



Since 1947 an italian excellence.

1947 Opening the first factory in Pontedera as mechanical workshop and protective chrome plating system.

1960s Beginning first collaboration with aerospace companies (Alfa Romeo, Avio and Aeritalia).

1980s High Precision Mechanical Machining becomes the company core business.

Surface area: over 15000 mq
Novicrom Team: 140 employees

- UNI EN ISO 9001:2015
- UNI EN 9100:2018
- UNI EN ISO 45001:2023
- ISO/IEC 27001:2022
- UNI/PdR 125:2022



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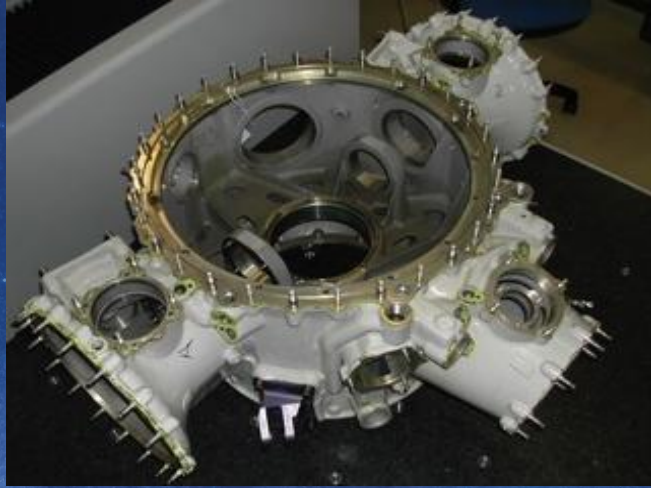
Manufacturing & Materials

Costruzioni Novicrom offers a large variety of products and can supply a wide range of manufacturing solutions from different raw materials:

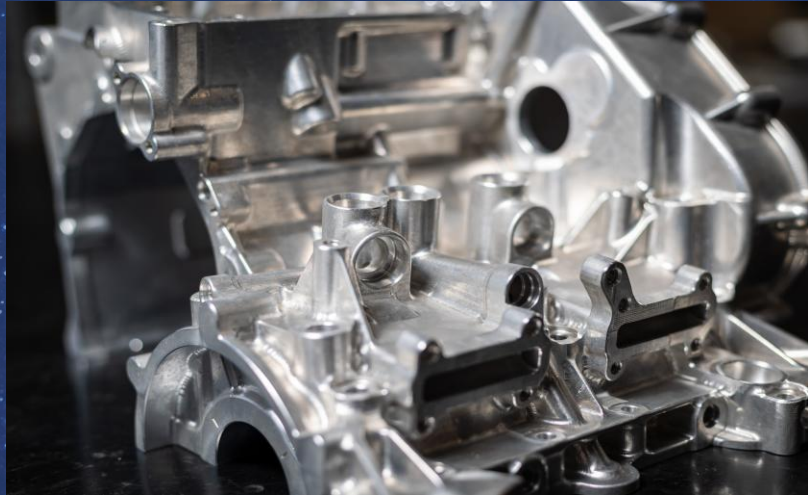
- Prototypes
 - Small series and pre-series
 - Engine Manufacturing
 - Aerospace and military components
 - Overhaul of aviation components - PART 145
 - Assembly operations
- Casting
 - Forging
 - Billet
- ✓ Titanium
 - ✓ Inconel
 - ✓ Maraging
 - ✓ Magnesium
 - ✓ Steel
 - ✓ Cast Iron
 - ✓ Aluminum
 - ✓ Copper



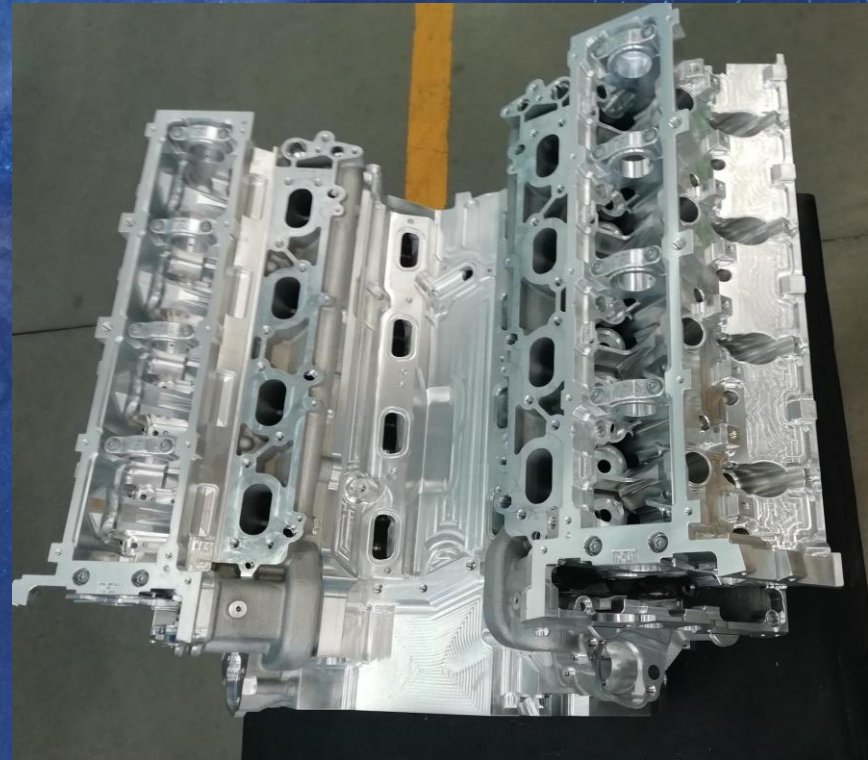
PRODUCTS: Aviation & Defence



PRODUCTS: Motorsport



PRODUCTS: Automotive





Quality System

UNI EN 9100:2018 Quality Management System required by Aerospace and Defence Authorities and Manufacturers

UNI EN ISO 9001:2015 International standard for quality management systems aimed to improve the quality of products or services and increase customer satisfaction

UNI EN ISO 45001:2023 Worker health and safety management system

ISO/IEC 27001:2022 Information security management system for protecting company data and processes

UNI/PdR 125:2022 Gender equality management system promoting equal opportunities in the workplace.

NADCAP Penetrant Inspection - Non destructive testing

RNI certificate for export, import, transit and brokering of armament materials

Certificates

LEONARDO

Helicopter division

Electronic division

Liquid penetrant inspection

DQP Thermal coupling monitoring

DQP Chrome plating of magnesium alloys

DQP Chromium alloy conversion.

MOE Subcontractor Costruzioni Novicrom

AVIO AERO

Cleanliness process

Liquid penetrant inspection

PIAGGIO AERO INDUSTRIES

Qualified supplier

Liquid penetrant inspection

MAGNAGHI AERONAUTICA E SALVER

Qualified supplier

SPIRIT AEROSYSTEM

Quality system approval





Sustainable Business Model

The definition of a sustainable company for Costruzioni Novicrom can be expressed as a commitment to a responsible business model, whose aim is to ensure sustainable development with a strong focus on the health of the planet and the social and economic well-being of people.

The meaning of corporate sustainability, therefore, goes beyond the environmental impact of a company, because it also considers the well-being of society.

Benefits of Digitalization Process

Digitalization of Costruzioni Novicrom business processes goes beyond simple technological implementation. It is a complex concept that touches on cultural, managerial and organisational aspects.

The company has embarked on this path to optimise the effectiveness of its activities, evolve continuously and maintain a competitive advantage.

Digital technologies are fundamental in the transformation of Costruzioni Novicrom.

The company focuses on identifying and adopting the most effective solutions to consolidate its digital transformation journey. This includes the integration of new technologies to improve efficiency, reduce costs and waste.



Departments

5-AXIS CNC

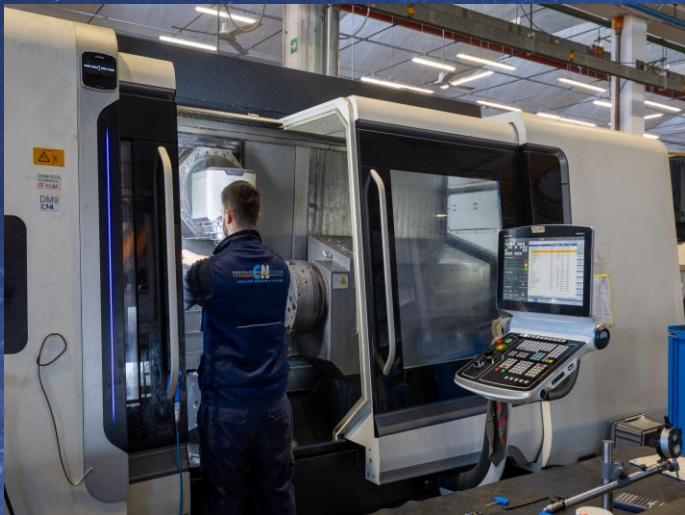
Fully air-conditioned, it consists of the latest generation of 5-axis machines that, thanks to the use of innovative CAM, allow the generation of complex trajectories and machining operations.

It is also possible to complete parts with fewer positionings, which benefits the accuracy and tolerances achieved.



Name	X (mm)	Y (mm)	Z (mm)	Year	TMC	TCR
DMG Mori DMC 160U	1600	1600	1100	2019	183	✓
DMG Mori DMC 160U	1600	1600	1100	2023	243	✓
DMG Mori DMC 125U	1250	1250	1000	2018	186	✓
HERMLE C1200U	1200	600	300	2001	30	-
MIKRON HPM 1000U	1000	800	600	2007	250	-
DMG Mori DMC 85	935	850	650	2015	90	✓
DMG Mori DMC 85	935	850	650	2021	120	✓
DMG Mori DMC 85	935	850	650	2023	180	✓
DMG Mori DMC 75	750	650	560	2023	120	✓
DMG Mori DMC 65	735	650	560	2018	60	✓
MIKRON UCP 800	800	650	500	2007	30	-
MIKRON HSM 600U	800	600	500	2006	50	-

TCR = Temperature Controlled Room - TMC = Tool Magazine Capacity



TURN-MILLING DEPARTMENT

Equipped with advanced multi-purpose machinery capable of combining the continuous movement of the various turning and milling axes to create complex 3D surfaces.

In addition, the ability to perform both turning and milling operations in perfect timing without changing machines ensures maximum speed and precision.

Name	X (mm)	Y (mm)	Z (mm)	∅ (mm)	Spindle (mm)	Year	TMC
DMG CTX Gamma 2000 TC	1250	400	2000	720	315	2011	36
DMG CTX Beta 2000 TC	650	300	2050	720	400	2019	50
DMG CTX Beta 1250 TC	490	250	1300	415	315	2017	80
DMG CTX Beta 2000 TC	650	300	2050	720	400	2025	50

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4-AXIS CNC

In this department it is possible to machine products of any material and even complex shapes with very high precision and, thanks to offline programming and the use of advanced tool magazines and pallet changers, it is possible to approach small to medium batches, optimizing production times and reducing time to market.



Name	X (mm)	Y (mm)	Z (mm)	Year	TMC	Pressure (bar)
DIXI DHP 80	1180	1090	1080	2002	200	70
CNS CNC KMV16	1600	815	815	2018	30	15
MAZAK FH-8800	1300	1100	1000	2004	240	40
MAZAK H-800	1250	1000	850	1995	80	40
MAZAK FH-6800	1050	800	880	2001	150	40
MAZAK H-630 N	1000	800	750	1997	120	15

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CNC TURNING DEPARTMENT

Equipped with the latest generation of traditional, vertical and numerically controlled machines. Versatility of the machines and skilled operators allow the production of different materials parts with diameters ranging from a few millimetres up to 1.5 metres.



Name	X (mm)	Y (mm)	Z (mm)	Ø (mm)	Spindle (mm)	Year	TCR
HYUNDAI L600 MA	800	-	1600	920	800	2019	-
DMG CTX G 3000	495	160	3050	700	500	2017	✓
CNS VT 36 2000	385	-	1960	630	380	2018	-
DMG Ecoturn 650	412	-	1150	600	315	2019	✓
DMG Ecoturn 650	412	-	1150	600	315	2015	-
HITACHI NR 1742	180	-	340	165	240	1990	✓

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SIP DEPARTMENT

High-end, fully air-conditioned control **BORING MACHINE** department consists of a SIP GENEVOISE 8000 gantry machine, a SIP 4000 horizontal-axis machine, and a SIP 640 vertical-axis machine, all equipped with Heidenhain control. These machines guarantee accuracy and precision of a few microns for working volumes up to 1500x1000x1000mm.

The SIP department is one of the excellence of Costruzioni Novicrom's process technology. This provides great flexibility in responding to special customer requirements. These machines operate in a constant temperature environment (20°) and guarantee extremely precise machining.

Name	X (mm)	Y (mm)	Z (mm)	CNC	5 AXES	TMC	TCR
SIP 8000	1600	900	950	✓	✓	80	✓
SIP 4000	1500	1000	600	✓	✓	140	✓
SIP 640	1000	700	1000	✓	-	1	✓

TCR = Temperature Controlled Room - TMC = Tool Magazine Capacity





EDM CENTRE (ELECTRO DISCHARGE MACHINING)

It incorporates a modern wire-cutting machine that enables high-precision machining while and an excellent surface finishing.

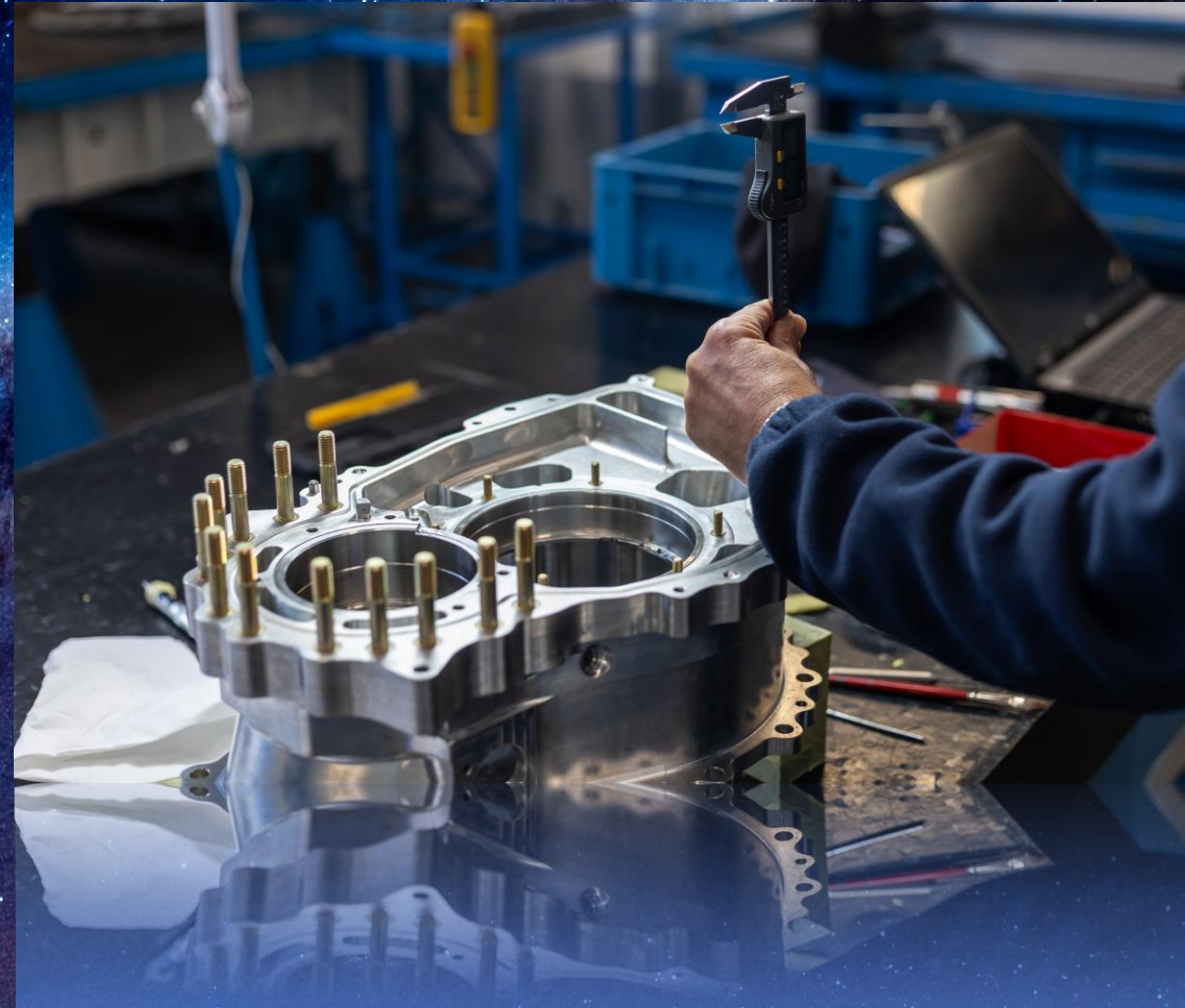
- Agie Charmilles CUT30P
- Dimensions of 1050x800x350mm
- High precision machining
- Shape hard to create with conventional machines

MANUAL OPERATIONS AND ASSEMBLING

Composed of a team of operators with special manual skills, who carry out all intermediate and final operations, such as deburring, polishing, drilling or tapping by hand, and other aesthetic finishes requested by the customer.

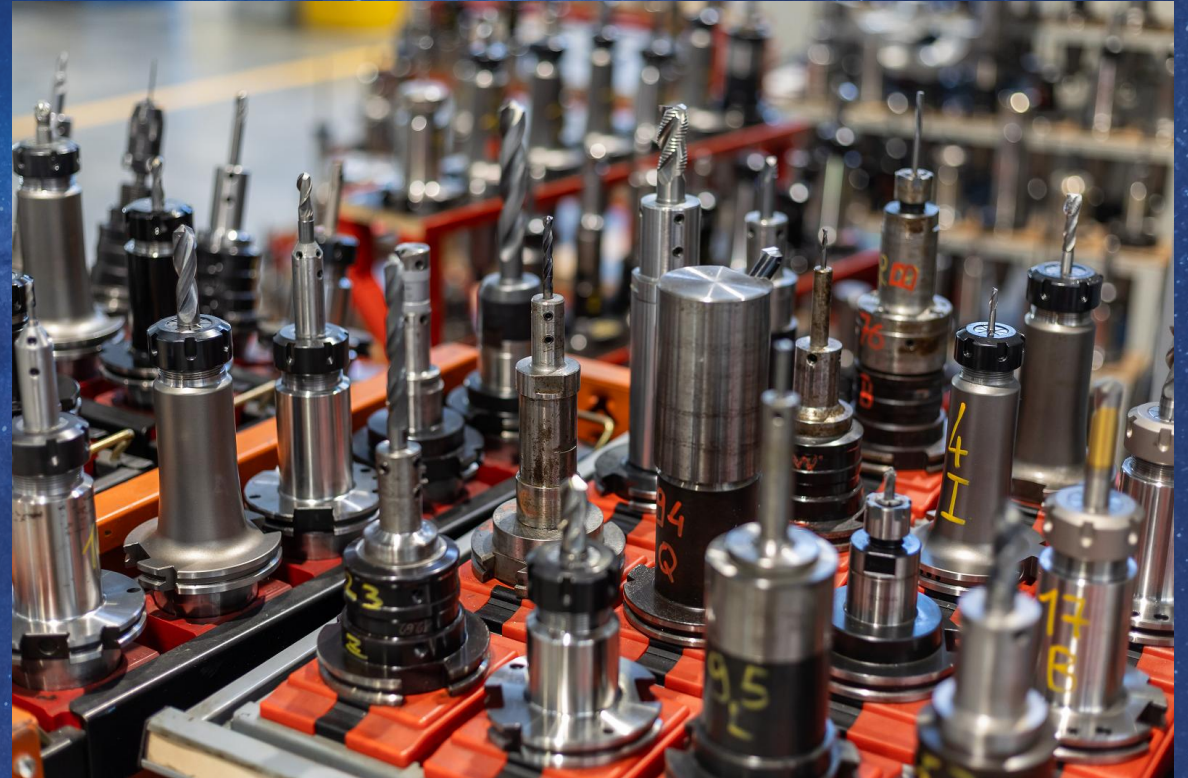
They have the specific skills to carry out mechanical pre-assembly of pins, screws, helicoils and various inserts, valve seats and guides, bushings and sleeves with related pinning, up to the final assembly of the components into sub-assemblies and the complete assembly.

In addition, through training and coaching, they are qualified by various customers to carry out Special Qualified Processes.



PRESETTING DEPARTMENT

Balancing and tool integrity checks should be carried out to ensure the highest quality standards and precision.



SHARPENING CENTRE

In this department with a 6-axis controlled machine Costruzioni Novicrom produces and sharpens drills, milling cutters, reamers and taps. Tools with complex shapes are also prepared from solid carbide bars according to technological needs.



CONTROL ROOM

6 Zeiss CMMs (Coordinate Measuring Machine) including two equipped with portals of maximum XYZ travel of 1600x2400x1000mm under strictly controlled temperature and humidity conditions.

Other Department Equipment: profilometer, roughness tester, probe for lite scope inspection of cavities and ducts, as well as a wide range of manual testing instruments to verify 100% of product characteristics.

Name	X (mm)	Y (mm)	Z (mm)	Year	Accuracy from	TCR
ZEISS PRISMO 10HTG VAST	1200	1800	1000	2006	0.9 + L/350 μm	✓
ZEISS CONTURA G2	500	500	500	2007		✓
ZEISS DURAMAX	500	500	500	2010		✓
ZEISS DURAMAX	500	500	500	2013		✓
ZEISS PRISMO NAVIGATOR	1600	2400	1000	2016	0.5+L/500 μm	✓
ZEISS PRISMO 16-24-10	1600	2400	1000	2022		✓

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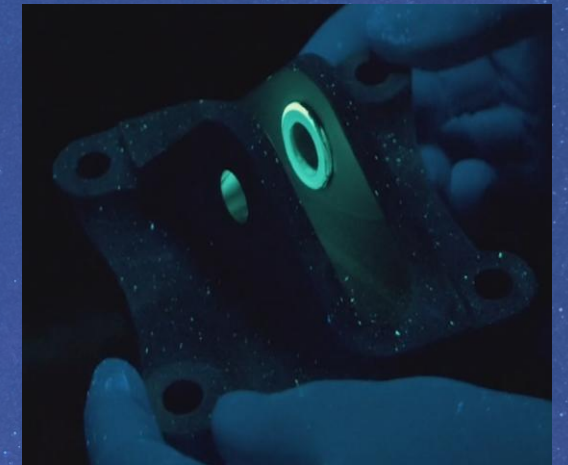
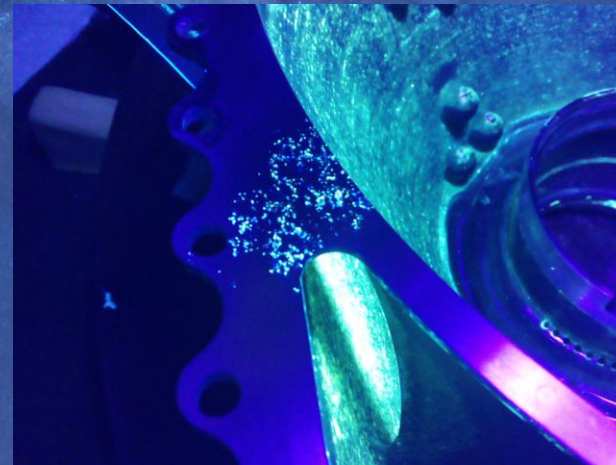


- NADCAP certification for NDT
- 2 Electrostatic spray cabin (1500x1500x1500)

NON-DESTRUCTIVE TESTING CND PENETRANT INSPECTION

It allows the process to identify any surface defect on the material through the application of penetrating fluorescent liquids, with subsequent inspection by qualified 2nd Level personnel.

Plant and operators are NADCAP-certified and the electrostatic spray application process, is carried out up to dimensions 1500x1500x1500mm.



OIL-AIR-WATER PRESSURE TEST

It allows to verify any spot possible leakage of the machined part under the operating conditions foreseen in the design phase, by introducing oil or pressurized air into the internal circuits and ducts, according to the customer's requirements.

All tools required to tested the parts are designed and developed in Costruzioni Novicrom.



CLEANLINESS CHECK

The large fluxing bench and the ultra-high resolution Zeiss microscope allow to verify the final cleaning requirement according to Customer Specification.



Microvision 304 - [PACClassification2]*

File Modifica Visualizza Microscopio Acquisizione Elaborazione Annotazioni Misure Calcoli Archivi Comandi Applicazioni Strumenti Finestra Auto

Microscopio
Video camera
Axiocam IC5
Scaling
HCE
Multidimensional Acquisition
Mosaic
Elaborazione d'immagine

Conven: 3XZ

Stage
Position 1 [µm]: 86388,118 Position 7 [µm]: 87564,837
Distance 1 [µm]: 86388,118 Distance 7 [µm]: 87564,837
Set 3 Pos: Auto
Magn: 100 %

Focus
Position 2 [µm]: -176366,900 Distance 2 [µm]: -175165,000
Stop
Measure

Set 0 Position: Auto
Magn: 100 %

Results: Galleria particelle, Tabelle dati

Numero totale di particelle: 14400 Area analizzata: 1039,15 mm²

Tipi di particelle mostrati: Al particelle

Seleziona particella:

Movimento particelle: << >>
Visualizza lista

Tipi di particelle: Fibra
Modifica particella...
Elimina particella
Commenti:

Tabelle dati

IndiceRegion	PerimetroArea	Area [µm²]	DensitàDistribuzione	ParticellaType	Boundlet [µm]	Boundtop [µm]	Boundwidth [µm]	Boundheight [µm]	ImagePlaneName	ImageStagePos
3775	1471,06	68728,36	115,53	Fibra	30142,24	24412,81	301,25	1402,91 MD-Equipment-6...	76198,24	31948,38
4040	1027,54	13069,77	113,38	Fibra	5122,02	30262,38	820,27	464,01 MD-Equipment-6...	76198,24	31948,38
126	1061,60	21863,21	118,70	Fibra	30694,07	1902,08	883,49	524,19 MD-Equipment-6...	76198,24	31948,38
528	826,79	72687,20	124,50	Fibra	9415,73	31360,78	645,71	629,10 MD-Equipment-6...	76198,24	31948,38
3477	656,60	171943,37	134,57	Fibra	28800,89	24789,32	145,88	541,98 MD-Equipment-6...	76198,24	31948,38
579	578,42	3872,42	145,93	Fibra	9880,17	10121,38	361,60	526,33 MD-Equipment-6...	76198,24	31948,38
4375	538,65	16094,46	116,30	Fibra	33287,91	27622,24	208,90	524,15 MD-Equipment-6...	76198,24	31948,38
3385	585,04	18378,36	125,29	Fibra	22219,46	25588,60	423,72	529,91 MD-Equipment-6...	76198,24	31948,38
4847	861,04	19918,01	110,53	Fibra	8779,04	30375,38	382,21	343,99 MD-Equipment-6...	76198,24	31948,38
1441	454,18	14930,36	118,51	Fibra	21825,38	36690,65	218,17	414,12 MD-Equipment-6...	76198,24	31948,38

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Our Customers

Leonardo Helicopters	Ferrari
Leonardo System Defences	Scuderia Ferrari
Leonardo Land & Naval System Electronics	Ducati Corse
Avio Aero	Aprilia Racing
Piaggio Aero	Maserati
Aerea	Lamborghini
Magnaghi Aeronautica	McLaren
Salver	Centro Ricerche FIAT
Spirit	Grainger
Kongsberg	Piaggio
MBDA	Rheinmetall