

MANUAL DIN-RAIL SHEAR CUTTING AND PUNCHING MACHINES MODEL A559 (DRCP559140) ITC # 510.601

OPERATING INSTRUCTIONS



1. Main Characteristics

- Dimensions: Length: 110 mm (~10.6")
 Width: 190 mm (~7.5 ")
 Height: 162mm (~6.5 ") without handle
 Height: 810mm (~32") with lever
- Weight: 11.0kg (~24 lb.)
- ITC Part Number: 510.601

2. Description

The A559 DIN Rail cutting and punching machine has been specially designed for small and medium panel shops, OEMs and control/automation specialists who require an economical, portable tool, without sacrificing the convenience of being able to cut and punch all current types of DIN Rail.

The cutting machine is a complete unit. No other parts or accessories are required for its operation, or for cutting all the type types of DIN rail.

The following components are in the original package:

- The cutting element itself, with the shear/lever system, the mounting base and the punching system
- The 700mm lever (handle)
- The one meter-length measuring bar, with an adjustable end stop, allowing precise measurement of the length of a piece to cut, as well as the positioning of the longitudinal hole

The A559 machine has been designed for cutting standard steel profiles (common steel). It is not recommended to use it for cutting aluminum, copper or stainless steel profiles.

These cutting machines provide a fast, clean, straight cut and/or punching of standard DIN-rails. They were designed to cut without burrs or deformation of the DIN-rail. The punching is done separately and imprints slots (either longitudinal or transverse) at any point on the rail. The standard slot is oblong (8.5mm x 5mm - approximately 0.35" x 0.20"). Do not punch rail type TS15.

The cutting edges of the dies are designed to be able to cut all kinds of rail as long as the same are manufactured according to the established Standards (DIN 46277 or EN 50022/EN50035/EN50045). Rails which can be cut are the following:

- TS32 rail, prepunched or not (DIN46277/1)
- TS35 rail, prepunched or not (DIN46277/3)
- TS15 rail, prepunched or not (DIN46277/2)
- TS35C [high] rail, prepunched or not (DIN46277/1)

The machine also cuts non DIN symmetric "C" profiles 35x15mm, as well as 6mm steel bars, threaded or not.

No change of die or of any part of the cutting machine is needed in order to cut or punch any type of DIN-rail.

3. Installation

The DIN cutting machine should be permanently installed on a workbench. The latter must be appropriate to support the weight of the machine (approximately 24 lb. = 11kg) as well as the effort transmitted to the base while manually operating the machine. A wall-mounted or a heavy-duty bench (wood or metal surface) is best suited.

To mount on the workbench, drill 4 holes 9 or 10mm (3/8") in diameter. Use 4 machine screws 8mm (5/16") in diameter.

To best operate the machine, leave ample space (at least 2200mm - ~ 82") at least on one side of the machine, to allow insertion of the whole bar of DIN-rail. Please remember that DIN-rails are generally supplied in 2m (~79") bars. Please consider also the space needed for free motion of the operating lever (approximately 700mm = ~28").

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

CAUTION

Although there is a gap between the base plate and the bench surface, we recommend to drill two additional holes, minimum diameter 14mm (~9/16"), corresponding to the two punching tools, to allow ejecting the steel punchings. Failure to provide appropriate chutes may result first in faulty punching of the rails, then in permanent damage to the machine.

Once the machine is mounted, remove the clip on the lever stub, install the operating lever and secure it by inserting again the clip.

To install the rail-guide, leave approximately 1.1m (~41") on the right side 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. The rail-guide is joined to the body of the machine by means of two M6 Allen screws. To install, remove the screws (they are already mounted on the body), insert the rail-guide with the ruler upwards, and re-tighten the screws. Install the end stop on the rail-guide, with the protruding black plate towards the machine body. The eccentric setting lever must be inserted in the hole provided, before sliding the end stop on the rail-guide. To block the end stop, just turn the setting lever clockwise approximately ¼ turn, until it holds against the side of the rail-guide. The outside marker on the end stop indicates the cutting or punching length.

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 may introduce a significant error in measure.

4. Operating instructions

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

Cutting

The rail must be inserted in the cutting tool preferable from the left side of the machine (standard configuration for right handed operation). The rail must be perfectly straight. After having determined the required length on the rail-guide, operate the lever, lowering it in one decided movement. The total angle required of the cutting operation is approximately 135 degrees. The machine has been designed to be operated by one user, no special effort is needed. If resistance is met while attempting to cut a rail, STOP immediately and verify that no external object has been inserted in any die.

The machine is designed to cut ONE rail at a time.

Punching

This device punches all types of rail (except DIN 46277/2 = EN 50045). Use the slot closer to the operator to punch a transversal hole, and the slot further from the operator to punch a longitudinal hole. An image of each type of hole appears above the left entry to each slot.

After having chosen the rail, and determined the required length on the rail-guide for punching, operate the lever, lowering it on one decided movement. The total angle required for the punching operation is approximately 75 degrees.

After each cutting or punching operation, gently return the lever to the initial position. This allows easy removal of both pieces of rail. An end stop limits the return of the lever.

5. 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 and the dies. Wipe off any liquids or moisture
- Regularly oil the mechanical moving parts and the dies
- Periodically inspect the steel punching chute, and remove all pieces which may have blocked it

The machine does not, in principle, need re-sharpening. However, should such procedure be required, it is recommended not to attempt to disassemble the machine and sharpen the dies unless you are skilled in tool making and maintenance.