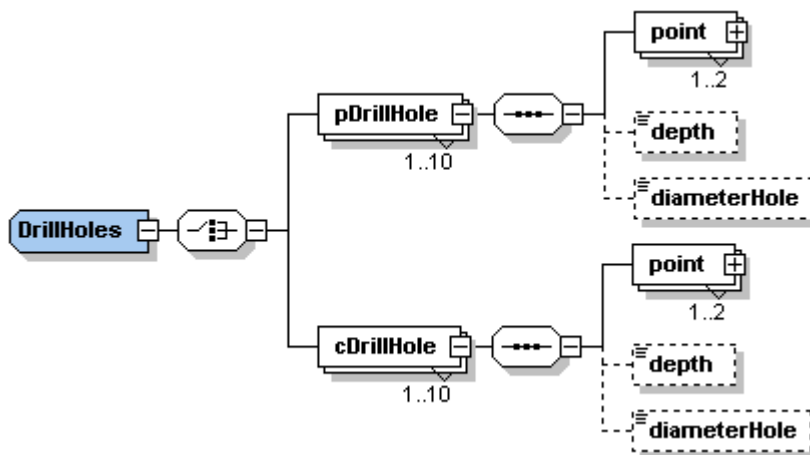
### XSD

```
<xs:complexType name="Diameter">
  <xs:sequence>
```

```
<xs:element name="physical">
  <xs:simpleType>
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="99"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="optical" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="99"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="elliptic" type="xs:boolean" default="false" minOccurs="0"/>
<xs:element name="encoded" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
```

## 2.5.12 DrillHoles

Used in  
[Frame](#)



### Elemente

#### pDrillHole

**type:** complex  
**occurs:** 1..10  
**description:**  
**info:** CZ: ignored - use cDrillHole instead

#### Elemente für pDrillHole

##### point

**type:** [PPoint](#)  
**occurs:** 1..2  
**description:**

##### depth

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

##### diameterHole

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

**cDrillHole**

**type:** complex  
**occurs:** 1..10  
**description:**

**Elemente für cDrillHole****point**

**type:** [CPoint](#)  
**occurs:** 1..2  
**description:**

**depth**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

**diameterHole**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

**XSD**

```

<xs:complexType name="DrillHoles">
  <xs:choice>
    <xs:element name="pDrillHole" maxOccurs="10">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="point" type="PPoint" maxOccurs="2"/>
          <xs:element name="depth" type="xs:float" minOccurs="0"
            <xs:element name="diameterHole" type="xs:float"
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    <xs:element name="cDrillHole" maxOccurs="10">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="point" type="CPoint" maxOccurs="2"
            <xs:element name="depth" type="xs:float" minOccurs="0"
            <xs:element name="diameterHole" type="xs:float"
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:choice>
  </xs:complexType>

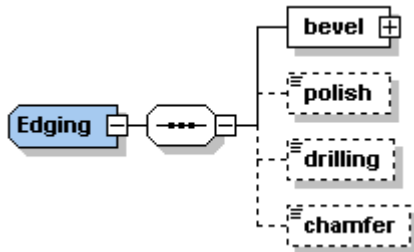
```



### 2.5.13 Edging

Used in

[Pair](#)



Attribute

#### edgingType

type: [EdgingType](#)  
 use: required  
 description:  
 info:

Elemente

#### bevel

type: [Bevel](#)  
 occurs: 1  
 description:

#### drilling

type: boolean  
 occurs: 0..1  
 description: in value=true then "/Frame/drillHoles" is used for drilling. Otherwise "/Frame/drillHoles" is just for information.

#### polish

type: boolean  
 occurs: 0..1  
 description:

#### chamfer

type: [ChamferIntensity](#)  
 attribut: position (simpletype [ChamferPos](#))  
 occurs: 0..1  
 description:  
 info: CZ: ignored

---

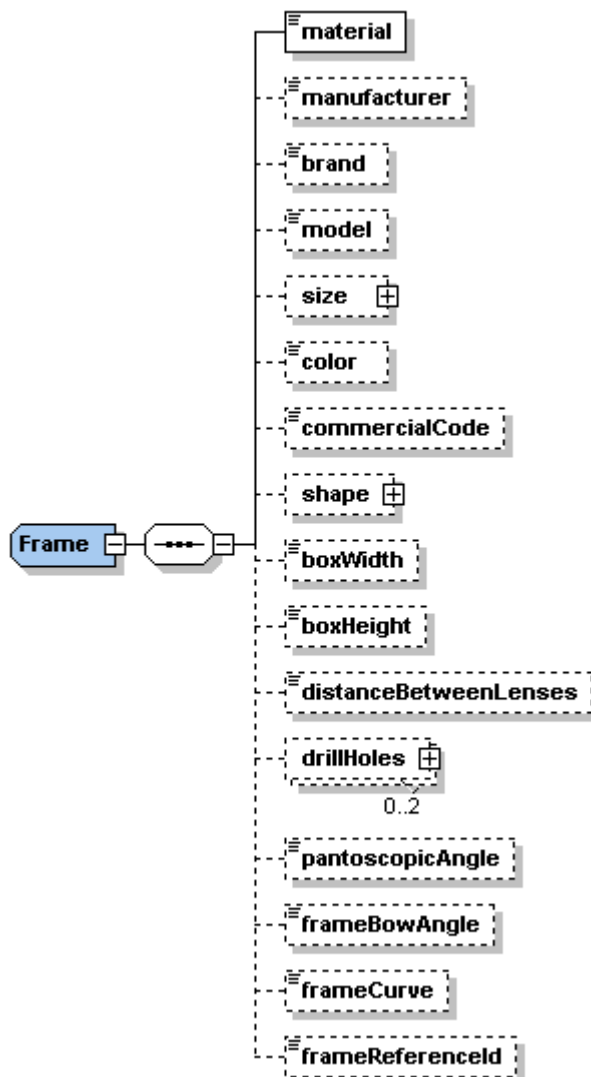
XSD

---

## 2.5.14 Frame

Used in

[Pair](#)



### Attribute

#### quantity

type: integer  
 use: required  
 description:

### Elemente

#### material

type: [FrameMaterials](#)



**occurs:** 1  
**description:**  
**info:** CZ: currently recognized: METAL, PLASTIC, NYLOR, SPECIAL

### **manufacturer**

**type:** string  
**occurs:** 0..1  
**description:**

### **brand**

**type:** string  
**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### **model**

**type:** string  
**occurs:** 0..1  
**description:**

### **size**

**type:** [FrameSize](#)  
**occurs:** 0..1  
**description:** Nominal size information as given from frame manufacturer  
**info:** CZ: currently ignored - use size elements under shape!

### **color**

**type:** string  
**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### **commercialCode**

**type:** string  
**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### **shape**

**type:** complex  
**occurs:** 0..1  
**description:**

### **Elemente für shape**

#### **catalog**

**type:**  
**occurs:** 1..2  
**description:** for thicknessreduction  
**Info:** CZ: ignored

### **Elemente für catalog**

**shapeld**

**type:** string  
**occurs:** 1  
**description:**

**explicit**

**type:** [Shape](#)  
**attribute:** side ([SidesSimple](#))  
**occurs:** 1..2  
**description:**

**traceData**

**type:** [TracerData](#)  
**occurs:** 1..2  
**description:** necessary for remoteEdging/Presize

**boxWidth**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** measured box width for size transformations

**boxHeight**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** measured box height for size transformations

**DistanceBetweenLenses**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** measured dbl for calculation purposes

**drillHoles**

**type:** [DrillHoles](#)  
**attribute:** side ([Sides](#))  
**occurs:** 0..2  
**description:**  
**info:** CZ: If attribute side is UNDEFINED and drillHoles occurs only once the drillhole values are mirrored from right to left side  
  
SEI: ignored

**pantoscopicAngle**

**type:** float  
**attribute:** dimension ([AngleDimension](#))  
**occurs:** 0..1  
**description:** LngDE: Fassungsverneigung  
**info:** ROD:possible value for AngleDimension: MM and DEG

**frameBowAngle**

**type:** float  
**attribute:** dimension ([AngleDimension](#))

---

**occurs:** 0..1  
**description:** LangDe: Fassungsscheibenwinkel  
**info:**

### frameCurve

**type:** float  
**unity:** dpt  
**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### frameReferenceld

**type:** string  
**occurs:** 0..1  
**description:** todo:Beschreibung  
**info:**

---

## XSD

```

<xs:complexType name="Frame">
  <xs:sequence>
    <xs:element name="material" type="FrameMaterials" />
    <xs:element name="manufacturer" type="xs:string" minOccurs="0" />
    <xs:element name="brand" type="xs:string" minOccurs="0" />
    <xs:element name="model" type="xs:string" minOccurs="0" />
    <xs:element name="size" type="FrameSize" minOccurs="0" />
    <xs:element name="color" type="xs:string" minOccurs="0" />
    <xs:element name="commercialCode" type="xs:string" minOccurs="0" />
    <xs:element name="shape" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:choice>
            <xs:element name="catalog">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="
shapeld" type="xs:string" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
            <xs:element name="explicit" maxOccurs="2">
              <xs:complexType>
                <xs:complexContent>
                  <xs:extension base="
Shape">
                    <xs:attribute
name="side" type="SidesSimple" use="required" />
                  </xs:extension>
                </xs:complexContent>
              </xs:complexType>
            </xs:element>
            <xs:element name="tracerData" type="TracerData
"/>
          </xs:choice>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

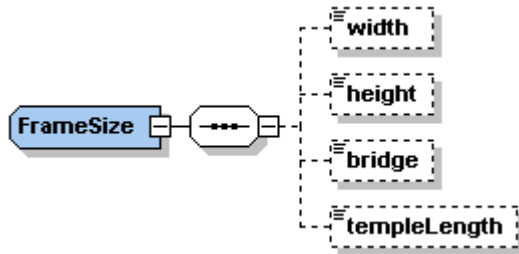
</xs:element>
<xs:element name="boxWidth" type="xs:float" minOccurs="0" />
<xs:element name="boxHeight" type="xs:float" minOccurs="0" />
<xs:element name="distanceBetweenLenses" type="xs:float" minOccurs="0" />
<xs:element name="drillHoles" minOccurs="0" maxOccurs="2">
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="DrillHoles">
        <xs:attribute name="side" type="Sides" use="
required" />
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
<xs:element name="pantoscopicAngle" minOccurs="0">
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float">
        <xs:attribute name="dimension" type="
AngleDimension" use="optional" default="DEG" />
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
<xs:element name="frameBowAngle" minOccurs="0">
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float">
        <xs:attribute name="dimension" type="
AngleDimension" use="optional" default="DEG" />
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
<xs:element name="frameCurve" type="xs:float" minOccurs="0" />
</xs:sequence>
<xs:attribute name="quantity" type="xs:integer" use="required" />
</xs:complexType>

```



## 2.5.15 FrameSize

Used in  
[Frame](#)



### Elemente

#### width

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

#### height

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

#### bridge

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

#### templeLength

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:**

### XSD

```
<xs:complexType name="FrameSize">
  <xs:sequence>
    <xs:element name="width" type="xs:float" minOccurs="0"/>
    <xs:element name="height" type="xs:float" minOccurs="0"/>
    <xs:element name="bridge" type="xs:float" minOccurs="0"/>
    <xs:element name="templeLength" type="xs:float" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```



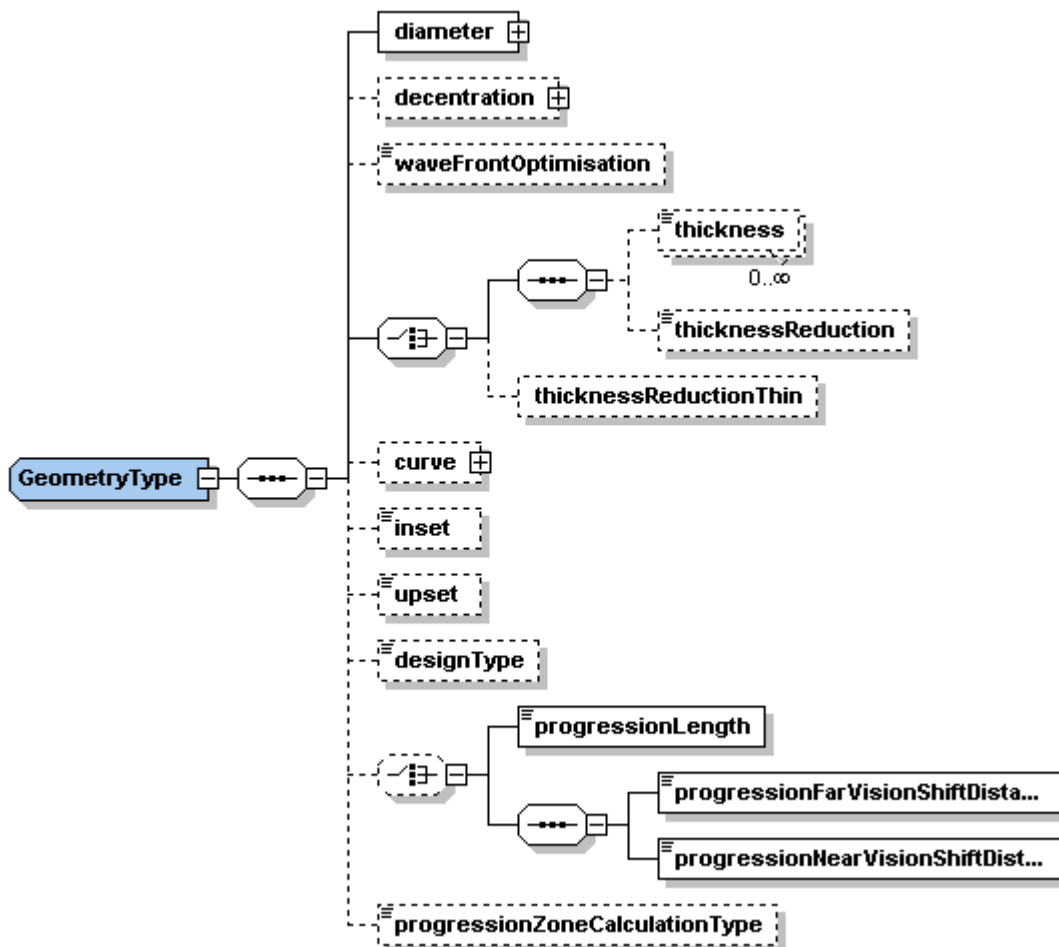




## 2.5.16 GeometryType

Used in

[Lens](#)



### Elemente

#### diameter

type: [Diameter](#)  
 occurs: 1  
 description: DE:Bestelldurchmesser

#### decentration

type: [Decentration](#)  
 occurs: 1  
 description:

#### thickness

type: float  
 unity: mm  
 attribute: reference ([ThicknessReferences](#))

**occurs:** 0..1  
**description:**  
**info:**

### **thicknessReduction**

**type:** boolean  
**occurs:** 0..1  
**description:** LngDe: TRUE = Anwahl der computerunterstützten Optimierung für die Rand- bzw. Mittendicke: Bei Zeiss entspricht dies der Anwahl OPTIMA  
**info:** CZ: Flag for Optima  
ROD: Flag for MDM.

### **thicknessReductionThin**

**type:** boolean  
**occurs:** 0..1  
**description:** LngDe: Randscharf  
**info:**

### **waveFrontOptimisation**

**type:** boolean  
**occurs:** 0..1  
**description:** Kennzeichnet die kostenpflichtige Optimierung mit Hilfe der Wellenfrontdaten, die unter  
**info:** patient:iProfilerData geschickt werden.  
SEI: ignored

### **curve**

**type:** [Curve](#)  
**occurs:** 0..1  
**description:** Durchbiegung des Glases

### **inset**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Horizontaler Versatz nasal vom Fernbezugspunkt zum Nahbezugspunkt bedingt durch die Akkomotation beim Nahsehen.  
**info:** CZ: ignored

### **upset**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Vertikaler Abstand vom Fernbezugspunkt zum oberen Rand des Nahteil (nur bei Bifo- Trifo-Gläsern)  
**info:** CZ: ignored  
SEI: ignored

### **designType**

**type:** string  
**occurs:** 0..1  
**possibleValues:**  
A

---

B  
C

**description:** Used by Seiko  
**info:** CZ: ignored

### progressionLength

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** for progressive lenses with variable length of progressionzone  
**info:** CZ: ignored

### progressionFarVisionShiftDistance

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Far Vision Vertical Shift distance Bz to Bf  
**info:** CZ: ignored  
SEI: ignored

### progressionNearVisionShiftDistance

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Near Vision Vertical Shift distance Bz to Bn  
**info:** CZ: ignored  
SEI: ignored

### progressionZoneCalculationType

**type:** string  
**occurs:** 0..1  
**description:** Type of calculation of the progression zone length  
**info:** CZ: ignored  
SEI: ignored

---

## XSD

```

xs:complexType name="GeometryType">
  <xs:sequence>
    <xs:element name="diameter" type="Diameter"/>
    <xs:element name="decentration" type="Decentration"/>
    <xs:element name="thickness" minOccurs="0">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:float">
            <xs:attribute name="reference" type="ThicknessReferences"
use="required"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="thicknessReduction" type="xs:boolean" minOccurs="0"/>
    <xs:element name="waveFrontOptimisation" type="xs:boolean" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

---

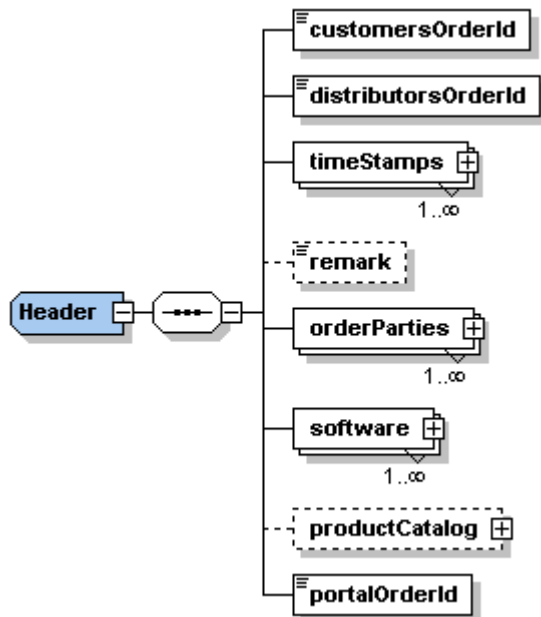
```
<xs:element name="curve" type="Curve" minOccurs="0"/>
<xs:element name="inset" type="xs:float" minOccurs="0"/>
<xs:element name="upset" type="xs:float" minOccurs="0"/>
<xs:element name="designtype" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="A"/>
      <xs:enumeration value="B"/>
      <xs:enumeration value="C"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:choice minOccurs="0">
  <xs:element name="progressionLength" type="xs:float"/>
  <xs:sequence>
    <xs:element name="progressionFarVisionShiftDistance"/>
    <xs:element name="progressionNearVisionShiftDistance"/>
  </xs:sequence>
</xs:choice>
  <xs:element name="progressionZoneCalculationType" type="xs:string" minOccurs="0"/>
</xs:sequence>
</xs:complexType>
```



## 2.5.17 Header

Used in

[b2bOptic](#)



### Attribute

#### msgType

type: [MsgTypes](#)  
 use: optional  
 default: REQUEST  
 description:

#### msgState

type: [MsgStates](#)  
 use: optional  
 default: NEW  
 description:

#### testIndicator

type: boolean  
 use: optional  
 default: 0  
 description:

### Elemente

#### customersOrderId

**type:** string  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

### **distributorsOrderId**

**type:** string  
**occurs:** 1  
**description:**  
**info:** CZ: ignored

### **timeStamps**

**type:** [TimeStamps](#)  
**occurs:** 1..n  
**description:**  
**info:** CZ: ignored

### **remark**

**type:** string  
**occurs:** 1  
**description:**  
**info:** CZ: Any comments or remarks are effectively ignored!

### **orderParties**

**type:** [Account](#)  
**attribute:** role (Type [Roles](#))  
**use:** yes  
**occurs:** 1..n  
**description:** (LngDe) orderParties ist eine Ableitung von Account mit einem zusätzlichen Attribut role vom Type Roles  
**info:** CZ: at least one entry with @role ORIGINATOR or INVOICETO should be present, unless present under items/parties; serves as default - if nothing is specified in items branch, these entries are used

### **software**

**type:** [Software](#)  
**occurs:** 1..n  
**description:**

### **productCatalog**

**type:** [ProductCatalog](#)  
**occurs:** 1  
**description:**  
**info:** SEI: ignored

### **portalOrderId**

**type:** string  
**occurs:** 1  
**description:** retailer's order id  
(LngDe)Bestellnummer des Optikers)  
**info:** CZ: ignored

---

## XSD

```

<xs:complexType name="Header">
  <xs:sequence>
    <xs:element name="customersOrderId" type="xs:string"/>
    <xs:element name="distributorsOrderId" type="xs:string"/>
    <xs:element name="timeStamps" type="TimeStamps" maxOccurs="unbounded"/>
    <xs:element name="remark" type="xs:string" minOccurs="0"/>
    <xs:element name="orderParties" maxOccurs="unbounded">
      <xs:complexType>
        <xs:complexContent>
          <xs:extension base="Account">
            <xs:attribute name="role" type="Roles" use="
required"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="software" type="Software" maxOccurs="unbounded"/>
    <xs:element name="productCatalog" type="ProductCatalog" minOccurs="0"/>
    <xs:element name="portalOrderId" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="msgType" type="MsgTypes" use="optional" default="REQUEST"/>
  <xs:attribute name="msgState" type="MsgStates" use="optional" default="NEW"/>
  <xs:attribute name="testIndicator" type="xs:boolean" use="optional" default="0"/>
</xs:complexType>

```

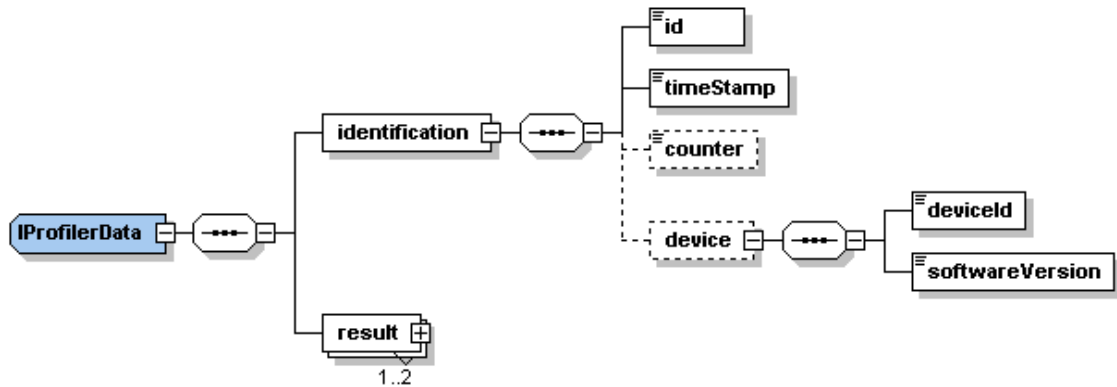




## 2.5.18 IProfilerData

Used in

[Patient](#)



### Elemente

#### identification

type:

occurs: 1

description:

#### Elemente für identification

##### id

type: string (1..50 Zeichen)

occurs: 1

description:

##### timeStamp

type: datetime

occurs: 1

description:

##### counter

type: int

minValue: 1

occurs: 0..1

description:

##### device

type:

occurs: 0..1

description:

#### Elemente für device

**deviceId**

**type:** String (1..50 Zeichen)  
**occurs:** 1  
**description:**

**softwareVersion**

**type:** String (1..50 Zeichen)  
**occurs:** 1  
**description:**

**result**

**type:** [iProfilerResult](#)  
**use:** yes  
**occurs:** 1  
**description:**

**XSD**

```

<xs:complexType name="IProfilerData">
  <xs:sequence>
    <xs:element name="identification">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="id">
            <xs:simpleType>
              <xs:restriction base="xs:string">
                <xs:minLength value="1"/>
                <xs:maxLength value="50"/>
              </xs:restriction>
            </xs:simpleType>
          </xs:element>
          <xs:element name="timeStamp" type="xs:dateTime"/>
          <xs:element name="counter" minOccurs="0">
            <xs:simpleType>
              <xs:restriction base="xs:int">
                <xs:minInclusive value="0"/>
              </xs:restriction>
            </xs:simpleType>
          </xs:element>
          <xs:element name="device" minOccurs="0">
            <xs:complexType>
              <xs:sequence>
                <xs:element name="deviceId">
                  <xs:simpleType>
                    <xs:restriction
base="xs:string">
                      <
                      <
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="
softwareVersion">
                  <xs:simpleType>

```

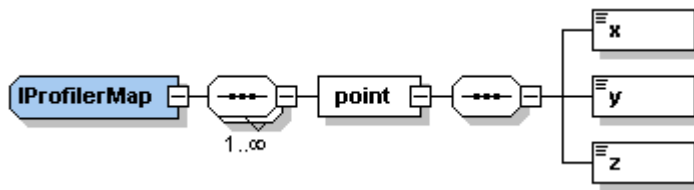
```
base="xs:string">
xs:minLength value="1" />
xs:maxLength value="50" />
</xs:restriction>
</xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="result" type="IProfilerResult" maxOccurs="2" />
</xs:sequence>
</xs:complexType>
```



## 2.5.19 IProfilerMap

Used in

[IProfilerResult](#)



### Elemente

#### point

type:

occurs: 1

description:

#### Elemente für point

##### X

type: float

unity:  $\mu\text{m}$

occurs: 1

description:

##### Y

type: float

unity:  $\mu\text{m}$

occurs: 1

description:

##### Z

type: float

unity:  $\mu\text{m}$

occurs: 1

description:

### XSD

```

<xs:complexType name="IProfilerMap">
  <xs:sequence maxOccurs="unbounded">
    <xs:element name="point">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="x" type="xs:float" />
          <xs:element name="y" type="xs:float" />
          <xs:element name="z" type="xs:float" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
  
```

---

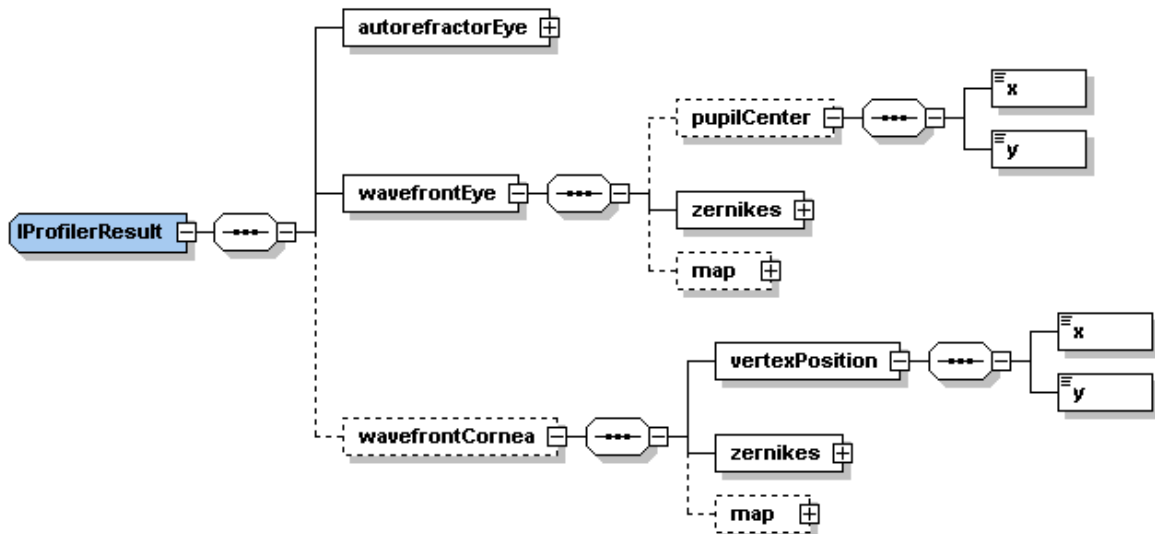
```
        </xs:element>  
    </xs:sequence>  
</xs:complexType>
```





## 2.5.20 IProfilerResult

Used in  
[IProfilerData](#)



### Attribute

#### side

type: [Sides](#)  
 use: yes  
 description:

### Elemente

#### autorefractorEye

type: [RXDataTypeSimple](#)  
 occurs: 1  
 description:

#### wavefrontEye

type:  
 occurs: 1  
 description:

#### Elemente für wavefrontEye

#### pupilCenter

type:  
 occurs: 1  
 description:

**Elemente für pupilCenter**

**X**  
type: float  
unity: mm  
occurs: 1  
description:

**Y**  
type: float  
unity: mm  
occurs: 1  
description:

**zernikes**  
type: Zernikes  
occurs: 1  
description:

**map**  
type: [IProfilerMap](#)  
occurs: 0..1  
description:

**wavefrontCornea**

type:  
occurs: 0..1  
description:

**Elemente für wavefrontCornea****vertexPosition**

type:  
occurs: 1  
description:

**Elemente für vertexPosition**

**X**  
type: float  
unity: mm  
occurs: 1  
description:

**Y**  
type: float  
unity: mm  
occurs: 1  
description:

**zernikes**

---

**type:** Zernikes  
**occurs:** 1  
**description:**

**map**  
**type:** [IProfilerMap](#)  
**occurs:** 1  
**description:**

## XSD

```

<xs:complexType name="IProfilerResult" >
  <xs:sequence>
    <xs:element name="autorefractorEye" type="RefractionSimple" />
    <xs:element name="wavefrontEye" >
      <xs:complexType>
        <xs:sequence>
          <xs:element name="pupilCenter" minOccurs="0" >
            <xs:complexType>
              <xs:sequence>
                <xs:element name="x" type="
xs:float" />
                <xs:element name="y" type="
xs:float" />
              </xs:sequence>
            </xs:complexType>
          </xs:element>
          <xs:element name="zernikes" type="Zernikes" />
          <xs:element name="map" type="IProfilerMap" minOccurs="
0" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="wavefrontCornea" minOccurs="0" >
      <xs:complexType>
        <xs:sequence>
          <xs:element name="vertexPosition" >
            <xs:complexType>
              <xs:sequence>
                <xs:element name="x" type="
xs:float" />
                <xs:element name="y" type="
xs:float" />
              </xs:sequence>
            </xs:complexType>
          </xs:element>
          <xs:element name="zernikes" type="Zernikes" />
          <xs:element name="map" type="IProfilerMap" minOccurs="
0" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:attribute name="side" type="Sides" use="required" />
</xs:complexType>

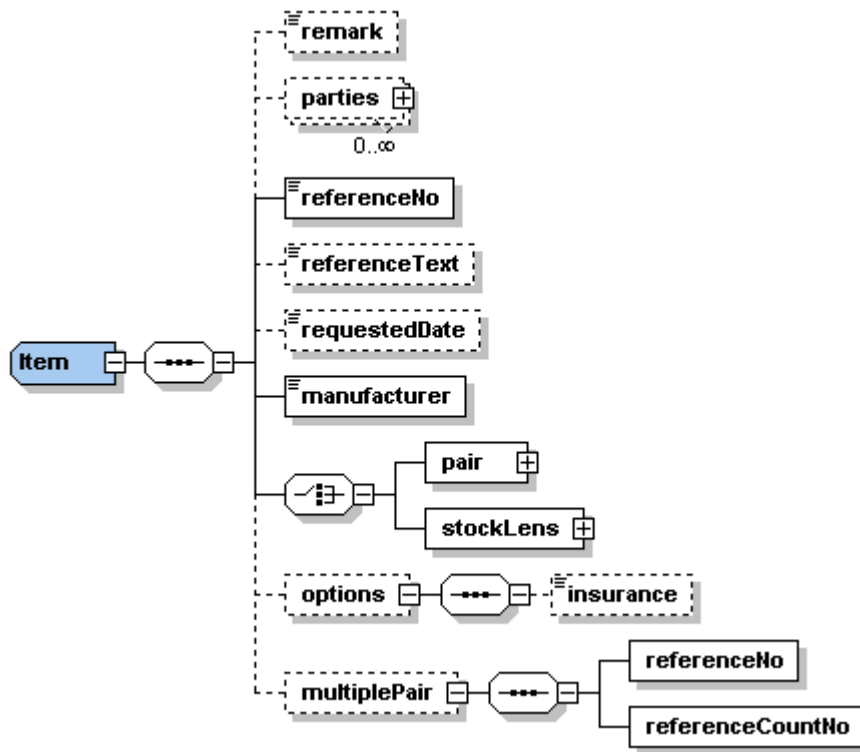
```



## 2.5.21 Item

Used in

[b2bOptic](#)



### Elemente

#### remark

**type:** string

**occurs:** 0..1

**description:**

**info:** CZ: Any comments or remarks are effectively ignored!

#### parties

**type:** [Account](#)

**attribute:** role (Type [Roles](#))

**occurs:** 0..n

**description:** LngDe: orderParties ist eine Ableitung von Account mit einem zusätzlichen Attribut role vom Type Roles

if not given use defaults from header

**info:**

#### referenceNo

**type:** string

**occurs:** 1

**description:** i.e. buyer's job no.

**referenceText**

**type:** string  
**occurs:** 0..1  
**description:** i.e. buyer's commission  
**info:** CZ: currently ignored - use referenceNo also for textual references (commission)

**requestedDate**

**type:** date  
**occurs:** 0..1  
**description:**  
**info:** CZ,SEI: currently ignored

**manufacturer**

**type:** string  
**occurs:** 1  
**description:**  
**info:** CZ, SEI: currently ignored

**pair**

**type:** [Pair](#)  
**occurs:** 1  
**description:**

**stockLens**

**type:** [StockLens](#)  
**occurs:** 1  
**description:**  
**info:** CZ: currently ignored

**options**

**type:**  
**occurs:** 0..1  
**description:**

**Weitere Elemente für options****insurance**

**type:** boolean  
**occurs:** 0..1  
**description:** LngDe: Inkl. Versicherung  
**info:** CZ,SEI: Ignored  
ROD: Nur Versicherungsvertragskunden können mit insurance=false für  
einzelne Gläser die  
Versicherung ausschalten (In deutsch, da derzeit nur mit deutschen Kunden  
möglich)

**multiplePair**

**type:**  
**occurs:** 0..1

---

**description:**

**info:** CZ, Rod :ignored  
Currently only used by ESS.

**Weitere Elemente für multiplePair****referenceNo**

**type:** string  
**occurs:** 1  
**description:** LngDe: Referenz-Nr des Basisauftrag  
**info:** CZ: Ignored  
ROD: Ignored

**referenceCountNo**

**type:** integer  
**occurs:** 1  
**description:** LngDe: Laufende Nummer  
**info:** CZ: Ignored  
ROD: Ignored

**XSD**

```

<xs:complexType name="Item">
  <xs:sequence>
    <xs:element name="remark" type="xs:string" minOccurs="0"/>
    <xs:element name="parties" minOccurs="0" maxOccurs="unbounded">
      <xs:complexType>
        <xs:complexContent>
          <xs:extension base="Account">
            <xs:attribute name="role" type="Roles" use="
required"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="referenceNo" type="xs:string"/>
    <xs:element name="referenceText" type="xs:string" minOccurs="0"/>
    <xs:element name="requestedDate" type="xs:date" minOccurs="0"/>
    <xs:element name="manufacturer" type="xs:string"/>
    <xs:choice>
      <xs:element name="pair" type="Pair"/>
      <xs:element name="stockLens" type="StockLens"/>
    </xs:choice>
    <xs:element name="options" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="insurance" type="xs:boolean"
minOccurs="0"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```



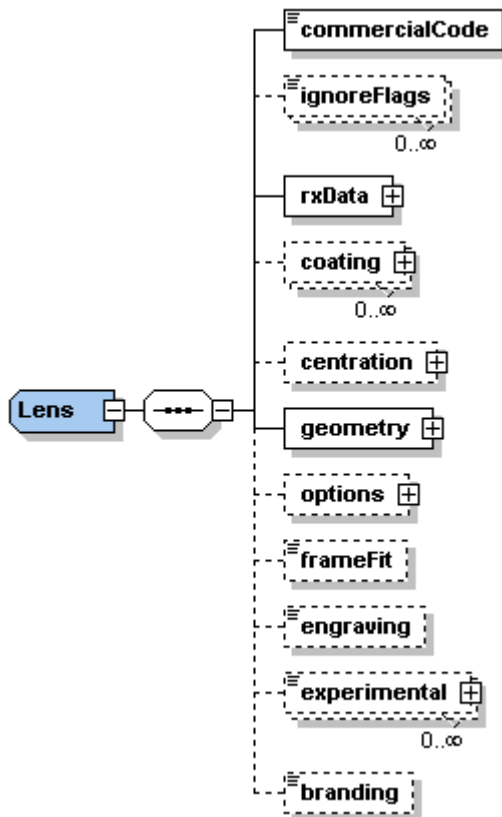




## 2.5.22 Lens

Used in

[Pair](#)



### Attribute

#### **side**

**type:** [Sides](#)

**use:** required

**description:** Kennzeichnet das Glas als rechtes oder linkes Glas.  
UNDEFINED ist nur bei Einstärkengläsern erlaubt, die sowohl als rechtes und linkes Glas verwendet werden können.

#### **balancingLens**

**type:** boolean

**use:** optional

**Default:** 0

**description:** LngDe: CZ: Bei Zeiss nur bedingt sinnvoll nutzbar, da auch als Ausgleichsglas ein vollwertiges Glas bestellt werden muss.

#### **virtualLens**

**type:** boolean

**use:** optional

**Default:** 0  
**description:** LngDe: TRUE definiert das Glas als virtuell. Dies kann verwendet werden um ein „virtuelles Glas“ für die Berechnung eines Glaspaares mit übergeben zu können.  
**info:** CZ: ignored

## Elemente

### commercialCode

**type:** string  
**occurs:** 1  
**description:**

### ignoreFlags

**type:** string  
**occurs:** 0..n  
**description:**  
**info:** CZ, SEI: ignored  
 ROD:LngDe: ist einer der folgenden Statusnr. eingetragen, wird entsprechender Fehler ignoriert

107	Kommissions-Nr. doppelt
225	Prisma R/L > 3 dpt unterschiedlich
304	Brückenweite < 5mm oder > 40mm
362	Nahtteilrand außerhalb der Form
523	Fassungsvorneigung < -10° oder > +20°
524	Fassungsscheibenwinkel < -10° oder > +35°

### rxData

**type:** [RXDataType](#)  
**occurs:** 1  
**description:**

### coating

**type:** [Coating](#)  
**occurs:** 0..n  
**description:**

### centration

**type:** [Centration](#)  
**occurs:** 0..1  
**description:**

### geometry

**type:** [GeometryType](#)  
**occurs:** 1  
**description:**

### options

**type:**  
**occurs:** 0..1  
**description:**

### Elemente für options

**occlusion**

**type:** boolean  
**occurs:** 0..1  
**description:**

**frosted**

**type:** boolean  
**occurs:** 0..1  
**description:** (german: Mattieren)

**slaboff**

**type:** boolean  
**occurs:** 0..1  
**description:**

**framefit**

**type:** float  
**unity:**  
**occurs:** 0..1  
**description:** Progressionslänge für Zeiss-FrameFit-Gläser mit Wertebereich von 0 bis 6. 4 ist der Standardwert.  
**info:** CZ: Size correction for the length of progression zone.  
ROD: ignored

**engraving**

**type:** string  
**occurs:** 0..1  
**description:** String mit Zeichen, die in die Brille eingraviert werden  
**info:** CZ: Individual gravure text, max five characters. Note: Not all characters supported!

**experimental**

**type:** anyType  
**occurs:** 0..n  
**description:**

**branding**

**type:** boolean  
**occurs:** 0..1  
**description:** Logo des Herstellers gravieren  
**info:** Currently used only by Essilor

---

**XSD**

```
<xs:complexType name="Lens">  
  <xs:sequence>  
    <xs:element name="commercialCode" type="xs:string"/>  
  </xs:sequence>  
</xs:complexType>
```

---

```

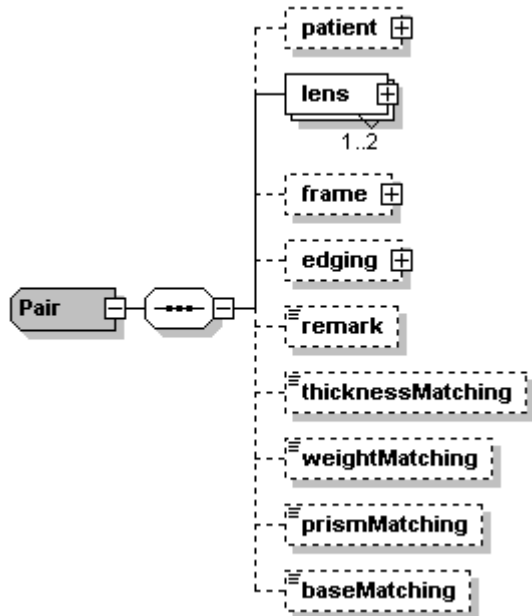
unbounded"/>
  <xs:element name="ignoreFlags" type="xs:string" minOccurs="0" maxOccurs="
  <xs:element name="rxData">
    <xs:complexType>
      <xs:complexContent>
        <xs:extension base="RXDataType" />
      </xs:complexContent>
    </xs:complexType>
  </xs:element>
  <xs:element name="coating" type="Coating" minOccurs="0" maxOccurs="unbounded
"/>
  <xs:element name="centration" type="Centration" minOccurs="0" />
  <xs:element name="geometry" type="GeometryType" />
  <xs:element name="options" minOccurs="0">
    <xs:complexType>
      <xs:sequence>
        <xs:choice minOccurs="0">
          <xs:element name="occlusion" type="xs:boolean" />
          <xs:element name="frosted" type="xs:boolean" />
        </xs:choice>
        <xs:element name="slabOff" minOccurs="0">
          <xs:complexType>
            <xs:simpleContent>
              <xs:extension base="xs:boolean" />
            </xs:simpleContent>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="frameFit" type="xs:float" minOccurs="0" />
  <xs:element name="engraving" minOccurs="0">
    <xs:simpleType>
      <xs:restriction base="xs:string" />
    </xs:simpleType>
  </xs:element>
  <xs:element name="experimental" type="xs:anyType" minOccurs="0" maxOccurs="
unbounded"/>
  </xs:sequence>
  <xs:attribute name="side" type="Sides" use="required" />
  <xs:attribute name="balancingLens" type="xs:boolean" use="optional" default="0" />
  <xs:attribute name="virtualLens" type="xs:boolean" use="optional" default="0" />
</xs:complexType>

```



## 2.5.23 Pair

Used in  
[Item](#)



### Elemente

#### patient

type: [Patient](#)  
occurs: 1  
description:

#### lens

type: [Lens](#)  
attribute: quantity (Type integer)  
occurs: 1..2  
description: LngDe: lens ist eine Ableitung von Lens mit einem zusätzlichen Attribut quantity vom Type integer  
info: CZ: any quantity other than 1 will result in an exception thrown to the client! YOU HAVE BEEN WARNED!

#### frame

type: [Frame](#)  
occurs: 0..1  
description:

#### edging

type: [Edging](#)  
occurs: 0..1  
description:

**remark**

**type:** string  
**occurs:** 1  
**description:**  
**info:** CZ: Any comments or remarks are effectively ignored!

**thicknessMatching**

**type:** boolean  
**use:** optional  
**description:** thickness balance  
LngDe: Dickenangleichung  
**info:** CZ: Bei Zeiss gibt es nur das Flag für „Angleichen“, der Kunde kann nicht wählen was genau er angeglichen haben will. Da es kein allgemeines Flag für „Matching“ gibt nutzt Zeiss die Zeiss thicknessMatching für das allgemeine „Angleichen“. Je nach Bedarf gleicht Basiskurve und / oder die Dicke an, so das die Gläser möglichst gleich aussehen. SEI:ignored

**weightMatching**

**type:** boolean  
**use:** optional  
**description:** weight balance  
LngDe: Gewichtsangleichung  
**info:** CZ, SEI: ignored

**prismMatching**

**type:** boolean  
**use:** optional  
**description:** prism balance LngDe:Prismenverteilung auf beide Gläser  
**info:** CZ, SEI: ignored :

**baseMatching**

**type:** boolean  
**use:** optional  
**description:** LngDe:Basiskurvenangleichung  
**info:** CZ, ROD: ignored:

---

XSD

---

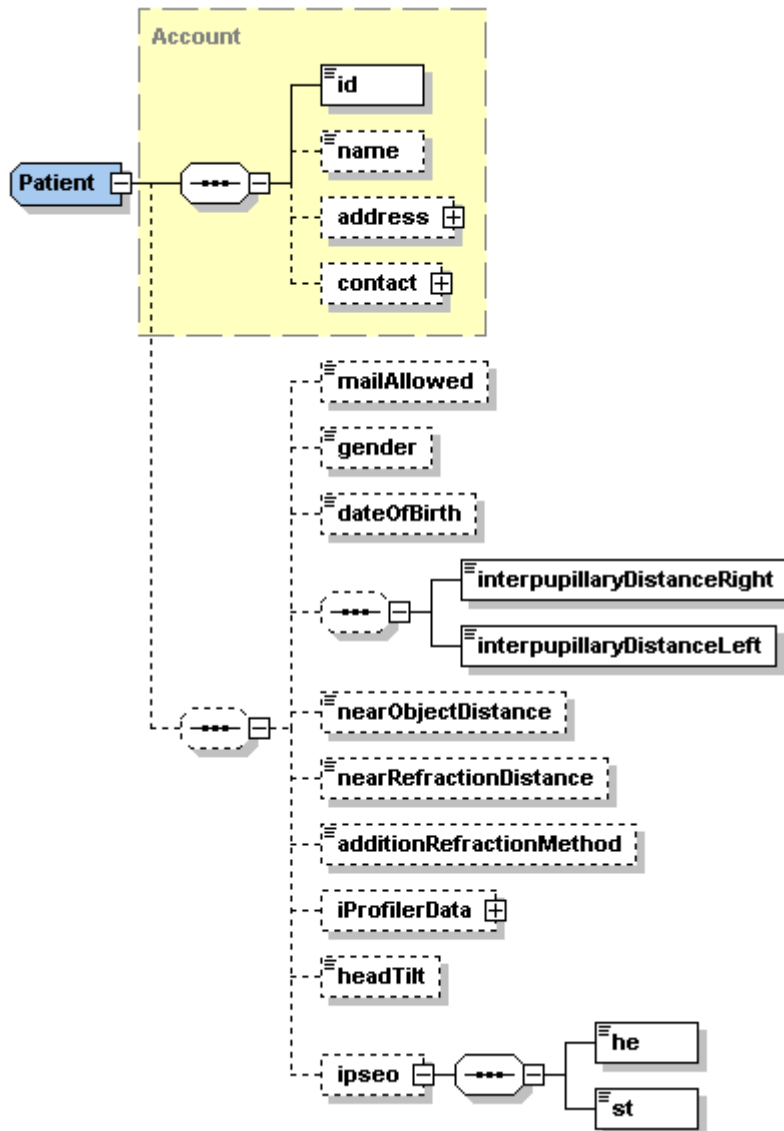




## 2.5.24 Patient

Used in

[Pair](#)



**Remark:** /Patient/name should not be used. Instead of, please use /Patient/contact/Lastname

### mailAllowed

type: boolean

occurs: 0..1

description:

info: CZ: ignored

### gender

type: [Gender](#)

**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### **dateOfBirth**

**type:** dateTime  
**occurs:** 0..1  
**description:**  
**info:** CZ: ignored

### **interpupillaryDistanceRight**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Right PD of Patient. Do not use for centration.  
For centration use Element [Centration](#)  
**info:** CZ,SEI: ignored

### **interpupillaryDistanceLeft**

**type:** float  
**unity:** mm  
**occurs:** 0..1  
**description:** Left PD Patient. Do not use for centration.  
For centration use Element [Centration](#)  
**info:** CZ,SEI: ignored

### **nearObjectDistance**

**type:** float  
**unity:** cm  
**occurs:** 0..1  
**description:**

### **nearRefractionDistance**

**type:** float  
**unity:** cm  
**occurs:** 0..1  
**description:**

### **additionRefractionMethod**

**type:** [AdditionRefractionMethod](#)  
**occurs:** 0..1  
**description:**

### **iProfilerData**

**type:** [IProfilerData](#)  
**occurs:** 0..1  
**description:**  
**info:** ROD: ignored  
SEI: ignored

### **headTilt**

**type:** float  
**unity:** cm  
**occurs:** 0..1

description:

### ipseo

type: complexType

occurs: 0..1

description: Element for Essilor-Ipseo-Lenses

info: ROD,CZ :ignored

### Elemente für ipseo

#### he

type: float

occurs: 0..1

description: value for Head-Eye-coefficient

#### st

type: float

occurs: 0..1

description: value for Stab-coefficient

---

## XSD

```
<xs:complexType name="Patient">
  <xs:complexContent>
    <xs:extension base="Account">
      <xs:sequence minOccurs="0">
        <xs:element name="mailAllowed" type="xs:boolean"
default="false" minOccurs="0"/>
        <xs:element name="gender" type="Gender"
minOccurs="0"/>
        <xs:element name="dateOfBirth" type="xs:date"
minOccurs="0"/>
        <xs:sequence minOccurs="0">
          <xs:element name="
interpupillaryDistanceRight" type="xs:float"/>
          <xs:element name="
interpupillaryDistanceLeft" type="xs:float"/>
        </xs:sequence>
        <xs:element name="nearObjectDistance" type="
xs:float" minOccurs="0"/>
        <xs:element name="nearRefractionDistance" type="
xs:float" minOccurs="0"/>
        <xs:element name="additionRefractionMethod" type="
="AdditionRefractionMethod" minOccurs="0"/>
        <xs:element name="iProfilerData" type="
IProfilerData" minOccurs="0"/>
        <xs:element name="headTilt" type="xs:float"
minOccurs="0"/>
        <xs:element name="ipseo" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="he" type="
xs:float"/>
              <xs:element name="st" type="
```

---

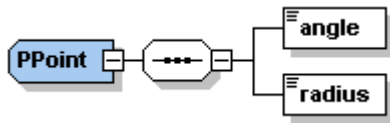
```
xs:float"/>
                                </xs:sequence>
                                </xs:complexType>
                                </xs:element>
                                </xs:sequence>
                                </xs:extension>
                                </xs:complexContent>
</xs:complexType>
```

---

## 2.5.25 PPoint

Used in

[Shape](#)



### Elemente

#### angle

**type:** float  
**unity:** see dimension  
**attribute:** dimension ([AngleDimension](#))  
**occurs:** 1  
**description:**  
**info:** ROD:possible value for AngleDimension: DEG

#### radius

**type:** float  
**unity:** mm  
**occurs:** 1  
**description:**

### XSD

```

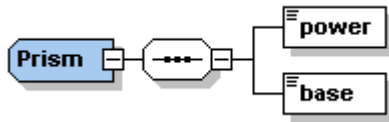
<xs:complexType name="PPoint">
  <xs:sequence>
    <xs:element name="angle">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:float">
            AngleDimension" use="optional" default="DEG"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="radius" type="xs:float"/>
  </xs:sequence>
</xs:complexType>
  
```



## 2.5.26 Prism

Used in

[RXDataType](#)



### Elemente

#### power

**type:** float  
**unity:** cm/m  
**occurs:** 1  
**description:**

#### base

**type:** float  
**unity:** degree  
**minValue:** 0.0  
**maxValue:** 360.0  
**occurs:** 1  
**description:**

### XSD

```
<xs:complexType name="Prism">
  <xs:sequence>
    <xs:element name="power" type="xs:float" />
    <xs:element name="base">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.0" />
          <xs:maxInclusive value="360.0" />
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

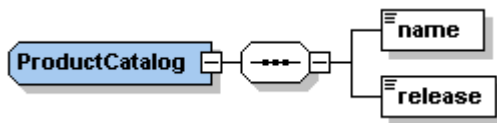




## 2.5.27 ProductCatalog

Used in

[Header](#)



### Elemente

#### name

**type:** string

**possible values:** czv  
sf4  
sf6  
optimeyes  
euronet

**occurs:** 1

**description:**

**info:** CZ: ignored

#### release

**type:** string

**occurs:** 1

**description:** Für SF6 sollte hier die UID-Manufacturer aus der Datei Head.Dat stehen

**info:** CZ: ignored

### XSD

```

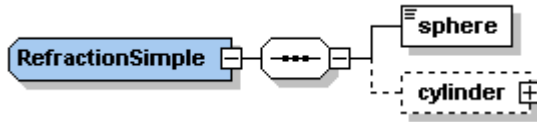
<xs:complexType name="ProductCatalog">
  <xs:sequence>
    <xs:element name="name">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="czv"/>
          <xs:enumeration value="sf4"/>
          <xs:enumeration value="sf6"/>
          <xs:enumeration value="optimeyes"/>
          <xs:enumeration value="euronet"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="release" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
  
```



## 2.5.28 RXDataTypeSimple

Used in

[IProfilerResult](#)



### Elemente

#### sphere

**type:** float  
**unity:** dpt  
**minValue:** -50  
**maxValue:** 50  
**occurs:** 1  
**description:**

#### cylinder

**type:** [Cylinder](#)  
**occurs:** 0..1  
**description:**

### XSD

```

<xs:complexType name="RXDataTypeSimple">
  <xs:sequence>
    <xs:element name="sphere">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-50"/>
          <xs:maxInclusive value="50"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

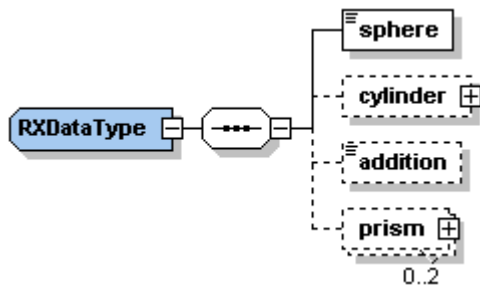
```



## 2.5.29 RXDataType

Used in

[Lens](#)



### Elemente

#### sphere

**type:** float  
**unity:** dpt  
**minValue:** -50  
**maxValue:** 50  
**occurs:** 1  
**description:**

#### cylinder

**type:** [Cylinder](#)  
**occurs:** 0..1  
**description:**

#### addition

**type:** float  
**unity:** dpt  
**minValue:** 0.25  
**occurs:** 0..1  
**description:**

#### prism

**type:** [Prism](#)  
**occurs:** 0..2  
**description:**

### XSD

```

<xs:complexType name="RXDataType">
  <xs:sequence>
    <xs:element name="sphere">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-50"/>
          <xs:maxInclusive value="50"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```
        </xs:simpleType>
    </xs:element>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0" />
    <xs:element name="addition" minOccurs="0">
        <xs:simpleType>
            <xs:restriction base="xs:float">
                <xs:minInclusive value="0.25" />
            </xs:restriction>
        </xs:simpleType>
    </xs:element>
    <xs:element name="prism" type="Prism" minOccurs="0" maxOccurs="2" />
</xs:sequence>
</xs:complexType>
```

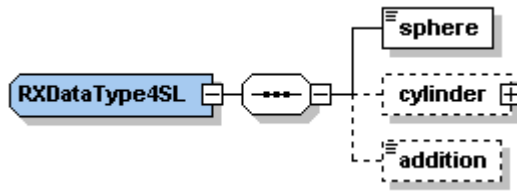




## 2.5.30 RXDataType4SL

Used in

[StockLens](#)



### Elemente

#### sphere

**type:** float  
**unity:** dpt  
**minValue:** -50  
**maxValue:** 50  
**occurs:** 1  
**description:**

#### cylinder

**type:** [Cylinder](#)  
**occurs:** 0..1  
**description:**

#### addition

**type:** float  
**unity:** dpt  
**minValue:** 0.25  
**occurs:** 0..1  
**description:**

### XSD

```

<xs:complexType name="RXDataType4SL">
  <xs:sequence>
    <xs:element name="sphere">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-50"/>
          <xs:maxInclusive value="50"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
    <xs:element name="addition" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.25"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
  
```

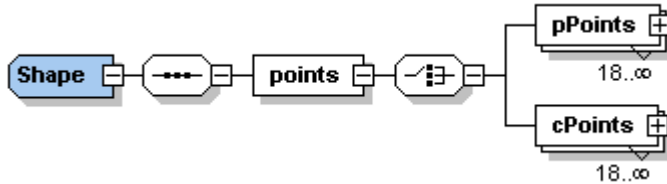
```
</xs:simpleType>  
</xs:element>  
</xs:sequence>  
</xs:complexType>
```

---



### 2.5.31 Shape

Used in  
[Frame](#)



#### Elemente

##### points

type:

occurs: 1

description: LngDe: Formdaten werden "Boxzentriert" angegeben.

##### Elemente für points

##### pPoints

type: [PPoint](#)

occurs: 18..n

description:

info:

CZ: In an order (header[@msgType=ORDER]) any number of polar coordinates other than 36 will result in an exception thrown to the client.

##### cPoints

type: [cPoint](#)

occurs: 18..n

description:

info:

CZ: currently ignored - use polar coordinates instead!

#### XSD

```

<xs:complexType name="Shape">
  <xs:sequence>
    <xs:element name="points">
      <xs:complexType>
        <xs:choice>
          <xs:element name="pPoints" type="PPoint" minOccurs="18"
            " maxOccurs="unbounded" />
          <xs:element name="cPoints" type="CPoint" minOccurs="18"
            " maxOccurs="unbounded" />
        </xs:choice>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
  
```

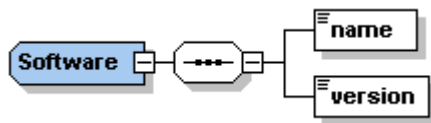




## 2.5.32 Software

Used in

[Header](#)



Attribute

### typeOf

type: [SoftwareTypes](#)

use: required

description:

Elemente

### name

type: string

occurs: 1

description:

### version

type: string

occurs: 1

description:

XSD

```
<xs:complexType name="Software">
  <xs:sequence>
    <xs:element name="name" type="xs:string"/>
    <xs:element name="version" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="typeOf" type="SoftwareTypes" use="required"/>
</xs:complexType>
```

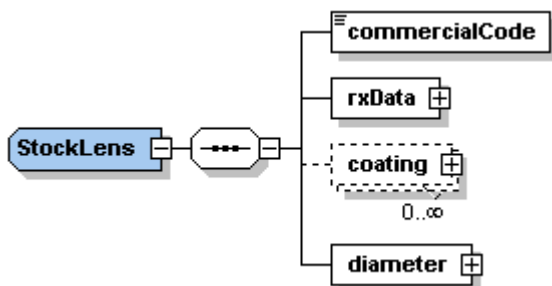




## 2.5.33 StockLens

Used in

[Pair Item](#)



### Attribute

#### **quantity**

type: integer  
use: required  
description:

#### **side**

type: [Sides](#)  
use: required  
description:

### Elemente

#### **commercialCode**

type: string  
occurs: 1  
description:

#### **rxData**

type: [RXDataType4SL](#)  
occurs: 1  
description:

#### **coating**

type: [Coating](#)  
occurs: 0..n  
description:

#### **diameter**

type: Diameter  
occurs: 1  
description:

## XSD

```
<xs:complexType name="StockLens">
  <xs:sequence>
    <xs:element name="commercialCode" type="xs:string"/>
    <xs:element name="rxData" type="RXDataType4SL"/>
    <xs:element name="coating" type="Coating" minOccurs="0" maxOccurs="unbounded" />
  </xs:sequence>
  <xs:element name="diameter" type="Diameter" />
  <xs:attribute name="quantity" type="xs:integer" use="required" />
  <xs:attribute name="side" type="Sides" use="required" />
</xs:complexType>
```

---



## 2.5.34 TimeStamps

Used in

[Header](#)



### Elemente

#### dateTime

**type:** dateTime  
**attribute:** step (Type [MsgSteps](#))  
**occurs:** 1  
**description:**

### XSD

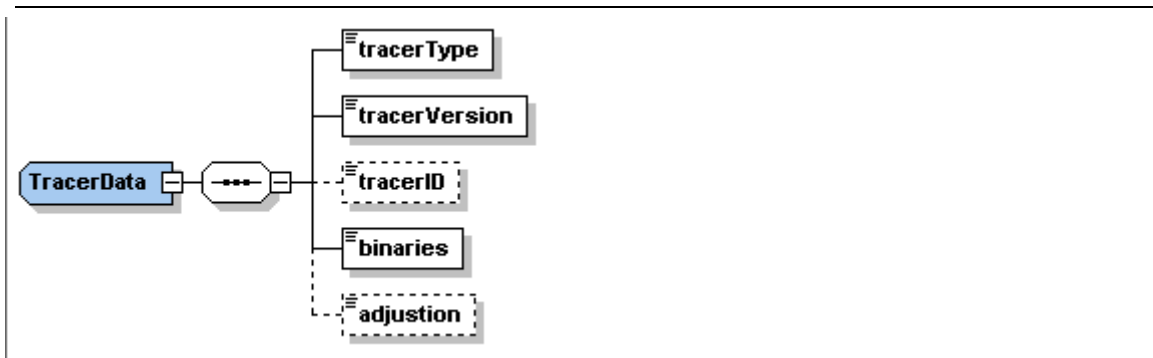
```

<xs:complexType name="TimeStamps">
  <xs:sequence>
    <xs:element name="dateTime">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:dateTime">
            <xs:attribute name="step" type="MsgSteps" use="
required" />
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
  
```



### 2.5.35 TracerData

Used in  
[Frame](#)



#### Elemente

##### tracerType

type: [TracerType](#)  
 occurs: 1  
 description:

##### tracerVersion

type: string  
 occurs: 1  
 description:  
 info: CZ: ignored

##### TracerId

type: string  
 occurs: 0..1  
 description: Serialnumber of tracer

##### binaries

type: hexBinary  
 attribute: format (Type [TracerBinaryFormat](#))  
 occurs: 1  
 description:

##### adjustion

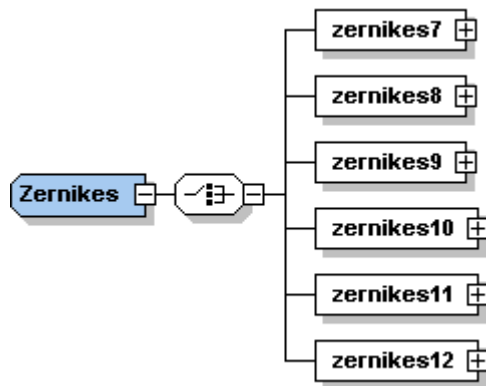
type: float  
 unity: mm  
 occurs: 0..1  
 description: general size adjustment parameter  
 info: CZ: Size correction in the Nidek data set.  
 ROD: ignored

## XSD

```
<xs:complexType name="TracerData" >
  <xs:sequence>
    <xs:element name="tracerType" type="TracerType" />
    <xs:element name="tracerVersion" type="xs:string" />
    <xs:element name="tracerID" type="xs:string" minOccurs="0" />
    <xs:element name="binaries" >
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:hexBinary">
            <xs:attribute name="format" type="TracerBinaryFormat" />
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="adjustment" type="xs:float" minOccurs="0" />
  </xs:sequence>
</xs:complexType>
```

## 2.5.36 Zernikes

Used in  
[IProfilerResult](#)



### Elemente

#### zernikes7

type: [Zernikes7](#)  
occurs: 1  
description:

#### zernikes8

type: [Zernikes8](#)  
occurs: 1  
description:

#### zernikes9

type: [Zernikes9](#)  
occurs: 1  
description:

#### zernikes10

type: [Zernikes10](#)  
occurs: 1  
description:

#### zernikes11

type: [Zernikes11](#)  
occurs: 1  
description:

#### zernikes12

type: [Zernikes12](#)  
occurs: 1  
description:



---

## XSD

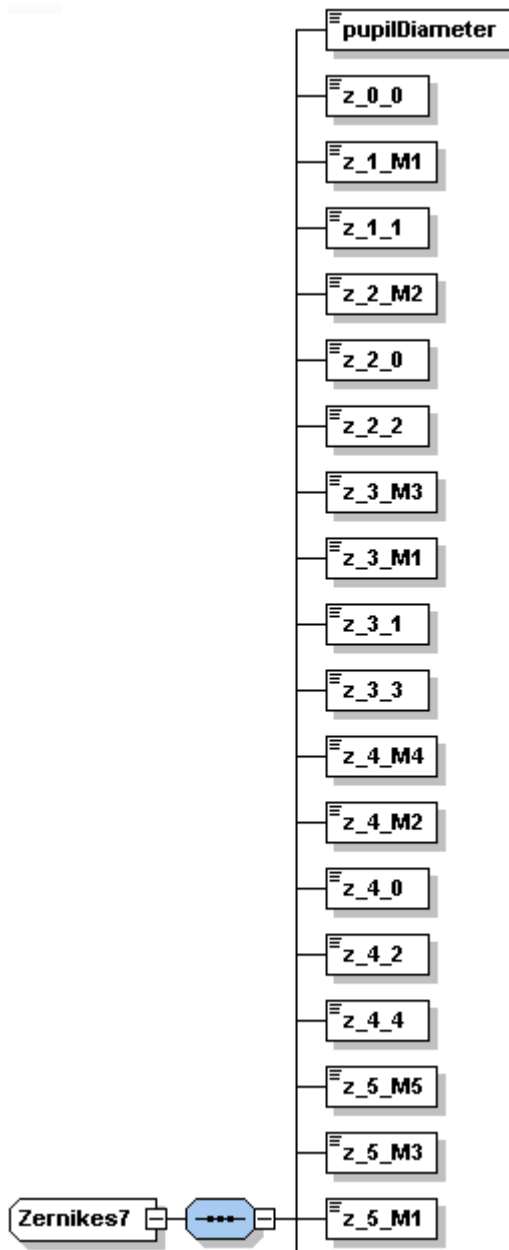
```
<xs:complexType name="Zernikes">
  <xs:choice>
    <xs:element name="zernikes7" type="Zernikes7"/>
    <xs:element name="zernikes8" type="Zernikes8"/>
    <xs:element name="zernikes9" type="Zernikes9"/>
    <xs:element name="zernikes10" type="Zernikes10"/>
    <xs:element name="zernikes11" type="Zernikes11"/>
    <xs:element name="zernikes12" type="Zernikes12"/>
  </xs:choice>
</xs:complexType>
```

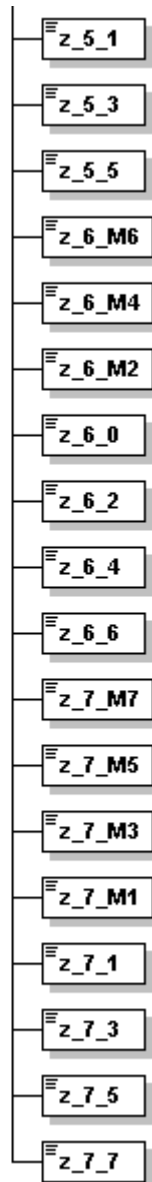
---



## 2.5.37 Zernikes7

Used in  
[Zernikes](#)





## Elemente

### pupilDiameter

type: float  
unity: mm  
occurs: 1  
description:

### z\_1\_M1

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

### z\_1\_1

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 2 M2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 2 0**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 2 2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 3 M3**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 3 M1**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 3 1**

**type:** float  
**occurs:** 1  
**unity:**  $\mu\text{m}$   
**description:**

**z 3 3**

**type:** float  
**occurs:** 1  
**unity:**  $\mu\text{m}$   
**description:**

**z 4 M4**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 4 M2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 4 0**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 4 2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 4 4**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 M5**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 M3**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 M1**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 1**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 3**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 5 5**

---

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 M6**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 M4**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 M2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 0**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 2**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 4**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 6 6**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 7 M7**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 7 M5**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 M3

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 M1

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 1

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 3

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 5

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

### z 7 7

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

---

## XSD

```

<xs:complexType name="Zernikes7">
  <xs:sequence>
    <xs:element name="pupilDiameter" type="xs:float"/>
    <xs:element name="z_0_0" type="xs:float"/>
    <xs:element name="z_1_M1" type="xs:float"/>
    <xs:element name="z_1_1" type="xs:float"/>
    <xs:element name="z_2_M2" type="xs:float"/>
    <xs:element name="z_2_0" type="xs:float"/>
    <xs:element name="z_2_2" type="xs:float"/>
    <xs:element name="z_3_M3" type="xs:float"/>
    <xs:element name="z_3_M1" type="xs:float"/>
  
```

---

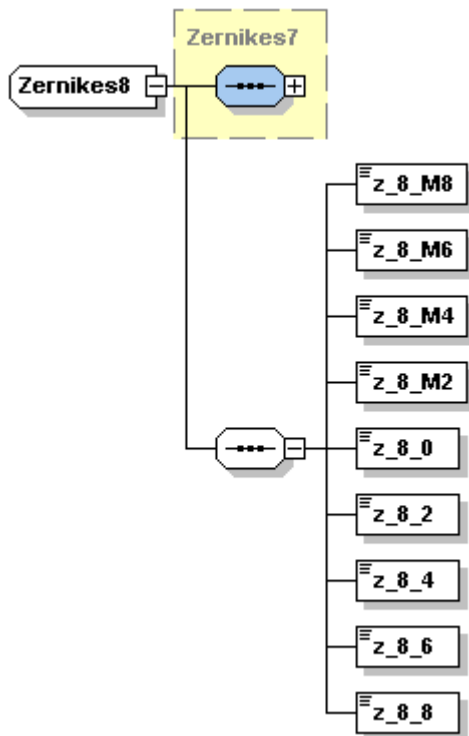


```
<xs:element name="z_3_1" type="xs:float" />
<xs:element name="z_3_3" type="xs:float" />
<xs:element name="z_4_M4" type="xs:float" />
<xs:element name="z_4_M2" type="xs:float" />
<xs:element name="z_4_0" type="xs:float" />
<xs:element name="z_4_2" type="xs:float" />
<xs:element name="z_4_4" type="xs:float" />
<xs:element name="z_5_M5" type="xs:float" />
<xs:element name="z_5_M3" type="xs:float" />
<xs:element name="z_5_M1" type="xs:float" />
<xs:element name="z_5_1" type="xs:float" />
<xs:element name="z_5_3" type="xs:float" />
<xs:element name="z_5_5" type="xs:float" />
<xs:element name="z_6_M6" type="xs:float" />
<xs:element name="z_6_M4" type="xs:float" />
<xs:element name="z_6_M2" type="xs:float" />
<xs:element name="z_6_0" type="xs:float" />
<xs:element name="z_6_2" type="xs:float" />
<xs:element name="z_6_4" type="xs:float" />
<xs:element name="z_6_6" type="xs:float" />
<xs:element name="z_7_M7" type="xs:float" />
<xs:element name="z_7_M3" type="xs:float" />
<xs:element name="z_7_M1" type="xs:float" />
<xs:element name="z_7_M5" type="xs:float" />
<xs:element name="z_7_1" type="xs:float" />
<xs:element name="z_7_3" type="xs:float" />
<xs:element name="z_7_5" type="xs:float" />
<xs:element name="z_7_7" type="xs:float" />
</xs:sequence>
</xs:complexType>
```

## 2.5.38 Zernikes8

Used in

[Zernikes](#)



## Elemente

### z\_8\_M8

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

### z\_8\_M6

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

### z\_8\_M4

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

### z\_8\_M2

type: float

unity:  $\mu\text{m}$   
 occurs: 1  
 description:

**z 8 0**

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

**z 8 2**

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

**z 8 4**

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

**z 8 6**

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

**z 8 8**

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

---

**XSD**

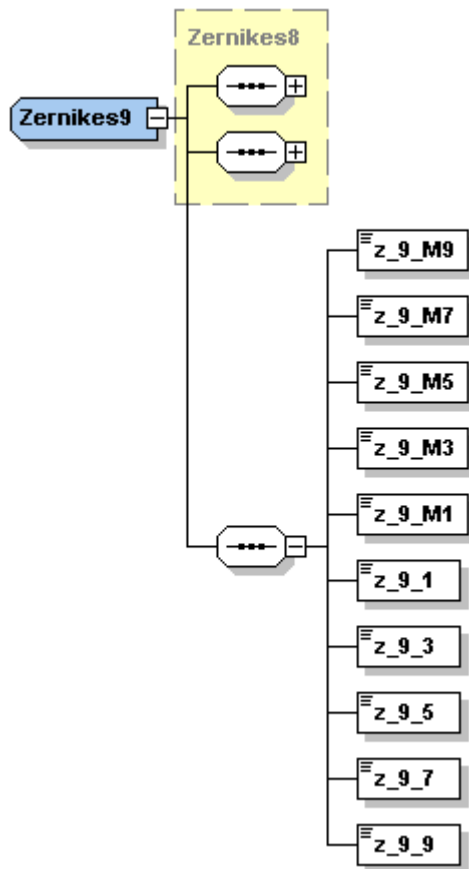
```
<xs:complexType name="Zernikes8">
  <xs:complexContent>
    <xs:extension base="Zernikes7">
      <xs:sequence>
        <xs:element name="z_8_M8" type="xs:float"/>
        <xs:element name="z_8_M6" type="xs:float"/>
        <xs:element name="z_8_M4" type="xs:float"/>
        <xs:element name="z_8_M2" type="xs:float"/>
        <xs:element name="z_8_0" type="xs:float"/>
        <xs:element name="z_8_2" type="xs:float"/>
        <xs:element name="z_8_4" type="xs:float"/>
        <xs:element name="z_8_6" type="xs:float"/>
        <xs:element name="z_8_8" type="xs:float"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

---

### 2.5.39 Zernikes9

Used in

[Zernikes](#)



### Elemente

#### z\_9\_M9

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

#### z\_9\_M7

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

#### z\_9\_M5

type: float  
unity:  $\mu\text{m}$   
occurs: 1

description:

**z\_9\_M3**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_M1**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_1**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_3**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_5**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_7**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z\_9\_9**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

---

## XSD

```
<xs:complexType name="Zernikes9">  
  <xs:complexContent>  
    <xs:extension base="Zernikes8">  
      <xs:sequence>  
        <xs:element name="z_9_M9" type="xs:float"/>  
        <xs:element name="z_9_M7" type="xs:float"/>  
      </xs:sequence>  
    </xs:extension>  
  </xs:complexContent>  
</xs:complexType>
```

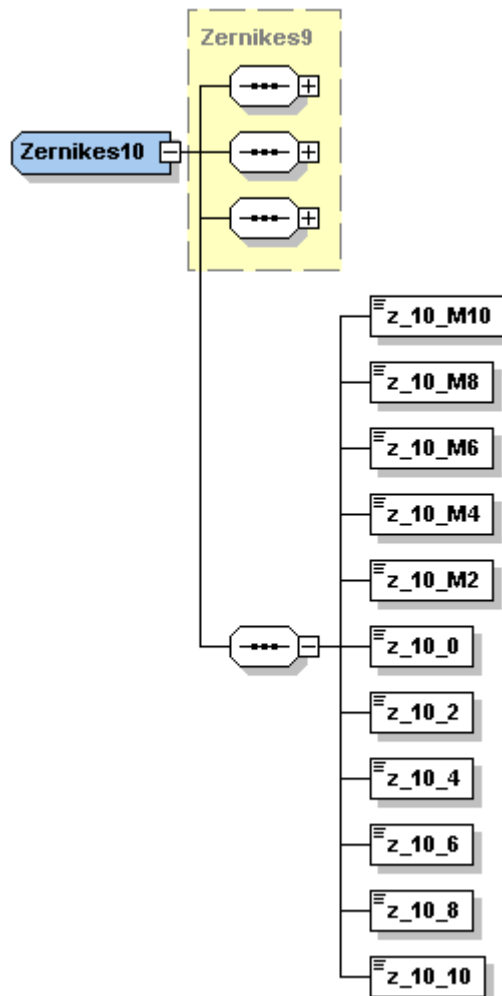
---

```
<xs:element name="z_9_M5" type="xs:float"/>
<xs:element name="z_9_M3" type="xs:float"/>
<xs:element name="z_9_M1" type="xs:float"/>
<xs:element name="z_9_1" type="xs:float"/>
<xs:element name="z_9_3" type="xs:float"/>
<xs:element name="z_9_5" type="xs:float"/>
<xs:element name="z_9_7" type="xs:float"/>
<xs:element name="z_9_9" type="xs:float"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
```

---

## 2.5.40 Zernikes10

Used in  
[Zernikes](#)



### Elemente

#### z\_10\_M10

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

#### z\_10\_M8

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 M6**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 M4**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 M2**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 0**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 2**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 4**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 6**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 8**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 10 10**

type: float  
unity:  $\mu\text{m}$   
occurs: 1

---



description:

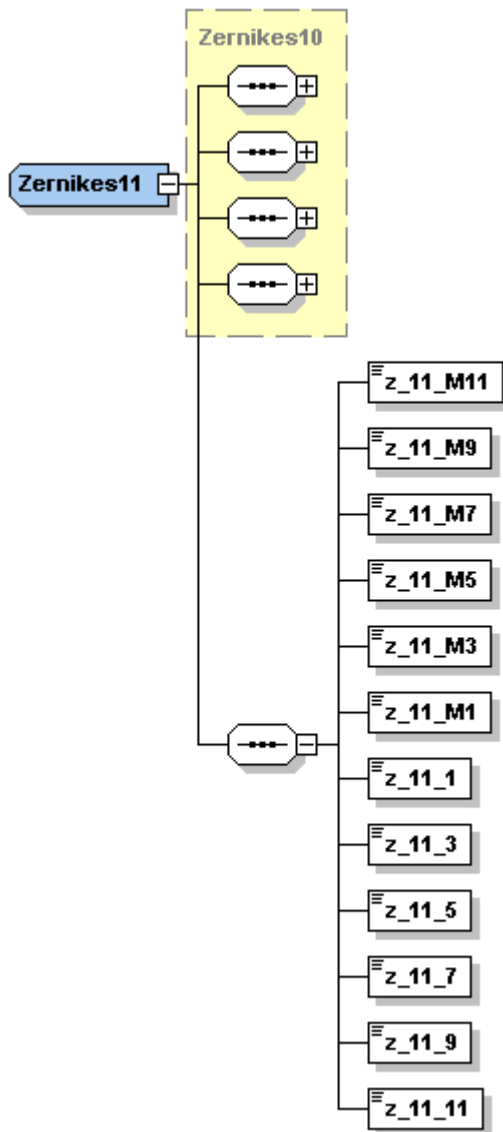
---

## XSD

```
<xs:complexType name="Zernikes10">
  <xs:complexContent>
    <xs:extension base="Zernikes9">
      <xs:sequence>
        <xs:element name="z_10_M10" type="xs:float" />
        <xs:element name="z_10_M8" type="xs:float" />
        <xs:element name="z_10_M6" type="xs:float" />
        <xs:element name="z_10_M4" type="xs:float" />
        <xs:element name="z_10_M2" type="xs:float" />
        <xs:element name="z_10_0" type="xs:float" />
        <xs:element name="z_10_2" type="xs:float" />
        <xs:element name="z_10_4" type="xs:float" />
        <xs:element name="z_10_6" type="xs:float" />
        <xs:element name="z_10_8" type="xs:float" />
        <xs:element name="z_10_10" type="xs:float" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

## 2.5.41 Zernikes11

Used in  
[Zernikes](#)



### Elemente

#### z\_11\_M11

type: float  
 unity:  $\mu\text{m}$   
 occurs: 1  
 description:

#### z\_11\_M9

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 M7**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 M5**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 M3**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 M1**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 1**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 3**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 5**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z 11 7**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z\_11\_9**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z\_11\_11**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

## XSD

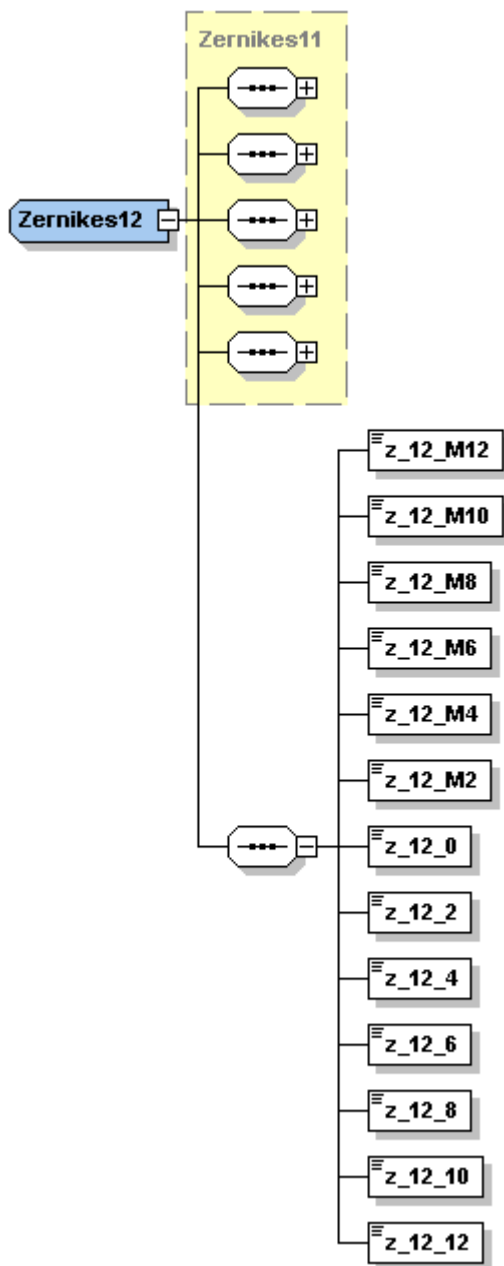
```

<xs:complexType name="Zernikes11">
  <xs:complexContent>
    <xs:extension base="Zernikes10">
      <xs:sequence>
        <xs:element name="z_11_M11" type="xs:float"/>
        <xs:element name="z_11_M9" type="xs:float"/>
        <xs:element name="z_11_M7" type="xs:float"/>
        <xs:element name="z_11_M5" type="xs:float"/>
        <xs:element name="z_11_M3" type="xs:float"/>
        <xs:element name="z_11_M1" type="xs:float"/>
        <xs:element name="z_11_1" type="xs:float"/>
        <xs:element name="z_11_3" type="xs:float"/>
        <xs:element name="z_11_5" type="xs:float"/>
        <xs:element name="z_11_7" type="xs:float"/>
        <xs:element name="z_11_9" type="xs:float"/>
        <xs:element name="z_11_11" type="xs:float"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

## 2.5.42 Zernikes12

Used in  
[Zernikes](#)



### Elemente

#### z\_12\_M12

type: float  
unity:  $\mu\text{m}$

occurs: 1  
description:

**z 12 M10**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 M8**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 M6**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 M4**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 M2**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 0**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 2**

type: float  
unity:  $\mu\text{m}$   
occurs: 1  
description:

**z 12 4**

type: float  
unity:  $\mu\text{m}$

---

**occurs:** 1  
**description:**

**z\_12\_6**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z\_12\_8**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z\_12\_10**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

**z\_12\_12**

**type:** float  
**unity:**  $\mu\text{m}$   
**occurs:** 1  
**description:**

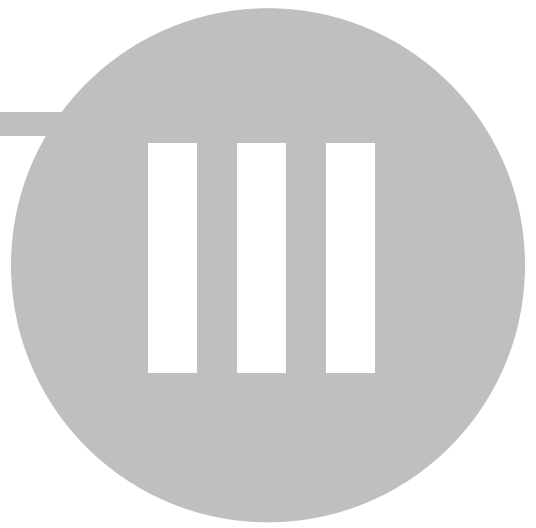
---

**XSD**

```
<xs:complexType name="Zernikes12">
  <xs:complexContent>
    <xs:extension base="Zernikes11">
      <xs:sequence>
        <xs:element name="z_12_M12" type="xs:float"/>
        <xs:element name="z_12_M10" type="xs:float"/>
        <xs:element name="z_12_M8" type="xs:float"/>
        <xs:element name="z_12_M6" type="xs:float"/>
        <xs:element name="z_12_M4" type="xs:float"/>
        <xs:element name="z_12_M2" type="xs:float"/>
        <xs:element name="z_12_0" type="xs:float"/>
        <xs:element name="z_12_2" type="xs:float"/>
        <xs:element name="z_12_4" type="xs:float"/>
        <xs:element name="z_12_6" type="xs:float"/>
        <xs:element name="z_12_8" type="xs:float"/>
        <xs:element name="z_12_10" type="xs:float"/>
        <xs:element name="z_12_12" type="xs:float"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

---

# Chapter





## 3 XSD - Versionen

### 3.1 Version 1.2.3

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.4 U (http://www.xmlspy.com) by Carl Zeiss (Carl Zeiss) -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified"
attributeFormDefault="unqualified" version="1.2.3">
  <xs:element name="b2bOptic">
    <xs:annotation>
      <xs:documentation/>
    </xs:annotation>
    <xs:complexType>
      <xs:sequence>
        <xs:element name="header" type="Header"/>
        <xs:element name="items">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="item" type="Item"
maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="experimental" type="xs:anyType" minOccurs
="0" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:simpleType name="MsgTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="ORDER"/>
      <xs:enumeration value="REQUEST"/>
      <xs:enumeration value="CALCULATION"/>
      <xs:enumeration value="VALIDATION"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BevelPosType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="AUTO"/>
      <xs:enumeration value="FRONT"/>
      <xs:enumeration value="BACK"/>
      <xs:enumeration value="RELATION"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BevelTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NORMAL"/>
      <xs:enumeration value="FLAT"/>
      <xs:enumeration value="GROOVED"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="SoftwareTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="ORIGINATOR"/>
      <xs:enumeration value="VERIFIER"/>
      <xs:enumeration value="SENDER"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MsgStates">
    <xs:restriction base="xs:string">
      <xs:enumeration value="NEW"/>
      <xs:enumeration value="UPDATE"/>
      <xs:enumeration value="CANCEL"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="MsgSteps">
    <xs:restriction base="xs:string">
      <xs:enumeration value="CREATE"/>
      <xs:enumeration value="TRANSFER"/>
      <xs:enumeration value="RECEIPT"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="Roles">
```

```

        <xs:restriction base="xs:string">
            <xs:enumeration value="ORIGINATOR" />
            <xs:enumeration value="SUPPLIER" />
            <xs:enumeration value="SHIPTO" />
            <xs:enumeration value="CARRIER" />
            <xs:enumeration value="INVOICETO" />
            <xs:enumeration value="PAIDBY" />
            <xs:enumeration value="MANUFACTURER" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="FrameMaterials">
        <xs:restriction base="xs:string">
            <xs:enumeration value="METAL" />
            <xs:enumeration value="PLASTIC" />
            <xs:enumeration value="OPTYL" />
            <xs:enumeration value="NYLOR" />
            <xs:enumeration value="DRILLED" />
            <xs:enumeration value="SPECIAL" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="HeightReferences">
        <xs:restriction base="xs:string">
            <xs:enumeration value="OVERBOX" />
            <xs:enumeration value="OVERSHAPE" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="OCReferences">
        <xs:restriction base="xs:string">
            <xs:enumeration value="FAR" />
            <xs:enumeration value="NEAR" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="CoatingTypes">
        <xs:restriction base="xs:string">
            <xs:enumeration value="COLOR" />
            <xs:enumeration value="UV" />
            <xs:enumeration value="ANTIREFLEX" />
            <xs:enumeration value="HARD" />
            <xs:enumeration value="CLEAN" />
            <xs:enumeration value="OTHER" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="EdgingType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="NONE" />
            <xs:enumeration value="ROUGHING" />
            <xs:enumeration value="ONSHAPE" />
            <xs:enumeration value="GIVENFRAME" />
            <xs:enumeration value="ORDEREDFRAME" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="AngleDimension">
        <xs:restriction base="xs:string">
            <xs:enumeration value="DEG" />
            <xs:enumeration value="RAD" />
            <xs:enumeration value="MM" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="Currencies">
        <xs:restriction base="xs:string">
            <xs:length value="3" />
            <xs:enumeration value="EUR" />
            <xs:enumeration value="USD" />
            <xs:enumeration value="SFR" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="Sides">
        <xs:restriction base="xs:string">
            <xs:enumeration value="RIGHT" />
            <xs:enumeration value="LEFT" />
            <xs:enumeration value="UNDEFINED" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ThicknessReferences">
        <xs:restriction base="xs:string">

```

```

        <xs:enumeration value="REDUCEWITHSHAPE" />
        <xs:enumeration value="CENTER" />
        <xs:enumeration value="EDGE" />
        <xs:enumeration value="DRILLHOLE" />
        <xs:enumeration value="FORNYLOR" />
        <xs:enumeration value="THIN" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DeliveryMethods">
    <xs:restriction base="xs:string" />
</xs:simpleType>
<xs:simpleType name="References">
    <xs:restriction base="xs:string">
        <xs:enumeration value="BOXCENTER" />
        <xs:enumeration value="OPTCENTER" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="TimeStamps">
    <xs:sequence>
        <xs:element name="dateTime">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:dateTime">
                        <xs:attribute name="step" type="
MsgSteps" use="required" />
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CurrencyValue">
    <xs:sequence>
        <xs:element name="Value" form="qualified">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:float">
                        <xs:attribute name="currency" type="
Currencies" use="required" />
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Software">
    <xs:sequence>
        <xs:element name="name" type="xs:string" />
        <xs:element name="version" type="xs:string" />
    </xs:sequence>
    <xs:attribute name="typeOf" type="SoftwareTypes" use="required" />
</xs:complexType>
<xs:complexType name="ProductCatalog">
    <xs:sequence>
        <xs:element name="name" type="xs:string">
            <xs:annotation>
                <xs:documentation>i.e. "IPRO STANDARD": currently
ignored</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="version" type="xs:string">
            <xs:annotation>
                <xs:documentation>i.e. "6.2": currently ignored</
msg:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="release" type="xs:string">
            <xs:annotation>
                <xs:documentation>when was the catalogue released or
a release-version: currently ignored</xs:documentation>
            </xs:annotation>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Account">

```

```

        <xs:sequence>
          <xs:element name="id">
            <xs:complexType>
              <xs:simpleContent>
                <xs:extension base="xs:string">
                  <xs:attribute name="memberShipID" type
="xs:long" use="optional" default="1">
                    <xs:annotation>
                      <xs:documentation>CZ:
For further use: Specify the membership-id to support different customerid's for different
brands.</xs:documentation>
                    </xs:annotation>
                  </xs:attribute>
                </xs:extension>
              </xs:simpleContent>
            </xs:complexType>
          </xs:element>
          <xs:element name="name" type="xs:string" minOccurs="0">
            <xs:annotation>
              <xs:documentation>CZ: currently ignored</
xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="address" type="Address" minOccurs="0">
            <xs:annotation>
              <xs:documentation>CZ: currently ignored</
xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="contact" type="ContactInfo" minOccurs="0">
            <xs:annotation>
              <xs:documentation>CZ: currently ignored</
xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="Address">
        <xs:sequence>
          <xs:element name="addressLine" type="xs:string" minOccurs="0"
maxOccurs="3"/>
          <xs:element name="poBox" type="xs:string" minOccurs="0"/>
          <xs:choice minOccurs="0">
            <xs:element name="province" type="xs:string"/>
            <xs:element name="region" type="xs:string"/>
            <xs:element name="state" type="xs:string"/>
          </xs:choice>
          <xs:element name="city" type="xs:string"/>
          <xs:element name="zip" type="xs:string"/>
          <xs:element name="countryCode" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="ContactInfo">
        <xs:sequence>
          <xs:element name="title" type="xs:string" minOccurs="0"/>
          <xs:element name="firstName" type="xs:string" minOccurs="0"/>
          <xs:element name="lastName" type="xs:string"/>
          <xs:element name="phone" type="xs:string" minOccurs="0" maxOccurs="
unbounded"/>
          <xs:element name="fax" type="xs:string" minOccurs="0" maxOccurs="
unbounded"/>
          <xs:element name="eMail" type="xs:string" minOccurs="0" maxOccurs="
unbounded"/>
        </xs:sequence>
      </xs:complexType>
      <xs:complexType name="Lens">
        <xs:sequence>
          <xs:element name="commercialCode" type="xs:string"/>
          <xs:choice>
            <xs:sequence>
              <xs:element name="rxData">
                <xs:complexType>
                  <xs:complexContent>
                    <xs:extension base="RXDataType
"/>

```

```

        </xs:complexContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="coating" minOccurs="0" maxOccurs="
unbounded">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="
commercialCode" type="xs:string"/>
          <xs:element name="minIntensity"
            type="xs:integer" minOccurs="0">
              <xs:annotation>
                <
xs:documentation>Minimum color intensity for tinting as a percentage: currently ignored</
xs:documentation>
              </xs:annotation>
            </xs:element>
          <xs:element name="maxIntensity"
            type="xs:integer" minOccurs="0">
              <xs:annotation>
                <
xs:documentation>Maximum color intensity for tinting as a percentage: currently ignored</
xs:documentation>
              </xs:annotation>
            </xs:element>
        </xs:sequence>
        <xs:attribute name="coatingType" type
="CoatingTypes" use="optional"/>
      </xs:complexType>
    </xs:element>
    <xs:element name="centration" type="Centration"
minOccurs="0"/>
      <xs:element name="geometry" type="GeometryType"/>
      <xs:element name="options" minOccurs="0">
        <xs:complexType>
          <xs:sequence>
            <xs:choice minOccurs="0">
              <xs:element name="
occlusion" type="xs:boolean"/>
              <xs:element name="
frosted" type="xs:boolean">
                <xs:annotation>
                  <
xs:documentation>mattieren</xs:documentation>
                </xs:annotation>
            </xs:choice>
            <xs:element name="slabOff"
              type="xs:complexType"
              <
xs:simpleContent>
                <xs:extension base="xs:boolean">
                  <xs:attribute name="value" use="optional">
                    <xs:simpleType>
                      <xs:restriction base="xs:float">
                        <xs:minInclusive value="1.3"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:attribute>
                </xs:extension>
              </xs:simpleContent>
            </xs:complexType>
          </xs:element>

```

```

type="xs:boolean" minOccurs="0">
  <xs:documentation>CZ: currently ignored</xs:documentation>
  minOccurs="0">
    <xs:documentation>CZ: currently ignored</xs:documentation>
    <xs:simpleContent>
      <xs:extension base="xs:boolean">
        <xs:attribute name="value" type="xs:float" use="optional"/>
      </xs:extension>
    </xs:simpleContent>
    default="back" minOccurs="0">
      <xs:documentation>CZ: currently ignored</xs:documentation>
      base="xs:string">
        <xs:enumeration value="front"/>
        <xs:enumeration value="back"/>
      </xs:restriction>
    </xs:restriction>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="toric"
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction
      <xs:enumeration value="front"/>
      <xs:enumeration value="back"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="frameFit" minOccurs="0">
  <xs:annotation>
    <xs:documentation>CZ: Size correction
    for the length of progression zone.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="engraving" minOccurs="0">
  <xs:annotation>
    <xs:documentation>CZ: Individual
    gravure text, max five characters. Note: Not all characters supported!</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
</xs:element>
</xs:sequence>
<xs:sequence>
  <xs:annotation>
    <xs:documentation>for repeated orders:
    currently ignored</xs:documentation>
  </xs:annotation>
  <xs:element name="remakeType" type="xs:string"/>
  <xs:element name="originalOrderId" type="xs:string"/>
  <xs:element name="reason" type="xs:string"/>
</xs:choice>
<xs:element name="experimental" type="xs:anyType" minOccurs="0"
maxOccurs="unbounded"/>
</xs:sequence>

```

```

<xs:attribute name="side" type="Sides" use="required"/>
<xs:attribute name="balancingLens" type="xs:boolean" use="optional" default
="0"/>
<xs:attribute name="virtualLens" type="xs:boolean" use="optional" default="
0">
    <xs:annotation>
        <xs:documentation>CZ: currently ignored</xs:documentation>
    </xs:annotation>
</xs:attribute>
</xs:complexType>
<xs:complexType name="StockLens">
    <xs:sequence>
        <xs:element name="commercialCode" type="xs:string"/>
        <xs:element name="rxData" type="RXDataType4SL"/>
        <xs:element name="coating" minOccurs="0" maxOccurs="unbounded">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="commercialCode"/>
                    <xs:element name="minIntensity" type="
xs:integer" minOccurs="0">
                        <xs:annotation>
                            <xs:documentation>Minimum
color intensity for tinting as a percentage</xs:documentation>
                        </xs:annotation>
                    </xs:element>
                    <xs:element name="maxIntensity" type="
xs:integer" minOccurs="0">
                        <xs:annotation>
                            <xs:documentation>Maximum
color intensity for tinting as a percentage</xs:documentation>
                        </xs:annotation>
                    </xs:element>
                </xs:sequence>
                <xs:attribute name="coatingType" type="CoatingTypes"
use="optional"/>
            </xs:complexType>
        </xs:element>
        <xs:element name="diameter">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="physical">
                        <xs:simpleType>
                            <xs:restriction base="
xs:integer">
                                <xs:minInclusive value
="1"/>
                                <xs:maxInclusive value
="99"/>
                            </xs:restriction>
                        </xs:simpleType>
                    </xs:element>
                    <xs:element name="optical" minOccurs="0">
                        <xs:annotation>
                            <xs:documentation>only if
predecentrated</xs:documentation>
                        </xs:annotation>
                        <xs:simpleType>
                            <xs:restriction base="
xs:integer">
                                <xs:minInclusive value
="1"/>
                                <xs:maxInclusive value
="99"/>
                            </xs:restriction>
                        </xs:simpleType>
                    </xs:element>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="RXDataType">
    <xs:choice>
        <xs:sequence>
            <xs:element name="sphere">

```

```

        <xs:simpleType>
          <xs:restriction base="xs:float">
            <xs:minInclusive value="-50"/>
            <xs:maxInclusive value="50"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:element>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
    <xs:element name="addition" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.25"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="prism" minOccurs="0" maxOccurs="2">
      <xs:complexType>
        <xs:complexContent>
          <xs:extension base="Prism">
            <xs:attribute name="
pupillary-distance-correction" use="optional">
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:element name="trialFrame" type="TrialFrame">
    <xs:annotation>
      <xs:documentation>centration data needed: currently
ignored</xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:choice>
</xs:complexType>
<xs:complexType name="RXDataType4SL">
  <xs:sequence>
    <xs:element name="sphere">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-50"/>
          <xs:maxInclusive value="50"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
    <xs:element name="addition" minOccurs="0">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.25"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Centration">
  <xs:sequence>
    <xs:element name="monocularCentrationDistance">
      <xs:annotation>
        <xs:documentation>CZ: see @reference annotation</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```



```

        <xs:simpleContent>
          <xs:extension base="xs:float">
            <xs:attribute name="reference" type="
OCReferences" use="required">
              <xs:annotation>
                <xs:documentation>CZ:
Currently only FAR supported, NEAR will be ignored!</xs:documentation>
              </xs:annotation>
            </xs:attribute>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="height">
      <xs:annotation>
        <xs:documentation>CZ: see @reference annotation</
xs:documentation>
      </xs:annotation>
    </xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float">
        <xs:attribute name="reference" type="
OCReferences" use="required">
          <xs:annotation>
            <xs:documentation>FAR -
> Y-> H</xs:documentation>
          </xs:annotation>
        </xs:attribute>
      <xs:attribute name="referenceHeight"
type="HeightReferences" use="required"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
</xs:element>
<xs:element name="backVertexDistance" minOccurs="0">
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float"/>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
<xs:complexType name="Shape">
  <xs:sequence>
    <xs:element name="perimeter" type="xs:float">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="points">
      <xs:complexType>
        <xs:choice>
          <xs:element name="pPoints" type="PPoint"
minOccurs="18" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>CZ: In an
order (header[@msgType=ORDER]) any number of polar coordinates other than 36 will result
in an exception thrown to the client. YOU HAVE BEEN WARNED!</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="cPoints" type="CPoint"
minOccurs="18" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>CZ:
currently ignored - use polar coordinates instead!</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:choice>
      </xs:complexType>
    </xs:element>
    <xs:attribute name="dimensions" type="xs:integer" use
="required"/>
    <xs:attribute name="reference" type="References" use
="optional"/>
  </xs:complexType>

```

```

        </xs:element>
      </xs:sequence>
    </xs:complexType>
  <xs:complexType name="CPoint">
    <xs:sequence>
      <xs:element name="x" type="xs:float">
        <xs:annotation>
          <xs:documentation>mm</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="y" type="xs:float">
        <xs:annotation>
          <xs:documentation>mm</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="z" type="xs:float" minOccurs="0">
        <xs:annotation>
          <xs:documentation>mm</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="PPoint">
    <xs:sequence>
      <xs:element name="angle">
        <xs:complexType>
          <xs:simpleContent>
            <xs:extension base="xs:float">
              <xs:attribute name="dimension" type="
AngleDimension" use="optional" default="DEG"/>
            </xs:extension>
          </xs:simpleContent>
        </xs:complexType>
      </xs:element>
      <xs:element name="radius" type="xs:float">
        <xs:annotation>
          <xs:documentation>mm</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="z" type="xs:float" minOccurs="0">
        <xs:annotation>
          <xs:documentation>mm: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Size">
    <xs:sequence>
      <xs:element name="width" type="xs:float"/>
      <xs:element name="height" type="xs:float"/>
      <xs:element name="bridge" type="xs:float"/>
      <xs:element name="templeLength" type="xs:float" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Bevel">
    <xs:sequence>
      <xs:element name="type" type="BevelTypes"/>
      <xs:element name="position" minOccurs="0" maxOccurs="2">
        <xs:annotation>
          <xs:documentation>in case of FRONT, BACK: [mm]
distance to front/back. In case of RELATED: [%] front/back-dist.
</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="BevelPosType">
    <xs:simpleContent>
      <xs:extension base="xs:float">
        <xs:attribute name="posType" type="
BevelPosType" use="optional" default="AUTO"/>
        <xs:attribute name="side" type="Sides"
use="optional"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>

```

```
<xs:element name="grooveDepth" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="grooveWidth" type="xs:float" minOccurs="0">
    <xs:annotation>
      <xs:documentation>CZ: currently ignored</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Curve">
  <xs:choice>
    <xs:element name="flat" type="xs:boolean"/>
    <xs:element name="moreCurved" type="xs:boolean">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="baseCurve" type="xs:float">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="planoConcave" type="xs:boolean">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="planoConvex" type="xs:boolean">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="biConcave" type="xs:boolean">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="biConvex" type="xs:boolean">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
  </xs:choice>
</xs:complexType>
<xs:complexType name="Header">
  <xs:sequence>
    <xs:element name="cultureId" type="xs:string">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="customersOrderId" type="xs:string">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
    <xs:element name="distributorsOrderId" type="xs:string">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
  </xs:sequence>
</xs:complexType>
```

```

        <xs:element name="timeStamps" type="TimeStamps" maxOccurs="unbounded"
">
            <xs:annotation>
                <xs:documentation>CZ: currently ignored</
xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="remark" type="xs:string" minOccurs="0">
            <xs:annotation>
                <xs:documentation>CZ: Any comments or remarks are
effectively ignored!</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="orderParties" maxOccurs="unbounded">
            <xs:annotation>
                <xs:documentation>CZ: at least one entry with @role
ORIGINATOR or INVOICETO should be present, unless present under items/parties; serves as
default - if nothing is specified in items branch, these entries are used</
xs:documentation>
            </xs:annotation>
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="Account">
                        <xs:attribute name="role" type="Roles"
use="required"/>
                    </xs:extension>
                </xs:complexContent>
            </xs:complexType>
            <xs:element name="software" type="Software" maxOccurs="unbounded"/>
            <xs:element name="productCatalog" type="ProductCatalog"/>
            <xs:element name="portalOrderId" type="xs:string">
                <xs:annotation>
                    <xs:documentation>retailer's order id: currently
ignored</xs:documentation>
                </xs:annotation>
            </xs:element>
        </xs:sequence>
        <xs:attribute name="msgType" type="MsgTypes" use="optional" default="
REQUEST"/>
        <xs:attribute name="msgState" type="MsgStates" use="optional" default="NEW
"/>
        <xs:attribute name="testIndicator" type="xs:boolean" use="optional" default
="0"/>
    </xs:complexType>
    <xs:complexType name="Item">
        <xs:sequence>
            <xs:element name="remark" type="xs:string" minOccurs="0">
                <xs:annotation>
                    <xs:documentation>CZ: Any comments or remarks are
effectively ignored!</xs:documentation>
                </xs:annotation>
            </xs:element>
            <xs:element name="parties" minOccurs="0" maxOccurs="unbounded">
                <xs:annotation>
                    <xs:documentation>if not given use defaults from
header: selection rules:
@role ORIGINATOR will receive invoice if no @role INVOICETO is presentno @role SHIPTO is
present, the recipient of the invoice will also become recipient of the goods</
xs:documentation>
                </xs:annotation>
            </xs:complexType>
                <xs:complexContent>
                    <xs:extension base="Account">
                        <xs:attribute name="role" type="Roles"
use="required"/>
                    </xs:extension>
                </xs:complexContent>
            </xs:complexType>
            <xs:element name="referenceNo" type="xs:string">
                <xs:annotation>
                    <xs:documentation>i.e. buyer's job no.</
xs:documentation>
                </xs:annotation>
            </xs:element>
        </xs:sequence>
    </xs:complexType>

```

```

</xs:element>
<xs:element name="referenceText" type="xs:string" minOccurs="0">
  <xs:annotation>
    <xs:documentation>i.e. buyer's commission: currently
ignored - use referenceNo also for textual references (commission)</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="requestedDate" type="xs:date" minOccurs="0">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="deliveryMethod">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
  </xs:annotation>
<xs:complexType>
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="deliveryType" type
="DeliveryMethods" use="optional">
        <xs:annotation>
          <xs:documentation>
enumeration of predefined methodes
</xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
</xs:element>
<xs:element name="manufacturer" type="xs:string">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
  </xs:annotation>
</xs:element>
<xs:choice>
  <xs:element name="pair" type="Pair"/>
  <xs:element name="stockLens">
    <xs:annotation>
      <xs:documentation>CZ: currently ignored</
xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="StockLens">
        <xs:attribute name="quantity"
type="xs:integer" use="required"/>
        <xs:attribute name="side" type
="Sides" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
<xs:element name="semi">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
  </xs:annotation>
</xs:element>
</xs:choice>
<xs:element name="options" minOccurs="0">
  <xs:annotation>
    <xs:documentation>CZ: currently ignored</
xs:documentation>
  </xs:annotation>
<xs:complexType>
  <xs:sequence>
    <xs:element name="insurance" type="xs:integer
" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:element>
      </xs:sequence>
    </xs:complexType>
  <xs:complexType name="Frame">
    <xs:sequence>
      <xs:element name="material" type="FrameMaterials">
        <xs:annotation>
          <xs:documentation>CZ: currently recognized: METAL,
PLASTIC, NYLOR, SPECIAL</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="manufacturer" type="xs:string" minOccurs="0"/>
      <xs:element name="brand" type="xs:string" minOccurs="0">
        <xs:annotation>
          <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="model" type="xs:string" minOccurs="0"/>
      <xs:element name="size" type="Size" minOccurs="0">
        <xs:annotation>
          <xs:documentation>Nominal size information as given
from frame manufacturer: currently ignored - use size elements under shape!</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="color" type="xs:string" minOccurs="0">
        <xs:annotation>
          <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="commercialCode" type="xs:string" minOccurs="0">
        <xs:annotation>
          <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="shape" minOccurs="0">
        <xs:complexType>
          <xs:sequence>
            <xs:choice>
              <xs:element name="catalog">
                <xs:annotation>
                  <xs:documentation>for
thicknessreduction: currently ignored</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:sequence>
                <xs:element
name="shapeId" type="xs:string"/>
              </xs:sequence>
            </xs:choice>
          </xs:complexType>
        </xs:element>
        <xs:element name="explicit" type="
Shape" maxOccurs="2">
          <xs:annotation>
            <xs:documentation>CZ:
If explicit occurs once, data is assumed to belong to the right lens - no matter if there
is only a right lens, only a left lens or two lenses in the document. If explicit occurs
twice, the first occurrence is assumed to belong to the right lens, the second to the left
lens respectively - again no matter how many lenses are really contained in the document
under pair/lens</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="tracerData">
          <xs:annotation>
            <xs:documentation>
necessary for remoteEdging/Presize</xs:documentation>
          </xs:annotation>
        </xs:complexType>
      </xs:sequence>
    </xs:element>
    name="tracerBrand" type="xs:string">

```

&lt;

```
xs:annotation>
<xs:documentation>i.e. "Briot", "Essilor", "Nidek"</xs:documentation>
xs:annotation>
name="tracerType">
xs:annotation>
<xs:documentation>i.e. "Scanform Net 2", "Phi": currently ignored</xs:documentation>
xs:annotation>
xs:simpleType>
<xs:restriction base="xs:string">
  <xs:enumeration value="Hoya 3DFT"/>
  <xs:enumeration value="Hoya GT1000"/>
  <xs:enumeration value="Hoya GT3000"/>
  <xs:enumeration value="Hoya GT3000 OMA"/>
  <xs:enumeration value="Hoya UT1000"/>
  <xs:enumeration value="Essilor Gamma"/>
  <xs:enumeration value="Essilor PHI PCCOM"/>
  <xs:enumeration value="Essilor PHI OMA"/>
  <xs:enumeration value="Essilor Kappa PCCOM"/>
  <xs:enumeration value="Essilor Kappa OMA"/>
  <xs:enumeration value="National Optronics 4T"/>
  <xs:enumeration value="Briot ScanfomNet I"/>
  <xs:enumeration value="Briot ScanfomNet II"/>
  <xs:enumeration value="Weco 3DFT+"/>
  <xs:enumeration value="Weco Trace II"/>
  <xs:enumeration value="Weco Trace III"/>
  <xs:enumeration value="Nidek LT700"/>
  <xs:enumeration value="Nidek LT900"/>
  <xs:enumeration value="Nidek LT1000"/>
  <xs:enumeration value="Indo NDK"/>
  <xs:enumeration value="Indo OMA"/>
  <xs:enumeration value="Topcon FR50"/>
  <xs:enumeration value="Takubomatic FD80"/>
  <xs:enumeration value="Unknown"/>
</xs:restriction>
xs:simpleType>
name="tracerVersion" type="xs:string">
xs:annotation>
```

```

<xs:documentation>CZ: currently ignored</xs:documentation>
xs:annotation>
</xs:element>
name="tracerID" type="xs:string" minOccurs="0">
<xs:element
xs:annotation>
</xs:element>
<xs:documentation>CZ: Serial number of the tracer</xs:documentation>
xs:annotation>
</xs:element>
name="binaries">
<xs:element
xs:complexType>
<xs:simpleContent>
  <xs:extension base="xs:hexBinary">
    <xs:attribute name="format" type="xs:string">
      <xs:annotation>
        <xs:documentation>use common values. i.e. "OMA", "NIDEK",
"MO1", "WECO"...</xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:extension>
</xs:simpleContent>
xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
<xs:element name="adjustion" type="xs:float"
minOccurs="0">
  <xs:annotation>
    <xs:documentation>general size
adjustion parameter: Size correction in the Nidek data set.</xs:documentation>
  </xs:annotation>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="boxWidth" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>measured box width for size
transformations</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="boxHeight" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>measured box height for size
transformations</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="distanceBetweenLenses" type="xs:float" minOccurs="
0">
  <xs:annotation>
    <xs:documentation>measured dbl for calculation
purposes</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="drillHoles" minOccurs="0" maxOccurs="2">
  <xs:annotation>

```



```

        <xs:documentation>CZ: If attribute side is UNDEFINED
and drillHoles occurs only once the drillhole values are mirrored from right to left side
</xs:documentation>
        </xs:annotation>
        <xs:complexType>
            <xs:complexContent>
                <xs:extension base="DrillHoles">
                    <xs:attribute name="side" type="Sides"
use="prohibited"/>
                </xs:extension>
            </xs:complexContent>
        </xs:complexType>
    </xs:element>
    <xs:element name="pantoscopicAngle" minOccurs="0">
        <xs:complexType>
            <xs:simpleContent>
                <xs:extension base="xs:float">
                    <xs:attribute name="dimension" type="
AngleDimension" use="optional" default="DEG"/>
                </xs:extension>
            </xs:simpleContent>
        </xs:complexType>
    </xs:element>
    <xs:element name="frameBowAngle" minOccurs="0">
        <xs:annotation>
            <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
        <xs:complexType>
            <xs:simpleContent>
                <xs:extension base="xs:float">
                    <xs:attribute name="dimension" type="
AngleDimension" use="optional" default="DEG"/>
                </xs:extension>
            </xs:simpleContent>
        </xs:complexType>
    </xs:element>
    <xs:element name="remark" type="xs:string" minOccurs="0">
        <xs:annotation>
            <xs:documentation>CZ: Any comments or remarks are
effectively ignored!</xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="frameCurve" type="xs:float" minOccurs="0">
        <xs:annotation>
            <xs:documentation>CZ: currently ignored</
xs:documentation>
        </xs:annotation>
    </xs:element>
    </xs:sequence>
    <xs:attribute name="quantity" type="xs:integer" use="required"/>
</xs:complexType>
<xs:complexType name="TrialFrame">
    <xs:sequence>
        <xs:element name="sphere" minOccurs="0">
            <xs:simpleType>
                <xs:restriction base="xs:float">
                    <xs:minInclusive value="-50"/>
                    <xs:maxInclusive value="50"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
        <xs:element name="prism" type="Prism" maxOccurs="2"/>
        <xs:element name="decentration">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="horizontal" type="xs:float"
"/>
                    <xs:element name="vertical" type="xs:float"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="back-vertex-distance" type="xs:float"/>
    </xs:sequence>

```

```

</xs:complexType>
<xs:complexType name="Prism">
  <xs:sequence>
    <xs:element name="power" type="xs:float" />
    <xs:element name="base">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.0" />
          <xs:maxInclusive value="360.0" />
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Cylinder">
  <xs:sequence>
    <xs:element name="power" type="xs:float" />
    <xs:element name="base">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.0" />
          <xs:maxInclusive value="360.0" />
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="DrillHoles">
  <xs:choice>
    <xs:element name="pDrillHole" maxOccurs="4">
      <xs:annotation>
        <xs:documentation>CZ: currently ignored - use
cDrillHole instead</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:sequence>
          <xs:element name="point" maxOccurs="2">
            <xs:complexType>
              <xs:sequence>
                <xs:element name="angle"
" >
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:complexType>
    </xs:choice>
  </xs:complexType>
  <xs:extension base="xs:float" />
  <xs:simpleContent>
    </xs:element>
    <xs:element name="
radius" type="xs:float">
      <xs:annotation>
        <xs:documentation>mm</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="z"
type="xs:float" minOccurs="0">
      <xs:annotation>
        <xs:documentation>mm</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:element name="cDrillHole" maxOccurs="4">

```

```

        <xs:complexType>
          <xs:sequence>
            <xs:element name="point" maxOccurs="2">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="x"
                    type="xs:float">
                      <xs:annotation>
                        <
                          </xs:annotation>
                        </xs:element>
                      <xs:element name="y"
                    type="xs:float">
                      <xs:annotation>
                        <
                          </xs:annotation>
                        </xs:element>
                      <xs:element name="z"
                    type="xs:float" minOccurs="0">
                      <xs:annotation>
                        <
                          </xs:annotation>
                        </xs:element>
                      <xs:documentation>mm: currently ignored</xs:documentation>
                    >
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:choice>
      </xs:complexType>
      <xs:complexType name="Pair">
        <xs:sequence>
          <xs:element name="patient" minOccurs="0">
            <xs:complexType>
              <xs:complexContent>
                <xs:extension base="Account">
                  <xs:sequence minOccurs="0">
                    <xs:element name="
classification" minOccurs="0" maxOccurs="unbounded">
                      <xs:annotation>
                        <
                          </xs:annotation>
                        </xs:complexType>
                      <
                    </xs:complexType>
                    <xs:extension base="xs:string">
                      <xs:attribute name="typeOfClass" type="xs:string" use="required"/>
                    </xs:extension>
                  </xs:complexType>
                </xs:element>
                <xs:element name="mailAllowed"
                  type="xs:boolean" minOccurs="0">
                  <xs:annotation>
                    <
                      </xs:annotation>
                    </xs:element>
                  <xs:element name="dateOfBirth"
                    type="xs:date" minOccurs="0">
                    <xs:annotation>
                      <
                        </xs:annotation>
                      </xs:documentation>
                    >
                  </xs:complexType>
                </xs:element>
              </xs:complexType>
            </xs:sequence>
          </xs:complexType>
        </xs:choice>
      </xs:complexType>
    </xs:sequence>
  </xs:complexType>

```

```

interpupillaryDistance" type="xs:float" minOccurs="0">
    </xs:annotation>
</xs:element>
<xs:element name="
    </xs:annotation>
    <
xs:documentation>CZ: currently ignored</xs:documentation>
    </xs:annotation>
</xs:element>
<xs:element name="
nearObjectDistance" type="xs:float" minOccurs="0"/>
    </xs:sequence>
    </xs:extension>
    </xs:complexContent>
    </xs:complexType>
</xs:element>
<xs:element name="lens" maxOccurs="2">
    <xs:complexType>
        <xs:complexContent>
            <xs:extension base="Lens">
                <xs:attribute name="quantity" type="
xs:integer" use="required">
                    <xs:annotation>
                        <xs:documentation>CZ:
any quantity other than 1 will result in an exception thrown to the client! YOU HAVE BEEN
WARNED!</xs:documentation>
                    </xs:annotation>
                    </xs:attribute>
                </xs:extension>
            </xs:complexContent>
        </xs:complexType>
</xs:element>
<xs:element name="frame" type="Frame" minOccurs="0"/>
<xs:element name="edging" minOccurs="0">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="bevel">
                <xs:complexType>
                    <xs:complexContent>
                        <xs:extension base="
Bevel"/>
                    </xs:complexContent>
                </xs:complexType>
            </xs:element>
            <xs:element name="polish" type="xs:boolean"/>
            <xs:element name="chamfer" type="xs:integer">
                <xs:annotation>
                    <xs:documentation>Bitmap:
0=no, 1=front, 2=back, 4=strong, : currently ignored</xs:documentation>
                </xs:annotation>
            </xs:element>
            <xs:element name="ignoreFlags" type="
xs:string" minOccurs="0" maxOccurs="unbounded">
                <xs:annotation>
                    <xs:documentation>CZ:
currently ignored</xs:documentation>
                </xs:annotation>
            </xs:element>
        </xs:sequence>
        <xs:attribute name="edgingType" type="EdgingType" use
="required"/>
    </xs:complexType>
</xs:element>
<xs:element name="remark" type="xs:string" minOccurs="0">
    <xs:annotation>
        <xs:documentation>CZ: Any comments or remarks are
effectively ignored!</xs:documentation>
    </xs:annotation>
</xs:element>
</xs:sequence>
<xs:attribute name="thicknessMatching" type="xs:integer" use="optional">
    <xs:annotation>
        <xs:documentation>0=UNDEF, 1=MID, 2=EDGE</xs:documentation>
        <xs:documentation>CZ: value 2 currently ignored</
xs:documentation>

```

```

        </xs:annotation>
    </xs:attribute>
    <xs:attribute name="weightMatching" type="xs:boolean" use="optional">
        <xs:annotation>
            <xs:documentation>CZ: currently ignored</xs:documentation>
        </xs:annotation>
    </xs:attribute>
    <xs:attribute name="prismMatching" type="xs:boolean" use="optional">
        <xs:annotation>
            <xs:documentation>CZ: currently ignored</xs:documentation>
        </xs:annotation>
    </xs:attribute>
    <xs:attribute name="baseMatching" type="xs:boolean" use="optional">
        <xs:annotation>
            <xs:documentation>CZ: currently ignored</xs:documentation>
        </xs:annotation>
    </xs:attribute>
</xs:complexType>
<xs:complexType name="GeometryType">
    <xs:sequence>
        <xs:element name="diameter">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="physical">
                        <xs:annotation>
                            <xs:documentation>
Physikalischer Durchmesser</xs:documentation>
                        </xs:annotation>
                    <xs:simpleType>
                        <xs:restriction base="
xs:integer">
                            <xs:minInclusive value
="1"/>
                            <xs:maxInclusive value
="99"/>
                        </xs:restriction>
                    </xs:simpleType>
                </xs:element>
                <xs:element name="optical" minOccurs="0">
                    <xs:annotation>
                        <xs:documentation>Optisch
wirksamer Durchmesser - nur vorhanden, falls unterschiedlich vom physikalischen
Durchmesser (also bei vordezentrierten Glaesern): currently ignored</xs:documentation>
                    </xs:annotation>
                    <xs:simpleType>
                        <xs:restriction base="
xs:integer">
                            <xs:minInclusive value
="1"/>
                            <xs:maxInclusive value
="99"/>
                        </xs:restriction>
                    </xs:simpleType>
                </xs:element>
                <xs:element name="encoded" type="xs:string"
minOccurs="0">
                    <xs:annotation>
                        <xs:documentation>i.e. for
Essilor's "commercial diameter": currently ignored</xs:documentation>
                    </xs:annotation>
                </xs:element>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="decentration" minOccurs="0">
        <xs:complexType>
            <xs:choice>
                <xs:sequence>
                    <xs:element name="length">
                        <xs:simpleType>
                            <xs:restriction base="
xs:float">
                                <
xs:minInclusive value="0.1"/>
                            <

```

```

xs:maxInclusive value="40.0"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="direction">
  <xs:simpleType>
    <xs:restriction base="
xs:float">
      <
xs:minInclusive value="0.0"/>
      <
xs:maxInclusive value="360.0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:sequence>
<xs:sequence>
  <xs:annotation>
    <xs:documentation>CZ:
currently ignored - use length - direction instead!</xs:documentation>
  </xs:annotation>
  <xs:element name="horizontal" type="
xs:float"/>
  <xs:element name="vertical" type="
xs:float"/>
</xs:sequence>
</xs:choice>
<xs:attribute name="origin" use="optional" default="
internal">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="
internal"/>
      <xs:enumeration value="
customer"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
</xs:complexType>
</xs:element>
<xs:element name="thickness" minOccurs="0">
  <xs:annotation>
    <xs:documentation>this means "minimum thickness". The
real thickness can even be larger.: minimum center thickness</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:float">
        <xs:attribute name="reference" type="
ThicknessReferences" use="required"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
<xs:element name="thicknessReduction" type="xs:boolean" minOccurs="0"
">
  <xs:annotation>
    <xs:documentation>CZ: Flag for our Optima</
xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="curve" type="Curve" minOccurs="0"/>
<xs:element name="inset" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>for lenses with variable insets:
currently ignored</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="upset" type="xs:float" minOccurs="0">
  <xs:annotation>
    <xs:documentation>for lenses with variable upsets:
currently ignored</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="progressionLength" type="xs:float" minOccurs="0">

```

---

```
        <xs:annotation>
          <xs:documentation>for progressive lenses with
variable length of progressionzone: currently ignored</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

---

## 3.2 Änderungen von Version 1.2.3 nach 1.5.0

### Folgende Änderungen wurden durchgeführt:

#### Entfernte Typen:

~~simpleType CoatingTypes wurde entfernt.~~

~~Begründung: CoatingTypes wurde im complexType Lens/coating als Attribut verwendet. Dort ist auch der EDV-Code des Zuschlages definiert. Beding durch den EDV-Code ergibt sich automatisch der Zuschlagstyp, sodaß eine Angabe des Zuschlagstyp sinnlos ist.~~

~~simpleType Currencies wurde entfernt.~~

~~Begründung: Currencies wurde nirgends verwendet~~

~~simpleType DeliveryMethods wurde entfernt.~~

~~Begründung: Dieser Type war ein freier Text ohne Vorgaben oder Restriktionen. Eignet sich nicht für eine Weiterverarbeitung.~~

~~complexType CurrencyValue wurde entfernt.~~

~~Begründung: Currencies wurde nirgends verwendet~~

~~complexType TrialFrame wurde entfernt.~~

~~Begründung: War ungenügend definiert und wurde von keinem verwendet. Wird später in einer korrekte Fassung definiert, wenn es benötigt wird.~~

#### Zugefügte Typen:

**simpleType Gender wurde zugefügt**

**simpleType ProgressionZoneCalculationType wurde zugefügt**

**simpleType TracerBinaryFormat wurde zugefügt**

**simpleType TracerType wurde zugefügt**

**complexType Coating wurde zugefügt**

**complexType Decentration wurde zugefügt**

**complexType Diameter wurde zugefügt**

**complexType Edging wurde zugefügt**

**complexType IProfilerData wurde zugefügt**

**complexType IProfilerMap wurde zugefügt**

**complexType IProfilerResult wurde zugefügt**

---



**complexType Patient wurde zugefügt**

**complexType RXDataTypeSimple wurde zugefügt**

**complexType TracerData wurde zugefügt**

**complexType Zernikes wurde zugefügt**

**complexType Zernikes7 wurde zugefügt**

**complexType Zernikes8 wurde zugefügt**

**complexType Zernikes9 wurde zugefügt**

**complexType Zernikes10 wurde zugefügt**

**complexType Zernikes11 wurde zugefügt**

**complexType Zernikes12 wurde zugefügt**

#### **Geänderte Typen:**

**complexType Address wurde geändert.**

Elemente province, region und state wurden entfernt.

Elemente city zip und countryCode sind nicht mehr zwingend erforderlich.

**complexType Cylinder wurde geändert.**

Elemente base wurde nach axis umbenannt.

**complexType DrillHoles wurde geändert.**

Struktur zum Element point wurde in den neu definierte complexType CPoint bzw. PPoint ausgelagert.

Element depth wurde zugefügt.

Element diameterHole wurde zugefügt

**complexType Frame wurde geändert.**

Struktur zum Element tracerData wurde in den neu definierte complexType TracerData ausgelagert.

Element adjustment wurde in den complexType TracerData verlagert.

Zum Element explicit wurde das Attribut side definiert.

**complexType GeometryType wurde geändert.**

Struktur zum Element diameter wurde in den neu definierte complexType Diameter ausgelagert.

Element elliptic wurde zum complexType Diameter zugefügt.

Wichtig: Im complexType Diameter wird bei einem vordezentrierten Glas der kleinere Durchmesser

immer im Element physical abgelegt. Der größere Durchmesser wird im Element optical angegeben.

Struktur zum Element decentration wurde in den neu definierte complexType Decentration ausgelagert.

Element waveFrontOptimisation wurde hinzugefügt

Element designType wurde hinzugefügt

Element progressionFarVisionShiftDistance wurde hinzugefügt

Element progressionNearVisionShiftDistance wurde hinzugefügt

Element progressionZoneCalculationType wurde hinzugefügt

**complexType Header wurde geändert.**

Element cultureId wurde entfernt

**complexType Item wurde geändert.**

Element deliveryMethod wurde entfernt

Element semi wurde entfernt

**complexType Lens wurde geändert.**

Element remakeType wurde entfernt

Element originalOrderId wurde entfernt

Element reason wurde entfernt

Struktur zum Element coating wurde in den neu definierte complexType Coating ausgelagert.

Element lenticular wurde entfernt

Element aniseicony wurde entfernt

Element toric wurde entfernt

Das Attribut value wurde im Element slaboff entfernt

**complexType Pair wurde geändert.**

Struktur zum Element patient wurde in den neu definierte complexType Patient ausgelagert.

Struktur zum Element edging wurde in den neu definierte complexType Edging ausgelagert.

Element classification wurde entfernt.

Element Gender wurde dem complexType Patient zugefügt

Element iProfilerData wurde dem complexType Patient zugefügt

Element nearRefractionDistance wurde dem complexType Patient zugefügt

Element nearRefractionDistance wurde dem complexType Patient zugefügt

Attribut thicknessMatching ist nun vom Type boolean statt vom Type integer.

**complexType ProductCatalog wurde geändert.**

Element version wurde entfernt

Enumeration zum Element name wurde zugefügt.

**complexType RXDataType wurde geändert.**

Element trialFrame wurde entfernt.

**complexType StockLens wurde geändert.**

Struktur zum Element coating wurde in den neu definierte complexType Coating ausgelagert.

Struktur zum Element diameter wurde in den neu definierte complexType Diameter ausgelagert.

**complexType Size wurde umbenannt nach FrameSize.**

19.03.2008

**simpleType BevelTypes**

Der Wert "NORMAL" wurde umbenannt nach "BEVEL"

**simpleType ProgressionZoneCalculationType wieder entfernt.**

das Element /GeometryType/progressionZoneCalculationType ist nun vom type String.

**complexType Item/options/insurance**

ist nun vom Type boolean

**complexType Decentration/direction**

ist nun vom Type integer

**simpleType EdgingType**

---

Wert NONE wurde entfernt

**complexType Edging**

Element drilling wurde zugefügt

**complexType Item**

Element multiplePair zugefügt.

**complexType Lens**

Element branding zugefügt.

**complexType patient**

Element interpupillaryDistance entfernt und interpupillaryDistanceRight bzw. interpupillaryDistanceLeft zugefügt.  
Element ipseo zugefügt.

**complexType Frame**

Element remark wurde entfernt.

**complexType Edging / complexType Lens**

Element ignoreFlags wurden von Edging nach Lens verschoben

**complexType Shape**

Element perimeter wurde entfernt.  
Attribut dimensions wurde entfernt.

**complexType GeometryType**

Element thicknessReductionThin wurde zugefügt.  
Struktur um die Elemente thickness und thicknessReduction wurde geändert.

**simpleType ThicknessReference**

Wert FORNYLOR und THIN wurden entfernt.

24.04.2008

**simpleType References wurde entfernt.**

**Attribut Reference im complextype Shape wurde entfernt.**

**complexType Pair:**

Die Attribute thicknessMatching, weightMatching, prismMatching und baseMatching wurden in Elemente umgewandelt.

**complexType Coating:**

Element colorName zugefügt.

**complexType ProductCatalog:**

Aufzählungselement "czv" zugefügt

**complexType FrameSize**

Alle Felder sind nun optional.

**simpleType ChamferIntensity zugefügt**

**simpleType ChamferPos zugefügt**

**ComplexType Edging**

Der Wert vom Element chamfer ist nun vom Type ChamferIntensity  
Das Attribut Position vom Type ChamferPos wurde zum Element chamfer zugefügt.  
Das Element chamfer ist nun optional.  
Das Element drilling ist nun optional.  
Das Element polish ist nun optional

**SimpleType SidesSimple zugefügt**

Im ComplexType Frame wurde für das Element explicit das Attribut Side geändert und ist nun vom Type SidesSimple.

**SimpleType BevelTypes**

Folgende werte wurden zugefügt  
FRAMECURVATURE  
FRAMEBASE

**ComplexType Frame**

Element frameReferenceId zugefügt

31.10.2008

**SimpleType AdditionRefractionMethod zugefügt****complexType Patient:**

Element headTilt zugefügt.  
Element additionRefractionMethod zugefügt

**complexType Edging:**

Attribut Position im Element chamfer ist nun kleingeschrieben.

**complexType DrillHoles:**

Maximale Anzahl von 4 auf 10 gesetzt.

**complexType Coating**

Attribut coatingType ist nur required.

Hinweis zugefügt:

- Empfänger können sich von einer "unsicherer" (externer) Quelle nur auf die Angaben COLOR und OTHER verlassen.
  - Die Softwarehersteller verwenden mindestens COLOR bei Farben, für alles andere OTHER.
  - Werden die Daten doch ausgefüllt legt man bei Mehrschichten eine Priorität fest: z.B. ANTIREFLEX, HARD, COLOR, UV, CLEAN, OTHER.
-



### 3.3 Version 1.5.0 Beta

**08.05.2008 ACHTUNG! Diese Version ist noch nicht freigegeben**

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified"
attributeFormDefault="unqualified" version="1.5.0">
  <xs:element name="b2bOptic">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="header" type="Header"/>
        <xs:element name="items">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="item" type="Item"
maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="experimental" type="xs:anyType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:simpleType name="AngleDimension">
    <xs:restriction base="xs:string">
      <xs:enumeration value="DEG"/>
      <xs:enumeration value="RAD"/>
      <xs:enumeration value="MM"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BevelPosType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="AUTO"/>
      <xs:enumeration value="FRONT"/>
      <xs:enumeration value="BACK"/>
      <xs:enumeration value="RELATION"/>
      <xs:enumeration value="FRAMECURVATURE"/>
      <xs:enumeration value="FRAMEBASE"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="BevelTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="BEVEL"/>
      <xs:enumeration value="FLAT"/>
      <xs:enumeration value="GROOVED"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ChamferIntensity">
    <xs:restriction base="xs:string">
      <xs:enumeration value="THIN"/>
      <xs:enumeration value="MEDIUM"/>
      <xs:enumeration value="LARGE"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ChamferPos">
    <xs:restriction base="xs:string">
      <xs:enumeration value="BOTH"/>
      <xs:enumeration value="FRONT"/>
      <xs:enumeration value="BACK"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="CoatingTypes">
    <xs:restriction base="xs:string">

```

```
        <xs:enumeration value="COLOR"/>
        <xs:enumeration value="UV"/>
        <xs:enumeration value="ANTIREFLEX"/>
        <xs:enumeration value="HARD"/>
        <xs:enumeration value="CLEAN"/>
        <xs:enumeration value="OTHER"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="EdgingType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ROUGHING"/>
        <xs:enumeration value="ONSHAPE"/>
        <xs:enumeration value="GIVENFRAME"/>
        <xs:enumeration value="ORDEREDFRAME"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FrameMaterials">
    <xs:restriction base="xs:string">
        <xs:enumeration value="METAL"/>
        <xs:enumeration value="PLASTIC"/>
        <xs:enumeration value="OPTYL"/>
        <xs:enumeration value="NYLOR"/>
        <xs:enumeration value="DRILLED"/>
        <xs:enumeration value="SPECIAL"/>
    </xs:restriction>
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<xs:simpleType name="Gender">
    <xs:restriction base="xs:string">
        <xs:enumeration value="MALE"/>
        <xs:enumeration value="FEMALE"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="HeightReferences">
    <xs:restriction base="xs:string">
        <xs:enumeration value="OVERBOX"/>
        <xs:enumeration value="OVERSHAPE"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MsgStates">
    <xs:restriction base="xs:string">
        <xs:enumeration value="NEW"/>
        <xs:enumeration value="UPDATE"/>
        <xs:enumeration value="CANCEL"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MsgSteps">
    <xs:restriction base="xs:string">
        <xs:enumeration value="CREATE"/>
        <xs:enumeration value="TRANSFER"/>
        <xs:enumeration value="RECEIPT"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MsgTypes">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ORDER"/>
        <xs:enumeration value="REQUEST"/>
        <xs:enumeration value="CALCULATION"/>
        <xs:enumeration value="VALIDATION"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="OCReferences">
    <xs:restriction base="xs:string">
        <xs:enumeration value="FAR"/>
        <xs:enumeration value="NEAR"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Roles">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ORIGINATOR"/>
        <xs:enumeration value="SUPPLIER"/>
        <xs:enumeration value="SHIPTO"/>
    </xs:restriction>
</xs:simpleType>
```

```

        <xs:enumeration value="CARRIER"/>
        <xs:enumeration value="INVOICETO"/>
        <xs:enumeration value="PAIDBY"/>
        <xs:enumeration value="MANUFACTURER"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="Sides">
    <xs:restriction base="xs:string">
        <xs:enumeration value="RIGHT"/>
        <xs:enumeration value="LEFT"/>
        <xs:enumeration value="UNDEFINED"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SidesSimple">
    <xs:restriction base="xs:string">
        <xs:enumeration value="RIGHT"/>
        <xs:enumeration value="LEFT"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SoftwareTypes">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ORIGINATOR"/>
        <xs:enumeration value="VERIFIER"/>
        <xs:enumeration value="SENDER"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ThicknessReferences">
    <xs:restriction base="xs:string">
        <xs:enumeration value="REDUCEWITHSHAPE"/>
        <xs:enumeration value="CENTER"/>
        <xs:enumeration value="EDGE"/>
        <xs:enumeration value="DRILLHOLE"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TracerBinaryFormat">
    <xs:restriction base="xs:string">
        <xs:enumeration value="DLL BRIOT"/>
        <xs:enumeration value="DVI"/>
        <xs:enumeration value="GT3000"/>
        <xs:enumeration value="MO1"/>
        <xs:enumeration value="NIDEK"/>
        <xs:enumeration value="OMA3.02"/>
        <xs:enumeration value="PHI"/>
        <xs:enumeration value="T4"/>
        <xs:enumeration value="WECO"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="TracerType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Hoya 3DFT"/>
        <xs:enumeration value="Hoya GT1000"/>
        <xs:enumeration value="Hoya GT3000"/>
        <xs:enumeration value="Hoya GT3000 OMA"/>
        <xs:enumeration value="Hoya UT1000"/>
        <xs:enumeration value="Essilor Gamma"/>
        <xs:enumeration value="Essilor PHI PCCOM"/>
        <xs:enumeration value="Essilor PHI OMA"/>
        <xs:enumeration value="Essilor Kappa PCCOM"/>
        <xs:enumeration value="Essilor Kappa OMA"/>
        <xs:enumeration value="National Optronics 4T"/>
        <xs:enumeration value="Briot ScanfomNet I"/>
        <xs:enumeration value="Briot ScanfomNet II"/>
        <xs:enumeration value="Weco 3DFT+"/>
        <xs:enumeration value="Weco Trace II"/>
        <xs:enumeration value="Weco Trace III"/>
        <xs:enumeration value="Nidek LT700"/>
        <xs:enumeration value="Nidek LT900"/>
        <xs:enumeration value="Nidek LT900 OMA"/>
        <xs:enumeration value="Nidek LT1000"/>
        <xs:enumeration value="Indo NDK"/>
        <xs:enumeration value="Indo OMA"/>
    </xs:restriction>

```



```

        <xs:enumeration value="Topcon FR50"/>
        <xs:enumeration value="Takubomatic FD80"/>
        <xs:enumeration value="Unknown"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="Account">
    <xs:sequence>
        <xs:element name="id">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:string">
                        <xs:attribute name="memberShipID"
type="xs:long" use="optional" default="1"/>
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
        <xs:element name="name" type="xs:string" minOccurs="0"/>
        <xs:element name="address" type="Address" minOccurs="0"/>
        <xs:element name="contact" type="ContactInfo" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Address">
    <xs:sequence>
        <xs:element name="addressLine" type="xs:string" minOccurs="0" maxOccurs="3"/>
        <xs:element name="poBox" type="xs:string" minOccurs="0"/>
        <xs:element name="city" type="xs:string" minOccurs="0"/>
        <xs:element name="zip" type="xs:string" minOccurs="0"/>
        <xs:element name="countryCode" type="xs:string" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Bevel">
    <xs:sequence>
        <xs:element name="type" type="BevelTypes"/>
        <xs:element name="position" minOccurs="0" maxOccurs="2">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:float">
                        <xs:attribute name="posType"
type="BevelPosType" use="optional" default="AUTO"/>
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
        <xs:element name="grooveDepth" type="xs:float" minOccurs="0"/>
        <xs:element name="grooveWidth" type="xs:float" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Centration">
    <xs:sequence>
        <xs:element name="monocularCentrationDistance">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:float">
                        <xs:attribute name="reference"
type="OCReferences" use="required"/>
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
        <xs:element name="height">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:float">
                        <xs:attribute name="reference"
type="OCReferences" use="required"/>
                        <xs:attribute name="referenceHeight"
type="HeightReferences" use="required"/>
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>

```

```

        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="backVertexDistance" type="xs:float" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Coating">
  <xs:sequence>
    <xs:element name="commercialCode" type="xs:string"/>
    <xs:element name="minIntensity" type="xs:integer" minOccurs="0"/>
    <xs:element name="maxIntensity" type="xs:integer" minOccurs="0"/>
    <xs:element name="colorName" type="xs:string" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="coatingType" type="CoatingTypes" use="optional"/>
</xs:complexType>
<xs:complexType name="ContactInfo">
  <xs:sequence>
    <xs:element name="title" type="xs:string" minOccurs="0"/>
    <xs:element name="firstName" type="xs:string" minOccurs="0"/>
    <xs:element name="lastName" type="xs:string"/>
    <xs:element name="phone" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="fax" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="eMail" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CPoint">
  <xs:sequence>
    <xs:element name="x" type="xs:float"/>
    <xs:element name="y" type="xs:float"/>
    <xs:element name="z" type="xs:float" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Curve">
  <xs:choice>
    <xs:element name="flat" type="xs:boolean"/>
    <xs:element name="moreCurved" type="xs:boolean"/>
    <xs:element name="baseCurve" type="xs:float"/>
    <xs:element name="planoConcave" type="xs:boolean"/>
    <xs:element name="planoConvex" type="xs:boolean"/>
    <xs:element name="biConcave" type="xs:boolean"/>
    <xs:element name="biConvex" type="xs:boolean"/>
  </xs:choice>
</xs:complexType>
<xs:complexType name="Cylinder">
  <xs:sequence>
    <xs:element name="power" type="xs:float"/>
    <xs:element name="axis">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0.0"/>
          <xs:maxInclusive value="360.0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Decentration">
  <xs:choice>
    <xs:sequence>
      <xs:element name="length" type="xs:float"/>
      <xs:element name="direction" type="xs:integer"/>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="horizontal" type="xs:float"/>
      <xs:element name="vertical" type="xs:float"/>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="hdec" type="xs:float"/>
    </xs:sequence>
  </xs:choice>
</xs:complexType>

```

```

<xs:complexType name="Diameter">
  <xs:sequence>
    <xs:element name="physical" type="xs:integer"/>
    <xs:element name="optical" type="xs:integer" minOccurs="0"/>
    <xs:element name="elliptic" type="xs:boolean" default="false" minOccurs="0"/>
    <xs:element name="encoded" type="xs:string" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="DrillHoles">
  <xs:choice>
    <xs:element name="pDrillHole" maxOccurs="4">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="point" type="PPoint" maxOccurs="2"/>
          <xs:element name="depth" type="xs:float" minOccurs="0"/>
          <xs:element name="diameterHole" type="xs:float"
minOccurs="0"/>
        </xs:sequence>
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    </xs:element>
    <xs:element name="cDrillHole" maxOccurs="4">
      <xs:complexType>
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          <xs:element name="depth" type="xs:float" minOccurs="0"/>
          <xs:element name="diameterHole" type="xs:float"
minOccurs="0"/>
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      </xs:complexType>
    </xs:element>
  </xs:choice>
</xs:complexType>
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  <xs:sequence>
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    <xs:element name="polish" type="xs:boolean" default="false" minOccurs="0"/>
    <xs:element name="drilling" type="xs:boolean" default="false" minOccurs="0"/>
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        <xs:simpleContent>
          <xs:extension base="ChamferIntensity">
            <xs:attribute name="Position" type="ChamferPos"
use="optional" default="BOTH"/>
          </xs:extension>
        </xs:simpleContent>
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    </xs:element>
  </xs:sequence>
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  <xs:sequence>
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    <xs:element name="manufacturer" type="xs:string" minOccurs="0"/>
    <xs:element name="brand" type="xs:string" minOccurs="0"/>
    <xs:element name="model" type="xs:string" minOccurs="0"/>
    <xs:element name="size" type="FrameSize" minOccurs="0"/>
    <xs:element name="color" type="xs:string" minOccurs="0"/>
    <xs:element name="commercialCode" type="xs:string" minOccurs="0"/>
    <xs:element name="shape" minOccurs="0">
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                <xs:sequence>
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name="shapeld" type="xs:string"/>
                </xs:sequence>
              </xs:complexType>
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      </xs:element>
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  </xs:sequence>
</xs:complexType>

```

```

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    <xs:complexContent>
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        base="Shape"/>
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  type="TracerData"/>
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<xs:element name="drillHoles" minOccurs="0" maxOccurs="2">
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="DrillHoles">
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          use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
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    <xs:simpleContent>
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    </xs:simpleContent>
  </xs:complexType>
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    <xs:element name="bridge" type="xs:float" minOccurs="0"/>
    <xs:element name="templeLength" type="xs:float" minOccurs="0"/>
  </xs:sequence>
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  <xs:sequence>
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    <xs:element name="decentration" type="Decentration" minOccurs="0"/>
    <xs:element name="waveFrontOptimisation" type="xs:boolean" default="false"
      minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:choice>
  <xs:sequence>
    <xs:element name="thickness" minOccurs="0"
      maxOccurs="unbounded"/>
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</xs:choice>
</xs:complexType>

```



```

        <xs:maxLength value="50"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="timeStamp" type="xs:dateTime"/>
  <xs:element name="counter" minOccurs="0">
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    </xs:simpleType>
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      <xs:sequence>
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          </xs:simpleType>
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            </xs:restriction>
          </xs:simpleType>
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    </xs:complexType>
  </xs:element>
  <xs:sequence>
    <xs:complexType>
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          <xs:sequence>
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            <xs:element name="z" type="xs:float"/>
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      <xs:element name="wavefrontEye">
        <xs:complexType>
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                <xs:sequence>

```

```

type="xs:float"/>
type="xs:float"/>
minOccurs="0"/>
type="xs:float"/>
type="xs:float"/>
minOccurs="0"/>
use="required"/>
default="false" minOccurs="0"/>
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</xs:element>
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<xs:element name="vertexPosition">
<xs:complexType>
<xs:sequence>
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<xs:element name="y"
</xs:sequence>
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<xs:attribute name="role" type="Roles"
</xs:extension>
</xs:complexContent>
</xs:complexType>
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<xs:element name="referenceCountNo" type="xs:integer"/>
</xs:sequence>
</xs:complexType>

```

```

        </xs:element>
      </xs:sequence>
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    <xs:sequence>
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      <xs:element name="ignoreFlags" type="xs:string" minOccurs="0"
maxOccurs="unbounded"/>
      <xs:element name="rxData" type="RXDataType"/>
      <xs:element name="coating" type="Coating" minOccurs="0" maxOccurs="unbounded"/>
      <xs:element name="centration" type="Centration" minOccurs="0"/>
      <xs:element name="geometry" type="GeometryType"/>
      <xs:element name="options" minOccurs="0">
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          <xs:sequence>
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type="xs:boolean"/>
              <xs:element name="frosted" type="xs:boolean"/>
            </xs:choice>
            <xs:element name="slabOff" type="xs:boolean"
default="false" minOccurs="0"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
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      <xs:element name="engraving" type="xs:string" minOccurs="0"/>
      <xs:element name="branding" type="xs:boolean" default="false" minOccurs="0"/>
      <xs:element name="experimental" type="xs:anyType" minOccurs="0"
maxOccurs="unbounded"/>
    </xs:sequence>
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    <xs:attribute name="balancingLens" type="xs:boolean" use="optional" default="false"/>
    <xs:attribute name="virtualLens" type="xs:boolean" use="optional" default="false"/>
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    <xs:sequence>
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      <xs:element name="lens" maxOccurs="2">
        <xs:complexType>
          <xs:complexContent>
            <xs:extension base="Lens">
              <xs:attribute name="quantity" type="xs:integer"
use="required"/>
            </xs:extension>
          </xs:complexContent>
        </xs:complexType>
      </xs:element>
      <xs:element name="frame" type="Frame" minOccurs="0"/>
      <xs:element name="edging" type="Edging" minOccurs="0"/>
      <xs:element name="remark" type="xs:string" minOccurs="0"/>
      <xs:element name="thicknessMatching" type="xs:boolean" default="false" minOccurs="0"/>
      <xs:element name="weightMatching" type="xs:boolean" default="false" minOccurs="0"/>
      <xs:element name="prismMatching" type="xs:boolean" default="false" minOccurs="0"/>
      <xs:element name="baseMatching" type="xs:boolean" default="false" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Patient">
    <xs:complexContent>
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        <xs:sequence minOccurs="0">
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minOccurs="0"/>
          <xs:element name="gender" type="Gender" minOccurs="0"/>
          <xs:element name="dateOfBirth" type="xs:date" minOccurs="0"/>
          <xs:sequence minOccurs="0">
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type="xs:float"/>
            <xs:element name="interpupillaryDistanceLeft"
type="xs:float"/>
          </xs:sequence>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```



```

minOccurs="0"/>
minOccurs="0"/>
<xs:element name="nearObjectDistance" type="xs:float"
<xs:element name="iProfilerData" type="IProfilerData"
<xs:element name="nearRefractionDistance" minOccurs="0"/>
<xs:element name="ipseo" minOccurs="0">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="he" type="xs:float"/>
      <xs:element name="st" type="xs:float"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
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    <xs:element name="angle">
      <xs:complexType>
        <xs:simpleContent>
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            <xs:attribute name="dimension"
type="AngleDimension" use="optional" default="DEG"/>
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        </xs:simpleContent>
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    <xs:element name="z" type="xs:float" minOccurs="0"/>
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  <xs:sequence>
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    <xs:element name="base">
      <xs:simpleType>
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          <xs:maxInclusive value="360.0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
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  <xs:sequence>
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      <xs:simpleType>
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          <xs:enumeration value="sf4"/>
          <xs:enumeration value="sf6"/>
          <xs:enumeration value="optimeyes"/>
          <xs:enumeration value="euronet"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
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  </xs:sequence>
</xs:complexType>
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  <xs:sequence>
    <xs:element name="sphere" type="xs:float"/>
    <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="RXDataType">
  <xs:sequence>
    <xs:element name="sphere">

```

```

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                <xs:minInclusive value="-50"/>
                <xs:maxInclusive value="50"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:element>
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    <xs:element name="addition" minOccurs="0">
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                <xs:minInclusive value="0.25"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:element>
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</xs:complexType>
<xs:complexType name="RXDataType4SL">
    <xs:sequence>
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                    <xs:minInclusive value="-50"/>
                    <xs:maxInclusive value="50"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
        <xs:element name="cylinder" type="Cylinder" minOccurs="0"/>
        <xs:element name="addition" minOccurs="0">
            <xs:simpleType>
                <xs:restriction base="xs:float">
                    <xs:minInclusive value="0.25"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Shape">
    <xs:sequence>
        <xs:element name="points">
            <xs:complexType>
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maxOccurs="unbounded"/>
                    <xs:element name="cPoints" type="CPoint" minOccurs="18"
maxOccurs="unbounded"/>
                </xs:choice>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
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        <xs:element name="version" type="xs:string"/>
    </xs:sequence>
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    <xs:sequence>
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        <xs:element name="rxData" type="RXDataType4SL"/>
        <xs:element name="coating" type="Coating" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="diameter" type="Diameter"/>
    </xs:sequence>
    <xs:attribute name="quantity" type="xs:integer" use="required"/>
    <xs:attribute name="side" type="Sides" use="required"/>
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    <xs:sequence>

```

```

        <xs:element name="dateTime">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:dateTime">
                        <xs:attribute name="step" type="MsgSteps"
use="required"/>
                    </xs:extension>
                </xs:simpleContent>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>
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    <xs:sequence>
        <xs:element name="tracerType" type="TracerType"/>
        <xs:element name="tracerVersion" type="xs:string"/>
        <xs:element name="tracerID" type="xs:string" minOccurs="0"/>
        <xs:element name="binaries">
            <xs:complexType>
                <xs:simpleContent>
                    <xs:extension base="xs:hexBinary">
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type="TracerBinaryFormat" use="required"/>
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                </xs:simpleContent>
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        </xs:element>
        <xs:element name="adjustion" type="xs:float" minOccurs="0"/>
    </xs:sequence>
</xs:complexType>
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    <xs:choice>
        <xs:element name="zernikes7" type="Zernikes7"/>
        <xs:element name="zernikes8" type="Zernikes8"/>
        <xs:element name="zernikes9" type="Zernikes9"/>
        <xs:element name="zernikes10" type="Zernikes10"/>
        <xs:element name="zernikes11" type="Zernikes11"/>
        <xs:element name="zernikes12" type="Zernikes12"/>
    </xs:choice>
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    <xs:sequence>
        <xs:element name="pupilDiameter" type="xs:float"/>
        <xs:element name="z_0_0" type="xs:float"/>
        <xs:element name="z_1_M1" type="xs:float"/>
        <xs:element name="z_1_1" type="xs:float"/>
        <xs:element name="z_2_M2" type="xs:float"/>
        <xs:element name="z_2_0" type="xs:float"/>
        <xs:element name="z_2_2" type="xs:float"/>
        <xs:element name="z_3_M3" type="xs:float"/>
        <xs:element name="z_3_M1" type="xs:float"/>
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        <xs:element name="z_4_M4" type="xs:float"/>
        <xs:element name="z_4_M2" type="xs:float"/>
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        <xs:element name="z_4_2" type="xs:float"/>
        <xs:element name="z_4_4" type="xs:float"/>
        <xs:element name="z_5_M5" type="xs:float"/>
        <xs:element name="z_5_M3" type="xs:float"/>
        <xs:element name="z_5_M1" type="xs:float"/>
        <xs:element name="z_5_1" type="xs:float"/>
        <xs:element name="z_5_3" type="xs:float"/>
        <xs:element name="z_5_5" type="xs:float"/>
        <xs:element name="z_6_M6" type="xs:float"/>
        <xs:element name="z_6_M4" type="xs:float"/>
        <xs:element name="z_6_M2" type="xs:float"/>
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        <xs:element name="z_6_2" type="xs:float"/>
        <xs:element name="z_6_4" type="xs:float"/>
        <xs:element name="z_6_6" type="xs:float"/>
    </xs:sequence>

```

```

        <xs:element name="z_7_M7" type="xs:float"/>
        <xs:element name="z_7_M5" type="xs:float"/>
        <xs:element name="z_7_M3" type="xs:float"/>
        <xs:element name="z_7_M1" type="xs:float"/>
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        <xs:element name="z_7_3" type="xs:float"/>
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        <xs:element name="z_7_7" type="xs:float"/>
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    <xs:complexContent>
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                <xs:element name="z_8_M6" type="xs:float"/>
                <xs:element name="z_8_M4" type="xs:float"/>
                <xs:element name="z_8_M2" type="xs:float"/>
                <xs:element name="z_8_0" type="xs:float"/>
                <xs:element name="z_8_2" type="xs:float"/>
                <xs:element name="z_8_4" type="xs:float"/>
                <xs:element name="z_8_6" type="xs:float"/>
                <xs:element name="z_8_8" type="xs:float"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
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    <xs:complexContent>
        <xs:extension base="Zernikes8">
            <xs:sequence>
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                <xs:element name="z_9_M7" type="xs:float"/>
                <xs:element name="z_9_M5" type="xs:float"/>
                <xs:element name="z_9_M3" type="xs:float"/>
                <xs:element name="z_9_M1" type="xs:float"/>
                <xs:element name="z_9_1" type="xs:float"/>
                <xs:element name="z_9_3" type="xs:float"/>
                <xs:element name="z_9_5" type="xs:float"/>
                <xs:element name="z_9_7" type="xs:float"/>
                <xs:element name="z_9_9" type="xs:float"/>
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        <xs:extension base="Zernikes9">
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                <xs:element name="z_10_M8" type="xs:float"/>
                <xs:element name="z_10_M6" type="xs:float"/>
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                <xs:element name="z_10_M2" type="xs:float"/>
                <xs:element name="z_10_0" type="xs:float"/>
                <xs:element name="z_10_2" type="xs:float"/>
                <xs:element name="z_10_4" type="xs:float"/>
                <xs:element name="z_10_6" type="xs:float"/>
                <xs:element name="z_10_8" type="xs:float"/>
                <xs:element name="z_10_10" type="xs:float"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="Zernikes11">
    <xs:complexContent>
        <xs:extension base="Zernikes10">
            <xs:sequence>
                <xs:element name="z_11_M11" type="xs:float"/>
                <xs:element name="z_11_M9" type="xs:float"/>
                <xs:element name="z_11_M7" type="xs:float"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```
<xs:element name="z_11_M5" type="xs:float"/>
<xs:element name="z_11_M3" type="xs:float"/>
<xs:element name="z_11_M1" type="xs:float"/>
<xs:element name="z_11_1" type="xs:float"/>
<xs:element name="z_11_3" type="xs:float"/>
<xs:element name="z_11_5" type="xs:float"/>
<xs:element name="z_11_7" type="xs:float"/>
<xs:element name="z_11_9" type="xs:float"/>
<xs:element name="z_11_11" type="xs:float"/>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="Zernikes12">
  <xs:complexContent>
    <xs:extension base="Zernikes11">
      <xs:sequence>
        <xs:element name="z_12_M12" type="xs:float"/>
        <xs:element name="z_12_M10" type="xs:float"/>
        <xs:element name="z_12_M8" type="xs:float"/>
        <xs:element name="z_12_M6" type="xs:float"/>
        <xs:element name="z_12_M4" type="xs:float"/>
        <xs:element name="z_12_M2" type="xs:float"/>
        <xs:element name="z_12_0" type="xs:float"/>
        <xs:element name="z_12_2" type="xs:float"/>
        <xs:element name="z_12_4" type="xs:float"/>
        <xs:element name="z_12_6" type="xs:float"/>
        <xs:element name="z_12_8" type="xs:float"/>
        <xs:element name="z_12_10" type="xs:float"/>
        <xs:element name="z_12_12" type="xs:float"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
</xs:schema>
```

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Endnotes 2... (after index)

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