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INFORME / *REPORT* Nº PL19070056

REGLAMENTO ONU 17.08, REFERENTE A LA RESISTENCIA DE LOS ASIENTOS, SUS ANCLAJES Y EL RENDIMIENTO DE LOS APOYACABEZAS/

UN REGULATION 17.08 RELATING TO THE STRENGTH OF THE SEATS, THEIR ANCHORAGES AND THE PERFORMANCE OF THE HEAD RESTRAINT

Solicitante / Applicant	:	OKB SP. Z O.O. ul. Rokicińska 108/110, 95-006 Bukowiec Poland
Fabricante del vehículo / Manufacturer	:	OKB SP. Z O.O. ul. Rokicińska 108/110, 95-006 Bukowiec Poland
Marca / Mark	:	OKB
Tipo / Type	:	SAF04T
Categoría / Category	:	M1, N1, N2
Lugar y fecha de emisión del informe / Place and date of sigue	:	L'Albornar, Santa Oliva (Tarragona), 10.09.2019

CONCLUSIONES: El subsistema asiento-piso HA SIDO ENSAYADO con las prescripciones relativas a la homologación de los vehículos a motor en relación a los asientos, sus anclajes y los apoyacabezas, de acuerdo con el Reglamento ONU 17.08, según se detalla en la hoja de ensayo anexa a este informe.

CONCLUSIONS: The seat-floor subsystem HAS BEEN TESTED the uniform provisions concerning the type-approval of motor vehicles with regard to the seats, their anchorages and any head restraints according to UN 17.08., as detailed in annex to this report.

Realizado / *Performed by:*

Kamil Ruthendorf- Przewoski
INGENIERO DE ENSAYOS
TEST ENGINEER

V. Bº./ *Revised by:*

Lluís Sans Gomis
JEFE DE DEPARTAMENTO
DEPARTMENT MANAGER

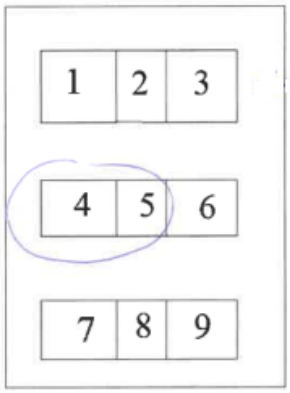
ANEXO AL INFORME / *ANNEX TO THE REPORT*

1. Características del vehículo ensayado / *Tested vehicle characteristics*

Solicitante / *Applicant*	:	OKB SP. Z O.O. ul. Rokicińska 108/110, 95-006 Bukowiec, Poland
Fecha de recepción de la muestra / *Date of reception*	:	29.08.2019
No de muestra / *Sample Id*	:	00119121/1.90729
Marca / *Trade mark*	:	OKB
Tipo / *Type*	:	SAF04T (OKBeeSAFE 04T) [1)]
Variante probado / *Tested variant*	:	el asiento con adaptador de 120 mm OKBeeADA0403 se probó como el peor de los casos (más alto, más pesado, instalado en los rieles con los mismos tornillos M8 que la variante sin el adaptador) / *the seat with adapter 120 mm OKBeeADA0403 was tested as the worst case (higher, heavier, installed to the rails with the same screws M8 as the variant without the adapter)*

[1)] El objeto de las pruebas fue un asiento doble SAF04T, realizado de acuerdo con el dibujo "Part list SAF04T" del 04.10.2019, ubicado en la posición 4 y 5 en el dibujo de abajo, sobre rieles de aluminio OKBeeRAIL 01S instalado en el piso de un vehículo Ford Transit (ya que las fuerzas son tomadas por el los rieles OKB, los resultados son representante también para otros tipos de vehículos) / *object of the tests was a double seat SAF04T, made according to the drawing "Part list SAF04T" from 04.10.2019, located in position 4 and 5 on the drawing below, installed on aluminium rails OKBeeRAIL 01S attached to the floor of a vehicle Ford Transit (as the forces are taken by the OKB rails themselves, the results are representative also for other types of vehicles):*

Location of the seat in the vehicle



2. Requisitos / *Requirements*

Párrafo / *Paragraph*	Requisito / *Requirement*	Resultado / *Result*
5.1.	Especificaciones generales. / *General specifications.*	Cumple / *Fulfils*
5.2.	Requisitos generales aplicables a los asientos de los vehículos de categoría M1./ *General requirements applicable to all seats of vehicles of category M1.*	Cumple / *Fulfils*
5.3.	Requisitos generales aplicables a los asientos de las categorías N1, N2 y N3 y a los asientos de los vehículos de las categorías M2 y M3 no cubiertos por el Reglamento 80. / *General specifications applicable to seats of vehicles of categories N1, N2 and N3 and to seats of vehicles of categories M2 and M3 not covered by Regulation No. 80.*	Cumple / *Fulfils*
5.4.	Instalación de los apoyacabezas. /*Mounting of head restraints.*	Cumple / *Fulfils*
5.5.	Requisitos especiales para los asientos con apoya cabezas. / *Special requirements for seats fitted or capable of being fitted with head restraints.*	No aplica / *Does not apply*
5.6.	Altura de los apoyacabezas. / *Height of head restraints*.	Cumple / *Fulfils*
5.7.	Requisitos de los apoyacabezas. / *Head restraint requirements.*	Cumple / *Fulfils*
5.8.	Espacios en los apoyacabezas. / *Head restraint gaps.*	Cumple / *Fulfils*
5.9.	Espacios en los apoyacabezas integrados en los asientos. / *Head restraint integral with the seat-back gaps* .	No aplica / *Does not apply*
5.10.	Espacios en los apoyacabezas ajustables en altura. / *Head restraint adjustable for height gaps*	No aplica / *Does not apply*
5.11.	Anchura de los apoyacabezas. / *Width of head restraints*.	Cumple / *Fulfils*
5.12.	Desplazamiento del apoyacabezas < 102mm durante el ensayo de resistencia. / *Head restraint displacement during the resistance test < 102mm*.	Cumple / *Fulfils*
5.13.	Resistencia del apoyacabezas. / *Head restraint resistance*.	Cumple / *Fulfils*
5.14.	El apoyacabezas solo puede ser movido a una posición superior de la posición de uso con un movimiento deliberado del usuario./ *It shall not be possible to raise it beyond the maximum operational height except by deliberate action on the part of the user distinct from any act necessary for its adjustment.*	Cumple / *Fulfils*
5.15.	Resistencia del respaldo. / *Seat back resistance*.	Cumple / *Fulfils*
5.16.	Protección de los ocupantes del desplazamiento del equipaje. / *Protection of occupants from displaced luggage*	No aplica / *Does not apply*

3. Ensayos realizados / *Performed tests*

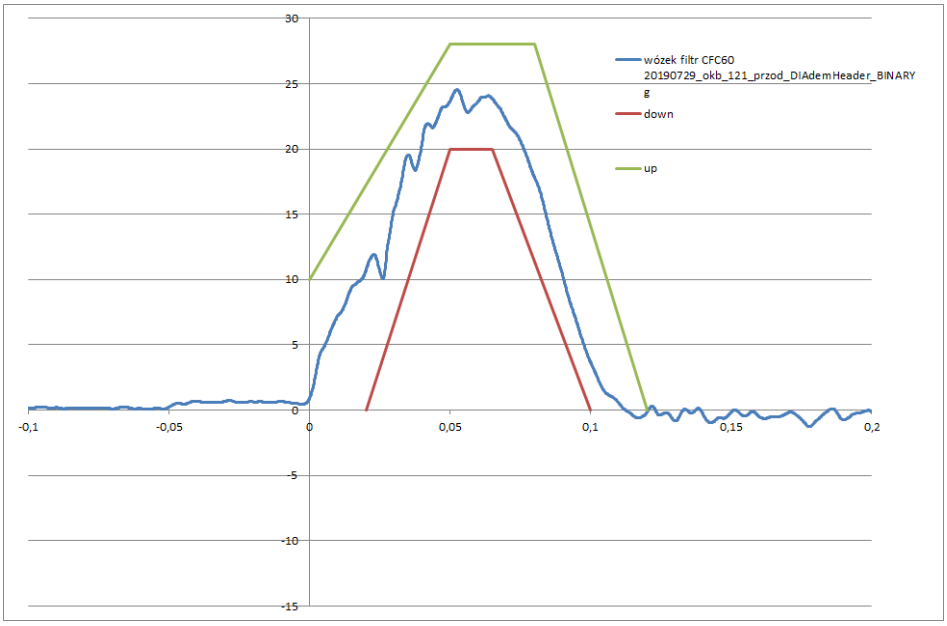
3.1. Especificaciones generales aplicables a todos los ensayos / *General specifications applicable to all tests*

Ajuste horizontal / *Horizontal adjustment*	No aplica / *Does not apply*
Ajuste vertical / *Vertical adjustment*	No aplica / *Does not apply*
Ángulo de respaldo / *Seat back torso angle*	No aplica / *Does not apply*
Posicionamiento de los apoyacabezas / *Head restraint positioning.*	2ª fila, outboard/ *2nd row, outboard:* **Uppermost position (lowest position in case of energy dissipation test)**

3.2. Ensayo de la resistencia de los anclajes de los asientos y los de los sistemas de ajuste, bloqueo y desplazamiento / *Test of strength of the seat anchorage and the adjustment, locking and displacement Systems.*

3.3.1. Ensayo frontal/ *Frontal impact (test #1)*

Configuración / *Configuration*	Aceleración / *Acceleration*	Tiempo / *Time*
Frontal / *Frontal impact*	>20 g	> 30 ms



before tests:

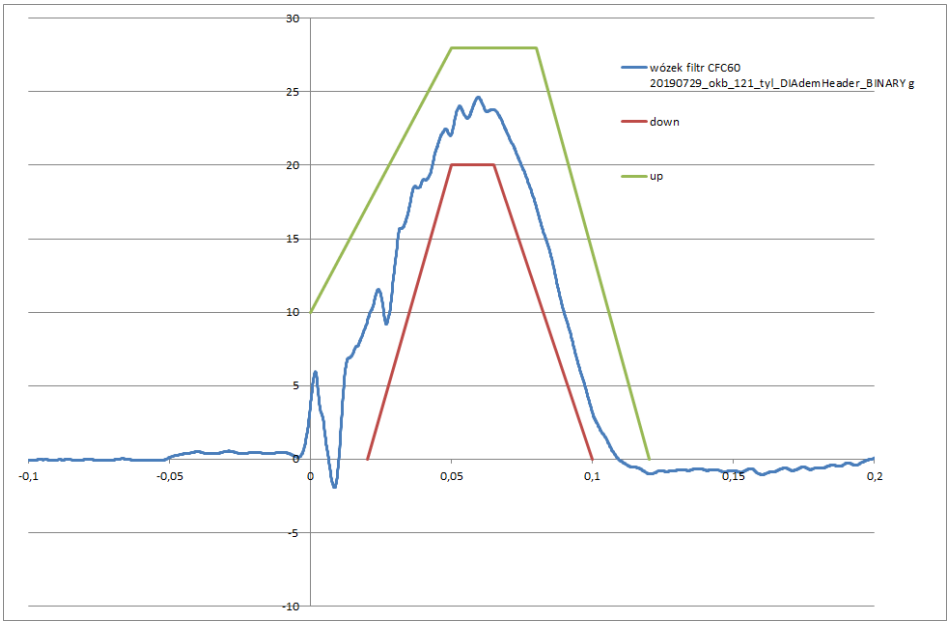
after tests:


Observaciones / *Remarks:* ---

Verificaciones / *Verifications*	Cumple / *Fulfils*

3.3.2. Ensayo posterior / *Rear impact* (test #2)

Configuración / *Configuration*	Aceleración / *Acceleration*	Tiempo / *Time*
Posterior/ *Rear impact*	>20 g	> 30 ms



before test:

after tests:

Observaciones / *Remarks:* ---

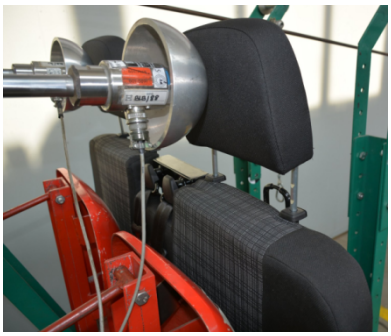
Verificaciones / *Verifications* Cumple / *Fulfils*

3.3. Ensayo de resistencia de respaldo y sus sistemas de ajuste / *Test of strength of the seat-back and its adjustment systems (test #3)*

Respaldo/ *Seatback*

Momento aplicado en el respaldo / *Torque applied to the backrest*	53,0 daNm
	Cumple / *Fulfils*

3.4. Ensayos de Resistencia de los apoyacabezas / *Resistance test of the head restraint (test #4)*



Respaldo/ *Seatback*

Momento aplicado en el respaldo / *Torque applied to the backrest*	37,3 daNm

Apoyacabezas/ *Head restraint*

Momento aplicado en el apoyacabezas / *Torque applied to the head restraint*	37,3 daNm

Máximo desplazamiento del apoyacabezas /
Maximum head restraint displacement < 102 mm

Fuerza aplicada en el apoyacabezas /
Force applied to the head restraint 89,0 daN

Asiento / *Seat*	**Momento / *Moment***	**Desplazamiento / *Disaplacement***	**Fuerza / *Load***
position 4	37,3 daNm	84 < 102 mm	89,0 daN
position 5	37,3 daNm	74 < 102 mm	89,0 daN

Cumple / *Fulfils*

Observaciones / *Remarks:* durante las pruebas n. ° 3 y n. ° 4, el asiento se instaló en un banco de pruebas rígido / *during test #3 and #4 the seat was installed on rigid test bench.*

3.5. Apoyacabezas / *Head restraint geometry (test #6)*

3.5.1. Altura del apoyacabezas / *Height of head restraints*

Asiento / *Seat*	**Altura / *Height***
position 4	810-860 > 750 mm
position 5	810-860 > 750 mm

Cumple / *Fulfils*

3.5.2. Anchura del apoyacabezas/ *Width of the head restraint*

Asiento / *Seat*	**Anchura / *Width***
position 4	235 > 170 mm
position 5	235 > 170 mm

Cumple / *Fulfils*

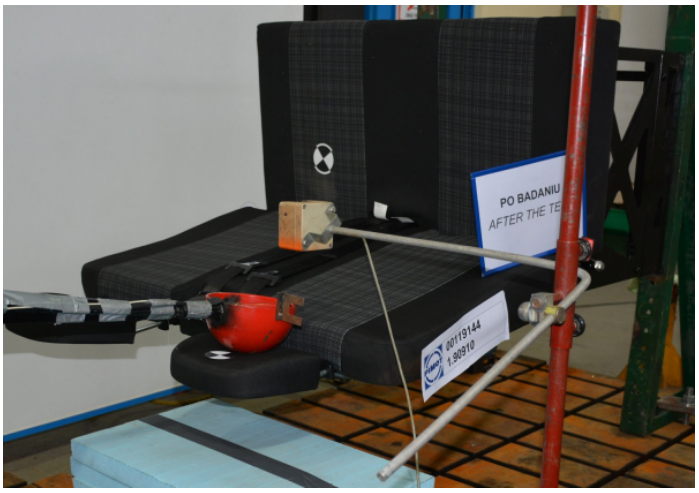
3.5.3. Espacios del apoyacabezas / *Gaps of the head restraints*

Asiento / *Seat*	Espacios / *Gaps*
position 4	17 mm* < 25 mm
position 5	17mm* < 25 mm

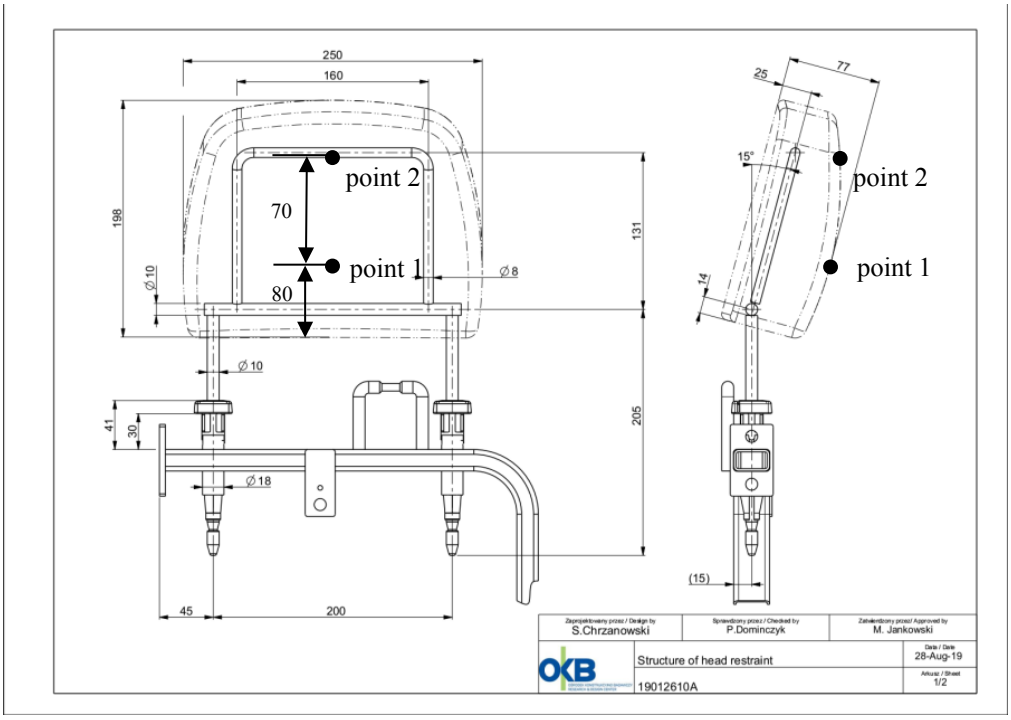
* espacio entre el reposacabezas y el respaldo, en la posición más baja del reposacabezas / *gap between the head restraint and the backrest, in the lowest position of the head restraint*

Cumple / *Fulfils*

3.6. Ensayo de absorción de energía / *Energy absorption test (test #5)*



Asiento / *Seat*	Puntos de impacto / *Impact points*	Ángulo de impactos / *Impact angles*		Velocidad / *Speed*	Decel. max en 3 ms / *Max. Deceleration in 3 ms*	Resultado / *Result*
position 4	1	Horizontal front -> rear	0º	24,1 km/h	38,25g	OK
position 5	2	Horizontal front -> rear	0º	24,1 km/h	47,72g	OK



Observaciones / *Remarks:* no hay otros asientos detrás de los asientos en cuestión, no es necesario impactar la parte trasera del asiento / reposacabezas / *there are no other seats behind the seats in question - no need to impact rear part of the seat/ head restraint.*

3.7. Protección de los ocupantes contra el desplazamiento del equipaje / *Protection the occupants against displacement of luggage*

Configuración / *Configuration*	Requisito / *Requirement*	Resultado / *Result*
~~Impacto frontal / *Frontal impact*~~	~~Desplazamiento apoyacabezas / *Head restraint displacement* ≥ 150 mm~~	~~Cumple / *Fulfils*~~
~~Impacto frontal / *Frontal impact*~~	~~Desplazamiento respaldo / *Seat back displacement* ≥ 100 mm~~	~~Cumple / *Fulfils*~~

No aplica / *Does not apply*

4. Resultado / *Result*

El subsistema asiento-piso ensayado cumple con las prescripciones relativas a la homologación de los automóviles en lo que concierne a los asientos, sus anclajes y los apoyacabezas, de acuerdo con el Reglamento ONU 17.08. / *The tested seat-floor subsystem fulfils the prescriptions with regard to the seats, their anchorages and any head restraints according to Regulation UN 17.08.*

Lugar del ensayo / *Test place* : Warsaw (PIMOT), Poland
Fecha del ensayo / *Test date* : 29.07.2019, 09.09.2019

Kamil Ruthendorf- Przewoski
INGENIERO DE ENSAYOS
TEST ENGINEER

DOCUMENTACIÓN TÉCNICA /
TECHNICAL DOCUMENTATION

INFORMATION FOLDER / DOCUMENT:

PURSUANT TO UN/ECE REGULATION No. 14,16,17

FOR A SEAT TYPE

OKBeeSAFE 04T

Total number of pages: *25*
Date of issue: *04.10.2019*

List of documentation and supplements

List of enclosures

Drawings of seats and seatbelt anchorages - ECE 14	Enclosure 1
Drawing of ISOFIX anchorages	Enclosure 2
Drawings ECE 17	Enclosure 3
Fixation to the vehicle body	Enclosure 4
Optional components	Enclosure 5

0.	GENERAL	
0.1	Make (trade name of manufacturer):	OKB
0.2	Type:	SAF04T
0.2.1	Commercial name(s) (if available):	OKBeeSAFE 04T
0.3	Means of identification of type:	N/A
0.3.1	Location of that marking:	N/A
0.4	Category of vehicle:	M1, N1, N2
0.5	Name and address of manufacturer:	OKB SP. Z O.O. ul. Rokicińska 108/110 95-006 Bukowiec Poland
0.8	Name(s) and address(es) of assembly plant(s):	OKB SP. Z O.O. ul. Rokicińska 108/110 95-006 Bukowiec Poland
1.	GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE	
1.1	Photographs and/or drawings of a representative vehicle:	N/A
9.	BODYWORK	
9.1	Type of bodywork using the codes set out in Part C of Annex II of Directive 2007/46/EC:	N/A
9.10	Interior arrangement	N/A
9.10.3	Seats	Front seats are out of scope of this test report The data below is relating only to the rear seats installed by the 2nd-stage-manufaturer
9.10.3.1	Number of seating positions:	2
9.10.3.1.1	Location and arrangement:	There are no other seats behind the seats in question
9.10.3.2	Seat(s) designated for use only when the vehicle is stationary:	N/A
9.10.3.3	Mass:	OKBeeSAFE 04T – 56 kg – mass of the heaviest configuration

9.10.3.4	Characteristics: for seats not type-approved as components, description and drawings of	
9.10.3.4.1	The seats and their anchorages:	See Enclosure 1
9.10.3.4.2	The adjustment system:	N/A
9.10.3.4.3	The displacement and locking systems:	N/A
9.10.3.4.4	The seat-belt anchorages (if incorporated in the seat structure):	OKBeeSAFE 04T – see Enclosure 1
9.10.3.4.5	The parts of the vehicle used as anchorages:	N/A
9.10.3.5	Coordinates or drawing of the R-point	
9.10.3.5.1	Driver's seat:	N/A
9.10.3.5.2	All other seating positions:	OKBeeSAFE 04T – see Enclosure 1
9.10.3.6	Design torso angle	
9.10.3.6.1	Driver's seat:	N/A
9.10.3.6.2	All other seating positions:	OKBeeSAFE 04T – 9˚
9.10.3.7	Range of seat adjustment	
9.10.3.7.1	Driver's seat:	N/A
9.10.3.7.2	All other seating positions:	N/A
9.10.4.	Head restraints	
9.10.4.1.	Type(s) of head restraints:	OKBeeSAFE 04T – adjustable
9.10.4.2.	Type-approval number(s), if available:	N/A
9.10.4.3.	For head restraints not yet approved	
9.10.4.3.1.	A detailed description of the head restraint, specifying in particular the nature of the padding material or materials and, where applicable, the position and specifications of the braces and anchorage pieces for the type of seat for which approval is sought:	Steel frame upholstered by PUR soft padding and various types of fabrics. See enclosure 3
9.10.4.3.2.	In the case of a 'separate' head restraint	N/A
9.10.4.3.2.1.	A detailed description of the structural zone to which the head restraint is intended to be fixed:	N/A

9.10.4.3.2.2.	Dimensional drawings of the characteristic parts of the structure and the head restraint:	See enclosure 3
9.12.	Safety belts and/or other restraint systems	
9.12.1.	Number and position of safety belts and restraint systems and seats on which they can be used: (L = left, R = right, C = centre)	

		Complete EC type-approval mark	Variant (if applicable)	Belt adjustment device for height
First row	L	N/A	N/A	N/A
	C	N/A	N/A	N/A
	R	N/A	N/A	N/A
Other rows	L or R	E1 16R-04 0876*	E2 16R-06 17007* E4 16R-06 37192* E1 16R-04 0396* E2 16R-04 0886	N/A

*- the seats may be alternatively mounted symmetrically about the longitudinal symmetry line

9.12.2.	Nature and position of supplementary restraint system: (L = left, R = right, C = centre)	
9.12.3.	Nature and position of safety belt anchorages and proof of compliance with ECE R 14 or Directive 76/115/EEC:	N/A
9.12.4.	Brief description of the electrical/ electronic components (if any):	N/A
9.13	Safety belt anchorages	
9.13.1	Photographs and/or drawings of the bodywork showing the position and dimensions of the actual and effective anchorages including the R-points:	See Enclosure 1

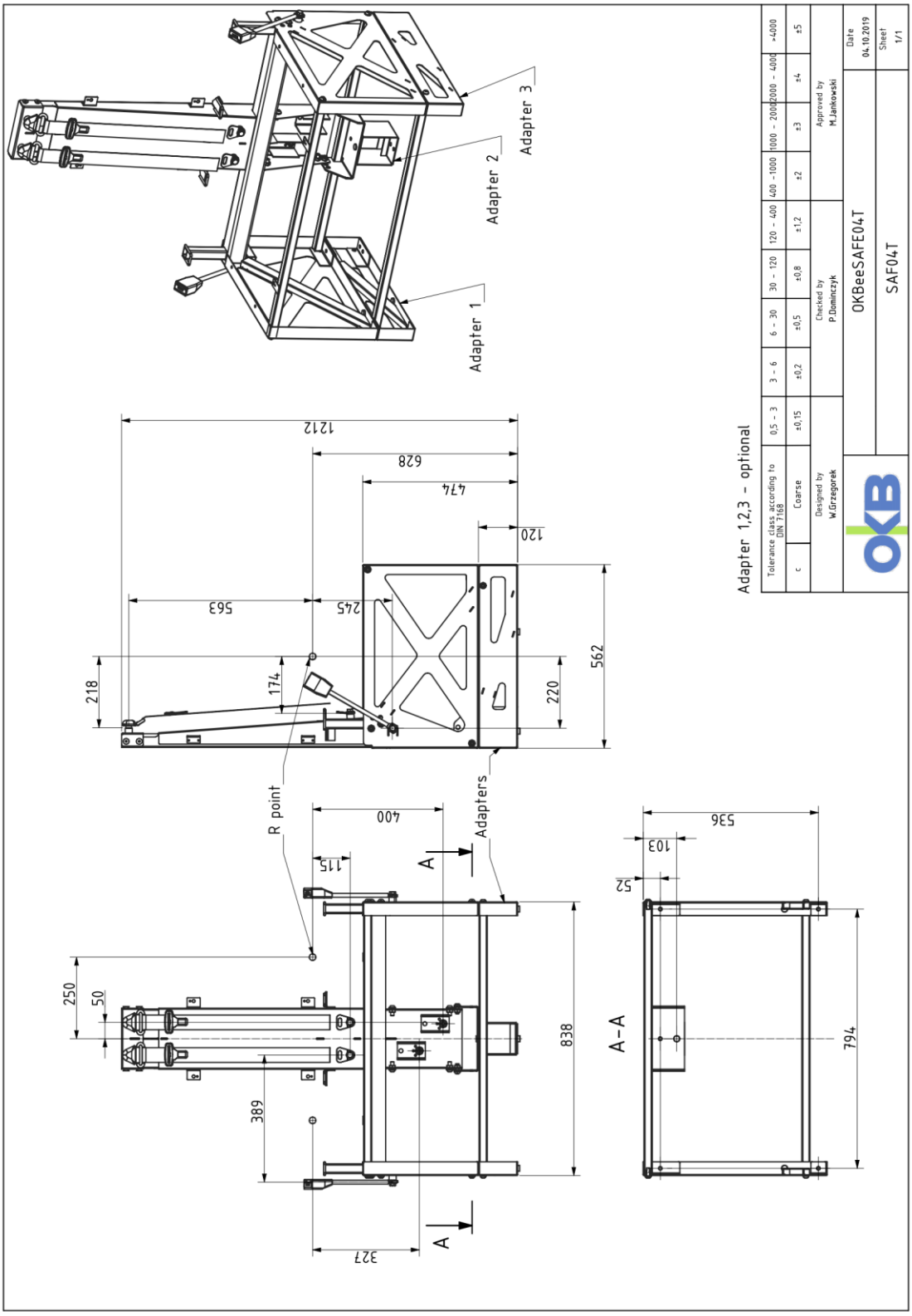
9.13.2	Drawings of the belt anchorages and parts of the vehicle structure where they are attached (with the material indication):	See Enclosure 1
9.13.3	Designation of the types of safety belt authorised for fitting to the anchorages with which the vehicle is equipped:	

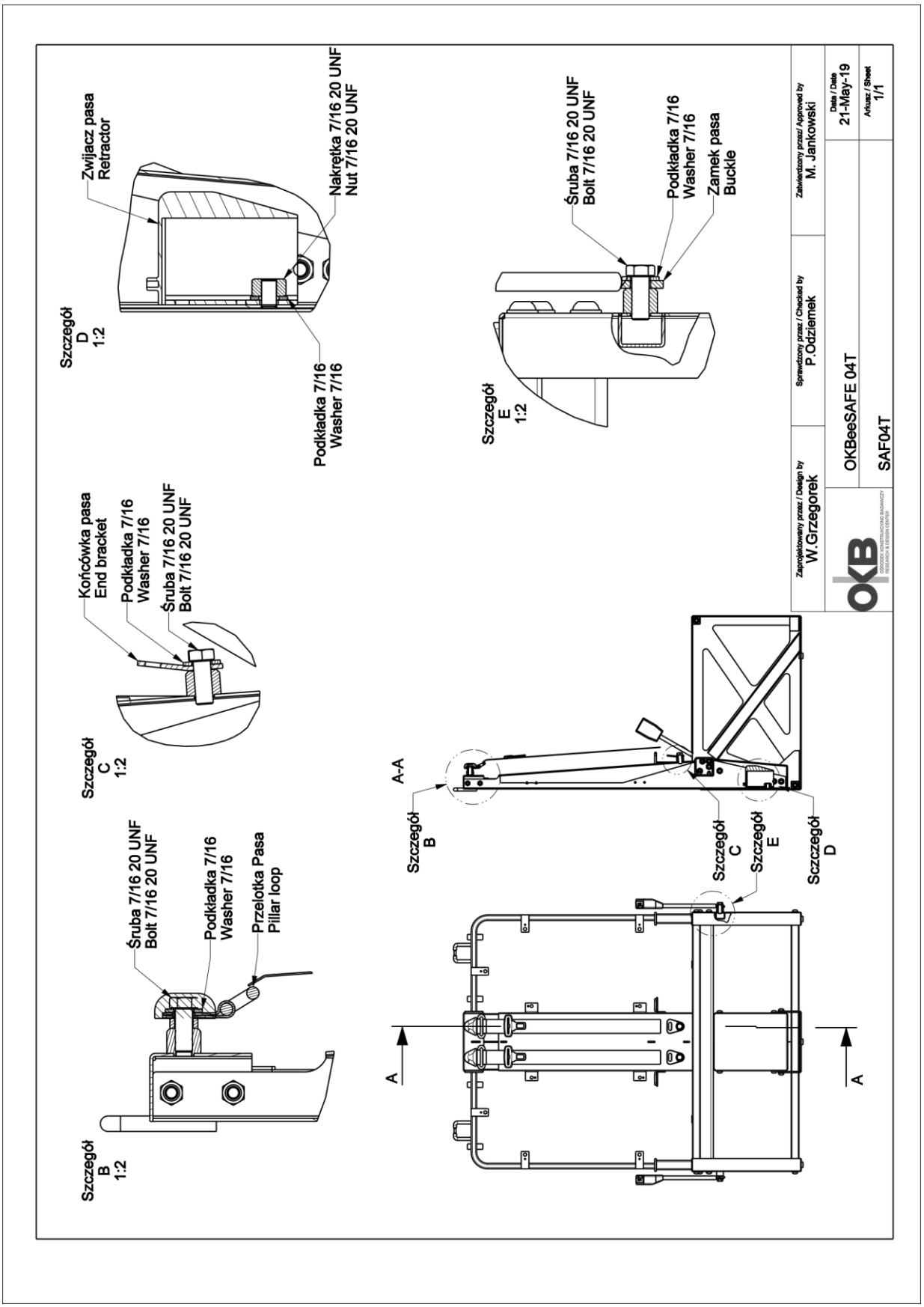
	Anchorage location	
	Vehicle structure	Seat structure
First row of seats	N/A	N/A

Second row of seats			Anchorage location	
			Vehicle structure	Seat structure
Left-hand seat	Lower anchorages	outboard	--	*Ar*
		inboard	--	*Ar*
	Upper anchorages		--	*Ar*
Right-hand seat	Lower anchorages	outboard	--	*Ar*
		inboard	--	*Ar*
	Upper anchorages		--	*Ar*

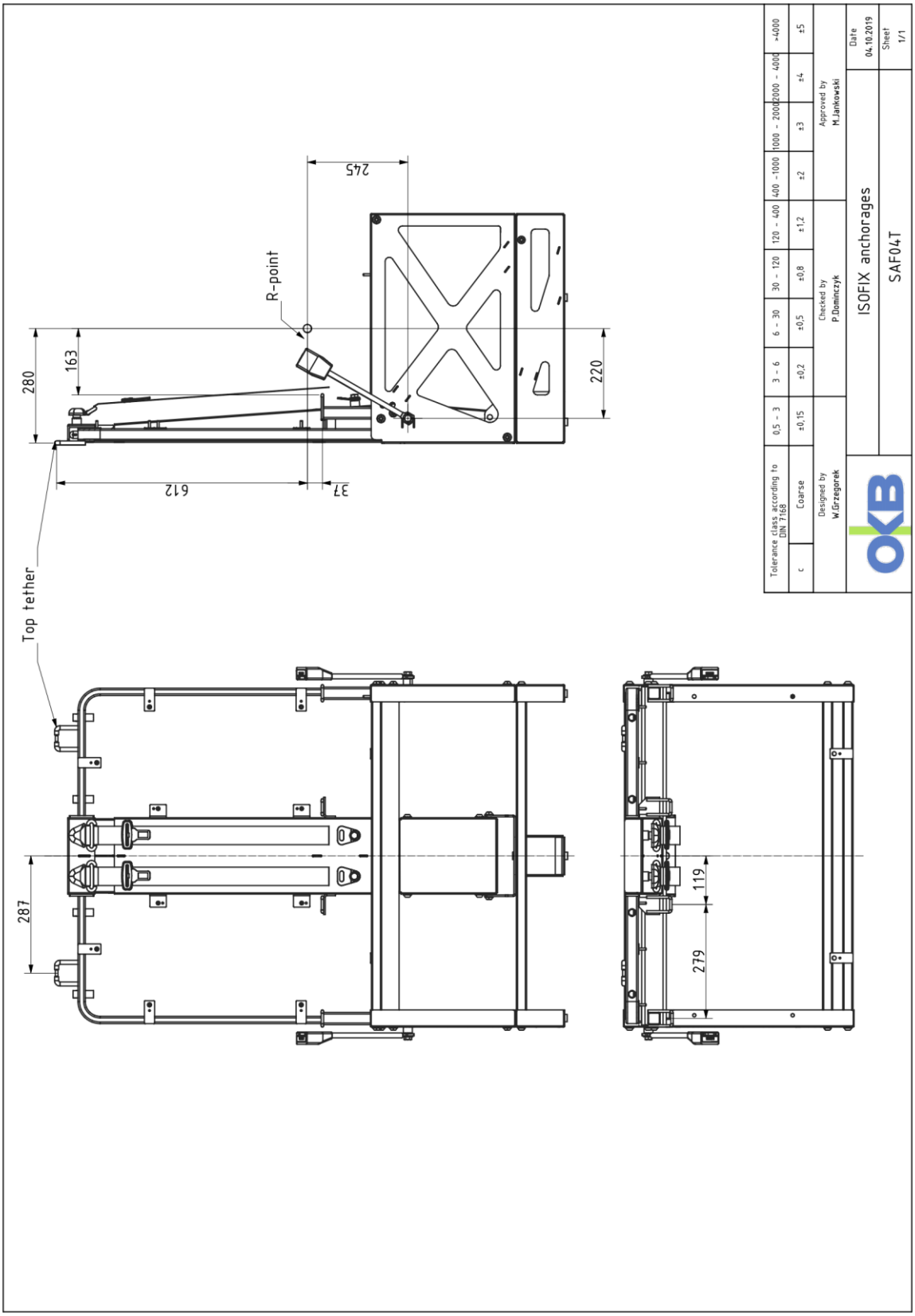
9.13.4	Description of a particular type of safety belt where an anchorage is located in the seat backrest or incorporates an energy dissipating device:	See Enclosures

Enclosure 1: DRAWINGS OF SEATS AND SEATBELTS ANCHORAGES – ECE14

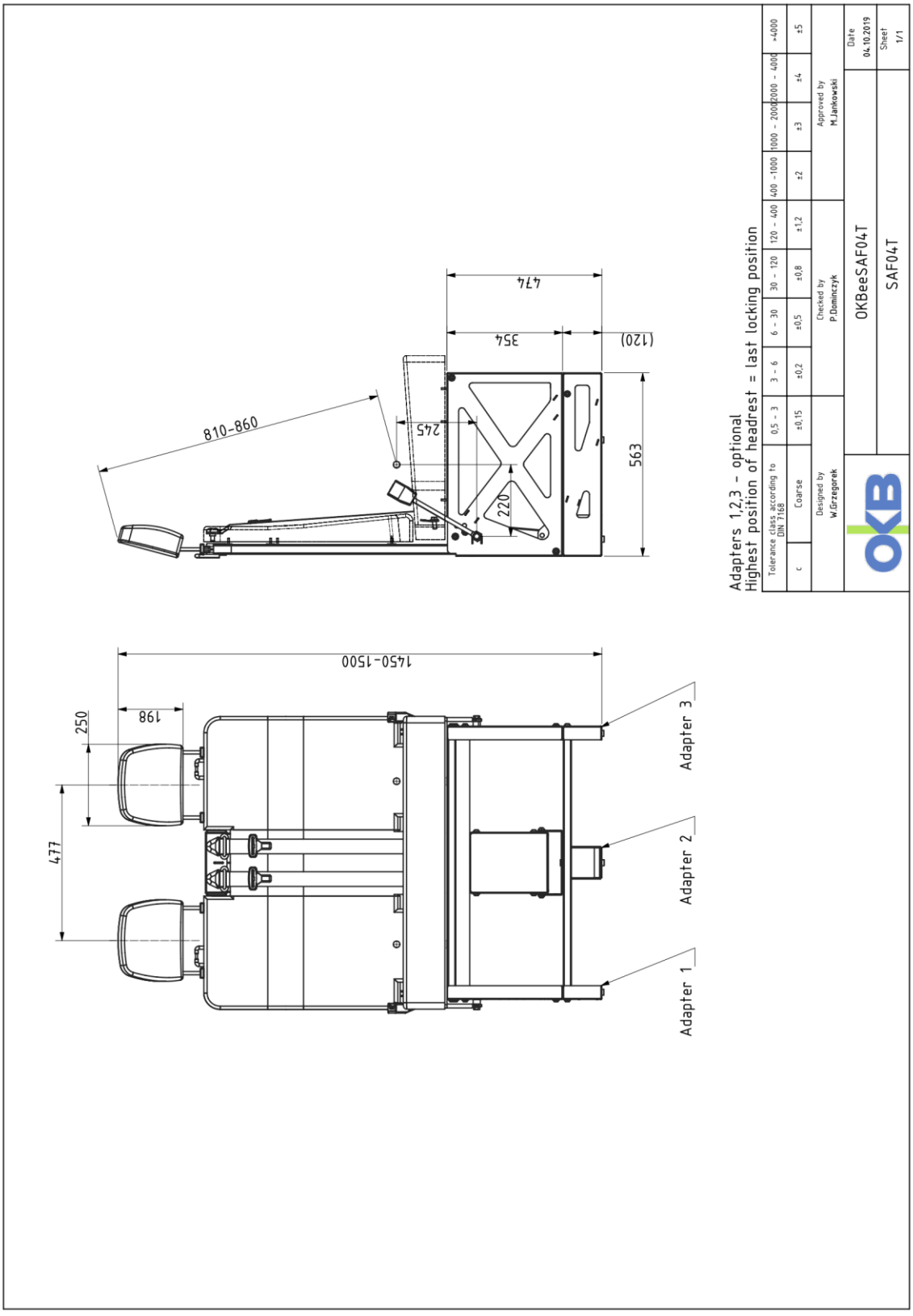


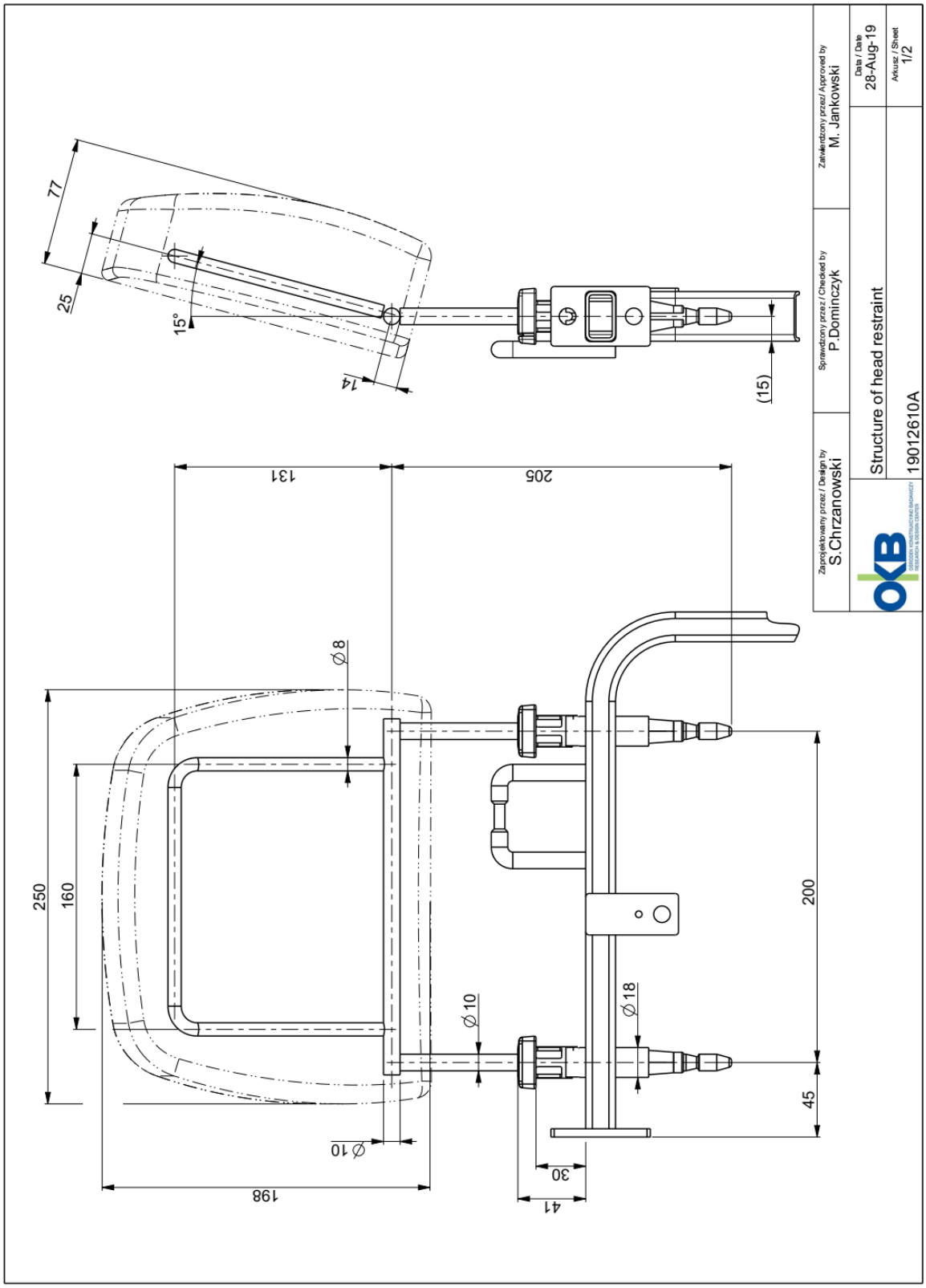


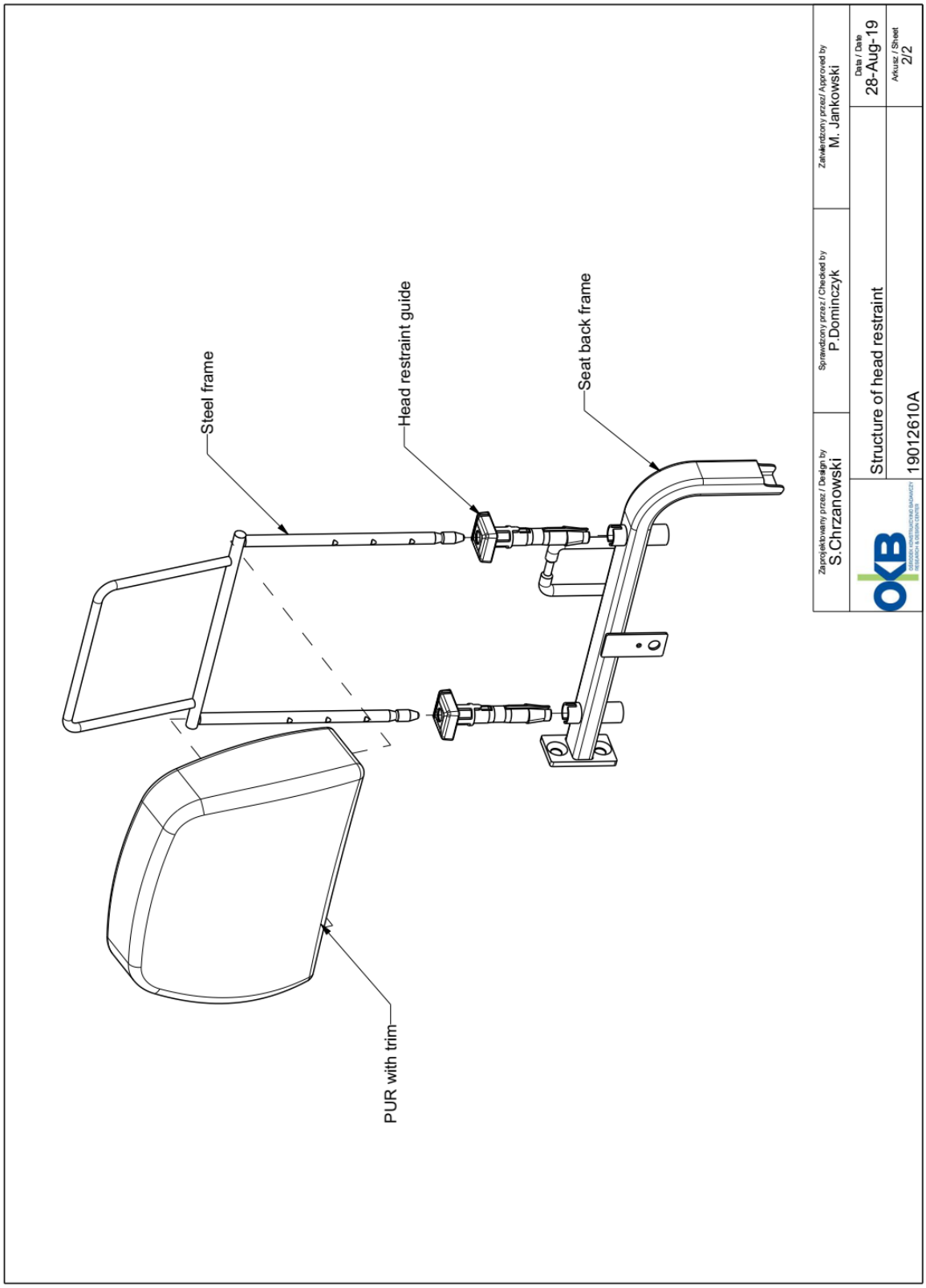
Enclosure 2 : Drawings of ISOFIX anchorages ECE14



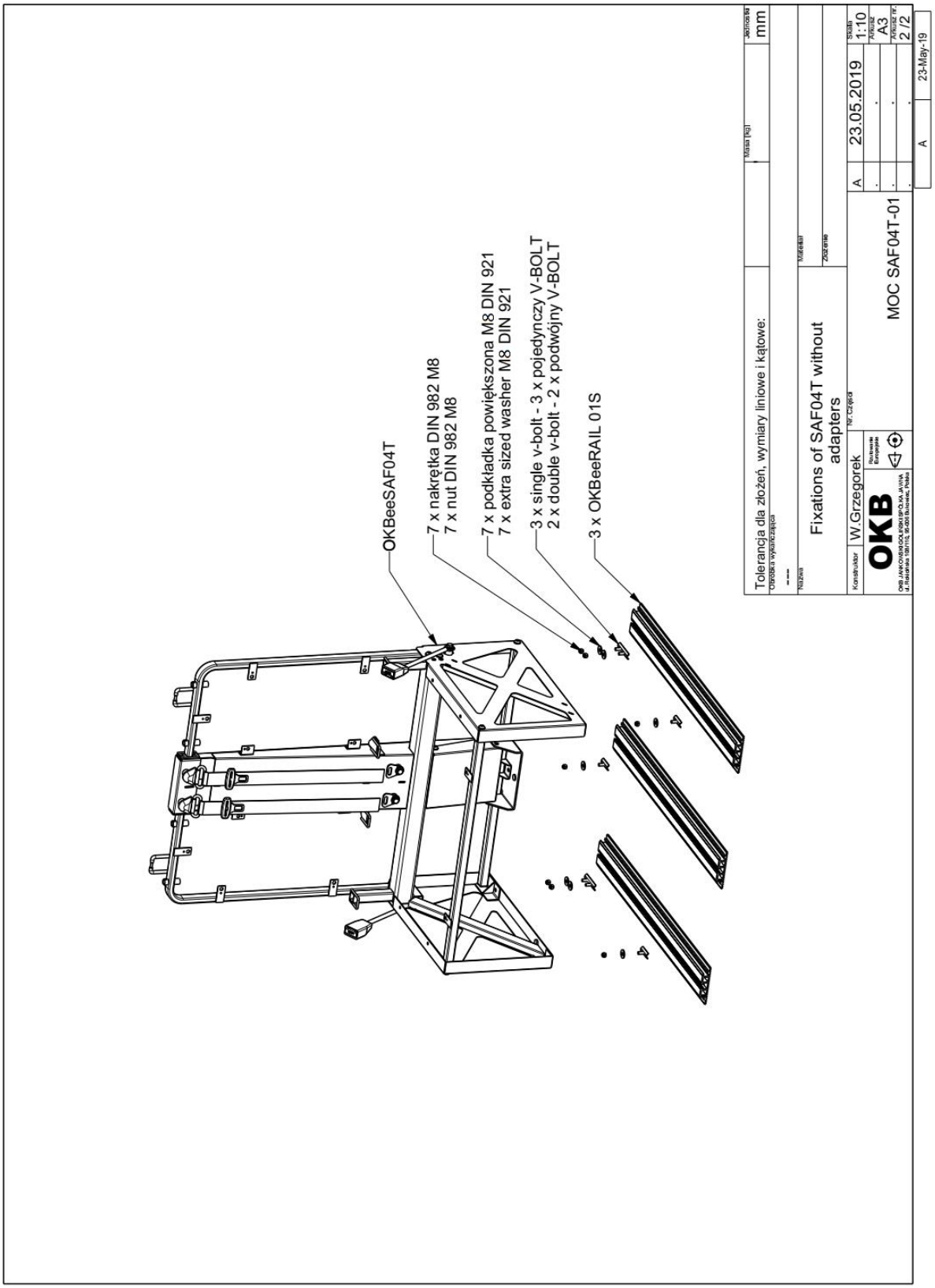
Enclosure 3 : Drawings ECE17

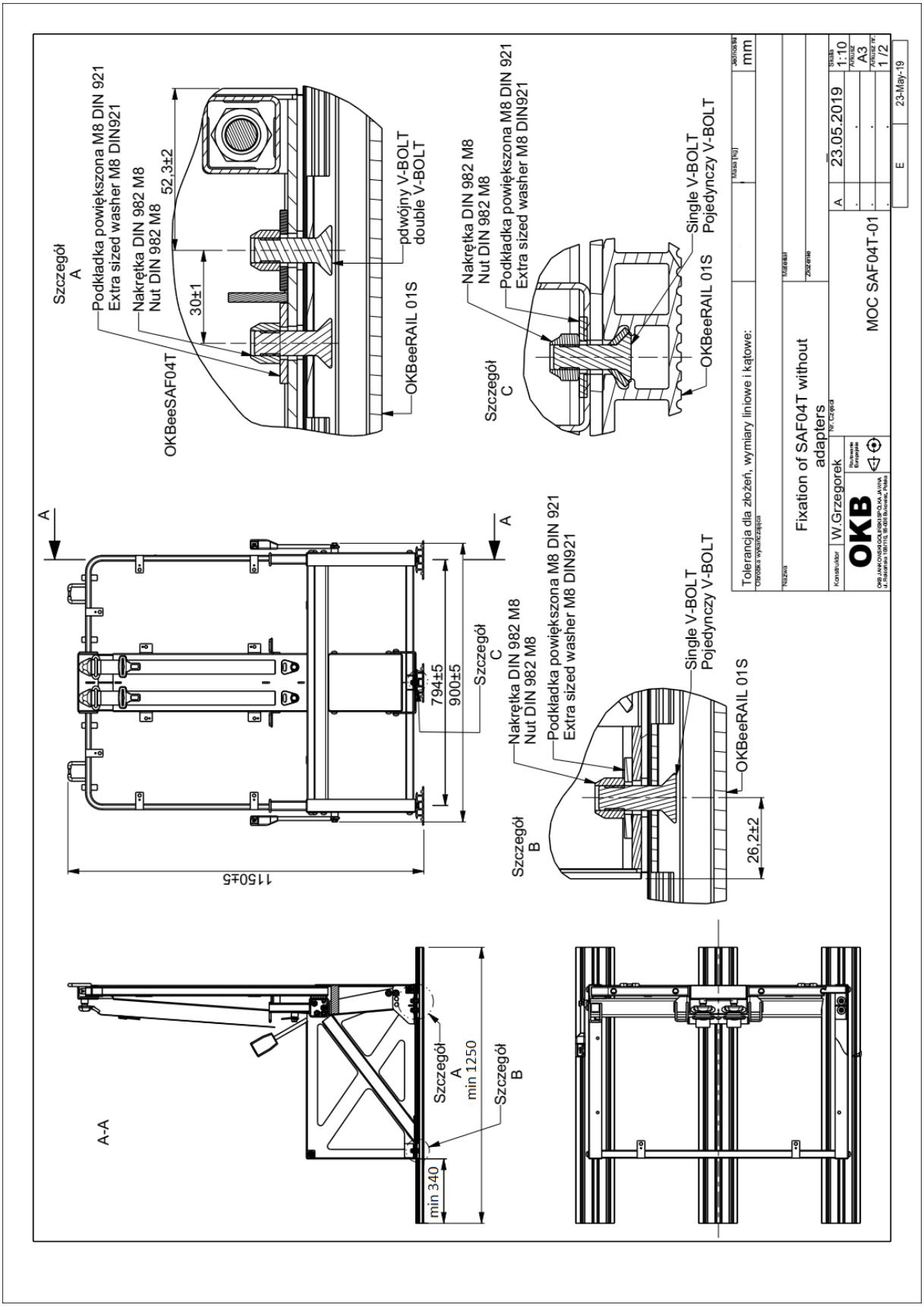


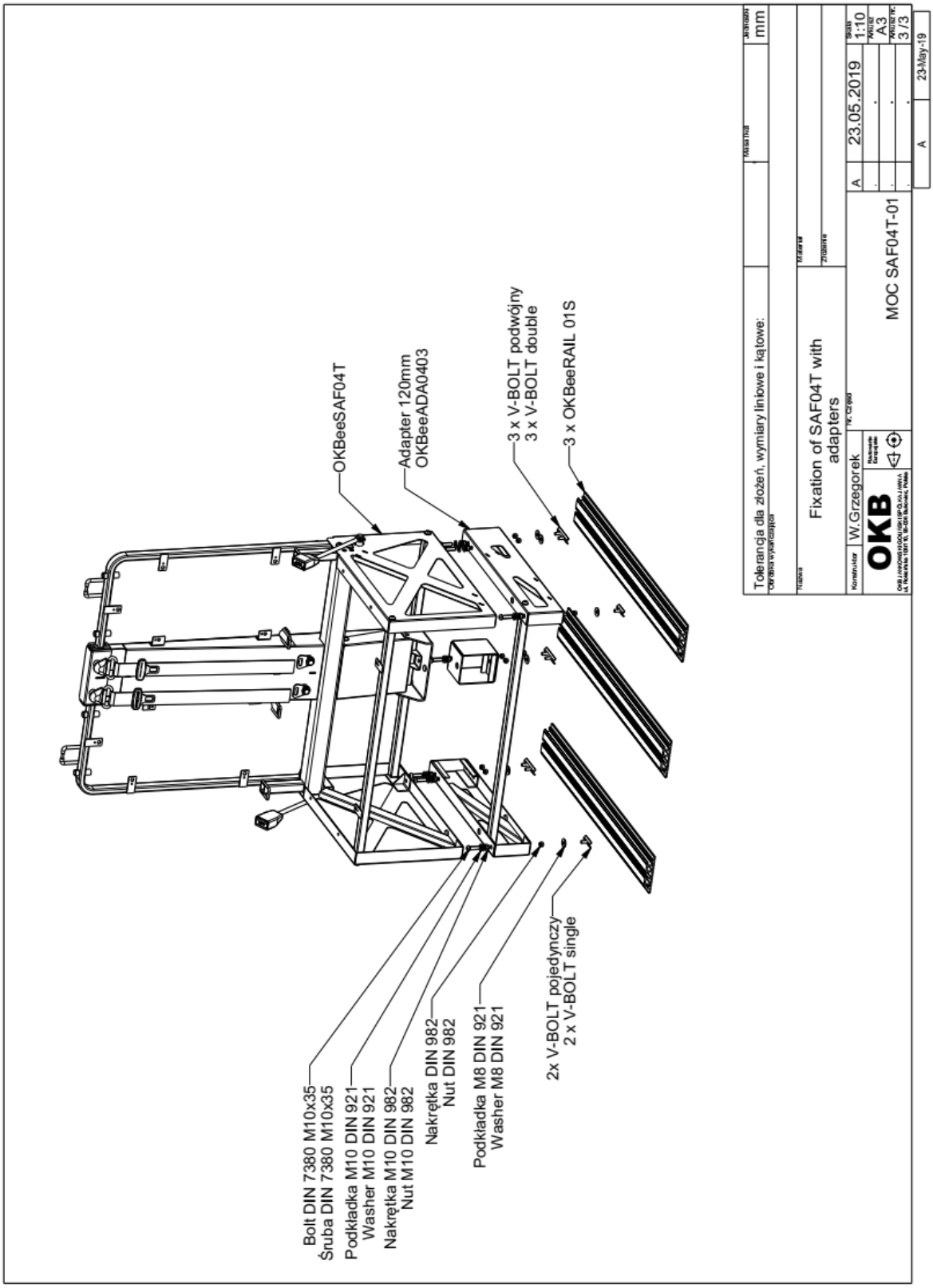


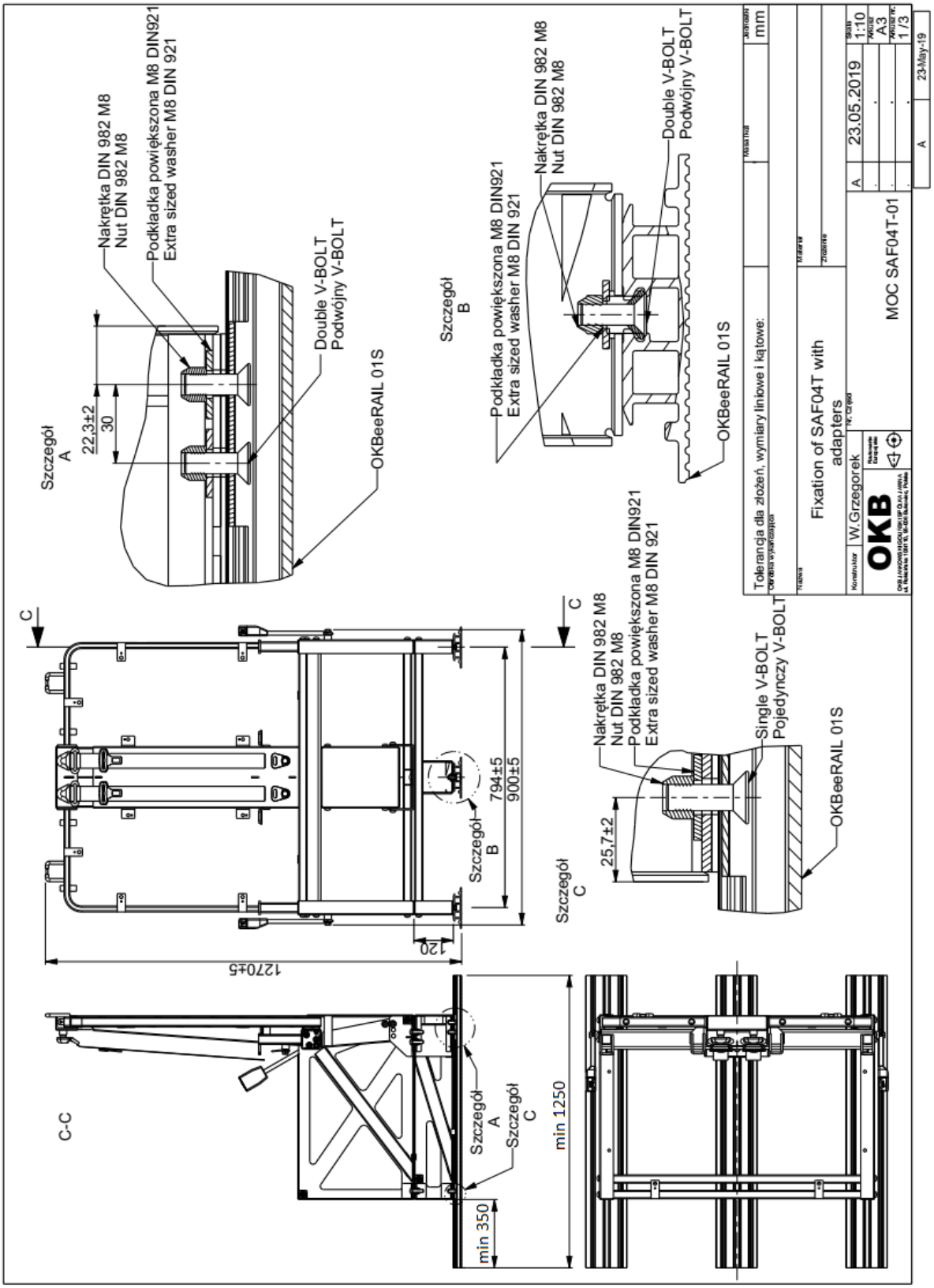


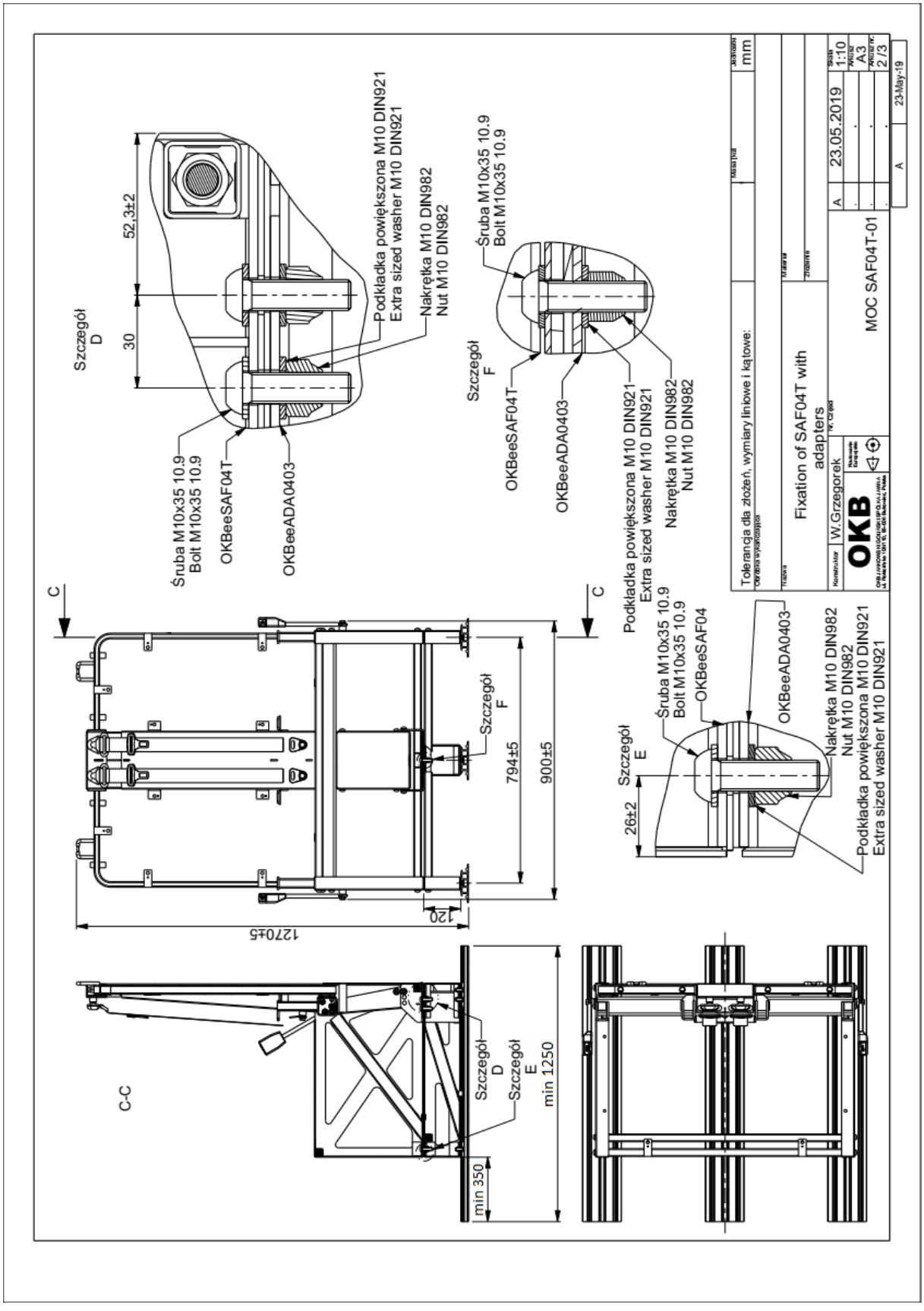
ENCLOSURE 4 – Fixation to the vehicle body











Instrukcja przyklejnia szyn aluminiowych do podłogi pojazdu/ Instruction of gluing aluminium rails

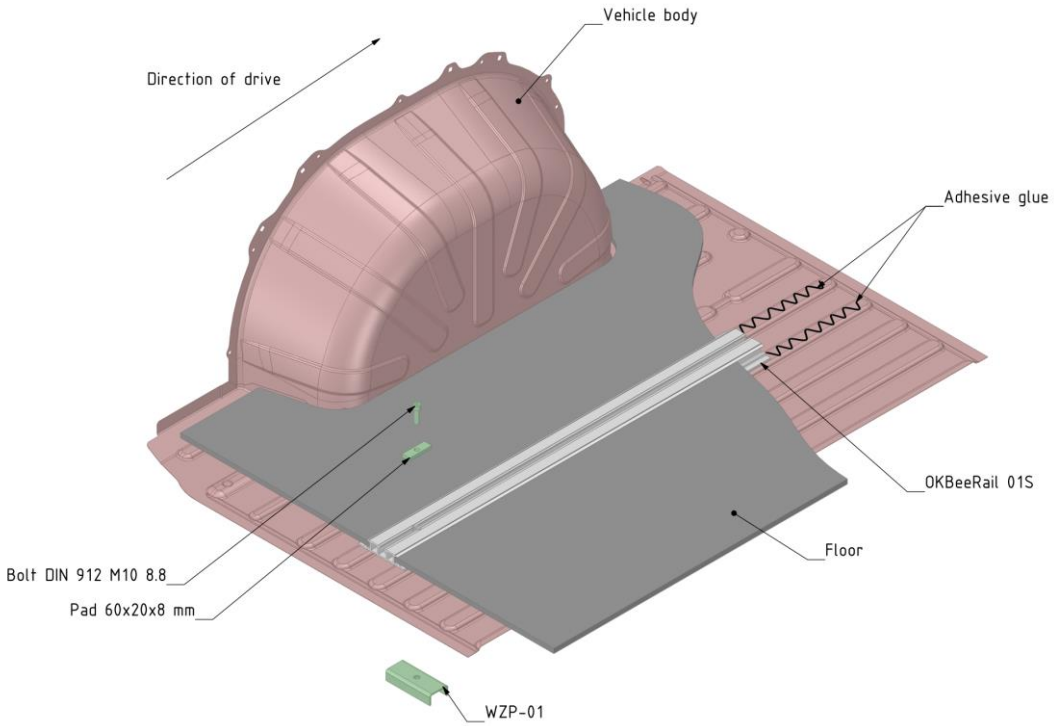
Sposób przygotowania powierzchni: / *Surface preparation of:*

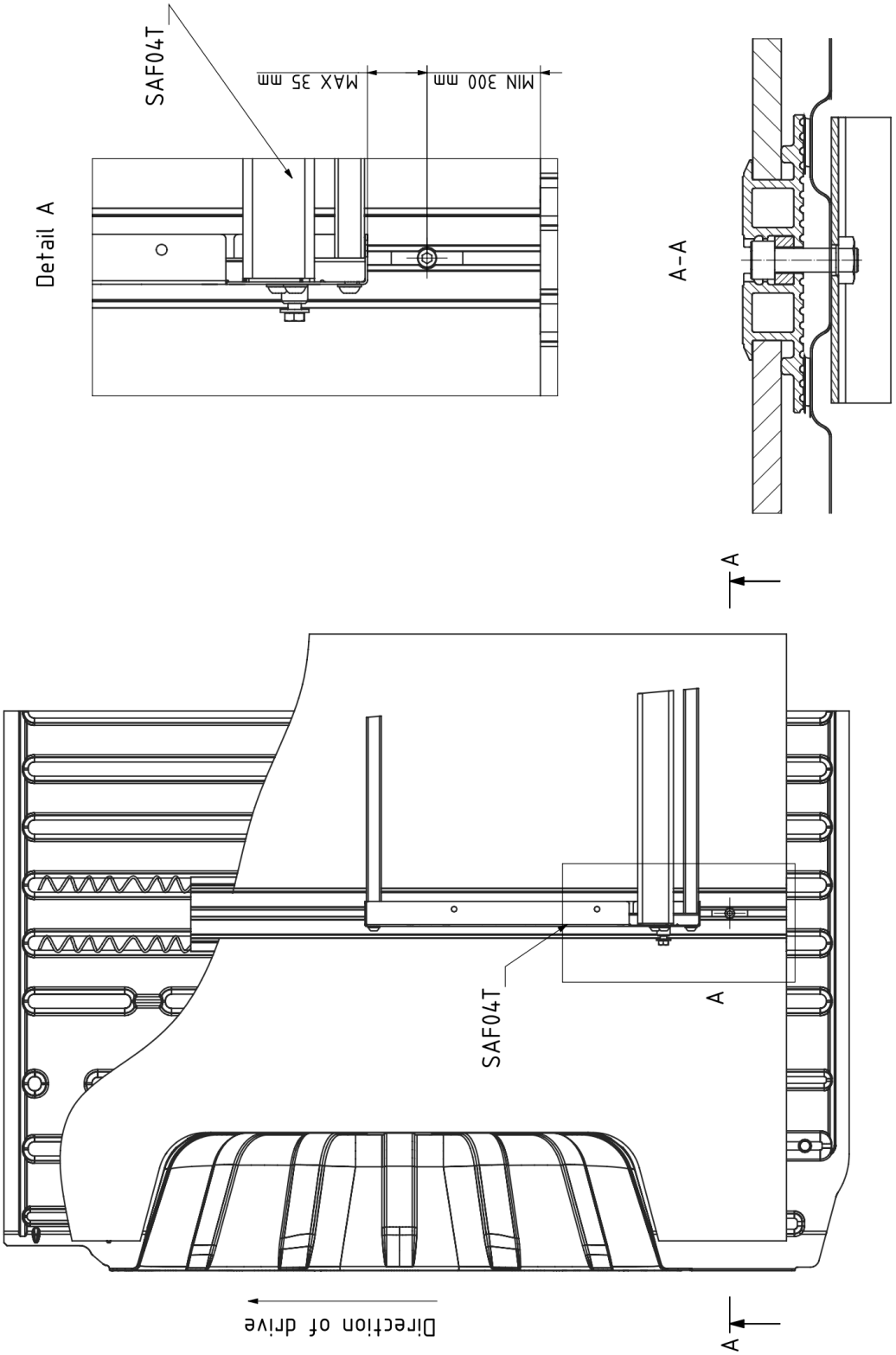
- aluminium surowe lub powlekane / *raw or coated aluminum*
- blacha lakierowana fabrycznie lub powlekana na gorąco / *originally or powder coated steel sheet*

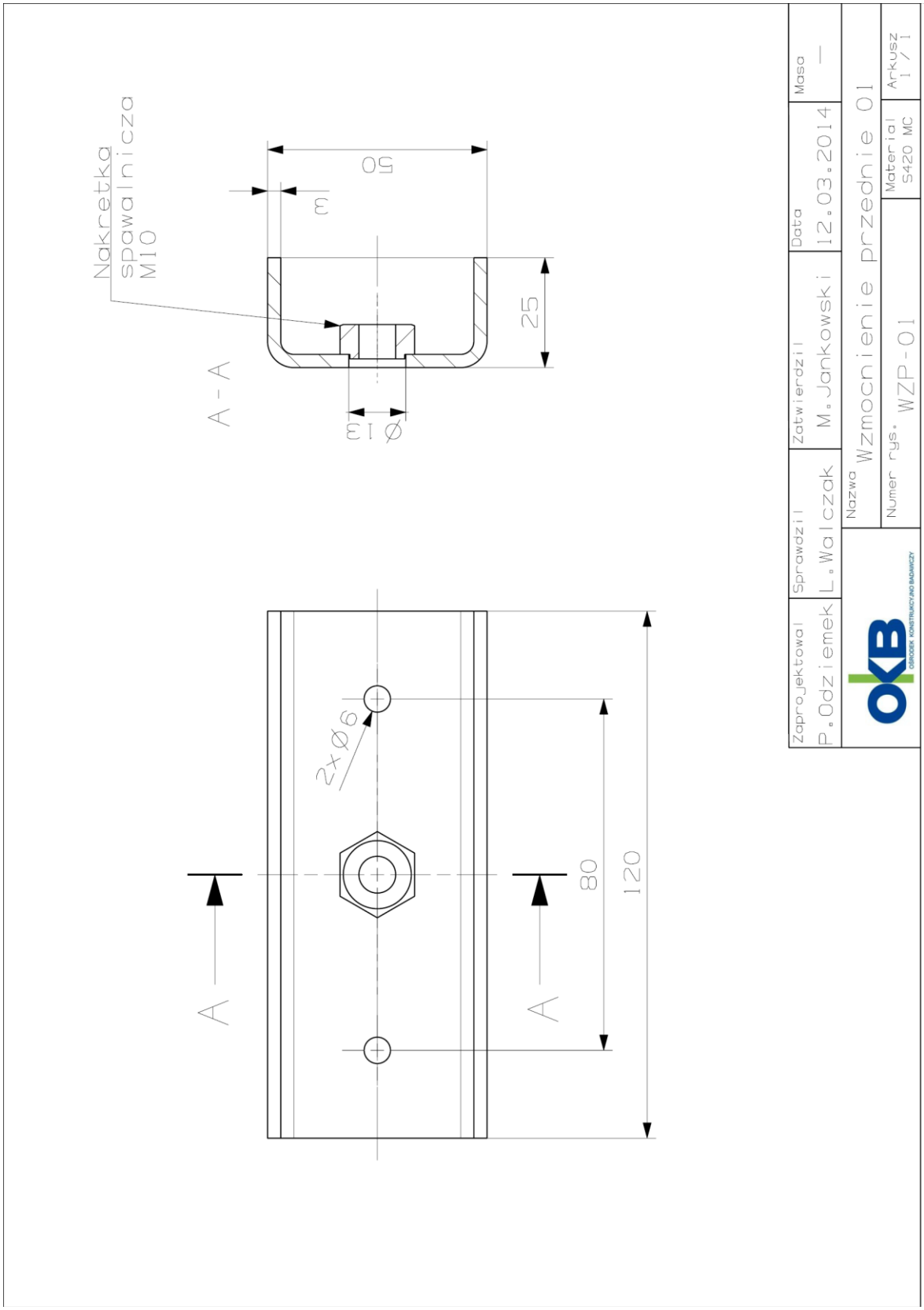
1) zmatowić / *roughen*
2) odtłuścić przy pomocy Sika Aktivator 205 lub BETACLEAN 3350 / *degrease with Sika Aktivator 205 or BETACLEAN 3350*
3) zagruntować przy pomocy Sika 206G+P lub BETAPRIME 5061 / *prime with Sika 206G+P or BETAPRIME 5061*

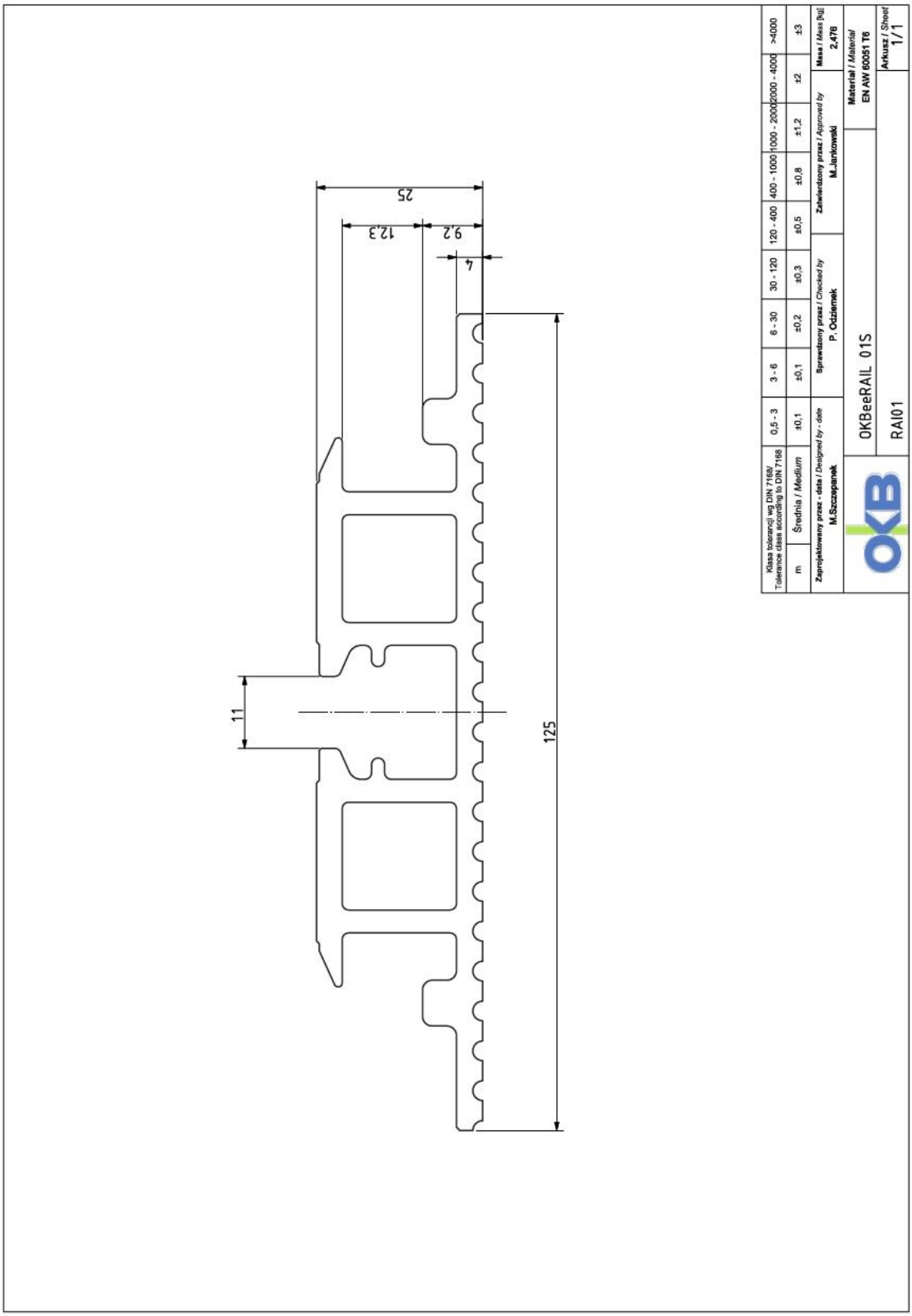
Na powierzchnie przygotowane w ten sposób, stosować ścieżki kleju Sikaflex 252 lub 552 lub BETAMATE 7120 w kształcie litery S (na każdą szynę OKBeeRAIL). Na fragmencie podłogi pojazdu, gdzie zastosowano klej, użyć dystansu (np. podkładki) o grubości ~3 mm, a następnie położyć i docisnąć szynę. / *For surfaces prepared in this way, apply paths of Sikaflex 252 or 552 or BETAMATE 7120 in an S pattern (per each rail). In the fragment of the vehicle floor, where adhesive is applied, use separator (e.g. washer) of ~3 mm thickness, and afterwards attach and press the rail.*

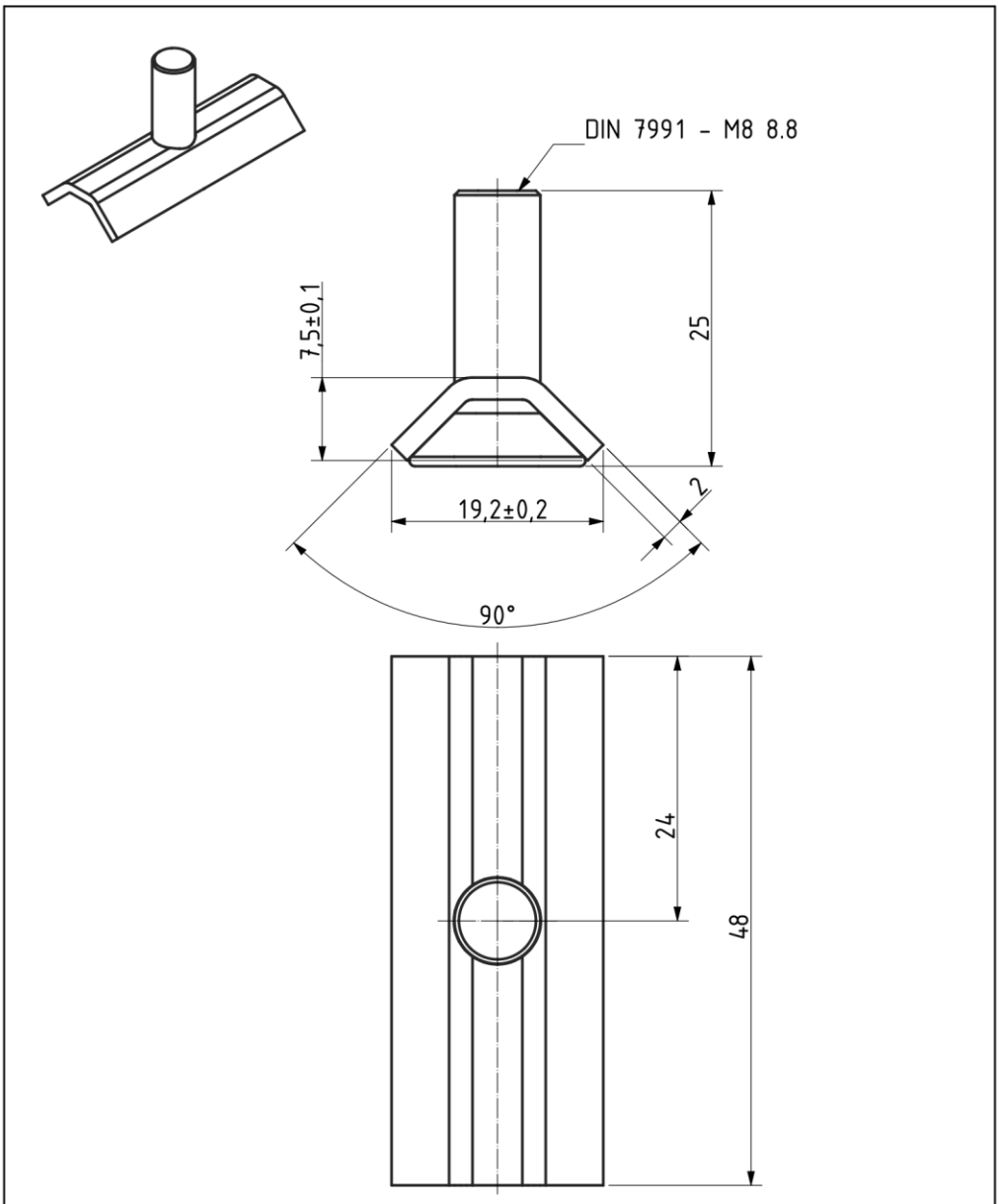
W tylnej części szyny musi być zastosowane wzmocnienie podpodłogowe – ceownik WZP-01 (przykręcane śrubą M10-8.8). / *In the rear part of the rail there must be underfloor reinforcement – C-profile WZP-01 (fixed by M10-8.8 bolt).*







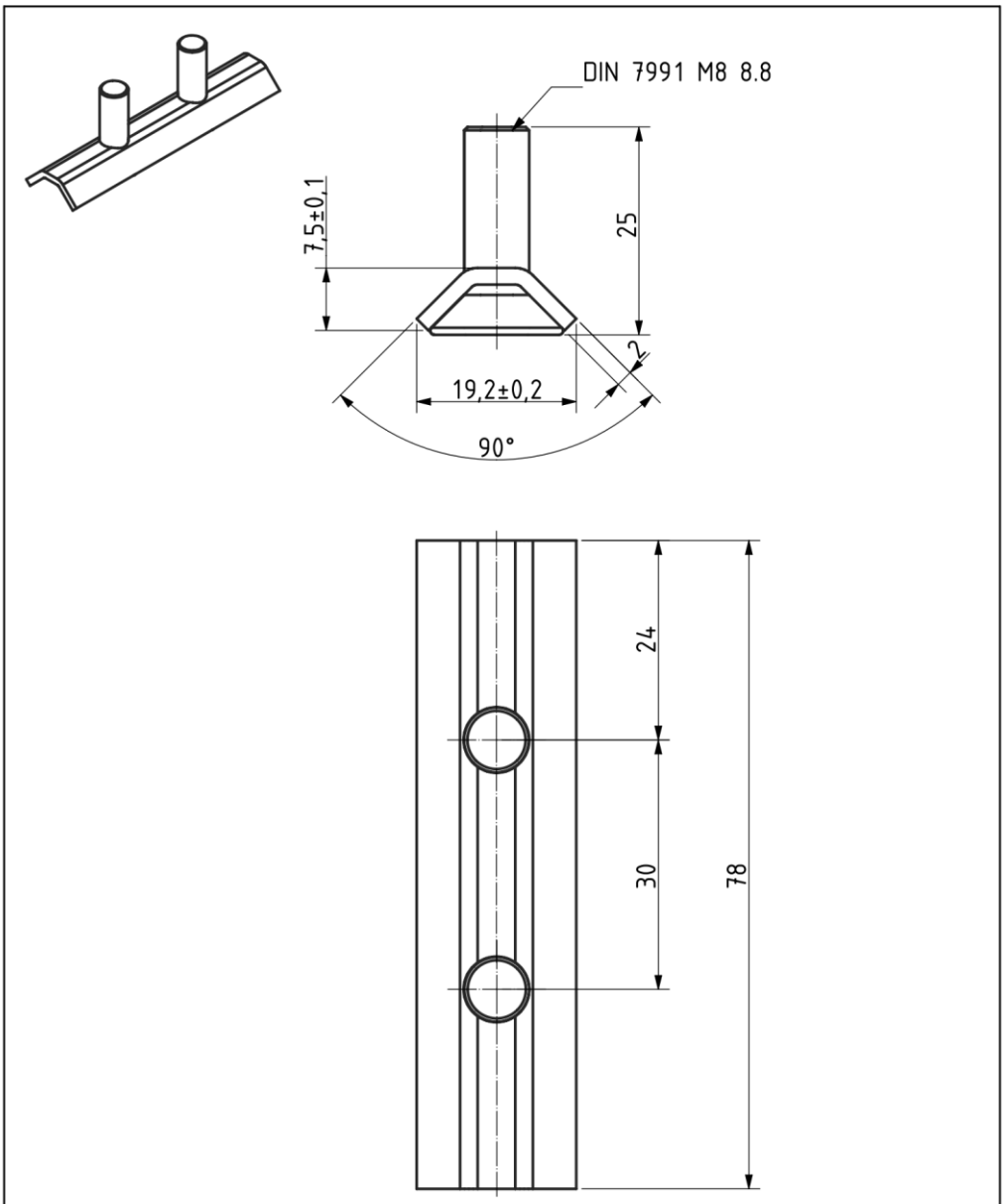




Tolerance class according to DIN 7168		0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 -1000	1000 - 2000	2000 - 4000	>4000
f	Fine	±0,05	±0,05	±0,1	±0,15	±0,2	±0,3	±0,5	±0,8	-

Designed by - date	Checked by	Approved by
S.Chrzanowski		

	V-bolt single	Date 03.01.2019
OKB	19009550	Sheet 1/1



Tolerance class according to DIN 7168		0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 -1000	1000 - 2000	2000 - 4000	>4000
f	Fine	±0,05	±0,05	±0,1	±0,15	±0,2	±0,3	±0,5	±0,8	-

Designed by - date	Checked by	Approved by
S.Chrzanowski		

	V-Bolt double	Date 03.01.2019
OKB	19009551	Sheet 1/1

ENCLOSURE 5: Other components