WAG S.A.
WORLD ACOUSTIC GROUP

ROAD AND RAILWAY ACOUSTIC NOISE PROTECTION SYSTEMS

WAG S.A.
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WHO WE ARE

We are a company with Polish capital. WAG S.A. has over 20 years of experience in designing and implementing acoustic protection in Poland and around the world.

Every day we expand our activities to other areas. We not only produce materials and elements for the construction of acoustic screens, but also provide comprehensive construction and engineering services..

WORLD ACOUSTIC GROUP S.A.
Chróstnik 104 59-311 Lubin

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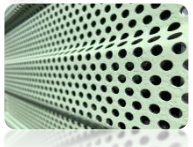
RANGE OF ACTIVITIES

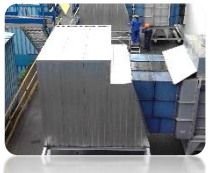
ACOUSTIC ANALYSIS



PRODUCTION OF FILLINGS FOR ABSORBING AND REFLECTING SCREENS

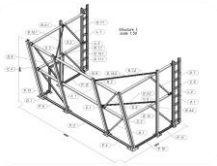
ACCESSORIES FOR ACOUSTIC SCREENS

ACOUSTIC ROOF SCREENS



INDUSTRIAL ACOUSTIC PROTECTION SYSTEM

IMPLEMENTATION OF ROAD AND RAILWAY SCREENS



ENGINEERING DESIGN

SELF-SUPPORTING PALISADE FACING SYSTEM

CONSTRUCTION OF FOUNDATIONS FOR ACOUSTIC SCREENS USING DRIVEN STEEL PILE TECHNOLOGY

FOUNDATION OF SCREEN POLES IN THE CASE OF ROCKY GROUND

CONSTRUCTION OF SHEET WALLS REINFORCED WITH CAP

MANUFACTURING SELF-SUPPORTING ARCHES FOR RAILWAYS, AGRICULTURE AND INDUSTRY

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ACOUSTIC ANALYSIS

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ACOUSTIC ANALYSIS

NOISE MEASUREMENT

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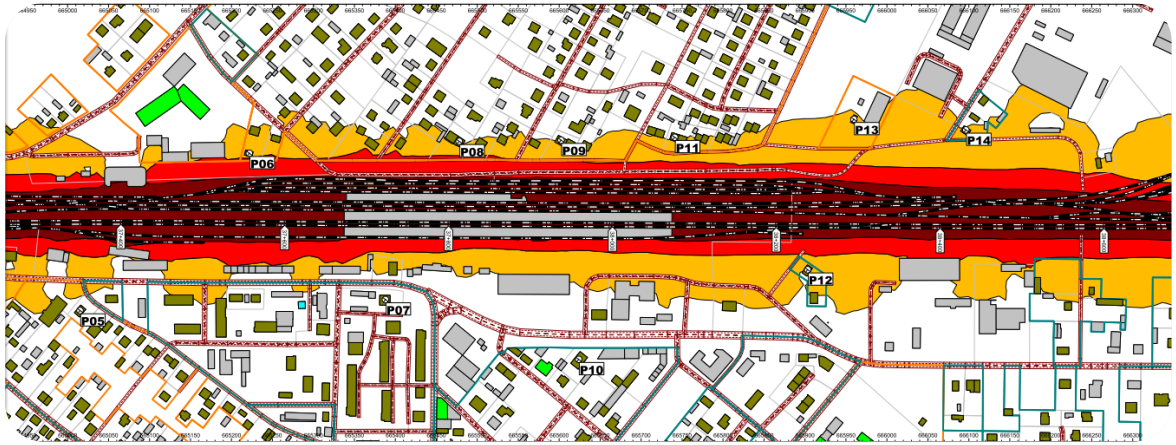
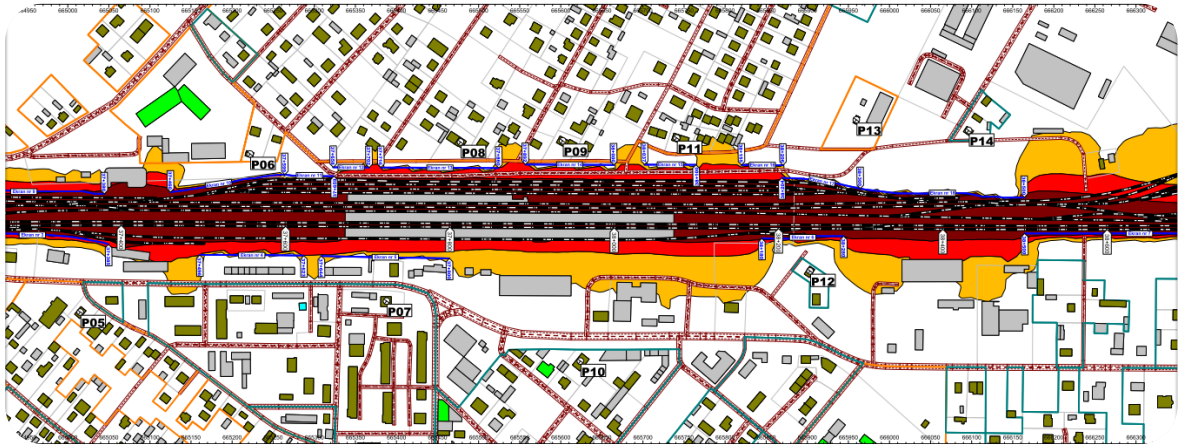
BEFORE IMPLEMENTATION OF ACOUSTIC PROTECTION



AFTER IMPLEMENTATION OF ACOUSTIC PROTECTION



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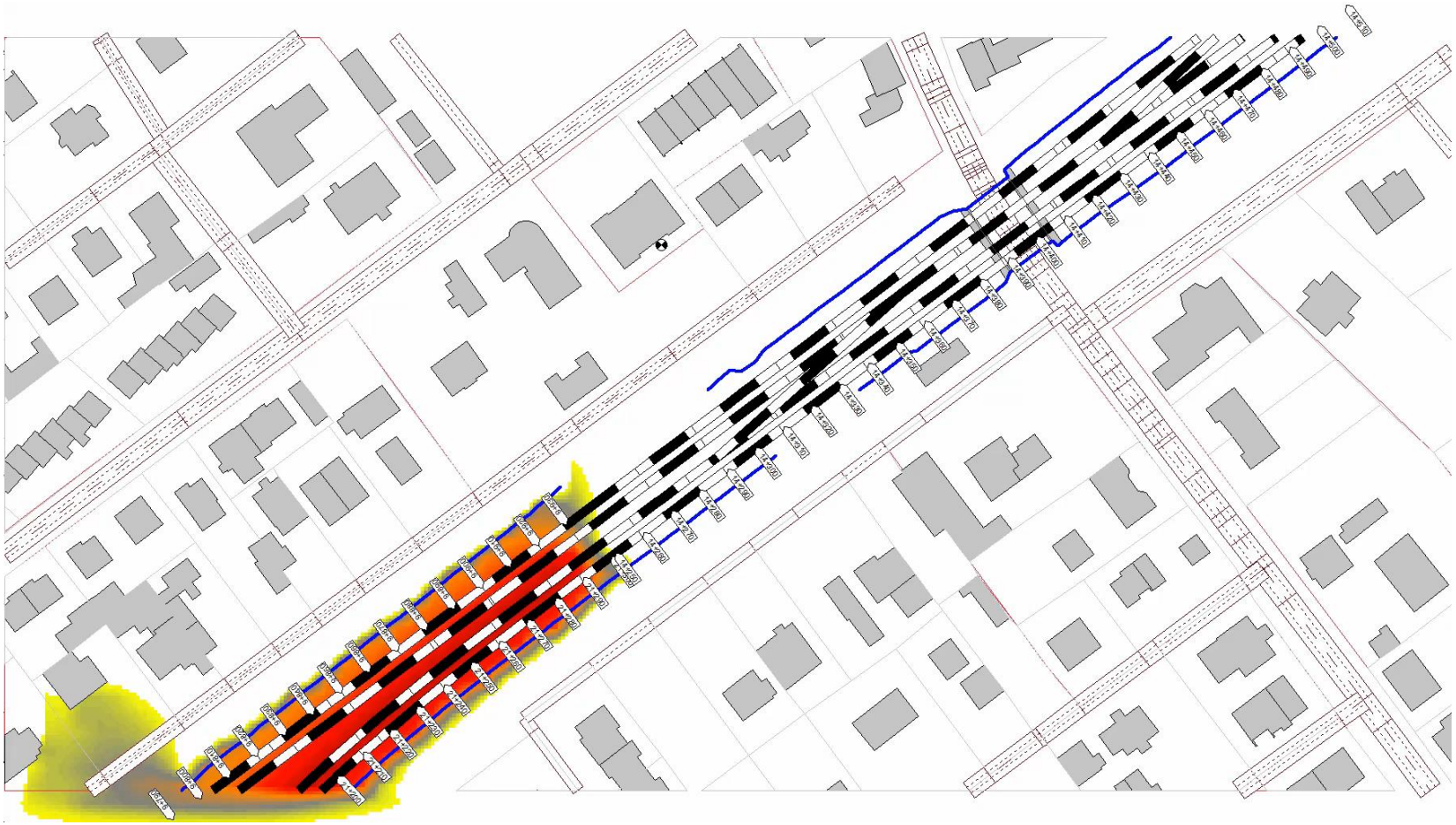
ACOUSTIC ANALYSIS



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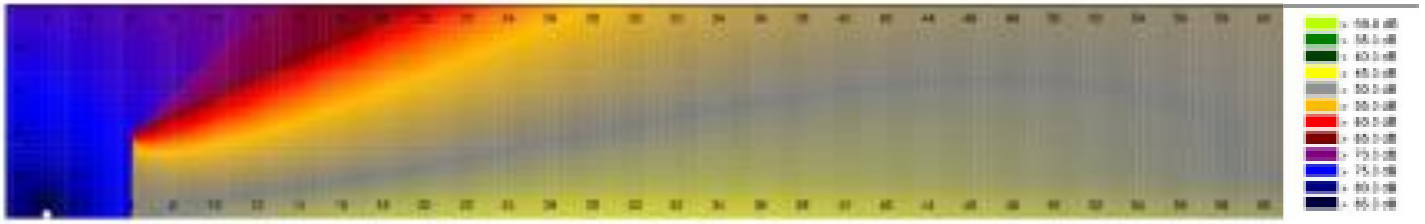
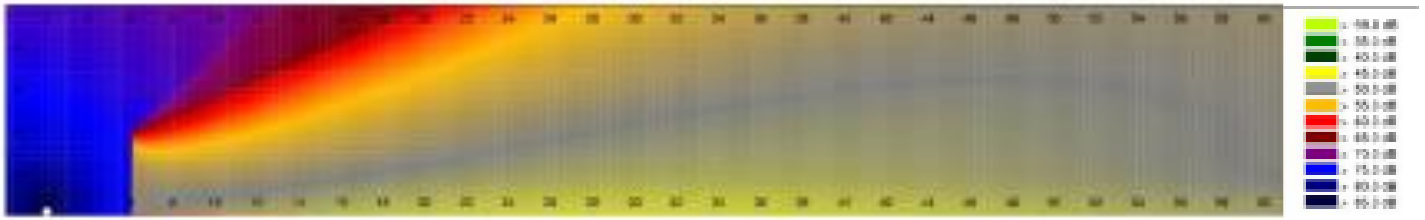
ACOUSTIC ANALYSIS

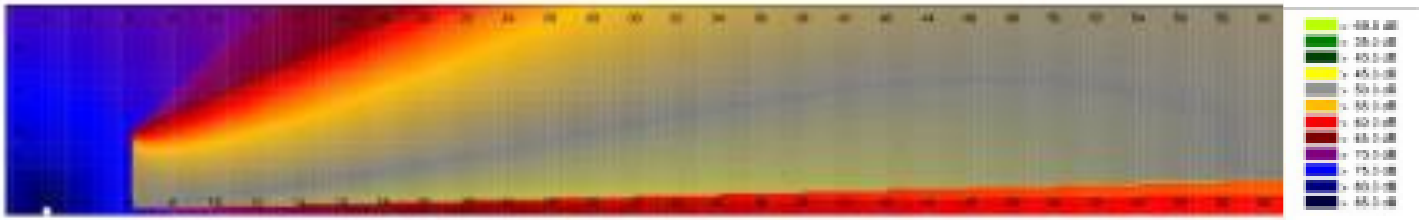
Torowisko na poziomie terenu, brak szczeliny pod ekranem.



Torowisko na poziomie – szczelina pod ekranem 0,1 m



Torowisko na poziomie – szczelina pod ekranem 0,3 m



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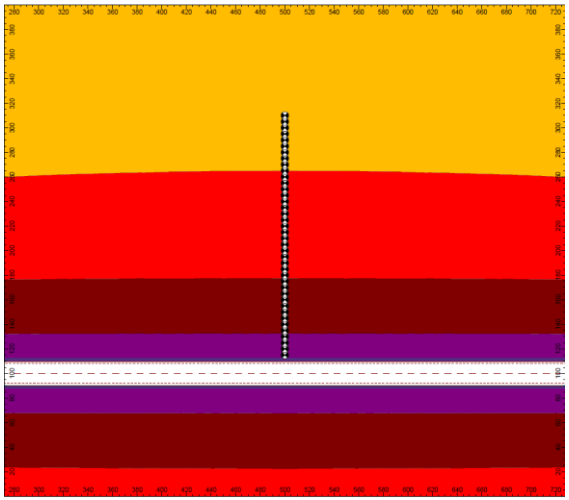
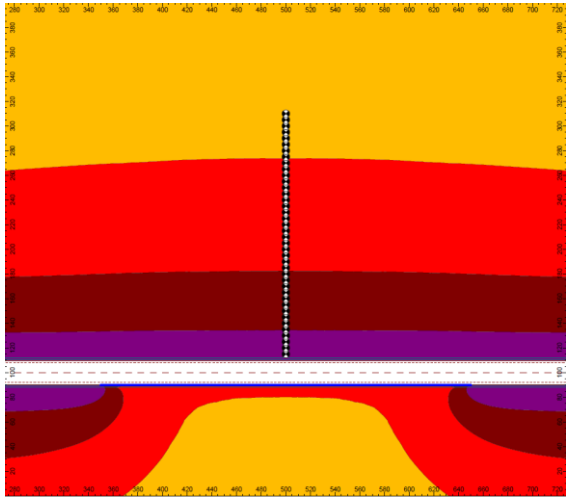
ACOUSTIC ANALYSIS

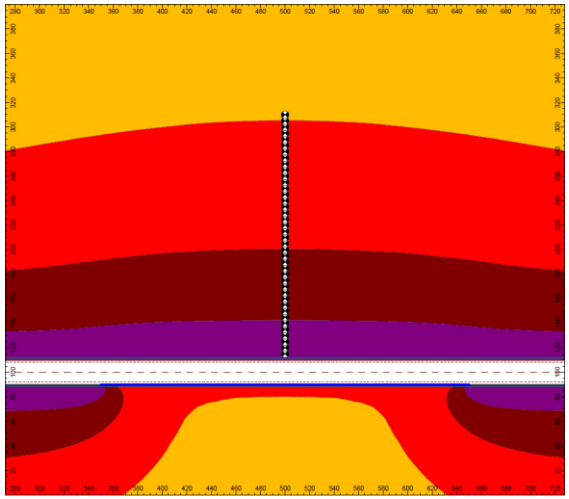
>= 35.0
>= 40.0
>= 45.0
>= 50.0
>= 55.0
>= 60.0
>= 65.0
>= 70.0



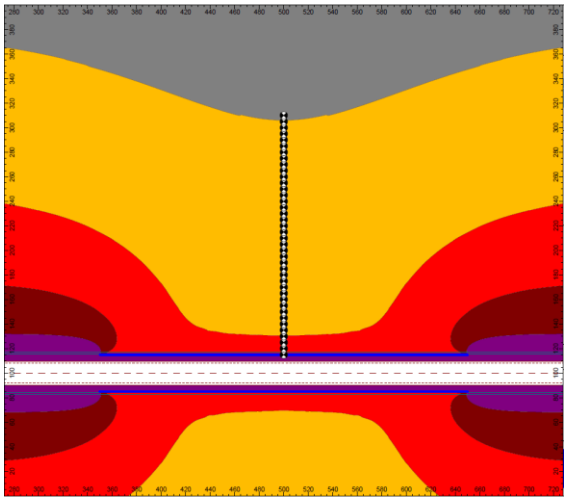
CONDITION WITHOUT ACOUSTIC SCREEN



CONDITION WITH ONE 4 m HIGH ABSORBENT SCREEN



CONDITION WITH ONE 4 m HIGH REFLECTIVE SCREEN



CONDITION WITH TWO 4 m HIGH ABSORBENT SCREENS

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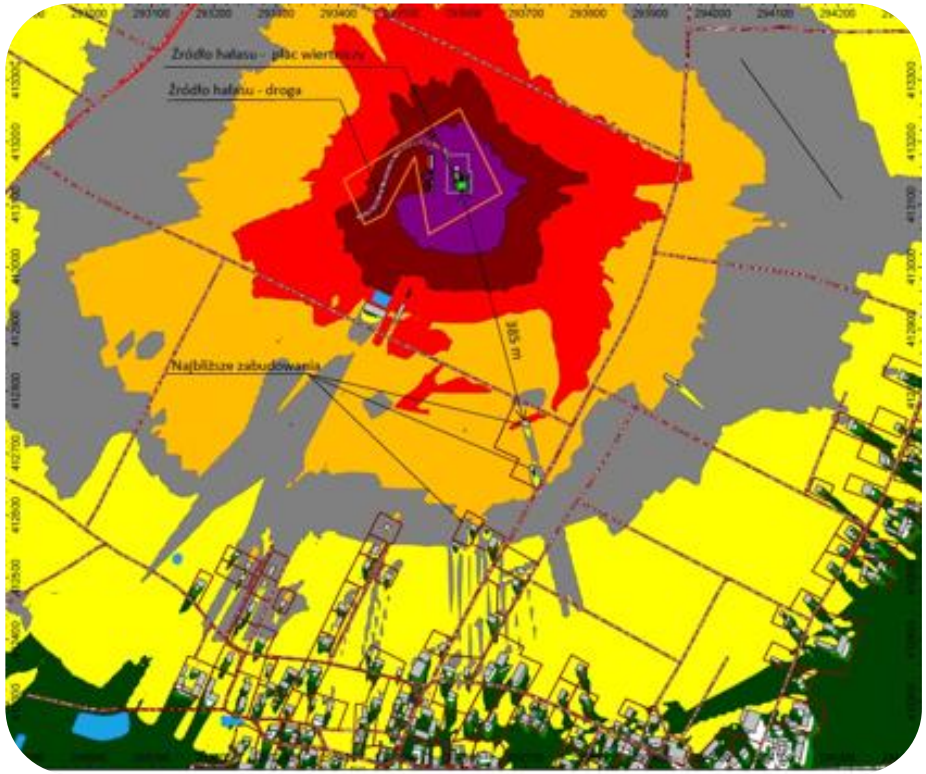
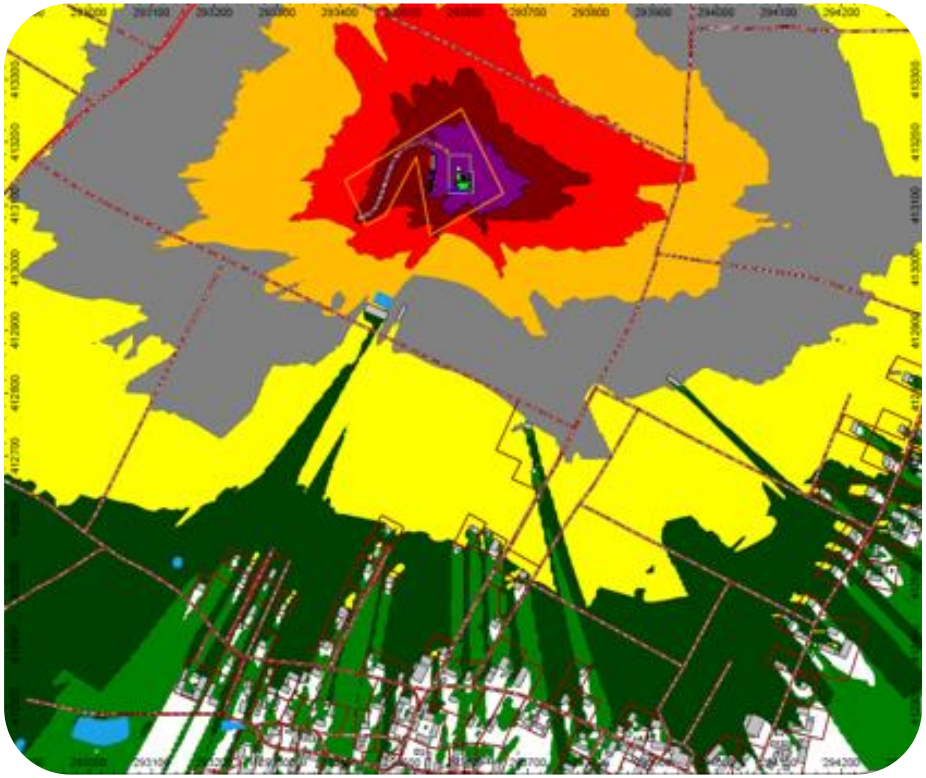
ACOUSTIC ANALYSIS

WITHOUT ACOUSTIC SCREENS



Level of noise at the closest buildings: above 60 dB

CONDITION AFTER APPLICATION OF A 6M HEIGHT ACOUSTIC SCREEN



Level of noise at the closest buildings: above 45 dB

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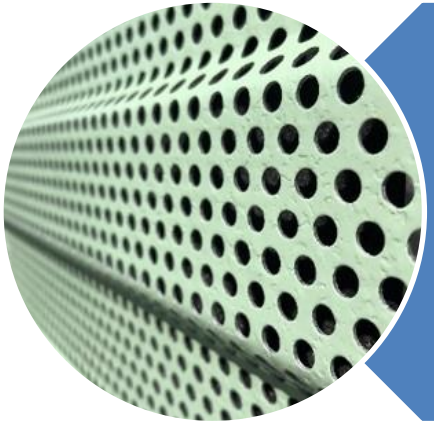

FILLINGS OF ACOUSTIC SCREENS

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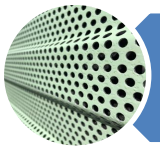

FILLINGS OF ACOUSTIC SCREENS

ABSORPTION PANELS AND REFLECTIVE : WNC type B, WN2C type B, WNR type B

WIDTH	0,125 m		
HEIGHT	0,50 m		
LENGTH	up to 5,00 m		
MAXIMUM QLS WIND LOAD (l=5,0m)	1,65 kN/m2 (optionally up to 3,00 kN/m2)		
TYPE OF MOUNTING	Installation between posts of HEA/B profiles		
SUPPORT STRUCTURE SPACING	up to 5,00 m		
TYPE OF MATERIAL	aluminium		
DRY WEIGHT	12,36 kg/m2	17,46 kg/m2	13,05 kg/m2
ENVIRONMENTAL PROTECTION	100% recyclable		
COLOUR	RAL		
SOUND INSULATION INDEX Rw	WNC type B 32 dB	WN2C type B i A 31 dB	-
AIR SOUND INSULATION COEFFICIENT	WNC type B 26 dB	WN2C type B i A 26 dB	WNR 21 dB
SOUND ABSORPTION COEFFICIENT	WNC type B 14 dB	WN2C type B i A 12 dB	-

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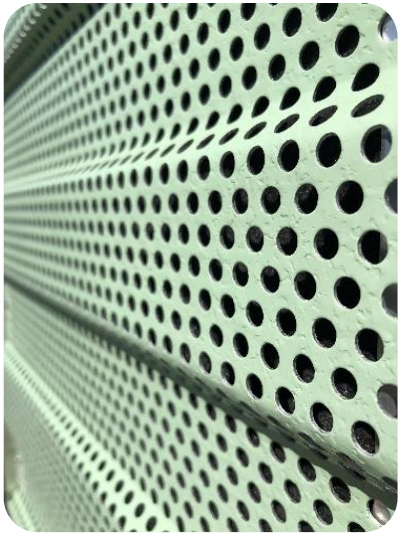
FILLINGS OF ACOUSTIC SCREENS

ALUMINIUM PANELS

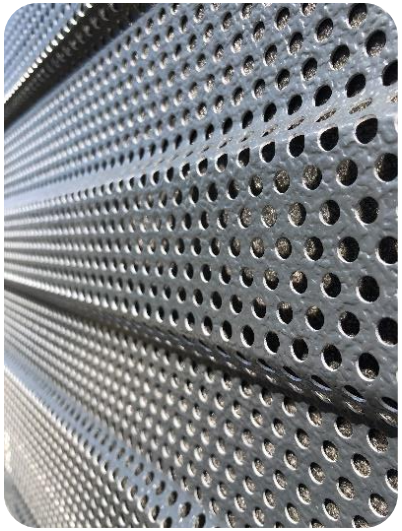
CE ZÜS

Notified Body no 1020
Report no 1020-CPR-040 048854

The product complies with requirements in standard
EN 14388:2005/AC:2008 – English version
PN-EN 14388:2009 – Polish version
Standard title: - Road traffic noise reducing devices and barriers



WAG NOISE CATCHER



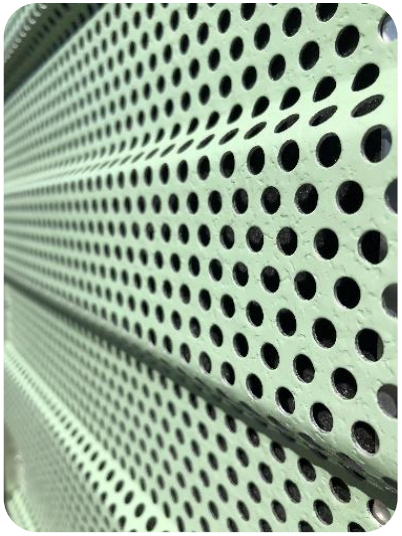
WAG NOISE DOUBLE CATCHER

WAG NOISE CATCHER REFLECTOR

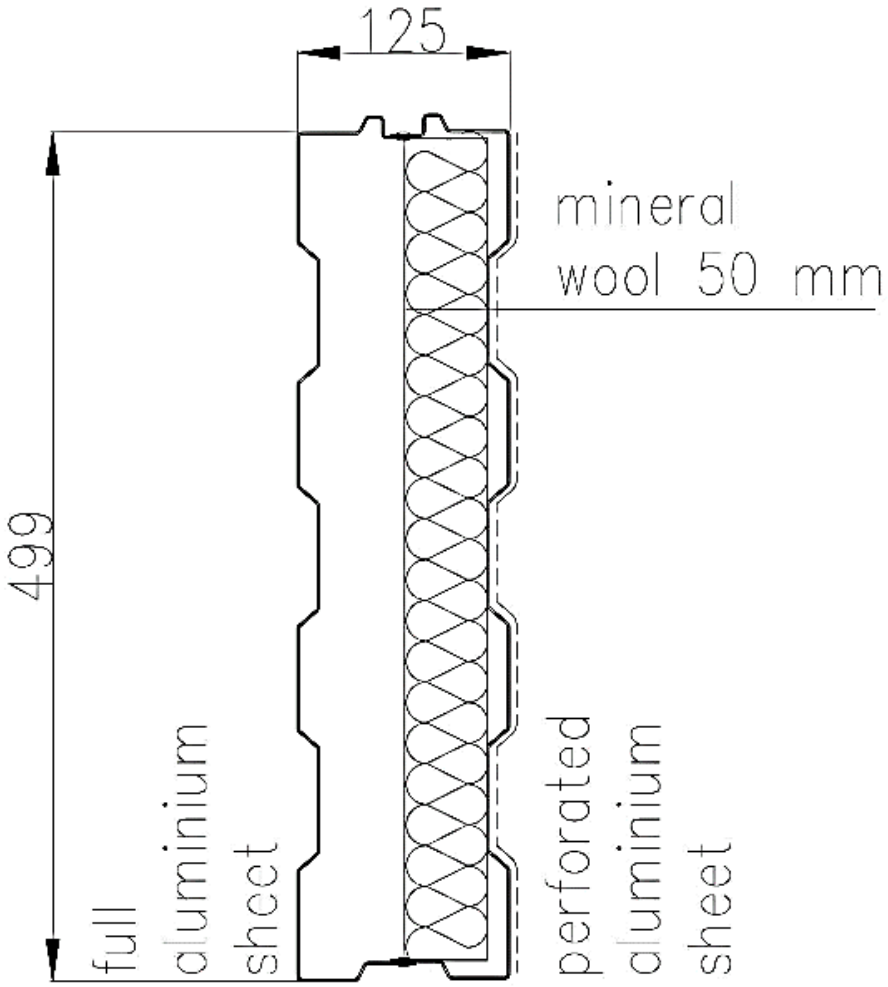
FILLINGS OF ACOUSTIC SCREENS

SINGLE-SIDED ABSORPTION ALUMINUM PANELS

CE



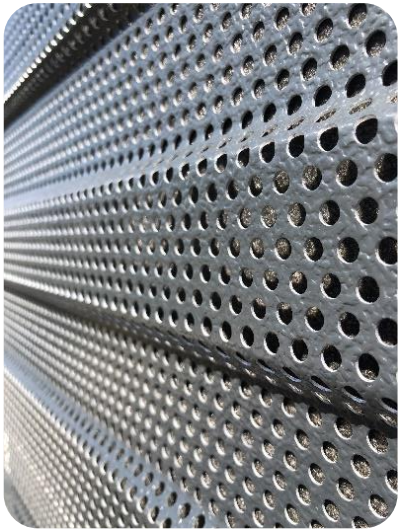
WAG NOISE CATCHER



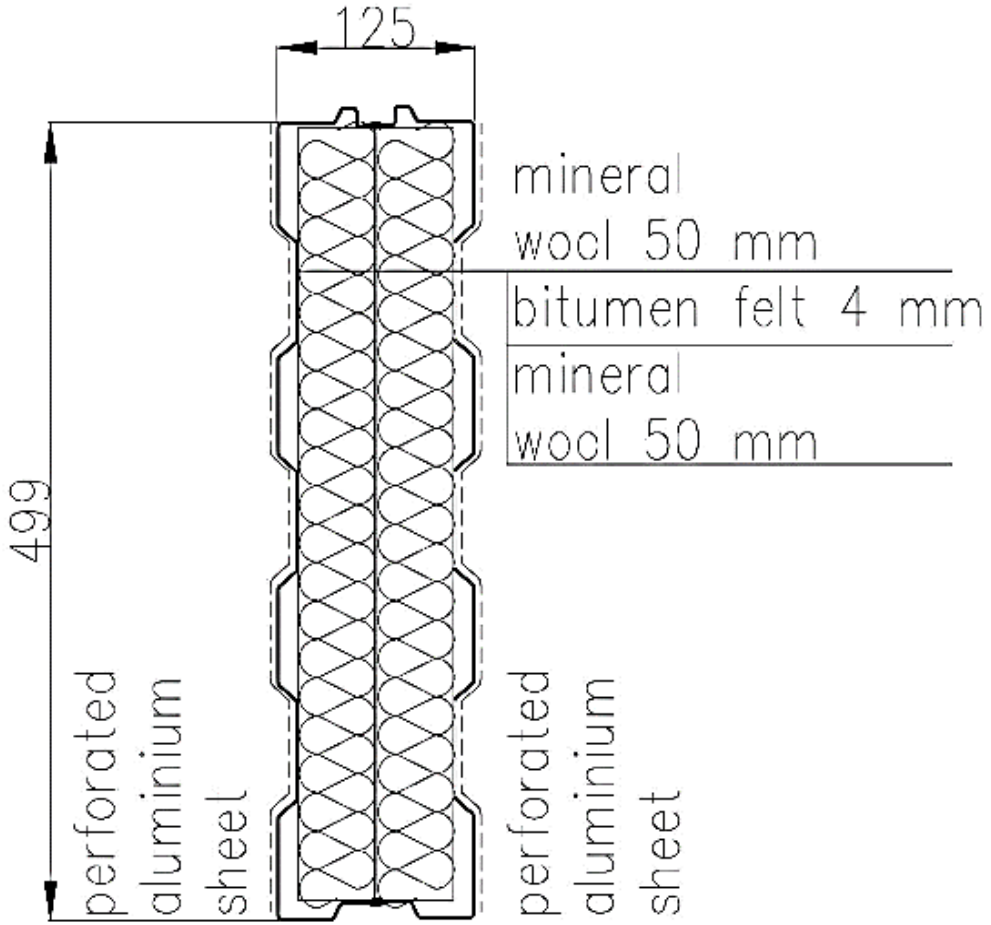
FILLINGS OF ACOUSTIC SCREENS

ALUMINUM PANELS ABSORBING ON BOTH SIDES

CE



WAG NOISE DOUBLE CATCHER

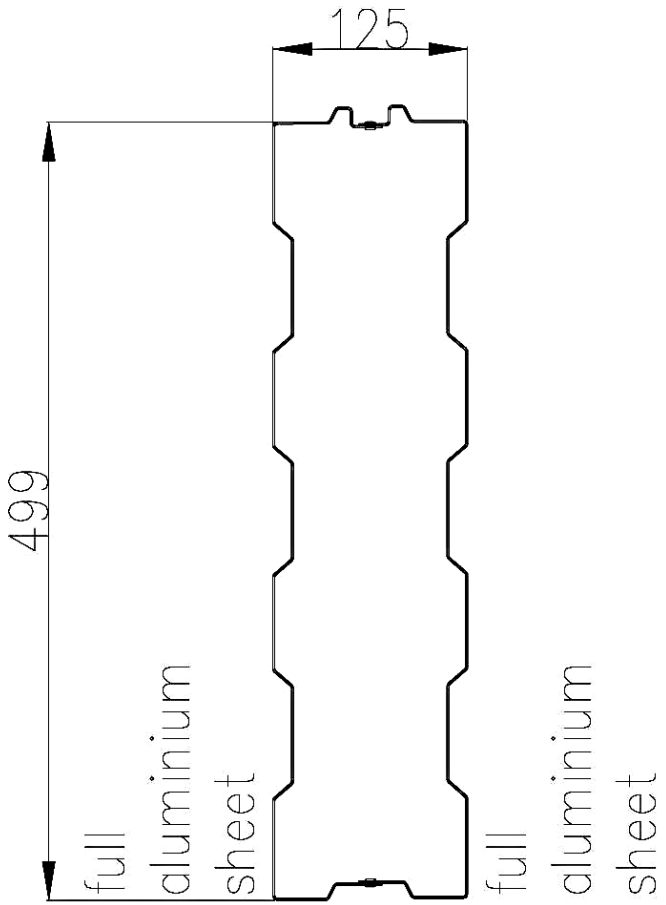


FILLINGS OF ACOUSTIC SCREENS

REFLECTIVE ALUMINUM PANELS

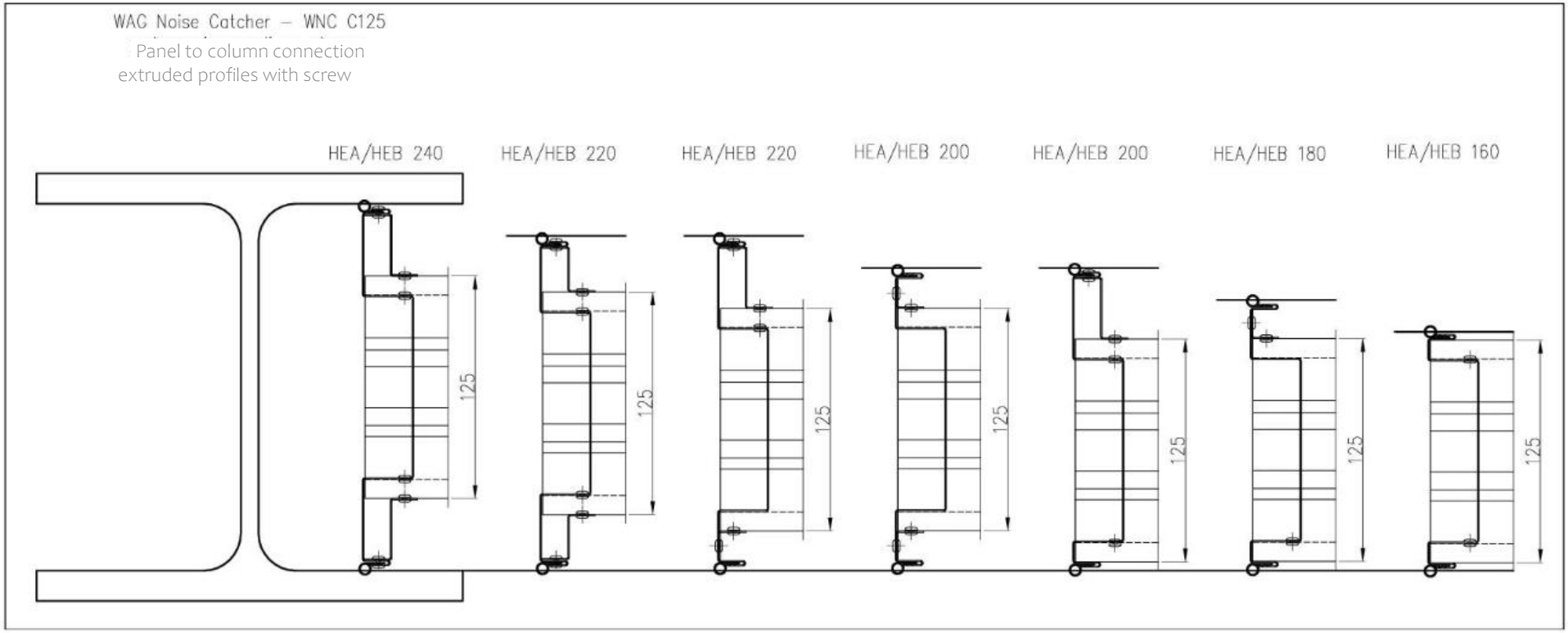
CE

WAG NOISE CATCHER
REFLECTOR



FILLINGS OF ACOUSTIC SCREENS

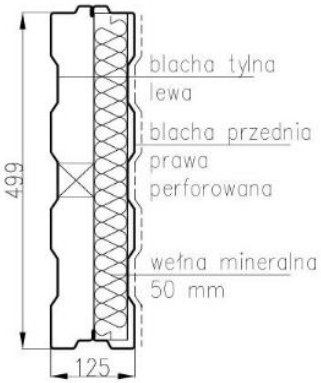
TYPE OF ALUMINIUM BASICS



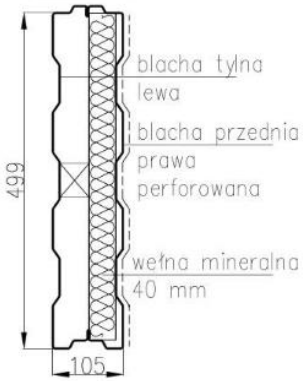
FILLINGS OF ACOUSTIC SCREENS

NEW TYPE OF ALUMINIUM PANELS

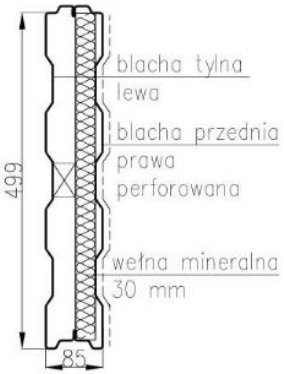
WAG Noise Catcher – WNC C125
jednostronnie perforowany 1x50
skala 1:5



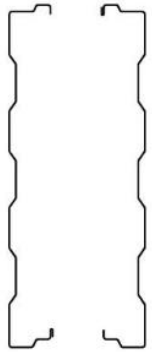
WAG Noise Catcher – WNC C105
jednostronnie perforowany 1x40
skala 1:5



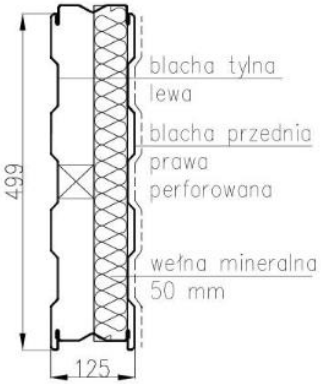
WAG Noise Catcher – WNC C85
jednostronnie perforowany 1x30
skala 1:5



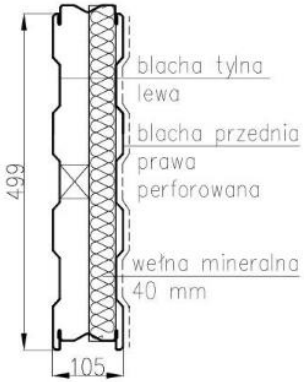
WNC C
widok rozstrzelony



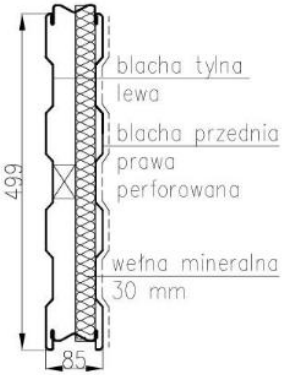
WAG Noise Catcher – WNC D125
jednostronnie perforowany 1x50
skala 1:5



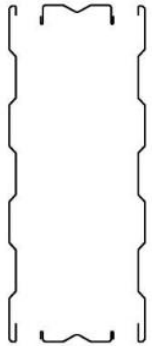
WAG Noise Catcher – WNC D105
jednostronnie perforowany 1x40
skala 1:5



WAG Noise Catcher – WNC D85
jednostronnie perforowany 1x30
skala 1:5



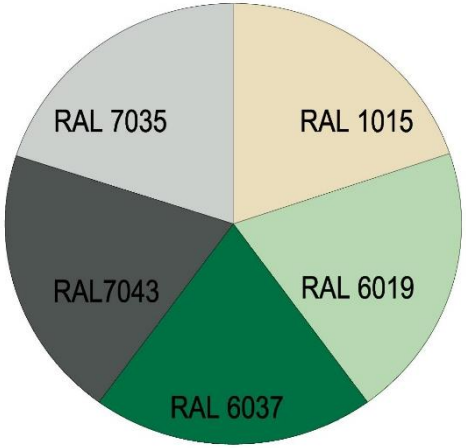
WNC D
widok rozstrzelony
skala 1:5



FILLINGS OF ACOUSTIC SCREENS

ACOUSTIC PANELS AND OCTAGONAL NOISE DIFFUSER ARE AVAILABLE IN COLORS FROM THE RAL PALETTE

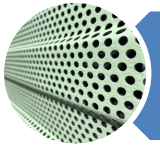
OUR STANDARD COLOURS ARE:



Other colours are available at customer's request

Factory painted thickness 25µm

Painting after perforation and forming – standard QUALICOAT – thickness 80µm



FILLINGS FOR TRANSPARENT REFLECTIVE SCREENS

WNR T PMMA REFLECTIVE PANEL 12

	Property	Declared value	Reference document
1.	Sound absorption coefficient	NDP	PN-EN 1793-1
2.	Airborne sound insulation coefficient	DL_R=29 dB, klasa B3	PN-EN 1793-2
3.	Weighted index of specific acoustic insulation	Rw=31 dB	PN-EN ISO 717-1
4.	Maximum wind load and static load	1,45 kN/m2 [Lmax = 4000 mm]	EN 1794-1 Annex A
5.	Breakin load	2,54 kN/m2 [Lmax = 4000 mm]	Numerical analysis and stone impact resistance of acoustic transparent panel WNR T type PMMA 15
6.	Dry weight	15,3 kg/m2 dla [1,0 m x 4,0 m]	EN 1794-1 Annex B
7.	Stone impact resistance	Complies	EN 1794-1 Annex C
8.	Resistance to brush fire	Class 3	EN 1794-2 Annex A
9.	Environmental protection	100% Recyclable	EN 1794-2 Annex C
10.	Escape route	Complies	EN 1794-2 Annex D
11.	The ability to reflect light	NDP	EN 1794-2 Annex E
12.	Transparency	NPD	EN 1794-2 Annex F
13.	Durability of functional and non-acoustic properties	25 years	EN 14389-2:2004

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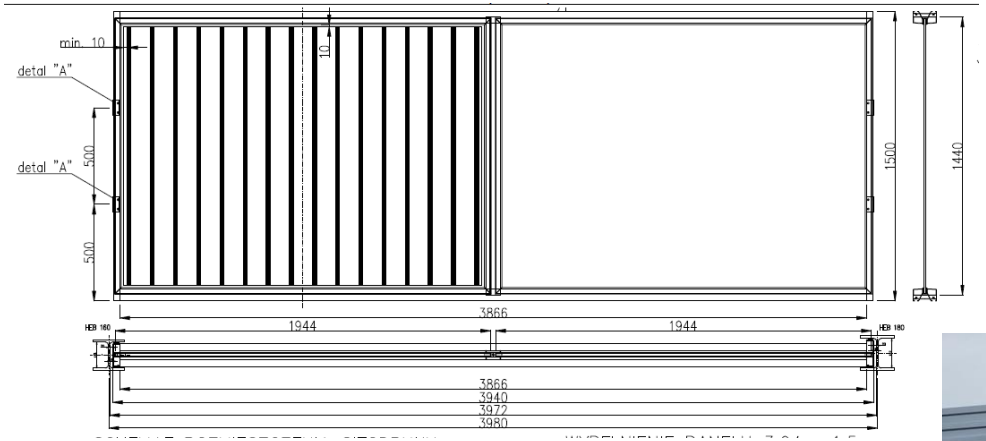
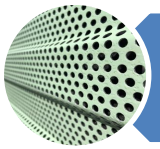
FILLINGS FOR TRANSPARENT REFLECTIVE SCREENS WNR T PMMA 12

WNR T PMMA REFLECTIVE PANEL 12





FILLINGS FOR TRANSPARENT REFLECTIVE SCREENS WNR T PC8

REFLECTIVE PANEL WNR T PC8

	Property	Declared value	Reference document
1.	Sound absorption coefficient	NDP	PN-EN 1793-1
2.	Airborne sound insulation coefficient	DL_R=29 dB, klasa B3	PN-EN 1793-2
3.	Weighted index of specific acoustic insulation	Rw (C;Ctr) = 30 (-1; -4) dB	PN-EN ISO 10140-2
4.	Maximum normal characteristic load qk	0,73 kN/m2	EN 1794-1 Annex A
5.	Maximum dynamic load from snow removal	V = 50 km/h [10.0 kN/m2 x m2]	EN 1794-1 Annex E
6.	Dry weight	60 kg ± 5%	EN 1794-1 Annex B
7.	Brush fire resistance	Class 3	EN 17942 Annex A
8.	Environmental protection	100% Recyclable	EN 1794-2 Annex C
9.	Escape route	Complies	EN 1794-2 Annex D
10.	The ability to reflect light	NDP	EN 1794-2 Annex E
11.	Transparency	NDP	EN 1794-2 Annex F
12.	Durability of functional and non-acoustic properties	10 years	-

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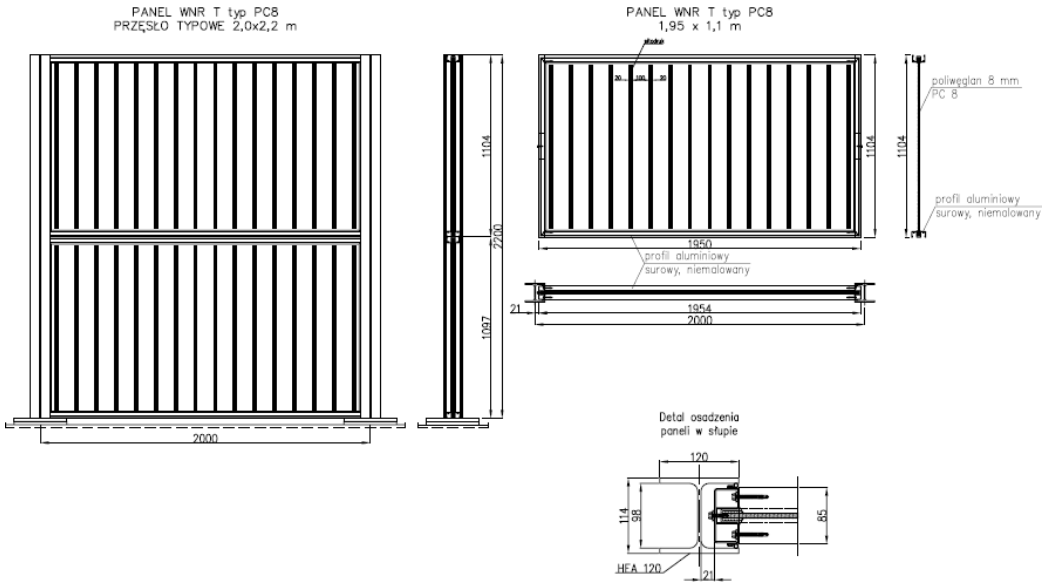
FILLINGS FOR TRANSPARENT REFLECTIVE SCREENS WNR T PC8

REFLECTIVE PANEL WNR T PC8



FILLINGS OF REFLECTING SCREENS

REFLECTIVE PANEL SYSTEMS –BRIDGE AND ROAD

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FILLINGS FOR TRANSPARENT REFLECTIVE SCREENS

TRANSPARENT PANELS

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FILLINGS FOR ANTI-GLARE SCREENS

WAG ANTIGLARE AW-80

WAG ANTIGLARE A-80

WAG ANTIGLARE PANELS TYPE: A-80, AW-80

WIDTH	0,41M
HEIGHT	0,41M
LENGTH	do 5,00m
MAX. WIND LOAD QLS(l=5,0m)	2,5kN/m2
TYPE OF MOUNTING	installation between the shelves of the HEA/B I-beam
SPACING OF SUPPORT STRUCTURE	Up to 2,00m
TYPE OF MATERIAL	aluminium/wood
DRY WEIGHT	4,00kg/m2; 7,20kg/m2
ENVIRONMENTAL PROTECTION	recycling 100%
COLOR	RAL 7035, RAL 6019, RAL 1015, color of natural aluminum

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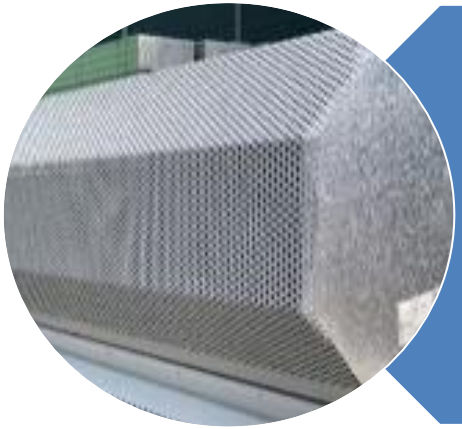
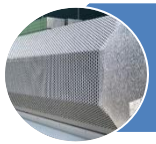
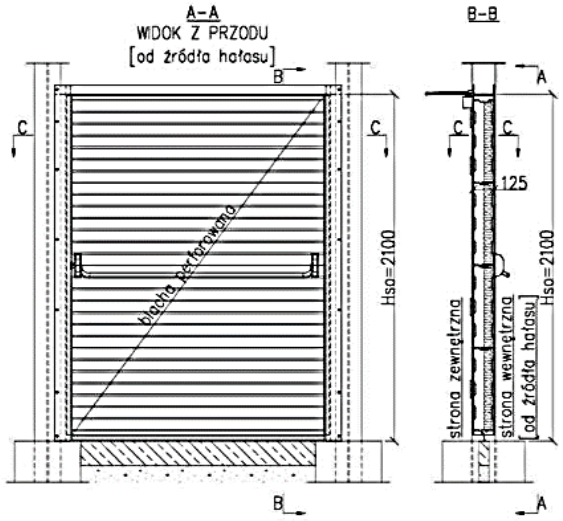


ACCESSORIES FOR ACOUSTIC SCREENS



ACCESSORIES FOR ACOUSTIC SCREENS – EMERGENCY DOORS

ACOUSTIC EMERGENCY DOORS



Property	Declared value
Door height Hsmin Door height Hso	2155 mm 2100 mm
Door width Ls Door width Lso90	1350÷2000 mm 964÷1614 mm
Door leaf thickness	125 mm
Cross-section of door supporting pole	HEA 160/ HEB 160
Escape route	Meets the requirements
The door leaf is filled with WNC B acoustic panels	Meets the requirements
Sound absorption coefficient for WNC B panel	DLa = 14 dB
Airborne sound insulation coefficient for WNC B panel	DLR = 26 dB
Fasteners and hinges	Aluminium, Stainless steel
Environmental protection	100% recycable
Durability of non-acoustic performance	Not less than 10 years
Inflammability	Non-flammable materials
Door weight in accordance 1÷2	50÷67 kg

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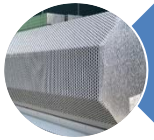
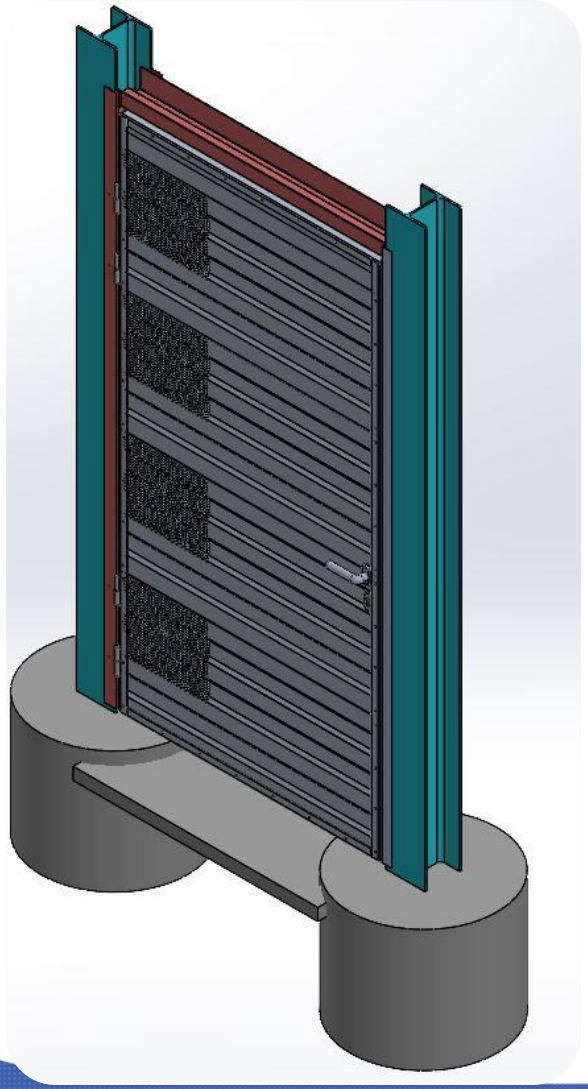
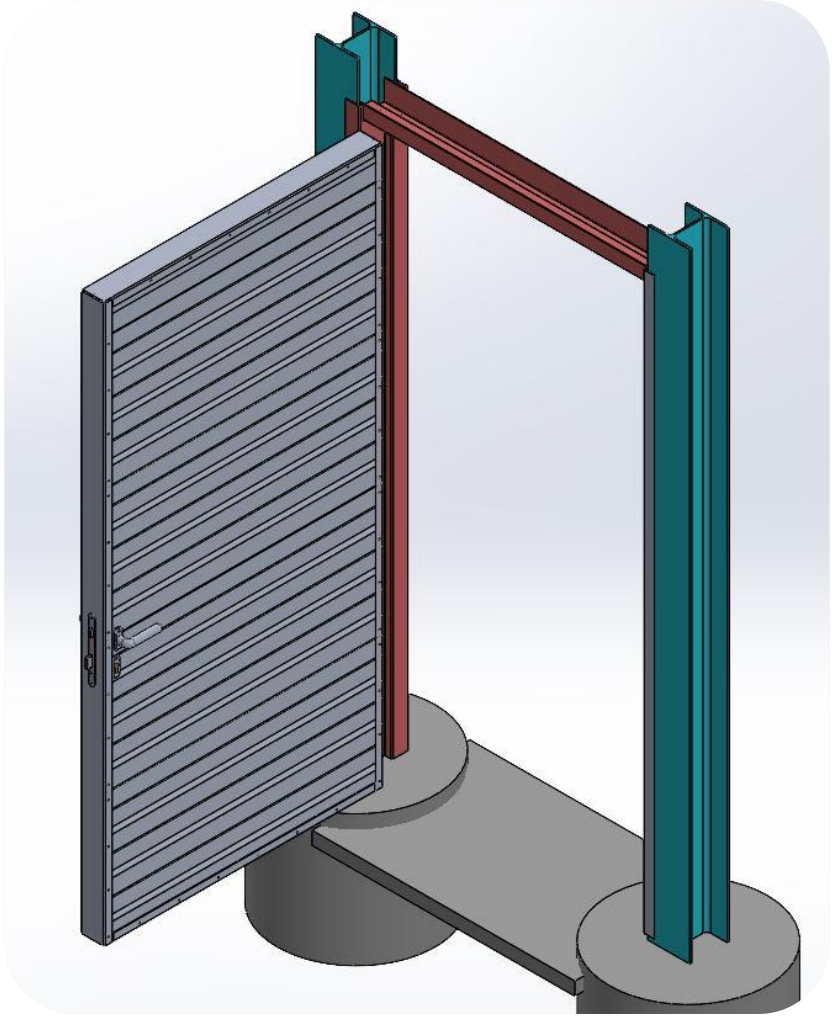


ACCESSORIES FOR ACOUSTIC SCREENS – EMERGENCY DOORS





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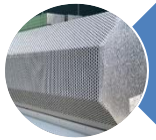
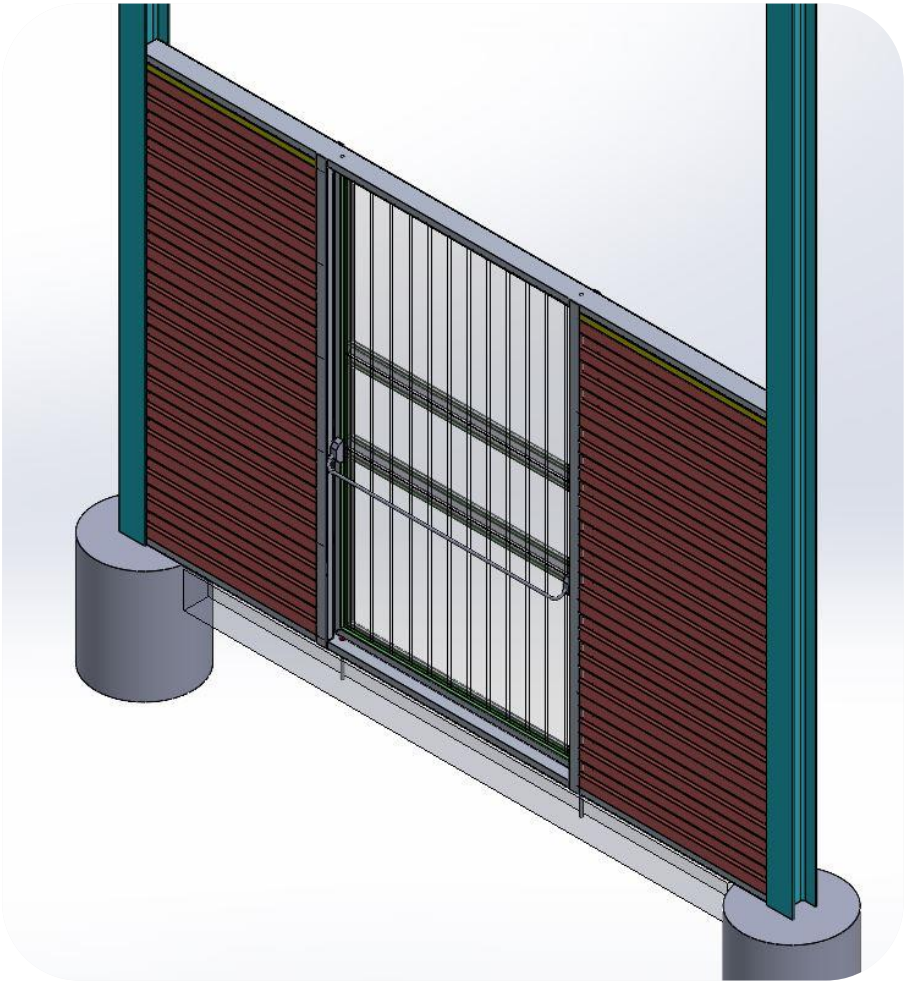
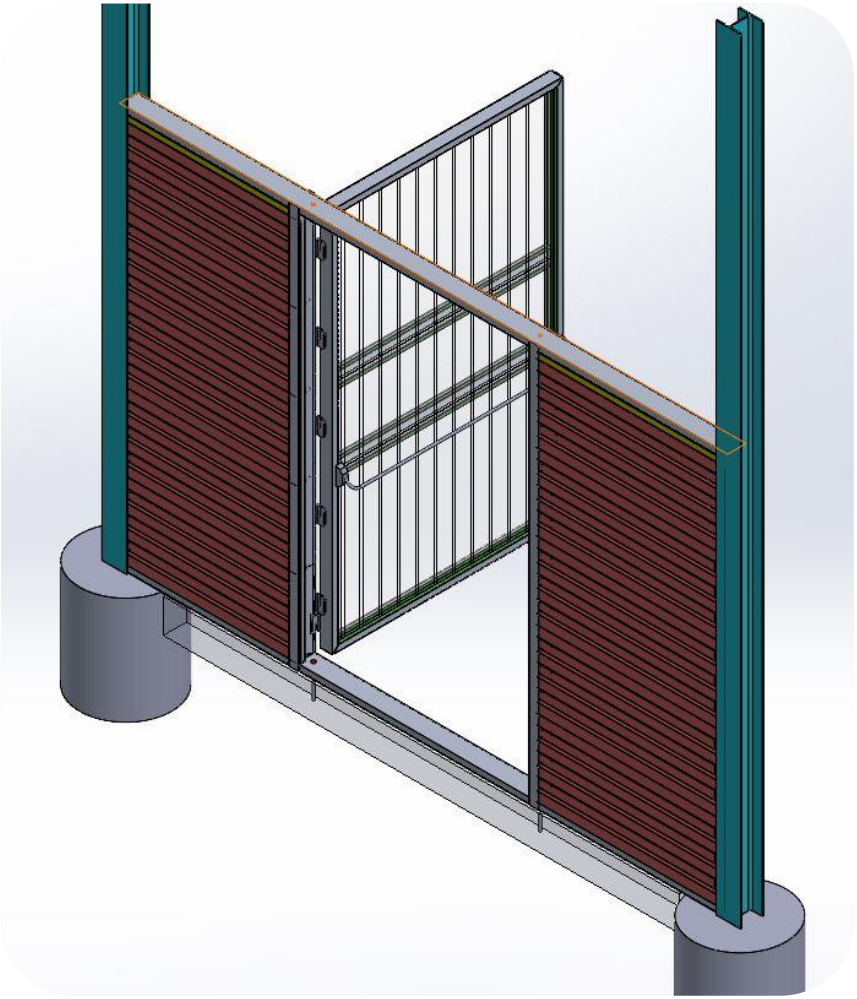


ACCESSORIES FOR ACOUSTIC SCREENS – EMERGENCY DOORS IN THE SPAN





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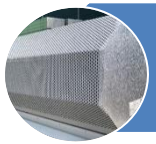
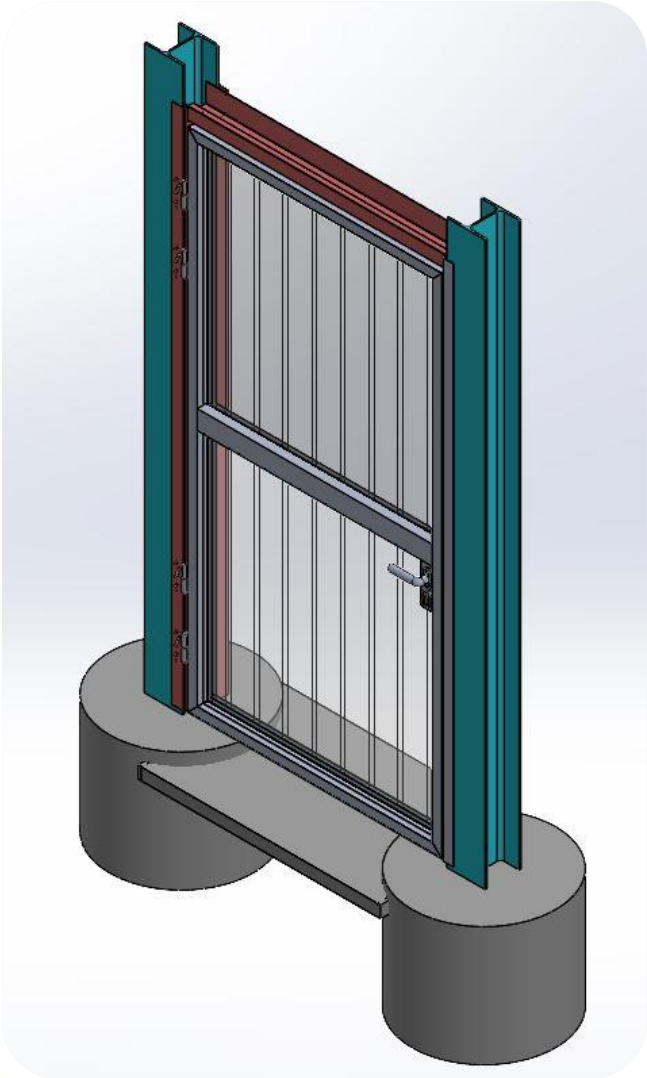
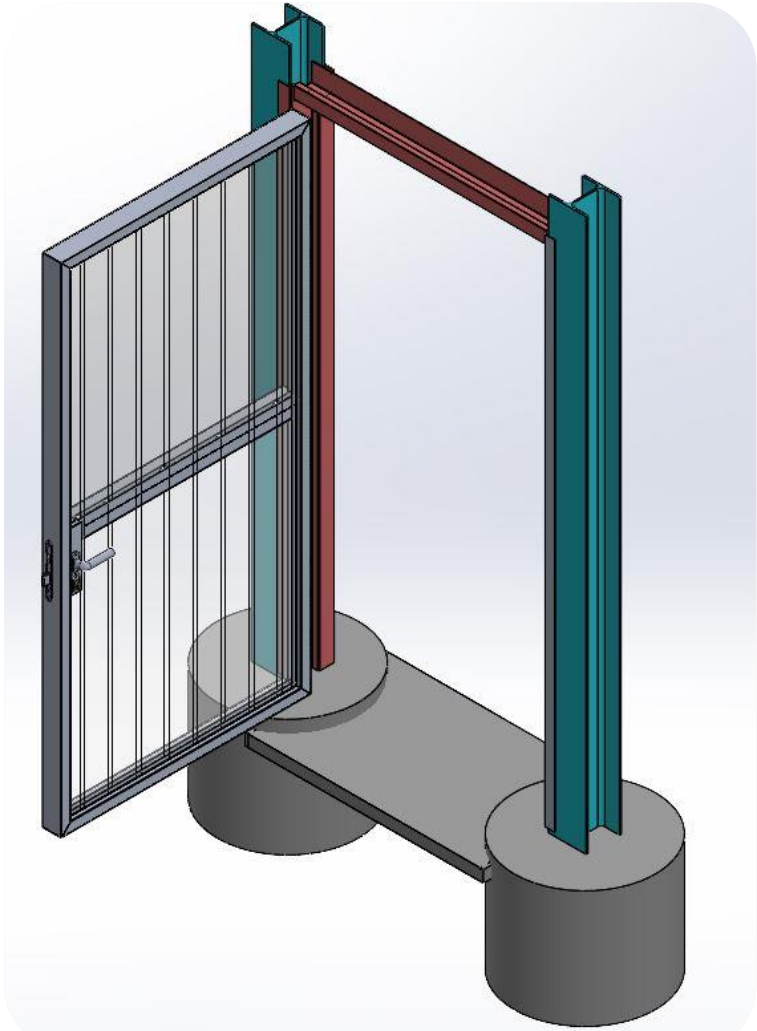


ACCESSORIES FOR ACOUSTIC SCREENS – TECHNICAL DOORS





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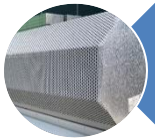
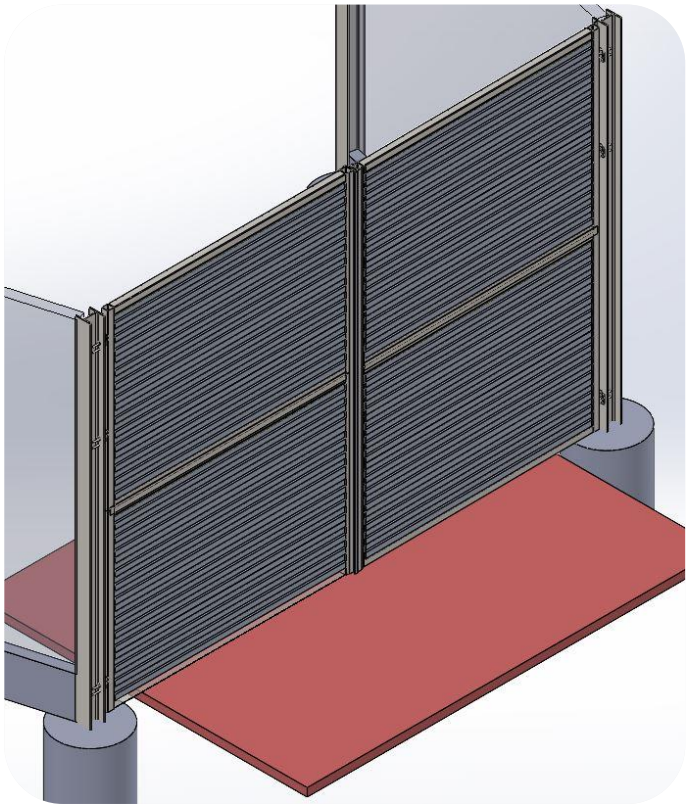
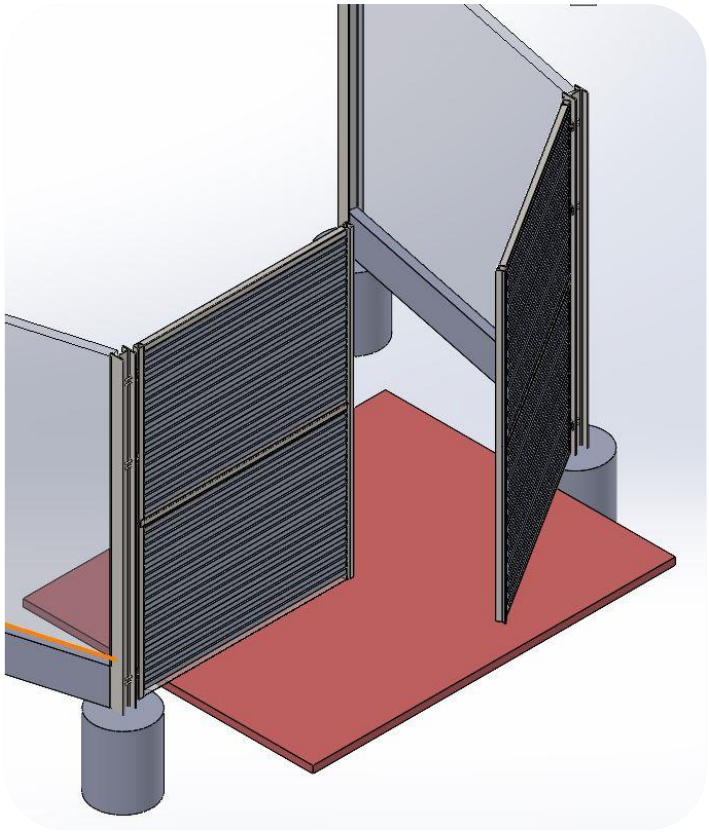


ACCESSORIES FOR ACOUSTIC SCREENS – SWING GATES





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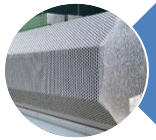

ACCESSORIES FOR ACOUSTIC SCREENS – SWING GATES

WAG S.A.
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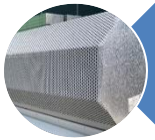
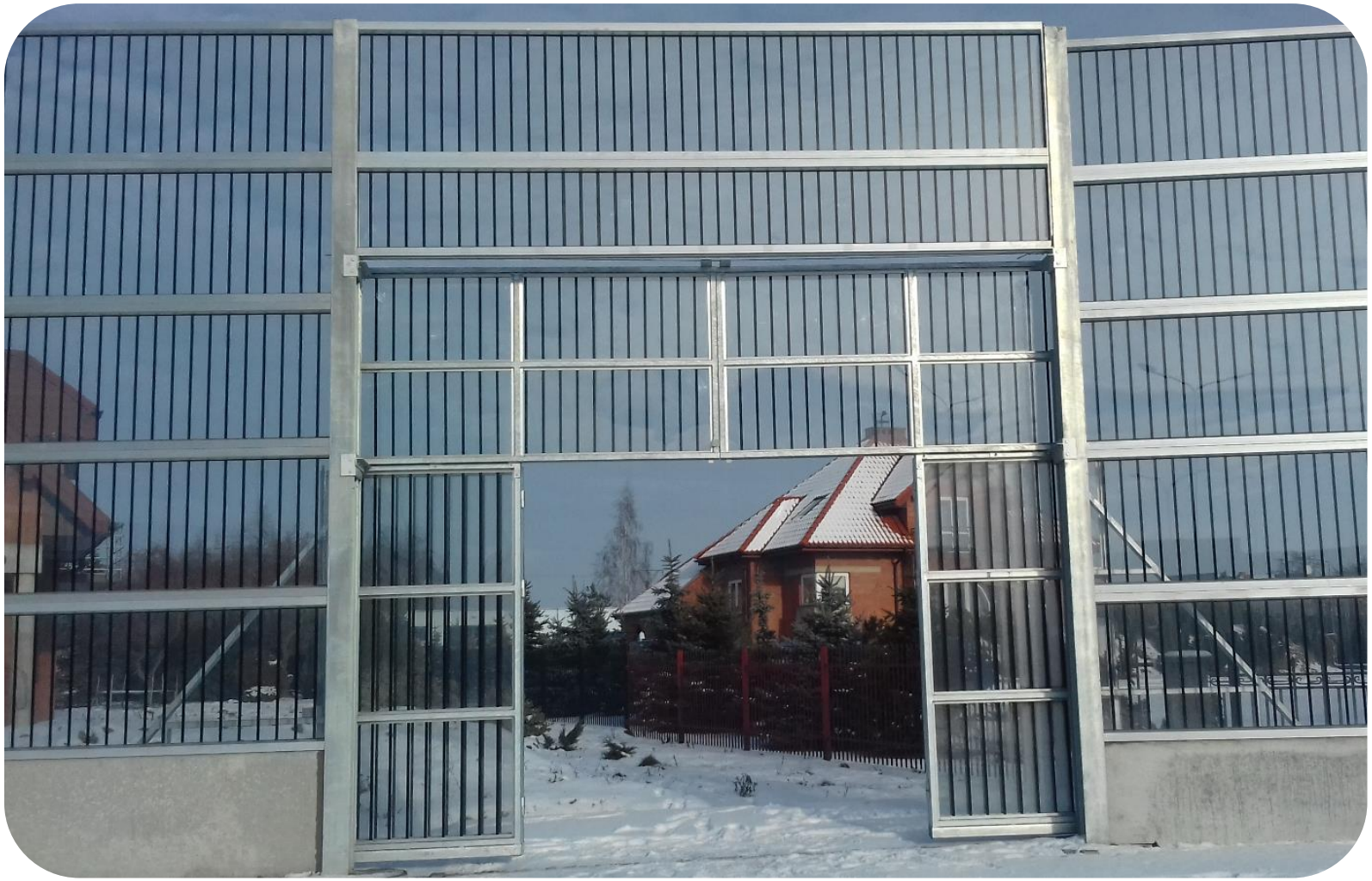


ACCESSORIES FOR ACOUSTIC SCREENS – GATES



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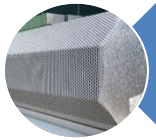
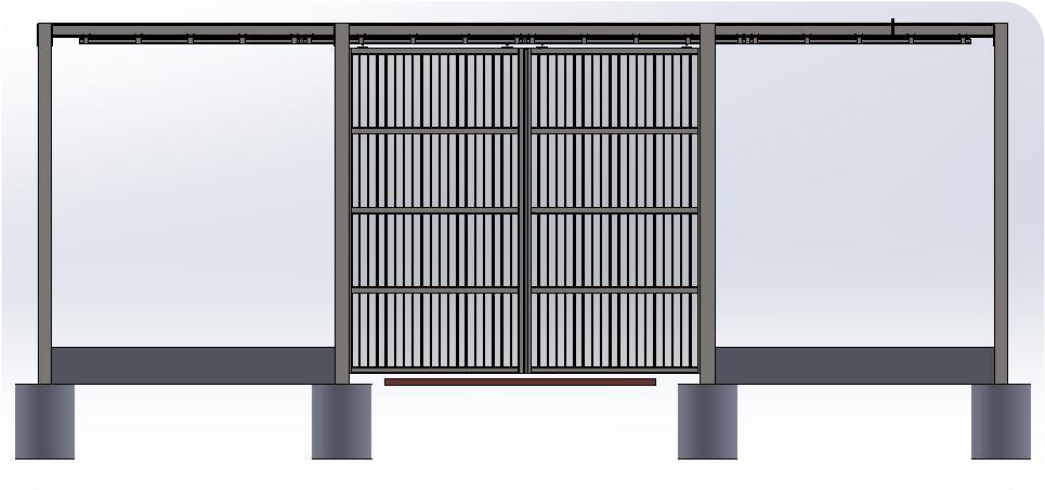
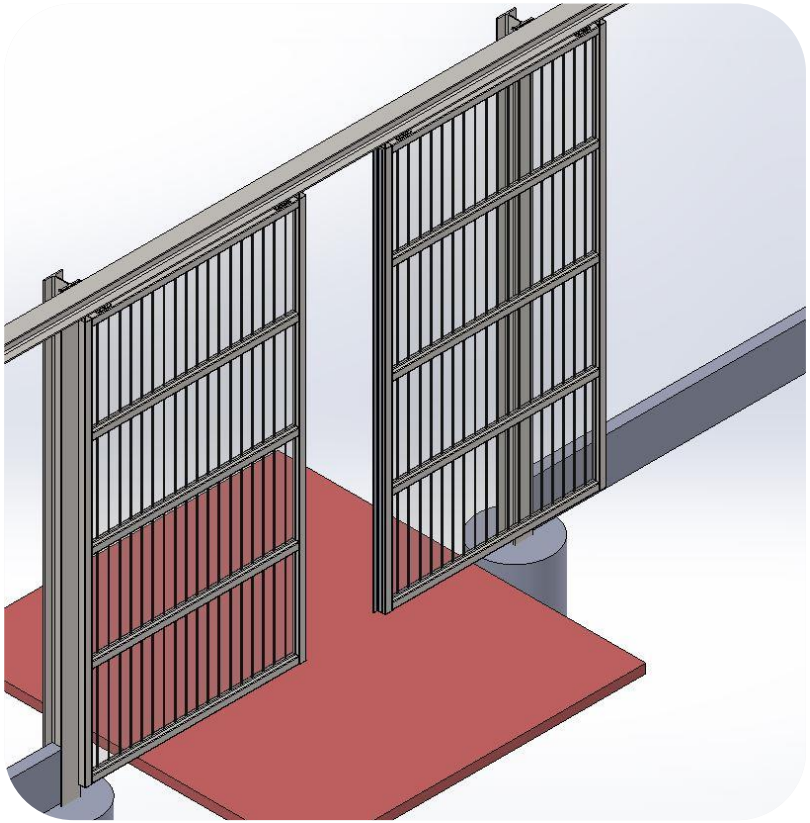
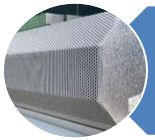


ACCESSORIES FOR ACOUSTIC SCREENS – SLIDING GATES





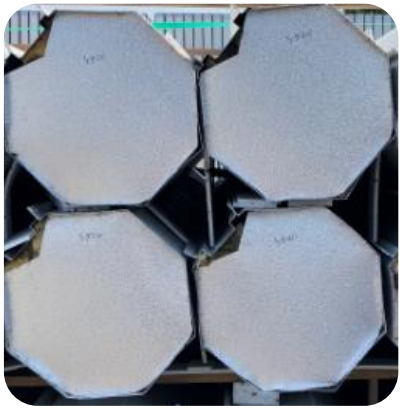


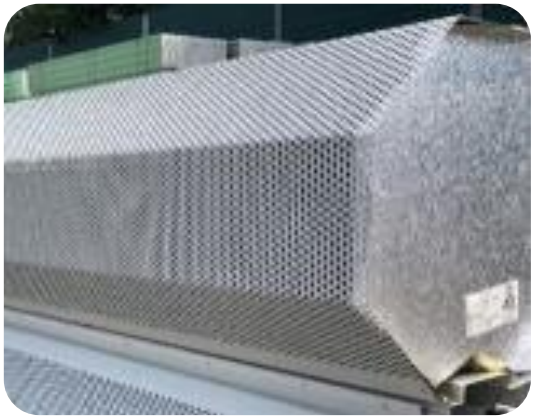
ACCESSORIES FOR ACOUSTIC SCREENS – OCTAGONAL NOISE REDUCERS

OKTAGONAL WAG NOISE REDUCERS

Notified body no. 1020
Report No. 1020-CPR-040 054113

The product complies with requirements in standard
EN 14388:2005/AC:2008 – English version
PN-EN 14388:2009 – Polish version
Title of the standard: Road noise protection devices. Specification





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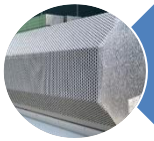
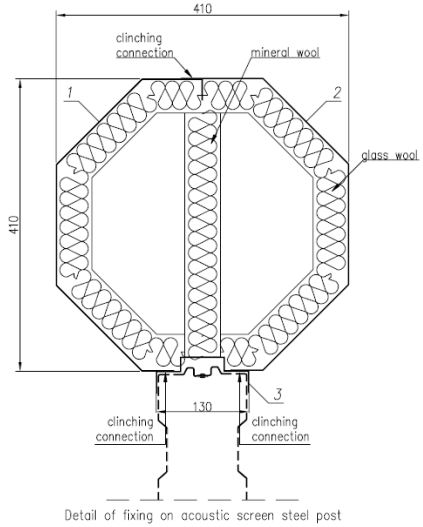
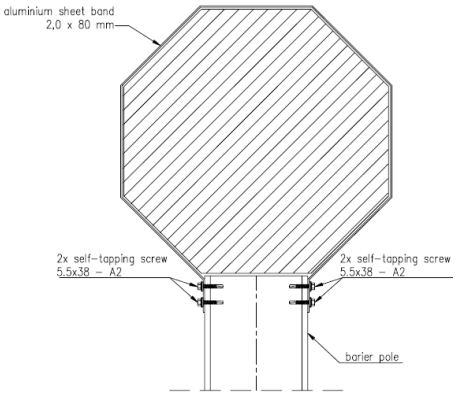


ACCESORIES FOR ACOUSTIC SCREENS

OKTAGONAL WAG NOISE REDUCERS



Detail of fixing on acoustic screen steel post



WIDTH	0,41M
HEIGHT	0,41M
LENGTH	Up to 5,00m
MAX. WIND LOAD QLS(l=5,0m)	2,5kN/m2
TYPE OF MOUNTING	montaż na słupach dwuteowych HEB/A przy pomocy opasek
SPACE OF SUPPORT STRUCTURE	do 5,00m
TYPE OF MATERIAL	Aluminium
DRY WEIGHT	7,29kg/mb
ENVIRONMENTAL PROTECTION	100% recyclable
COLOUR	RAL

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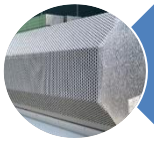

ACCESSORIES FOR ACOUSTIC SCREENS – PROTECTIVE NETS FOR BATS

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MANUFACTURING FOUNDATION PILES FOR ACOUSTIC SCREENS USING DRIVEN STEEL PILE TECHNOLOGY

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE WARSAW RAILWAY STATION -WŁOCHY


KOMATSU
KOMATSU
Warszawa Włochy

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE WARSAW RAILWAY STATION-WŁOCHY

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE WARSAW RAILWAY STATION-WŁOCHY

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE FOCUS MALL SHOPPING GALLERY IN ZIELONA GÓRA

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE FOCUS MALL SHOPPING GALLERY IN ZIELONA GÓRA

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE FOCUS MALL SHOPPING GALLERY IN ZIELONA GÓRA

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE FOCUS MALL SHOPPING GALLERY IN ZIELONA GÓRA

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ACOUSTIC SCREEN USING DRIVEN STEEL PILE TECHNOLOGY - SCREEN AT THE FOCUS MALL SHOPPING GALLERY IN ZIELONA GÓRA

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FOUNDATION OF SCREEN POLES IN THE CASE OF ROCKY GROUND

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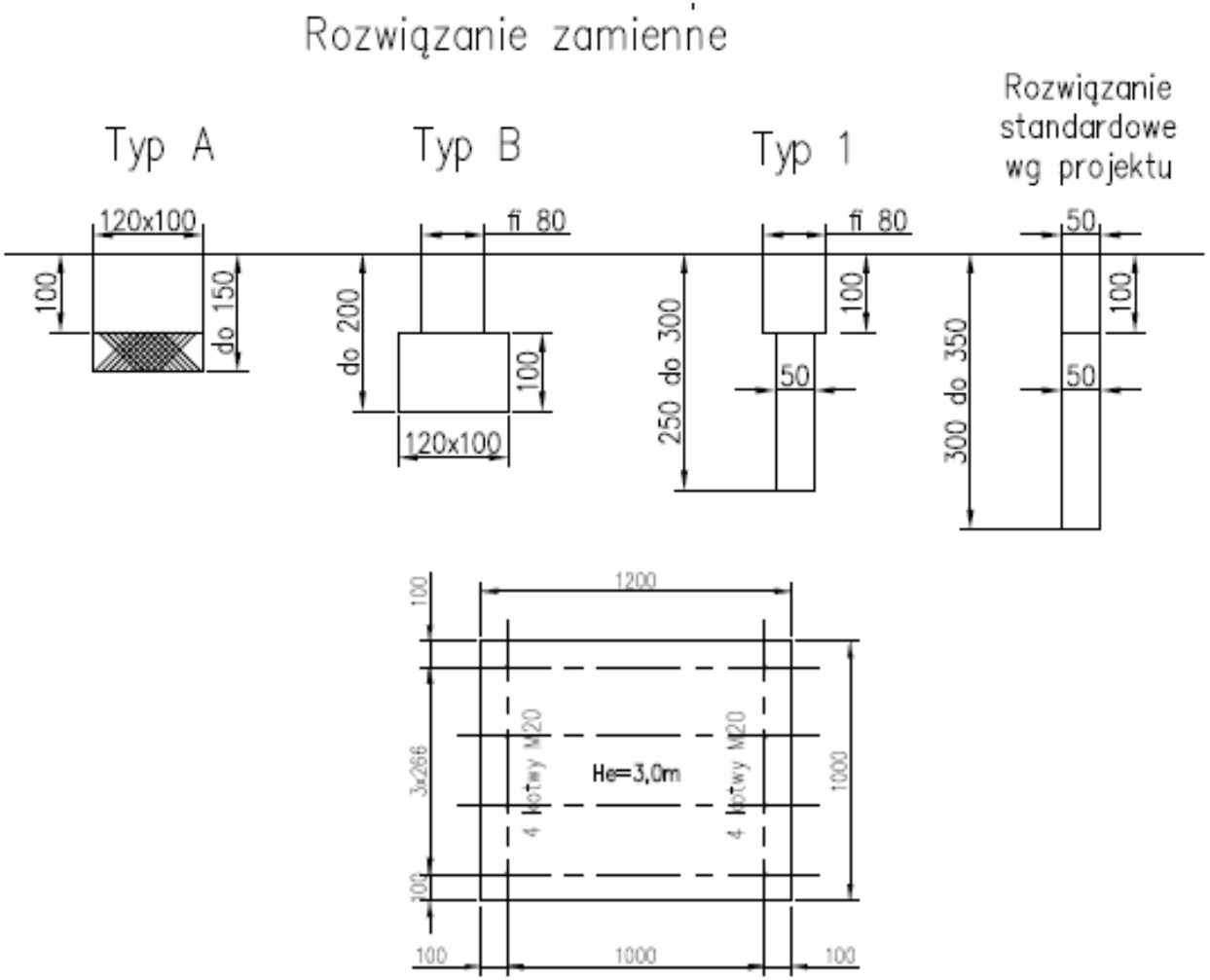
EXAMPLE OF REPLACEMENT SOLUTION FOR FOUNDING SCREEN POLES IN THE CASE OF ROCKY GROUND FOR PROJECT: "CONSTRUCTION OF THE WAŁBRZYCH BYPASS"



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EXAMPLE OF REPLACEMENT SOLUTION FOR FOUNDING SCREEN POLES IN THE CASE OF ROCKY GROUND FOR PROJECT: "CONSTRUCTION OF THE WAŁBRZYCH BYPASS"

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EXAMPLE OF REPLACEMENT SOLUTION FOR FOUNDING SCREEN POLES IN THE CASE OF ROCKY GROUND FOR PROJECT: "CONSTRUCTION OF THE WAŁBRZYCH BYPASS"

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EXAMPLE OF REPLACEMENT SOLUTION FOR FOUNDING SCREEN POLES IN THE CASE OF ROCKY GROUND FOR PROJECT: "CONSTRUCTION OF THE WAŁBRZYCH BYPASS"

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CONSTRUCTION OF SHEET WALLS REINFORCED WITH CAP

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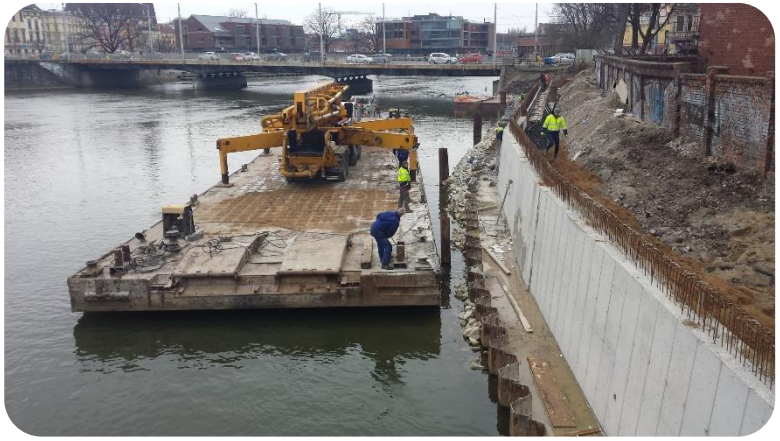
CONSTRUCTION OF SHEET WALLS TOPPED WITH CAP FOR PROJECT: "MODERNIZATION OF THE ODRA CITY CENTER BOULEVARDS"



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SELF-SUPPORTING PALISADE FACING SYSTEM

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Palisade facing system used in the project: "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Photo1. Photo before the start of the project entitled: "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Photo.2. Photo after the palisade facing for the project titled: "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Design assumptions for the project. "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250”

Development of the palisade facing

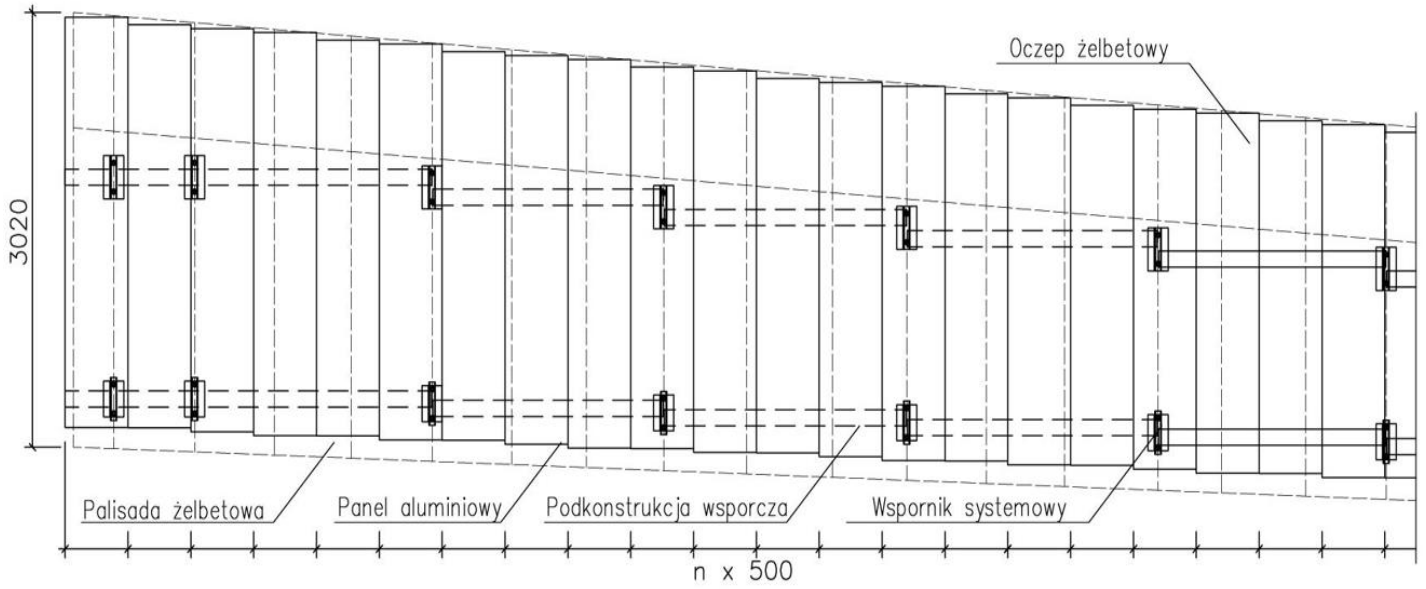

Photo.3. Designed extension of the palisade facing for the project titled: "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Design assumptions for the project. "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250”

Cross-section through the palisade

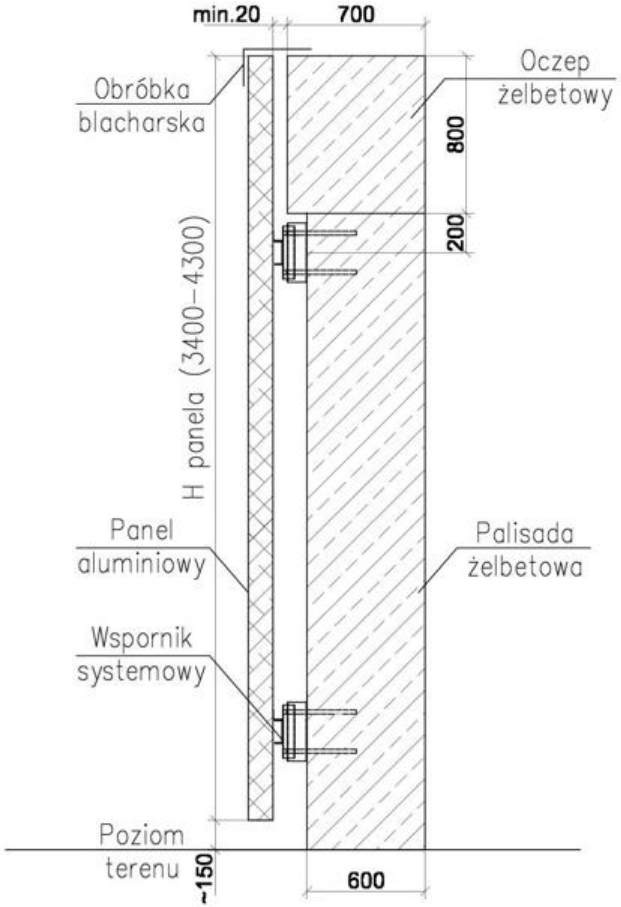

Photo 4. Designed cross-section through the palisade for the project. "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Design assumptions for the project. "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250”

Implementation stage for the task titled "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Photo 5. Execution of the substructure for the palisade facing at the implementation stage for the task titled "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Photo 6. Execution of the substructure for the palisade facing at the implementation stage for the task titled "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Design assumptions for the project. "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250”

Implementation stage for the task titled "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

Photo 7;8. Execution of the substructure for the palisade facing at the implementation stage for the task titled "Construction of the bypass of the city of Wałbrzych along national road No. 35 from km 2+350 to km 8+250"

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TYPES OF PANELS FOR CLADDING THE FENCE

Depending on their function, two types of panels can be used for facing the palisade:

Acoustic function - single-sided WAG Noise Catcher absorbing panels. The housing meets sound absorption requirements.

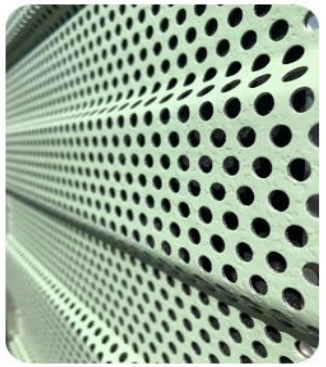
Architectural function - WAG Reflector reflecting aluminum panels. The casing does not require absorption, it is only an element of aesthetic finishing.

CE

Notified body no. 1020
Report No. 1020-CPR-040 054113

The product complies with requirements in standard
EN 14388:2005/AC:2008 – English version
PN-EN 14388:2009 – Polish version
Title of the standard:
Road noise protection devices.
Specification

WAG NOISE CATCHER REFLECTOR



WAG NOISE CATCHER

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TYPES OF PANELS FOR CLADDING THE FENCE

Tab. 1. Parameters of panels for cladding:

WIDTH	0,125 m	
HEIGHT	0,50 m	
LENGTH	Up to 5,00 m	
MAX. WINTER LOADS QLS (l=5,0	1,65 kN/m2 (optional up to 3,00 kN/m2)	
TYPE OF MOUNTING	installation between the shelves of the HEA/B I-beam	
SPACING OF SUPPORT STRUCTURE	up to 5,00 m	
TYPE OF MATERIAL	aluminium	
DRY WEIGHT	12,36 kg/m2	13,05 kg/m2
ENVIROMENTAL PROTECTION	100% recycling	
COLOUR	RAL	
SOUND INSULATION INDEX Rw	WNC typE B 32 dB	-
AIR SOUND INSULATION COEFFICIENT	WNC typE B 26 dB	WNR 21 dB
SOUND ABSORPTION COEFFICIENT	WNC typE B 14 dB	-

Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

Main features of the system::

- light aluminum housing (stainless material);
- enabling the removal of excess rainwater and possible soil and rock fragments;
- The cladding and supporting substructure do not transfer the loads to the steel palisade transoms (steel poles).
- Loads from the cladding panels transferred by the system hangers directly to the reinforced concrete piles.
- Elements of control and inspection of the space between the housing and the palisade:
  - Approximately every 10 m, the panel can be dismantled and the panel can be inspected at its full height;
  - Point inspection holes approximately every 30 m, used to control devices monitoring the tension force in nails (location of inspection holes depends on the needs of the ordering party and inventory measurements);
- EstheticAL appearance.

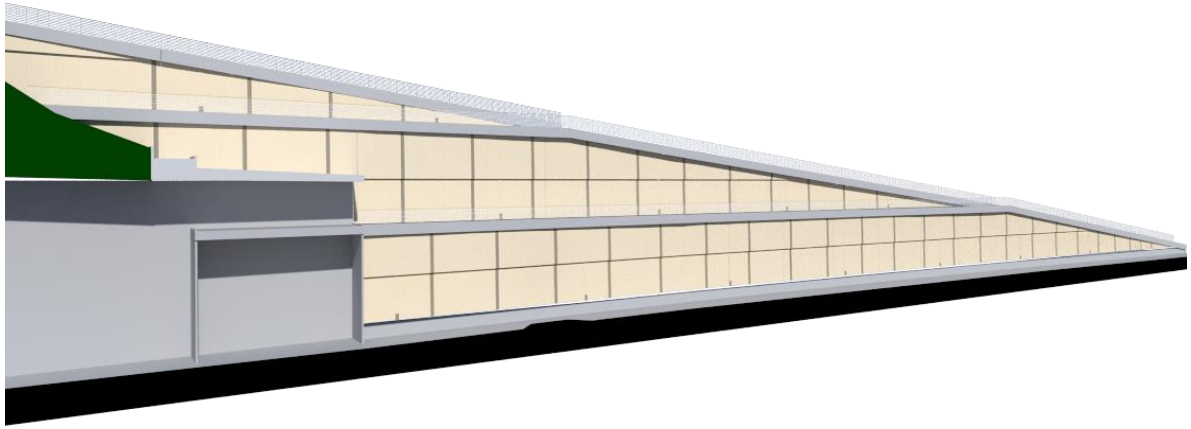

Photo 10. Architectural concept for the implementation titled "Construction of the S7 expressway, section Lubień - Rabka on the Naprawa - Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel”

Photo 11. Architectural concept for the implementation titled "Construction of the S7 expressway, section Lubień - Rabka on the Naprawa - Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

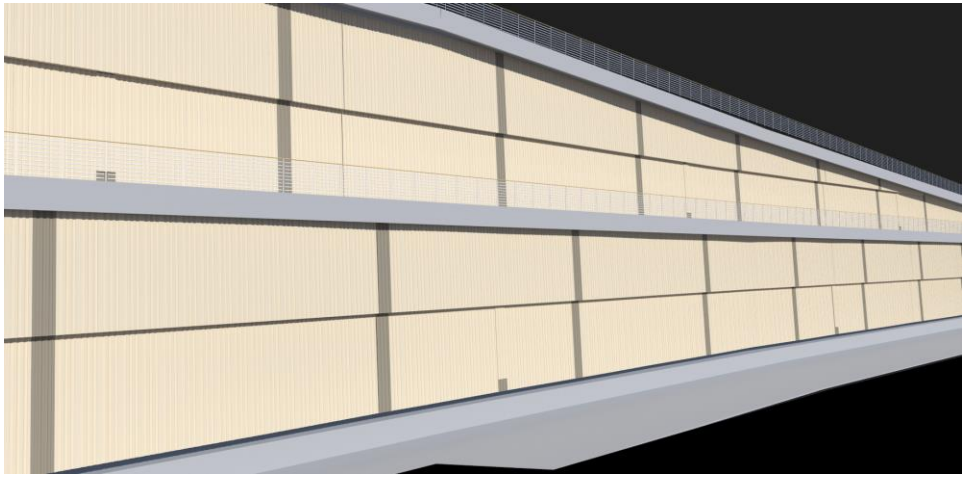

Photo 12. Architectural concept for the implementation titled "Construction of the S7 expressway, section Lubień - Rabka on the Naprawa - Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

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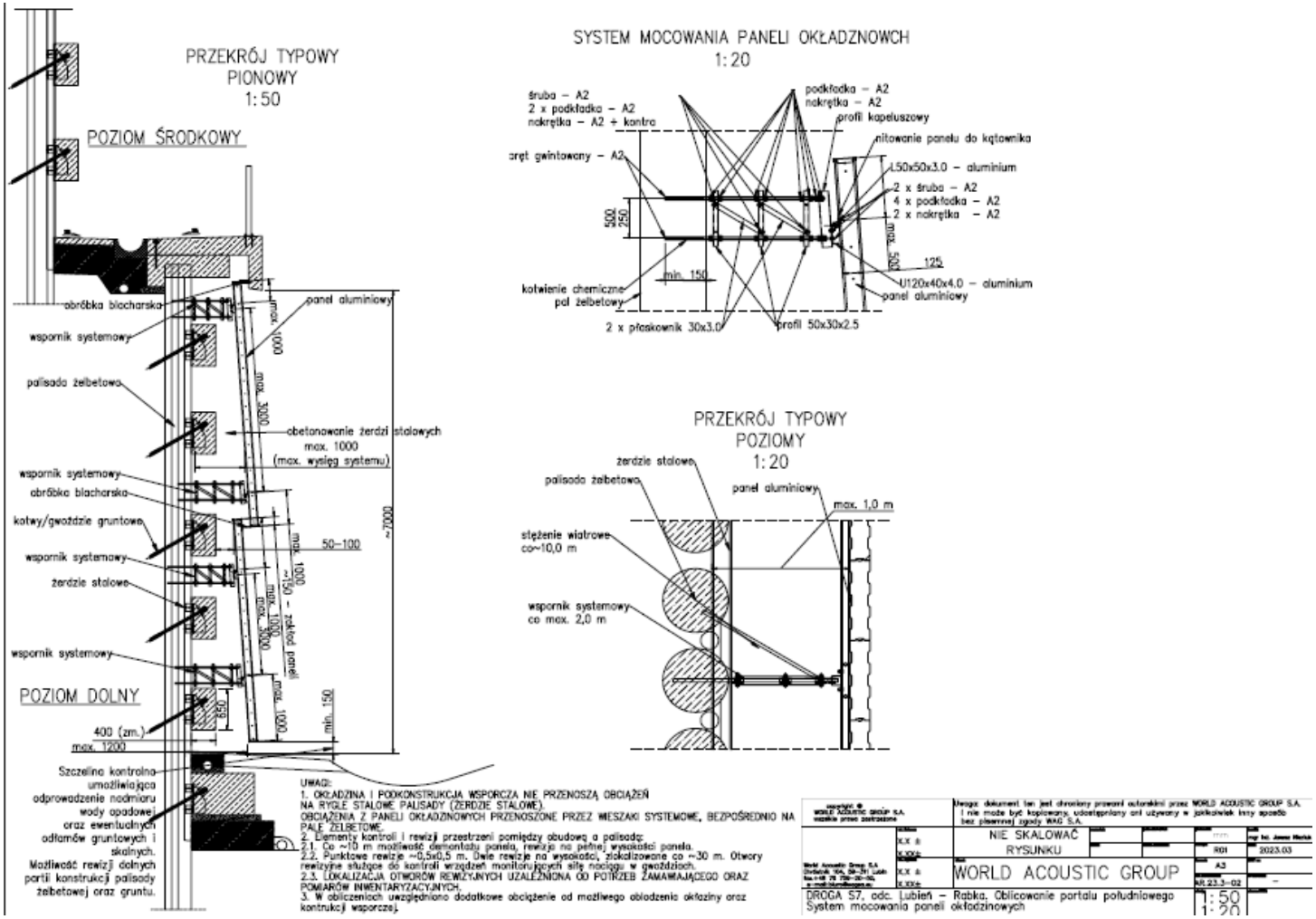
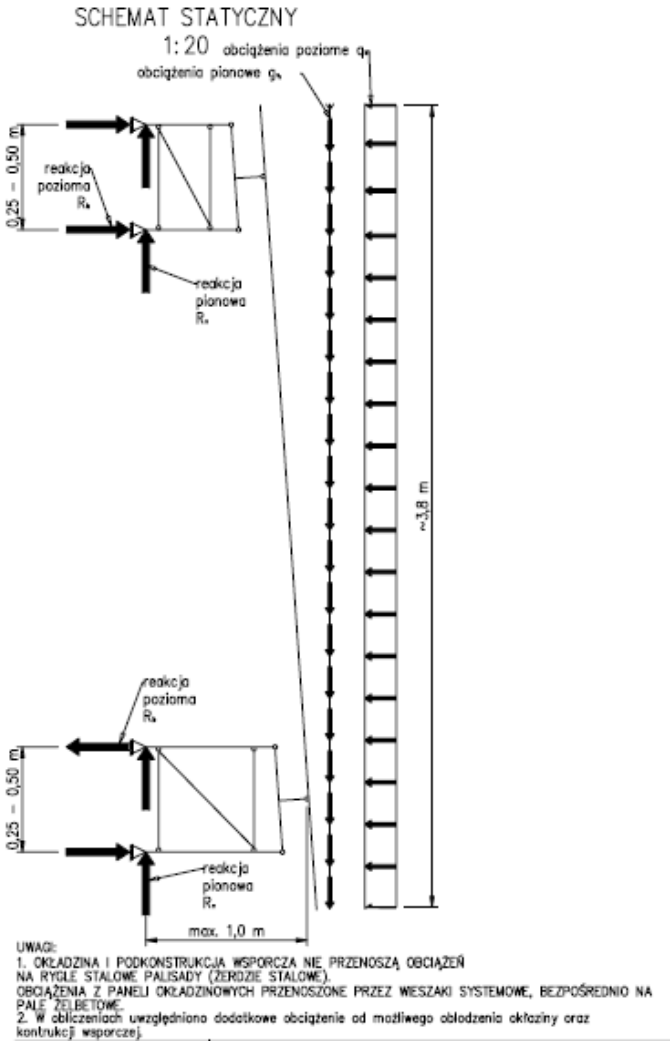
Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

Cladding panel fastening system (cross-section)



Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel”

Static diagram of loads acting directly on the palisade



Elements of control and inspection

Elements of control and inspection of the space between the housing and the palisade:

- Approximately every 10 m, the panel can be dismantled and the panel can be inspected at its full height;
- Point inspection holes approximately every 30 m, used to control devices monitoring the tension force in nails (location of inspection holes depends on the needs of the ordering party and inventory measurements);
- A control gap enabling the drainage of excess rainwater and possible soil and rock fragments. Possibility of inspecting the lower parts of the reinforced concrete palisade structure and the ground.

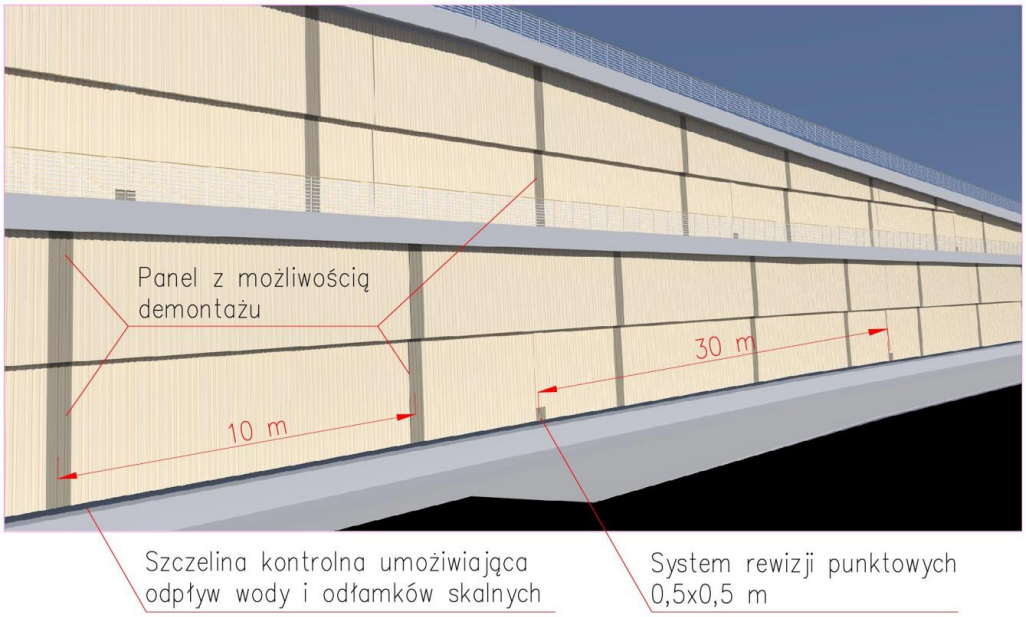


Photo 13. Elements of control and audit for the implementation of "Construction of the S7 expressway, section Lubień - Rabka on the Naprawa - Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel”

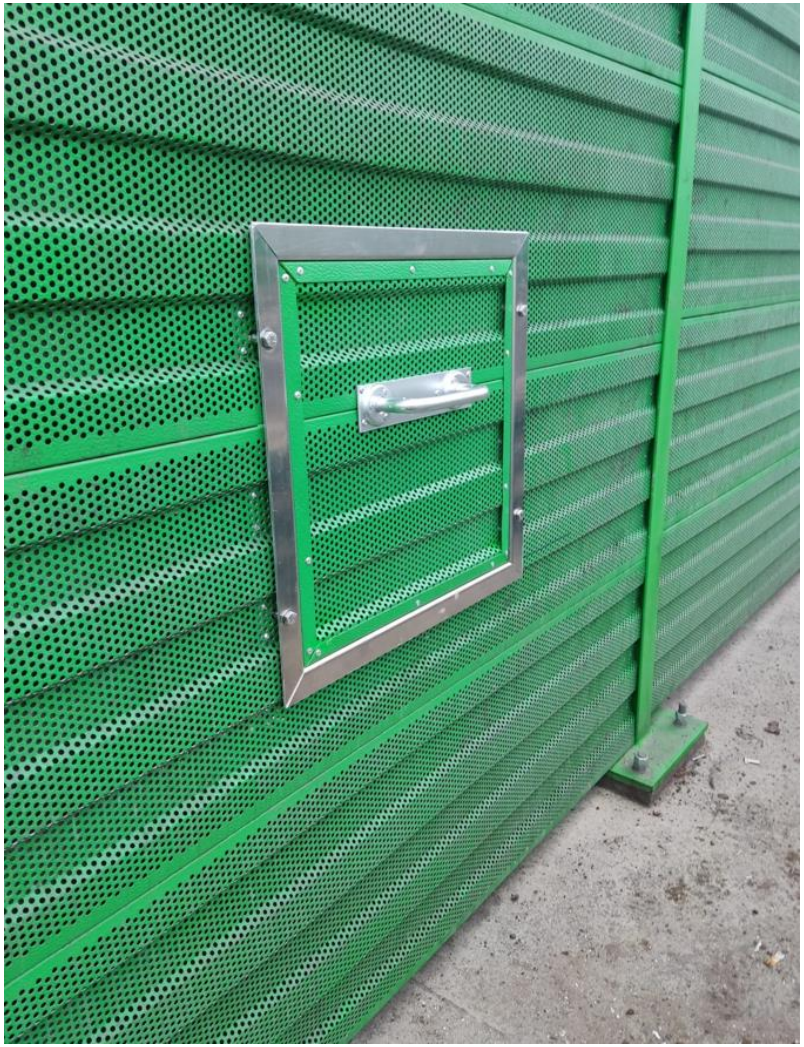


Photo 14. Photo of a point inspection hole used to check devices monitoring the tension force in nails

Architectural concept of the self-supporting MO6 wall cladding system for the contract titled: "Construction of the S7 expressway, section Lubień – Rabka on the Naprawa – Skomielna Biała section at km from approx. 721+170 to approx. 724+220 along with the construction of the tunnel"

Technical Data Sheet

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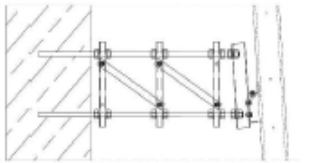
KARTA TECHNICZNA

SYSTEM MOCOWANIA PANELI OKŁADZINOWYCH DO ZASTOSOWANIA NA KONTRAKCIE PN.: „BUDOWA DROGI EKSPRESOWEJ S7, ODC. LUBIEŃ – RABKA NA ODCINKU NAPRAWA – SKOMIELNA BIAŁA W KM OD OK. 721+170 DO OK. 724+220 WRAZ Z BUDOWĄ TUNELU"

1. **Nazwa wyrobu:** *SYSTEM MOCOWANIA PANELI OKŁADZINOWYCH*
2. **Zastosowanie:** *System mocowania paneli okładzinowych umożliwia montaż paneli okładzinowych oraz tworzenie na licach palisad żelbetowych powierzchni o atrakcyjnych walorach estetycznych.*
3. **Producent:** *WORLD ACOUSTIC GROUP SPÓŁKA AKCYJNA, Chrástnik 104, 59-311 Lubin, NIP: 692-22-60-445, REGON: 390774191, tel. +48 76 75 92 050, biuro@wagsa.eu*
4. **Parametry techniczne systemu mocowania paneli okładzinowych**

Właściwość:	Wartość:
Wysięg wspornika: -L_{max}	1000 mm
Wysokość: - rozstaw prętów kotwiących	250 ÷500 mm
Maksymalny rozstaw: - w pionie - w poziomie	3000 mm 2000 mm
Maksymalne obciążenie wiatrem i obciążenie statyczne:	1,60 kN/m^2
Maksymalny ciężar okładziny:	0,15 kN/m^2
Maksymalne obciążenie dodatkowe (oblodzenie):	0,20 kN/m^2
Materiał: pręty gwintowane profile aluminiowe elementy złączne panel aluminiowy	-stal nierdzewna A2 -stop EN AW 6060, 6063, 3754 -stal nierdzewna A2, aluminium -stop 3103, 3005
Konstrukcja systemu:	wieszak, ramka
Kotwienie:	chemiczne
Parametry podłoża:	beton kl. min C30/37
Trwałość właściwości użytkowych	nie mniej niż 10 lat

+



Dane niezbędne od Inwestora w celu wykonania pełnej dokumentacji projektowej:

- Inwentaryzacja powykonawcza pali;
- Inwentaryzacja rygli poziomych i kotew/gwoździ;
- rozmieszczenie czujników pomiarowych siły w gwoździach;
- rozmieszczenie sączków [dok projektowa i powykonawcza].

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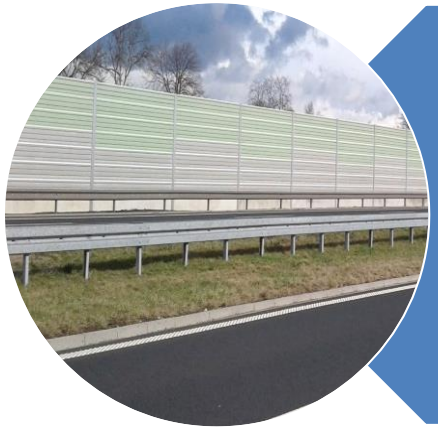

IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

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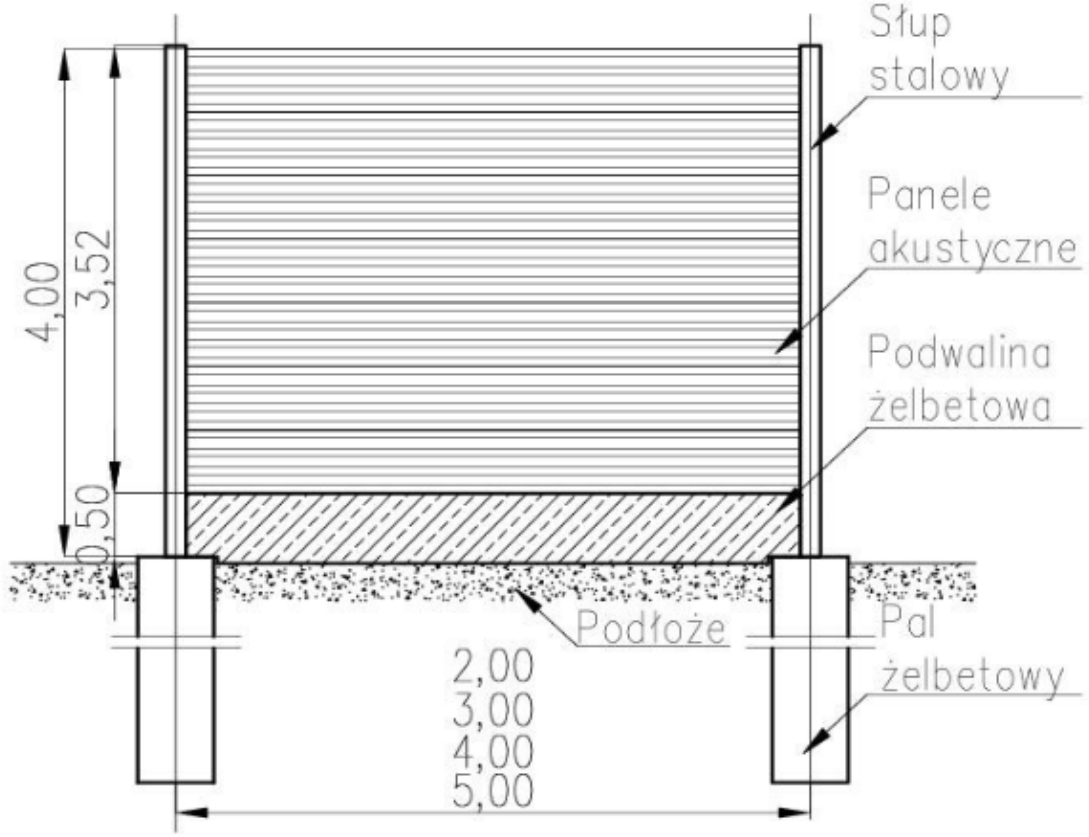
DESIGNING ACOUSTIC PROTECTION



SCREEN CROSS-SCREEN BY THE ROAD

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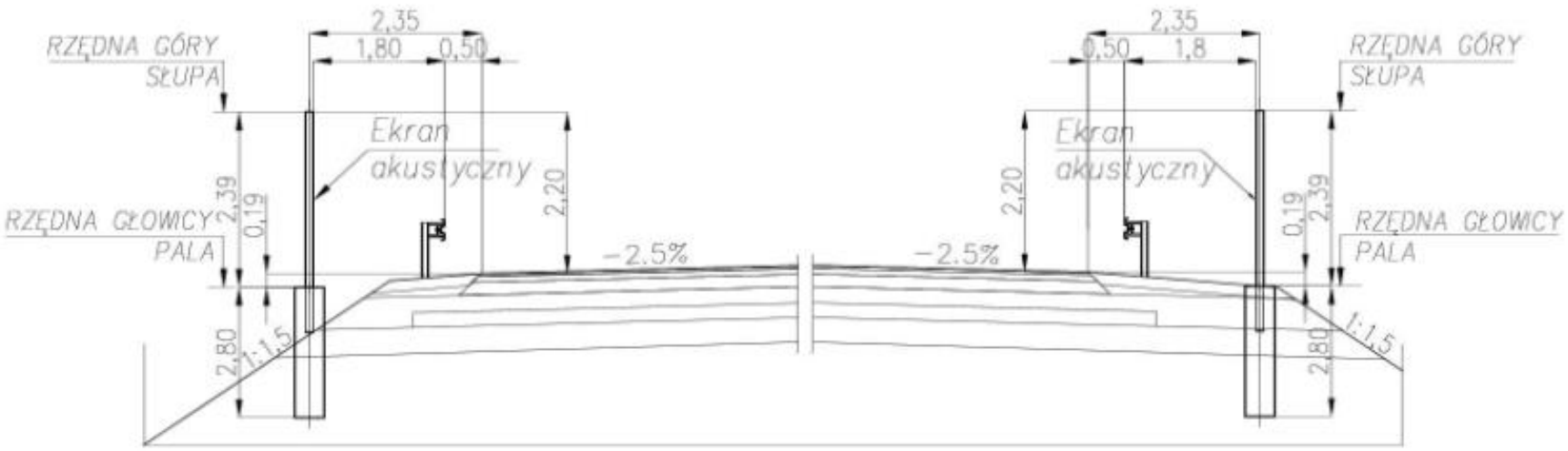
DESIGNING ACOUSTIC PROTECTION



SCREEN CROSS-SCREEN BY THE ROAD

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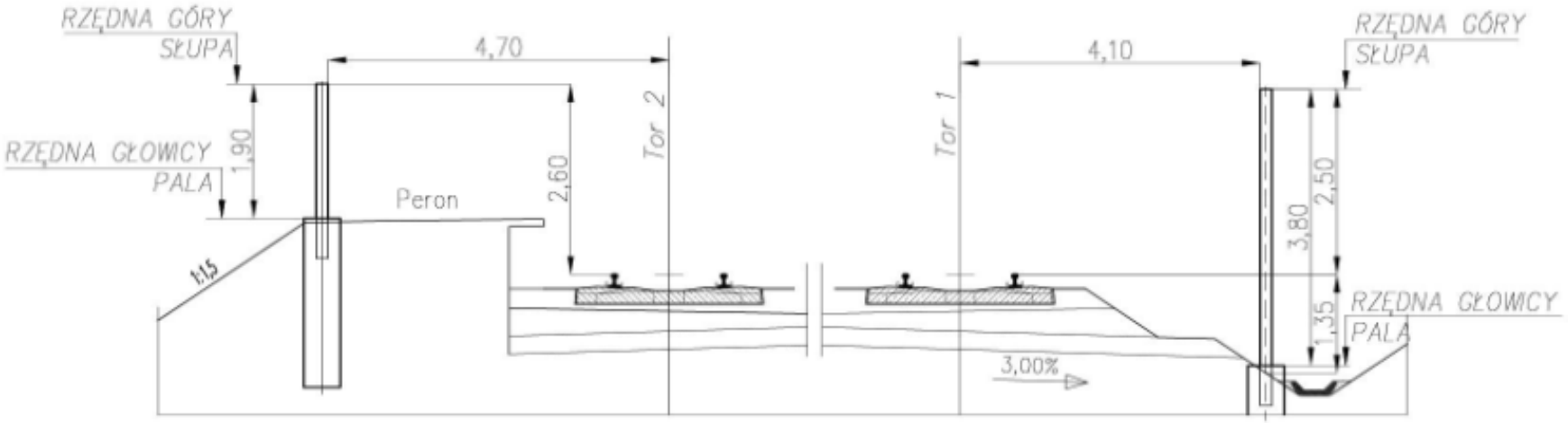
DESIGNING ACOUSTIC PROTECTION



CROSS-SECTION OF THE SCREEN NEAR THE RAILWAY LINE

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

ROAD S3 – GAWORZYCE – KAZIMIERZÓW 2018

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

ROAD S7 - 2018

ROAD S7 SZYDŁOWIEC 2017

ROAD S3 NOWA SÓL – LEGNICA 2017

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ROAD S3 LEGNICA - 2019

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ROAD S51 – OLSZYTN – OLSZTYNEK 2019

ROAD S8 – WYSZKÓW – OSTRÓW MAZOWIECKI 2019

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ROAD S5 LESZNO – KACZKOWO 2018

ROAD S3 LEGNICA - 2019

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ROAD S7 – RADOM - 2018

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

WARSZAWA - 2017

TORPOL E75 - 2017

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S7 – SZYDŁOWIEC - 2017

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

ROAD S3 – SZCZECIN- GOLENIÓW

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

WAG ANTI-GLARE PANELS
A-80, AW-80

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

ROAD S7 – RADOM BYPASS

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

EXTENSION OF THE FOCUS MALL SHOPPING CENTER IN Zielona Góra

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IMPLEMENTATION OF ROAD AND RAILWAY SCREENS

TREBIC, CZECHIA

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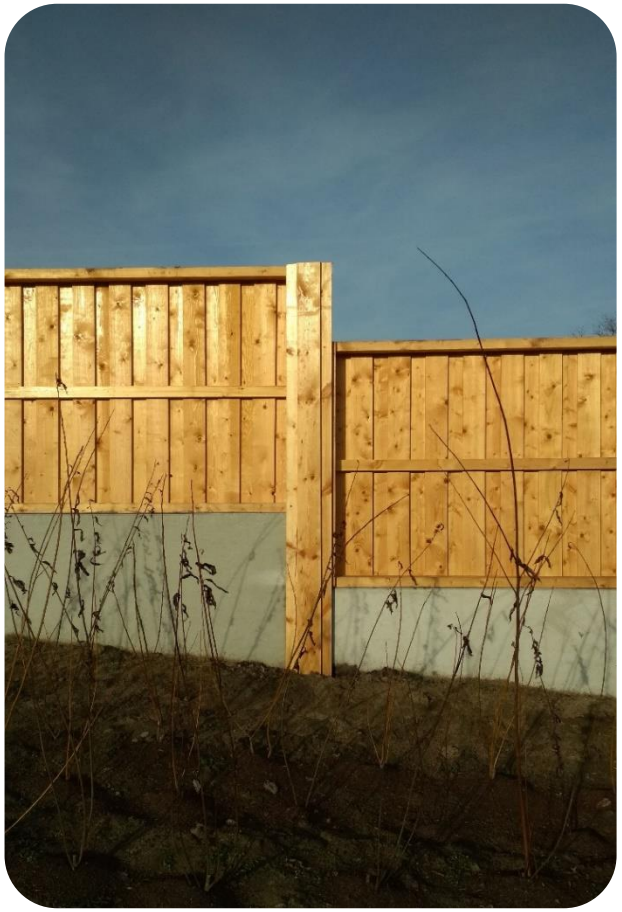
IMPLEMENTATION OF ROAD AND RAILWAY SCREENS



WAG ANTI-GLARE PANELS
ROAD S5- WRONCZYN-KOŚCIAN

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THANK YOU FOR YOUR ATTENTION

World Acoustic Group S.A.
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