



## ***RAILGUIDE AND END STOP FOR A3001 & ALC01 DIN CUTTING/PUNCHING MACHINES***

The accessory meter ruler, or “rail-guide” (p/n 510.561A and 510.561B) allows to measure the length of the piece to be cut and the spacing between slots, thus making these operations precise and repeatable. This accessory is supplied with A3001 machines, and is optional for ALC01 machines.

PLEASE NOTE: The rail-guide for machines model A3001 is imprinted with the code ALC05, while the rail-guide for machines model ALC01 is imprinted with the code ALC01.

The meter ruler (part n. 510.561A) is assembled by means of two hex socket screws (supplied with the meter ruler) to the base plate of the cutter (3). The rail-guide is ruled in millimeters (mm.) and in inches (in). An end stop (part n. 510.561B) slides on the rail-guide and can be locked in at any required length. Once the cut or punch is made, the rail can be removed without changing the setting of the end stop, thanks to its movable flap.

The end stop is mounted with the orange lever towards the outside. A screw at the end of the meter ruler prevents the end stop from escaping the ruler. Please note that the cutting length is measured against the marking “Schneiden” while the punching length is measured against the marking “Lochen”.

# MANUAL DIN-RAIL SHEAR CUTTING AND PUNCHING MACHINES MODEL A3001

## 1. Main Characteristics

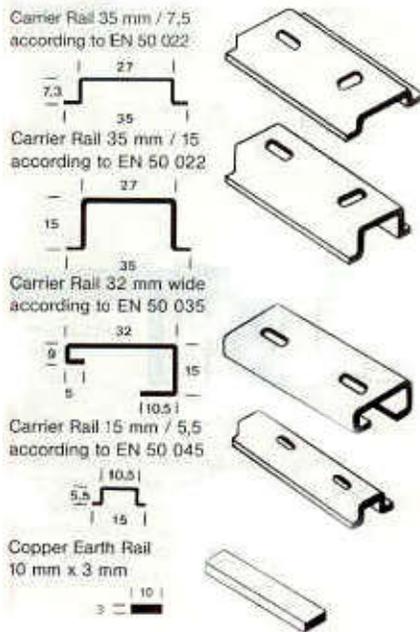
### - Dimensions:

Length:	270 mm (~10.6")
Width:	190 mm (~7.5 ")
Height (without handle):	210 mm (~8.25 ")

### - Weight:

A3001	~11.5 kg (~25 lb.)
lever	~1.5 kg (~3 lb.)
railguide w/stop	~4.5 kg (~10 lb.)

### 1a. Description:



The A3001 DIN-rail cutting and punching machine provides a fast, clean, straight cut and/or punching of standard DIN-rails 35x15 mm, 35x7.3 mm, 32x15 mm, 15x5 mm. It can also cut ground copper bars 10x3 mm. The machine was designed to cut without burrs or deformation of the rail. The punching is done separately and imprints longitudinal slots 6.4x12 mm in any point of the rail as well as transversal slots exclusively at a pre-determined distance of 8.75 mm from the end of the rail (see Figure 1).

Fig. 1- Standard DIN-rails with slots - Dimensional drawing.

No change of die or of any part of the cutting machine is needed in order either to cut or punch any type of DIN-rail. The blade cutting edges are so designed as to be able to cut all kinds of rail - shown on Figure 1 - as long as the same are manufactured according to the established standards (DIN 46277 or EN 50022 / EN50035 / EN50045).

The main parts of the cutting machine are:

- the steel body mounted on a flat base, which can be secured on a bench
- the high quality steel blades
- the lever which allows to operate manually

The cutting machine is supplied with an accessory rail-guide which allows measurement of the length of the piece to be cut and the spacing between slots, thus making these operations precise and repeatable (see Figure 3).

The rail-guide ruled in millimeters (mm) is installed on the flat base of the cutting machine by means of two screws M5.

An end stop slides on the rail-guide and can be locked in at any required length. Read the distance of the cut from the edge of the rail on the place marked "Schneiden" (cutting) on the end stop. Once the cut or punch is made, the rail can be removed without changing the setting of the end stop, thanks to its movable flap. For precise punching at a determined distance, read the distance of the hole from the edge of the rail on the place marked "Lochen" (punching) on the end stop.

## 2. Installation

The DIN cutting machine must be permanently installed on a workbench. The latter must be appropriate to support the weight of the machine (approx. 55 lb. = 25 kg) as well as the effort transmitted to the base while manually operating the machine. A wall-mounted or a heavy duty bench is best suited.

Please consider also the space needed for free motion of the operating lever (1 m = approx. 40").

To mount on the workbench, drill 4 holes 8 mm dia. (~7/16"), using the machine itself as a template. Use 4 machine screws 6 mm. or 7 mm. dia. (1/4" or 3/8"). The length of each screw must be at least equal to 25 mm. (1") PLUS the thickness of the bench-table. Use a 3/8" washer on the bottom side.

Leave ample space (at least approx. 2200 mm = ~ 82") at least on one side of the machine, to allow insertion of a whole bar of DIN-rail. Please remember that DIN-rails are generally supplied in 2m (~79") bars.

If frequent removal of the cutting machine is expected, use winged nuts instead of hex nuts.

Because the length of the screws depends on the nature of your bench, please note that screws, washers and nuts are **not** provided with the machine.

The machine is built with raiser feet, thus allowing to remove the steel pieces produced when punching the rail. However, it is recommended to drill an additional hole, MINIMUM 12 mm (~1/2") dia. corresponding to the puncher tool, to allow ejecting the steel punchings. Failure to provide this chute may result first in faulty punching of the rails, then in permanent damage to the machine.

Once the machine is mounted, install the operating lever and secure it by tightening again the hex nut.

If the rail-guide is being used, you must also leave approx. 1.1 m (~41") to the right of the machine, unencumbered by other equipment, tools, etc. Verify that the end stop on the rail-guide can slide over the whole length of the rail-guide.

## CAUTION

When the rail-guide is installed on the DIN-rail cutting machine, be sure to mount it perfectly flat on its base. Mounting it incorrectly would introduce a significant error in the measurement.

### 3. Operating Instructions

The operation of the manual DIN-rail cutting machines is extremely simple and fast.

#### CUTTING:

Each rail must be inserted in the appropriate slot preferably **from the left side of the machine**. There are 4 slots, one for each type of rail.

#### PUNCHING:

As mentioned, the punching device allows making of transversal or longitudinal slots (see Figure 1) depending on where the rail is introduced in the punching piece.

This device punches all types of rail (except DIN 46277/3 = EN 50045).

After having chosen the rail, and determined the required length on the rail-guide for cutting as well as for punching, operate the lever, lowering it in one decided movement.

#### **CAUTION:**

As the blade and the lever are spring loaded, follow the lever return by keeping your hand on the lever in its upward movement, in order to avoid accidents. An end stop limits the return of the lever.

### 4. Maintenance

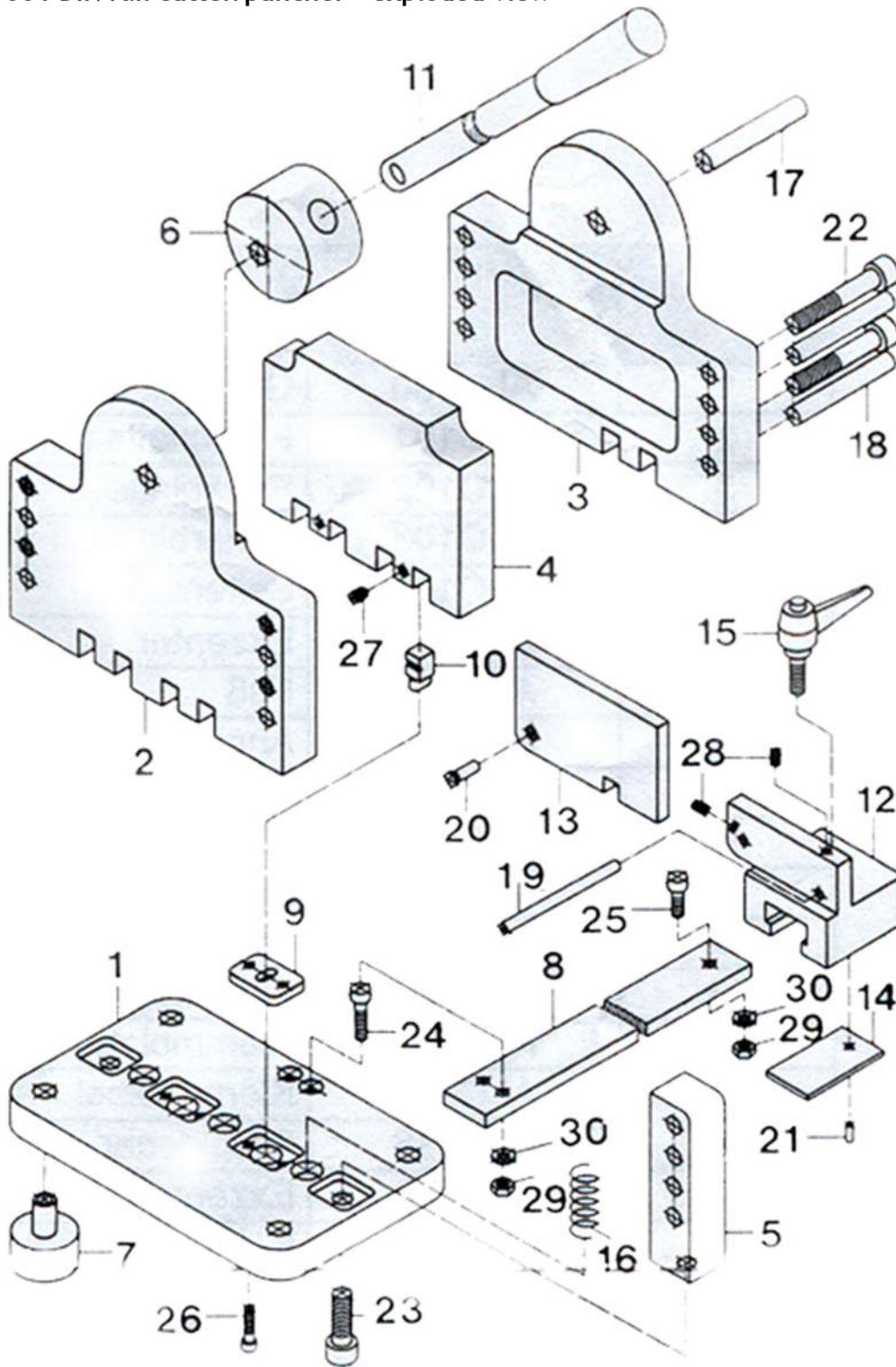
The cutting machine is sufficiently robust and does not require any special maintenance. However, in order to guarantee its good functioning, the following measures are recommended:

- After every day's use, the cutting machine should be cleaned with a cloth, removing any dirt, especially from the moving parts (bearings, blade)
- Regularly oil the mechanical moving parts and the blades
- Periodically inspect the steel punching chute, and remove all pieces which may have blocked it

Should the cutting blade get jammed, follow this procedure for disassembling: (**NOTICE:** do not attempt this procedure if you are not familiar with assembling and disassembling precision machinery!!)

- Loosen the two screws on the base plate (pos. 23) simultaneously (they are under spring pressure) Remove the two screws. At this point the dies for longitudinal and transversal holes, located in the base plate, can be exchanged (pos. 9 and 26)
- Remove the 3 springs (pos. 16) and the movable blade (pos. 4). At this point the punches for longitudinal and transversal holes, located in the movable blade, can be exchanged (pos. 10 and 27)
- Clean and grease carefully the two blades and reassemble in reverse sequence

A3001 DIN rail cutter/puncher - exploded view



**Part List:**

N.	Code	Description	Quantity
1	ALC100	Base plate	1
2	ALC101	Front plate, with standard DIN profiles	1
3	ALC102	Back plate	1
4	ALC103	Cutting plate, with standard DIN profiles	1
5	ALC104	Assembly pillar	2
6	ALC105	Eccentric	1
7	ALC106	Foot	4
8	ALC107	Meter ruler 1000 mm.	1
9	ALC108	Female die for punch	2
10	ALC109	Male die for punch	2
11	ALC110	Handle	1
12	ALC111	End stop body	1
13	ALC112	End stop moving flap	1
14	ALC113	Protection sliding plate	1
15	ALC114	Tightening screw, end stop	1
16	ALC115	Spring	3
17	ALC116	Eccentric pin, 12 mm. dia.	1
18	ALC117	Pin for main frame, 10 mm. dia.	4
19	ALC118	End stop pin 6 mm. dia.	1
20	ALC119	Axle screw for end stop	1
21	ALC120	Security pin for sliding plate	1
22	ALC121	Allen screw for main frame	4
23	ALC122	Allen screw for assembly pillar	2
24	ALC123	Allen screw for meter ruler	2
25	ALC124	Retaining Allen screw for meter ruler	1
26	ALC125	Allen screw for female punch die	4
27	ALC126	Allen screw for male punch die	2
28	ALC127	Allen screws for end stop body	2
29	ALC128	Hex nut for retaining screw, meter ruler	3
30	ALC129	Washer for retaining screw, meter ruler	3
31	ALC130	Spacer for guiding support (not shown)	4
32	ALC131	Guiding support (not shown)	1
33	ALC132	Adjustable plate for support (not shown)	10
34	ALC133	Allen screw for guiding support (not shown)	10
35	ALC134	Nut for guiding support (not shown)	8



## WARRANTY

ITC Inc. warrants this Product to be free from defects in material and workmanship and agrees to remedy any such defect. This warranty covers 1 year Parts and Labor from the date of purchase by the original purchaser.

This warranty is conditional upon the Product being installed and used as directed in the instruction manual.

ITC's obligation under this warranty shall be limited to the repair, including all necessary parts and the cost of the shop labor connected therewith, or at ITC's option, the exchange of any Product which shows evidence of a manufacturing defect within the warranty period. Replacement parts, furnished under this warranty shall be warranted for a period equal to the unexpired portion of the original equipment warranty.

Parts may be replaced under this warranty with new or comparable remanufactured parts.

This warranty does not cover damage from abuse, neglect, or any other use not found in the printed instructions.

This warranty does not apply to the external appearance of this Product, and shall, in addition, not apply to customer adjustments that are not covered in the instruction manual; damages due to handling, transportation, unpacking, set-up, installation, repair or replacement of parts supplied by other than ITC authorized service personnel; or any malfunction or failure caused by or resulting from abnormal environmental conditions, improper service, improper maintenance, modifications or repair by the consumer, accident, fire, flood, or any other Acts of God.

This warranty becomes void in the event of rental use of this Product. This warranty becomes void in the event serial numbers are altered, defaced or removed.

This warranty does not apply outside Canada. ITC Inc. disclaims all responsibilities for consequential damages or incidental losses caused by the use of this product.

If you have a claim under this warranty, please call our Customer Service at: (416) 663-7223 or by e-mail at: [sales@itcproducts.com](mailto:sales@itcproducts.com)

### CUSTOMER RECORD

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Prov.: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Model No: \_\_\_\_\_ Serial No: \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Distributor's Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Prov.: \_\_\_\_\_ Postal Code: \_\_\_\_\_

ITC Inc.  
220 Viceroy Road, Unit 1  
Concord, Ontario, Canada L4L 3C2 2N1  
phone: (416)663-7223 fax: (416) 663-7224  
[www.itcproducts.com](http://www.itcproducts.com)