
KHT M NC

HYDRAULIC SHEAR

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Qualität und Zuverlässigkeit weltweit

Die KNUTH Werkzeugmaschinen GmbH ist einer der führenden Anbieter konventioneller und CNC-gesteuerter Werkzeugmaschinen. Als international tätiges Unternehmen ist KNUTH in mehr als 30 Ländern präsent.

In der Unternehmenszentrale Wasbek finden Kunden auf 16.000 m² Ausstellungsfläche Maschinen aus allen Bereichen der Zerspaltung und Blechbearbeitung vorführbereit und kurzfristig lieferbar.



Quality Assurance for your KNUTH Machine

Quality by KNUTH Certified Quality Assurance

More than 1400 machines are shipped annually from our headquarters in Wasbek, Germany. Every machine has to pass a series of tests in our 5-level quality assurance process that covers everything from incoming quality control to alignment testing, and from functional, technical and geometric accuracy tests to the final acceptance test.

These tests are conducted by our master technicians who use a dedicated customized data processing system for this purpose.

An ISO 9001 certified quality management system ensures continuous control and improvement of all quality-relevant activities. Design, development and precision of each individual machine are documented exactly in detailed inspection protocols and acceptance test logs.

All-Encompassing KNUTH Service Worldwide Reliability

Our highly qualified technicians and engineers all over the world ensure reliable service from one central source. And our global supplier network ensures prompt availability of replacement parts and consumables at a local level.



The Process of Making a
KNUTH Machine Tool



KNUTH Machines in Action

Look us up on YouTube to experience our machines in action before the real-life test on site.

Subscribe to our YouTube channel - Go to KNUTH Machine Tools!



Complete Service by KNUTH

Reliable service from a single source

We provide highly qualified technicians and engineers all over the world to ensure reliable service from one central source. And our global supplier network ensures prompt availability of replacement parts and consumables at a local level.



CONSULTATION

- Sample work pieces
- Machine demos



START-UP

- Installation / Commissioning
- On-site Instruction



TRAINING

- User Training
- Maintenance Training



PREVENTIVE MAINTENANCE

- Inspection
- Maintenance



REPAIR

- Machine Repair
- Spare Parts



MACHINE WARRANTY

- Protect Insurance

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KNUTH Parts Service

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Our Service Help Desk is available 24/7 online at: [knuth.de/servicedesk](https://www.knuth.de/servicedesk)



Hydraulic swing-beam shear

KHT M NC

With Estun E21 NC control and pneumatic sheet support



EASY TO USE ESTUN E21 NC-CONTROLLER

MOTORIZED BACK-GAUGE FOR PRECISE POSITIONING

PNEUMATIC SHEET SUPPORT FOR ACCURATE CUTTING OF THIN SHEETS

ADJUSTABLE ANGLE STOP

KHT M NC Hydraulic shear

Models

KHT 2006 M NC, KHT 3010 M NC
KHT 2506 M NC, KHT 3012 M NC
KHT 2508 M NC, KHT 4006 M NC
KHT 3006 M NC, KHT 4008 M NC
KHT 3008 M NC, KHT 4010 M NC
KHT 4012 M NC

The models from the KHT M NC series are built under a swing-beam design. The cutting bar is guided in a pivot bearing anchored in the machine body making cuts very straight without the risk of upper and lower blades jamming. The robust and precise back gauge is controlled via ESTUN 21 NC controller.



Hydraulic swing-beam shear

KHT M NC

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Main Features

Machine construction



- Using a swing beam design, the top knife holder is curved and it follows an arched motion around a lever support, offering a precise cut.



- After the cut, the distance between the upper and the lower blade increases, preventing the cut plate from damaging the bottom knife.
- The return of the blade is done via a reliable, CE conform Nitrogen cylinder, with long life and low maintenance.



- The frame is a heavy-duty, stress relieved welded construction made of high quality steel.
- The upper frame and lower table create the perfect inertia for minimum deformation and superior cutting quality.



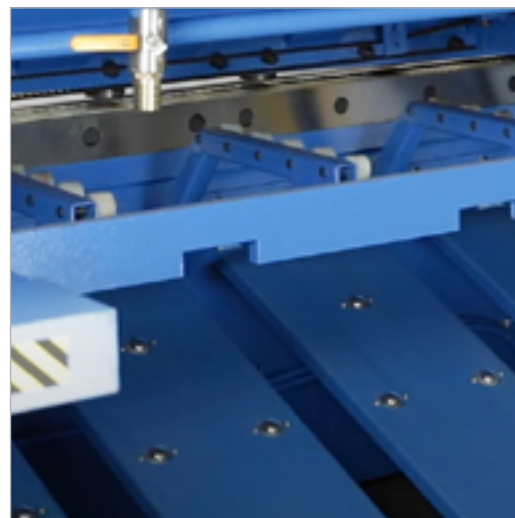
- Based on the sheet thickness, to improve the cutting quality the gap between the blades can be easily set using the adjusting system from the machine side.

Main Features

Sheet support



- This series features a robust back gauge, built with a ballscrew transmission to keep a high accuracy even under most demanding production requirements.
- The travel distance is controller directly from the NC controller.



- To prevent sheet deformation due to unsupported weight, this machine is equipped standard with a pneumatic sheet support.
- On the walls of this support are mounted rollerballs for a smooth slide of the cut parts.



- The front table is large enough to facilitate the cutting of shorter plates.
- The transfer balls provide an effortless feeding of the plate and prevent it from scratching.



- Long and robust support front arms give a secure hold to larger sheets.
- The left arm features as standard an adjustable angle stop which increases the machine's range of applications.

Main Features

Cutting system



- The cutting process is done by a reliable hydraulic system, which is using high quality components for long life running.
- With components from world wide know suppliers, like Rexroth, JS, Valqua, the maintenance requirements are reduced to minimum.



- The hold-down clamps, which are hydraulically controlled in terms of pressure, firmly hold the metal sheet in place during the cut.
- The manual positioning of the workpiece is done very conveniently, using the shadow line.



- The machine is delivered with a set of knives which are suitable as well for cutting stainless steel.
- The top blade has a prismatic shape with two cutting edges.
- The bottom one has a rectangular shape with four cutting edges.



- The set-up of the machine is done from a control panel with swivelling arm.
- The easy to use NC controller Estun 21 ensures precise positioning of the workpiece and programs cutting sequences.
- The operating is done using the mobile foot pedal unit with emergency stop switch.

Main Features

Machine safety and CE



- The machine is built following the latest CE standards and safety requirements for both operators and environment.
- The electric system uses components from well known suppliers, like Schneider and Omron.



- Machine features a front finger guard rail on the full cutting length.
- The flip-up segment in the left side offers a better visualization of the shadow line.



- On the back-side, a light barrier from LNTECH is installed to secure the working area of the back gauge.

Controller

ESTUN E21



- Integrating multiple functions, this controller ensure a sufficient level of control of the cutting process to cover the most necessary industrial requirements.

Basic Functions

- » Position control of the back gauge
- » Position display in mm or inch
- » Intelligent positioning control
- » Retract functions
- » Automatic reference searching
- » One-key parameter backup and restore
- » Fast positioning indexing
- » Power-off protection

Extended Functions

- » Possibility of singe-step or multi-step operation
- » 40 programs storage space, each program with 25 steps
- » Workpiece counter

Parameter setup for Single-step operation	Parameter setup for Multi-step operation
Possibility of programming position of X axis	Possibility of programming position of X axis
Display of the current position of X axis	Display of the current position of X axis
Setting the delay time of X axis retraction	Setting the delay time of X axis retraction
Setting the retract distance of X axis	Setting the retract distance of X axis
Counter: preset the workpiece number (target)	Counter: preset the workpiece number (target)
Counter: display the current workpiece number	Counter: display the current workpiece number
-	Setting the number of repeats of a specific operation
-	Creating the cutting steps in one program.

Technical Data

Working area		KHT 2006 M NC	KHT 2506 M NC	KHT 2508 M NC	KHT 3006 M NC	KHT 4006 M NC	KHT 3008 M NC	KHT 4008 M NC	KHT 3010 M NC	KHT 4010 M NC	KHT 3012 M NC	KHT 4012 M NC
Plate thickness (max) - mild steel	mm	6	6	8	6	4	8	8	10	10	12	12
Plate thickness (max) - stainless steel	mm	4	4	5	4	4	5	5	6	6	8	8
Working length	mm	2000	2500	2500	3.200	4.000	3.200	4.000	3.200	4.000	3.200	4.000
Throat depth	mm	150										
Cutting angle	°	1°30'										
Cutting speed	h/min	20	18	12	16	14	10	8	8	8	14	10
Hold-down	pcs	9	10	10	13	16	13	15	13	15	12	14
Hold-down capacity	t	14	15	17,5	20	24	26	30	31	36	38	44
Work table height	mm	800									810	860
Front support arms												
Number of support arms	pcs	3	3	3	3	4	3	4	3	4	3	4
Length of support arms	mm	1.000										
Back gauge												
Rear stop	mm	600									800	
Feed speed X-axis	mm/min	2.280										
Positioning accuracy	mm	0,1										
Drive capacity												
Motor rating main drive	kW	7,5					11		15		18,5	
Hydraulic tank volume	l	200	250	250	250	250	250	300	250	300	400	400
Measures and weights												
Length (without front arms)	m	2,6	3,1	3,1	3,8	4,6	3,8	4,6	3,8	4,6	3,9	4,7
Width (W)	m	1,5	1,5	1,9	1,6	1,6	1,8	1,9	1,9	1,9	1,8	2,0
Height (H)	m	1,6	1,6	1,8	1,6	1,7	1,8	1,8	1,8	1,8	1,9	2,0
Net weight	kg	4500	5000	7000	6.700	8.600	8.300	9.700	8.500	10.000	10.800	13.200
Art.-Nr.		184218	184219	184228	184210	184211	184212	184213	184214	184215	184216	184217

* Due to the process of constant improvement, products and product's data can change without notice.

Standard Equipment

Estun E21 NC-Controller



- Easy to use controller capable of storing 40 programs, each program including 25 steps.
- Units displayed in mm or inch.

Motorized back-gauge adjustment



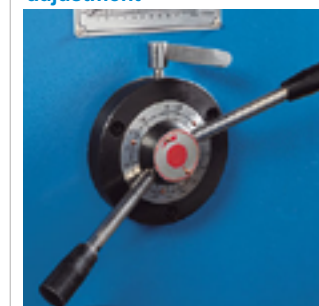
- User-friendly NC controlled back gauge for precise single cuts or for series production.

Pneumatic sheet support



- Using the pneumatically controlled sheet metal holding device, even thin metal sheets can be positioned exactly on the backgauge.

Manual cutting gap adjustment



- Facilitates quality cutting for a wide range of plate thicknesses by adjusting the gap distance.

Shadow light cutting line



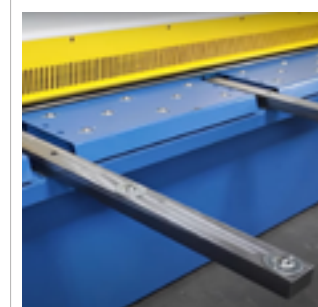
- Accurate alignment using the shadow cutting line.

Standard upper and lower knife



- Knives suitable also for cutting stainless steel.
- The upper knife has 2 cutting sides and the bottom one has 4 sides.

Support arms



- 3 rigid support arms for models up to 3.200 mm working length.
- 4 rigid support arms for models with 4.000 mm working length
- The length of the arms is 1.000 mm.

Adjustable angle stop



- Easy to use angle stop with clamping lever and angle scale.

Full length finger guard



- Full length finger guard with 1.000 mm flip up section for better view of the cutting process.

Safety system for back working area



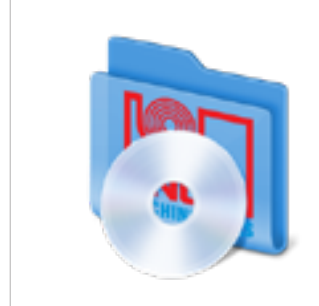
- Light barrier for the back working area.

Foot pedal with emergency stop switch



- Mobile unit with pedal and emergency stop button.

Operator instructions





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Optional Equipment

Hydraulic oil cooler

- Recommended for series production or when operated in high temperature environment.

Additional blade set

- 1 additional set of knives suitable also for cutting stainless steel.
- The upper knife has 2 cutting sides and the bottom one has 4 sides.

Automatic central lubrication

- This option greatly reduces maintenance time and increases the life of the machine by minimizing wear due to friction.



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