



# vanad

More than 20 years of experience in the machine development



## OXY-FUEL, PLASMA AND LASER CNC cutting machines

DEVELOPMENT >>> PRODUCTION >>> ASSEMBLY >>> SERVICE

# VANAD 2000 a.s.



## > VANAD 2000 a.s. – the successor in the tradition of cutting machine production in the Czech Republic

Vanad 2000 a.s., based in Golčův Jeníkov, is a traditional Czech producer of modern design high-performance CNC shape cutting machines with oxy-fuel, the latest plasma technologies and fiber laser.

Since 1994 we have been specialising in the production and development of high performance CNC machines for shape cutting of a wide range of materials. The tradition of production and the know-how of our cutting machines continues in the over 40 years long history of manufacturing cutting machines in former Czechoslovakia. During the existence of our company, we have produced and delivered our cutting machines to hundreds of satisfied customers in the Czech Republic and abroad. We develop original software and design with special emphasis on the high quality of the machines.

Our goal is to bring the maximum value to the end user. Thanks to the permanent research and development, which are supported by the extensive know-how and experience of all of our employees, we continuously bring new and innovative solutions for cutting stations to the domestic and foreign markets. Our flexibility and variability enables us to adapt to individual customer requirements and subsequently propose thorough individual solutions. Thanks to the complexity of our solutions we rank among the leading manufacturers and suppliers of the cutting machines not only in the Czech Republic. Fast and professional guarantee and after-guarantee service is a matter of course for us.

Vanad 2000 a.s. is an authorised partner of leading suppliers of technologies for thermal cutting. Our vision is to be a world supplier of CNC machines for thermal cutting of a wide range of materials and, at the same time, to keep an individual approach to each of our customers. Our priorities are: first of all the satisfied customers, machine innovation and development, professionalism, compliance with ethical principles and environmental protection.

## Our company in dates

- **2015** Rotators **RotCUT** to the machines **Vanad SUPREMA**, **Vanad KOMPAKT Laser** and **Vanad MIRON Laser**

- **2014** **Vanad MIRON Laser** and **Vanad KOMPAKT Light**
- **2013** **Vanad BLUESTER** with the automatic plasma 3D head and **Vanad SUPREMA**
- **2012** **Vanad KOMPAKT Laser**
- **2011** Cutting machine with serial number 1000
- **2010** Semi-automatic rotation three-torch cutting head, **RotCUT** rotator for form cutting
- **2009** **Vanad ARENA B&R**
- **2008** New range of machines with the B&R control system, commencement of production in the new plant
- **2007** Cutting machine with serial number 800, new company head office



- **2004** Cutting machine with serial number 500, commencement of the reconstruction of the company premises
- **2003** Higher level of cutting station optimisation regarding cutting productivity, costs and environmental protection
- **2001** **Vanad KOMPAKT** assembled with a material table, transformation of the company to Vanad 2000 a.s.
- **2000** Beginning of export to the global market
- **1998** Modification of **Vanad PROXIMA** with applications for HD plasma
- **1997** **Vanad PROXIMA** – machine of the highest class, building of the own production plant
- **1996** Beginning of export to the European market
- **1995** Commencement of the serial production of **Vanad MIRA** and **Vanad ARENA**
- **1994** Establishment of Vanad s.r.o, reconstruction of older machines, own machine and control system development



### ◀ Sales network

In addition to an extensive sales network in Europe we also have representatives in Egypt, South Africa and the Arab countries of GCC



## Parameters of the Vanad machines

The Vanad machines allow for the processing of all common available materials designed for plasma and oxy-fuel cutting. Our machines are distinguished by their simple operation along with the easy and fast data preparation. They are equipped with a number of special tools and instruments designed on the basis of many years of experience by our development team for the purposes of highly demanding cutting procedures regarding the shape and accuracy. The uniqueness of our solutions provides our customers with a wide range of utilisation and subsequently with the opportunity to acquire competition advantages within the market.

During the construction work and production, we use the latest technologies in order to guarantee a perfect functionality of the machine. High durability, great dynamics, maximum accuracy of the portal and cutting units guiding with high quality wiping process of the guiding surfaces – these are the properties which predetermine Vanad machines for utilisation within highly demanding operations with maximum requirements regarding the productivity of the cutting process and cut part quality.

The basic premise for achieving the dimensional accuracy, perpendicularity of edges, and the required structure of the cut quality, is, besides the utilisation of the most suitable cutting technology, also an appropriately fine shift, constant speed, and high acceleration, resistance to the torch oscillation, high accuracy and repeatability. Meeting of these requirements is the primary criterion when designing Vanad machines. The result includes extremely solid construction, accurate guiding, powerful drives, backlash-free gears, and modern control system. The named qualities thus allow for achieving the highest quality of the cut parts.



### We provide

- Individual special designs of solutions for optimal efficiency
- Pre-project consulting, designs of cutting stations
- Designing of station location, including the drawing of power inputs

- Inspection of the workplace preparedness
- Transport of the machine to the customer
- Cutting station installation and commissioning
- Upgrading of cutting stations

### We deliver

- Complete equipment of the cutting station (extraction material table, extraction and filtration)
- Laser, plasma systems and torches for flame cutting
- Additional devices for optimisation of the production efficiency
- Consumables for laser, plasma and oxy-fuel cutting
- Complete product range of original spare parts



Workplace before modernisation



Workplace after modernisation

## Thermal Cutting Centre

**We introduce to you the largest permanent centre for thermal cutting of materials on the premises of our company in Golčův Jeníkov. With eight permanent stations it is the largest permanent showroom of thermal cutting in the Czech Republic.**

### The purpose of the centre is to

- Help anyone interested to choose the most suitable CNC machine, equipment and technology;
- Demonstrate technological capabilities of the Vanad CNC machines;
- Advise and/or train staff in proper operating of the CNC machines or programmes for data preparation;
- Cooperate with vocational schools in the education process in the field of thermal cutting and in doing so to facilitate the students in their school-to-work transition.



◀ The new headquarters of Vanad, built in 2007 on the premises of a former textile factory Technolen, has offered extensive space for further development of the company and an opportunity to create a unique showroom

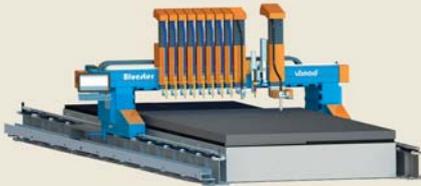
▶ Vanad CNC machines and demonstrations of cutting processes can be seen in our Thermal Cutting Centre in Golčův Jeníkov



# Vanad BLUESTER



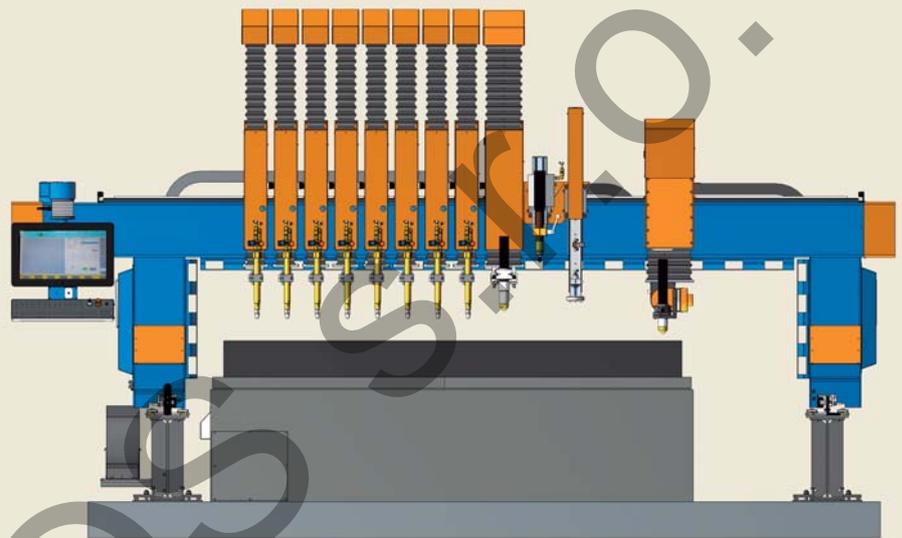
- > OXY-FUEL / PLASMA
- > HIGHEST PERFORMANCE
- > 3D PLASMA HEAD
- > HIGHEST QUALITY



## Features

- Double-sided longitudinal travel
- High lifting capacity of the gantry – up to 10 units applicable
- Linear guides in all movement axes
- New set of adjustable large format touch screens with a technological keyboard
- Standard thickness of the cut material up to 400 mm
- Precise control of the ignition and working height of the torch
- High positional accuracy also during long-term operations
- Outstanding dynamic properties of the CNC machine
- High-performance, operationally stable, user-friendly CNC system
- Elimination of downtime during operation
- Digital measurement of positions EnDat
- Automatic adjustment of the portal (if necessary)

The CNC thermal cutting machine Vanad BLUESTER presents a state-of-the-art device available on the market. It is designed for the toughest operations. This machine is used for processing of very large formats of metal sheets with oxy-fuel and plasma technology, including the automatic bevel cutting with the fully automatic 3D head. The machine may be equipped with a number of supplementary devices.



◀ Cutting station BLUESTER 45 x 120 built in 2014 with the Kjellberg HiFocus 440i plasma system and oxy-fuel technology

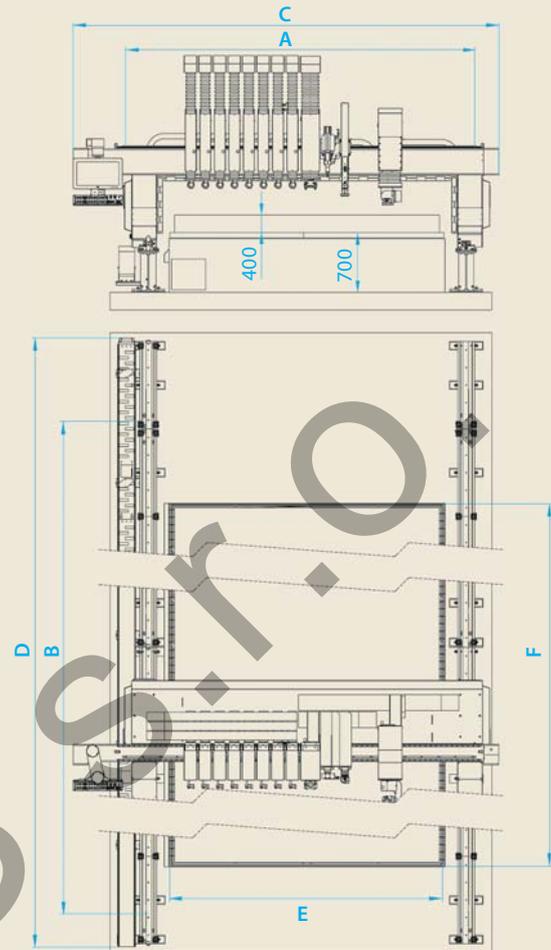
▶ The drilling unit is used for marking sites for further processing. It can be used as a supplement effectively increasing productivity or as an independent technology

### Standard equipment

- Sectional chassis for automatic portal settings
- Longitudinal reinforced IPE beams of the guide rails
- Flexible energy chains
- Electric flame ignition of the oxy-fuel torch
- Transfer of cutting plans via the USB or LAN network
- Precise control of the ignition and working height of the torch
- B&R control system

### Optional equipment

- Technology for robotic 3D plasma cutting
- Marking unit – plasma marking
- Marking unit – micro-punching
- Marking unit – drawing needle
- Drilling unit
- Unit for contact control of the plasma torch height – for cutting of thin metal sheets
- Oxy-fuel unit for straight bevel cuts (V, X)
- CAD/CAM software for preparation of cutting data



Vanad BLUESTER		20	25	30	35	...	up to 80	
Working width of the machine	A [mm]	2134	2634	3134	3634	then at 500 mm intervals	8134	
Working length of the machine	B [mm]	(4035, 5035, 7035, 9035, 11035, 13035, 15035, max. 61035)				then at 500 mm intervals	up to 61035	
Total width of the machine	C [mm]	3950	4450	4950	5450	then at 500 mm intervals	9950	
Total length of the machine	D [mm]	(5044, 6044, 8044, 10044, 12044, 14044, 16044, max. 62044)				then at 500 mm intervals	up to 62044	
Loading width for metal sheet	E [mm]	2100	2600	3100	3600	then at 500 mm intervals	up to 8100	
Loading length for metal sheet	F [mm]	according to working length of the machine						up to 60000
Maximum travel speed	[m/min]	42,4						
Maximum number of units		10 (in combinations of 1 main, 1 secondary (plasma) unit, 8 secondary (oxy-fuel) units, 2 supplementary devices, 2x 3D unit, 1 rotating three-torch head, 2 manual three-torch heads)						



▶ The 3D automatic plasma head extends the usage possibilities of the BLUESTER CNC machine

▶ The Vanad BLUESTER CNC cutting machine can be delivered also as part of a comprehensive cutting station with a plasma system and consumables for plasma or oxy-fuel cutting, a compressor for compressed air supply, including its treatment for cutting as well as extraction and filter system for the exhaust of smoke and fumes from the thermal cutting of materials



# Vanad PROXIMA



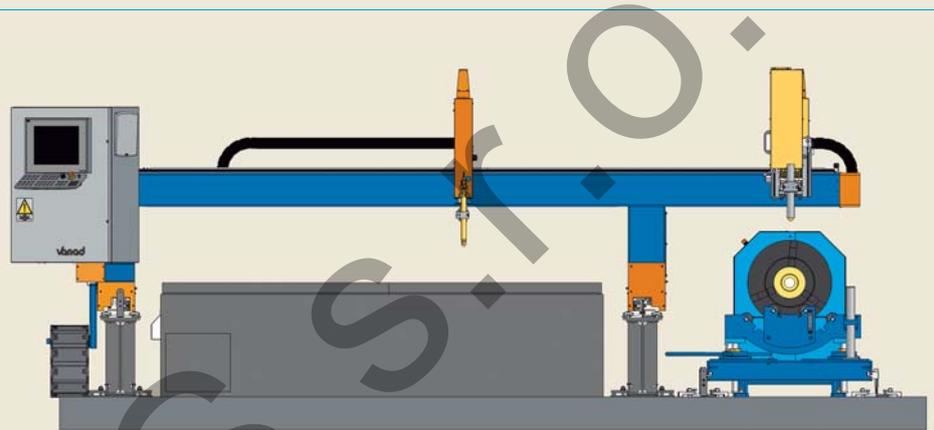
- > OXY-FUEL / PLASMA
- > HIGH PERFORMANCE
- > HIGH ACCURACY
- > EXTENSIVE ACCESSORIES
- > SUPPLEMENTARY DEVICE  
RotCUT



## Features

- Double-sided longitudinal travel
- Linear guides in all movement axes
- New set of adjustable large format touch screens with a technological keyboard
- Standard thickness of the cut material up to 200 mm
- High positional accuracy also during long-term operations
- Outstanding dynamic properties of the CNC machine
- Elimination of downtime during operation
- High-performance, operationally stable, user-friendly CNC system
- High lifting capacity of the gantry – option for use up to 8 cutting units

The Vanad PROXIMA presents a cutting edge high-performance CNC cutting machine designed for tough operations and demanding customers. The Vanad PROXIMA works perfectly on large metal sheets with multiple oxy-fuel torches attached, including manual or fully automatic bevelling. Installed plasma carriages are ideal for the usage of the latest and most effective plasma systems. This machine can also be equipped with other supplementary devices, including RotCUT for processing of tubes and profiles.



◀ Comprehensive cutting station PROXIMA built in 2014. CNC cutting machine is equipped with the Kjellberg HiFocus 360i plasma system, oxy-fuel technology, Tigemma filter system and Orlik compressor

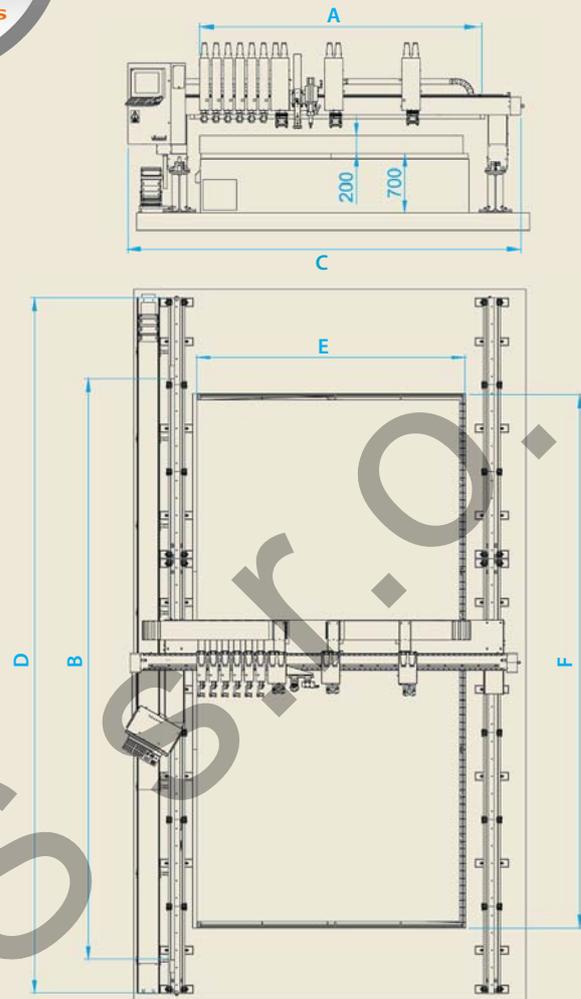
▶ High-performance double portal cutting station PROXIMA implemented in 2013 with the Kjellberg HiFocus 440i plasma system and oxy-fuel technology

### Standard equipment

- Longitudinal reinforced IPE beams
- Flexible energy chains
- Electronic control of the torch height
- Transfer of cutting plans via the USB or LAN network
- Exact control of the ignition and working height of the torch
- B&R control system

### Optional equipment

- Marking unit – plasma marking
- Marking unit – micro-punching
- Marking unit – drawing needle
- Drilling unit
- Unit for contact control of the plasma torch height – for cutting of thin sheets
- Oxy-fuel unit for straight bevel cuts (V, X)
- Electric flame ignition of the oxy-fuel torch
- CAD/CAM software for preparation of cutting data



Vanad PROXIMA		15	20	25	30	...	up to 60	
Working width of the machine	A [mm]	1634	2134	2634	3134	then at 500 mm intervals	6134	
Working length of the machine	B [mm]	(3490, 4490, 6490, 8490, 9490, 10490, 12490, 15490, max. 24490)				then at 500 mm intervals	up to 24490	
Total width of the machine	C [mm]	2990	3490	3990	4490	then at 500 mm intervals	7490	
Total length of the machine	D [mm]	(5044, 6044, 8044, 10044, 12044, 14044, 16044, max. 26044)				then at 500 mm intervals	up to 26044	
Loading width for metal sheet	E [mm]	1600	2100	2600	3100	then at 500 mm intervals	up to 6100	
Loading length for metal sheet	F [mm]	according to working length of the machine						up to 24000
Maximum travel speed	[m/min]	35,4						
Maximum number of units		8 (in combinations of 1 main, 1 secondary (plasma) unit, 6 secondary (oxy-fuel) units, 2 supplementary devices, 1 rotating three-torch head, 2 manual three-torch heads)						



▶ Semi-automatic three-torch head is an optional device used for direct cutting of the material used for bevel cutting of materials. Created bevels are often used for subsequent welding

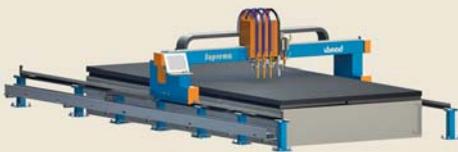
▶ The CNC thermal cutting machine PROXIMA can be fitted out with up to 8 units – for example 6 oxy-fuel and 2 plasma units for processing large metal sheets



# Vanad SUPREMA



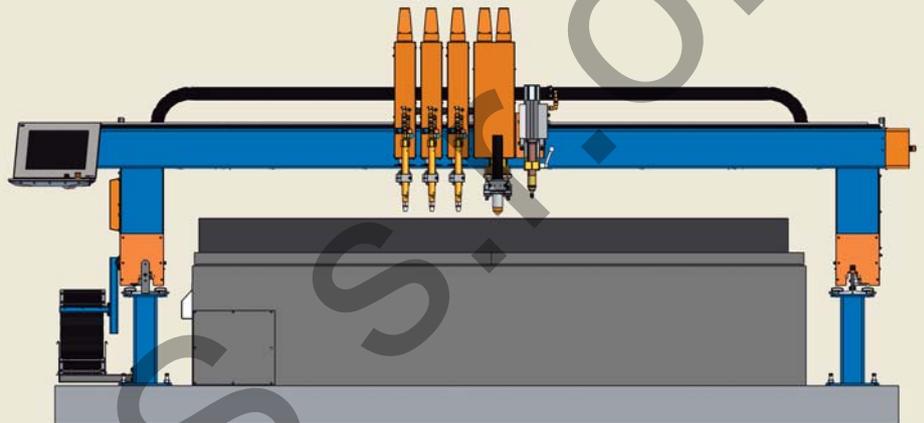
- > OXY-FUEL / PLASMA
- > HIGH EFFICIENCY
- > MAXIMUM PRECISION
- > HIGH PERFORMANCE



## Features

- Linear guides in all movement axes
- New range of adjustable large format touch screens with a technological keyboard
- Motors with high torque features – outstanding dynamic properties of the machine
- Proportional gas distribution
- Standard thickness of the cut material up to 175 mm
- Transfer of cutting plans via the USB or LAN network
- Elimination of downtime during operation
- High-performance, operationally stable, user-friendly CNC system

The CNC thermal cutting machine Vanad SUPREMA is an excellent innovative CNC cutting machine which meets all general requirements. It is a great solution for processing large metal sheets with a number of oxy-fuel torches along with the option of manual bevelling. The Vanad SUPREMA is also designed for usage of modern and powerful plasma systems. The machine can also be equipped with supplementary devices which extend its overall utilisation.



◀ SUPREMA cutting station built in 2014. The CNC cutting machine is equipped with the Hypertherm Powermax 125 plasma system and oxy-fuel technology.

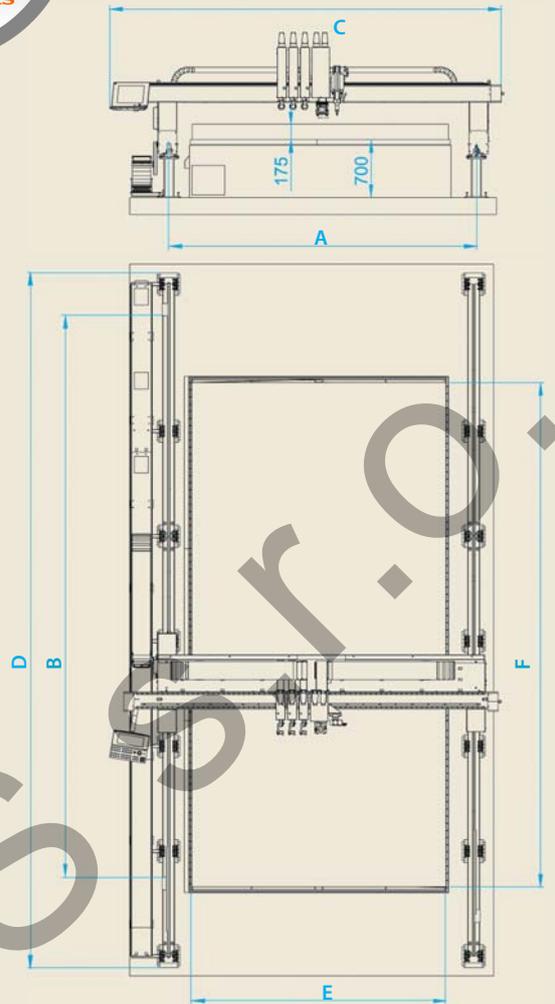
The SUPREMA in the picture is also fitted with a marking unit with several advantages: permanent marking, high speed, low costs, long-term machine-readable marking

### Standard equipment

- Double-sided longitudinal travel
- B&R control system
- Flexible energy chains
- Transfer of cutting plans via the USB or LAN network
- Exact control of the ignition and working height of the torch

### Optional equipment

- Laser pointer for setting the initial torch position
- CAD/CAM software for preparation of cutting data
- Electric flame ignition of the oxy-fuel torch
- IHT capacitive height control of the oxy-fuel torch



Vanad SUPREMA		15	20	25	30
Working width of the machine	A [mm]	1634	2134	2634	3134
Working length of the machine	B [mm]		3580, 4580, 6580, 8580, 10580, 12580		
Total width of the machine	C [mm]	3070	3570	4070	4570
Total length of the machine	D [mm]		5270, 6270, 8270, 10270, 12270, 14270		
Loading width for metal sheet	E [mm]	1600	2100	2600	3160
Loading length for metal sheet	F [mm]		3000, 4000, 6000, 8000, 10000, 12000		
Maximum travel speed	[m/min]		14,1		
Maximum number of units		1 main unit, 3 secondary (oxy-fuel) units, 1 supplementary device			



◀ Positioning and the detail of the supplementary device RotCUT for the SUPREMA cutting machine

▶ Touch screen with a technological keyboard fulfils IP65 criteria for the resistance against water and solid particles



# Vanad ARENA



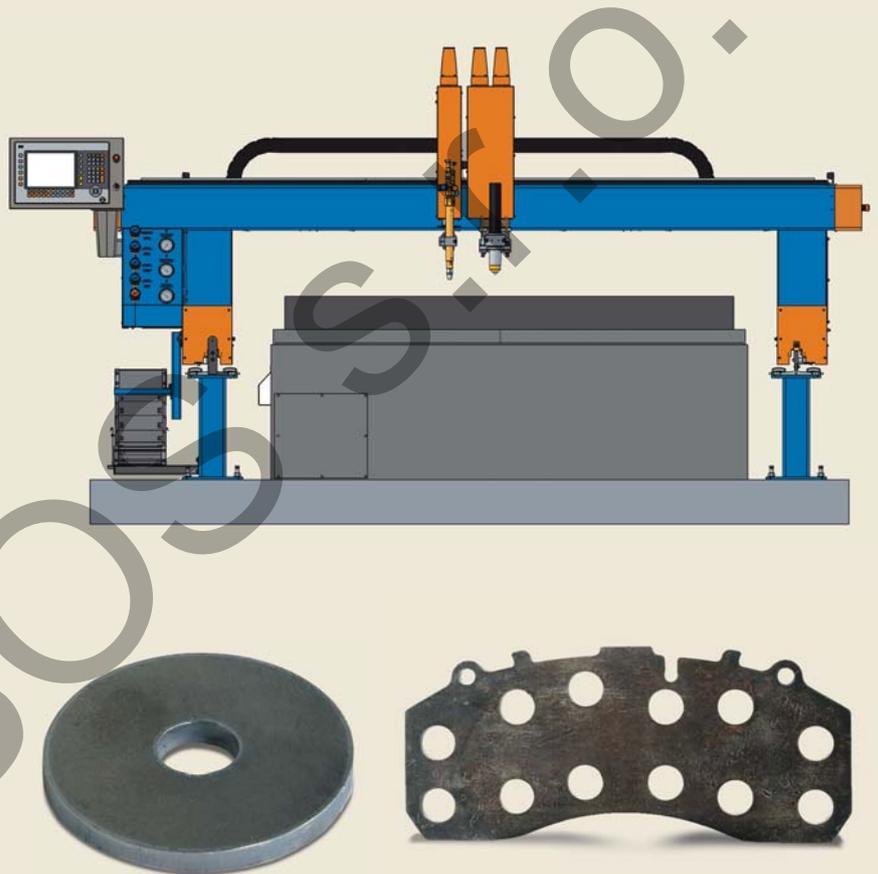
- > OXY-FUEL / PLASMA
- > EFFICIENT OPERATION
- > GREAT PERFORMANCE
- > EASY TO OPERATE



## Features

- High positioning accuracy, even during long-term operation
- Power Panel 500 touch screen with a technological keyboard for easy operation control
- Motors with high torque features – good dynamic properties
- Standard thickness of the cut material up to 150 mm
- Transfer of cutting plans via the USB or LAN network
- Elimination of downtime during operation
- High-performance, operationally stable, user-friendly CNC system

The Vanad ARENA CNC cutting machine is an optimal solution with a simple design. It is designed mainly for medium-sized enterprises. The machine is intended for the processing of standard metal sheets and has been designed for the installation of either simple plasma or oxy-fuel technology. The machine is equipped with a touch screen with a technological keyboard.



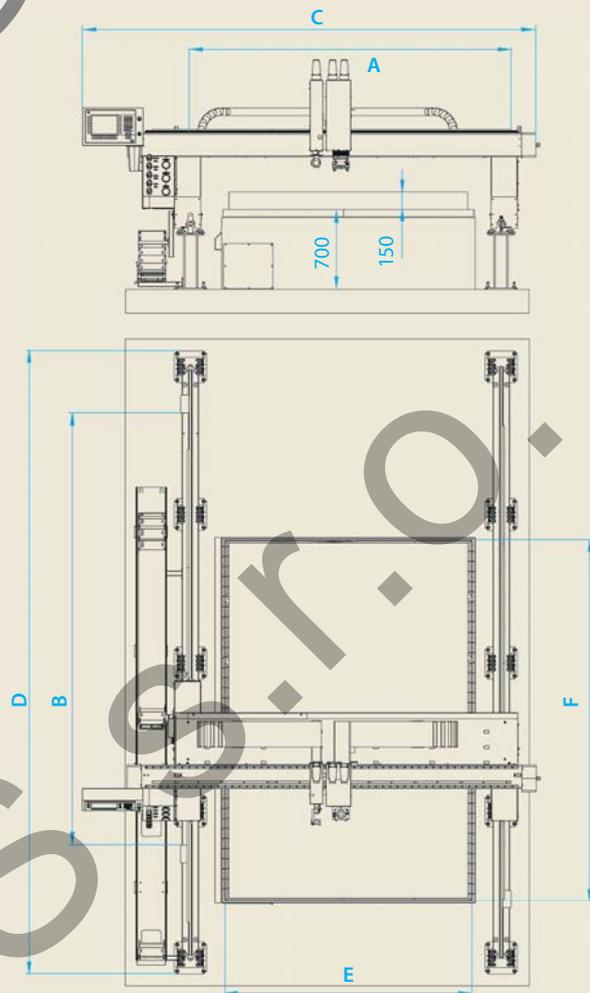
- ◀ The ARENA CNC cutting machine with a touch panel and oxy-fuel torch. The oxy-fuel torch is equipped with IHT height control system. Tigemma exhaust and filter unit form a part of the station

### Standard equipment

- Double-sided longitudinal travel
- B&R control system
- Flexible energy chains
- Transfer of cutting plans via the USB or LAN network
- Exact control of the ignition and working height of the torch

### Optional equipment

- Laser pointer for setting of the initial torch position
- CAD/CAM software for preparation of cutting data
- Electric flame ignition of the oxy-fuel torch
- IHT capacitive height control of the oxy-fuel torch



Vanad ARENA		15	20
Working width of the machine	A [mm]	1634	2134
Working length of the machine	B [mm]		3230, 4230, 6230
Total width of the machine	C [mm]	3300	3800
Total length of the machine	D [mm]		5270, 6270, 8270
Loading width for metal sheet	E [mm]	1600	2100
Loading length for metal sheet	F [mm]		3000, 4000, 6000
Maximum travel speed	[m/min]		12,7
Maximum number of units		1 main unit, 1 secondary (oxy-fuel) unit	



▶ Mobile touch panel is an optional solution for the machine operation control

▶ Comprehensive cutting station ARENA implemented in 2014. The CNC machine of the size 2 x 4 m is equipped with plasma and oxy-fuel technology for cutting up to 150 mm, with IHT capacitive height control and drilling unit. The Kemper exhaust and filter unit forms a part of the station



# Vanad MIRA



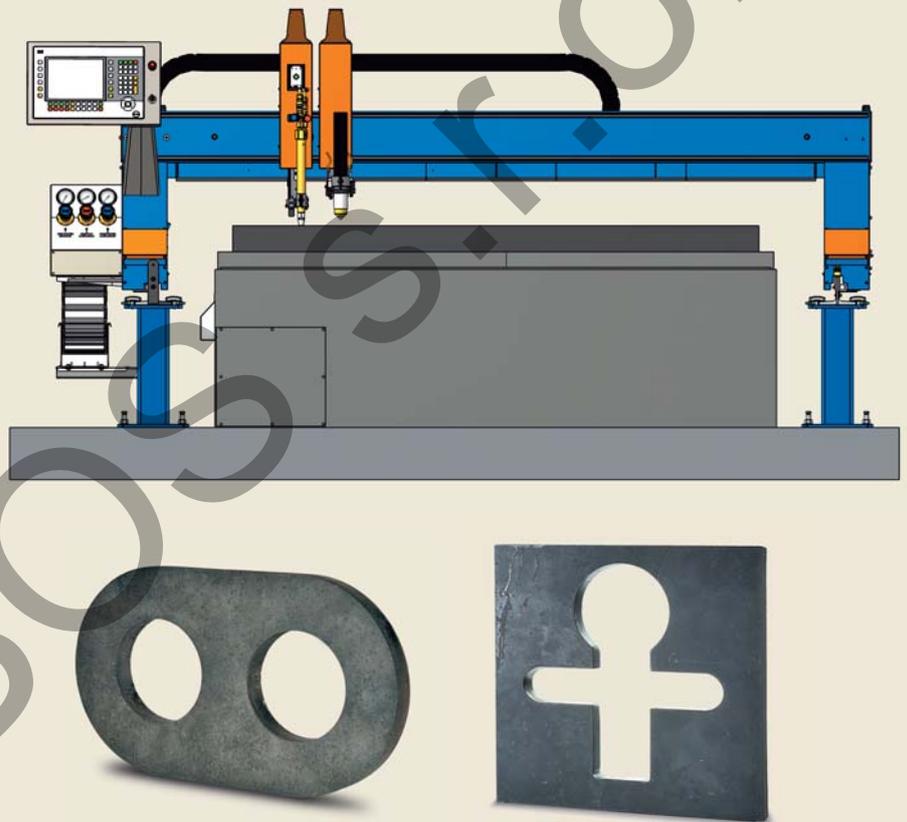
- > OXY-FUEL / PLASMA
- > SIMPLE
- > USER-FRIENDLY
- > EFFICIENT



## Features

- Double-sided longitudinal travel
- Touch screen Power Panel 500 with a technological keyboard for easy operation
- Motors with high torque features
- Outstanding dynamic properties of the CNC machine
- Standard thickness of the cut material up to 100 mm
- Transfer of cutting plans via the USB or LAN network
- Elimination of downtime during operation
- High-performance, operationally stable, user-friendly CNC system

The CNC cutting machine Vanad MIRA is distinguished by its simplicity. It is an ideal solution for both smaller operations and companies starting with thermal cutting of materials. The construction of the machine is designed so that it could easily machine standard metal sheet formats. The CNC machine works perfectly with simple plasma. For cutting of thicker metal sheets, the machine is fitted with an oxy-fuel cutting unit.



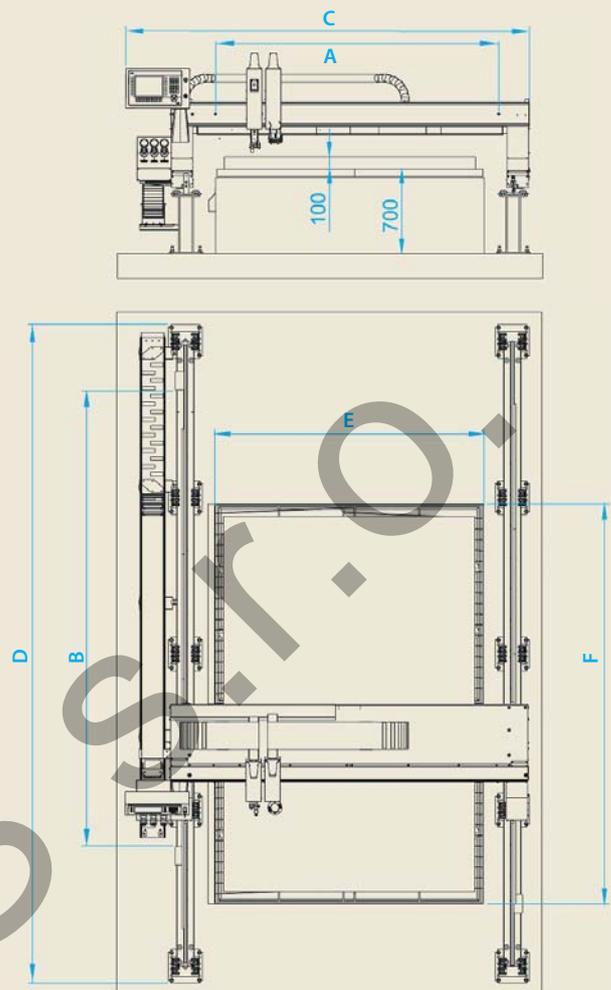
◀ The CNC cutting machine Vanad MIRA is equipped with oxy-fuel technology, laser pointer and electric flame ignition of the oxy-fuel torch. The picture shows the piercing of 100 mm structural steel. The CNC machine MIRA is also installed in our showroom, where you can see and try it

### Standard equipment

- B&R control system
- Flexible energy chains
- Transfer of cutting plans via the USB or LAN network
- Precise control of the ignition and working height of the torch

### Optional equipment

- Laser pointer for setting the initial torch position
- CAD/CAM software for preparation of cutting data
- Electric ignition of the oxy-fuel torch
- IHT capacitive height control of the oxy-fuel torch



Vanad MIRA		15	20
Working width of the machine	A [mm]	1634	2134
Working length of the machine	B [mm]		1820, 3820, 4820, 6820
Total width of the machine	C [mm]	2710	3210
Total length of the machine	D [mm]		3270, 5270, 6270, 8270
Loading width for metal sheet	E [mm]	1600	2100
Loading length for metal sheet	F [mm]		1000, 3000, 4000, 6000
Maximum travel speed	[m/min]		12,7
Maximum number of units		plasma+oxy-fuel or oxy-fuel+oxy-fuel	



◀ The Vanad MIRA cutting station built in 2013 with the Hypertherm Powermax 105 plasma system

▶ Details of the cutting unit with oxy-fuel torch which is equipped with IHT capacitive height control system



# Vanad MIRON



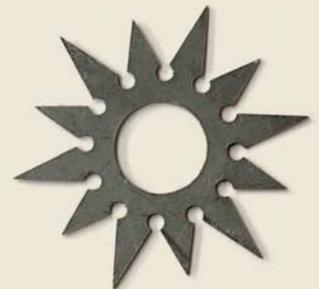
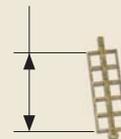
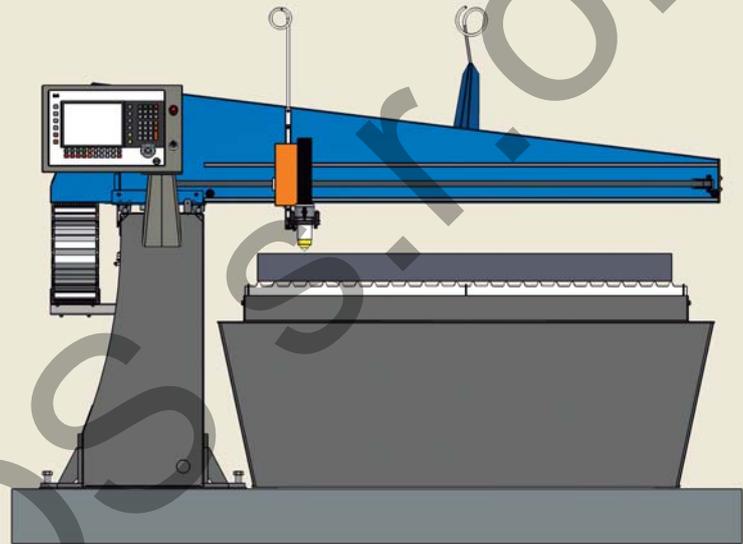
- > OXY-FUEL / PLASMA / LASER
- > EASY ACCESS
- > SMALL SIZE
- > SUPPLEMENTARY DEVICE  
RotCUT



## Features

- Suitable for combining with any of the thermal cutting technologies (oxy-fuel, plasma, laser)
- Small installation length and width compared to portal construction
- Easy access to the table from the side
- Performance of the fiber laser up to 1 kW
- Touch screen Power Panel 500 with a technological keyboard, model MIRON Laser with the 15" adjustable touch screen with a technological keyboard and 24" screen for monitoring of cutting observation
- Easy control of operation
- Solid construction of separate track block
- Standard thickness of the cut material up to 100 mm
- Cutting of highly reflective materials
- Minimum kerf
- Possible common line cutting
- Elimination of downtime during operation
- High-performance, operationally stable, user-friendly CNC system

The Vanad MIRON Laser CNC cutting machine is a top-ranking device with a simple construction. Its advantage is a quick and simple installation. Thanks to an open access it can process larger or non-standard metal sheets despite its small dimensions. This machine can be fitted with three types of thermal cutting technologies: oxy-fuel, plasma and also fiber laser. The basic models available are MIRON with plasma or oxy-fuel technology, MIRON RotCUT for processing of tubes and profiles, and MIRON Laser.



◀ MIRON Laser is an efficient CNC cutting machine equipped with fiber laser, which effortlessly cuts metal and non-metal materials such as mica plates, HSS sheets, klingerit, mirelon, polyethylene foam, anti-vibration rubber sheets, cardboard, cork, brass, bronze, copper and tar paper.

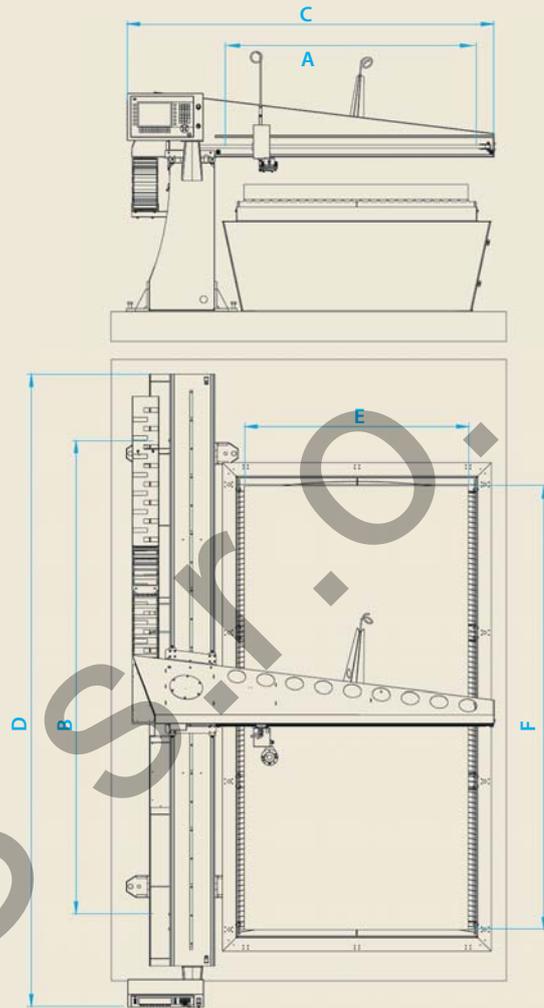
The machine also allows for cutting with compressed air, which greatly reduces not only the cutting costs, but also provides additional benefits for cutting of aluminium, and stainless as well as structural steel

### Standard equipment

- B&R control system
- Flexible energy chains
- Two linear guides for the single-side longitudinal travel
- Motors with constant torque – high quality cut parts
- Transfer of cutting data via the USB or LAN network
- Precise control of the plasma torch height

### Optional equipment

- Laser pointer for setting of the initial torch position
- IHT capacitive height control
- CAD/CAM software for preparation of the cutting data



Vanad MIRON		10	15
Working width of the machine	A [mm]	1100	1600
Working length of the machine	B [mm]		2150, 3150
Total width of the machine	C [mm]	1920	2420
Total length of the machine	D [mm]		3278, 4278
Loading width for metal sheet	E [mm]	1000	1500
Loading length for metal sheet	F [mm]		2000, 3000
Maximum travel speed	[m/min]		12,7
Maximum number of units			1 cutting unit



The Vanad MIRON may be delivered as part of a comprehensive cutting station, including oxy-fuel technology or a plasma or laser system and consumables, with a compressor for air supply, including its treatment as well as extraction and filter system for the exhaust of smoke and fumes from thermal cutting of materials



# Vanad RotCUT



- > OXY-FUEL / PLASMA / LASER
- > TUBES AND PROFILES
- > CUSTOMISED SOLUTIONS
- > HIGH ACCURACY

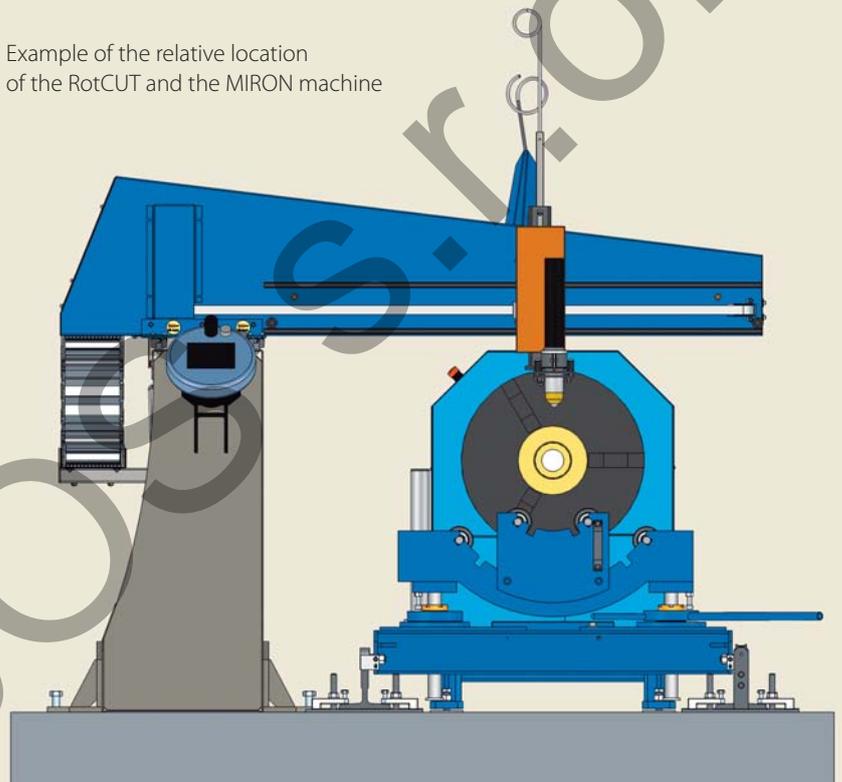


## Features

- Proven reliable robust construction allowing for achievement of high accuracy of fabricated shapes
- Ease of operation
- Reliable and user-friendly control system
- High versatility of the station in connection with a standard Vanad cutting machine
- Variable creating of cutting plans
- Minimum investment costs
- Transfer of the movement from axis "Y" program to the rotary axis "Rc" during cutting

The RotCUT is a modern, highly effective supplementary device for precise tube and profile processing, delivered together with Vanad machines. The RotCUT is designed for the production of steel construction components. The RotCUT device is distinguished by its remarkable accuracy, reliability and performance. The device is always tailor-made to meet requirements of each customer in order to achieve the maximum range of diameters and high productivity. Supporting steadies and the track for their fast transfer are included in RotCUT.

Example of the relative location of the RotCUT and the MIRON machine



- ◀ The supplementary RotCUT device for processing of tubes and profiles may be used in combination with other machines, e.g. Vanad BLUESTER, PROXIMA, MIRON, SUPREMA, MIRON Laser and KOMPAKT Laser

Two models of RotCUT with servo motors are available:

- RotCUT with a maximum tube diameter of 314 mm
- RotCUT with a tube diameter range of 60–1,000 mm

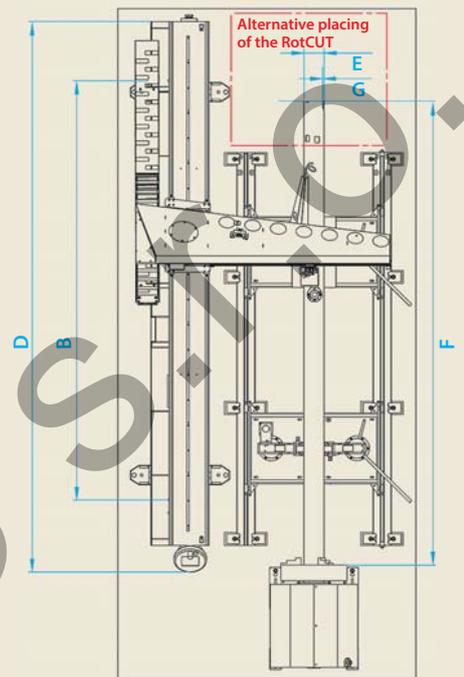
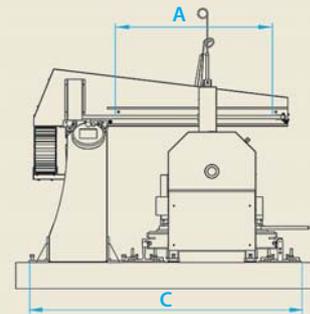
### Possible combinations of the RotCUT device

The RotCUT device for processing of tubes and profiles may be combined with the following Vanad CNC machines:

- RotCUT + BLUESTER, PROXIMA, MIRON, SUPREMA
- RotCUT Laser + KOMPAKT Laser, MIRON Laser



Example of the relative positioning of the RotCUT and the MIRON machine



		MIRON + RotCUT	PROXIMA + RotCUT	KOMPAKT Laser + RotCUT	SUPREMA + RotCUT
Tube diameter	E [mm]	60 – 600	60 – 1000	max. 246	max. 314
Tube length	F [mm]	max. 3000	max. 6000	in relation to the machine length (15x30 = 2500)	max. 3000
Tube wall thickness	G [mm]	max. 20	max. 20	max. 20	max. 20
Drive			servo motor with epicyclic gear		stepping motor with epicyclic gear
Construction of the device				steel, assembled	
Tube clamping				three-, or four-jaw chuck	
Control system				B&R	

We have developed a special solution tailor-made to meet our customers' special requirements regarding machining tubes – e.g. MIRON Laser machine with the solid state laser system SPI 500 W, supplementary RotCUT device, Kemper filter system and Orlik compressor



# Vanad KOMPAKT / KOMPAKT Light

- > OXY-FUEL / PLASMA
- > COMPACT
- > QUICK
- > EASY INSTALLATION

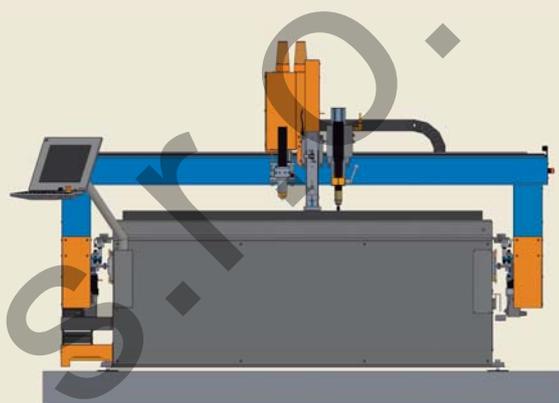
## Features

- Complete range of machines for processing of the most frequently used formats of metal sheet
- Rigid construction of the extraction table with an integrated travel path for the portal technology carrier
- Double-sided longitudinal travel
- Linear guides in all movement axes
- New range of adjustable large format touch screens with a technological keyboard; KOMPAKT Light model with the Power Panel 500 mobile touch screen with a technological keyboard
- Precise control of the ignition and working height of the torch
- High positioning accuracy, even during long-term operation
- Standard thickness of the cut material:
  - KOMPAKT 50 mm (70 mm oxy-fuel)
  - KOMPAKT Light 30 mm (50 mm oxy-fuel)
- Outstanding dynamic properties of a CNC machine
- High-performance, operationally stable, user-friendly CNC system
- Elimination of downtime during operation

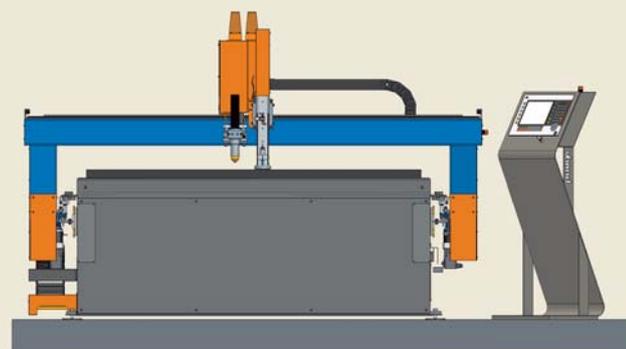
The CNC thermal cutting machines Vanad KOMPAKT and KOMPAKT Light present a great compact solution with easy assembly and handling. Their construction enables customers to machine the most common formats of metal sheet and fully meets all requirements for a high-performance station. Thanks to its solid construction the Vanad KOMPAKT machine may be fitted up with a modern powerful plasma system as well as oxy-fuel technology. The Vanad KOMPAKT Light is designed for the use of standard air plasma systems. It also allows for the installation of supplementary devices.



Vanad **KOMPAKT**



Vanad **KOMPAKT Light**



◀ The Vanad KOMPAKT machine is integral to our centre for thermal cutting and is also often lent to demonstrate quality cut parts at exhibitions in the Czech Republic and abroad.

The machine is equipped with plasma technology and marking unit. The Vanad KOMPAKT may be fitted up with two supplementary devices

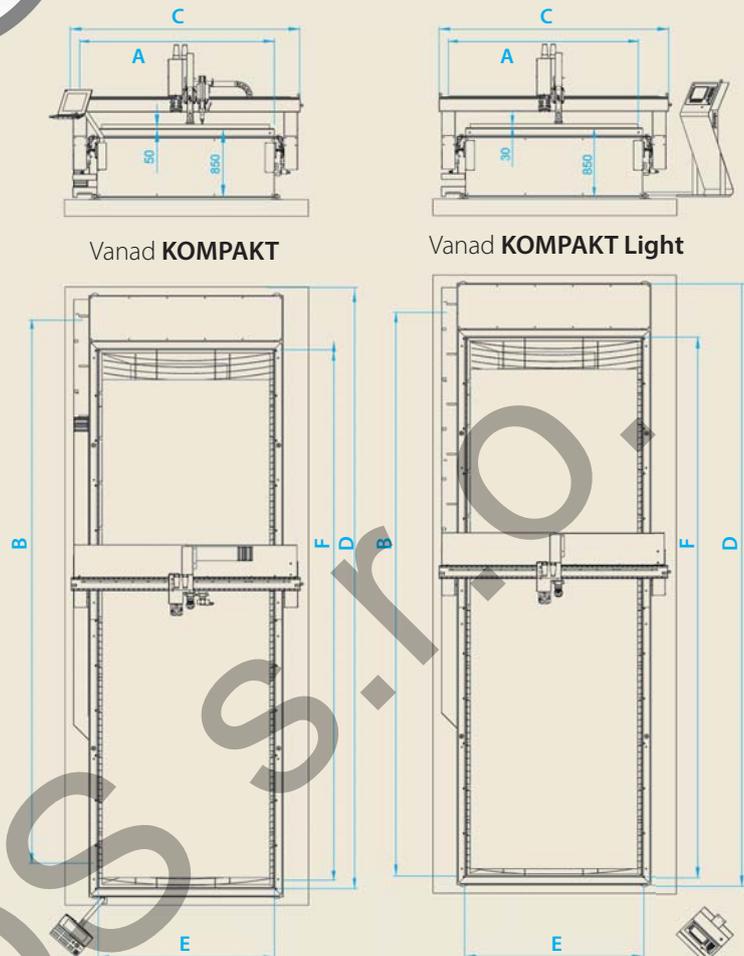


### Standard equipment

- Double-sided longitudinal travel
- Flexible energy chains
- B&R control system
- Transfer of cutting data via the USB or LAN network
- Precise control of the plasma torch height
- Pneumatic-electric control of the ignition height of the plasma torch

### Optional equipment

- Marking unit – plasma marking
- Marking unit – micro-punching
- Marking unit – drawing needle
- Drilling unit
- Unit for contact control of the plasma torch height (for cutting of thin sheets)
- CAD/CAM software for preparation of cutting data



		Vanad KOMPAKT						Vanad KOMPAKT Light				
		10×20	15×30	15×60	20×30	20×40	20×60	10×20	15×30	15×60	20×40	20×60
Working width of the machine	A [mm]	1200	1700	1700	2200	2200	2200	1200	1700	1700	2200	2200
Working length of the machine	B [mm]	2290	3290	6530	3290	4290	6530	2290	3290	6530	4290	6530
Total width of the machine	C [mm]	1730	2230	2230	2730	2730	2730	1730	2230	2230	2730	2730
Total length of the machine	D [mm]	3140	4140	7380	4140	5140	7380	3140	4140	7380	5140	7380
Loading width for metal sheet	E [mm]	1100	1600	1600	2100	2100	2100	1100	1600	1600	2100	2100
Loading length for metal sheet	F [mm]	2160	3240	6480	3240	4320	6480	2160	3240	6480	4320	6480
Maximum travel speed	[m/min]	42,4						14,1				
Maximum number of units		1 main unit + 2 supplementary devices						1 main unit + 1 supplementary device				

◀ The Vanad KOMPAKT Light is a sophisticated solution designed for use of standard air plasma systems. The machine may be equipped with one supplementary device

▶ The Vanad KOMPAKT CNC cutting machine is very popular among our customers for its excellent properties, easy operation and quick assembly





# Vanad KOMPAKT LASER

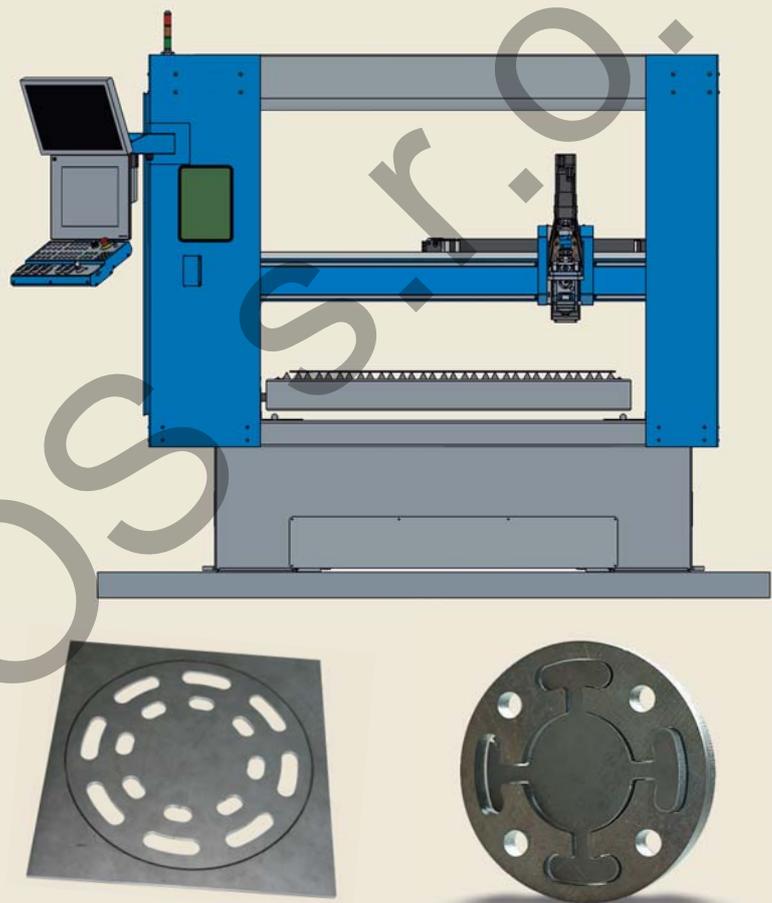
- > LASER
- > THE HIGHEST SPEED
- > THE HIGHEST ACCURACY
- > ENERGY EFFICIENCY



## Features

- Outstanding dynamic properties of the CNC machine
- Solid construction of separate track block and table
- Double-sided longitudinal travel
- Optical measurement of the positioning
- 15" adjustable touch screen with a technological keyboard and 24" screen for cutting monitoring
- High positional accuracy guaranteed also during long-term operations
- Performance of the fiber laser up to 3 kW
- Cutting of highly reflective materials
- Minimum kerf
- Possible common line cutting
- High-performance, operationally stable, user-friendly CNC system
- Elimination of downtime during operation
- Minimum of required maintenance
- Low energy consumption, environmentally friendly

The Vanad KOMPAKT Laser CNC thermal cutting machine presents the latest compact solution for using the most modern fiber lasers. It is easy to assemble and handle thanks to its solid construction. The construction of the machine allows for comfortable and extremely precise thermal cutting of standard metal sheet formats and meets all customer's requirements for a high-performance station. The Vanad KOMPAKT Laser machine is equipped, even in its standard version, with a camera for the monitoring of cutting on a separate monitor, protective sight glasses and automatic roller blinds.



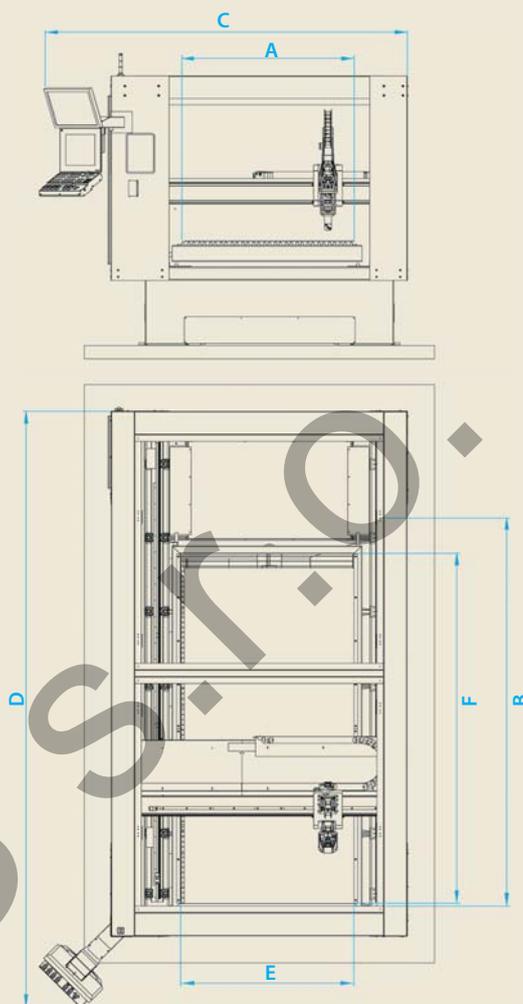
- ◀ The design of the extraction table provides for a variable grid extension for loading of material and placement of conveyor for dumping of the waste out of the cutting area according to the station or customer requirements

### Standard equipment

- Flexible energy chains in all axes
- Linear guides in all movement axes
- B&R control system
- Transfer of cutting data via the LAN network, Wi-Fi or USB
- Capacity control of the height of the cutting head
- Laser marking unit
- Camera for monitoring of the cutting and its display on a separate monitor
- Controlled piercing for longer lifetime of consumables
- Own anti-collision head system
- Protective filter – 1 sight glass of A3/A4 size
- Laser pointer
- Manually sliding grid

### Optional equipment

- Safety light curtain around the extended grid
- Conveyor belt
- CAD/CAM software for the preparation of cutting data
- Electrically controlled sliding grid
- Large size side windows
- Two hydraulically exchangeable grids for minimisation of the preparation time



Vanad KOMPACT LASER		12,5 × 25	15 × 30	20 × 40
Working width of the machine	A [mm]	1350	1650	2150
Working length of the machine	B [mm]	2580	3100	4100
Total width of the machine	C [mm]	2030	2440	2940
Total length of the machine	D [mm]	3830 (+ sliding grid)	4600 (+ sliding grid)	5600 (+ sliding grid)
Loading width for metal sheet	E [mm]	1250	1500	2000
Loading length for metal sheet	F [mm]	2500	3000	4000
Maximum travel speed	[m/min]		45,3	
Maximum number of units			1 laser unit	



#### ► Sliding grid for cut parts

◀ The CNC machine is delivered as part of a comprehensive cutting station, i.e. including a laser system and consumables for laser cutting, a compressor for the supply of the compressed air, including its treatment for laser cutting and an extraction and filter system for the exhaust of smoke and fumes from the thermal cutting

#### ► Manually sliding grid





# Service, Assembly, Technology

## Service

We carry out the servicing of the Vanad CNC cutting machines and plasma and laser systems. Vanad provides the guarantee and after-guarantee service, preventive inspections, overhauling of the machinery and repairs of plasma and laser units, including the professional consulting services over the phone.

### Guarantee service

We will perform any repair for free if the malfunction was not caused through the negligent fault (e.g. collision of the machine with another device due to operator's error, any inappropriate objects on the track, etc.). In case of a defect preventing the machine from operating, our service technician will be available on the spot. Other problems are solved as agreed on a case-by-case basis.

### Repairs of plasma and laser systems

We are an authorised service partner of all plasma and laser systems suppliers.

### Upgrading of machinery

We provide replacement of worn-out racks, bearings and guideway, overhauling of gearboxes, **installation of supplementary equipment**, modernisation of the gas distribution system, exchange of torches and pressure reducing valves, we edit software, etc.

### Consulting services

We train operators of CNC machines and provide information about maintenance of machinery, technology supplements and cutting technology.

### Service over the phone

Daily from 6.00 a.m. to 8.00 p.m. (including weekends), we provide our customers with telephone assistance in resolving problems (simple repairs).

(+420) 603 287 860 from 6.00 a.m. to 8.00 p.m.

(+420) 569 400 411 from 6.00 a.m. to 2:30 p.m.

## Assembly

Advanced technology, high quality materials and precise and thorough assembly guarantee, high accuracy and long life of Vanad CNC cutting machines. Training of machine operators in thermal cutting technology and CAD/CAM software for creation of cutting plans form an integral part of machine assembly.

## CAD/CAM software

A quality CNC cutting machine cannot do without effective data preparation, including easy data transfer into the machine. The Vanad cutting machines utilise a wide range of software products, such as WrykRys, SAPS, LANTEK, Hypertherm CAD/CAM.



## Suppliers

We are an authorised partner of leading suppliers of technologies for thermal cutting of materials – **Hypertherm, Kjellberg, Formica, SPI Laser, IPG, Messer, GCE, B&R Automation, Kemper, Tigemma and Vanterm**. Our machines may be delivered as part of the comprehensive cutting station – CNC cutting machine, extraction table, plasma or laser system, compressor, filter system, etc.

## Consumables and spare parts

The use of original consumables and spare parts is the only way how to ensure a long-term high performance and accuracy of the CNC cutting station. Due to higher cutting speeds and significantly longer lifetime the productivity and reliability of the machine increase.

### Plasma systems:

We delivery consumables and spare parts for Kjellberg, Hypertherm and Formica plasma systems – OTC and MAXIMIZER machine torches.

### Oxy-fuel torches:

We delivery consumables and spare parts to machine torches for Messer, GCE and Harris oxy-fuel cutting for acetylene, propane, natural gas and MAPP, APACHI and ETHYLENE mixed flammable gases.

## Delivery times

If the requested parts are available in our stock, your order will be processed immediately otherwise in the shortest possible time. More information about ordering of consumables and spare parts is available on [vanad@vanad.com](mailto:vanad@vanad.com).

## Special applications

### Pneumatic drilling unit

The pneumatic drilling unit with an automatic feed is placed on a separate secondary carriage and powered by compressed air. It is designed as a complementary technology to Vanad cutting machines.

### Three torch cutting head

Solid construction with three burners is an optional device that is used for direct material cutting with manual adjustment of the cutting angle and distance mechanically adjustable working height.



◀ We deliver original consumables and spare parts for oxy-fuel, plasma and laser cutting. We help you to optimise the cutting quality and costs. Please contact us on [vanad@vanad.com](mailto:vanad@vanad.com) with your specific data about your cutting demands



### Three-torch cutting head

The cutting unit of solid construction with three torches is an additional device. It is used for straight cutting of material with manual setting of the cutting angle and also with distance mechanical setting of the working height.

### Semi-automatic rotation three-torch cutting head

The three-torch cutting head is designed for making cut parts, as, for instance, the elements of weldments. The cut parts are provided with a bevel – oblique cut of required dimensions. Bevels created with use of the three-torch cutting head are often used for subsequent welding.

### 3D automatic plasma head

Up to half of the world production of cut parts is bevelled, especially for the subsequent welding. Thanks to the use of robotic databanks and transformations, **Vanad 3D plasma head** allows for fully automatic angle settings, kerf correction, recalculation of plasma arc and height control and thereby it significantly expands the possibilities of using cutting machines and increases their power output. The construction of the head uses two harmonic gearboxes for rotational axis, which excel in high precision, rigidity, carrying capacity and compact dimensions. The used top quality components ensure the accuracy and the required dynamics of the head movement



### Milling unit

The milling unit is used as an addition to the main cutting technology or as a main application on machines intended for a specific manufacturing task. Based on our long-time experience we will create for you the table design and characteristics of the required milling cutter.

### Micro-punching marking unit

The pneumatic micro-punching marking unit with a hardened steel tang, whose movement is provided by the compressed air, may be used with **BLUESTER, PROXIMA, SUPREMA** or **KOMPAKT** Vanad machines for marking of metallic materials, such as steel or aluminium. The depth of marking is dependent on hardness of the marked material, pressure and quantity of the compressed air and the distance of the point from the material. The micro-punching marking is used in all branches of industry (logo, date, time, serial number, marks and simple graphics).

### B&R control system

B&R (*Bernecker & Rainer Industrie-Elektronik Ges. mbH*) was established in 1983 in the Austrian town Eggelsberg. Today it ranks among the world leaders in field automation technology with the turnover exceeding EUR 500 million (in 2014). The company's motto "Perfection in Automation" also means that B&R focuses on product development and presents technical trends and standards. The number of countries in which B&R operates is

growing steadily. Nowadays, it is nearly 75 countries worldwide. In the Czech Republic, B&R has its headquarters in Brno with branches in Prague, Pilsen and Zábřeh. We have been cooperating with the headquarters in Brno in development and modification of the control system for our machines since 2006.

The main components are constantly produced and checked in the Austrian headquarters, placing emphasis on quality and reliability. B&R invests nearly 15% of the turnover back into research and development, particularly in order to keep its technologies on the top in the field of automation.

The operating system for all B&R control systems design is different from conventional PLC. It is capable of multi-tasking with deterministic timing behaviour. It is used in both, the state-of-the-art and best-performance machines and also in equipment utilising renewable energy sources.



### Advantages of the VANAD cutting machines with the B&R control system in comparison with other systems:

higher productivity • accelerated start-up of the torch on nearby holes • reducing speed on circles and curves • reducing of the cutting currents at corners and curves • sophisticated switching of the plasma arc on and off • increased lifetime of plasma consumables • higher travel speed • communication with the environment (USB, Ethernet TCP/IP, VNC, FTP, even a remote connection over the Internet) • user-friendly and intuitive machine control via touch screen and membrane keypad • the option to interrupt the cutting plan, to use another and afterwards return to the original one • more kerf correction values for circuit, holes and various diameters – better quality of the cut parts • resistance to electromagnetic interference • sophisticated diagnostics and displaying of error messages • thanks to this the option to correct quickly and easily any prospective errors • high system reliability and HW and SW resistance against failures • low input of electronic components and therefore high heat resistance (components work in ambient temperature up to +55°C) • modularity enabling future extensions – lower costs • protection of the control panel and keyboard in accordance with IP65

### Additional services

- Training of CNC cutting machines operators
- Training of CAD/CAM software for preparing of cutting plans
- Individual payment terms (by instalments or lease, alternatively as agreed with the customer)
- Individual guarantee period
- Professional service (express guarantee and after guarantee service, preventive inspections, upgrading of the machinery, repairs of plasma and laser units, consulting and training activities, advisory service over the phone)



◀ We regularly hold training courses for dealers of Vanad cutting machines in our Thermal Cutting Centre in Golčův Jeníkov. We inform them about innovations and changes, which they can see and try out in our showroom



# Vanad



## Visit the largest thermal cutting showroom in the Czech Republic

We extend a cordial invitation to everyone who is interested to visit the largest permanent Thermal Cutting Centre in our plant in Golčův Jeníkov.

In the thermal cutting centre everyone who is interested can see the Vanad CNC cutting machines and get familiar with their technological capabilities. Currently in the centre there are eight permanent stations installed representing all the three methods of thermal cutting – with oxy-fuel, plasma or laser for standard metal sheets.

The purpose of the centre is to help customers to select the most suitable CNC machine, equipment and technology. We will answer your questions and provide you with the solutions you seek. We will train your staff in operating of CNC machines or utilisation of programmes for data preparation. Book an appointment on [vanad@vanad.com](mailto:vanad@vanad.com).

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