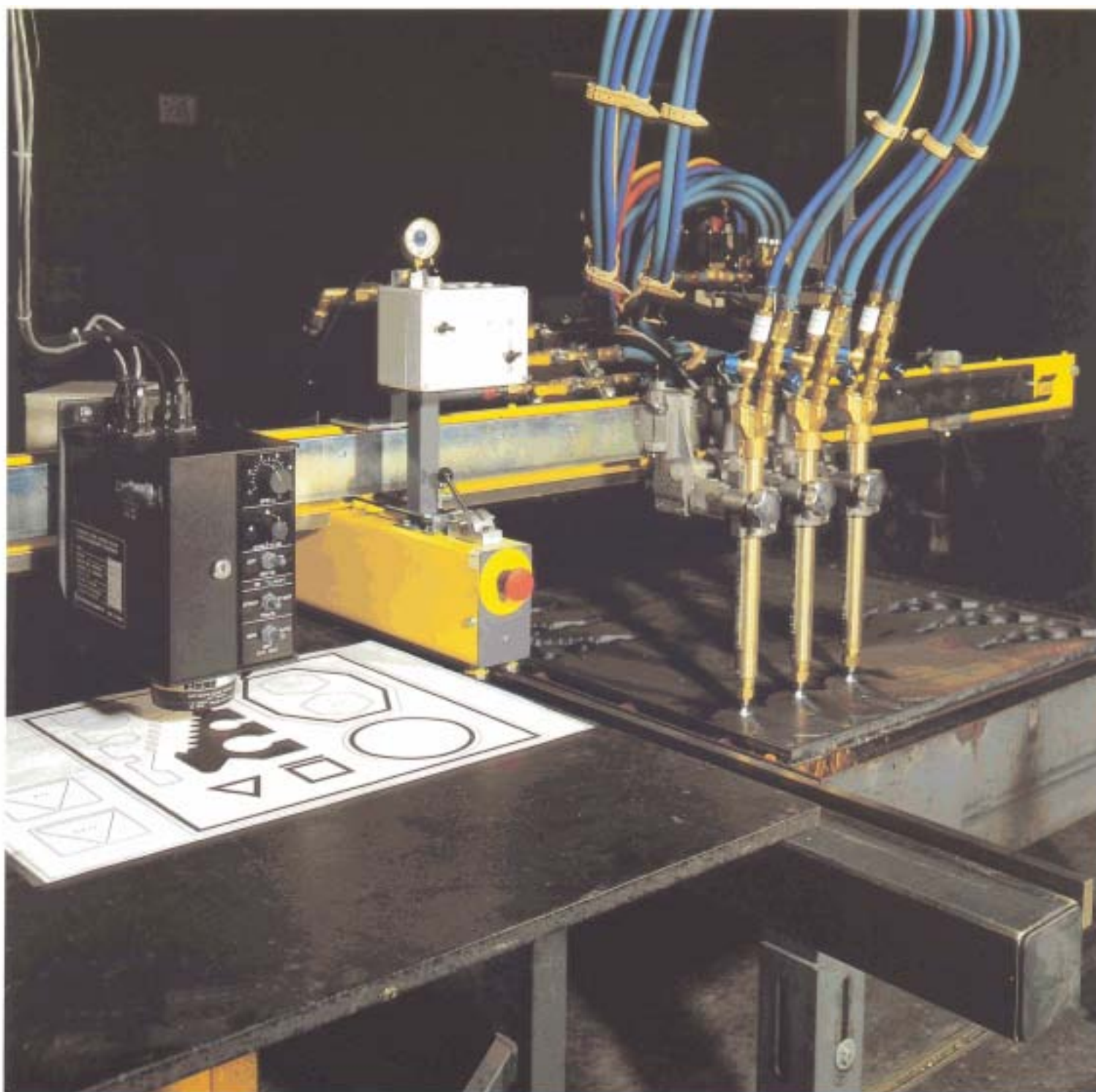


ULTRAREX UXB

Co-ordinate Gas Cutting Machine With Photoelectric Tracing



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ULTRAREX UXB with three manually adjustable single machine cutting torches for simultaneous use in batch production

The ULTRAREX UXB is a co-ordinate gas cutting machines with photo-electric control. This machine has been specifically developed for use in small and medium sized workshops of the steel fabrication industry.

Precise guiding accuracy, optimum cutting speed, easy mounting and serviceability, low prime costs, these are only some of the most remarkable features of the ULTRAREX UXB.

The machine has been designed in compliance with the latest ergonomic guidelines. The machine meets the regulations of the Employer's liability insurance association and those of the VDE (German Electrical Standards), and of course, it is in accordance with the German specifications applicable to gas cutting machines.

The ULTRAREX UXB is equipped with a robust co-ordinate drive and a tracer control system which is approved since many years.

Integrated circuits in C-MOS technology guarantee a maximum service life.

Profile cuts of any kind are carried out by transference of the photo-electric tracing from 1:1 tracer drawings or silhouettes to the machine cutting torches.

No tracer drawings are required for straight line cutting or rectangular beveling of plates. Cutting in all four co-ordinate directions is simply carried out by operating a selector switch on the control head.

A gangway of approx. 400 mm width between the machine track and the cutting table is provided to allow the operator continuous checking of the cutting process.

The ULTRAREX UXB can be equipped with up to 4 machine cutting torches, thus making it suitable either for one-off or batch production.

Machine carriage

The machine carriage includes a carriage for the longitudinal motion on the track, and a transverse carriage moving, on the main beam for the longitudinal carriage.

The longitudinal carriage is a triangulated design, and is equipped with hardened, adjustable running wheels and guide rollers with ball bearings. This guarantees smooth running and optimum guiding accuracy in longitudinal direction.

The transverse carriage, equipped with a rack is used for the simultaneous motion of the torch carriages and the photo-electric control head.

Machine track

The machine track include's two rails, hereof one guiding and one support rail. The track can be optionally fixed to 4 independent rail columns or to 2 rail stands arranged at right angles to the machine track.

The track is available in standard lengths of 3000 mm and 4000 mm. Only the 4000 mm track can be extended with 2000 mm extension track.

Tracing table

The tracing table is used to carry tracer drawings. It is movable between the machine rails. Its surface is painted matt-black.

The length is 1000 mm for all sizes. The width of the plate corresponds to the different sizes, 1250 mm for size 12.5, 1500 mm for the sizes 15 and 15/20.

Kerf compensation

The kerf compensation allowing an adjustment of the kerf width up to ± 3 mm, enables the automatic correction of tracer drawings. The required kerf compensation is set on the scale ring of the control head. It is, therefore, not necessary to make allowances for the kerf width when preparing tracer drawings.

Co-ordinate control

The movement of the machine carriage both in longitudinal and transverse direction is effected by two separated drive units. Pinions transmit the torque of the electro-motors via gears to the pinion mounted on the rear track wheel for the longitudinal motion, and to the rack mounted on the transverse carriage for the transverse motion.

A freewheel mechanical clutch allows easy and accurate positioning of the machine by hand.

Photo-electric tracing (scale 1:1)

The photo-electric control head in series located on the left-hand side, can be moved and locked on the transverse carriage.

It is equipped with a control panel comprising all operating units and switches necessary for the control and tracing.

The movement of the control head is transmitted to the torch carriages via transverse carriage.

The photo-electric tracer control enables tracing from line drawings (min. line thickness 0.8 mm) or from silhouettes.

Gas distribution equipment

The gas distribution manifold for fuel gas, heating oxygen and cutting oxygen is normally equipped with outlets for the connection of 4 machine cutting torches.

Automatic lead-in

the built-in automatic lead-in does not require an extra line to catch the contour.

After pressing the "Start" push button, the machine starts moving in the preselected direction, and after having caught the drawing line, automatically switches on the photo-electric tracer control.



Photo-electric control head with integrated control units

Automatic cut-out

The machine motion is automatically stopped if the drawing line is defective or unclear.

If the photo-electric tracing loses the line for any reason, the line control will also automatically cut out. By this funktion, defective cuts are avoided.

Automatic corner slow down

A special corner slow down funktion – as usual for most gas cutting machines – is not required for the **ULTRAREX UXB** because of the excellent control and guidance of the machine which make it unnecessary.

Cutting speed

The cutting speed is infinitely variable and can be set within speed ranges of 100–1000 mm/min by means of a rotary switch located on the control head.

The cutting speed remains constant for all directions of the machine motion.

Torch carriage with manual height control

The torch carriage is equipped with running wheels; it is locked by means of a clamping device to the transverse carriage so that there is a firm connection between the control head and the torch carriage.

An adjustable longitudinal support enables easy adjustment of the machine cutting torches to the plate edge.

The machine cutting torch itself can be swivelled up to $\pm 45^\circ$ in transverse direction and adjustable up to $\pm 15^\circ$ in longitudinal direction.

It also can be adjusted in vertical direction up to 250 mm by means of a rack and pinion.

Torch carriage with motorized height control

The design of the torch carriage corresponds, in principle, to the before described one.



Torch carriage with manual height control

The cutting nozzle to workpiece distance is adjusted by means of electromotor drive which is manually operated by a tumbler switch on the additional operator's panel.

Distance of motorized height control is 245 mm in vertical direction.

A later settlement from manual to motorized height control is possible.

Oxy-gas equipment with central manually operated valves

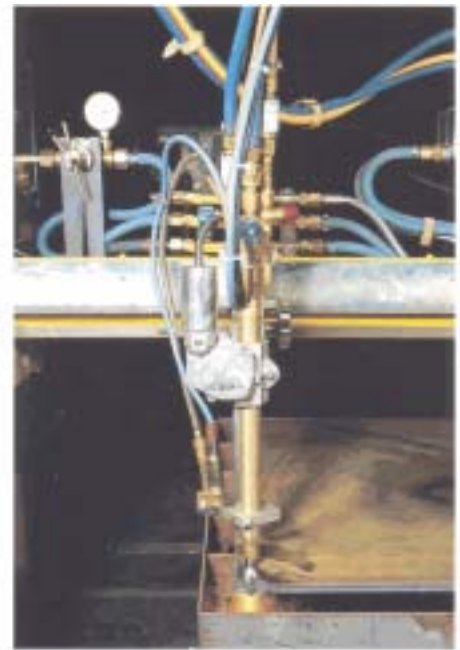
The machine is equipped with a central valve control used for manual opening



Additional operating panel for motorized height control and electric ignition device



Central manually operated valve control of gases supplied to the machine cutting torches



Torch carriage with motorized height control and electric ignition device

and cutting off the fuel gas, heating oxygen and cutting oxygen.

The main cutting oxygen valve allows the proportional supply of the cutting oxygen necessary when piercing holes.

Central solenoid valve for cutting oxygen

This valve automatically controls the cutting oxygen when the machine starts, as well as the cut off, if the photo-electric tracing loses the line for any reason.



2 stage pressure regulator for fast preheating



Central solenoid valve for cutting oxygen

Electric ignition device

The ignition device is of major benefit when several machine cutting torches are used at the same time.

The preheated gases are ignited automatically via switches on the control panel.

Machine cutting torch

The ULTRAREX UXB can be equipped either with injector torches or torches for gas mixing cutting nozzles.

All machine cutting torches have adjusting valves for fuel gas, heating oxygen and cutting oxygen. The standard equipment of a machine cutting torch includes 1 set of gas cutting nozzles from 3–125 mm.

Circle cutting device

This adjustable circle cutting device is used for automatic cutting of disks, circles etc; use for tracer drawings is unnecessary.

Line regulator station

This station is used for setting the gas pressures and can be wall mounted.

It consists of pressure regulators, ball valves, flash back arrestors and console.

Self assembly

The erection of the machine is quite simple and can be managed by the customer according to our detailed mounting instructions.



Line regulator station

Technical data

Machine size		12.5	15	15/20
Cutting width (1 single torch)	[mm]	1250	1500	1500
Cutting width (2 single torches)	[mm]	2 x 835	2 x 760	2 x 1000
Cutting width (3 single torches)	[mm]	3 x 416	3 x 500	3 x 665
Cutting width (4 single torches)	[mm]	4 x 310	4 x 375	4 x 500
Max. parallel cut	[mm]	1250 (1500)	1500 (1750)	2000
Min. parallel cut	[mm]	95	95	95
Max. circle cut	[Ø mm]	1000	1000	1000
Min. circle cut	[Ø mm]	150	150	150
Cutting length for 3000 mm track	[mm]	2250	2250	2250
Cutting length for 4000 mm track ¹⁾	[mm]	3250	3250	3250
Tracing width (table plate)	[mm]	1250	1500	1500
Tracing length (table plate)	[mm]	1000	1000	1000
Cutting thickness (1 single torch)	[mm]	3-200	3-200	3-200
Cutting thickness (2 single torches)	[mm]	3-125	3-125	3-125
Cutting thickness (3 single torches)	[mm]	3- 75	3- 75	3- 75
Cutting thickness (4 single torches)	[mm]	3- 75	3- 75	3- 75
Cutting speed	[mm/min]	100-1000	100-1000	100-1000
Max. number of single torches		4	4	4
Fuel gases ²⁾		Acetylene / Propane / Natural gas		
Connection voltage ³⁾	[V/Hz]	220/50-60	220/50-60	220/50-60
Input power	[VA]	~ 200	~ 200	~ 200
Machine length	[mm]	700	750	750
Machine width	[mm]	3200	3700	4200
Machine height	[mm]	2100	2100	2100
Cutting table height	[mm]	700	700	700

¹⁾ Track extension for 2000 mm possible

²⁾ Other kinds of fuel gas on request

³⁾ Other connection voltages on request

We reserve the right to make technical modifications and improvements without notification



CUTTING SYSTEMS

