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PRODUCT DATA SHEET – WSW-12

Section 1. PRODUCT DESCRIPTION

SELF-DRILLING SCREW WITH ALUMINIUM/EPDM WASHER FOR FIXING SANDWICH PANELS IN STEEL CONSTRUCTION – WSW-12



Self-drilling screw for fixing sandwich panels WSW-12 is made of heat-treated carbon steel in SQ Ceramic coating. The screw has SW hex head, pin threaded for use in steel, self-drilling tip, aluminium/EPDM washer and threading under head of the screw.

The screws are used for fixing sandwich panels in steel construction with thickness $\Sigma t_i \leq 12$ mm.

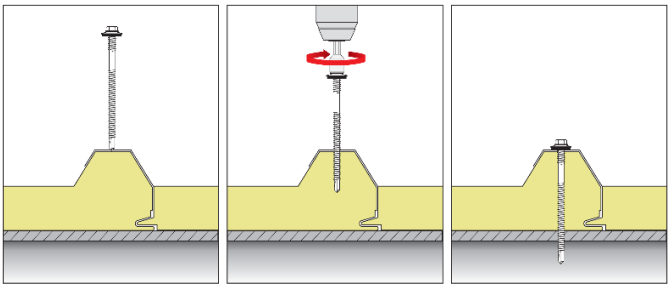
Use:

- **fixing sandwich panels in steel construction**
- **fixing wall sandwich panels in vertical and horizontal configuration**
- **fixing roof sandwich panels**
- **surface mounting (visible mount)**
- **mounting in sandwich panel joint (concealed mount)**

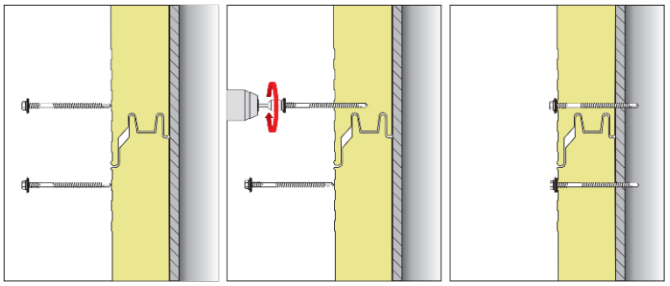
Self-drilling screws hold European Technical Assessment: ETA-16/0444

Section 2. METHOD OF INSTALLATION

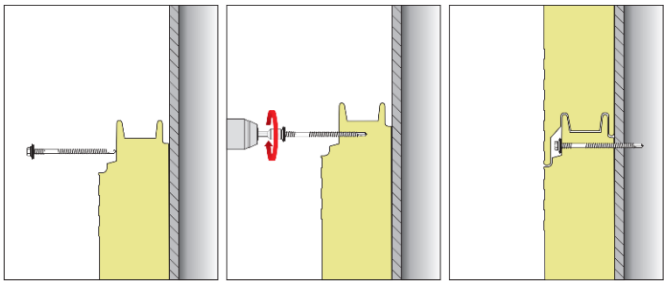
1. Original self-drilling screws delivered by the manufacturer can be used only
2. Before installation identify the substrate, its thickness and environmental conditions (expressed as corrosivity categories), and then select screws which meet the above criteria
3. Correctly select screw type, its length, drilling capacity depending on sum of thickness values of members being fixed
4. Drilling capacity for each screw is given in corresponding Product Data Sheet and European Technical Assessment and stands for the sum of thickness values of members being fixed
5. Make sure to set optimum rotary speed when screwing, as too high rotary speed may cause burning of drilling bits and make it impossible to fasten the screw
6. At all times screws should be installed perpendicularly to the substrate surface
7. Make sure to press the washer correctly, as when the washer is pressed either too strongly or too weakly, lack of tightness is likely, which may result in corrosion in the fixing point



Surface mounting of roof sandwich panel (when selecting the length of the screw take into account the height of upper surface of the panel to be fixed)



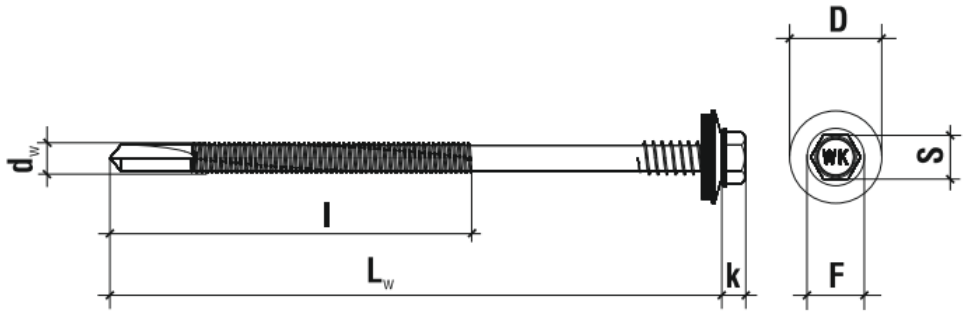
Surface mounting of wall sandwich panel – visible mount



Mounting of wall sandwich panel in joint – concealed mount (when selecting the length of the screw take into account the height of joint of the panel to be fixed)

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Section 3. TECHNICAL DATA



TECHNICAL PARAMETERS		
Parameter	Unit	Value
Screw diameter	d_w [mm]	5,5
Drilling capacity	Σt_i [mm]	≤ 12
Wrench size	S [mm]	SW-8
Head height	k [mm]	5,4
Head diameter	F [mm]	10,5
Drill length	[mm]	19,0
Screw material	-	carbon steel
Corrosion protection	-	SQ Ceramic coating
EPDM washer	D [mm]	aluminium A19
Coating to RAL palette	-	min. 60 µm
Substrate material	-	steel ≥ S235JR
European Technical Assessment	-	ETA-16/0444

INSTALLATION PARAMETERS		
Parameter	Unit	Value
Screw diameter	d_w [mm]	5,5
Threading diameter	d_p [mm]	6,3
Diameter of hole in the substrate	d_0 [mm]	-
Min. depth of hole in the substrate	h_0 [mm]	-
Anchorage depth	h_{eff} [mm]	push-through
Min. substrate thickness	h_{min} [mm]	4,0
Min. spacing	s_{min} [mm]	50
Min. distance from edge	c_{min} [mm]	25

RESISTANCE						
Characteristic pull-out / shear strength [kN]						
Substrate thickness [mm]	Panel cladding sheet thickness [mm]					
	0,40	0,50	0,63	0,75	0,88	1,00
4,00 ÷ 11,00	1,83/0,83	3,17/1,33	4,04/1,62	4,64/1,91	4,64/1,91	4,64/1,91

*Partial safety factor of 1,33 recommended

SELECTION TABLE					
WSW-12 (SQ Ceramic coating)	WSW-12-RAL* (SQ Ceramic coating + RAL)	Screw dimensions	Panel thickness	Thread length with drill	Number of pieces in a box
		d_w x L_w [mm]	[mm]	l [mm]	[pcs]
WSW-12-55095-A19	WSW-12-55095-A19-RAL	5,5 x 95	50-65	50	100
WSW-12-55115-A19	WSW-12-55115-A19-RAL	5,5 x 115	70-85	50	100
WSW-12-55135-A19	WSW-12-55135-A19-RAL	5,5 x 135	70-105	70	100
WSW-12-55155-A19	WSW-12-55155-A19-RAL	5,5 x 155	90-125	70	100
WSW-12-55175-A19	WSW-12-55175-A19-RAL	5,5 x 175	110-145	70	100
WSW-12-55195-A19	WSW-12-55195-A19-RAL	5,5 x 195	130-165	70	100
WSW-12-55235-A19	WSW-12-55235-A19-RAL	5,5 x 235	170-205	70	100
WSW-12-55285-A19	WSW-12-55285-A19-RAL	5,5 x 285	220-255	70	100

*Screw on request and to order

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.

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