

**PRODUCT DATA SHEET – TD-060/TDP-060**

**Section 1. PRODUCT DESCRIPTION**

**SPECIAL SCREWED-IN FASTENER WITH SCREW – TD-060/TDP-060**

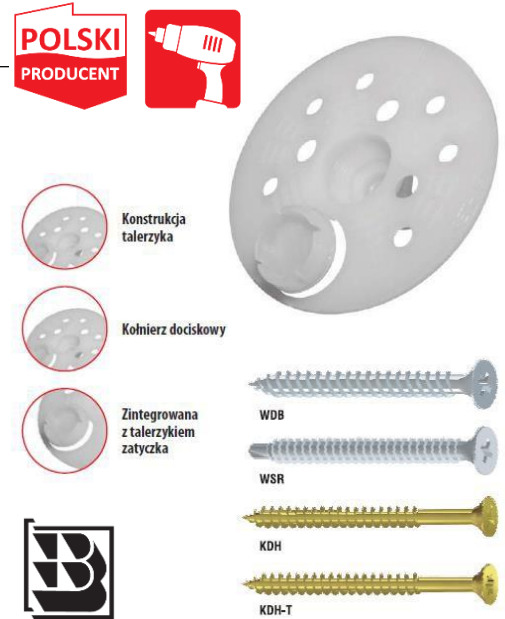
Special screwed-in fastener with screw TD-060/TDP-060 with steel screw for fastening of mineral wool and polystyrene in steel sheet and wooden substrates. The fastener has an integrated plug on the support washer which reduces spot thermal conductivity of the fastener. Recommended for:

- EPS polystyrene
- XPS polystyrene
- mineral wool
- mineral wool lamella board

Types of substrates on which fastener TD-060/TDP-060 can be installed:



Fasteners hold Technical Approval: AT-15-9228/2013



**Section 2. METHOD OF INSTALLATION**

1. Before installation identify the substrate (steel sheet, wooden substrate) and select suitable fasteners
2. Select adequate length of the screw so that the threaded part of the screw is in the construction material of the wall
3. Minimum length of the fastener is:  $L_d = t_{fix} + h_{eff}$ , where:  $t_{fix}$  - thickness of insulation material to be fixed,  $h_{eff}$  - depth of fastener anchorage in the substrate (given in the sheet and in Technical Approval)
4. Number of fasteners per 1m<sup>2</sup> should be defined in thermal insulation design. Recommended number of fasteners: FOR POLYSTYRENE:
  - up to the height of 15m from the ground, as minimum use 6pcs/m<sup>2</sup> in the middle area of a wall and 8pcs/m<sup>2</sup> in a corner area
  - above 15m from the ground, as minimum use 8pcs/m<sup>2</sup> in the middle area of a wall and 10pcs/m<sup>2</sup> in a corner area; for WOOL number of fasteners should be increased in each area by 2pcs/m<sup>2</sup>**Recommendation shall not replace thermal insulation design!!**
5. When installing the fasteners it is not necessary to drill holes beforehand (screw threaded for use in timber or steel)
6. Using screw gun tighten the screw so that the fastener support washer is faced with thermal insulation material



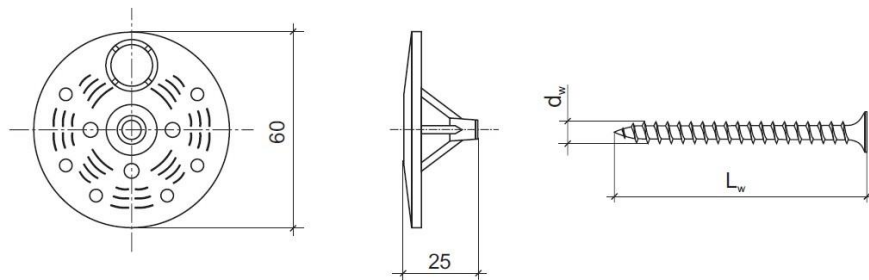
**Section 3. TECHNICAL DATA**

TECHNICAL PARAMETERS				
Parameter	Unit	Steel sheet < 0.88mm	Steel sheet > 0.88mm	Timber, OSB, cement board
Plug diameter	d <sub>w</sub> [mm]	4.8	4.8	5.0/6.0
Plate diameter	D <sub>k</sub> [mm]	64	64	64
Anchorage depth	h <sub>eff</sub> [mm]	20	20	30/12.5/18*
Plug material	[-]	Polyamide PA/Polypropylene	Polyamide PA/Polypropylene	Polyamide PA/Polypropylene
Pin material	[-]	Galvanized steel	Galvanized steel	Galvanized steel
Approval	[-]	AT-15-9228/2013	AT-15-9228/2013	AT-15-9228/2013

\*timber, cement board, OSB

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STRENGTH PARAMETERS					
Substrate type	Substrate thickness	Fastener marking	Design resistance [kN]	Fastener marking	Design resistance [kN]
Steel sheet profile	0.50	WDB	0.24	WSR	0.21
Steel sheet profile	0.75	WDB	0.40	WSR	0.55
Steel sheet profile	0.88	WDB	0.68	WSR	0.87
Steel sheet profile	1.00	-	-	WSR	1.03
Steel sheet profile	1.25	-	-	WSR	1.23
Wood C22	30	KDH 5.0	1.19	KDH 6.0	1.55
Wood C22	42	KDH 5.0	2.12	KDH 6.0	2.77
OSB	12.5	KDH 5.0	0.31	KDH 6.0	0.35
OSB	18	KDH 5.0	0.47	KDH 6.0	0.51
Cement board - fibre	12.5	KDH 5.0	0.32	KDH 6.0	0.22



SELECTION TABLE				
Insulation material thickness [mm]	Washer	Steel sheet < 0.88mm	Steel sheet > 0.88mm	Timber, OSB, cement board
		WDB	WSR	KDHT/KDH
30	TD-060/TDP-060	WDB-48050	WSR-48050	KDHT/KDH-05060
40	TD-060/TDP-060	WDB-48060	WSR-48060	KDHT/KDH-05070
50	TD-060/TDP-060	WDB-48070	WSR-48070	KDHT/KDH-05080
60	TD-060/TDP-060	WDB-48080	WSR-48080	KDHT/KDH-05090
70	TD-060/TDP-060	WDB-48090	WSR-48090	KDHT/KDH-05100
80	TD-060/TDP-060	WDB-48100	WSR-48100	KDHT/KDH-06110
90	TD-060/TDP-060	WDB-48120	WSR-48120	KDHT/KDH-06120
100	TD-060/TDP-060	WDB-48120	WSR-48120	KDHT/KDH-06140
110	TD-060/TDP-060	WDB-48140	WSR-48140	KDHT/KDH-06140
120	TD-060/TDP-060	WDB-48140	WSR-48140	KDHT/KDH-06160
130	TD-060/TDP-060	WDB-48160	WSR-48160	KDHT/KDH-06160
140	TD-060/TDP-060	WDB-48160	WSR-48160	KDHT/KDH-06180
150	TD-060/TDP-060	WDB-48200	WSR-48200	KDHT/KDH-06180
160	TD-060/TDP-060	WDB-48200	WSR-48200	KDHT/KDH-06200
170	TD-060/TDP-060	WDB-48200	WSR-48200	KDHT/KDH-06200
180	TD-060/TDP-060	WDB-48200	WSR-48200	KDHT/KDH-06200
190	TD-060/TDP-060	WDB-48200	WSR-48200	-

**Section 4. REMARKS**

1. All previous versions of this Product Data Sheet shall cease to be valid
2. 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.