TITOLO:
SUPPLIER QUALITY MANUAL

RIFERIMENTI:
IATF 16949:2016
ISO 9001:2015
ISO 45001:2015
ISO 14001:2015
Regg. EMAS

MOTIVO DELLA REVISIONE CORRENTE:
SPECIFIES REFERENCES FOR REGULATIONS RELATED TO CHEMICAL SUBSTANCES TO BE APPLIED BY SUPPLIERS

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INTRODUCTION

The purpose of the Supplier Quality Manual is:
› communicate to suppliers in a clear and uniform manner the expectations, guidelines and quality requirements of the MTU Group;
› indicate to suppliers the tools and methods necessary for the development, manufacture and control of products in accordance with these requirements.
The contents of the Supplier Quality Manual represent the minimum procedures that must be effectively implemented by all suppliers of production materials in all MTU Group plants.
The Supplier Quality Manual is an integral part of the "General Conditions of Purchase" in force and is drawn up in line with the contents of the MTU Group Policy. The document "Mission and Policy" can be consulted on the intranet site www.meccanotecnicaumbra.com.
The goal of the MTU Group is to provide its customers with products with a "zero defect" quality target, to supply these products globally and to be a competitive supplier in every market, ensuring the commitment to continuous improvement in the areas of environment, safety and corporate social responsibility. This can only be achieved with the support and commitment of its suppliers.

CODE OF ETHICS

The MTU Group carries out its activities with reference to the provisions of a Code of Ethics that is inspired by the principles of compliance with the laws in force, loyalty, fairness and professional rigour in order to preserve the integrity of the Group's assets and safeguard their respectability and image, maintaining relationships of clarity and transparency with its shareholders and with economic entities in general.
The MTU Group does not have business relations with anyone who does not base its activities on the principles underlying this Code; all suppliers of the MTU Group are therefore required to accept it, committing themselves to behave in accordance with the provisions contained therein.
The MTU Group's Code of Ethics can be consulted on the www.meccanotecnicaumbra.com website.

QUALITY MANAGEMENT SYSTEM

To become a supplier of the MTU Group, it is necessary to be in possession of the ISO 9001 certification issued by an accredited third-party body.

Suppliers of products for the aerospace & defence sector must structure their quality management system with the aim of complying with the UNI EN 9100 standard.

Suppliers of products for the automotive industry must structure their quality management system with IATF 16949 in mind.

In the event that the supplier has to outsource production phases, after assessing the suitability of the subcontractor, it must verify that it is at least ISO 9001 certified; in the case of subcontracting, the supplier must indicate this in the PPAP documentation.

The requirements of Procedure P.012, including any Customer Specific Requirements, shall be transferred to subcontractors at any level.

ENVIRONMENTAL MANAGEMENT SYSTEM

An effective environmental management system that ensures compliance with applicable standards and promotes continuous improvement of the supplier's environmental performance is an essential element of supplier assessment.
All supplies must comply with the applicable environmental regulations applicable in the producing and receiving country.

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

An effective occupational health and safety management system that ensures compliance with applicable standards and promotes continuous improvement of the supplier's performance in terms of occupational injuries or diseases is an essential element of the supplier's assessment.
All supplies must comply with the applicable safety regulations applicable in the producing and receiving country.

CORPORATE SOCIAL RESPONSIBILITY MANAGEMENT SYSTEM

An effective corporate social responsibility management system that ensures compliance with applicable regulations and promotes continuous improvement of performance must necessarily involve its suppliers in this process. Consequently, it is an essential element in the assessment of the supplier. All supplies must comply with the "Company Code of Ethics", the "Child Labour Procedure" and the "Procedure on the Handling of Reports and Complaints".
These procedures can be consulted on the www.meccanotecnicaumbra.com websitehttp://www.meccanotecnicaumbra.com/.

ENERGY MANAGEMENT SYSTEM

An effective energy management system that promotes continuous performance improvement must necessarily involve its suppliers in this process. Consequently, the energy performance during the planned and/or expected life of energy-using products, equipment and services that have an impact on the Significant Energy Uses identified by MTU, constitutes one of the supplier's evaluation criteria. In these areas, all supplies must comply with the specifications communicated to ensure the energy performance of the equipment and services purchased and for the purchase of energy. The supplier is informed by the relevant MTU department, in consultation with the purchasing department, of these specifications.

LEGISLATIVE COMPLIANCE

All purchased components and/or materials used in the construction of mechanical seals must comply with the current regulations applicable in the country of production and sale of the materials/components as well as environmental, electrical, electromagnetic and safety regulations.
In particular, for the Management of Regulations on Chemical Substances applicable to Suppliers please refer to Working Instruction IS. 221 that can be consulted on the website http://www.meccanotecnicaumbra.com/.

SUPPLIER SELECTION AND MONITORING

Supplier Selection

The potential supplier will be invited to fill in a special questionnaire aimed at collecting information about the company in a structured way. On the basis of the replies to the questionnaire, the MTU Group carries out a risk assessment with regard to the quality of the product and the uninterrupted supply of products and defines any further activities to be carried out for the qualification of the supplier. This may include performing an audit at the supplier's premises. Once the qualification activities have been completed, the MTU Group decides whether the potential new supplier can be included in the Qualified Supplier List.

Supplier monitoring and development

Vendor Rating is carried out every 4 months and the results, through the Supplier Report, are sent to the supplier.
The Supplier Global Index (SGI) is the result of a weighted average of the scores of 8 characteristic, dynamic indices, automatically calculated by the information system.

SGI = IQ (55%) + OTD (20%) + QTY (7%) + SAF&ENV (10%) + QUALITY CERTIFICATE (5%) + SPECIAL STATUS (1%) + N. OF PREMIUM FREIGHT (1%) + SHIPMENT STOP TO CUSTOMER (1%)

- Quality Index (IQ): composed of quality measured in acceptance, in production, at the customer's premises (non-compliant batches).

  IQ = [(no. of compliant lots)*100 + (no. of batches accepted by derogation)*50 + (no. of rejected lots)*1]/total batches received

- Delivery Index (OTD): expresses compliance with the expected delivery date

  OTD = [1 – (late batches + early lots)]/ total lots received*100

- Quantity Index (QTY): [(quantity ordered – quantity received)/quantity ordered]*100

- Environment, Safety and Corporate Social Responsibility Index: expresses the assessment of the supplier's declared ability to manage environmental aspects, health and safety risks related to its production activities and Corporate Social Responsibility issues.

- Quality Certificate: expresses the type of certification of the Supplier's Quality Management System (IATF 16949 or ISO 9001)

- Shipment stop to Customer: indicates whether there have been any supply discontinuities at the Customers' plants

- No. of premium freight: indicates the number of events related to additional delivery costs

- Special status (quality & delivery): indicates whether there have been special status notifications from the Customer regarding quality or delivery issues

The target for the quality of the product supplied (IQ) and compliance with the agreed delivery dates (OTD) is communicated annually.
Corrective actions are required whenever the communicated objective is not achieved.

Corrective actions, depending on the type of supplier, the type of product supplied, and the identified deficiencies (quality or service) may include:

- no action, because the trend of results shows improvements;
- evaluate with the supplier at MTU the technical-qualitative-production problems that are at the root of the non-conformities detected in order to establish appropriate specific corrective actions (project or process modification, etc.) for priority situations;
- provide longer-term planning;
- agree on supply contracts with commitments for the collection of goods and safety stocks;
- evaluate with the supplier at its production site the technical-qualitative problems that lie at the root of the non-conformities detected by means of a process audit in order to establish appropriate specific corrective actions (project or process modification, etc.) for priority situations;

In the event that corrective actions do not prove effective in resolving the critical issues encountered, alternative sources of supply will be activated.

Inspection visits to the supplier
MTU reserves the right to carry out audits of suppliers and, if necessary, subcontractors by agreement. Supplier shall ensure access by MTU, MTU Customers and relevant authorities to the applicable facilities and documentary information.
MTU undertakes to guarantee the confidentiality of the information acquired during the audit in order to safeguard the supplier's technical assets.

MTU'S DESIGNATED EXTERNAL SUPPLIERS

Suppliers must use, when requested, external suppliers designated or approved by MTU including process sources (e.g. special processes).

CONTINUITY OF SUPPLY

Suppliers must prepare contingency plans to ensure continuity of supply to MTU in relation to the risks identified in the assessment of internal processes and those of their supply chain

PROCEDURE FOR THE APPROVAL OF SAMPLES

Prototypes. The sampling will have to be made for products that require a prior evaluation in the testing phase, MTU will ask the supplier to produce a limited number of parts, the order will be issued by the purchasing department with the code 08-XXXX.
This phase will allow the supplier to assess whether the product can be industrialized. Sampling can also be carried out with non-final equipment other than that which will be used for mass production.
The prototypes, identified in the purchase order with the component code preceded by the prefix 08-, must be addressed to MTU Italia by correctly identifying them in the transport document indicating the description 08-XXXX.

The **initial sampling**, identified in the purchase order with the component code preceded by the prefix 09-, prepared with definitive means and equipment for mass production, made with the material indicated in the drawing and already approved, must be submitted to the MTU in the following cases:

- Supply of new Product;
- Modification of existing product (drawing and/or material);
- Modification of the production process/introduction of new production technology (the supplier must notify the MTU in writing of any changes it intends to make);
- Modification of means of production/equipment/moulds;
- New equipment to increase production capacity;
- Relocation of the production unit;
- Introduction and/or change of subcontractors;
- Resumption of supplies following suspension of production due to quality problems;

The drawing with which the supplier is authorized to submit the initial sample must be in "approved" or "validated" status.
The supplier must submit to MTU Italia the samples accompanied by the following documentation:

Automotive Samples (Fxxx Series)

- PPAP Level 3

Aerospace & Defence samples (identified as "AD" on the product description on the purchase order)

- FAI (Dimensional Report on all the characteristics indicated in the drawing, ballooned drawing, Certificate of Material, Certificate of Conformity, Pachaging Specification (Annex D))
  For O-Rings Dimensional Report is not mandatory.
  If Customer Specific Requirements request a requalification for a component not supplied since some years, Supplier will be requested to present a new FAI.

Samples for the Household Appliance and Industrial sector (all series except Fxxx)

- PSW, Drawing, Dimensional Report and Material Certificate

In the case of multiple fixtures, dimensional reports must be performed for each mold/fixture and the number of mold/fixture positions must be specified.
The dimensional report must contain measurements related to all the characteristics contained in the component drawing.
In the event that the pieces are produced by a multi-position mould, samples relating to all positions (n° of mould positions) must be sent, otherwise 10 pieces.
Only after the approval of the sampling by the MTU Italia Quality Service, the supplier is authorized to ship the first standard supply.

The samples must be delivered in packaging identified by the label "FIRST SAMPLING" and addressed to the MTU Italia Quality Service; in the transport document it must be indicated with the description 09-XXXX.
Sampling will be taken into consideration only if accompanied by the relevant documentation.

Payment for the equipment is subject to the approval of the sampling and the passing of the assembly test where required.

Material homologation

The type of material to be used for the construction of the component is indicated on the drawing of the same.
Initial samples must be made using only materials already approved by MTU.
In the case of use of materials not previously approved, MTU will proceed with the relative homologation in accordance with internal procedures (Ref. Table 3)

Table 3

TYPOLOGY OF MATERIAL	REFERENCE SPECIFICATION
Ceramic Rings and carbide	The material is approved in accordance with the internal document D.19. The supplier's technical data sheet, containing the chemical and physical characteristics, is used as an internal reference for the purposes of acceptance controls and annual re-approval when required.
Rings made of carbonaceous materials	The material is approved in accordance with the internal document D.21. The supplier's technical data sheet, containing the chemical and physical characteristics, is used as an internal reference for the purposes of acceptance controls and annual re-approval when required.
Rubber and plastic components (except HNBR)	The material is approved in accordance with the internal document D.05. The supplier's technical data sheet, containing the chemical and physical characteristics, is used as an internal reference for the purposes of acceptance controls and annual re-approval when required.
Rubber components (HNBR)	The reference specifications for acceptance and annual re-approval tests are the MTU Technical Data Sheets for P4 and P41 compounds. The material is approved in accordance with the internal document D.05
Raw materials compounds coal, SiC, alumina and PTFE	The material is homologated through internal product and process tests. The supplier's technical data sheet, containing the chemical and physical characteristics, is used as an internal reference for the purposes of acceptance controls and annual re-approval when required.
Steel components	The chemical composition is related to the abbreviation of the material; for completeness of information, please refer to the correlation table between the different denominations in use (Annex A). The type of supply required is BR (EN 10088) or BA (ASTM A480) unless otherwise communicated by official communication.

PRODUCTION CONTROL

Series production can be carried out only after sampling approval by MTU and using a drawing in "validated" status.

Checks to be carried out on supplies

The supplier is required to control the products using suitable processes and equipment to ensure compliance with the characteristics indicated in the specification.
The supplier is required to formalize the in-process and final controls carried out on the products and to make the related registration documents available during the audit or send them upon request.
Products intended for the aerospace & defence sector must be 100% checked for all the characteristics indicated in the drawing.
For all other sectors (with the exception of aerospace & defence), the characteristics that the Supplier is required to certify are indicated in the MTU drawing and in Table 4.

Table 4

TYPOLOGY COMPONENT	CONTROLS
Elastomers	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - Physical Chemistry: Hardness; - visual: absence of cuts, lacerations, burrs, abrasions, lack of material, incomplete pieces, state of surface cleanliness, burns, blisters, holes, voids, deformations, streaks. - Any additional checks on the component drawing
Sheared components or turned	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - Visual: no dents, lacerations, burrs, surface cleanliness, deformations - Any additional checks on the component drawing - state of cleanliness: washed pieces free of any oily residue, processing scraps, shavings, foreign bodies, the parts must be free of surface oxidation.
Soft	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - Physical Chemistry: Load Value, Block Height; - visual: no deformation of the coils, direction of the propeller, state of surface cleanliness, burrs, typical steel colour, absence of surface oxidation. - Any additional checks on the component drawing
Ceramic rings, silicon and carbide	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - physical chemistry: specific gravity; - visual: absence of porosity, stains, scratches, grains, cracks, burrs, holes, state of surface cleanliness. - Any additional checks on the component drawing
Graphite/PTFE rings	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - physical chemistry: specific gravity; - visual: absence of porosity, stains, scratches, grains, cracks, holes, state of surface cleanliness. - Any additional checks on the component drawing
PTFE Powders, Carbon, SiC	- Chemical and physical controls (ref supplier certificate)
Impellers	- Dimensional: all special features (ref. Table 5) present on the drawing relating to the component; - Physical Chemistry: Bushing Inner Diameter Roughness; - visual: absence of porosity, burrs, scratches, grains, cracks, state of surface cleanliness.

On the drawing, specific for each type of component, the dimensional characteristics are identified through the symbology shown in table 5 below

Table 5 **SPECIAL FEATURES**

Feature Type	Definition	Symbol
Safety	Characteristic of the product that represents a source of danger for the customer	
Criticism	A product characteristic or parameter of the production process that can cause serious loss (i.e., resulting in vehicle downtime).	
Important	A product characteristic or parameter of the production process that may cause leakage perceptible to the user (which does not result in vehicle downtime or reduction in the performance of the primary function of the vehicle) or audible noise or that affects the ability to be assembled at the CUSTOMER.	
Secondary	A product characteristic or parameter of the production process that does not cause any type of leakage/noise perceptible to the user but has an influence on downstream MTU processes.	
Unclassified	A product characteristic or parameter of the production process that does not fit into one of the above descriptions.	No symbol

Safety, critical and important features must be reported on the Control Plan and Process FMEA documents relating to the products supplied.

1. STATISTICAL PROCESS CONTROL

All characteristics identified on the control plane with the symbol must  subjected to SPC (statistical process control) or 100% control.
For each batch produced, the capacity of the process described by the qualitative capacity index cpk must be calculated, which expresses the actual ability of a process to maintain a given characteristic consistently within the pre-established specification limits.
The long-term process capacity must be calculated under normal series production conditions over a sufficient period of time for all influencing factors in the process to be effective.
The evaluation of the process can be considered positive if Cpk ≥1.33.
In the event that the value obtained is < 1.33, the shipment of the lot must be agreed in advance with the Quality Control Manager.
Records of SPC activity must be sent in electronic format to the Quality Control Manager for each supply made

2. PRODUCT REQUALIFICATION

All components intended for OEM supplies listed in the annex (Annex B) must be subjected, in accordance with the Production Control Plan, to dimensional and material requalification on an annual basis.
The dimensional report includes the measurements of all the characteristics reported in the component drawing (in the case of multiple fixtures, the reports must be performed for each mold/fixture and the number of mold/fixture positions must be specified).
Counter-checks on the material must be carried out at an external laboratory accredited according to ISO/IEC 17025 or equivalent national standard and are related to the confirmation of the chemical/physical characteristics and functional tests carried out at the time of the approval of the first sampling and present in the PPAP of the component. The supplier is obliged to make the relevant registration documents available during the audit or to send them on request.

DOCUMENTATION TO BE ATTACHED TO SERIES SUPPLY

All Aerospace & Defence products must be delivered accompanied by the following documentation:

- Material Certificate (of the foundry in case of steel)
- Certificate of Conformity (CoC)

IDENTIFICATION AND TRACEABILITY OF PRODUCTS

The supplier must have a system in place that ensures:

› the identification of raw materials and semi-finished products in stock in its warehouses;

› identification of the progress of products in relation to monitoring and measurement requirements;
› the identification of the non-compliant product to avoid its inadvertent use or delivery;

› the identification of the finished product and deliberate conformity

› internal traceability starting from document transport number.

The supplier must have a system in place that allows the unequivocal identification and trace, for each production batch, the date of manufacture, the results of the controls and tests to which the products have been subjected and any corrective actions implemented. This requirement also applies to products and processes manufactured by subcontractors.

CONTROL AT THE INFEED OF THE GOODS

During the production process, the supplier must carry out and document all the necessary checks to ensure the conformity of the product sold with the contractual requirements.
To achieve the quality level required by the MTU, all incoming materials must have zero defects.
MTU will make sure to identify the incoming goods, the number of pieces and will assess alleged damage to the goods during transport.
MTU has no obligation to control the material purchased. Generally, the conformity of the purchased product is verified within the production process. Complaints due to problems detected at this stage will not be rejected.

REQUEST FOR WAIVER

The supplier must not deliver products on which it detects non-conformities with respect to the specified requirements without having obtained formal authorization from the MTU Quality Service.
Authorization for the supply of non-compliant products must be requested using the Derogation Request form attached (Annex C).
Each container of products accepted in derogation must be appropriately identified with a sign bearing the words Material accepted in derogation and with a copy of the derogation acceptance form issued by MTU Quality. MTU reserves the right to evaluate the costs related to the management of the request and its impact on production. The assessed costs will be communicated to the supplier for acceptance of the otherwise rejected waiver.

CHANGE MANAGEMENT

When the Supplier intends to make changes to the product and/or the production process, with respect to what was declared in the documentation submitted during the sampling phase, it must request approval from the MTU Italia Quality Service; Only after receiving approval will it be able to introduce the requested change, subject to the submission of a new sample.
Until the changes to the product and/or production process have been validated by MTU Italia (and the related sampling accepted), any concurrent production orders must be issued in accordance with the previously approved product/process, unless otherwise requested and documented through acceptance in derogation by MTU Italia.

NON-COMPLIANT PRODUCT HANDLING

NCs Detected in MTU During Acceptance or Production Control

In the case of NC, the Escalation Rules applied by MTU will be as follows:

a) occurrence of an NC:
the supplier receives the Non-Compliance Report and will have to support MTU in the containment phase of the problem by communicating in written form, on an 8D model, the measures adopted:

- Corrective containment actions (within 24 hours of notification of non-compliance)
- cause of NC, medium and long-term corrective actions (within 7 working days)
- verification of the effectiveness of the corrective actions taken, closure of non-compliance (within 15 working days, extendable upon justified request).

MTU temporarily revokes any free pass status.
In the absence of a response or in the event of inadequate corrective actions following the communication of the non-conformity, MTU reserves the right, in relation to production needs, to reject incoming supplies or to make 100% selections at the expense of the supplier.

In the event of serious and/or repetitive qualitative non-conformities, MTU applies the following practice:

b) occurrence of 3 consecutive NCs: MTU carries out a process audit to the supplier;
c) occurrence of 5 consecutive NCs: the supplier will be removed from the List of Qualified Suppliers.

Any non-compliant supplies will impact the supplier's Vendor Rating and will cause a charge in relation to the damage generated by line downtime, missed shipments to customers, etc.
Out-of-specification portions will be rendered freight collect.
Unless the parties agree in writing, the supplier will be charged the following costs:

- Logistic costs for non-compliance management
- Line Hold
- Product Recall Campaign
- MTU's End Customer Charges
- Rework
- Costs for additional shipments to customers

In the event of non-compliant components, MTU may carry out additional sorting on the pieces in stock at MTU or at and/or at the end customer MTU, charging the costs to the supplier.

In the event of non-conforming components that cannot be used, the supplier authorizes the return or scrapping at MTU and communicates any disposal instructions.

NC identified at MTU Customer
For defective parts found at the Customer's premises in the event of an epidemic and/or a finding exceeding the agreed quality levels, MTU reserves the right to request appropriate forms of compensation for the damages suffered.

PACKAGING AND LABELING OF MATERIALS

The supply material must be packed in suitable containers to prevent damage during transport. In the event of damage to supplies during handling and transport, the pieces will be considered non-compliant.
The materials used for the packaging must comply with all applicable legal requirements.
Table 6 indicates the types of packaging to be used for the different components supplied, unless otherwise specified:

Table 6

Component	Typology of single packaging	Maximum dimensions of the single package [WxWxH] [mm]
Metal veneers and springs	Cardboard or plastic box	40x40x30
Elastomers	Plastic bag inserted in carton box	40x40x30
Charcoal rings Ceramic rings (industrial sector)	Plastic bag inserted in carton box	40x40x30
Ceramic rings (automotive and household appliance sector)	Lined up in plastic or cardboard shelves inside the cardboard box	40x40x30
Raw materials: compounds: charcoal and alumina powder	Paper Bags	
SiC & PTFE Powder	Plastic drums	

Each individual box must be identified with a label, which must contain the following information (unless otherwise agreed with the Logistics Manager):

- Supplier's company name
- Product description
- MTU product code
- Order number or production batch
- Quantity of each container

Unless expressly indicated in further official communications, the total packaging does not exceed the dimensions of 800x1200x1000.
All wooden packaging must comply with the International Plant Protection Convention standard ISPM 15.

According to MTU's procedures for the manual handling of loads, the maximum weight allowed for each piece is 20 kg.

QUALITY RECORDINGS

The supplier must store and maintain available for 15 years the documented information relating to the product supplied and then dispose of it in a manner that ensures the destruction of the information. Any special requests from Customers that foresee different timing will be communicated by MTU.

COUNTERFEIT

The supplier must plan, implement and control processes for the prevention of the use of counterfeit or suspected counterfeit parts and their inclusion in the products delivered to MTU.
Definition of **counterfeit part**: An unauthorized copying, imitation, substitution, or modified part (e.g., material, part, component) that is knowingly misrepresented as a specified original part of an original or authorized manufacturer.

OWNERSHIP OF MTU GROUP

The properties of the MTU Group made available to the supplier for use or incorporation into the products shall be:

› register so that you have an up-to-date list at all times;
› properly identified (tools and equipment and production, testing and testing equipment must be permanently marked to allow the ownership of each element to be visible and can be determined);
› carefully preserved, protected, safeguarded and verified;
› included, when applicable, in calibration and maintenance programs. Ordinary maintenance and partial or total renovation of the properties of the MTU Group due to problems attributable to suppliers will be the responsibility of the suppliers themselves. Should the properties of the MTU Group require extraordinary maintenance due to deterioration or wear, the supplier is required to promptly notify the MTU Italia Group's Purchases in writing and may start the execution of the interventions only after receiving a formal authorization. The use of MTU Group properties does not relieve the supplier of responsibility for the quality of the products supplied.

MISCELLANEOUS

Additional requirements may be contained in individual contracts and/or stipulated in the General Terms and Conditions of Purchase.

ATTACHMENTS

ANNEX A:	Correlation table of steel designation according to various standards
ANNEX B:	OEM Part Number List Undergoing Annual Requalification
ANNEX C:	Request for exemption (Mod. 254)
ANNEX D:	Packaging Specification (Mod. 293)

GLOSSARY

MTU Meccanotecnica Umbra
QMS Quality Management System
RNCA Non-Compliance Reports in Acceptance
QC Quality Control

ANNEX A

Correlation table of steel designation according to various standards

Austenitic steels AISI 3XX [EN 10027] [EN 10088-2] [EN 12756]	X5CrNi17-7 [1.4319] [AISI 301]	F6
	AISI 301 Full Hard ASM5519	F61
	X10CrNi18-8 [1.4310] [AISI 302]	F
	X8CrNiS18-9 [1.4305] [AISI 303]	F4
	X5CrNi18-10 [1.4301] [AISI 304]	F1
	X5CrNi18-10 [1.4301] [AISI 304] - Ni 9% Min	F5
	X2CrNi19-11 [1.4306] [AISI 304L]	F11
	X2CrNi18-9 [1.4307] [AISI 304L]	F12
	X2CrNiN18-10 [1.4311] [AISI 304LN]	F13
	X6CrNi18-10 [1.4948] [AISI 304H]	F14
	X4CrNi18-12 [1.4303] [AISI 305]	F3
	X12CrNi23-13 [1.4833] [AISI 309S]	F2
	X8CrNi25-21 [1.4845] [AISI 310S]	F8
	X6CrNiTi18-10 [1.4541] [AISI 321]	F9
	X5CrNiMo17-12-2 [1.4401] [AISI 316]	G
	X3CrNiMo17-13-3 [1.4436] [AISI 316]	G0
	X2CrNiMo17-12-2 [1.4404] [AISI 316L]	G11
	X2CrNiMo18-14-3 [1.4435] [AISI 316L]	G12
	X2CrNiMo17-12-3 [1.4432] [AISI 316L]	G13
	X2CrNiMoN17-11-2 [1.4406] [AISI 316LN]	G41
	X2CrNiMoN17-13-3 [1.4429] [AISI 316LN]	G42
	X6CrNiMoTi17-12-2 [1.4571] [AISI 316Ti]	G2
	X6CrNiMoNb17-12-2 [1.4580] [AISI 316Cb]	G22
	X1NiCrMoCu25-20-5 [1.4539] [AISI 904L]	G23
Ferritic Steels AISI 4XX [EN 10027] [EN 10088-2] [EN 12756]	X2CrTi12 [1.4512] [AISI 409]	E2
	X6Cr17 [1.4016] [AISI 430]	E31
	X10CrMoS17 [1.4105] [AISI 430F]	E32
	X2CrTi17 [1.4520] [AISI 430Ti]	E33
	X6CrMo17-1 [1.4113] [AISI 434]	E4
Martensitic steels AISI 4XX [EN 10027] [EN 10088-2] [EN 12756]	X20Cr13 [1.4021] [AISI 420]	E11
	X30Cr13 [1.4028] [AISI 420]	E12
	X39Cr13 [1.4031] [AISI 420]	E13
	X46Cr13 [1.4034] [AISI 420]	E14
	X17CrNi16-2 [1.4057] [AISI 431]	And
	X90CrMoV18 [1.4112] [AISI 440B]	E5
	X39CrMo17-1 [1.4122]	E61
	X3CrNiMo13-4 [1.4313] [S41500]	E62
	X105CrMo17 [1.4125] [AISI 440C]	E63
PH AISI 6XX steels [EN 10027/EN 10088-2/EN 12756]	X5CrNiCuNb16-4 [1.4542] [17-4PH] [AISI 630]	F72
	X7CrNiAl1707 [1.4568] [17-7PH] [AISI 631]	F71
	AM350 [UNS35000] [AISI633]	F73
Duplex (Austenite-Ferritic) Steels [EN 10027/EN 10088-2/EN 12756]	X3CrNiMoN27-5-2 [1.4460] [AISI 329]	G31/G3
	X2CrNiMoN25-7-4 [1.4410] [S32750]	G32
	X2CrNiMoN22-5-3 [1.4462] [S32205]	G33
Carbon Steel	C72	D
	DC04 [1.0338] [A619DDS]	D2
	C67S [1.1231]	D3
	DD13 [1.0335]	D5
Casting Steels [EN 10027/EN 10088-2/EN 12756]	GX5CrNi19-10 [1.4308]	S11
	GX5CrNiMoNb19-11-2 [1.4581]	S12

ANNEX B

OEM Part Number List Undergoing Annual Requalification

CODE	DESCRIPTION	CODE	DESCRIPTION
13940	AN. TRACK/F-845/Q	**44112**	AN. LOWER/F-494/F1
13990	AN. TRACK/F-616/Q1	**44126**	CANNOTTO/F-624/F5
13996	AN. TRACK/F-805/Q1	**44133**	GIR.CM/F-704/R4XT
15052	SPRING/F-351-F1	**44135**	IMPELLER/F-729/R4XT
15060	SPRING/F-706/F	**44165**	CONTAINER/F-836/F1
15062	SPRING/F-741/F	**44169**	CANNOTTO/F-804/F5
15070	SPRING/F-741/F	**44174**	IMPELLER/F-897/R4XT
15999	SPRING/F-962/F	**44179**	AN. LOWER/F-959/F1
17839	AN. TRACK/F-669/V5	**44180**	AN. TOP/F-967/F5
17954	AN. PISTA/F-501/V5	**44181**	CANNOTTO/F-965/F5
18025	BELLOWS/F-503/P4	**44182**	CONTAINER/F-966/F1
18083	HEADPHONE/F-500/P4	**44183**	CANNOTTO/F-983/F5
18089	BELLOWS/F-439/P4	**44184**	AN. SUPPORT/F-887/F1
18127	CANNOTTO/F-743/P4	**44402**	CONTAINER/F-966/F8
18640	HEADPHONE/F-848/P41	**44581**	CANNOTTO/F-577-CH/F1
18982	HEADPHONE/F-800/P4	**44653**	AN. TOP/F-260/F1
19093	BELLOWS/F-958/P4	**44654**	AN. LOWER/F-446/F1
19094	HEADPHONE/F-960/P4	**44701**	CONTAINER/F-573/F1
19108	BELLOWS/F-958-P41	**44702**	CONTAINER/F-502/F1
19122	HEADPHONE/F-923/P4	**44727**	CANNOTTO/F-714/F1
19225	HEADPHONE/F-667/P41	**44774**	CANNOTTO/F-1015/F3
19226	HEADPHONE/F-609/P4	**44775**	CANNOTTO/F-922/F3
19998	BELLOWS/F-958/P41	**44998**	CONTAINER/F-573/F1/
42960	CANNOTTO/F-499/F5	**44301**	WASHER/F-1100/F1
47294	ABSORBER/F-1101/SA		

ANNEX C

Meccanotecnica Umbra	**Richiesta di DEROGA** ***Request for CONCESSION***

Sezione da compilare a cura del richiedente / *Section to fill by applicant*					
Data: *Date:*		Ente interno / *Internal Function:*			
Sig.: *Mr.:*		Telefono: *Phone:*		E-mail:	
Richiesta di autorizzazione a consegnare / produrre in DEROGA un lotto di particolari a codice: ***Request authorization to deliver / manufacture under DEVIATION a batch of part number:***					
N. Commessa: *Batch n.:*		Quantità / Scadenza della deroga: *Deviation quantity / expire date:*			
Motivo della richiesta / *Reason of request*		Identificazione tenute / *Seals identification*			
Azioni correttive previste / *Corrective actions planned*					

Sezione da compilare a cura del Cliente / *Section to fill by Customer*		
☐ Richiesta approvata / *Request approved* ☐ Richiesta respinta / *Request rejected*	Data: *Date:*	Firma: *Signature:*
Commenti: *Remarks:*		

Mod. 254 - Rev.0 – P18

ANNEX D

Meccanotecnica Umbra	SUPPLIERS PACKAGING SHEET	Mod. 293 - Rev. 0

FIELDS WITH *** IN GREY CELLS ARE MANDATORY: TO BE FULFILLED before sheet is returned toS MTU

Supplier Name		Supplier contact			
Supplier Plant		Phone		Rev Date	
		E-mail:			

PART NUMBER INFO

MTU p/n	Description	Part dimensions Length (mm)	Width (mm)	Height (mm)

Weight (kg)

PRIMARY PACKAGING (BOX) INFO

			Length (mm)	Width (mm)	Height (mm)
Packaging type		Ext. Dimensions			
Color		Int. Dimensions			
				(kg)	
Pcs/box		Gross w.		(kg) (pcs. + packaging)	
Pcs/layer					
layers/box					
Dunnage description					specify pcs/box
Separators description					specify pcs/box

PALLET INFO

boxes/pallet layer			total nr pcs/pallet	
nr layers/pallet			total pallet weight	kg
overall boxes weight		kg		
pallet weight		kg		
pallet overall dimensions		LxWxH (mm)		
PALLET TYPE				
cover type (if available)				

Part picture	Open box picture
Place Picture Here	Place Picture Here

Single box picture	Total pallet picture
Place Picture Here	Place Picture Here

Submitter (Supplier)	MTU approval
Date, signature	Date, signature

N° DI REVISIONE	DATA	STATO
12	29\04\26	Approved (L.Mochetto)