



## Multispindle Drilling and Grinding Machines

Type BU-NC

Type BU-CAR

Type BT-1

Type BT-2

Type KU-NC

Type KF

Type RS

Type ORG-NC

Type IRG-B

Type IRG-D

***ERLMANN***  
**drilling and grinding**



## MULTISPINDLE DRILLING MACHINES

### **BU-NC**

Multispindle Drilling Machine for Heavy Duty Brake Linings

### **BU-CAR**

Multispindle Drilling Machine for Passenger Car Linings

### **BT-1**

Multispindel Drilling Machine with quick changeover system

### **BT-2**

High Volume Multispindle Drilling Machine for Heavy Duty Brake Linings

### **KU-NC**

Multispindle Drilling Machine for Clutch Facings

### **KF**

Drilling Machine for Clutch Facings with Multispindle Drilling Head

### **RS**

Drilling Machine for Railway Brake Shoe Slot

## GRINDING MACHINES

### **ORG-NC**

Outside Radius Grinding Machine for Heavy Duty Brake Linings

### **IRG-B**

Inside Radius Grinding Machine with abrasive belt for Heavy Duty Brake Linings

### **IRG-D**

Inside Radius grinding Machine with diamond wheel for heavy duty brake blocks

## BU-NC

The advantage of this machine is the big versatility. It works numeric controlled and covers nearly the total range of the worldwide existing drill patterns. That means, the machine allows drilling of linings and blocks:

- from 135 mm up to 215 mm inside radius
- from 25 mm up to 260 mm width
- with up to 12 holes per row
- with up to 8 rows

Output about 560 pieces per hour of a 4 row block drilling of two in one operation.

## BU-CAR

This machine has been developed especially for passenger car linings. The most important advantages are the quick change over time (max. 1 hour) and the high production rate of 1.000 pieces per hour.

Up to 8 drill units 13°, each with its own driving motor can be accommodated to the base plate.

Linings dimensions:

- Inside radius  
min 75 mm  
max 145 mm
- Width:  
max 80 mm
- Cross pitch  
min 14 mm  
max 50 mm
- Arc length  
max 140°



## BT-1

The advantage of this multispindle drilling machine for heavy duty brake blocks is the quick change over time. A complete preinstalled set of drill units, fixed on a carrier system, can be changed in a few minutes.

A zero clamping system guaranteed the accurate locating of the drill units. Drill fixtures as well loading and unloading derives are quick changeable too. No settings are necessary.

The machine is designed for in line. Different drilling programs can be stored and easily selected.

The output is about 600 pieces per hour

Block dimensions:

- OD max	470 mm
- ID min	356 mm
- Width max	260 mm
- Cross pitch max	230 mm
- Number of holes per drilling row	6

## BT-2

We have designed this machine with two drilling platforms for high volume heavy duty commercial brake blocks production runs with up to 1.200 pieces per hour.

The Machine allows drilling just only half blocks from:

- 175 mm to 215 mm inside radius
- two to four rows blocks
- max. 5 rivet holes per drilling row



## KU-NC

Up to 8 drill units are attached over radial arms to a rigid and ample carrier ring by means of bolts and T-nuts. Each unit has its own 0,55 kW motor with timing belt drive.

The carrier ring is connected with vertical guide bars to a hydraulic feed unit at the base of the machine. This controls the drilling feed rate and also provides the facility for the carrier ring to be raised up for working space when setting the machine.

The clutch facing will be drilled stepwise in groups of holes until the numeric controlled index table has completed one revolution. Then the drilled disk will be rejected and a blank one will be located in the drill position.

Linings dimensions:

Outside diameter

150 mm to 500 mm

Thickness of clutch facing

2 mm–9 mm

## KF

This machine has been designed for drilling and countersinking for high volume production of clutch facings. The machine capacity is about 800 pieces per hour.

The machine is suitable for many different dimensions of clutch facings. For each different type of clutch facing suitable parts, as multispindle drilling head, drill jig, clamping plate, slider- and centring parts are necessary. The complete change-over takes at the most 30 minutes.

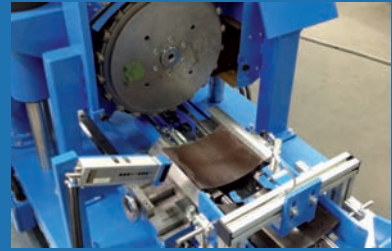
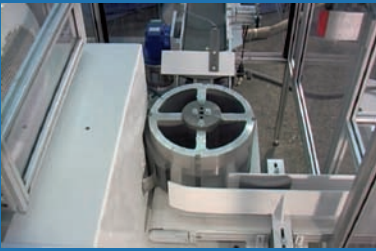
The dimensions of the clutch facings can be as follows:

- Outside diameter  
140 up to 250 mm
- Hole circle  
1 or 2
- Smallest distance between two holes  
20 mm
- Numbers of holes  
12 to 24
- Thickness of clutch facings  
2 to 5 mm

## RS

The machine is developed for the drilling of slot holes 24 x 11 in Railway Brake Shoes.

The brake shoes have to be loaded manually on a conveyor which will transport the parts to the drilling station. A transport system moves two parts at the same time into the drilling position. A double spindle unit drills two shoes at the same time. In the next step the drilled brake shoes will be moved by the same system onto an unloading conveyor.



## ORG-NC

The machine is designed to accurately grind the outside radius of brake blocks to true radii according to OEM-specification and based on ROWLAND design. Brake blocks can be parallel or taper curved.

Grinding of up to 1.560 blocks per hour can be achieved. The machine is equipped with semi-automatic loading. Brake blocks are to be hand loaded into the magazine.

## IRG-B

The machine runs by one operator who stacks blocks in a vertical magazine. Ground blocks exit (optional to a stack device in front of the operator).

Grinding of up to 900 blocks per hour can be achieved.

The machine uses a grinding belt running over a contact roller to produce the inside radius of tapered or parallel truck brake blocks. The contact roller has to be changed to suit the inside radius of the brake block to be grinded.

## IRG-D

The operating cycle of the machine is, as follows:

After the loading the blocks will be fixed for grinding operation in a grinding adapter and led vertically to reference side under the diamond grinding wheel. The diamond grinding wheel decreases correspondingly adjusted grinding excess and so produces the required surface of inside Radius. After the grinding the finished machined block is removed by a pulling device from grinding adapter and put it to unloading direction.

Grinding of up to 600 blocks per hour can be achieved.

The machine is designed for in line and can be connected with outside radius grinder and multispindle drilling machine.

## About **ERLMANN**



We are the leading manufacturer of manual and fully automatic operating

### **Multispindle Drilling and Grinding Machines for Brake linings and Clutch facings**

For more than 57 years our products have been valued by the major friction material producers world-wide.

The company has been founded in 1955 by the Engineer Ferdinand Erlmann. Due to his former activities he had best contacts to the Brake Lining and Clutch Facing Industry in Germany so that he could get a good overview of their requirements.

He developed efficient production technology for drilling of brake linings and clutch facings. To fulfil the demand of our customers he designed as well Hand

Drilling Jigs for a low production rate as automatically working machines for economic drilling of big runs.

In 1972 Ferdinand Erlmann incorporated a partnership with Rolf Stratmann and in 1987 he retired – meanwhile 70 years old. Rolf Stratmann assumes the complete participations. 2007, 65 years old, he assigned the company to Dipl.Ing. Gerd Schorn and he continue the business.

Beside of our standard machinery program several special purpose machines have been built according to the requirements of our clients. Since 2008 we also produce grinding machines with diamond wheels for brake linings.

Our Engineering department persistently develops the machines with high-precision components according to the newest

technology. The requested quality regulations for the original equipment of the most important motorcar and axle producers as DAIMLER CHRYSLER, VW, GENERAL MOTORS, DAF, DANA, BERGISCHE ACHSEN, MAN, MERITOR, ROCKWELL, SCANIA, FRUEHAUF, LEYLAND, VOLVO, PEGASO, KAESSBOHRER, IVECO a. s. o. will be completely fulfilled.

As producer of high quality machinery on a small and specialised market a personalised service to our customers is the first priority for us.

# ***ERLMANN***

**drilling and grinding**



## Locationplan **ERLMANN**



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