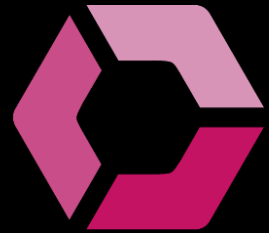


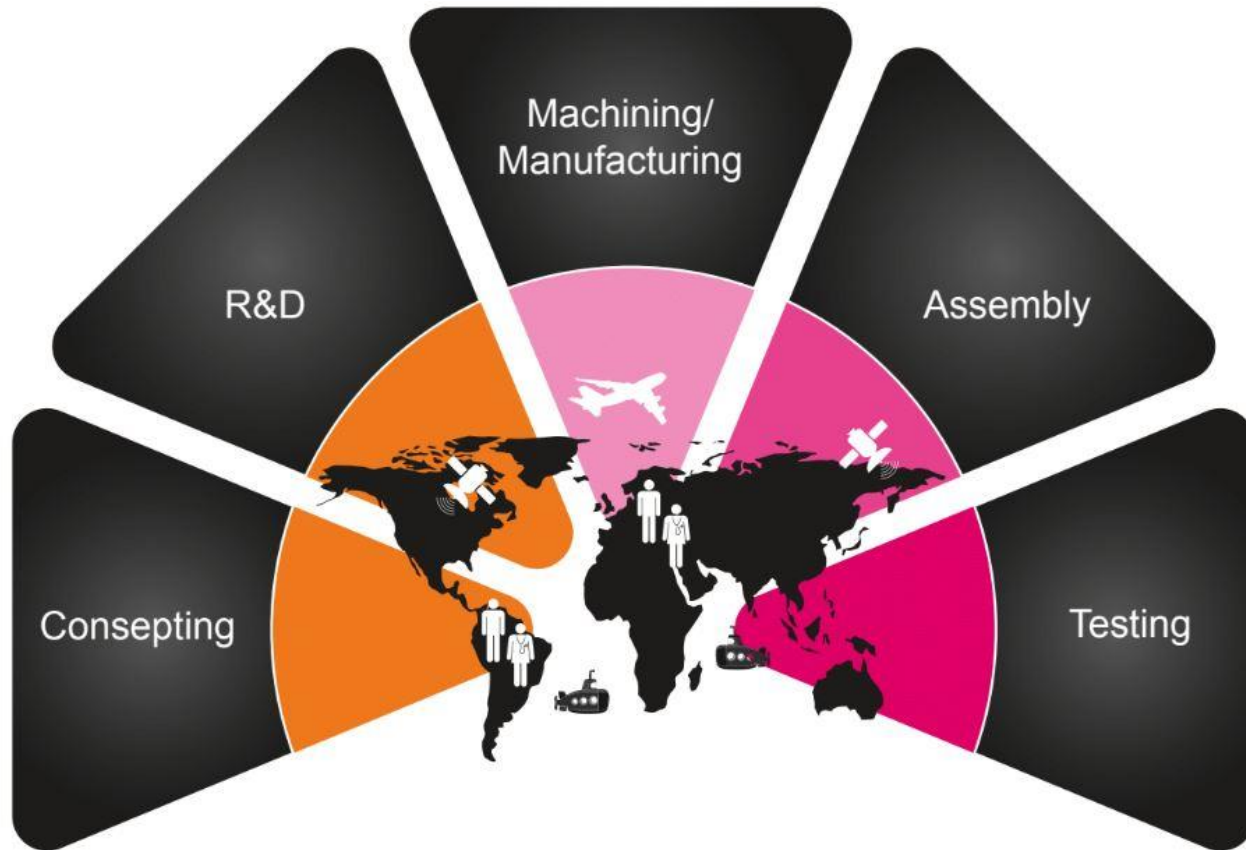
SEEK FOR PERFECTION



Mectalent Oy

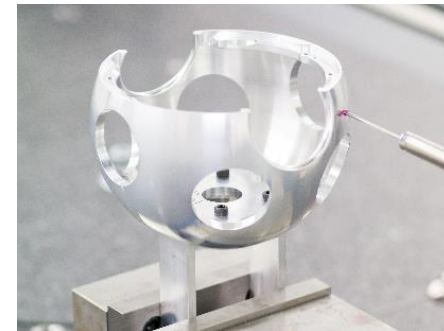
- One site, Located north of Finland, Oulu
- Factory size ca. 5000 m²
- 70 employees, turnover 2018 ca. 9 M€
 - Part of Cor Group Oy (turnover ca.200M€)
- 19 white collars
 - 10 in R&D department called Conseptas, an office also in Helsinki
- 51 blue collars
 - CNC turning, milling, welding, assembly, testing, clean room





Our services

- Engineering
 - Modeling
 - Project management
 - Mechanical engineering
- Production
 - Machining
 - Welding
 - system integrations and assemblies
- Laboratory services
 - Testing
 - Cleanroom, ISO8
 - Measuring



Quality

- Certified ISO 9001 (DNV, 2006), ISO 13485 (DNV 2009)
- Compliance with AQAP 2110, EN 9100, ISO 14001



Our customers

New Technologies

We manufacture demanding components and larger assemblies according to customers' individual needs. The field of new technologies is developing rapidly. We remain a frontrunner thanks to close customer cooperation. We strongly invest in R&D and top expertise.

REFERENCES

- Picosun
- Asqella
- Nokia
- Specim
- Cern



Medical Technology

We have operated in the field of medical technology for a long time and have manufactured highly demanding products, such as implants, for our customers. Our clean rooms meet the ISO 8 class requirements and we also have the official approvals required in the MEDTECH industry.

Our clean rooms have ISO 8 classification. Our planning and production of medical devices are based on our ISO 13485 quality system. We ensure that our products fulfil all legal safety requirements and risk management in the different stages of their life cycle.

REFERENCES

- GE Healthcare
- Phillips Medical
- Perkin Elmer Wallac
- ConMed Linvatec Biomaterials
- INION
- etc...

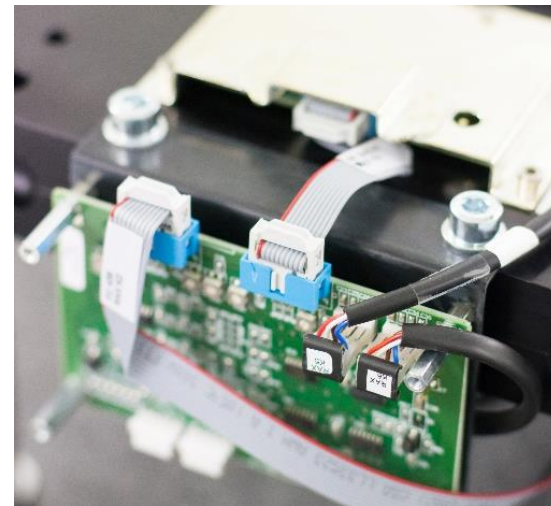


Defence / Aviation Technology

We manufacture versatile and unique products and assemblies for the defence forces and aviation according to customers' designs. In the defence and aviation industries, we work in accordance with the AQAP 2110 and EN 9100 standards.

REFERENCES

- Patria
- Patria Aviation
- NRPL Aero
- Saab systems
- RUAG
- etc...



Assemblies, examples

NewTech / Vacuum

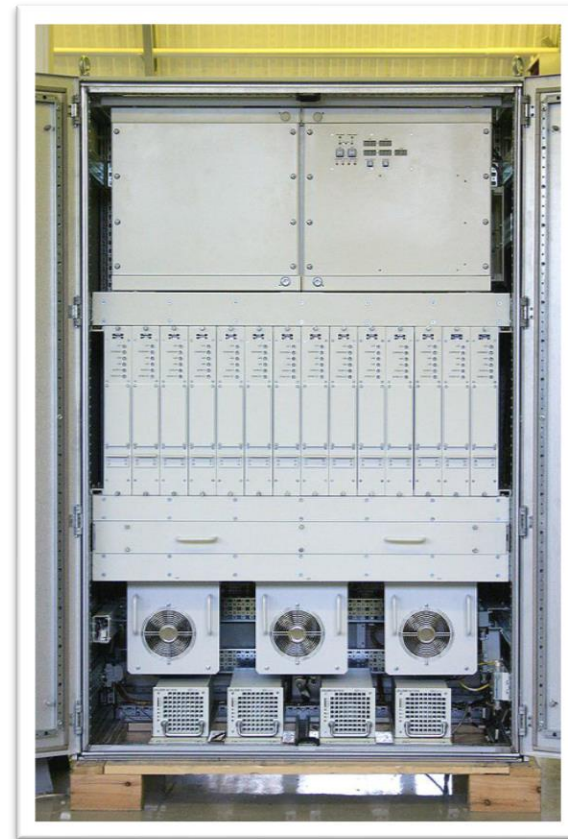
Atomic Layer Deposition ALD tool



Assemblies, examples

Defence / industrial

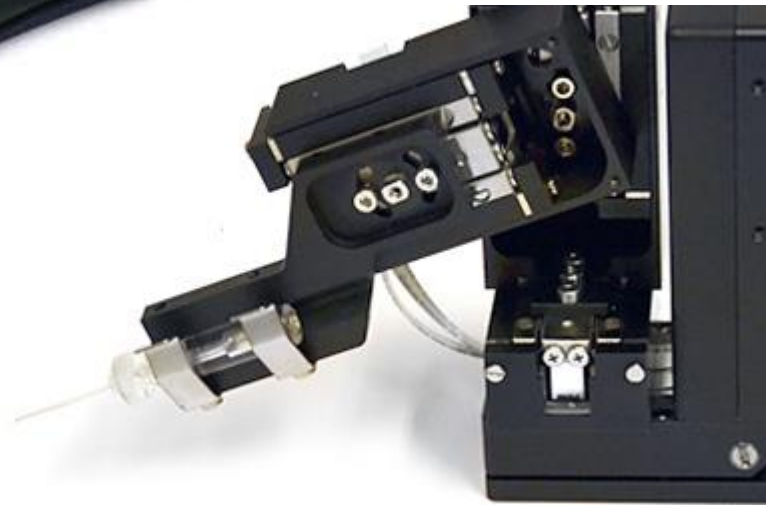
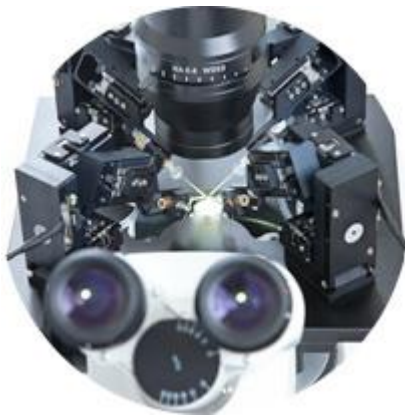
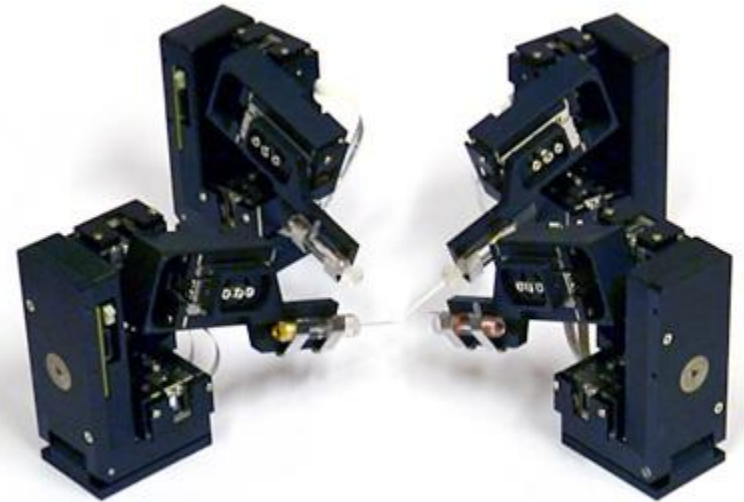
Control units for air surveillance radar systems



Assemblies, examples

Medical

Micromanipulator



Product examples

Aviation

- Satellite part; Titanium



- Airbus A380, Aluminium

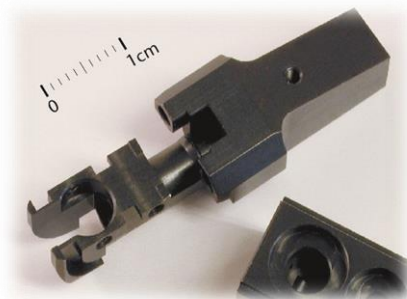
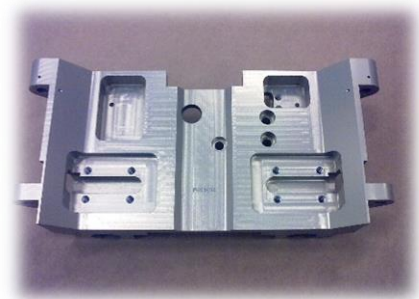
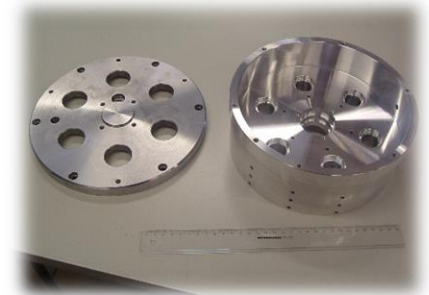
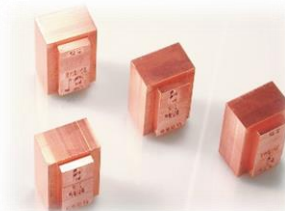
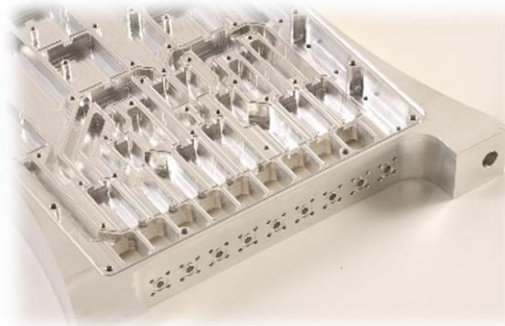


Space examples:

- Satellite frames
- Panels
- Structures
- Antennas
- Mechanics

Materials for machining, examples

- Stainless steel
- Steel
- Special steels
- Aluminium
- Titanium
- Plastics
- Peek
- Copper
- Brass
- Casts



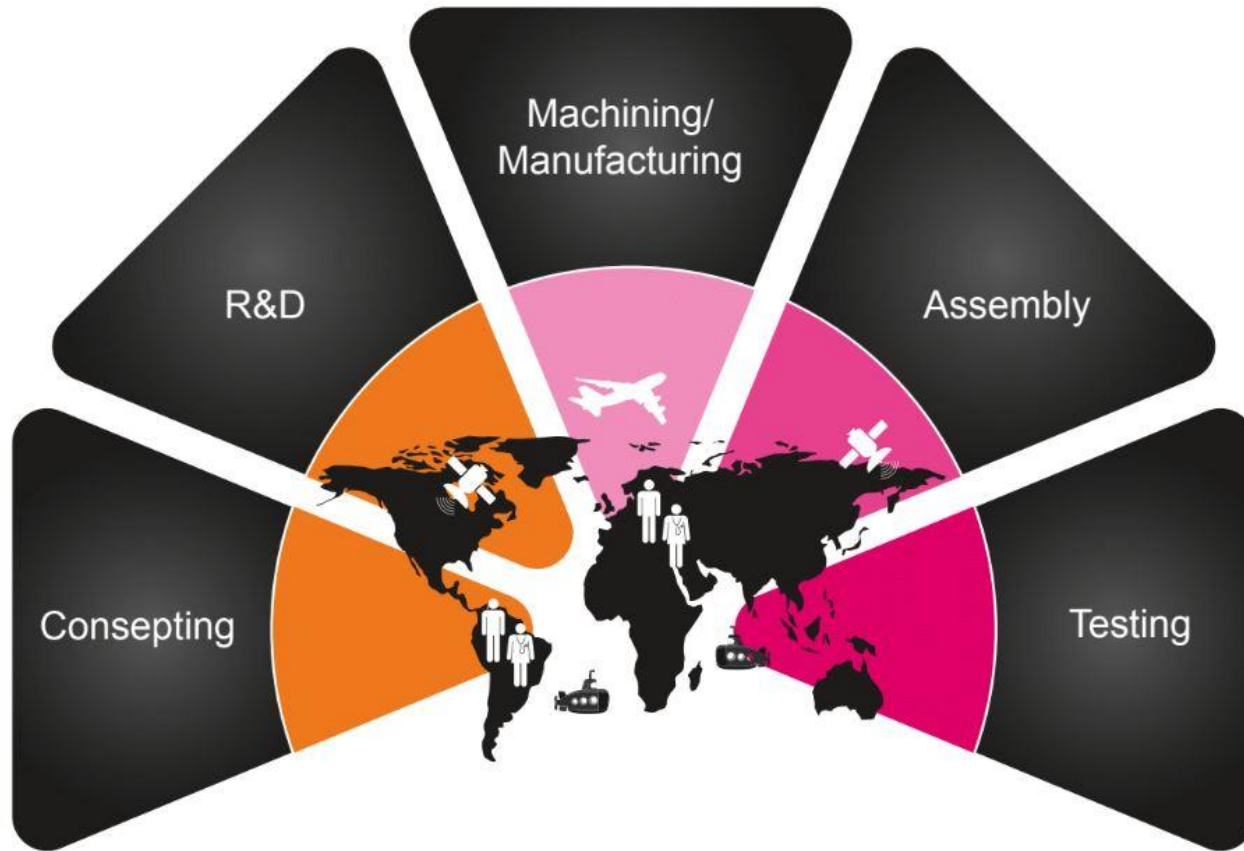
Common issues from a manufacturer's perspective

- Poor manufacturability
 - Requires special tooling and special methods,
 - Expensive
 - Slow
- Time schedules
 - Reserve 4-8 week lead time



New Tech & Space start ups

- Always include a manufacturing experienced Mechanical designer as early as possible, (concepting phase)
 - Big effect in cost and time savings



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Production methods

In-house Services:

- Milling ca. 15 machines
- Turning ca. 13 machines
- Cylindrical grinding
- Surface grinding
- Abrasive flow machining (AFM)
- Tool grinding
- Lapping
- Orbital welding
- TIG / MIG welding
- Laser welding
- Ultrasound welding.
- Wire-cut EDM
- Die-sink EDM
- Laser marking
- After treatment
 - Barrel Deburring (e.g., pellet, aluminum stone)
 - Glass bead and silicon carbide blasting
 - Ultrasonic cleaning
- Laboratory services
 - Measuring services (e.g., 3D measurement)
 - Vacuum testing (Helium leak test)
 - Laminar cabins
 - Cleanroom ISO-8
 - Mechanical engineering (CAD/CAM)
 - Solidworks, Mastercam

Services through our extensive subcontractor network, for example:

- Sheet metal parts
- electronics (circuit boards, etc.),
- laser cutting,
- water cutting

surface treatment

- Anodizing,
- alodine finishing,
- hard anodizing,
- painting,
- sterilization,
- heat treatments,
- chromating,
- chromium and hard chromium plating,
- gold, silver and nickel plating,
- black finishing,
- teflon coating,
- galvanizing,
- coppering,
- phosphating,
- electrolytic polishing,
- etc.

List of Machines

5-AXIS MILLING

5-axis machining centre DMG DMU 50, 2014

Working area: X= 500 mm, Y= 450 mm, Z= 400 mm.

5-axis machining centre DMG DMU 50, 2012

Working area: X= 500 mm, Y= 450 mm, Z= 400 mm.

5-axis modular machining centre Deckel Maho DMC 100U duoBlock, 2005

Six pallets, automatic changer.

Working area: X= 1000 mm, Y=1000 mm, Z=1000 mm

5-axis machining centre Hermle C40U, 2005

Working area: X= 850 mm, Y=700 mm, Z=500 mm

4-AXIS MILLING

4-axis machining centre FANUC Robodrill α -D21LiA5, 2015

Working area: X = 700 mm, Y = 400 mm, Z = 330 mm.

Mori Seiki NV5000a1B/40 vertical 4-axis milling machine, 2008

Machining area: X = 1020 mm, Y = 510 mm, Z = 510 mm

2 pcs, Mori Seiki NH-4000 DCG horizontal axis milling machine, 2005

Machining area: X = 560 mm, Y = 560 mm, Z = 630 mm

Mori Seiki NHX-4000 DCG horizontal axis milling machine, 2015

Matsuura ES-450H II horizontal axis milling machine, 2001

Machining area: X = 450 mm, Y = 400 mm, Z = 400 mm

2 pcs CNC machining centers FANUC Robodrill T21iEL, 2005

Machining area: X = 550 mm, Y = 400 mm, Z = 330 mm.

3-AXIS MILLING

Mori Seiki NV5000 vertical milling machine, 2003

Machining area: X= 800, Y=510, Z= 510

2 pcs, CNC machining centers FANUC Robodrill T14iA, 1998

Machining area: X= 500, Y=380, Z= 300

MULTIPURPOSE CNC LATHES

Mori Seiki NT-4300DCG/1500SZ, 2007

Max turning diameter at main spindle 730 mm, at opposite spindle 275 mm, bar working capacity 90 mm

Mori Seiki NT-4250DCG/1500SZ, 2006

Max turning diameter at main spindle 730 mm, at opposite spindle 275 mm, bar working capacity 80 mm

SWISS TURNING MACHINES

CNC sliding head-type automatic lathe Tsugami HS327-5AX, vm 2015

Max. diameter of bar being turned 8 - 32 mm, turning length with one stroke 320 mm. B-axle.

2 pcs CNC sliding head-type automatic lathe Tornos Bechler DECO 2000, year of purchase, 2001

Max. diameter of bar being turned 16 mm/32 mm.

CNC sliding head-type automatic lathe Tornos Bechler ENC 75 + Robobar SSF magazine bar feeder, 1996

Max. diameter of bar being turned 7 mm.

CNC sliding head-type automatic lathe Tsugami BS 12 CE + LNS Tryton magazine bar feeder, 1998

Diameter of bar being turned 2-12 mm, turning length with one stroke 140 mm.

CNC-TURNING CENTRES

CNC turning centre Tsugami MO8SY, 2015

Turning diameter 280 mm, turning length 380 mm, mandrel drilling 65 mm+ LNS Alpha SL65 S magazine bar feeder.

CNC turning centre Takisawa TA-25 YBT, 1998

Turning diameter 230 mm, turning length 530 mm, mandrel drilling 75 mm.

Takisawa TS4000YS, vm. 2014

Max turning diameter 370 mm, turning length 750 mm, bar working capacity 82 mm.

OTHER CNC-LATHES

CNC lathe Harrison Alpha 1330U, 2004

Turning diameter 1.5-260 mm.

CNC lathe Harrison ALPHA 400, 1997

Turning diameter 1.5-320 mm.

CNC lathe Harrison ALPHA 1800S, 2007

Turning diameter 800 mm.

MEASURING DEVICES

Coordinate measuring machine Zeiss Prismo, 2003

X = 1200 mm, Y = 1800 mm, Z = 1000 mm. Resolution 0,00004 mm. Calypso v4.8 measuring software.

3D-video measurement device Nikon VMR-3020, 2006

X= 300mm, Y= 200 mm, Z=150mm. Resolution 0,000001 mm.

Nikon V-12B profile projector

OTHER MACHINES

Wire cutting EDM machine Charmilles Robofil 640cc, 2007

X = 800 mm, Y = 550 mm, Z = 510 mm

Wire cutting EDM machine FANUC Robocut á-OC, 1999

Machining area: X=320 mm, Y=220 mm, Z=180 mm

Die sinking EDM machine Charmilles Roboform 400, 1988

X=450 mm, Y=320 mm, Z=410 mm, C = 360° .

Cylindrical grinding machine Junker EJ 29, vm. 2002

X = 350 mm, Z = 1000 mm

Centerless grinding machine Agathon 150-SL2, 1982

Workpiece diameter 0.1-10mm

Surface grinding machine V Trade SGA 3063 AHD, 2012

X=635 mm, Y=305 mm, Z=400 mm

AFM Extrude Hone 77A

5-axis CNC grinding machine Jungner US 560 CNC, 1999

Tool grinding machine Junker, 2001

Lapping machine Harrisons Engineering 600

Lapping area D245mm

Lapping machine Lapmaster Model15

Lapping area D135mm

2 pcs, Centre lathe Harrison VS 330TR, 1989

Turning diameter 320 mm.

Bridgeport EZ-Trak DX 3-axis CNC vertical milling machine, 2004

Machining area: X = 762 mm, Y = 305 mm, Z = 340 mm.

2 pcs, Vertical milling machines

Working area: X = 650 mm, Y = 380 mm, Z = 300 mm.

Zoller "Smile" Tool measurement and pre-assembly machine, 2004

Alfalaser laser marking station, 2004

Cajo CS20F laser marking system, vm.2014

Marking area 180 x 180 mm, frequency 20 – 100 kHz, fiberlaser, 1064 nm.

Alphalaser ALV 100 laser welding machine, 2004

Nd:YAG 1064 nm, average power 100 W. Welding diameter 0,2-2,0 mm.

Helium-leak detector Leybold UL200

Orbital welding system Orbimat 160C

Max diameter 42mm

Orbital welding system Cajon D75

Diameter 3-13mm

Orbital welding system Swagelok M200 NEW!

Diameter 3 - 17,3mm

Tensile test machine Lloyd EZ50

Max. force 50 kN

Ultrasonic welding system Dukane iQ servopress 43S245 (for plastics)

Thank you for your
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