

Darco

DARCO **cooperation offer**

invent. build. enjoy.

About us

Who we are

DARCO is one of the leaders of the HVAC (Heating Ventilation and Air Conditioning) sector in Poland. Since 1992, we have continuously expanded our offer, which currently includes chimney systems, ventilation and heating applications and cooperation services. We are constantly working on research and development - have our own laboratory, over 5,000 products in our portfolio (and every year new constructions are introduced), as well as own more than 60 patents and utility models.

Our priorities, key values and resources



Quality without compromise

Highest quality of production processes and of final products is our priority. We offer reliable and comprehensive solutions, complex product portfolio and provide professional customer service.



Long-term cooperation

We are a family company, building our relationships with clients and partners basing on trust and reliability for three generations.



Innovative infrastructure

Our modern, well equipped and highly automated machine park, two production halls and huge Logistic Centre allow serial and diversified production.



Sustainable growth

We are continuously improving our working standards in order to follow and meet needs of our clients. We care for the environment and natural resources, invest in green technologies and durable materials.

+ 350

staff

+ 3,500 tons

of various steel types
processed yearly

22,500 m²

of the total area of
our production and
warehouse halls

+ 16,000

pallets can be
stored in our main
warehouse

31

countries in Europe are
continuously importing
our products



Our services

A team of enthusiasts runs our company for almost 30 years. We may say that we often guide paths of development in the chimney and ventilation sectors with innovative solutions. We use our experience and technologically advanced machinery to provide services for multiple sectors. Create concepts and prototypes and later assure comprehensive production process and complete logistics services.



Sectors

Main areas of our services:

- HVAC sector
- Construction and machinery
- Electronics
- Automotive
- Warehousing and logistics technology
- Interior furnishings



Concept

We provide following services as a part of concept creation:

- Technical advice - we select the best technology and best material types
- Concept modelling - before proceeding with the next stage, we prepare virtual concept models, assuring that end product will meet the expectations
- Technical documentation preparation - we prepare production / technical documentation for all components used
- Prototype preparation - we prepare a prototype before starting serial production



Darco

Production

Production processes run by DARCO:

- 2D and 3D laser cutting
- punch pressing
- bending using press brakes and automatic panel bender
- folding (including roll-forming)
- material joining (welding, thermal welding, riveting)
- machining (turning, milling)
- plastic processing (press forming, spinning)
- surface treatment (grinding, brushing, sandblasting)
- painting preparation (phosphating) and painting (powder coating, wet painting)
- external components assembly
- quality control using high precision optical measuring device



parco
system

parco
system

parco
system

bow
me

interlocking system

Ø150 / 50

Ø150 / 50

Logistics

Our Logistics Centre with well developed warehouse infrastructure and own fleet of transport vehicles guarantees comprehensive solutions in the fields of:

- picking
- packing
- warehousing
- shipping
- transport

salvagnini

P4Xe-3125



Machine park and operating resources

DARCO has solid infrastructure, including:

- two production halls enabling serial and diversified production
- logistics centre with warehouse of capacity of over 16'000 pallets
- own research laboratory
- design and construction facilities

DARCO has wide range of machinery available, including:

- modern CNC machines
- automatic lines for metal sheet rolling and cutting
- 2D and 3D laser cutting machines
- fully robotized welding cells
- powder coating and wet painting facilities

and many others

Available materials

DARCO Sp. z o.o. stores wide range of carbon steel, stainless and aluminium sheets.

- mild steel:
 - type DC01 of thicknesses $0.5 \div 3.0$ mm
 - type S235JRG2 of thicknesses $2.5 \div 8.0$ mm
- stainless steel:
 - type 1.4301 of thicknesses $0.5 \div 5.0$ mm (also brushed - 4N-type surface)
 - type 1.4404 of thicknesses $0.5 \div 1.0$ mm
 - type 1.4828 of thicknesses $0.8 \div 2.0$ mm
- galvanized steel of thicknesses $0.5 \div 3.0$ mm
- aluminum of thicknesses $0.5 \div 3.0$ mm
- mild steel rods, stainless steel rods
- flat bars, closed profiles made with mild and stainless steel
- components made with special materials like copper, brass and plastics and many others



1. Material preparation.

Automatic cut-to-length lines.

	Width	Material thickness	Cutting length
I	1250 mm	2.0 mm	max. 2.5 m + material slitting in option
II	1500 mm	3.0 mm	max. 3 m

CNC Shears.

	Width	Material thickness	Cutting accuracy
I	2000 mm	2.0 mm	+/- 0.3 mm
II	3000 mm	2.0 mm	

2. Preliminary operations. LASER CUTTING AND PUNCHING.

2D Amada Regius-AJ Fiber Laser Cutting Machine.

Types of materials:	mild steel, stainless steel, galvanized steel, aluminum
Thicknesses of materials cut:	0.5 ÷ 25 mm
Measurements of material processed:	1500 x 3000 mm
Cutting accuracy:	+/-0.1 mm

2D Amada FOL Fiber Laser Cutting Machine (with auto loading/unloading system).

Types of materials:	mild steel, stainless steel, galvanized steel, aluminum, copper, brass
Thicknesses of materials cut:	0.5 ÷ 3 mm
Measurements of material processed:	1500 x 3000 mm
Cutting accuracy:	+/-0.1 mm

"FIBER" cutting technology compared to traditional CO2 lasers enables higher cutting speed, more precision as well as better quality (less material damages caused by high temperatures).

2D CO2 LVD Laser Cutting Machine.

Types of materials:	mild steel, stainless steel, galvanized steel, aluminum
Thicknesses of materials cut:	0.5 ÷ 16.0 mm
Measurements of material processed:	1500 x 3000 mm
Cutting accuracy:	+/- 0.1 mm



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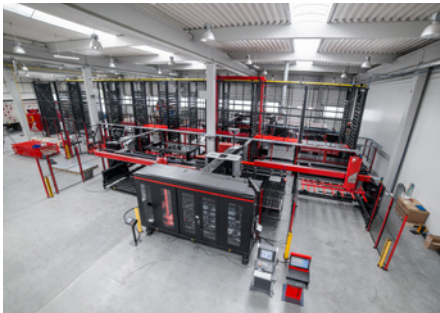
AMADA Punch Press.

Types of materials:	mild steel, stainless steel, galvanized steel, etc.
Thicknesses of materials cut:	0.5 ÷ 2.0 mm
Measurements of material processed:	2500 x 1270 mm
Positioning accuracy:	+/- 0.1 mm



Automated Punching Press Working Cell with storage (AMADA with tool changer).

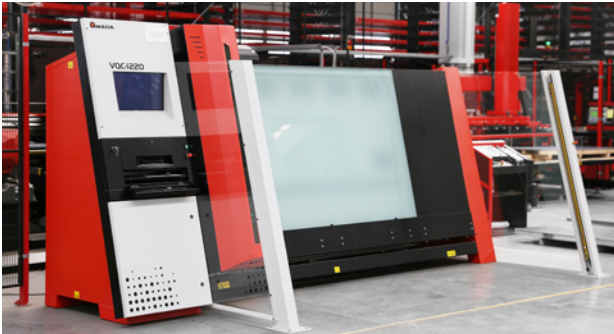
Types of materials:	mild steel, stainless steel, galvanized steel, aluminum
Thicknesses of materials cut:	max. 3.0 mm
Measurements of material processed:	1500 x 3000 mm
Positioning accuracy:	+/- 0.1 mm



AMADA Optical measuring machine.

Working area:	3000 x 1250 mm ± 3.0 mm
Measurement accuracy:	50 µm

Optical measuring machine is a device designed to verify the accuracy of punching/cutting operations by comparing the scanned image of a real made product with its CAD drawing.



3A. Main operations. BENDING.

AMADA ASTRO Bending cell	or automated bending with a servo-electric press brake bending length - 3 m, pressing force - 100 (2 robots)
AMADA EG Bending cell	automatic bending cell, max size pieces: 300x300 mm, min. 60x30 mm pressing force: 60 t
GASPARINI Bending cell	automated bending cell for pieces of up to 1.3 m length. pressing force - 45 t (1 robot)
Bystronic CNC brake presses	maximum working length 3.0 m, max tonnage 200 tonnes
BYSTRONIC Servo-electric press brakes	bending length of 2 m and pressing force of 80 t (2 pcs)



3B. Main operations. AUTOMATIC BENDING.

P4 Salvagnini panel bender.

Thickness:	3.0 mm / mild steel*
	2.0 mm / stainless steel*
	4.0 mm / aluminum*
Length:	330 ÷ 3100 mm*
Width:	155 ÷ 1524 mm
Max. diagonal:	3500 mm

** depends on the processed piece*

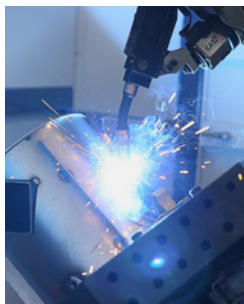
This device is designed for fully automatic bending of sheet metal products. It assures highest possible efficiency thanks to automated tools repositioning. It also gives possibility of making unique shapes and bends thanks to the innovative working method.



MIG/TIG robotized welding cell.

Max. measurements of the unit to be welded: 800 x 800 x 800 mm*

** depends on the processed piece*



3D Cutting cell with 1kW laser.

Max. measurements of element processed: 600 x 600 x 800 mm*

Max. thickness of material to cut 2.0 mm

** depends on the processed piece*



Others:

3D Plasma cutting machines for pipe cutting

max. diameter of element processed: 600 mm
max. length of element processed: 1500 mm
max. cutting thickness: 2.0 mm

Semi-automatic linear welders

max. length of welded element: 1000 mm
max. thickness of welded element: 3.0 mm
max. diameter of welded element: ø 500

CEMSA linear spotwelding machines (with copper wire)

materials to weld: mild steel and galvanized steel
max. length of welded element: 1000 mm
max. thickness of welded element: 1.0 mm
max. diameter of welded element: ø 500

Automatic 2-roll bender

max. thickness of material: 4.0 mm
(up to 1000 mm in width)

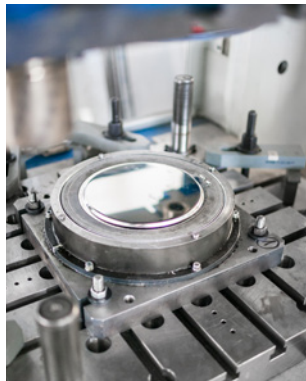
Expanding and shrinking machines for pipe-end forming

max. thickness of material: 3.0 mm
expanding / shrinking height: 60 mm/50 mm
expansion scale - depends on material thickness and type (up to 50 mm)

3c. Main operations. DEEP DRAWING.

Hydraulic CNC press.

	OMERA I	OMERA II
Max. pressing force:	250 t	80 t
Max. cushion force:	160 t	30 t
Working area:	1000 x 800 mm	600 x 450 mm



3d. Main operations. SPINNING.

CNC Spinning Machine.

Max. diameter of element spinned:	800 mm
Max. material thickness:	2.0 mm



3E. Main operations. LATHES.

I	CNC Lathe	max. diameter of element: \varnothing 300 distance between spindle and tail stock: \varnothing 65	1 pcs
II	CNC Automatic Lathes	max. diameter of element: \varnothing 65	3 pcs

Nine-axis machines able to process rods up to 3m. All equipped with powered tools allowing drilling and off-axis milling.



3F. Main operations. MILLING AND TURNING.

MAZAK VARIAXIS 5-axis machining center.

Max. diameter of processed piece: \varnothing 850 mm

Max. height of processed piece: 500 mm

Max. weight of processed piece: 600 kg



3G. Main operations. AUTOMATIC PRODUCTION OF PIPES.

Automated, pipe production unit with laser welding technology, Wail Flexistar.

Diameter range: \varnothing 60 ÷ 250 mm

Material thicknesses: 0.4 ÷ 1.0 mm

CNC controlled rolling and edge joining by means of laser welding.



4. Manual operations.

- TIG, MIG manual welders
- spot welding machines (max. thickness of material to be welded: 2.0 mm)
- hydraulic and pneumatic presses
- pneumatic riveting machines



5. Surface treatment.

- **Shot blasting:**

Shot blasting unit OMSG Capri largest processed component size: \varnothing 1000/1400 mm

CNC unit. Controlled parameters: Operation time, quantity and shot speed of grinding material.



- **Phosphate treatment**

- **Grinding/sanding:**

I **Broad band polishing machine Costa** maximum processing area size: 1000 x 1300 mm

II **Robotec robotised polishing unit for complex components** working area: \varnothing 800 x 800 mm

Cell equipped with automatic grinding tools changer.



- **Powder coating:**

I Automatic line	max. measurements of element painted: 800 x 600 x 1000 mm
II Manual line	max. measurements of element painted: 1400 x 1000 x 800 mm

DARCO owns two powder coating lines, including fully automatic one for high volume production. On running stock we have large variety of coats, what allows quick delivery times. What is also important, we also are working with silicone-based powder coats, that are used for production of components of high temperature resistance (450°C).

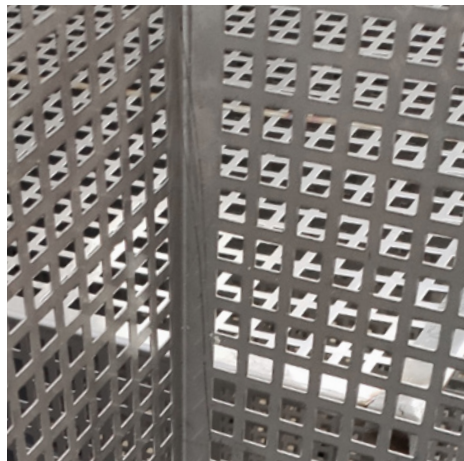
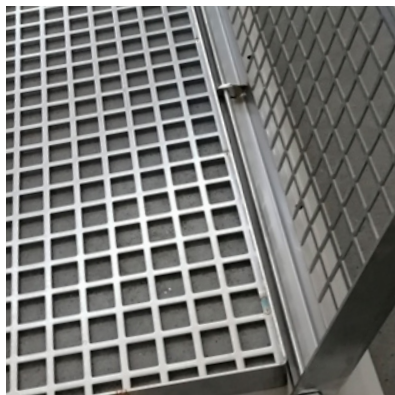


- **Wet painting (including water based paints) with robotized cell:**

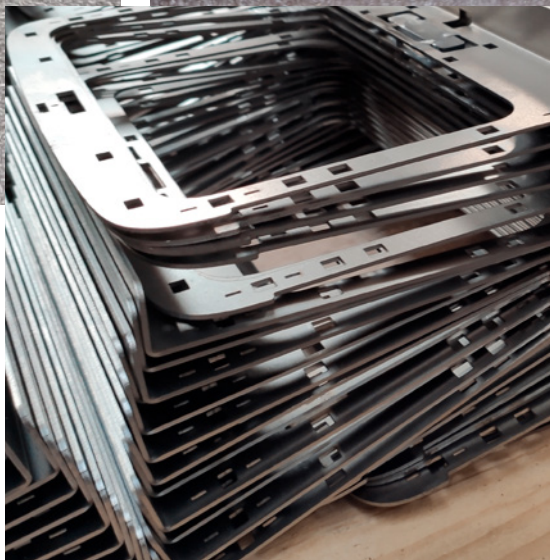
I Automatic line	max. measurements of element painted: ø 250 x 1000 mm
II Manual line	max. measurements of element painted: ø 300 x 1000 mm

As part of our standard production we use wet painting with high-temperature Senotherm coats. In this case we also own 2 lines, one automatic with a robotized cell and one manual.



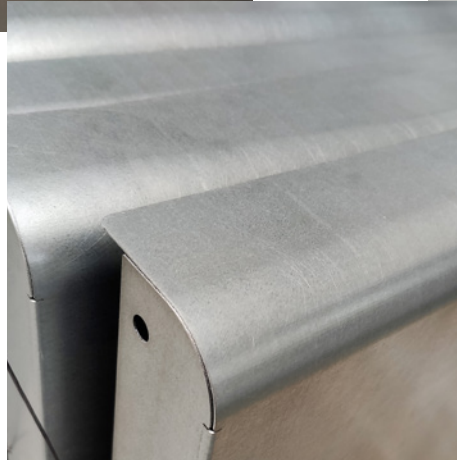
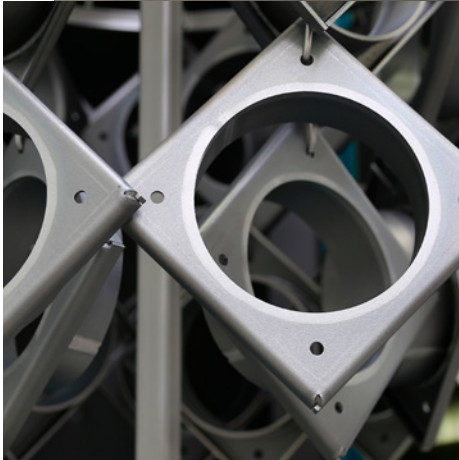
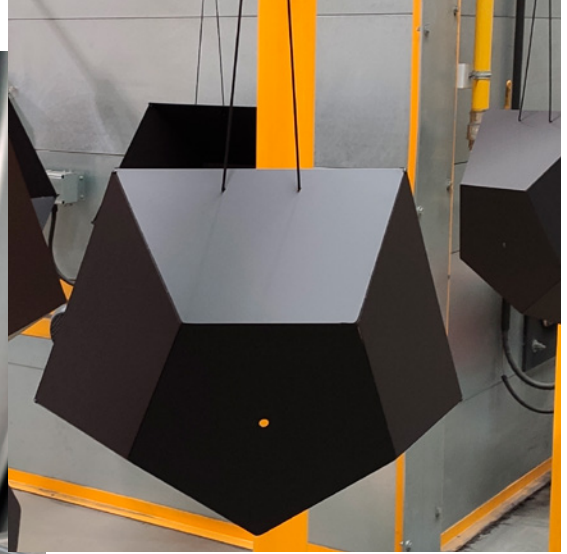


Sample projects



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