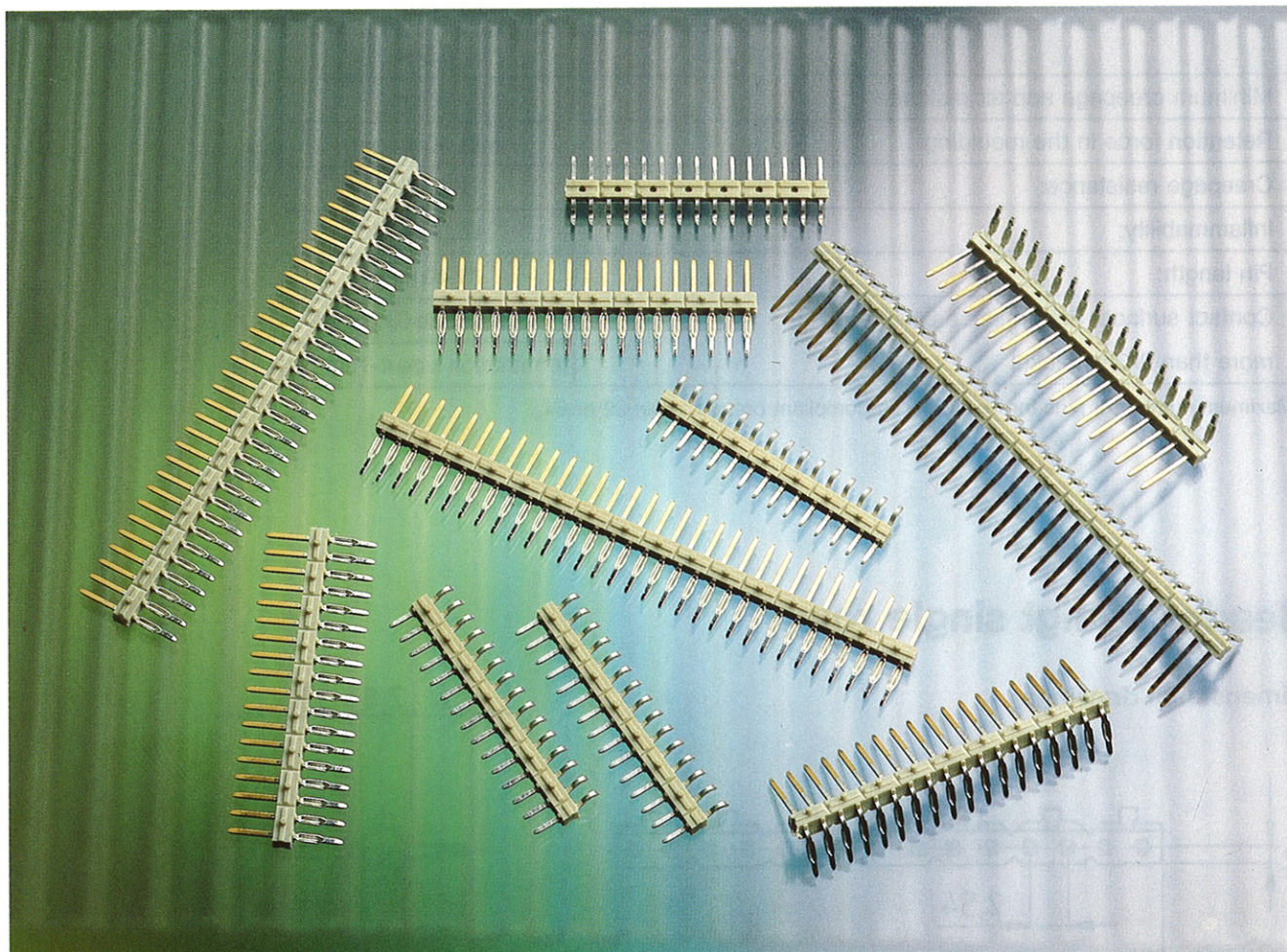


Series STL headers

**1-pin to 100-pins
for external and internal PCB connections**



If you need to connect two PCBs which are arranged one above the other or to attach connecting cables to PCBs inside your equipment, you will find that the ERNI header range offers almost countless possibilities.

This data sheet lists the standard versions. However, if other numbers of pins, contact lengths or contact materials are required for your particular application, please consult us at any time.

We have taken into account today's rationalized types of terminating when developing our new header range. You can press-fit ERNI headers solderless or you can use the reflow solder method.

The solderless press-fit technique is particularly recommended for PCBs with components fitted on both sides.

The single row and double row headers have prepared fracture points so that the desired number of pins can easily be snapped off. The plastic casings have engaging lugs on their long side so that any number of connectors can be lined up together.

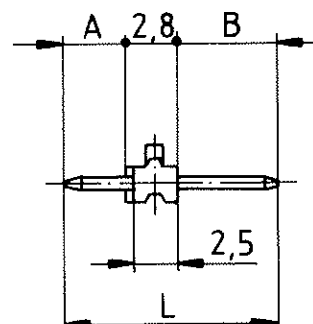
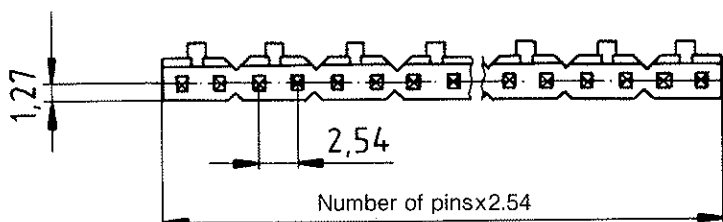
Mechanical and electrical characteristics

Maximum number of pins:	single row	50*
	double row	100*
Moulding material:	Ultramid A3 G7, PA66	
Temperature range:	-55°C to +125°C	
Current rating:	+ 20°C	2 A
	+ 70°C	1 A
	+ 100°C	0,5 A
Minimum creepage and air distance:	1,8 mm	
Retention force in the moulding:	min. 10 N / pin	
Creepage resistance:	KC 500	
Inflammability:	UL 94-HB	
Pin length:	11-40 mm	
Contact surface: Performance Level 207 more than 2-3µm nickel	contact side 0,8µm Au	
	termination side 4-7µm Sn	

* Maximum number of pins for headers with compliant pressfit zone: 32 or 64.

Header straight single row

Dimensional drawings



L=Total pin length

A=Pin length on termination side

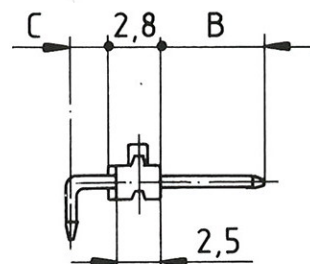
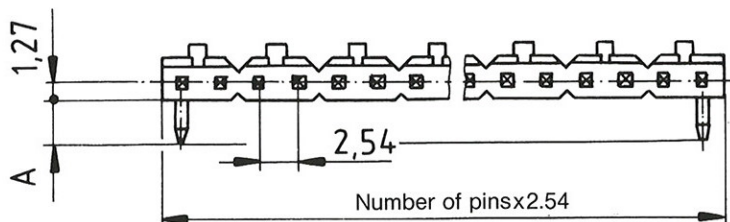
B=Pin length on contact side

Part numbers to be specified when ordering 50 pin headers right angle

L [mm]	11.0	12.4	14.9	20.0
A [mm]	2.9	2.9	5.4	10.5
B [mm]	5.3	6.7	6.7	6.7
Part no.	108 050	108 150	108 250	108 350

Header right angle double row

Dimensional drawings

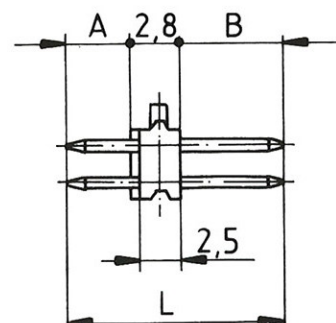
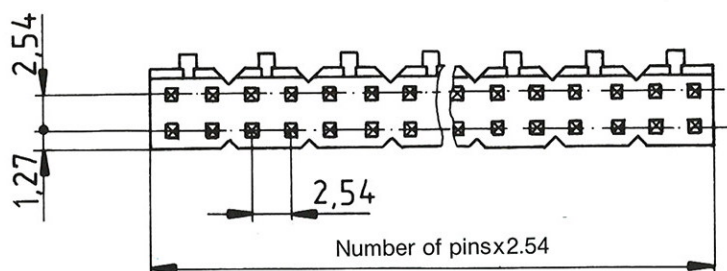


Part numbers to be specified when ordering 50 pin headers right angle

A [mm]	2.9	5.4
B [mm]	6.7	6.7
C [mm]	1.5	4.0
Part no.	108 450	108 550

Header straight double row

Dimensional drawings



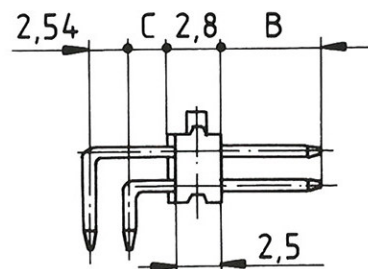
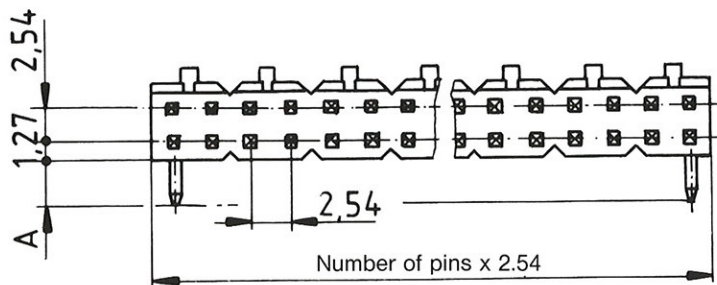
Part numbers to be specified when ordering 100 pin headers right angle

L [mm]	11.0	12.4	14.9	20.0
A [mm]	2.9	2.9	5.4	10.5
B [mm]	5.3	6.7	6.7	6.7
Part no.	208 100	208 200	208 300	208 400

L=Total pin length
A=Pin length on termination side
B=Pin length on contact side

Header right angle double row

Dimensional drawings



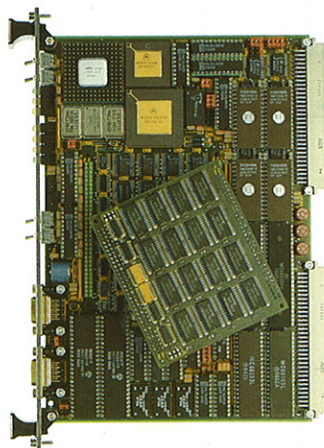
Part numbers to be specified when ordering 100 pin headers right angle

A [mm]	2.9
B [mm]	6.7
C [mm]	1.5
Part no.	208 500

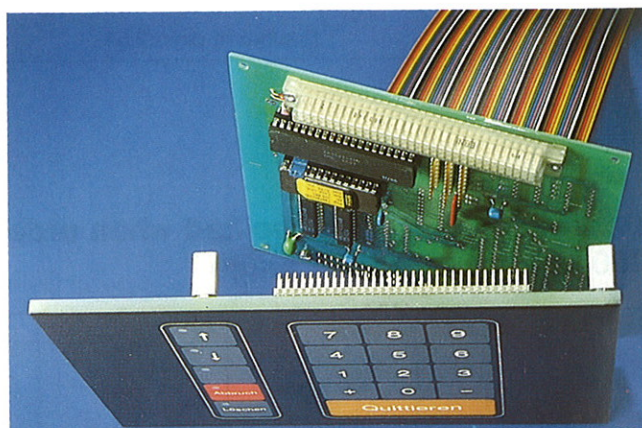
Our headers have prepared fracture points so that any number of pins can be snapped off. If you require a specific number of pins, please inform us when ordering.

We will then supply you with custom made headers. Each number of pins has its own part number which you can obtain from our inside sales product specialist responsible for your territory. This data sheet gives the part numbers for the maximum number of pins for each version.

Application examples:



Two PCBs aligned one above the other.



Headers for signal interface directly from the PCB.
External or internal.

Headers with compliant pin zone for the solderless press-fit technique

Back panel wiring systems are increasingly fitted with solderless, press-fit connectors. The main advantages of this wiring method are:

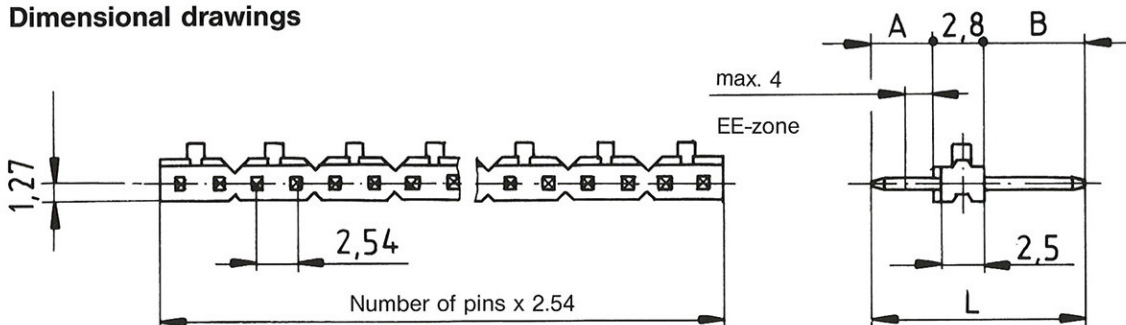
- You can have mating interfaces from both sides of the PCB.
- Connectors with gold plated terminals for the signal interface remain clean in the solder bath.
- Highly integrated multilayers are not subject to temperature stress in the solder bath. The washing process after soldering is also unnecessary.

The pressfit technique does not only have advantages for back panel wiring. Daughter cards which have already been reflow soldered allow the pressing in of pressfit headers afterwards.

This way a second soldering process does not become necessary laborious manual resoldering can be avoided. ERNI headers with the successfully used compliant pressfit zone are inserted using a simple pressfit tools which are available for various numbers of pins.

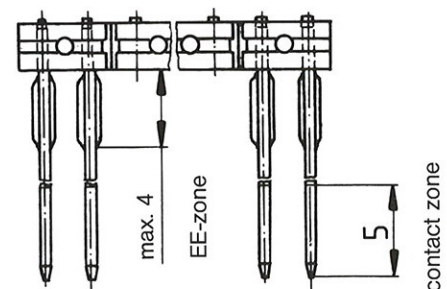
Headers single row

Dimensional drawings



Part numbers to be specified when ordering 32 pin headers

L [mm]	12.4	14.9	12.4
A [mm]	3.6	6.1	9.6
B [mm]	6.0	6.0	—
Part no.	108 632	108 732	108 832



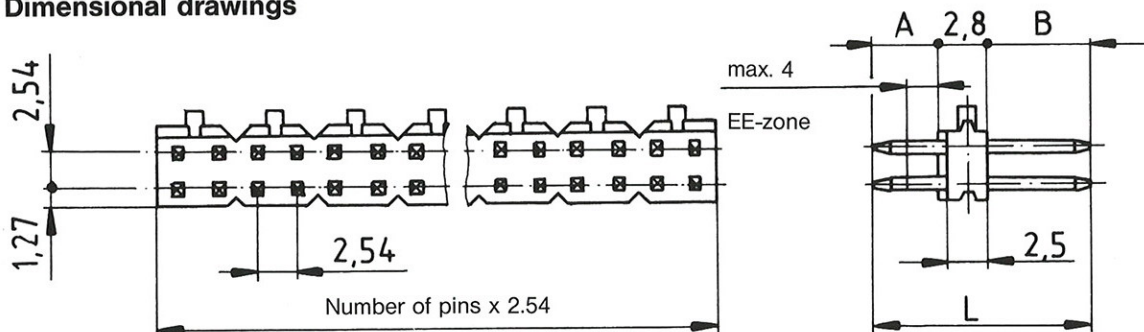
L=Total pin length

A=Pin length on termination side

B=Pin length on contact side

Headers double row

Dimensional drawings



Part numbers

to be specified when ordering 64 pin headers

L [mm]	12.4	14.9
A [mm]	3.6	6.1
B [mm]	6.0	6.0
Part no.	208 664	208 764

L=Total pin length

A=Pin length on termination side

B=Pin length on contact side

The ERNI pressfit technique means complete connector systems direct from the manufacturer. You can obtain your PCBs from us complete with all connectors and electronically tested. Or you can pressfit ERNI connectors yourself. We will provide the necessary

tools and instructions. The picture below shows what the ERNI compliant pressfit zone looks like at the contact point in the plated through hole:

Rounded die cut edges
protect the
metal plating

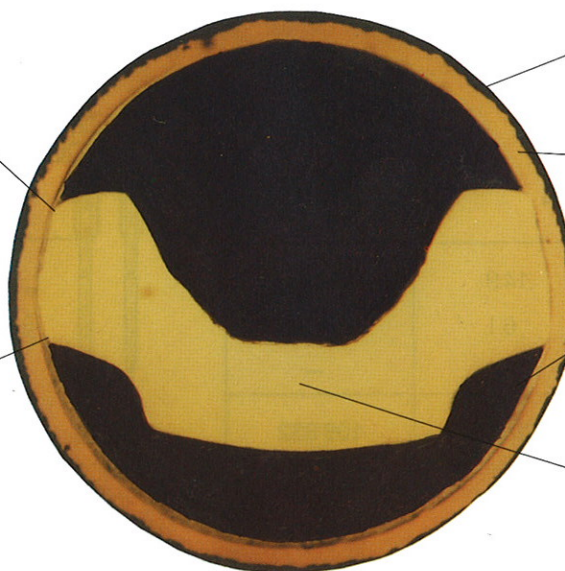
PCB hole
1.15-0.03 mm

Copper layer
min. 25 µm

Tin layer
max. 15 µm

Gastight,
vibration proof
connection in
the copper layer
of the
plated through hole

The necessary elasticity
is given by the
special shape.



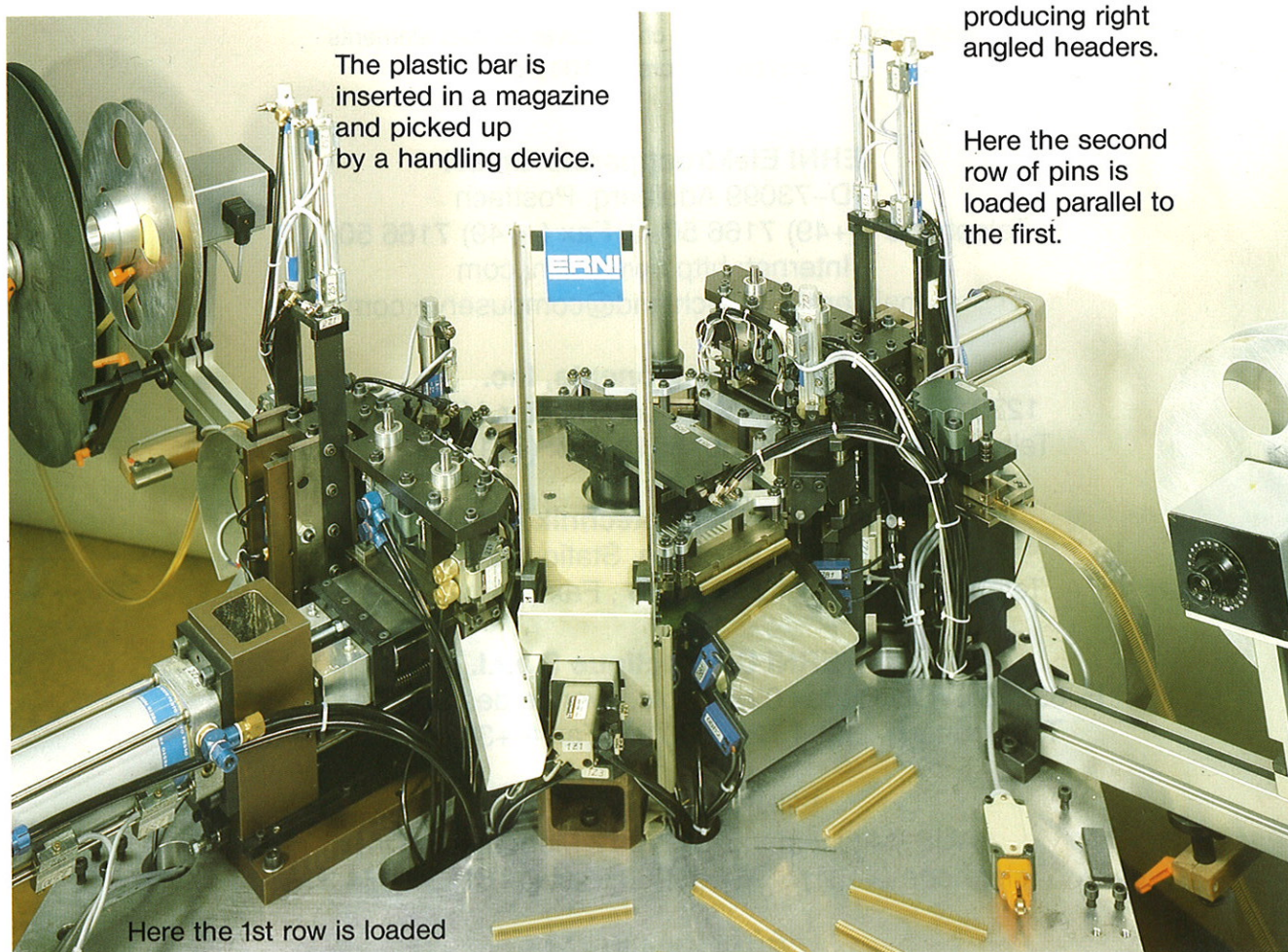
And how are your headers produced?

The ERNI Development Department has also allowed for partially loaded headers, various pin lengths and naturally headers for the pressfit technique.

Our Special Mechanical Engineering Department built this automated production machine, for which the tools were manufactured by our own tool shop.

The control system is also our own development and was made possible by collaboration with our Electronic Department.

The picture below shows how the header manufacturing machine operates:



The plastic bar is inserted in a magazine and picked up by a handling device.

Bending station for producing right angled headers.

Here the second row of pins is loaded parallel to the first.

Here the 1st row is loaded with pins up to a length of 40 mm. They all can be inserted simultaneously and at various depths.

Thus different contact pin lengths are possible.

The pin length on the termination side can also be varied.

The rotary indexing table transports the plastic bar from station to station.