



FONDERIE ED OFFICINE MECCANICHE

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C.F. 00831990171
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ISCR. REG. SOC. N°00831990171
ISCR. REG. DITTE N°212084
CAPITALE SOCIALE € 1.720.000
DI CUI VERSATO € 505.000

GENERAL TERMS AND CONDITIONS OF SALE & QUALITY ASSURANCE

Kupral S.p.a. has adopted the **GENERAL CONTRACTING CONDITIONS FOR EUROPEAN FOUNDRIES** (hereinafter GCCEF) available at the foot of this document, along with the minimum company quality standards outlined below (Kupral Standards).

The following also applies:

Cf. Section 2 GCCEF

The offer made by Kupral S.p.a. is only valid for the phases and processes offered and does not include customer regulations/standards with regard to anything explicitly outlined in the design, unless provided and clearly discussed and documented in writing by the customer in a separate meeting with the company.

Therefore the customer will be responsible for any shortcomings/issues/costs due to the above in terms of the offer, processes, quality etc.

Cf. Section 6 GCCEF

Without prejudice to the full application of section 6 of the GCCEF, Kupral S.p.a. shall, in the event of a delay, consider any urgent transport costs (e.g. by air) as a part of a penalty (max. 5% of contract value (taxes excluded) for parts delayed). Any extra is the customer's responsibility.

Cf. Section 2 GCCEF

Any statistical studies or checks, even if outlined in customer specifications/standards or included in the PPAP, are not included unless explicitly detailed in the offer, and are the responsibility of the customer. Kupral S.p.a. follows the procedures on minimum inspections outlined in section 12 and the attached Kupral Standards, using measuring instruments and software applications already used at Kupral S.p.a. when the offer was submitted to the customer.

Acceptance of the offer via an order or any other method implies acceptance of the information written here and in the GCCEF, even if not signed by the customer.



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SUPPLY SPECIFICATIONS – KUPRAL STANDARD

Scope and field of application

This specification documents, supplements and completes the general terms and conditions of sale, by defining the quality standards offered by Kupral, unless agreed otherwise agreed with the customer and approved by Kupral S.p.a.

Kupral can also meet customer requirements not covered here, but only after methods, timescales and costs for anything that differs to the information in this document have been agreed with the customer.

This specification applies in its entirety to all supplies and products provided by Kupral S.p.a.; different additional agreements may be made between Kupral S.p.a. and the customer, but only if documented and agreed by both parties.

This specification does not apply to prototypes.

1.1. Chemical analysis

Kupral S.p.a. defines chemical test schedules to ensure products comply with required standards. The chemical composition of Kupral S.p.a. products complies with standards agreed with the customer and verified by Kupral. Tests are outlined in test reports produced in accordance with EN 10204 type 3.1 certification.

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.2. X-ray Analysis

Kupral S.p.a. checks its products with X-ray inspections implemented in accordance with ASTM E155, functional class CF2, with grade C acceptance, where possible (at the discretion of the Quality Assurance department).

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.3. Hardness

Kupral S.p.a. checks the hardness of its products in accordance with ISO 6506-1 using the Brinell method (HB). The hardness of Kupral S.p.a. products complies with standards agreed with the



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1.4. Casting tolerance

Kupral S.p.a. adopts the general tolerances set out in ISO 8062-3, CT9 casting tolerance quality, unless agreed otherwise with the Kupral S.p.a technical department on the basis of the customer design. Furthermore, a minimum mould clamping tolerance of 0/+1.5 mm is considered depending on the casting considered, however this must always be defined between the customer and the foundry and is never an integral, theoretical part of the offer. Usually one piece per type is checked.

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.5. Machining tolerances and dimensional control of machined parts

Kupral S.p.a. adopts the general tolerances set out in ISO 2768-1 and ISO 2788-2, (medium), unless agreed otherwise with the Kupral S.p.a. technical department on the basis of the customer design.

Dimension checks are defined by the Quality Assurance department and carried out in accordance with quality management procedures.

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.6. Porosity of finished surfaces

Kupral S.p.a. defines a basic level of acceptability of porosity on machined surfaces equal to PK5 as per Kupral SF_03 specification (**table 1**)

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.7. Finish

Kupral S.p.a. does not guarantee or check the surface finish on its products.



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1.8. Functional tests

Kupral S.p.a. does not carry out functional tests as part of standard activities, nor build/purchase the necessary equipment.

These activities can be considered and implemented upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties following a separate quote.

1.9. Mechanical tests

Kupral S.p.a. does not carry out mechanical tests as part of standard activities, nor supply necessary specimens.

These activities can be considered and implemented upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties following a separate quote.

1.10. Marking

Kupral S.p.a. does not mark individual pieces with traceability details as part of its standard activities.

These activities can be considered and implemented upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties following a separate quote.

1.11. Documentation

Kupral only provides the following documents for items relating to the automotive industry:

- 1) Flow-chart
- 2) Pfmea
- 3) Control Plan in accordance with IATF 16949:16.

Documentation pertaining to the remaining sections is at the discretion of the Quality Assurance department and is produced on the basis of the company's internal quality management procedures.

Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.12. Repairs

Kupral S.p.a. may carry out repairs on non-compliant pieces subject to communication with the customer. Repairs may be carried out via impregnation, welding, sealing or filling operations.



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These activities may vary on the basis of agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.13. Sampling Plans

Kupral S.p.a. carries out its own checks on the basis of sampling plans compliant with ISO 2859-1. Different criteria may be considered and used upon agreement between Kupral S.p.a. and the customer, and must be documented and approved by both parties.

1.14. Acceptance of changes

Any modification to the customer's specification/drawing sent to Kupral will only be considered valid if clearly described by the customer and agreed with Kupral in terms of business and production feasibility. This description can be present on the drawing/specification (title block with a list of all the changes introduced or revision table with a list of all the changes introduced) or with a dedicated written communication. Changes not described above will not be initiated by Kupral, which is relieved of any charges/liability in this regard.

TABLE 1

<p>PK1 : (a) Maximum pore size: 0.4 mm - b) Minimum distance between hole edges: 6 mm - (c) Pores with a maximum size of 0.2 mm are not considered. - No exceptions are allowed</p>
<p>PK2 : (a) Maximum pore size: 0.4 mm - b) Minimum distance between hole edges: 5 mm - (c) Pores with a maximum size of 0.2 mm are not considered. The following exceptions are allowed for each finished process surface at regular intervals of min. 80 mm: A concentration of 3 pores with a minimum edge spacing of 1 mm is permitted, contrary to (b) - A single pore with a maximum pore size of 0.6 mm is permitted, contrary to (a) - No other defects are allowed in the range corresponding to the size of twice the \varnothing of the screw hole.</p>
<p>PK3 : (a) Maximum size of a pore: 0.7 mm - b) Minimum distance between the edges of the holes; 10 millimeters - (c) Pores with a maximum size of 0.4 mm are not considered - The following exceptions are allowed for each finished process surface at Minimum intervals of 80 mm : Permissible concentration of 3 pores with a minimum distance - between the edges of 1.5 mm, contrary to point (b) - A single pore with a maximum size of 1 mm is permitted, contrary to (a) - No other defects are allowed in the range corresponding to the \varnothing size of the screw hole.</p>
<p>PK4 : (a) Maximum size of a pore : 1 mm - (b) Minimum distance between the edges of the holes: 20 mm - (c) Pores with a maximum size of 0.6 mm are not considered - The following exceptions are allowed for each finished process surface at regular intervals of at least 80 mm: A concentration of 3 pores with a minimum edge spacing of 2 mm is permitted, contrary to point (b) - A single pore with a maximum size of 1.5 mm is allowed, contrary to (a). No other defects in the range corresponding to the size of twice the \varnothing of the screw hole are allowed.</p>
<p>PK5 : (a) Pore concentration with a maximum size of 2 mm at a minimum edge distance of 10 mm - (b) Pore concentration with a maximum size of 4 mm at a minimum edge distance of 30 mm - c) A single pore with a maximum size of 5 mm (if functionality and tightness are guaranteed) NOTE : Where there is no indication in the presence of threaded sections, the presence of a single pore will be considered Class PK4 with 4 threads (in the case of through holes, threaded in the direction of start) under the following conditions: - in the presence of M8 threads: max. size 3.5 mm - in the presence of M8 threads: max. size 5 mm.</p>