

## Section 1. PRODUCT DESCRIPTION

### UNIVERSAL PLUG WITH COUNTERSUNK HEAD SCREW – RU

Universal plug RU comprises sleeve made of polyamide and countersunk head steel screw with protective zinc coating. It is designed for fixing of light-duty interior finish systems, wooden strips and lightweight installations on all building substrates. The sleeve has anti-rotation lugs which keep the plug-in place when screwing in the screw. Special design of the plug ensures correct guidance of the screw and reliable connection.

Types of substrates on which universal plug RU can be installed:

- Concrete
- Solid clay brick and sand-lime brick
- Hollow clay brick and sand-lime brick
- Plasterboard

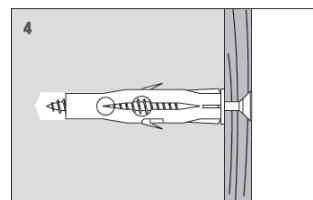
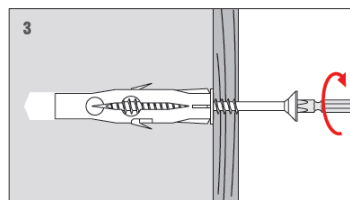
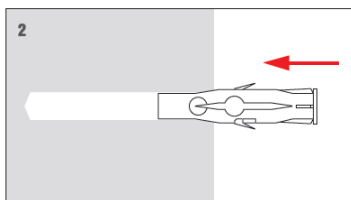
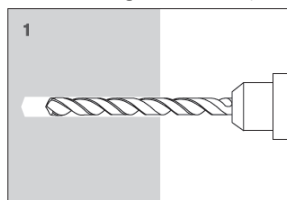


Płetwy przytrzymujące



## Section 2. METHOD OF INSTALLATION

1. Original plugs delivered by the manufacturer can be used only
2. Before installation identify a substrate in which the plug will be installed and compare loads which the plug will carry to resistance values given in Product Data Sheet or Technical Approval
3. Select an adequate length of the plug so that expansion zone is in the construction material of the wall (thickness of member being fixed matches max. usable length of the plug –  $t_{fix}$ )
4. Use proper method of drilling according to a substrate type (holes in masonry substrate made of hollow blocks should be drilled using a drill without impact)
5. Diameter of drilled holes should match diameter of the plugs used
6. Drilled holes in substrates of solid materials should be deeper by min. 10mm compared to the plug anchorage depth
7. Clean the holes in solid materials of drillings with a back and forth motion of the drill at a reduced speed
8. Then insert the plug into a drilled hole, and drive the screw through the element being fixed until it completely penetrates the sleeve (pre-fastening installation)



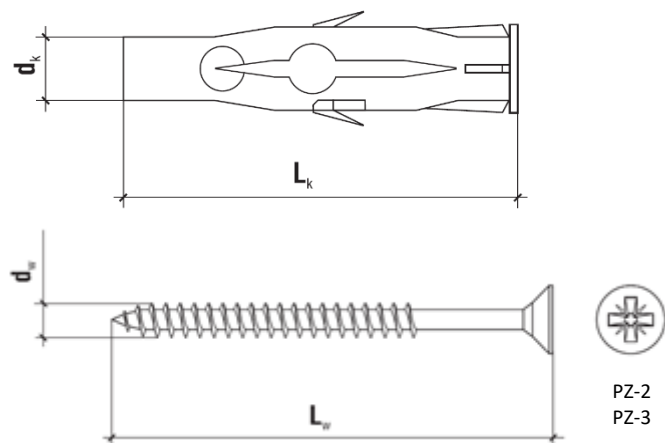
PRODUCT DATA SHEET – RU

Section 3. TECHNICAL DATA

| TECHNICAL PARAMETERS      |                |                   |
|---------------------------|----------------|-------------------|
| Parameter                 | Unit           | Value             |
| Plug diameter             | $d_k$ [mm]     | 6/8/10            |
| Hole/drill diameter       | $d_o$ [mm]     | 6/8/10            |
| Effective anchorage depth | $h_{eff}$ [mm] | 35/50/60*         |
| Drilled hole depth        | $h_o$ [mm]     | 45/60/70*         |
| Drive type                | [-]            | PZ-2/PZ-3**       |
| Sleeve material           | [-]            | PA – polyamide    |
| Screw material            | [-]            | Zinc-plated steel |

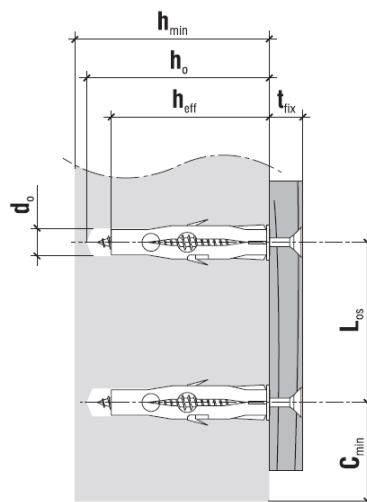
\*for RU 6/8/10

\*\*for RU-10



| RESISTANCE          |                                 |      |       |
|---------------------|---------------------------------|------|-------|
| Substrate type      | Design pull-out resistance [kN] |      |       |
|                     | RU-6                            | RU-8 | RU-10 |
| Concrete C20/25     | 0,38                            | 0,52 | 0,92  |
| Solid clay brick    | 0,25                            | 0,36 | 0,64  |
| Hollow brick        | 0,20                            | 0,25 | 0,25  |
| Plasterboard 12.5mm | 0,24                            | 0,26 | 0,28  |

| INSTALLATION PARAMETERS |                          |                         |                     |
|-------------------------|--------------------------|-------------------------|---------------------|
| Plug type               | Min. substrate thickness | Min. distance from edge | Min. axial distance |
|                         | $h_{min}$ [mm]           | $c_{min}$ [mm]          | $L_{os}$ [mm]       |
| RU-6                    | 70                       | 70                      | 140                 |
| RU-8                    | 100                      | 100                     | 200                 |
| RU-10                   | 120                      | 120                     | 240                 |



| SELECTION TABLE |                            |                           |                    |            |                           |
|-----------------|----------------------------|---------------------------|--------------------|------------|---------------------------|
| Product code    | Sleeve diameter and length | Screw diameter and length | Max. usable length | Drive type | Number of pieces in a box |
|                 | $d_k \times L_k$ [mm]      | $d_w \times L_w$ [mm]     | $t_{fix}$ [mm]     | [-]        | [pcs]                     |
| RU-06045        | 6x35                       | 3,5x45                    | 5                  | PZ-2       | 100                       |
| RU-06060        | 6x35                       | 3,5x60                    | 20                 | PZ-2       | 100                       |
| RU-08060        | 8x50                       | 4,5x60                    | 5                  | PZ-2       | 100                       |
| RU-08080        | 8x50                       | 4,5x80                    | 25                 | PZ-2       | 100                       |
| RU-10080        | 10x60                      | 6,0x80                    | 15                 | PZ-3       | 100                       |
| RU-10100        | 10x60                      | 6,0x100                   | 35                 | PZ-3       | 100                       |

Section 4. REMARKS

- All previous versions of this Product Data Sheet shall cease to be valid
- Data given in this Product Data Sheet is in accordance with current knowledge and published in good faith. KLIMAS Sp. z o.o. is not responsible for correctness and quality of the fixing if recommendations regarding method of use and installation are not followed.