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ENAVISION 800-QUAD-P System Configuration and Options

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COMPLETE METALWORKING SOLUTIONS

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1. General Overview of the Selective Laser Melting

1.1. Process Description

A thin layer of metal powder is selectively melted by a laser. The parts are built up layer by layer in the powder bed.

Recoater distributes a layer of metal powder onto a build platform and a layer is melted by a laser. The build platform will then be lowered and next layer of metal powder will be coated on top. By repeating the process of coating powder and melting where need, the parts are built up layer by layer in the powder bed.

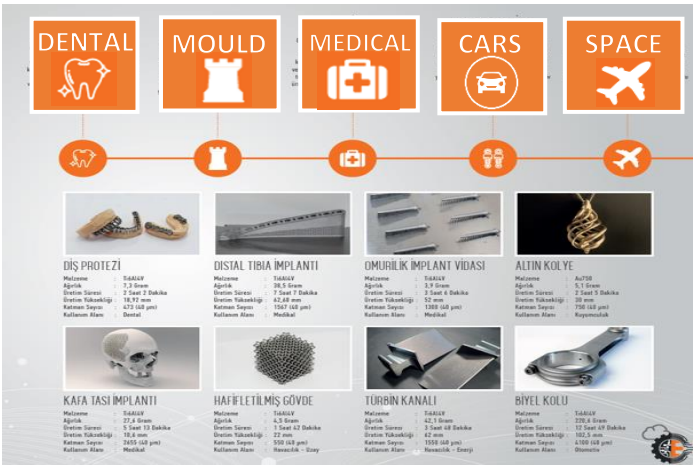
Laser melting requires support structures which anchor parts and overhanging structures to the build platform. This enables the heat transfer away where the laser is melting the powder. Therefore, it reduces thermal stresses and prevents wrapping. The build envelope can be filled by several parts being built in parallel as long as they are attached to the build platform.

Laser melting can manufacture parts in standard metals with high density (above %99) and good mechanical properties. Manufactured parts comparable to traditional production technologies. A constantly widening set of standard metals is available. Parts can be further processed as any welding part.

Manufactured parts can be required post-processing and heat treatment due to usage.

1.2. Application Areas

- ✓ Prototypes are produced in standard metals for form and functional testing by laser melting
- ✓ Molding Industry: This technology is using for complex molds.
- ✓ Automotive Industry: For prototypes and mass-produced parts.
- ✓ By using honeycomb structures to produce light weight parts
- ✓ Custom design production (powder material types depends according to production)
- ✓ Dental application (CoCr powder material)
- ✓ Biomedical application (Ti64 Powder material) for prosthetics and custom tools
- ✓ Aerospace and aeronautics application (Ti, In 718, 625 and other specific powder materials)
    - o Aircraft frames, structures, and parts
    - o Jet Engines
- ✓ Oil & Gas Equipment
- ✓ Turbine Blades for Energy Production
- ✓ Refractory Metal Components
- ✓ Industrial Pump Components
- ✓ Power Generation
- ✓ Tooling Repair and Reconditioning
- ✓ Marine Propulsion



2. ENAVISION 400-TWIN-P SYSTEM CONFIGURATION AND INTEGRATED FEATURES

2.1. Technical Specifications

- **Production Area (mm3)** : **800 x 800 x 300 (ENAVISION-QUAD-P)**
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- ✓ Variable layer thickness : 100 - 20 µm
- ✓ Laser Power : **4x** 1000 W
- ✓ Scan Speed : up to 11 m/s
- ✓ Scan System : **4x** 3D, Adjustable focus optic; varying of image field size, working distance and spot size
- ✓ Dimensions (LxWxH)* : 3200 x 2500 x 3530(can be change)
- ✓ E. connection /Power input : 480V 3Ph/N/PE; 32 A, 60 Hz, 4,5 kW
- ✓ Inert Gas : Argon or Nitrogen
- ✓ Inert Gas Consumption : ≤ 20 L / min
- ✓ Operating system : Windows 10/X embedded
- ✓ Network : Ethernet / Ethercat
- ✓ Heated build platform : Up to 200 ^{0}C
- ✓ Recoat velocity (bilateral)* : 50 to 500 mm/s
- ✓ Build chamber gas volume* : 262.5 to 1050 m3/h

*(can be change without notice)

- ✓ Laser Source

- ✓ Power : **4x** YGL 1000 W Ermaksan Resonator
- ✓ Laser wavelength : 1070 nm
- ✓ Mode of operation : Single Mode
- ✓ Pulse frequency interval : 0-10 kHz
- ✓ Power interval : % 5-100
- ✓ Power stability : ± % 1-3
- ✓ Output fiber delivery : single mode
- ✓ Typical beam quality(M^2) : ≤ 1.3
- ✓ Laser spot size* : 80 - 500 μm(± 10 μm)

Ermaksan EON Laser Resonator (embedded)

*(can be change without notice)

2.2. Optical System (Galvano Scanner)

2.3.1.System Specification

- ✓ Scan Speed : Up to 11 m/s
- ✓ Scanning System : **4x** Dynamic focus 3D scanning system
- ✓ Scanning system (z axis) : ± 6 mm
- ✓ Cooling : water / air
- ✓ Max. allowed scan angle
  - o Without objective : 0.38 rad
  - o With objective : 0.22 rad

2.3.2.Optical Performance

- ✓ Gain Error : < 5 mrad
- ✓ Zero offset : < 5 mrad
- ✓ Skew : < 1.5 mrad
- ✓ Nonlinearity : < 0.9 mrad/44^0
- ✓ Repeatability (RMS) : < 2 µrad
- ✓ Temperature drift
  - Offset : 20 µrad / K
  - Gain : 15 ppm / K
- ✓ 8-h-drift (after 30 min warm-up)
  - Offset : 100 µrad / K
  - Gain : 100 ppm / K
- ✓ Resolution (18 bit) : 2.8 µrad / K

2.4. Control System

- ✓ Industrial Process Control : Beckhoff
- ✓ Processor : Intel i5/i7, 2,4 GHz
- ✓ Ram : 4 GB DDR3L
- ✓ Operating system : Windows 10/X embedded
- ✓ PLC : TwinCat 3
- ✓ Motion Control : TwinCat 3 NC PTP
- ✓ Screen : 21.5 inch, multi touch, 1920x1080,
- ✓ Interface : DVI/USB
- ✓ Communication port : USB
- ✓ Memory : 300 GB

2.5. Software

2.5.1.Machine Control Software

User friendly and intuitive operation software enable safe working condition and minimize user faults. Ease of use combined with state-of-the-art technology.

- ✓ Control of all sensors
- ✓ Automatic build chamber conditioning due to predefined humidity and O_2 level
- ✓ Real time integrated process control
- ✓ Intelligence software algorithm to prevent misuse in manual operation
- ✓ Automatic and manual usage of powder feeding system
- ✓ Automatic and manual usage of re-coater system
- ✓ Automatic and manual usage of production platform
- ✓ Automatic filter shaking system to clean the filter element (filter element manually should replace predefined period)
- ✓ Automatic gas circulating of build chamber
- ✓ Warning and error log files
- ✓ ER 4.0 software:
  - Cloud based machine control software
  - Remote machine access through secure VPN connection
  - Monitor and track machine performance over the flexible easy to use Web interface from any where
  - Record and track machine real-time and historic performance data
  - Integrate machine data with MES and ERP software

Materialise e-Stage

- Store and categorize the machine data

2.5.2.Part Preparation Software

2.5.2.1. Materialise Magics

➢ Import

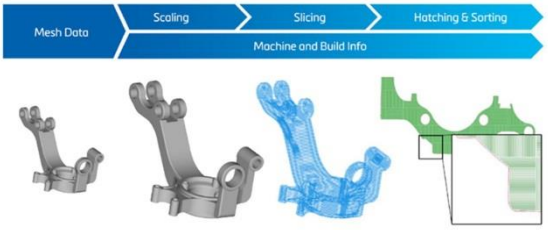
- ✓ With Magics, you can import an impressive number of file formats, including color and texture information, and stay in control of your original data.
- ✓ The following import formats are included in Magics RP:
  - VRML (*.wrl, *.vrml, *.x3dv), Rhino (*.3dm), Sketchup (*.skp), OBJ (*.obj), 3DS (*.3ds, *.prj), PLY (*.ply, *.zcp), ZPR (*.zpr), FBX (*.fbx), COLLADA (*.dae), X3D (.x3d), 3MF (*.3mf), DXF (*.dxf), STL (*.stl)

➢ Repair

- ✓ For a good print, you need high-quality 3D designs. To achieve this, Materialise Magics includes the best repair tools:
- ✓ Solve the most common problems in one click with Autofix
- ✓ Let the Fix Wizard guide you through the fixing process step-by-step when facing complex errors
- ✓ Maintain full control with manual tools
- ✓ Repair architectural models and add thickness with ShrinkWrap (i.e. a thin layer is wrapped around the original model and shrinks afterwards, repairing all errors)

➢ Import Module (Optional)

- ✓ Materialise Magics bridges the gap between CAD files and 3D printers by importing nearly all standard CAD formats, and packages such as SketchUp, SolidWorks or Rhino as well as traditional ones. With the Magics Base License, you can import more than 15 CAD file formats. If you want to convert an even wider range of file formats to STL, the Materialise Magics Import Module is what you need.

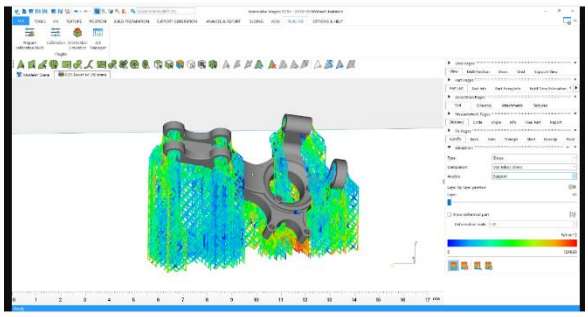


➢ Enhance Mesh

- ✓ To create a watertight mesh (i.e. a network of triangles representing your model) that is easy to edit, you can rely on mesh enhancement tools:
- ✓ Remove unnecessary triangles with Triangle Reduction
- ✓ Smooth your mesh without losing details you want to preserve

➢ Edit

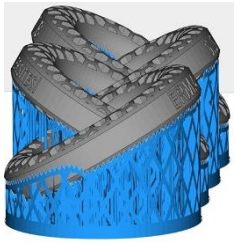
- ✓ Magics offers a wide range of easy-to-use editing features, targeted towards 3D Printing. With our toolset you can:
- ✓ Hollow and perforate your parts (including self-supporting hollows)
- ✓ Cut with advanced cutting lines
- ✓ Perform powerful Boolean operations (Unite, Subtract, Intersect)
- ✓ Apply text and image labels
- ✓ Turn surfaces into printable solids
- ✓ Modify the geometry of your parts with the extrude and offset tools
- ✓ Mark triangles, surfaces or entire shells rapidly and accurately



➢ Build Preparation

- ✓ Prepare platforms in a fast and efficient way thanks to our advanced positioning tools and machine management:
- ✓ Visualize your 3D printers in **Materialise Magics**, so you can see how many parts will fit
- ✓ Easily achieve the exact position, rotation and size that is required with user-friendly and powerful Translate, Rotate, Rescale and Mirroring tools, as well as the shape sorter
- ✓ Choose where the part shouldn't be positioned by creating no-build zones
- ✓ Use automatic placement to save time when preparing a build with many parts

➢ Support Generation Module for Metal 3D Printing (SG+)



- ✓ Conduct heat and avoid deformation
- ✓ Optimize part orientation
- ✓ Recuperate powder
- ✓ Reduce build futures with build validation tools

The Reason to Choose Materialise e-Stage (OPTIONAL)

➢ Spend Your Time Wisely

One of the biggest advantages of automated support generation is that you will save time on data preparation and finishing time. This results in a shorter lead time and a happier customer!

➢ Say Goodbye to Build Failures

It's time to say goodbye to failures related to support structures! Materialise e-Stage eliminates human errors and increases the success rates of your builds.

➢ Go for Supreme Quality

The reduced contact points and easy break-off points make post-processing easier and lead to a better surface quality for your part.

➢ Maximize Your Customer Services

Since automatic support generation reduces the lead times, you'll be able to deal with last-minute orders or invest more time in helping your customer. You'll also be able to accept orders for more complex parts.

2.5.3. Ermaksan Build Processor

Ermaksan Build Processor for doing research and defining the optimal parameters for your process. Its offers access to up to 250 parameters and you can experiment with different zones and patterns of the Material Development Module

- ✓ It processes and transfers the build data to your controller without any human interaction
- ✓ Its automatically reads out your controller configuration in order to stay within the physical limits of your machine
- ✓ It's compatible to generate different build styles

➢ Data Processing

- ✓ Process compensations
- ✓ Slicing and slice-based data
- ✓ Slice post-processing
- ✓ Integrated supports

➢ Process Integration

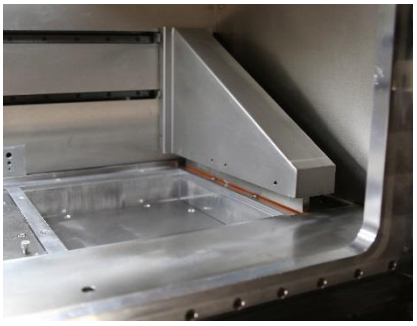
- ✓ Machine integration
- ✓ Client-server set-up
- ✓ Front-end software integration

➢ Additional Features

- ✓ Material and build-time estimation
  - The material and build time estimation functions allow you to create accurate quotes and improve build planning.
- ✓ Material development module
  - Speed up your R&D operations by creating test platforms efficiently. Test many different parameters sets in a single build to find good production parameters for a new material, or optimize them for a specific part

2.6. Re-Coating System

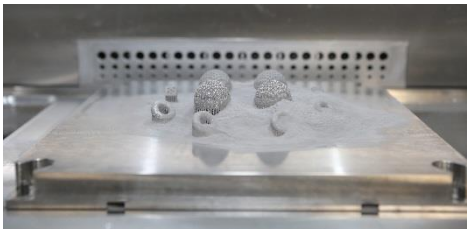
Features of Powder Deposition System



- ✓ Four ways speed control system
  - Powder deposition – manual
  - Returning speed – manual
  - Powder deposition – automatic
  - Returning speed – automatic
- ✓ Patented re-coater blade adjustment system
- ✓ SS Re-coater blade with rubber (standard)
- ✓ Carbon fiber brush re-coater blade (optional)
- ✓ Max speed is up to 500 mm/s

2.7. Building Platform

The parts build on this platform. Due to powder types building platform configured accordingly. Recommendations:

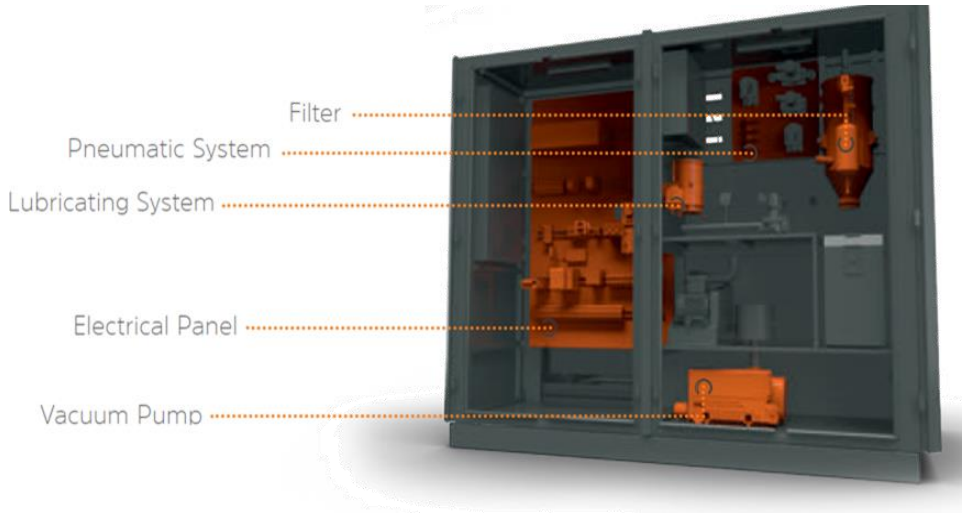


- ✓ Ti building platform for Ti alloy powders
- ✓ Aluminium platform for AlSi10Mg powder
- ✓ Steel platform for S316L powder

2.8. Filtering Unit

Its designed for ENAVISION 400. Laminar air flow and conditioned gas reach over the filter system to guaranteed the desired chamber condition. System specifications:

- ✓ Wet separator decomposes the wet from used gases (used gases can be argon, N2 etc.)
- ✓ Blower system adjust the air flow in the chamber due to settled parameter
- ✓ Stainless steel pipe systems
- ✓ With vacuum pump easily reaching the working condition
- ✓ Adjustable frequency of shaking period for powder cleaning onto the filter element
- ✓ Automatic filter fullness recognition and warning system



2.9. Chiller Unit

- ✓ Two ways adjustable output for laser source and optical system

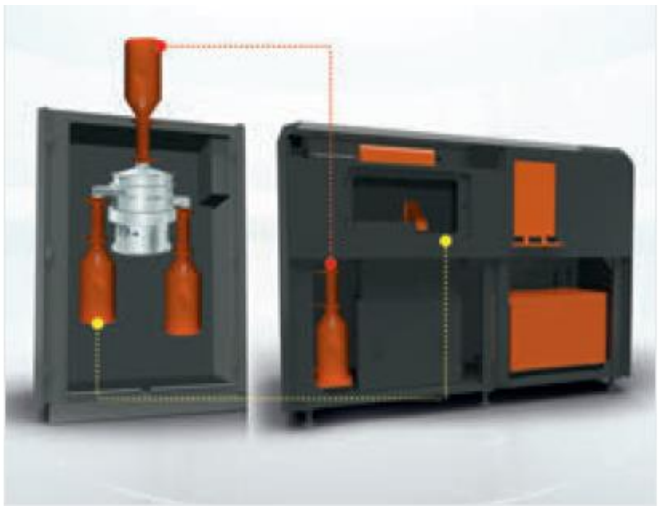
oTotal cooling capacity at standard conditions	:	5.5 kW
oPump flow	:	5-50 l/min
oPump standard power	:	750 W
oTank capacity	:	30 lt
oFittings	:	¾" BSP
oMax. noise level	:	69 dBA
oDimensions	:	760 x 760 x 1335 mm
oTotal power consumption	:	4450 W / 11.7 A

3. Optional Accessories / Peripherals

3.1 Ermaksan Semi-Automatic Sieve Station **(INCLUDED in PROPOSAL)**

Ermaksan Semi-automatic sieve station guarantees the quality of your additive manufacturing (AM) powder, and has been designed to provide optimum sieving efficiency, ensuring your powder is ready for use or reuse as and when you require it. With a simple one-button operation and mobile design, this automated check screener ensures your powder at every stage of the process is qualified for use quickly and safely. System Specifications:

- ✓ Sieving virgin powders - Guarantee the quality of virgin powder before it enters your production process
- ✓ Closed-loop powder recovery - Connect directly to your 3D printer, allowing you to transport your powders quickly and safely to the sieve station, and return immediately to the printer ready for re-use
- ✓ Build chamber evacuation - Quickly evacuate and screen loose powder from your build chamber, minimizing production downtime
- ✓ Powder vessel transfer - Easily connect to your loading container to guarantee the quality of your AM powder before use
- ✓ Fast and efficient sieving
- ✓ Hygienic, easy clean design prevents cross-contamination of the powders.



3.2 Safety Kit **(INCLUDED in PROPOSAL)**

- ✓ 3M Versaflo™ Faceshield M-107 with 3M™ Adflo (Motorized Safety Mask)
- ✓ Antistatic gloves
- ✓ Antistatic apron
- ✓ Antistatic carpet

3.3 Industrial Vacuum Cleaner System (Wet Separator) **(INCLUDED in PROPOSAL)**

Wet Separator vacuums the dust loaded air and guides it into a collecting tank which is filled with liquid. In this collecting tank air, dust and liquid are swirled. It is perfectly suitable for dust extraction of explosive material or fine dust. While using reactive powder materials like titanium and aluminum it has to be used.

- ✓ Housing : Stainless Steel
- ✓ Motor power (kW) : 1.1 / 1.3 / 1.5
- ✓ Voltage (Volt) : 230
- ✓ Sound Pressure level (db(A)) : 60
- ✓ Air flow rate (m^3/h) : 135 / 145 / 145
- ✓ Filter cartridge Dust class (m^2) : 3x0,1
- ✓ Residual dust filter class (m^2) : 3x0,1
- ✓ Height (mm) : 755
- ✓ Width (mm) : 480
- ✓ Length (mm) : 705
- ✓ Container Capacity(lt) : 7
- ✓ Protection class : 65

3.4 Industry 4.0 – ER 4.0 Software

ER 4.0 is Ermaksan Industry 4.0 concept software for increasing of your productivity. Its records your machine historic performance data. By the way you can track your machine and operator performance from anywhere. Monitor and track machine performance over the flexible easy to use Web interface. Keep under control of the machine whole the product lifecycle of the machine.

4. Powder Types

With ENAVISION 800 you can use below powders and more. Chemical composition will be released together with the powder.

- ✓ Ti 64
- ✓ 316 L
- ✓ In 625
- ✓ In 718
- ✓ AlSi10Mg
- ✓ HX
- ✓ Maraging Steel
- ✓ AlSi10Mg

For any other powder types, you can contact directly with us.

5. Installation and Commissioning

At the customer facility machine and peripherals runs. Comprises: Machine will be installed with peripherals in client's facility. Following operations will be done listed below:

- ✓ Levelling the machine
- ✓ Electric and gas connection
- ✓ Laser power measurement and calibration
- ✓ Adjustment of the re-coater
- ✓ Adjustment of the building platform
- ✓ Recoater, building platform and powder platform position control and calibration

6. Training

6.1. Basic System Training At Customer Facility (5 days)

- ✓ ENAVISION 800 specifications
- ✓ Peripherals specifications and operations
- ✓ Safety instructions and usage of the protective equipment
- ✓ Powder handling
- ✓ HMI explanation
- ✓ Machine operation
- ✓ Maintenance
- ✓ Troubleshooting & calibration procedures
- ✓ Machine parameters explanation

6.2. Job File Preparation Training At Customer Facility (2 days)

Basic level design rules training

Magics module training:

- ✓ Import file
- ✓ Repair
- ✓ Mesh enhances
- ✓ Support

Ermaksan Build Processor:

- ✓ Up-skin, down-skin, border types explanation
- ✓ Build processor parameter explanation
- ✓ Explanation parameter of scanning strategies
- ✓ Sample part's job file preparation (for one material type)

6.3. Additional Training Based on Metal Production (At Ermaksan's Facility)

According to customer requirement due to chosen powder material:

- ✓ Part design
- ✓ Parameters setup
- ✓ Defining production parameters by using special software
- ✓ Questions and replies

7. Maintenance

Maintenance details will be given together with machine manual. Maintenance recommended to done every year by Ermaksan technician. Maintenance includes Ermaksan machine control software. Magics maintenance has to ordered separately.

8. Warranty Terms

2 years machine and laser resonator warranty included while purchasing machine. Additional warranty extension can be ordered to protect your machine.

- ✓ The Seller guarantees high quality and reliability of all supplied Equipment as well as its parts during 24 months from the date of startup. Seller's warranty is limited to replacing parts found to be defective, consumable items not included. Seller reserves the right to invoice service visits found

to be necessary due to incorrect use of the machine or lack of maintenance. The responsibility of Seller is limited to the clause her above. The limitation excludes the liability for indirect damages which include loss of production, turnover or profits.

- ✓ In case of the Buyer application of a request to the Seller about removal of defects and discrepancies of completeness of the equipment, arisen through seller's fault, the Seller is obliged to execute at own expense a request in time no more than 30 working days if other term is not adjusted by the parties of the present Contract in the written form.

- ✓ Under condition of proper use, in case of appearance of defects of Equipment during Guarantee period, the Seller is obliged to repair all defects having provided the Buyer with spare parts free of charge and no later than within 20 days from the date of notification of defects to dispatch, at its own expense, the master for repair performing.

- ✓ Quantity, quality and appearance of supplied Equipment should be in conformance with technical conditions and descriptions indicated in Appendix to the present Contract as agreed.
- ✓ The Seller guarantees that the performance and cutting of machine will be as it was stated in machine technical details. Sample cuttings in laser machines are delivered to buyer with the machine.

FREE OF CHARGE SERVICES

- ✓ The service expenses under the warranty given for two years dating from delivery time of the machine to the Buyer, will be free of charge.
- ✓ Seller's warranty is limited to replacing parts found to be defective, consumable items not included. Seller reserves the right to invoice service visits found to be necessary due to incorrect use of the machine or lack of maintenance. The responsibility of Seller is limited to the clause here above. The limitation excludes the liability for indirect damages which include loss of production, turnover or profits.

PAID SERVICES

- ✓ Services out of warranty even if it is in warranty period, periodical maintenance services that were included to instruction book and all kinds of repairs and services that happens after the end of warranty period, to relocate even if it was in warranty period, are subject to payment.

PRICE AND PAYING CONDITIONS

- ✓ For any service completed for a machine out of warranty, the bill price will be converted to Turkish Lira according to the T.C. Central Bank exchange rate for the date of the bill. The payments are to be paid cash upon the arrival of the bill to the company. There will be 4% interest per month for the delay on the payments. ERMAKSAN reserves the right to change service prices, provided that it warns the customer 1 month before the agreement date.

- ✓ 1 technician for one day abroad 450.00 EURO (euro area) 600.00 USD (not euro area)
  2 technicians for one day abroad 600.00 EURO (euro area) 900.00 USD (not euro area)
  The journey and accommodation expenses will be invoiced separately.

ERMAKSAN Service is done between 08:30- 17:30 on weekdays. Out-of working hours, the requested calls at weekends or official holidays will be invoiced at a 50 % increased rate.

WARRANTY PROVISION

- ✓ The machine will be under warranty for two years after the delivery time. Any parts that are changed in or out of the warranty time, will be under the additional warranty of one more year.

- The operators (2 persons) that are determined by the user for the using of machine will be educated without charge by Ermaksan in the use of the machine. The user will use the machine according to user guide and periodic user care detailed.
- The user must use the machine according to the user guide given with the machine and must carry out the necessary maintenance, and make sure the operator has the necessary education given by ERMAKSAN.
- The seller warrants that the machine is suitable to the conditions of sale at the time of sale. The seller provides the warranty under the warranty and conditions of the distributor for the parts that are not their own.
- The basis of the place where the machine will be installed should be prepared in suitable standards according to "pre installation checklist" that was given to buyer with user manual. If the basis is not ready, ERMAKSAN suggests to delay of installation but in case of demand from customer, this situation will be determined by writing a minute and out of warranty machine will be delivered by installing.
- User accepts that machine operators who are assigned by him, have the authorization of representing the USER.
- The records that consist of signature of both sides (including operator) on service works form and installation form that are issued by Ermaksan authorized service staffs, have a binding force. If the user has an opponent view, he will notify ERMAKSAN in writing. Otherwise he will be considered as he accepted it as a whole.
- The user agrees to use the machines according to the user guide he was given with the machine and agrees that ERMAKSAN will not be responsible for any damage that occurs due to improper use.
- The seller does not accept any responsibility of defects raised because of abrasion and wear, wilful neglect, abnormal working conditions, uses outside the written or oral instructions of seller, not having maintenance timely, use without certificate, misusage, using the parts that seller did not confirm, and repairing the of parts without the permission of the seller.
- The customer, will shut down the machine at once in case of any breakdown and will report this to ERMAKSAN via e-mail as soon as possible. In the case that he cannot repair the machine; the customer will not start the machine until the authorized people attend the machine.
- During the agreement time, any breakdown problem will be solved through telephone and e-mail following notification to Ermaksan by the user. If it cannot be solved through telephone or e-mail, a technical service visit will happen within 48 hours inside the country. If the spare parts that should be shifted by the decision of technical services are some other manufacturer's products except ERMAKSAN, ERMAKSAN makes the shifting according to deadline that these manufacturers will give. When it is necessary to have service from this kind of manufacturers, ERMAKSAN doesn't give a time commitment.
- The buyer/user is to report the quality of the machine and suitability for technical details and the faults found in delivery time to the Seller immediately. In the case of any faults that cannot be determined when installed, the user must report to Seller in maximum 30 days after installation, with the details of any fault about its working.
- Ermaksan is not responsible for the faults in machine that are hidden or clear, if it is not reported in 30 days after the installation. In this case, buyer cannot ground warranty clauses. ERMAKSAN accepts to eliminate the fault firstly by repairing when the fault relates to quality of machine, suitability of technical details, are reported with the 30 days in written and providing that it is in warranty period,
- ERMAKSAN also accepts the faults that occurred later and faults not related to user's misuse and if it was notified within the 7 days.
- If repairing is not possible, seller side can change the machine or part that caused fault without any charge. The seller won't have any other responsibility to buyer.

OUT OF WARRANTY SITUATIONS:

- ✓ Consumables and optics, protective glass, seals, contact lens, fibre-optic cable, filters of waste gas, dust and fume filtering unit, etc. are not included the scope of warranty. These are materials should be periodically changed according to usage of machine.
- ✓ Any warranty will be considered void, following any intervention by anyone other than the ERMAKSAN authorised person.
- ✓ All breakdowns that are caused the buyer company's using a power source (UPS) unsuitable for the electric capacity of the machine, a breakdown in UPS, UPS' being deactivated by the customer etc, are out of guarantee.
- ✓ Not following the instructions of care and cleaning in the user guide is a reason to be out of guarantee.
- ✓ Misuse of machine and breakdowns as a result of using it over its capacity may be taken out of guarantee by investigating service authorised.
- ✓ The customer must purchase the spare parts from the manufacturer or authorised dealers and using the unoriginal approved spare parts and equipment can create an unsecure environment in machine. The manufacturer is not responsible for the security and damage problems caused by using the unoriginal spare parts and equipment. In this situation, all the breakdowns are taken out of the guarantee and the guarantee of the machine will be void by determining date.
- ✓ The manufacturer is not responsible for the damages and the security problems arising from the removal/deactivation of security equipment on the machine. In this situation, all the breakdowns are taken out of the guarantee and the guarantee of the machine, will be void.
- ✓ The machine should be turned on/off according to the instructions in the user guide. As turning on/off the machine in an inappropriate way will damage the machine, this kind of damages will be out of guarantee.
- ✓ CAD_CAM software is sent with the machine and is installed on the computer that the recipient company approves. The windows breakdowns, virus problems, hardware and software problems cause to CAD-CAM software, are out of guarantee.
- ✓ The buyer is responsible for the cleaning of the gas fittings prepared by the buyer company. The damage on optic systems caused by gas fittings' being unsuitable and dirty is out of the guarantee.
- ✓ All the repairing expenses of the damage caused by natural disasters like fire, flooding and leakage of electricity, and unsuitable environmental conditions, and also the misuse of the machine by the user, will be invoiced to the user by ERMAKSAN.

9. Documentation

- ✓ Pre-installation manual
- ✓ Machine and machine control software manual
- ✓ Cad interface software manual (Magics; Ermaksan Build Processor)
- ✓ Maintenance manual

Note: This document does not mean commitment, Ermaksan Machinery save rights to change any of feature or specification without prior notice.