A BETTER VIEW OF THE WORLD

Supplier Manual

Meopta - optika, s.r.o.

www.meopta.com

Obsah

1 INTRODUCTION

The Instruction „Supplier manual Meopta - optika, s.r.o.“ provides basic requirements for supply for the suppliers of company Meopta Optika s.r.o. and defines processes required for quality assurance of supplied goods according to the ISO 9001:2015 a AS9100D. The requirements provided in this instruction are part of every Purchase order and Purchase contract of Meopta Optika s.r.o. (further “Meopta”)

The responsibility for the quality of supplied goods and services is always born solely at the Supplier of Meopta. The supplier is responsible for application of appropriate quality management system which can be audited by Meopta by the agreed supplier audit.
The suppliers of Meopta guarantee that the requirements provided in this document are adequately deployed to their sub-suppliers.
In case of supplies for the defense sector the supplier will be required to follow the standards ČOS 051622 (AQAP 2110).
In case of supplies for the Aircraft Industry the supplier will be required to follow the standards AS9100D.
In case of supplies for the Aerospace Industry the supplier will be required to follow the standards
ESCC-E-ST-10-03, ECSS-Q-70-13A, ESCC 22900)

This Instruction is supplementary to the General delivery terms and conditions defined by document “GENERAL TERMS AND CONDITIONS OF PURCHSE GOODS AND SERVICES” which is attached to this document. (further referred as T&Cs)

2 CONTACT PERSONS

Definition of contact persons is required by Meopta during the phase of Requesting quotation. The supplier is required to inform Meopta in case of later changes.

- Account manager – responsible for sales conditions, prices, guarantees fulfilment of agreed conditions related to the supply to Meopta.
- Sales department (logistics) – responsible for managing the operational deliveries such as open orders, confirmations, invoicing, credit notes, rejection proces.
- Quality department – responsible for quality management process and for the outcoming quality of the supplier.
- Supplier quality assurance – responsible for supplier quality management and improvement process.

3 SUPPLIER QUALITY MANAGEMENT PROCESS

The supplier is obliged to manage his internal manufacturing and quality process to obtain the quality requirements of the supplied product or service to Meopta.
Meopta requires the supplier to implement the Quality Management standard ISO 9001. In case that the supplier is not ISO 9001 certified he is obliged to proof that all his internal processes are running according to his defined Quality Management system.

This section contains the overview of requirements that are requested to be implemented managed, documented, and validated by the supplier.

3.1 CAPACITY PLANNING

The supplier of Meopta is responsible to create sufficient capacities to fulfill the requirements provided by Purchase orders or forecasts provided by Meopta.

3.2 QUALITY OF SUPPLY

The supplier is obliged to deliver goods and services in quality and terms provided by the purchase agreement with Meopta. The requirements see attachment no. 6 (instruction is related to the definition of the precise dimensions of parts with regard to surface treatment) are discussed and explained with suppliers of mechanical parts without surface treatment (surface treatment is performed by Meopta), within the tender. The supplier is obliged to measure his own quality performance in terms of On time delivery and Technical quality and cooperate with Meopta on its evaluation.

The suppliers of Meopta are evaluated on Monthly basis on the On time delivery and Technical quality performance. Selected suppliers can be receiving the Supplier Scorecards containing their performance evaluation and request for improvements if needed. The suppliers are responsible to act upon the communicated requests.

3.3 QUALITY DATA MAINTENANCE

The supplier is responsible for maintenance, follow up and archiving of the quality system data. Unless otherwise specified in the purchase agreement or purchase order the standard archiving period is 5 years since the date of issuing of the document. If the supplier decides to discard the documentation after this time, he is obliged to offer it to Meopta for further archiving.
Based upon the request of Meopta, the supplier will enable review of the quality documents by Meopta. The supplier will enable access for the Meopta personnel to perform supplier audits inside his manufacturing premises where the Meopta products are being manufactured.

3.4 PARTS MARKING – BACKWARDS TRACEABILITY

Materials, Parts, semi-finished products and final products must be marked to ensure identification and prevent confusion. The marking must enable backwards traceability if requested by Meopta. In the case of a request for a number series (e.g. S/N), the supplier is obliged to request which numbers to mark on the pieces (e.g. a part of the number series is assigned to him).

3.5 ACCEPTANCE OF CHANGES

Meopta's supplier is obliged to deliver parts according to the documentation, material specifications, in approved manufacturing processes and plants approved by Meopta. In the case of approved samples, then also in accordance with these samples (see chapter 10).
Delivery deviating from the above-mentioned conditions needs to be formally approved by Meopta whereas the supplier is responsible to request such approval immediately after finding of any such deviation. Unless otherwise agreed the approval is always limited to certain quantity of delivered parts or certain delivery period unless otherwise agreed by Meopta.

The supplier is responsible to inform about any relevant changes in deliveries and especially in following cases:

a. Change of material supplier
b. Change of sub supplier of any manufacturing processes
c. Change of manufacturing location
d. Change of manufacturing process or manufacturing sequences.
e. Change of testing HW or SW.
f. Change of CNC programs
g. Change of Machine/ assembly tooling/ fixtures
h. Consolidation, split or re-organization of manufacturing steps.
i. Interruption of the manufacturing process longer than period of 24 months.
j. Correction of nonconformance's.

Meopta is entitled to request samples prior to the approval of above changes. Sample is considered to be the first serially manufactured product made out of materials, with technologies, in process, by tools and machines and according to documentation considered for serial production of the part.

3.6 MEASURING AND TESTING EQUIPMENT CALIBRATION

The supplier is required to use only calibrated and controlled measuring and testing equipment. All measuring gigs, including electric and pneumatic devices, fixed measuring devices must be regularly calibrated according to the implemented plan. Frequency of calibration must be

determined according to the type and application of the measuring jig or device. The calibration must be documented, and the measurement jig or device must be properly marked with next calibration date. Un-calibrated jigs and devices are prohibited for use!

3.7 INTERNAL AUDITS

The supplier is obliged to perform internal audits of his Quality management system.

3.8 SUBSUPPLIER QUALIFICATION

Same standards applied by Meopta for cooperation with the Supplier must be applied by the Supplier within his sub supplier's management. The supplier is required to deploy the conditions stated in this document to his sub suppliers. In any case the supplier of Meopta is fully responsible for the final delivery and quality of the supplied product or service.

4 CONFIRMATION OF PURCHASE ORDER AND FORECAST

The supplier is required to confirm purchase order of Meopta within two working days from receipt. The supplier is also required to confirm within to working days from receipt any changes in delivery dates or quantities of already confirmed purchase orders.

On monthly basis, usually in the first week of the month, the selected suppliers are receiving the forecast of planned demand of Meopta towards the supplier. The supplier is requested to confirm in 5 calendar days his ability to supply the planned requirement in dates and quantities required by the forecast or to immediately open negotiation on the future deliveries.

Based upon mutual agreement the supplier may be receiving open order lists on weekly or bi-weekly basis and communicate purchase order confirmations based upon this document.

5 RESPONSIBILITY FOR NONCONFORMITIES

Supplier delivers goods under warranty conditions according to the T&Cs of Meopta unless otherwise agreed in other documents. The supplier holds full responsibility for defects on the final product caused by defect or nonconformity on his delivered product or service. In case of finding of nonconformance on the delivered product or service all demonstrable cost related to the elimination of such nonconformance will be charged to the supplier.

All delivered products or services must comply with all applicable regulations in the Czech republic or country o use.

THE SUPPLIER OF MEOPTA TAKES HIS FULL RESPONSIBILITY FOR QUALITY AND SAFETY OF DELIVERED GOODS OR SERVICES.

6 COOPERATION ON WARRANTY CLAIMS

Meopta will inform supplier without any delay in case of nonconformity finding. The supplier is responsible to replace goods, repair or take other measures according to the instruction of Meopta. The supplier is also responsible to take measures to avoid repeating of the identical nonconformity.
The supplier is requested do provide Failure analysis report regarding the root cause and preventive and corrective action plan for the nonconformance within 2 working days from the receipt of the claim or in the period agreed with the Operational purchasing officer.

The supplier may be requested to fill the 8D REPORT in case of serious nonconformance. Template of the 8D report is attached to this document. Supplier is obliged to fill all applicable fields. The supplier will fill the steps (D1-D3) within 2 working days, steps (D4 and D5) within next 14 days and finalize the report within 30 days after receipt of the request unless otherwise agreed.
When sending replacements or repairs from a complaint, the supplier is obliged to visibly mark these pieces with the non-conformity number both on the packaging and on the delivery note or invoice. Otherwise, Meopta may return unmarked parts to the supplier and require their identification and/or payment of additional costs incurred.

7 REQUESTED DOCUMENTS

7.1 DOCUMENTS REQUIRED BY EACH DELIVERY

The supplier is requested supply following documents with every delivery:

a. Material Certificate
b. Delivery note (Content of the delivery note is prescribed in section 9.2)
c. Additional documents requested with delivery and noted on the particular purchase order (ATP Protocol, specific test result, special certificates)
d. Additional documents related to the specifics of the supplied goods or services (Safety Data Sheet, Legislation compliance documents ROHS, REACH, SVHC, TSCA (for US market), content of packaging materials according to ČSN EN 13427)

Failure to deliver any of the required documents is considered as incomplete delivery and such delivery of goods can be returned to the supplier as nonconforming.

7.2 DOCUMENTS REQUIRED WITH DELIVERY OF QUALIFICATION SAMPLES

The supplier is requested supply following documents with delivery of qualification samples:

e. PSW – Part Submission Warrant filled in the Meopta template (enclosed to this document and distributed to supplier with every purchase order for qualification samples)
f. Control plan in free format chosen by supplier (sample template enclosed to this document)
g. Material Certificate
h. Delivery note (Content of the delivery note is prescribed in section 9.2)
i. Additional documents requested with delivery and noted on the particular purchase order (ATP Protocol, specific test result, special certificates)
j. Additional documents related to the specifics of the supplied goods or services (Safety Data Sheet, Legislation compliance documents ROHS, REACH, SVHC, TSCA (for US market), content of packaging materials according to ČSN EN 13427)

Failure to deliver any of the required documents is considered as incomplete delivery and such delivery of goods can be returned to the supplier as nonconforming. Regarding first purchasing order or first order after drawing revision/iteration the actual drawing and ATP protocol is sent to the supplier by operational officer. The supplier must send ATP protocol to Meopta with each delivery.

7.3 ADDITIONAL DOCUMENTS

The supplier may be requested to provide additional documents such as ISO Certificates and others.

8 COMPLIANCE

8.1 ENVIRONMENTAL REQUIREMENTS

The suppliers are responsible to follow the regulation Act n. 348/2004 Sb (as amended) ad supply all products safe for human use.
The suppliers, forwarders or visitors entering the premises of Meopta are required to follow all legal as well as internal environmental rules and regulations and are responsible for any environmental damage caused by their misacting against these rules.

8.2 CONFLICT MINERALS

The suppliers will be requested to report according to the Conflict Minerals regulation.

8.3 COUNTERFEIT PARTS

Supplier shall only purchase products/components to be delivered to Meopta directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), or through an OCM/OEM authorized distributor chain. Parts shall not be acquired from independent distributors or brokers unless approved in advance in writing by Meopta. If Supplier becomes aware or suspects that it has furnished Counterfeit Parts or suspected Counterfeit Parts, Supplier shall immediately replace the Counterfeit Parts or suspected Counterfeit Parts with parts acceptable to Meopta.

9 PACKAGING

Unless otherwise specified, the supplier is required to use the requirements for packing mechanical or optical items described in Directive 3.6-8 **Packaging Requirements for Mechanical Items** and Directive 3.6-9 **Packaging Requirements for Optical Items**.

9.1 BASIC PACKAGING REQUIREMENTS

Every Part must be marked with Meopta part number (further Meopta PN) to enable immediate Identification of the Part.
Packages with more than one Item must be marked with Meopta PN and Meopta Purchase order number (further Meopta PO). In case of split packages, every partial packaging or separated Item must be marked with the Meopta PN.
Meopta prefers to pack parts separately by particular Meopta PO and to avoid consolidation of more Meopta POs into one packing.

Items prone to damage are preferred to be packed separately if possible.
ESD Items must be marked with pictogram on the packing and packed in separate transport packing for further manipulation after receipt.
In case that the delivered Item consists out of more components such information must be marked on the packing and noted in the Delivery Note.

9.2 DELIVERY NOTE

The delivery note must be placed inside the packaging or passed along with the package. The Delivery note must contain following minimum information: date of issue, Purchase order number, Part number (Meopta P/N), Part Description, delivered qty, number of packings.
In case of different Items suppled in different packings, please provide the Identification information on the delivery note.

10 SAMPLES, IDENTIFICATION, QALIFICATION

The supplier is requested to mark the delivered samples. The marking must be sustainably connected with the delivered sample to avoid loss or damage. Samples produced on tooling manufacturing simultaneously more items in one sequence must be marked including sequence No. In case that sample consists out of more components all components must be marked.

10.1 SAMPLE IDENTIFICATION must contain.

a) Supplier name
b) Meopta Item Number and description
c) Marking “Sample”
d) Quantity
e) Other information (color, finishing, purpose of Samples, etc.)
f) In case that samples are delivered in lager qty batch, mark the complete batch.

10.2 MANDATORY DOCUMENTS for Sample qualification

a. PSW – filled header by Supplier
b. Measurement protocol. It is important to perform complete measurement according to the technical documentation and provide full protocol Identifying the measured samples (ex. ATP protocol).
c. Material Certificate (content, specifications)
d. Drawing marked with measured dimensions in the measurement protocol.
e. Functional tests as specified in the technical documentation for the part.
f. Control plan (can be according to suppliers template) with minimum content: measured dimension or parameter, type of measurement guage, scope and frequency of measurement.

The supplier is required to send all required documents for the Sample qualification otherwise the qualification will not be performed.

10.3 QUALIFICATION STATEMENT

Meopta will issue final PSW with the conclusion on the APPROVAL/DISSAPROVAL of the qualification Samples. Approval of the qualification samples does not relieve the supplier from the responsibility to deliver future deliveries in the required quality.

11 SUPPLIER AUDIT

In order to qualify the supplier process readiness, the qualified Auditors of Meopta may perform supplier audit at the supplier premises.
During the supplier audit the supplier is obliged to provide following support:

- Provide information regarding the supplier organization, management, quality management and assurance, safety and Environmental care.
- Answer all questions related to the quality management and assurance asked during the Audit.
- Enable access of Meopta auditors to his premises to verify the quality measures in place.

The supplier Audit timing must be always announced by Meopta in sufficient advance. The Audit result is communicated in final Audit report with the supplier. The supplier is committing to prepare improvement plans for findings made during the Audit.

12 ATACHMENTS AND ABBREVIATIONS

12.1 Abbreviations

- **C.O.C. (Confirmation of compliance)** – written statement of the Supplier that the goods are compliant to requirements of Meopta.
- **ATP protocol** – form containing required measurements by Meopta and the real measurement results by the supplier.
- **FAI (First Article Inspection)** – process for qualification of samples.
- **PSW (Part Submission Warrant)** – form warranting the qualification of delivered parts.
- **ČOS 051622 (AQAP 2110)** - NATO requirement to verify quality during development, design and manufacturing.

12.2 Link to the General Terms and Conditions of Meopta which are part of this Supplier Manual:

- Czech version - http://www.meopta.com/cz/ke-stazeni/ - Základní dokumenty
- English version - http://www.meopta.com/en/download/ - General

12.3 List of attachments

- Attachment 1 – PSW (form warranting the qualification of delivered parts. – can be provided in MS Excel based upon request)
- Attachment 2 – PSW for Optical parts (form warranting the qualification of delivered parts. – can be provided in MS Excel based upon request)
- Attachment 3 - 8D report
- Attachment 4 - Control plan – Czech version
- Attachment 5 - Control plan – English version
- Attachment 6 - Deliveries of mechanical items without surface treatment

Attachment 1 – PSW (form warranting the qualification of delivered parts)

Příloha č. S 3.5-9 k S 3.5/Supplement no. S 3.5-9 to S 3.5
Název/Title: Krycí list ke kvalifikaci nakupovaných dílů
Verze/Version: 1

Meopta – optika, s.r.o.

KRYCÍ LIST KE KVALIFIKACI NAKUPOVANÝCH DÍLŮ (PART SUBMISSION WARRANT)

Název dílu/Part name:		**Důvod kvalifikace/Qualification reason**
Číslo dílu/Part number:		☐ Prvotní vzorování/Initial submission
Revize/Revision:		☐ Změna specifikací/Engineering change(s)
Iterace/Iteration:		☐ Změna výrobních podmínek/Change of manufacturing conditions
Dodavatel / Supplier:		☐ Nové (změněné) místo výroby/New (changed) manufacturing location
Kontakt/Contact:		☐ Dlouhá doba bez výroby (> 2roky)/Tooling inactive (>2 years)
PŘEDLOŽENÉ VÝSLEDKY/SUBMISSION RESULTS		☐ Náprava nesrovnalostí/Correction of Discrepancy ☐ Jiné/Other
Výsledky k/The results for		☐ rozměrové měření/dimensional measurements ☐ materiál a funkční testy/material and functional tests ☐ kritéria vzhledu/appearance criteria ☐ soubor statistických dat/statistical process package

Tyto výsledky splňují všechny požadavky konstrukční dokumentace/These result meets all design record requirements:

☐ Ano/Yes ☐ Ne/No

Dodavatel potvrzuje, že přiložené vzorky byly kompletně vyrobeny za sériových podmínek a na sériových nástrojích./Supplier confirms, that the figured first articles were completely manufactured under serial equipment and serial terms.

Name:	Date:	Signature:

POSOUZENÍ SQA (SQA EVALUATION)

PPAP dokumentace/PPAP documentation	☐ Schváleno/Approved ☐ Dočasně schváleno/Conditionally approved ☐ Zamítnuto/Rejected

Poznámky/Notes

Name:	Date:	Signature:

POSOUZENÍ OTK (INCOMING INSPECTION EVALUATION)

FAI	☐ Schváleno/Approved ☐ Dočasně schváleno/Conditionally approved ☐ Zamítnuto/Rejected

Poznámky/Notes

Name:	Date:	Signature:

Attachment 2 – PSW for Optical parts (form warranting the qualification of delivered parts)

Příloha č. S 3.5-10 k S 3.5/Supplement no. S 3.5-10 to S 3.5
Název/Title: Krycí list ke kvalifikaci nakupovaných dílů
Verze/Version: 1

Meopta – optika, s.r.o.

KRYCÍ LIST KE KVALIFIKACI NAKUPOVANÝCH DÍLŮ (PART SUBMISSION WARRANT)

Název dílu/Part name:		**Důvod kvalifikace/Qualification reason**
Číslo dílu/Part number:		☐ Prvotní vzorování/Initial submission
Revize/Revision:		☐ Změna specifikací/Engineering change(s)
Iterace/Iteration:		☐ Změna výrobních podmínek/Change of manufacturing conditions
Dodavatel / Supplier:		☐ Nové (změněné) místo výroby/New (changed) manufacturing location
Kontakt/Contact:		☐ Dlouhá doba bez výroby (> 2roky)/Tooling inactive (>2 years)
PŘEDLOŽENÉ VÝSLEDKY/SUBMISSION RESULTS		☐ Náprava nesrovnalostí/Correction of Discrepancy ☐ Jiné/Other
Výsledky k/The results for		☐ rozměrové měření/dimensional measurements ☐ materiál a funkční testy/material and functional tests ☐ kritéria vzhledu/appearance criteria ☐ soubor statistických dat/statistical process package

Tyto výsledky splňují všechny požadavky konstrukční dokumentace/These result meets all design record requirements:

☐ Ano/Yes ☐ Ne/No

Dodavatel potvrzuje, že přiložené vzorky byly kompletně vyrobeny za sériových podmínek a na sériových nástrojích./Supplier confirms, that the figured first articles were completely manufactured under serial equipment and serial terms. Pro optické díly požadujeme 100% proměření 10 vzorků. For optics parts we require 100% measuring protocol for 10 samples.

Name:	Date:	Signature:

POSOUZENÍ SQA (SQA EVALUATION)

PPAP dokumentace/PPAP documentation	☐ Schváleno/Approved ☐ Dočasně schváleno/Conditionally approved ☐ Zamítnuto/Rejected

Poznámky/Notes

Name:	Date:	Signature:

POSOUZENÍ OTK (INCOMING INSPECTION EVALUATION)

FAI	☐ Schváleno/Approved ☐ Dočasně schváleno/Conditionally approved ☐ Zamítnuto/Rejected

Poznámky/Notes

Name:	Date:	Signature:

Attachment 3 - 8D report

8D Report

Název 8D reportu / Title of 8D report:	Datum zahájení / Start date

Informace o výrobku / Product Information

Dodavatel/ Supplier:		
Č položky/ Part number:	Revize/ Revision:	Jméno položky/ Part name:
Zdroj neshody / NC's found by: O zákazník/customer; O Meopta Reklamační protokol č./ claim sheet No.:		Kusů / pcs:

D1 – Členové týmu / Team Members

Jméno/ Name	Kontakt(telefon) / telephone num.	Kontakt(email)/ e-mail	Pozice v týmu/ position in team	Společnost / company

D2 – Stanovení a popis problému / Problem Identification and Description

D3 – Okamžitá opatření / Interim Containment Action	Datum zavedení / Implementation Date
D4 – Hlavní příčina / Root Cause	Podíl na problému (%) / % Contribution

D5 – Návrh nápravného opatření / Corrective Actions Development

D6 – Zavedená nápravná opatření / Implemented Corrective Actions	Datum zavedení a číslo NO / Implementation Date and CA number
D7 – Preventivní opatření / Actions to Prevent Recurrence	Datum zavedení a číslo PO / Implementation Date and PA number

D8 – uzavření 8D / 8D closing

Odpovědný kvality manažer/ Responsible quality manager:	Datum uzavření/ Date of closing:	Vyplnil/ Written by:

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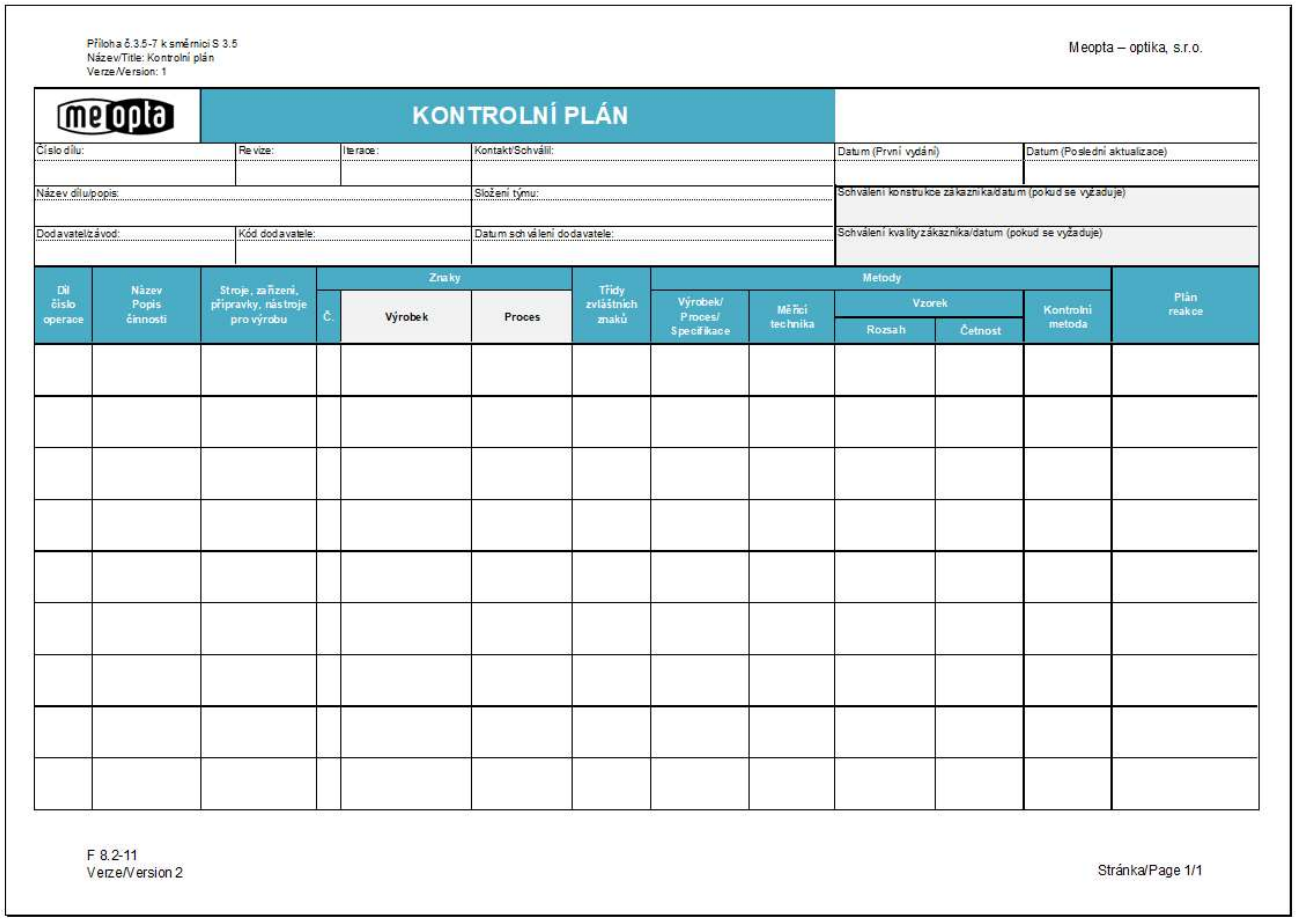
Attachment 4 - Control plan – Czech version



Příloha č.3.5-7 k směrnici S 3.5
Název/Title: Kontrolní plán
Verze/Version: 1

Meopta – optika, s.r.o.

KONTROLNÍ PLÁN

Číslo dílu:	Revize:	Iterace:	Kontakt/Schválil:	Datum (První vydání)	Datum (Poslední aktualizace)

Název dílu/popis:	Složení týmu:	Schválení konstrukce zákazníka/datum (pokud se vyžaduje)

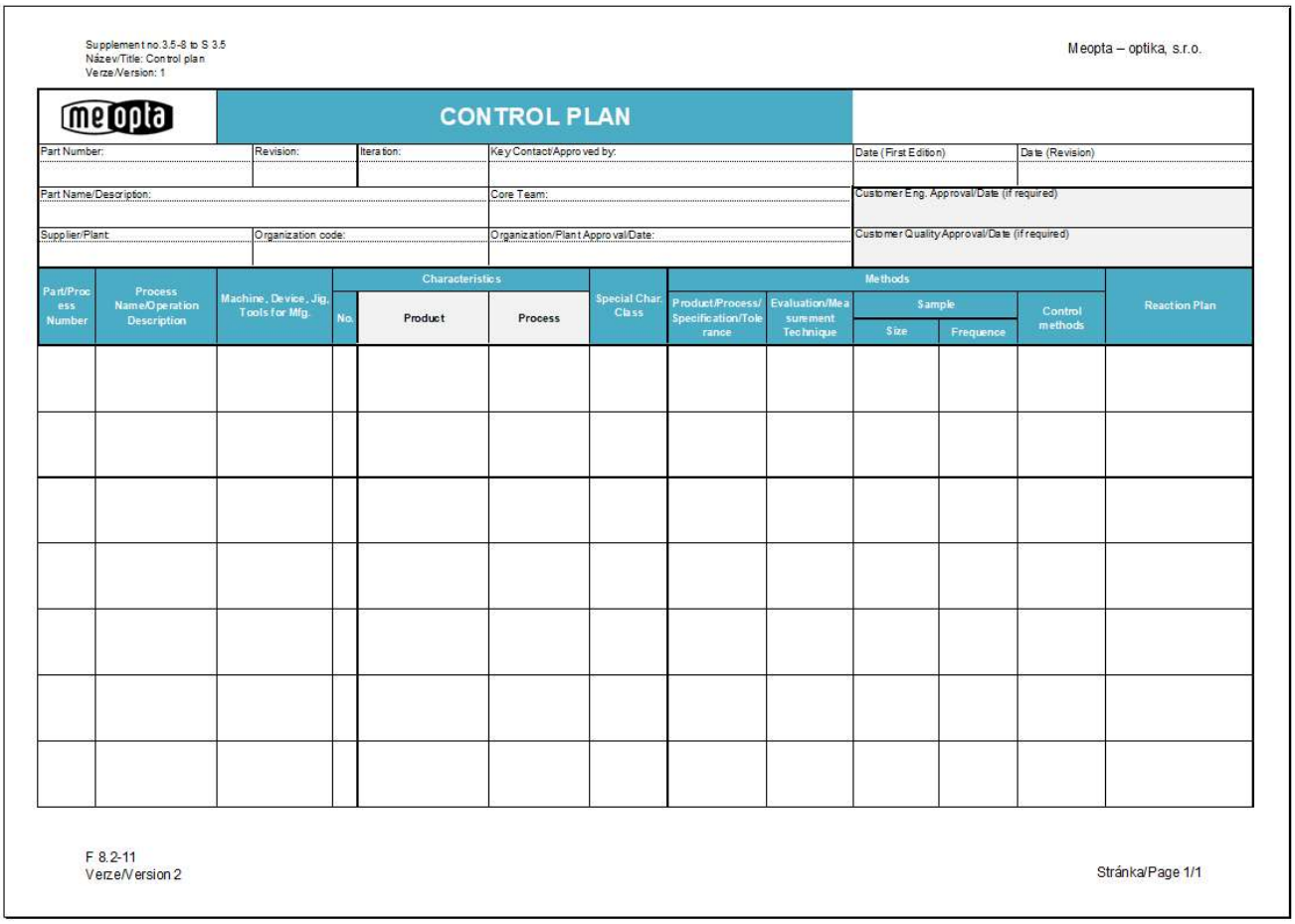
Dodavatel/závod:	Kód dodavatele:	Datum schválení dodavatele:	Schválení kvality zákazníka/datum (pokud se vyžaduje)

Díl číslo operace	Název Popis činnosti	Stroje, zařízení, přípravky, nástroje pro výrobu	Znaky			Třídy zvláštních znaků	Metody					Plán reakce
			Č.	Výrobek	Proces		Výrobek/ Proces/ Specifikace	Měřicí technika	Vzorek		Kontrolní metoda	
									Rozsah	Četnost		

F 8.2-11
Verze/Version 2

Stránka/Page 1/1

Attachment 5 - Control plan – English version



Supplement no.3.5-8 to S 3.5
Název/Title: Control plan
Verze/Version: 1

Meopta – optika, s.r.o.

CONTROL PLAN

Part Number:	Revision:	Iteration:	Key Contact/Approved by:	Date (First Edition)	Date (Revision)
Part Name/Description:			Core Team:	Customer Eng. Approval/Date (if required)	
Supplier/Plant:	Organization code:		Organization/Plant Approval/Date:	Customer Quality Approval/Date (if required)	

Part/Process Number	Process Name/Operation Description	Machine, Device, Jig, Tools for Mfg.	Characteristics			Special Char. Class	Methods					Reaction Plan
			No.	Product	Process		Product/Process/ Specification/Tolerance	Evaluation/Measurement Technique	Sample		Control methods	
									Size	Frequence		

F 8.2-11
Verze/Version 2

Stránka/Page 1/1

Attachment 6 - Deliveries of mechanical items without surface treatment

Deliveries of mechanical items without surface treatment

This work instruction is meant for external suppliers of mechanical parts. Its purpose is to define the accurate dimensions of the parts which have to be manufactured with regard to the surface treatment (ST) performed later by Meopta.

There can be two cases during surface treatment.

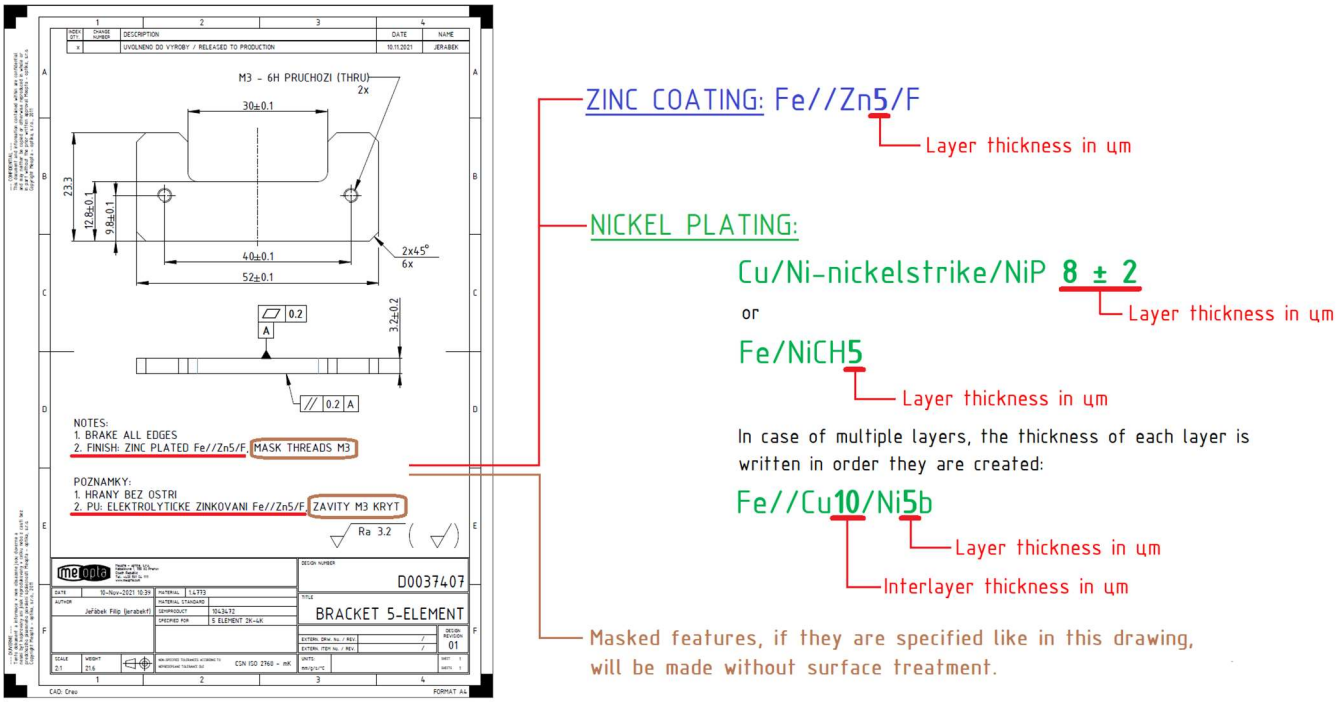
1. In technological processes during which a film is exposed on the surface of the part and the part dimensions change. This must be taken into account because the dimension in the drawing documentation is after the ST. (So for the part before ST the dimensions have to be corrected by ST thickness).
2. In technologies where oxide layers are formed, there is no change in size. The thicknesses of such layers are either "negligible" or, due to the pretreatment, there is a removal of the base material which is identical to the thickness of the desired surface treatment. So the dimensions on the drawing are correct also for part before ST.

- **Surface treatments for which the dimension must be taken into account**

The numerical thickness of the layer for these STs is clearly defined in the drawing documentation. The supplier must take this information into account during production. The technologies include:

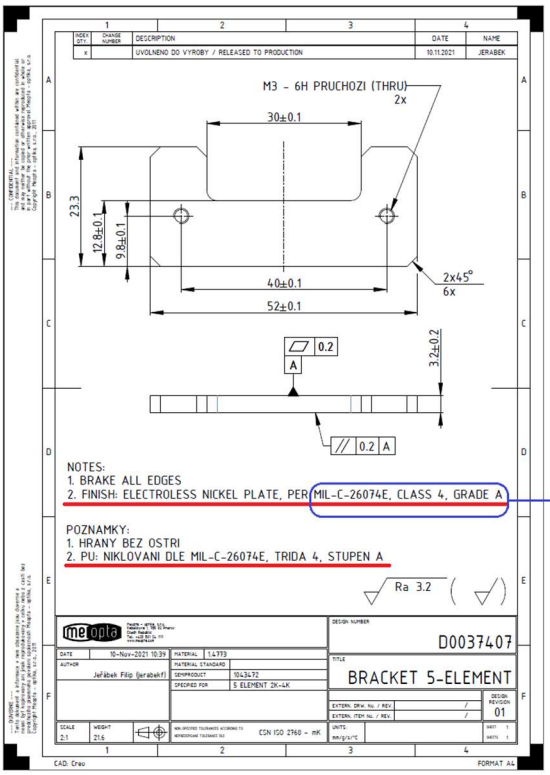
- **Zinc coating, Nickel plating, Chemical nickel plating** - registered in the relevant international standard e.g. ISO xxxx etc. with data determining the layer thickness (see**Chyba! Nenalezen zdroj odkazů.**).

Figure 1 - examples of ST marking and required thickness



There are also cases where the layer thickness is defined directly by the standard - see**Chyba! Nenalezen zdroj odkazů.**.

Figure 2 - example of notes about ST with reference to the standard that defines the layer thickness



NORM: MIL-C-26074E, CLASS 4, GRADE A

PREVIEW:

Electroless depostion of Nickel-Phosphorous Alloy coatings on metal and composit surfaces

Class 1	As plated, no subsequent heat treatment
Class 2	Heat treated to obtain required hardness
Class 3	Aluminum alloys nonheat-treatable, processed to improve adhesion of deposit
Class 4	Aluminum alloys, heat-treatable, processed to improve adhesion of deposit
	.
	Thickness
Grade A	.0010 inch minimum
Grade B	.0005 inch minimum
Grade C	.0015 inch minimum.

- **Surface treatments for which the dimension does not have to be taken into account**

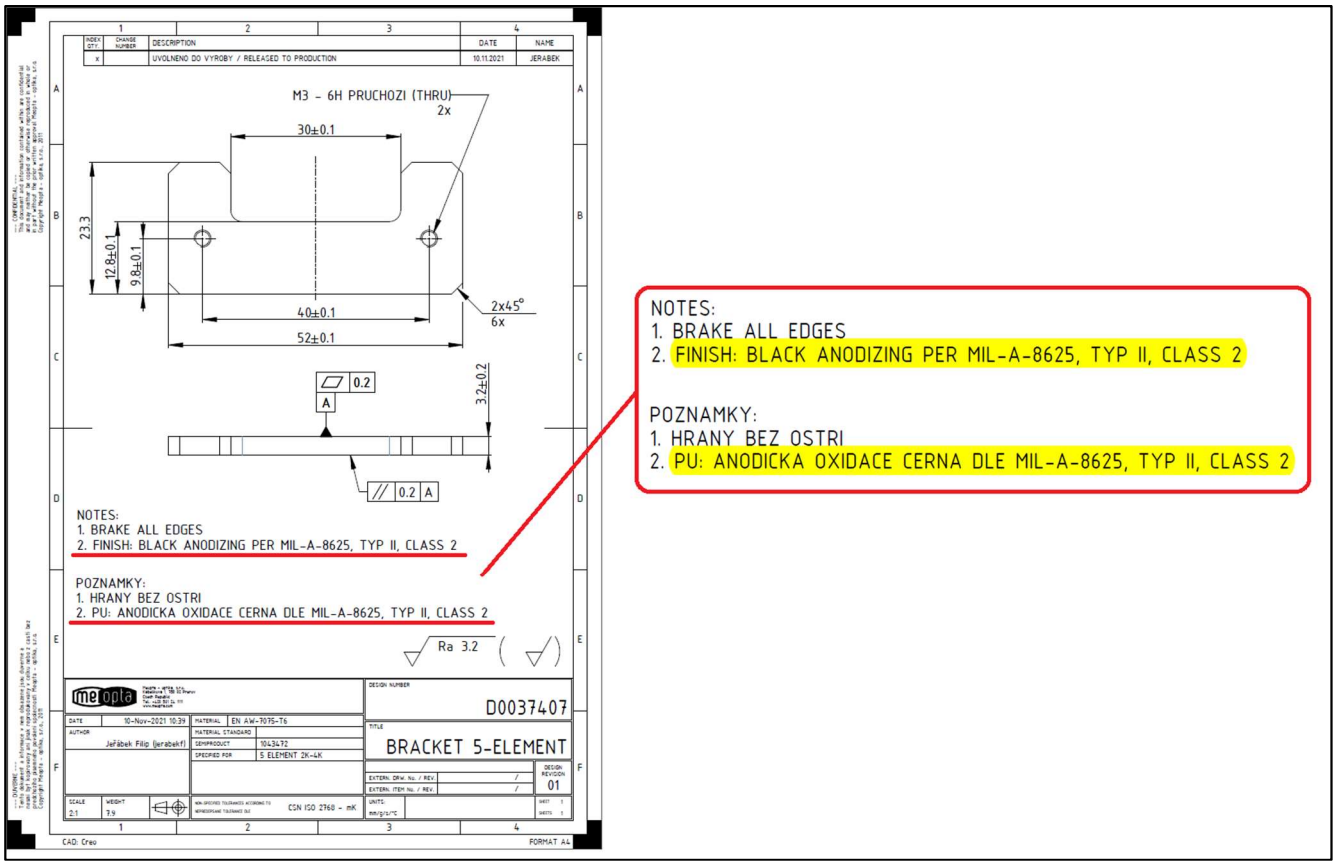
It is not necessary to take into account dimensional changes for these STs. The supplier can produce the parts to the final dimensions given by the drawing. The technologies include:

- **Anodizing / anodic oxidation** of aluminum registered by the relevant international standard e.g. ISO xxxx,

MIL-A-8625 type II, (class) 2 etc. Performed by Meopta itself or the supplier on the basis of a process qualified by Meopta.

- Passivation of stainless steels according to ASTM-A-967, AMS 2700C.
- Alkaline oxidation / blackening of steel and other metals

Figure 3 - Example of anodic oxidation in the drawing notes



Revision	Revision date	Reviewed by	Approved by	Description of the change
1.	7.11.2011	Martin Zborek	Aleš Mandák	First release, 7.11.2011
2.	17.6.2016	Martin Zborek	Martin Zborek	AS9100
3.	9.8.2021	Miroslav Chmelík	Miroslav Chmelík	Full revision and update according to recent business requirements
4.	26.1.2022	Miroslav Chmelík	Miroslav Chmelík	Reference for surface treatment of mechanical parts was added
5.	2.6.2023	David Kundera	Jindřich Hýža	Replacements/repairs labeling was added see article no. 6, articles no. 3 and 9 were revised