



Components  
for railroad  
surface  
systems

 plastwil

PLASTWIL IS A DYNAMICALLY DEVELOPING FAMILY-OWNED ENTERPRISE ACTIVE IN THE MANUFACTURING OF PLASTIC ELEMENTS AND METALWORKING FOR THE RAILWAY SECTOR AND OTHER BRANCHES OF INDUSTRY.

PLASTWIL is perceived as an expert in many fields of the manufacturing process of plastic products. From the beginning of the company, we manufacture elements for such a responsible sector as railway transport.

The innovative character of PLASTWIL is proven by the fact that it is a co-owner of a patent and an industrial property protection right. PLASTWIL is continuously working on new designs of plastic rail fastening elements and other technical elements.



## COMPONENTS FOR THE RAILWAY INDUSTRY

Rail fastening components for railway and tramway applications:

- Rail and sleeper pads
- Electro-insulating hold-down parts

The remaining components for track superstructures:

- Rail pads for turnouts
- Transverse and Longitudinal rail insulations
- Insulating sleeve and profile
- Screw dowels
- Four-split dowel for sleeper regeneration
- Dowel plugs
- PUR plugs for level crossing slabs
- PE cap



# SHAPED RAIL PADS

PWE  
rail  
pads

New  
generation  
of rail pads

PWE rail pads in direct rail fastening systems for concrete sleepers (e.g. SB) serve to ensure electrical insulation between a rail foot and a sleeper as well as to reduce the dynamic effects from the rolling stock transferred through the rails to the sleepers.

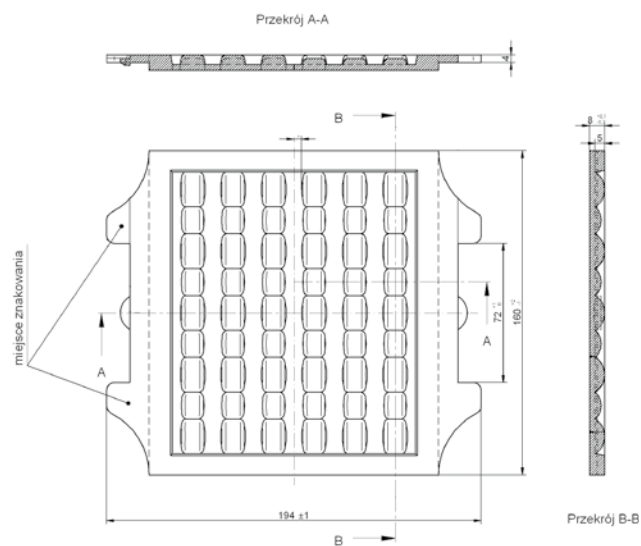
The new rail pad is characterised by two distinguishing features – the shape and the material it was made from. Due to the new 3D shape of the product and diversified parameters of its components, a significant improvement of the vibration damping characteristics, improved elasticity, and static and dynamic rigidity as well as improved physical-chemical parameters have been obtained compared to the previously used PKW rail pad.

The PWE rail pad has passed all necessary tests and meets all the requirements of European standards.

It may be used in resilient rail fastening systems for all types of pre-tensioned pre-stressed concrete sleepers.

The PWE rail pads serve also as sleeper pads in turnouts on concrete turnout sleepers.

Rail pad type	a [mm]	Rail type	Sleeper type
PWE 6094	160 <sup>+2/-1</sup>	60 E1	PS-94
PWE 6093	150 <sup>+2/-1</sup>	60 E1	PS-93

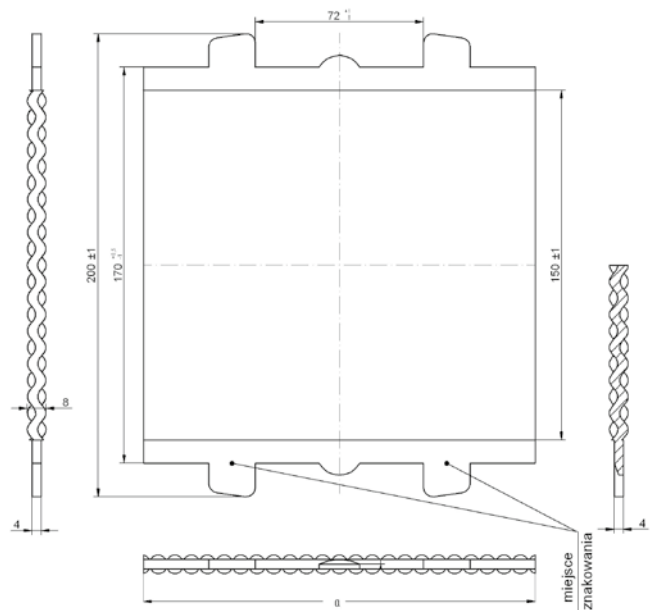


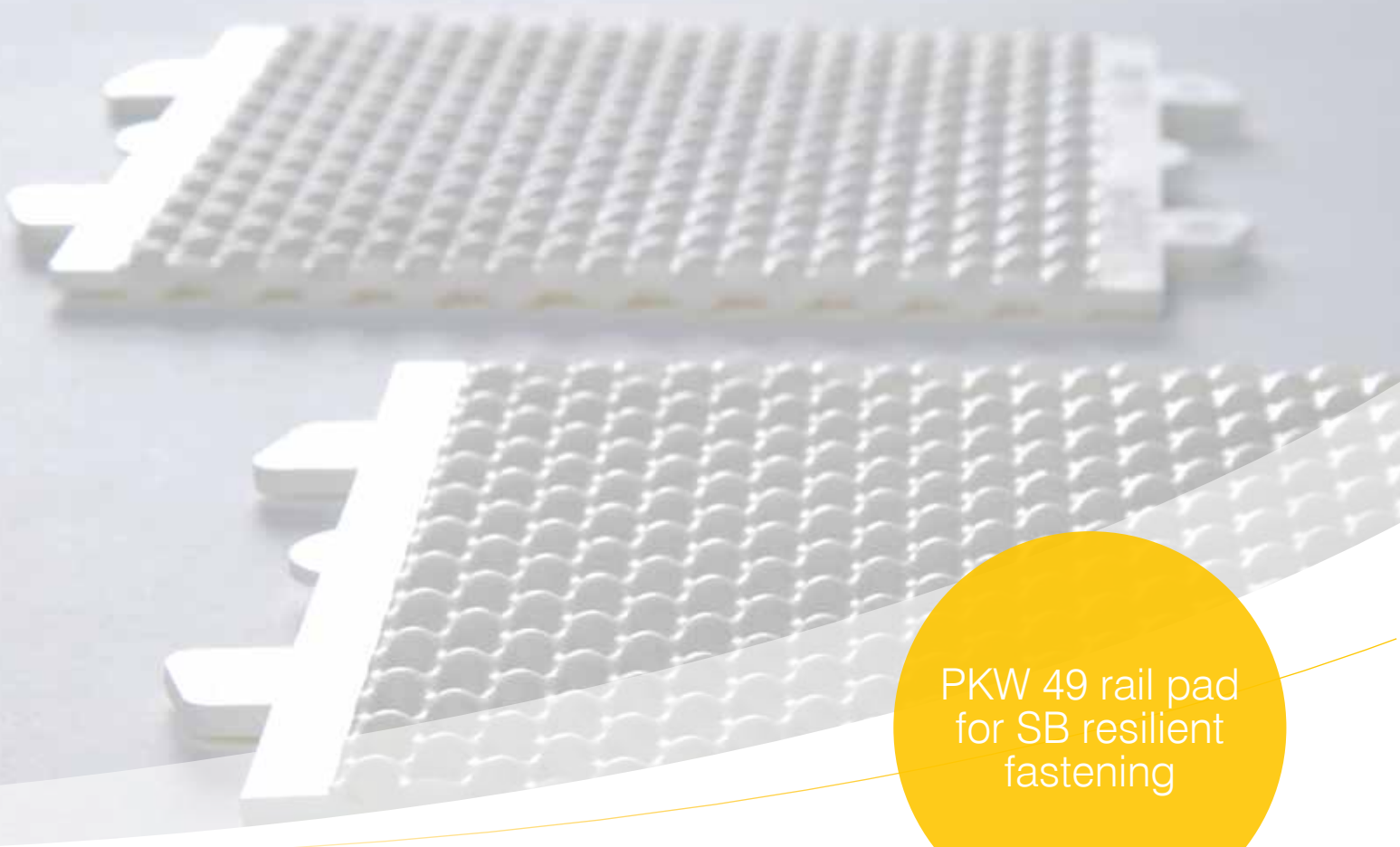
## PKW 60 rail pad for SB resilient fastening

The PKW rail pads in direct rail fastening systems for concrete sleepers (e.g. SB) serve to ensure electrical insulation between a rail foot and a sleeper as well as to reduce the dynamic effects of the rolling stock transferred through the rails to the sleepers or turnout sleepers.

The PKW rail pads also serve as sleeper pads in turnouts on concrete turnout sleepers.

Rail pad type	a [mm]	Rail type	Sleeper type
PKW 60 A	168 <sup>+2</sup>	60 E1	PS-94
PKW 60 K	154 <sup>+2</sup>	60 E1	PS-93, K-83, INBK-7
PKW 60 Ps	136 <sup>+2</sup>	60 E1	PS-83



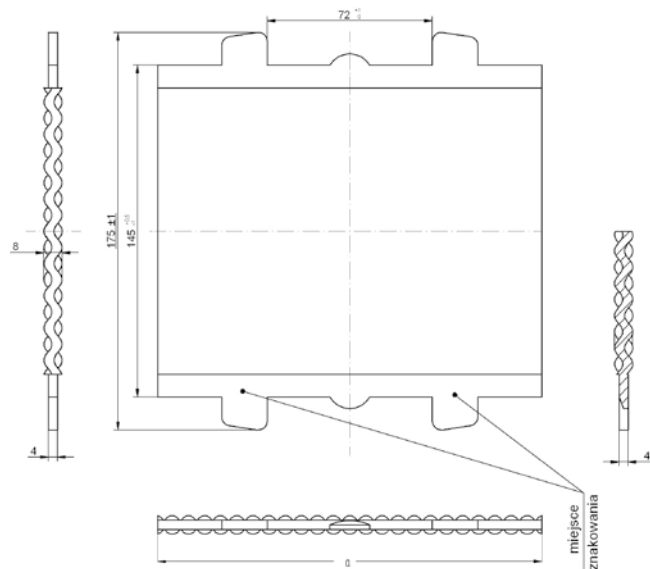


PKW 49 rail pad  
for SB resilient  
fastening

The PKW rail pads in direct rail fastening systems for concrete sleepers (e.g. SB) serve to ensure electrical insulation between a rail foot and a sleeper as well as to reduce the dynamic effects of the rolling stock transferred through the rails to the sleepers or turnout sleepers.

The PKW rail pads also serve as sleeper pads in turnouts on concrete turnout sleepers.

Rail pad type	a [mm]	Rail type	Sleeper type
PKW 49 A	168 <sup>+2</sup>	49 E1	PS-94
PKW 49 K	154 <sup>+2</sup>	49 E1	PS-93, K-83, INBK-7
PKW 49 Ps	136 <sup>+2</sup>	49 E1	PS-83



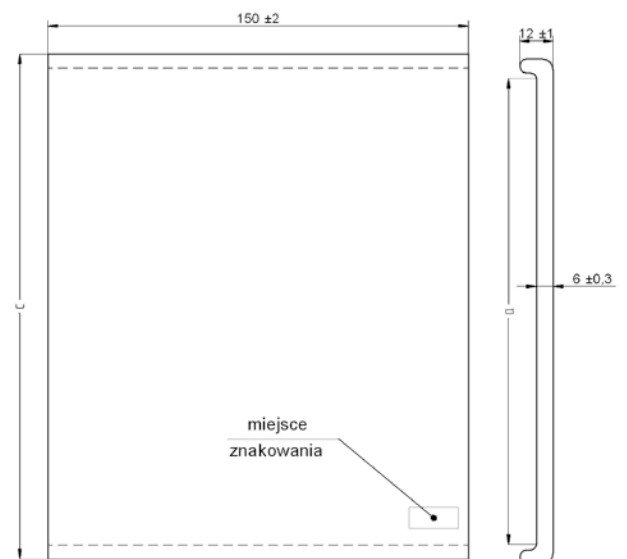


# FLAT RAIL PADS

B and D rail pads for conventional K-type rail fastening

The flat rail pads are used as the rail pads in indirect fastening systems for wooden or concrete sleepers (e.g. K-type) as well as in turnouts (K-type and SKI-type) to ensure electrical insulation between a rail foot and a sleeper or turnout sleeper as well as to reduce the dynamic effects of the rolling stock transferred through the rails and possibly through the ribbed base plates to the sleepers or turnout sleepers.

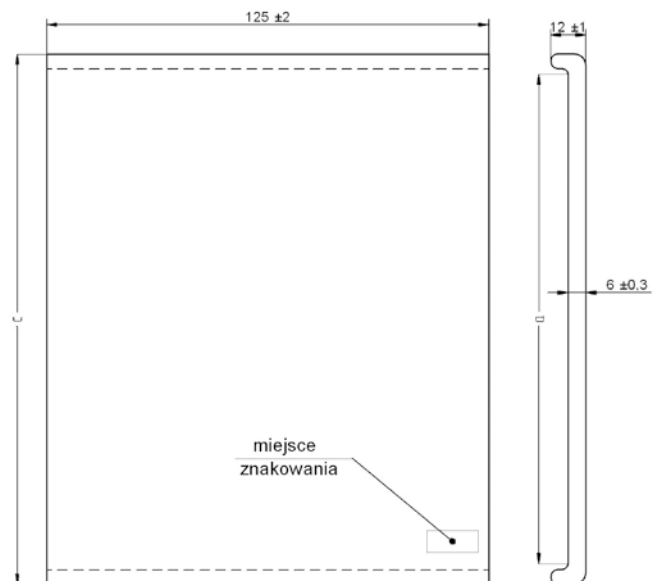
Rail pad type	a [mm]	c [mm]	Rail type	Sleeper type
B	118 <sup>+3</sup>	132 <sup>±2</sup>	60 E1	concrete
D	166 <sup>+3</sup>	180 <sup>±2</sup>	60 E1	wooden



## B and D rail pads for conventional K-type rail fastening

The flat rail pads are used as the rail pads in indirect fastening systems for wooden or concrete sleepers (e.g. K-type) as well as in turnouts (K-type and SkI-type) to ensure electrical insulation between a rail foot and a sleeper or turnout sleeper as well as to reduce the dynamic effects of the rolling stock transferred through the rails and possibly through the ribbed base plates to the sleepers or turnout sleepers.

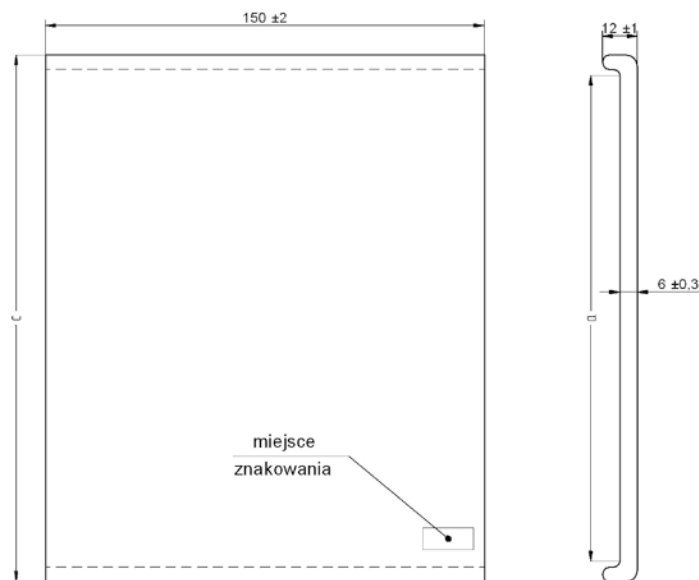
Rail pad type	a [mm]	c [mm]	Rail type	Sleeper type
B	118 <sup>+3</sup>	132 <sup>±2</sup>	49 E1	concrete
D	166 <sup>+3</sup>	180 <sup>±2</sup>	49 E1	wooden



## R-type rail pad for conventional rail fastening

The flat rail pads are used as the rail pads in indirect fastening systems for wooden or concrete sleepers (e.g. K-type) as well as in turnouts (K-type and SkI-type) to ensure electrical insulation between a rail foot and a sleeper or turnout sleeper as well as to reduce the dynamic effects of the rolling stock transferred through the rails and possibly through the ribbed base plates to the sleepers or turnout sleepers.

Rail pad type	a [mm]	c [mm]
R-2	166 <sup>+3</sup>	180 <sup>±2</sup>

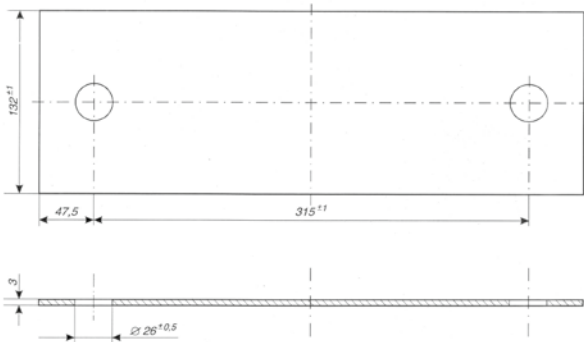






Rail pad for conventional 60 E1 rail fastening for concrete sleepers

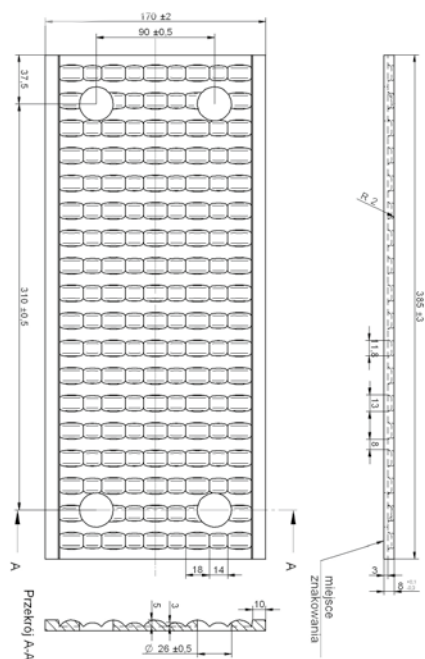
The rail pad for conventional 60 E1 rail fastening for concrete sleepers is intended for use as the rail pad in indirect rail fastening systems for concrete sleepers.





## Turnout rail pads

Both flat and shaped rail pads (PKW and PWE) serve as the rail and sleeper pads in turnouts on wooden and concrete turnout sleepers.



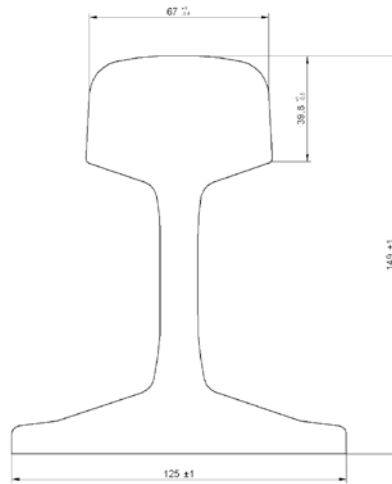
**Uwaga** szerokość, długość, rozstaw otworów - zmienne, zgodnie z rysunkami przekładek zawartymi w albumach przekładek zatwierdzonych dla poszczególnych typów rozjazdów

Turnout rail pad – an example

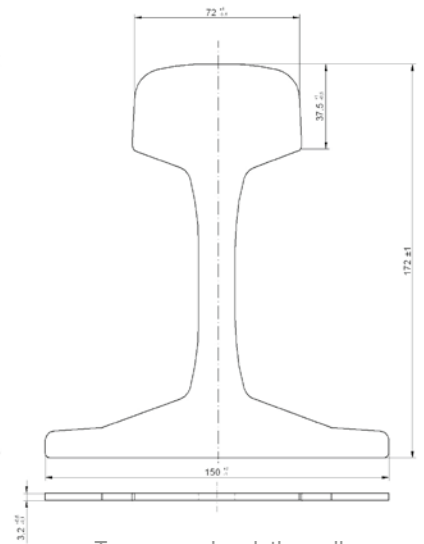
# INSULATING ELEMENTS OF RAIL JOINTS

## Transverse insulating rail spacers

The insulating elements are used in insulating rail joints of the 49 E1 and 60 E1 rails to ensure the reliable operation of railway traffic control devices. The transverse insulating spacers are used between the end faces of rails in the joint.



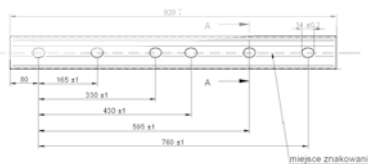
Transverse insulating rail spacers for 49 E1 rails



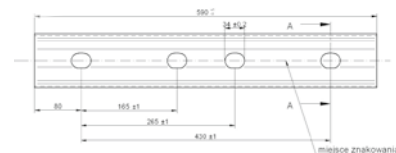
Transverse insulating rail spacers for 60 E1 rails

Longitudinal rail insulating spacer under the fishplate for 49 E1 rails

The insulating elements are used in insulating rail joints of the 49 E1 and 60 E1 rails to ensure the reliable operation of railway traffic control devices.



Longitudinal rail insulating spacer under the six-hole steel fishplate

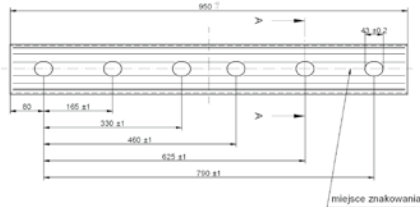


Longitudinal rail insulating spacer under the four-hole steel fishplate

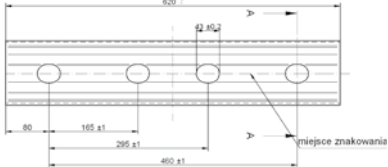


Longitudinal rail insulating spacer under the fishplate for 60 E1 rails

The insulating elements are used in insulating rail joints of the 49 E1 and 60 E1 rails to ensure the reliable operation of railway traffic control devices.



Longitudinal rail insulating spacer under the six-hole steel fishplate

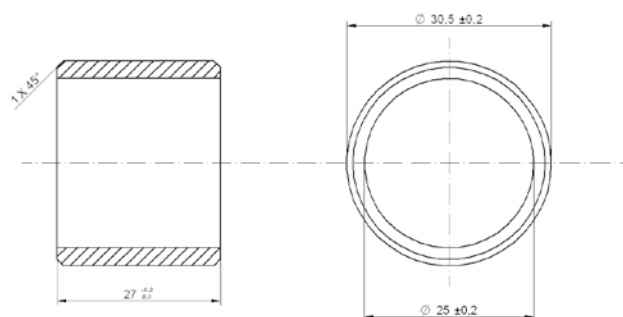


Longitudinal rail insulating spacer under the four-hole steel fishplate



## Insulating sleeve

The insulating elements are used in insulating rail joints of the 49 E1 and 60 E1 rails to ensure the reliable operation of railway traffic control devices. The insulating sleeves are used in the openings for connecting bolts.

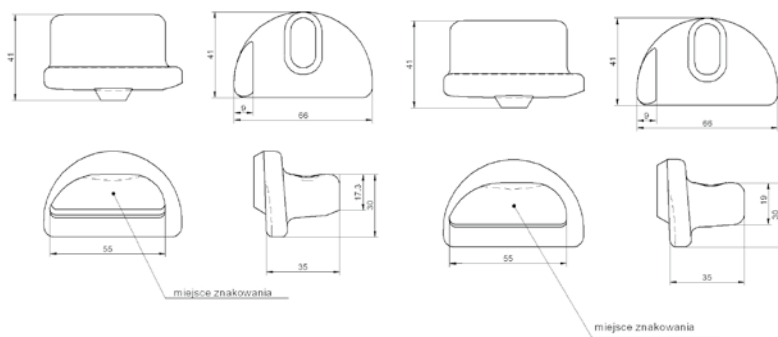




# ELECTRO-INSULATING HOLD-DOWN PARTS

Electro-insulating hold down parts  
WKW 60,  
WKW 49

The electro-insulating hold-down parts are used in the SB resilient rail fastening and serve to transfer the pressure of the spring clip to the rail foot, ensure the correct position of a rail in relation to an anchor and electrical insulation between the rail and the spring clips and anchors.



WKW49 electro-insulating hold-down part

WKW60 electro-insulating hold-down part

# SCREW DOWELS

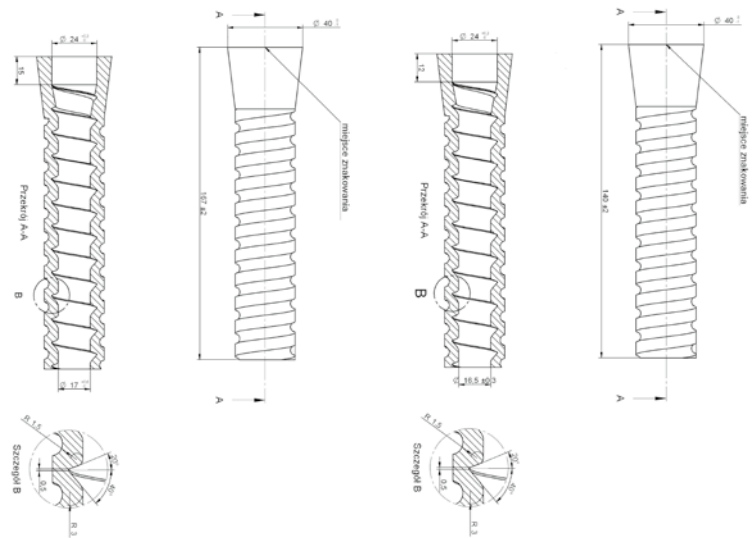
B and C screw dowels with a cylindrical opening for pre-tensioned pre-stressed concrete sleepers

The screw dowels are used in:

- Pre-tensioned pre-stressed concrete sleepers as a component of the K-type rail fastening
- Pre-tensioned pre-stressed concrete turnout sleepers as a component of the fastening of turnout parts
- Beams supporting the level crossing structure as a component of the slab fastening.

The B screw dowels are intended for the use of the 60 A screws for fastening the ribbed base plates to the concrete sleepers.

The C screw dowels are intended for the use of the 42R screws for fastening the pads and ribbed base plates to the turnout sleepers and MIROSŁAW-type external crossing slabs.

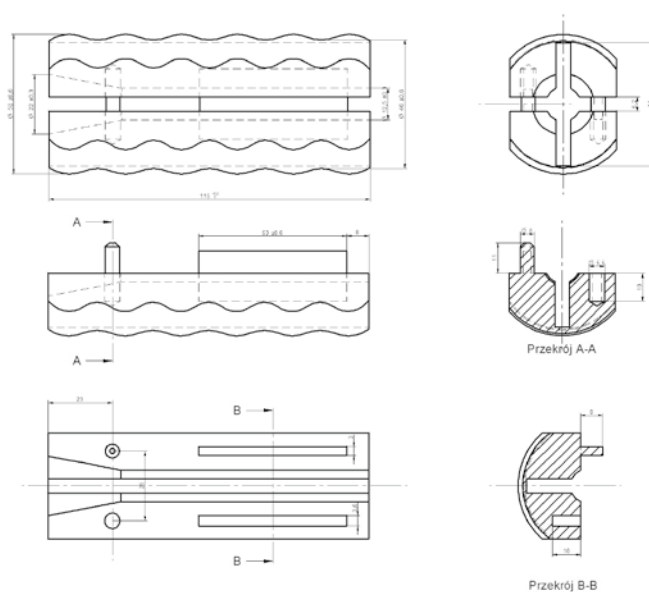


C screw dowel

B screw dowel

## Four-split dowels for sleeper regeneration

The four-split dowels are used for the regeneration of wooden and concrete sleepers.

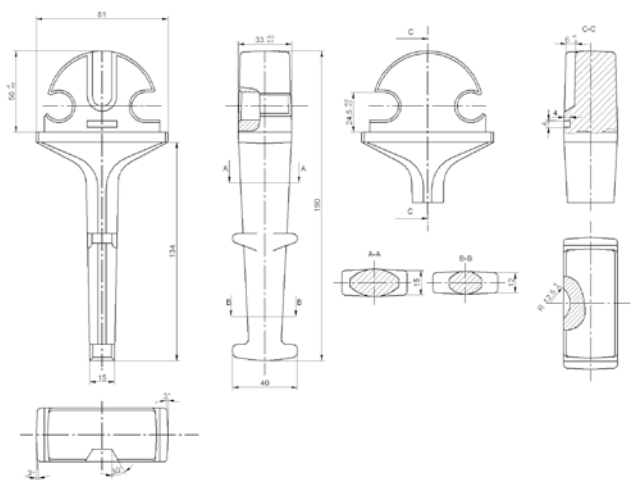


# METAL ELEMENTS



SB3/3 anchor for resilient rail fastenings after mechanical working

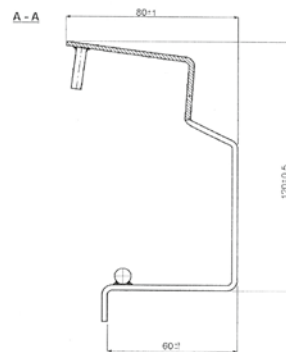
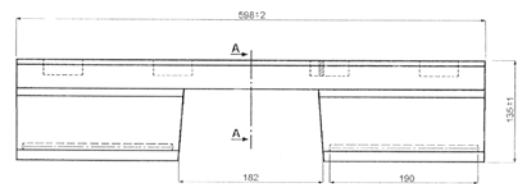
The SB3/3 cast iron anchor is intended for the use in the rail superstructure as a component of the resilient rail fastening system. In the SB-W1 or SB resilient rail fastening systems, it serves to fasten a 60 E1 or 49 E1 rail to a concrete sleeper (by means of a spring clip and an electro-insulating hold-down part), respectively.





Face pressing

The Face pressings made from 3 mm-thick steel plates with a suitably profiled shape are used as wearing-iron of the face profile of reinforced concrete slabs, which are components of the modern MIROSŁAW-type crossing surface that is used for the construction of the intersection of a railway track with a road at rail level.





THE COMPANY OFFERS SERVICES INVOLVING TURNING, MILLING, SURFACE GRINDING, COUNTERBORING AND CUTTING TOOL SHARPENING.

For our company, the complex customer service means, depending on the customer's needs:

- Consulting
- Design of an element
- Design of an injection mould
- Making of an injection mould
- Manufacture of a product
- Transport.

For production companies supplying pre-tensioned prestressed concrete sleepers to Polish State Railways (PKP) and tramway companies, the company provides services in the working of SB cast-iron anchors and the manufacture of the reinforcement of level crossing slabs.

For our products, we have obtained the certificates of approval for the operation of the buildings intended for the railway traffic control.

The high quality of the elements offered is of the utmost importance to us. This is proved by the Factory Production Control System implemented as a 2+ compliance assessment system with technical approvals issued by the Railway Engineering Research and Development Centre.

In 2002, the company implemented an in-house Quality Management System. We have an ISO 9001: 2008 Certificate, we also implemented the Environmental Management System in compliance with the international ISO 14001:2004 standard.

