

**INFORMATION FOLDER / DOCUMENT:  
OKB/02/2020-00**

**PURSUANT TO UN/ECE REGULATIONS  
No. 14-07  
“UNIFORM PROVISIONS CONCERNING THE APPROVAL  
OF VEHICLES WITH REGARD TO SAFETY-BELT  
ANCHORAGES“  
(as last amended)**

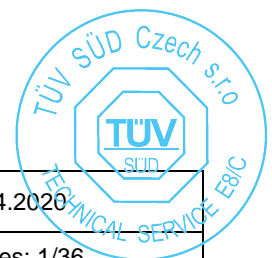
**FOR THE SEAT OKBee  
TYPE SAF04T**



.....  
Damian Goliński  
Vice President

Total number of pages: 36  
Date of issue: 06.04.2020

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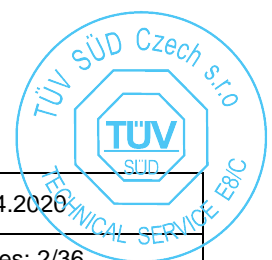
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Assembly drawings	Enclosure 4

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Confirmation

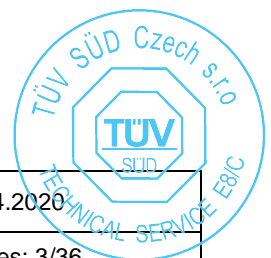
We hereby declare that the vehicle specimens submitted for this approval test have been manufactured and assembled on conditions of ordinary mass production and that they are compatible with the enclosed documentation.

Date of issue: 6<sup>th</sup> April 2020



.....  
Damian Goliński  
*Vice President*

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- 0. GENERAL
- 0.1 Make (trade name of manufacturer): OKBee
- 0.2 Type: SAF04T
- 0.2.1 Commercial name(s) (if available): OKBeeSAFE 04T
- 0.2.2 Dedicated for vehicle(s): See Enclosure 1
- 0.3 Means of identification of type: Letter and digits
- 0.3.1 Location of that marking: Near statutory plate
- 0.4 Category of vehicle: M1, N1
- 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): N/A

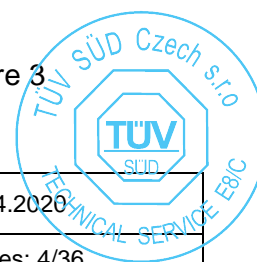
1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

- 1.1 Photographs and/or drawings of a representative vehicle: See Enclosure 1

9. BODYWORK

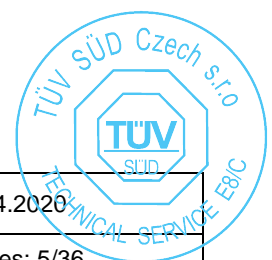
- 9.1 Type of bodywork using the codes set out in Part C of Annex II of Directive 2007/46/EC: N/A
- 9.10 Interior arrangement
- 9.10.3 Seats
- 9.10.3.1 Number of seating positions: Max. 3
- 9.10.3.1.1 Location and arrangement: Any position in the vehicle
- 9.10.3.2 Seat(s) designated for use only when the vehicle is stationary: N/A
- 9.10.3.3 Mass: OKBeeSAFE 04T – 69 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 2, Enclosure 3

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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):	see Enclosure 2
9.10.3.4.5	The parts of the vehicle used as anchorages:	See Enclosure 3
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:	See Enclosure 2
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:	15°-23°
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:	adjustable
9.10.4.2.	Type-approval number(s), if available:	N/A
9.10.4.3.	For head restraints not yet approved	N/A
9.12.	Safety belts and/or other restraint systems	

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- 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 <sup>1</sup>	N/A	N/A	N/A
	R <sup>1</sup>	N/A	N/A	N/A
Other rows	L*	E20 16R-04 0885	E20 16R-04 0886 E20 16R-04 0889	N/A
	R*			

<sup>1</sup>-If present

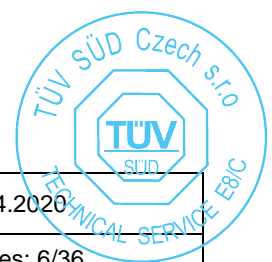
\*- seats alternatively mounted symmetrically about the longitudinal symmetry line

- 9.12.2. Nature and position of supplementary restraint system:  
 (L = left, R = right, C = centre)

ISOFIX anchorages mounted in 2 seating positions

- 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 Enclosures
- 9.13.2 Drawings of the belt anchorages and parts of the vehicle structure where they are attached (with the material indication): See Enclosure 2

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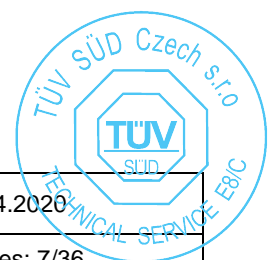
9.13.3 Designation of the types of safety belt authorised for fitting to the anchorages with which the vehicle is equipped:

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

Other rows 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

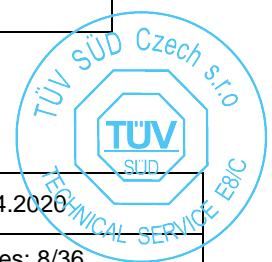
9.13.4 Description of a particular type of safety belt where an anchorage is located in the seat backrest or incorporates an energy dissipating device:

Ar4m



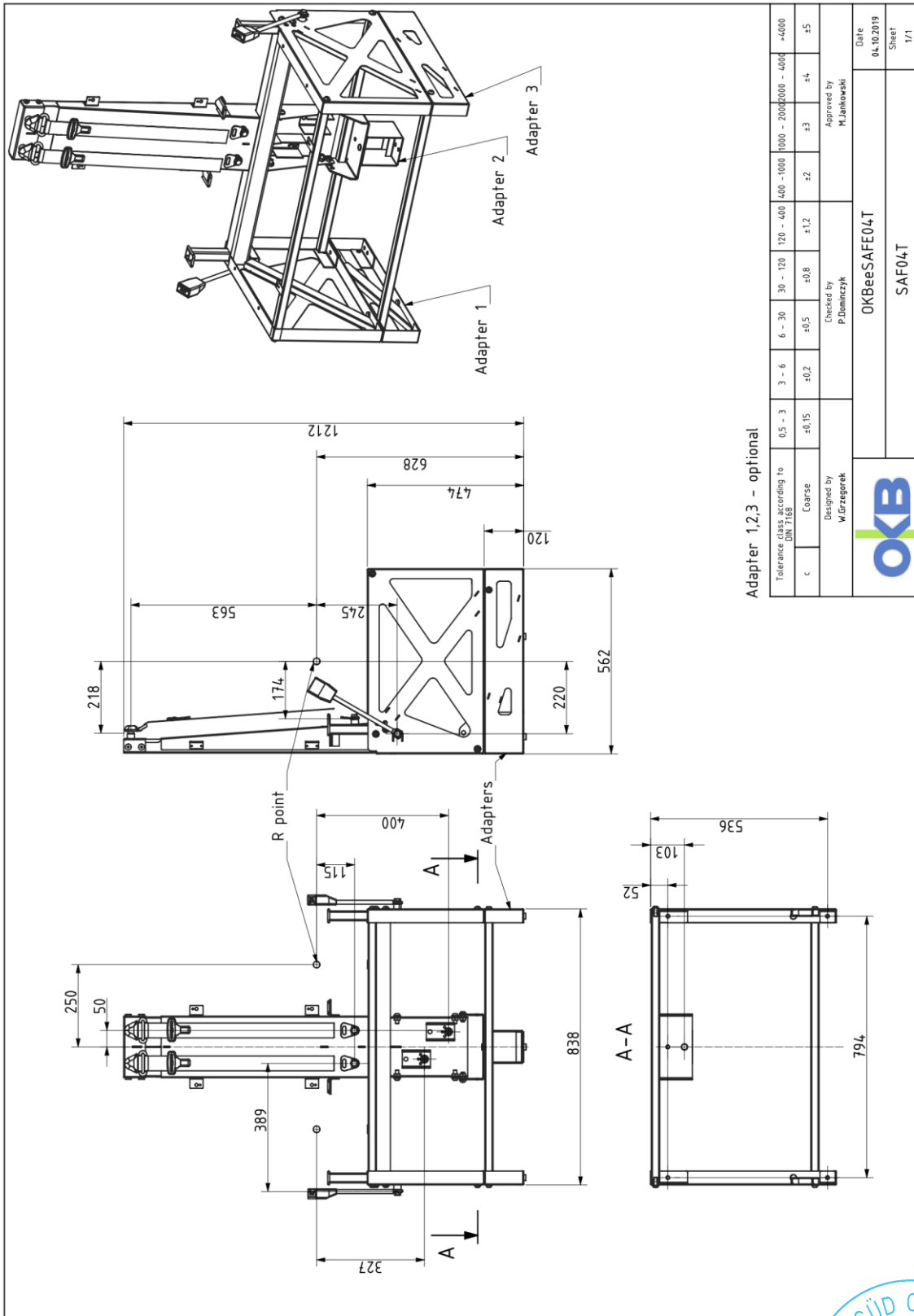
Enclosure 1: TABLE OF VEHICLES TYPES

Manufacturer	Commercial description / Type	Wheelbase
Daimler	Sprinter (906, 907)	3250, 3665, 4325
	Sprinter (910)	3259, 3924
	Vito/Viano/V-klasse (639, 639/2, 639/4)	3200, 3430
VW	Crafter (2E_)	3250, 3665, 4325
	Crafter (SYN_ e.g. SYN1E, SYM1E, SYN2E, SYN2Z, SYM2Z)	3640, 4490
	T5 (7H_, 7E_, 7J_)	3000, 3400
	T6 (7H_, 7E_, 7J_)	3000, 3400
Citroen	Jumper (Y)	3000, 3450, 4035
	Jumpy (X)	3000, 3122
	Jumpy (2016)	2925, 3275
	SpaceTourer	2925, 3275
Peugeot	Boxer (Y)	3000, 3450, 4035
	Expert (VF3_)	3000, 3122
	Expert (2016)	2925, 3275
	Traveller	2925, 3275
Fiat	Ducato (250)	3000, 3450, 4035
	Scudo (270)	3000, 3122
	Talento (FJL, FFL)	3098, 3498
Opel	Movano (MR, MS, MW)	3182, 3682, 4332
	Vivaro (F7)	3098, 3498
Renault	Master (FV, MA, VA)	3182, 3682, 4332
	Trafic (FL, L)	3098, 3498
	Trafic 2014 (JL, L)	3098, 3498
Renault Truck	Master (MF)	3182, 3682, 4332
Ford	Transit (FA_, FD_)	2933, 3300, 3750
	Transit (FC_)	3300, 3750, 3954
	Transit Custom (FA_, FC_)	2933, 3300
	Transit Connect (PU2)	2662, 3062
Iveco	Daily (IS_)	3000, 3300, 3520, 3595, 3950, 4100, 4175, 4750
Nissan	NV200	2725
	NV300	3098, 3498
	NV400	3182, 3682, 4332
Toyota	Pro Ace, Pro Ace Verso (2016)	2925, 3275
MAN	TGE (SYN_ e.g. SYN1E, SYM1E, SYN2E, SYN2Z, SYM2Z)	3640, 4490
LDV	V80, Maxus (SV6C)	3100, 3850
Hyundai	H350 (EU(V))	3435, 3670



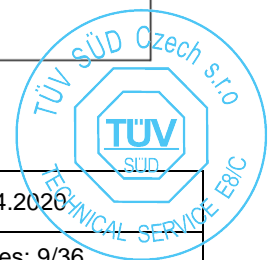


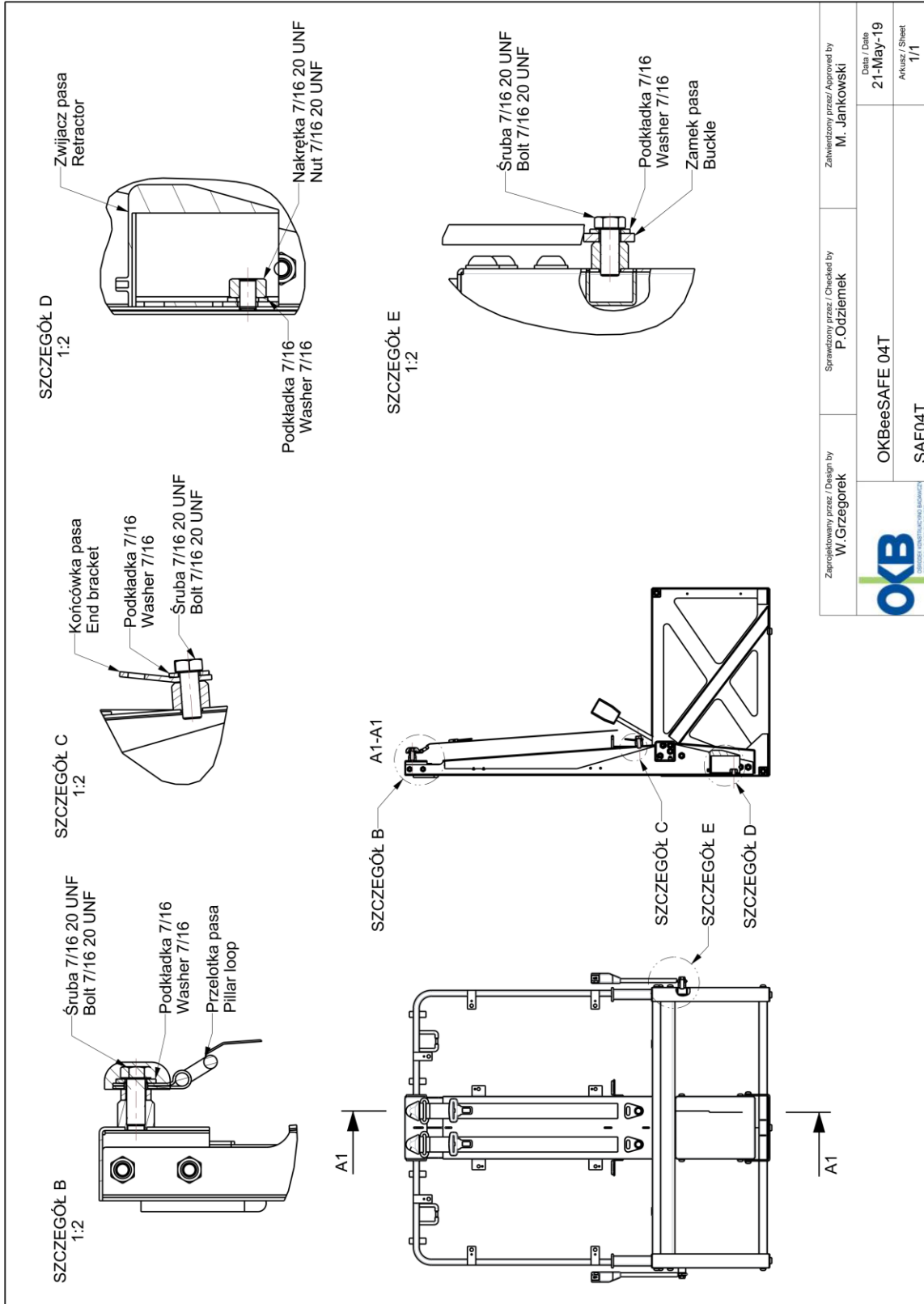
Enclosure 2: DRAWINGS OF SEATS AND SEATBELTS ANCHORAGES



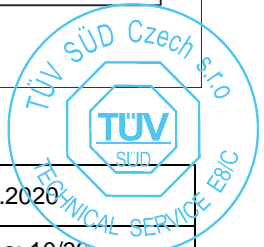
Adapter 1,2,3 - optional

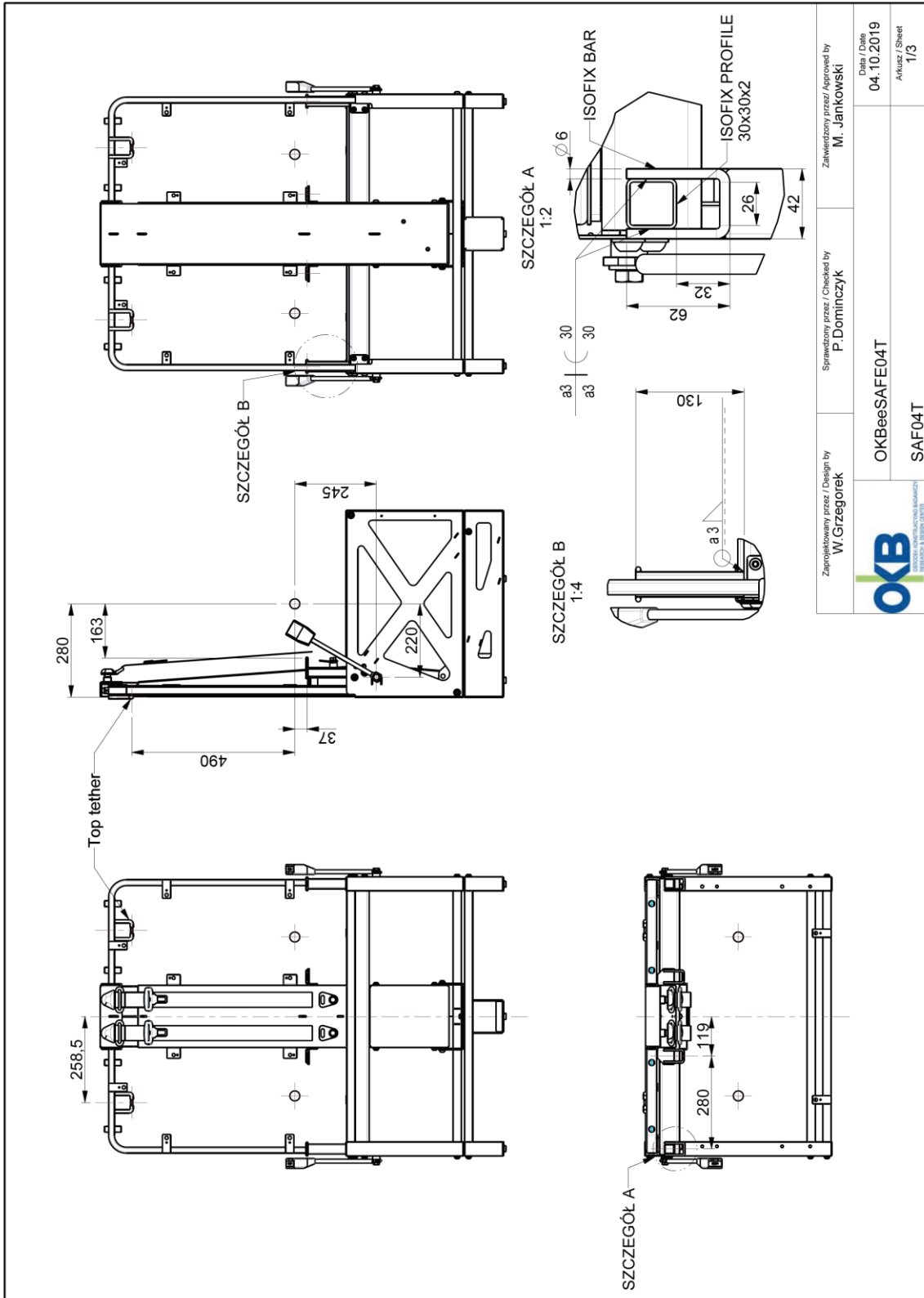
Tolerance class according to DIN 7168	0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 - 1000	1000 - 2000	2000 - 4000	+4000
c	±0,15	±0,2	±0,5	±0,8	±1,2	±2	±3	±4	±5
Coarse									
Designed by	W. Grzegorek								
Checked by	P. Dominczyk								
Approved by	M. Janowski								
Date	04.10.2019								
Sheet	1/1								
OKB									
OKBeeSAFE04T									
SAF04T									



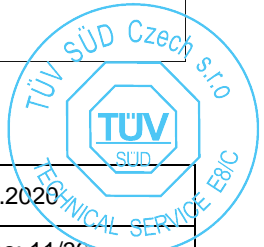


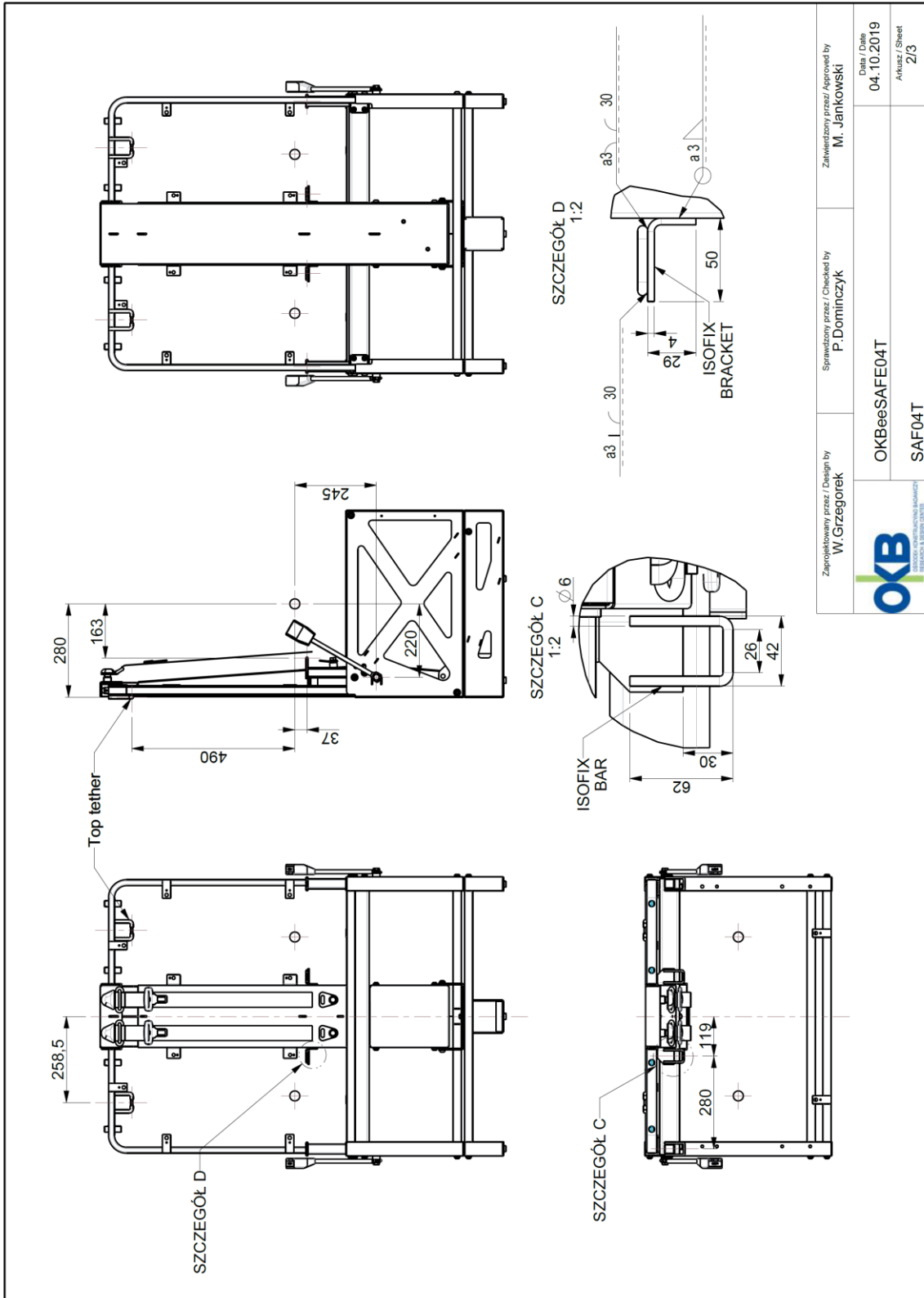
Zaprojektowany przez / Design by W. Grzegorek	Sprawdzony przez / Checked by P. Odziemek	Zatwierdzony przez / Approved by M. Jankowski
OKBeeSAFE 04T		Date / Date 21-May-19
SAF04T		Arkusz / Sheet 1/1





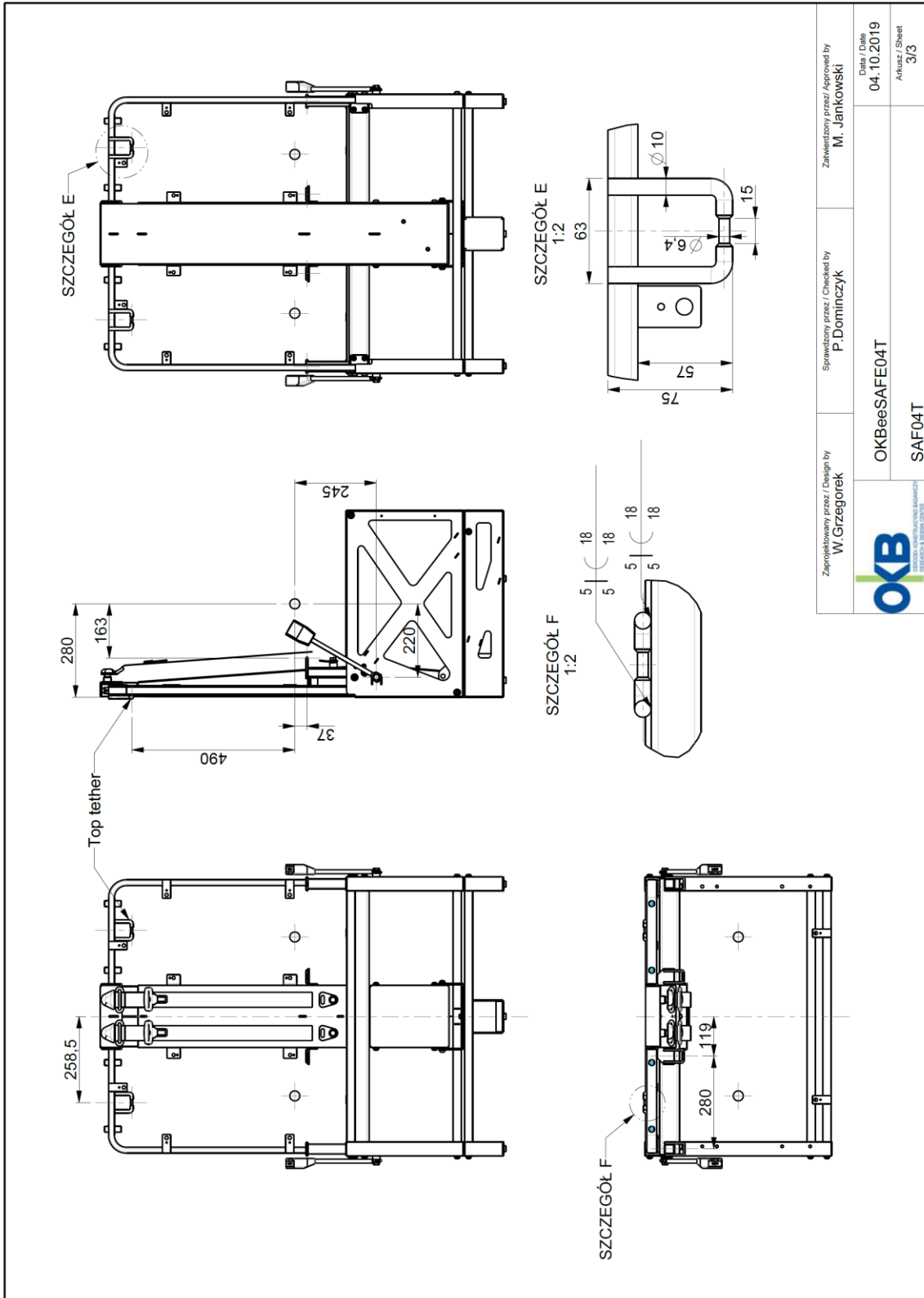
Zaprojektowany przez / Design by <b>W. Grzegorek</b>	Sprawdzony przez / Checked by <b>P. Dominczyk</b>	Zatwierdzony przez / Approved by <b>M. Jankowski</b>
OKB OŚRODEK KONSTRUKCYJNO BADAWCZY RESEARCH & DESIGN CENTER		OKBeSAFE04T SAF04T
Date / Date <b>04.10.2019</b>		Arkuszy / Sheet <b>1/3</b>



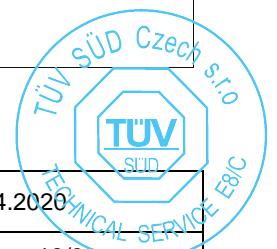


Zaprojektowany przez / Design by W. Grzegorek	Sprawdzony przez / Checked by P. Dominczyk	Zatwierdzony przez / Approved by M. Jankowski	Data / Date 04.10.2019
OKBeSAFE04T			Arkusz / Sheet 2/3
SAF04T			

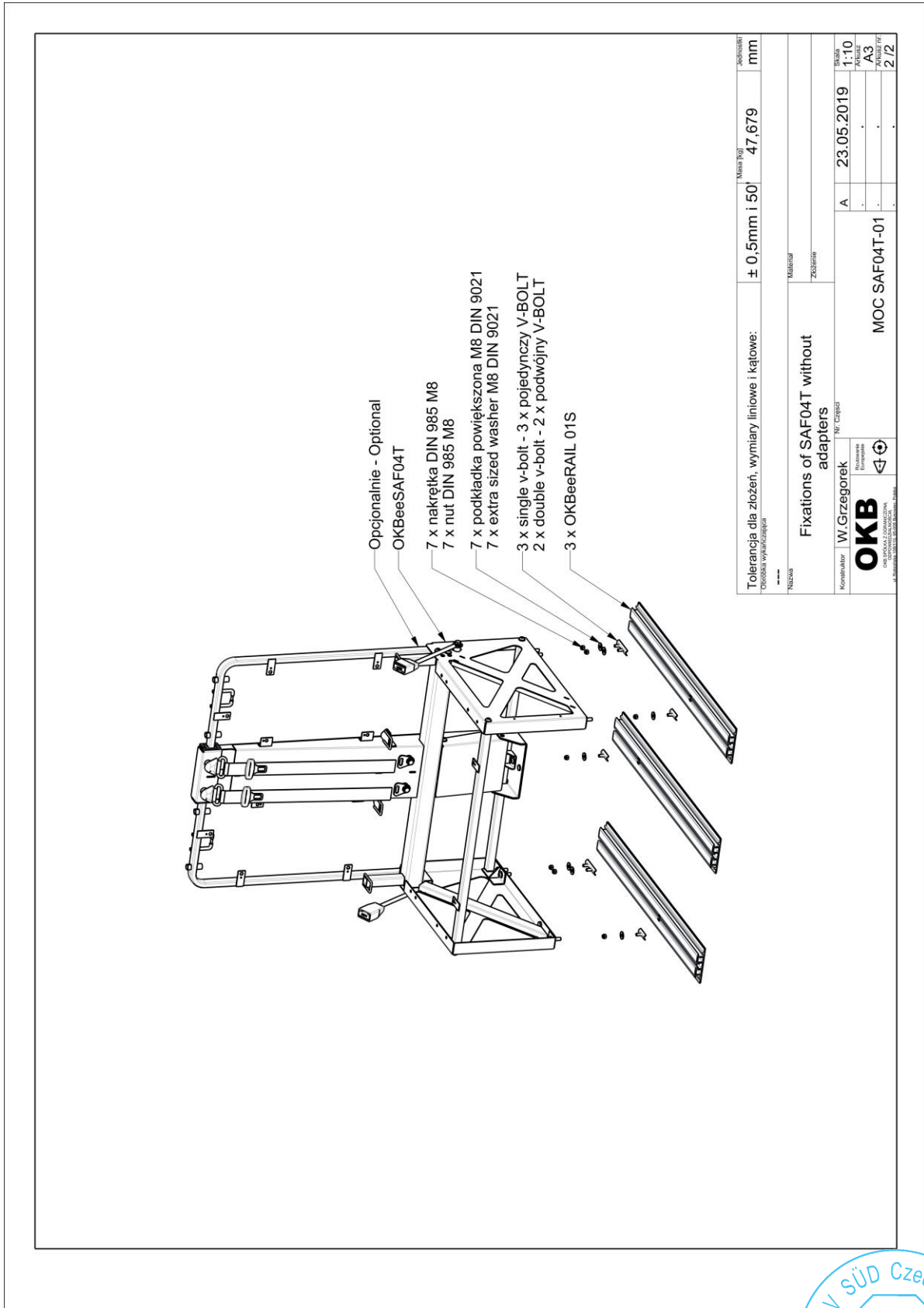




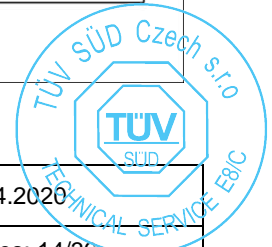
Zaprojektowany przez / Design by W. Grzegorek	Sprawdzony przez / Checked by P. Dominczyk	Zatwierdzony przez / Approved by M. Jankowski
OKB OŚRODEK KONSTRUKCYJNO BADAWCZY RESEARCH & DESIGN CENTER		OKBeSAFE04T SAF04T
Data / Date 04.10.2019		Arkusz / Sheet 3/3

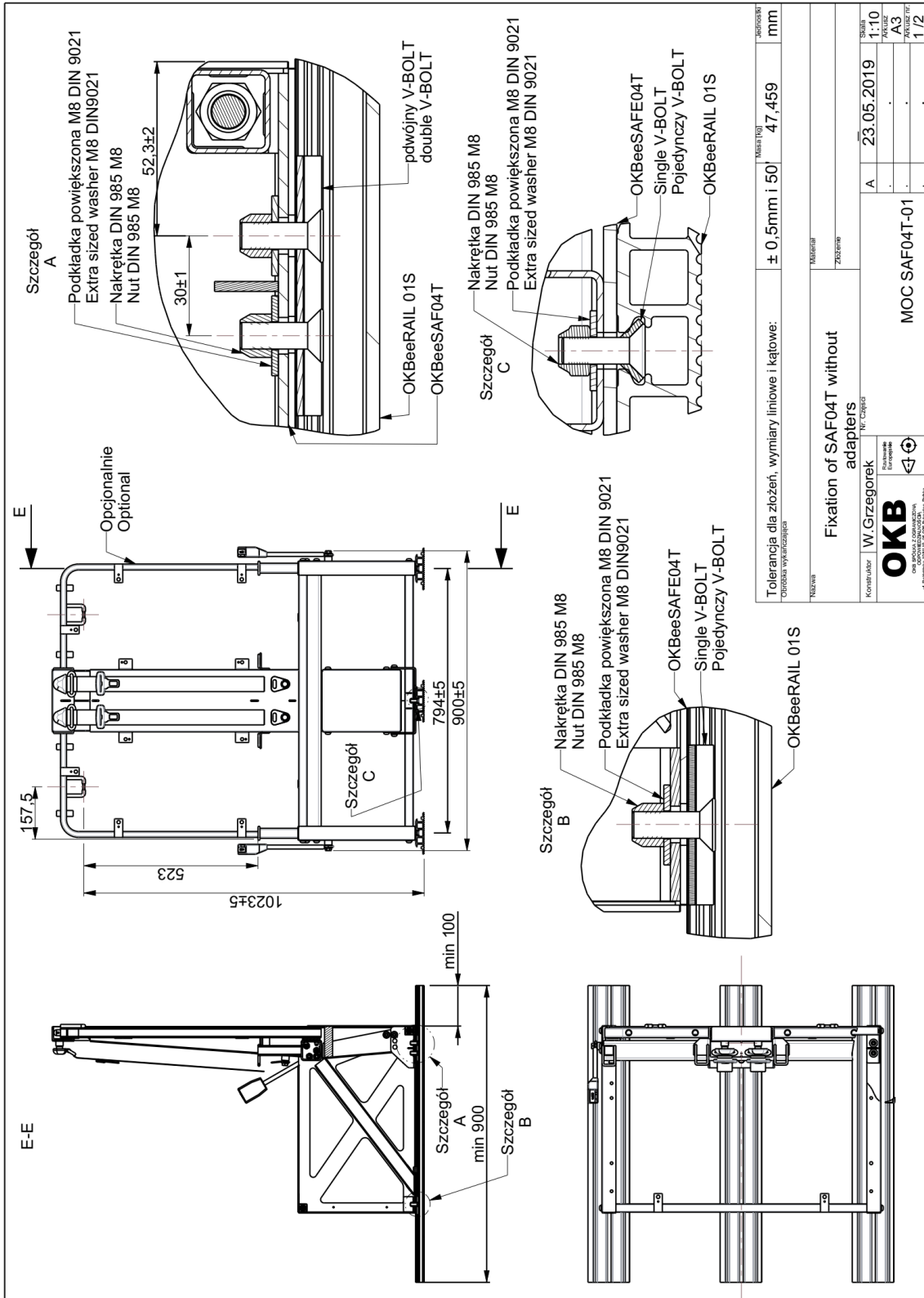


Enclosure 3: SEAT ANCHORAGES

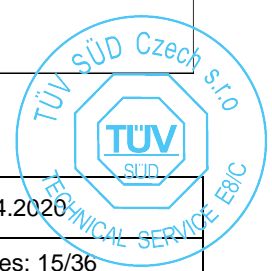


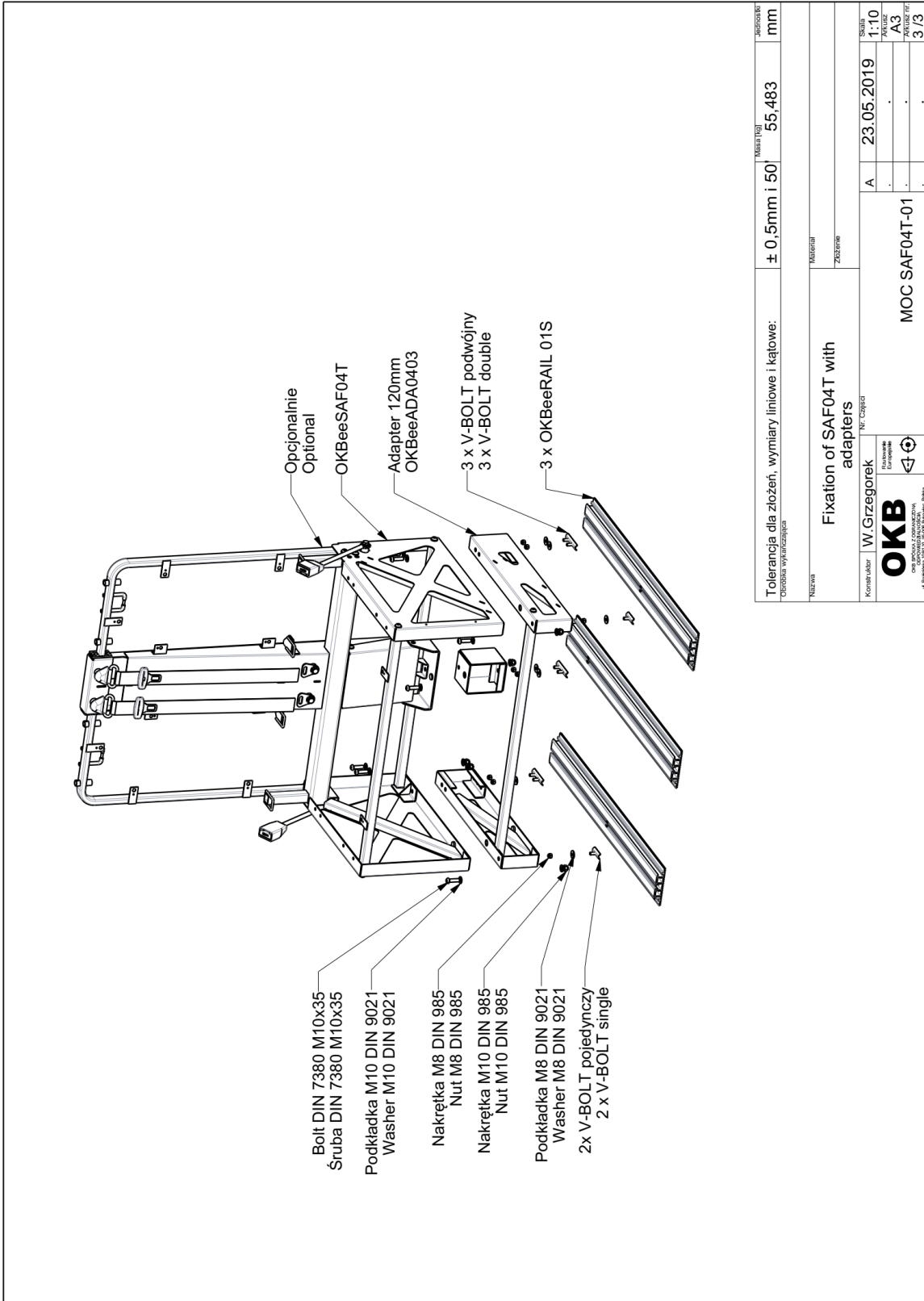
Tolerancja dla złożeń, wymiary liniowe i kąłowe: Dopuszczalność wykończenia		Masa (kg)	47,679	Jednostka	mm
		± 0.5mm i 50			
Nazwa					
Fixations of SAF04T without adapters					
Materiał					
Złożenie					
Konstruktor	W.Grzegorek	Wzrost	A	23.05.2019	1:10
<b>OKB</b>		Wersja			A3
OKB Sp. z o.o. ul. Słowackiego 17, 41-200 Sosnowiec, POLSKA		Wielkość			2 / 2
		MOC SAF04T-01			



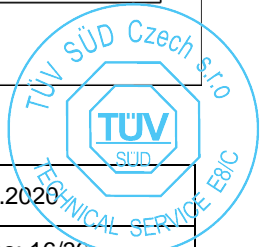


Tolerancja dla złożeń, wymiary linowe i kątowe: Dobrych wykańczającą		± 0,5mm i 50	Maks [mm]	47,459	Wzrost [mm]
MOCOWANIE					
ZŁOŻENIE					
Fixation of SAF04T without adapters					
Konstruktor	W.Grzegorek				
Nazwa	MOC SAF04T-01				
Skala	1:10				
Format	A3				
Wersja	1/2				

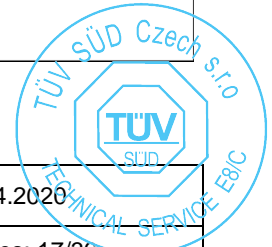
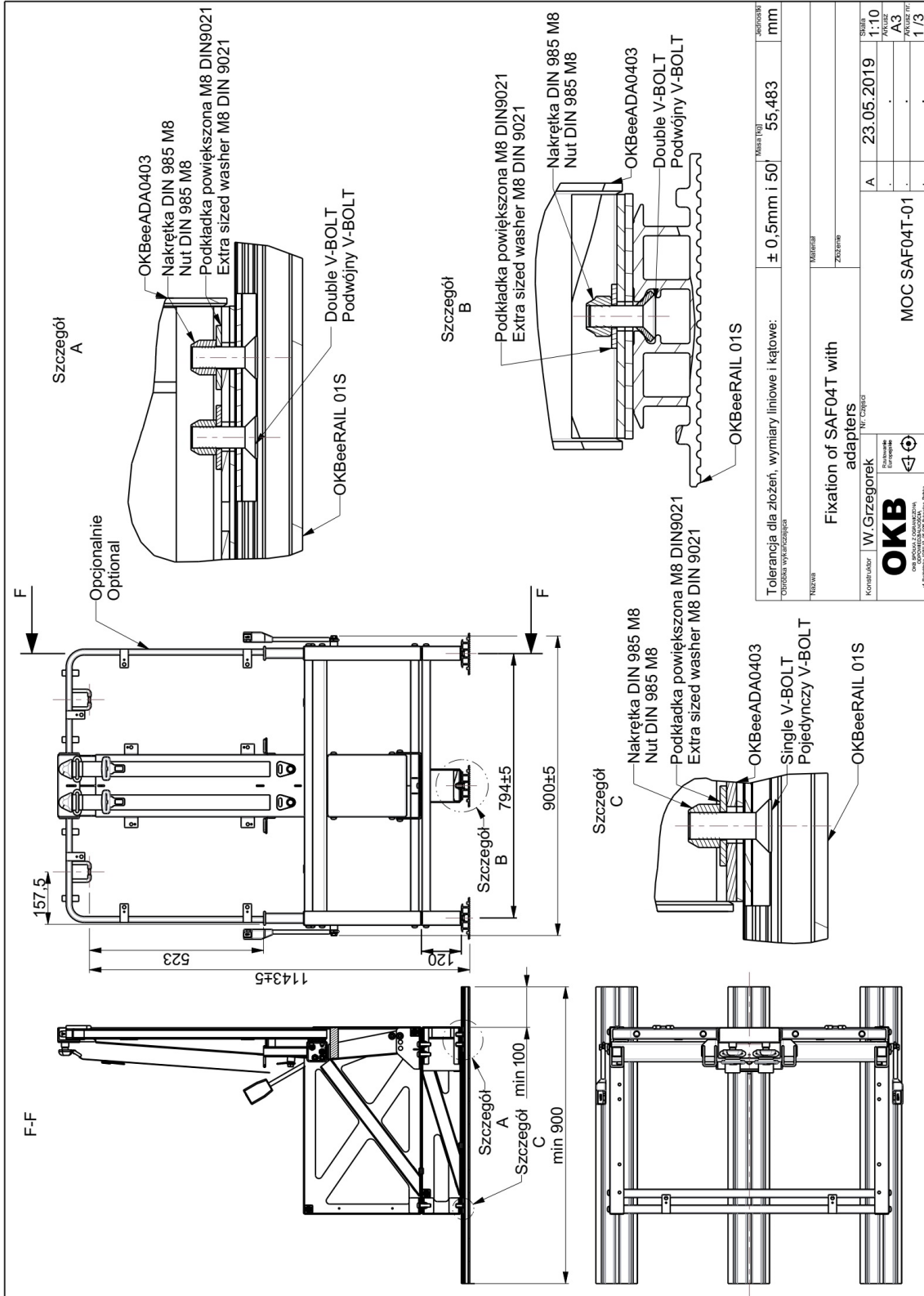


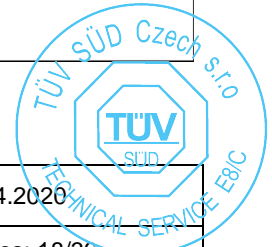
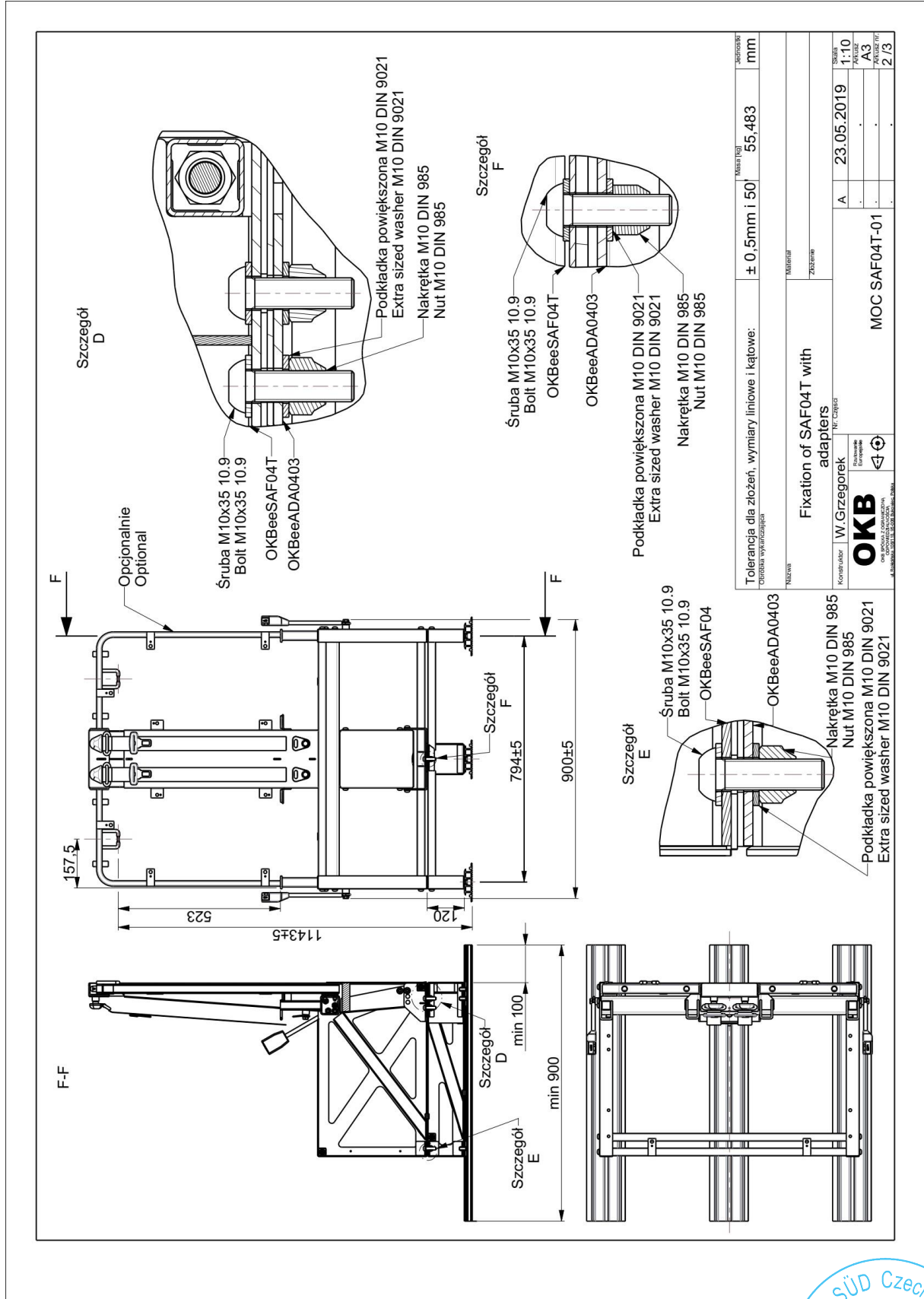


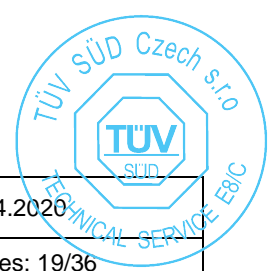
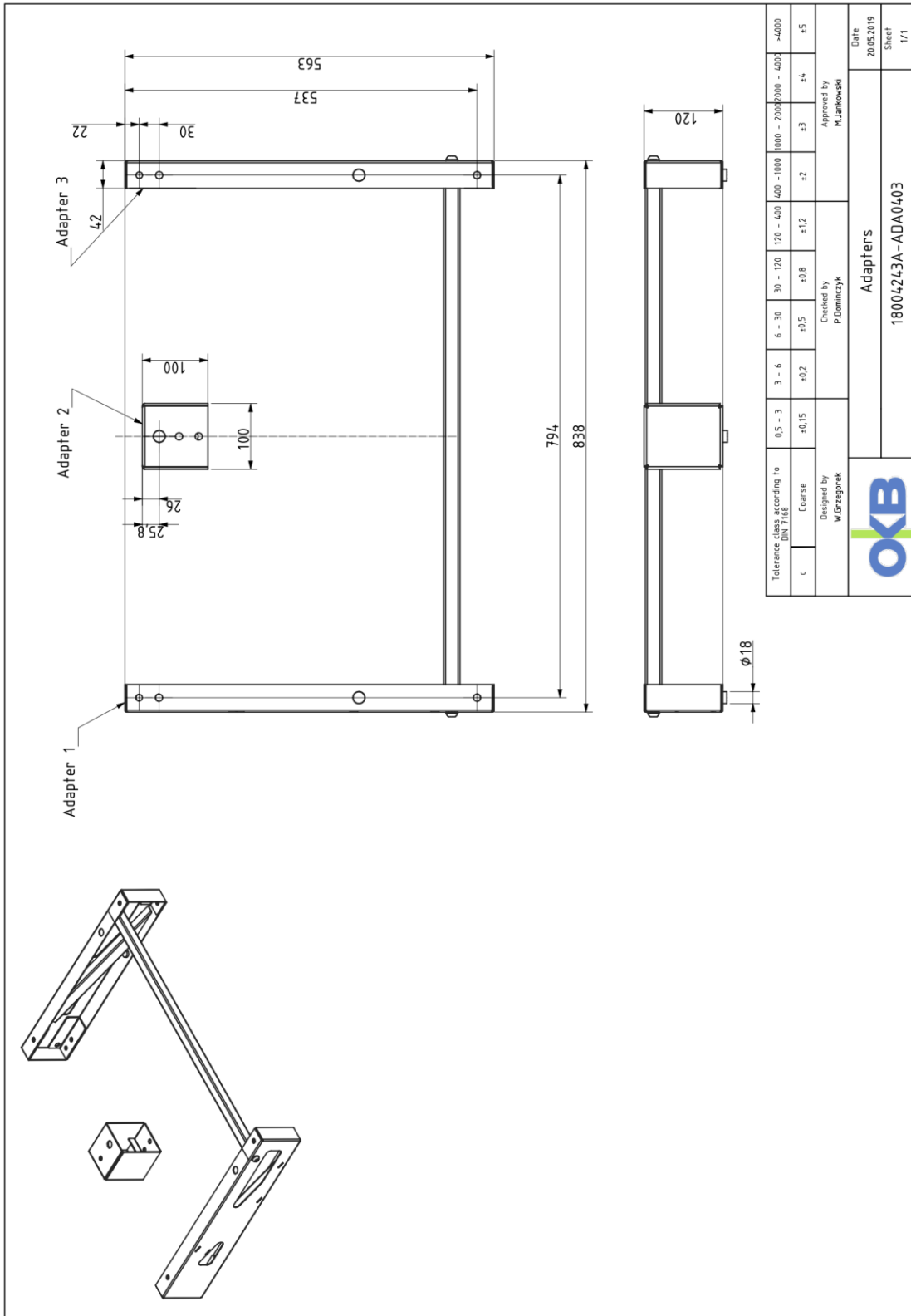
Tolerancja dla złożeń, wymiary liniowe i kątowe: Opracowa wyznaczająca		± 0,5mm i 50'	Masa [kg]	55,483	Jednostka	mm
Nazwa		Materiał		Zobczona		
Nazwa		Materiał		Zobczona		
Konsultator: W. Grzegorek		Nr. Części		A		
OKB OŚRODEK KONSTRUKCYJNO BADAWCZY AL. BIELSKA 103/105, 52-008 Białystok, POLSKA		MOC SAF04T-01		Data: 23.05.2019		
Skala: 1:10		Format: A3		Liczba stron: 3/3		

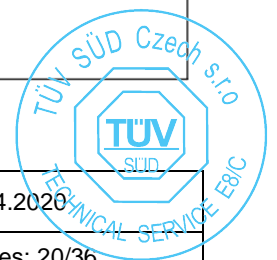
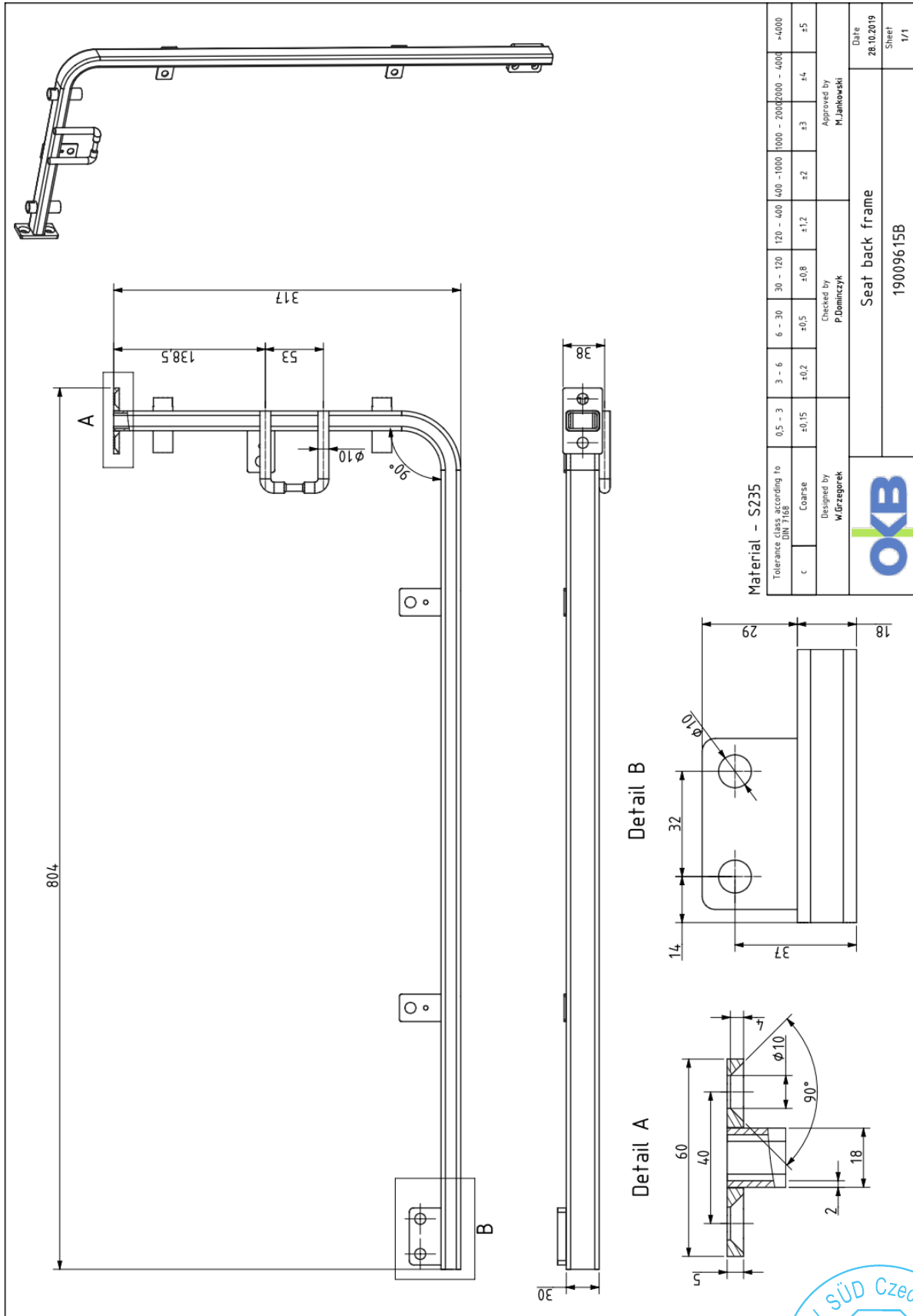


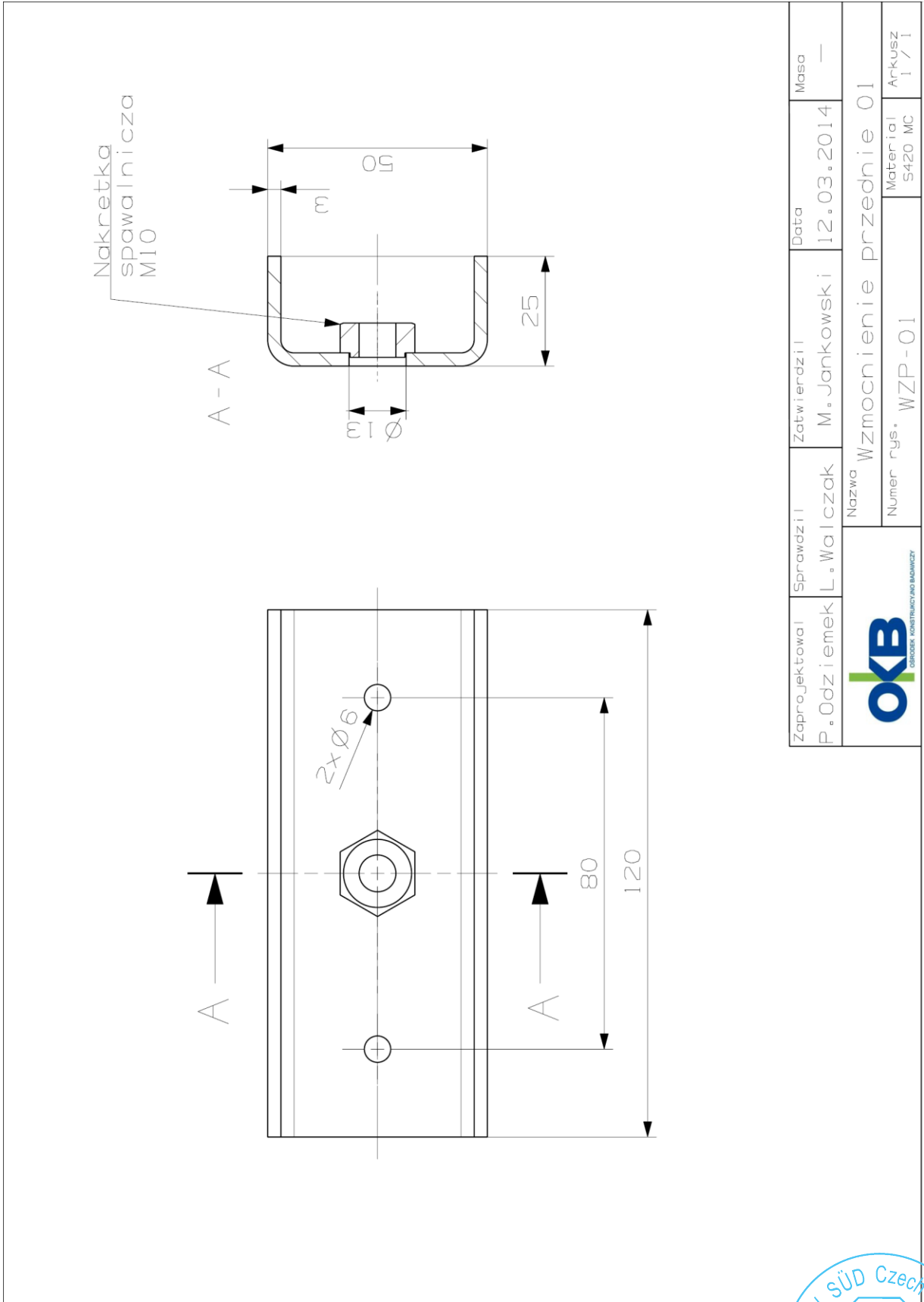




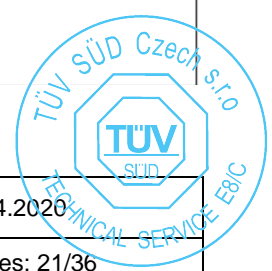


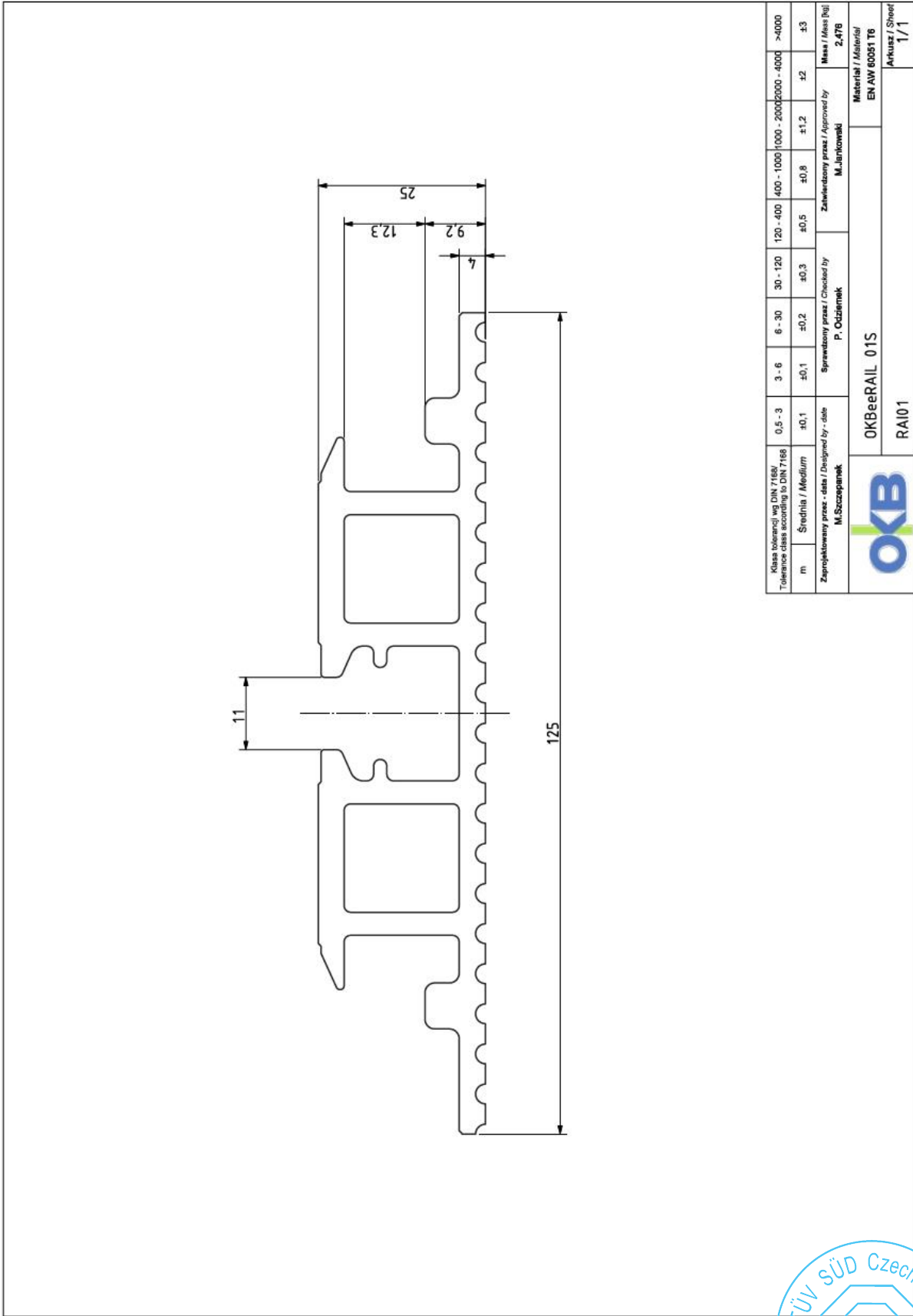




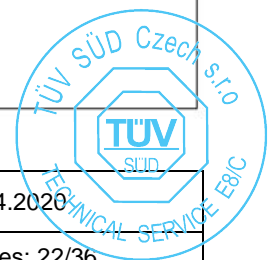


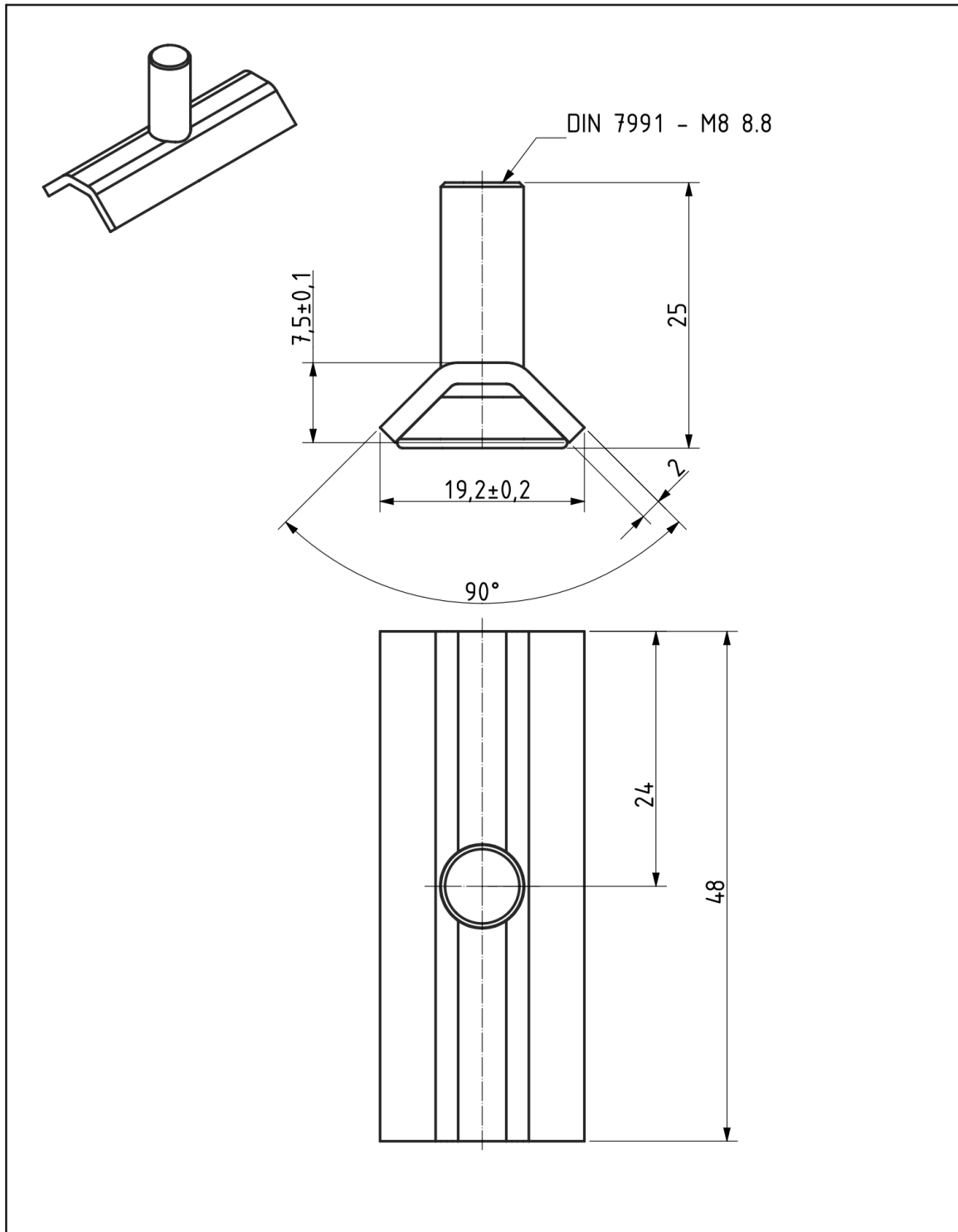
Zaprojektował P. Odziejmek	Sprawił L. Walczak	Zatwierdził M. Jankowski	Data 12.03.2014	Masa —
 OŚRODEK KONSTRUKCYJNO BADAWCZY		Nazwa Wzmocnienie przednie 01		
		Numer rys. WZP-01		Material S420 MC





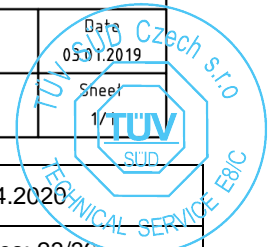
Klasa tolerancji wg DIN 7168 Tolerance class according to DIN 7168		0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 - 1000	1000 - 2000	2000 - 4000	>4000	
m	Średnica / Medium	±0,1	±0,1	±0,2	±0,3	±0,5	±0,8	±1,2	±2	±3	
Zaprojektowany przez - date / Designed by - date		M. Szczepaniak		Sprawdzony przez / Checked by		P. Czerniak		Zawierdzony przez / Approved by		M. Jankowski	
Masa / Mass [kg]		2,476		Material / Material		EN AW 60051 T6		Arkusz / Sheet		1/1	
OKB		OKBeerAIL 01S		RAI01							

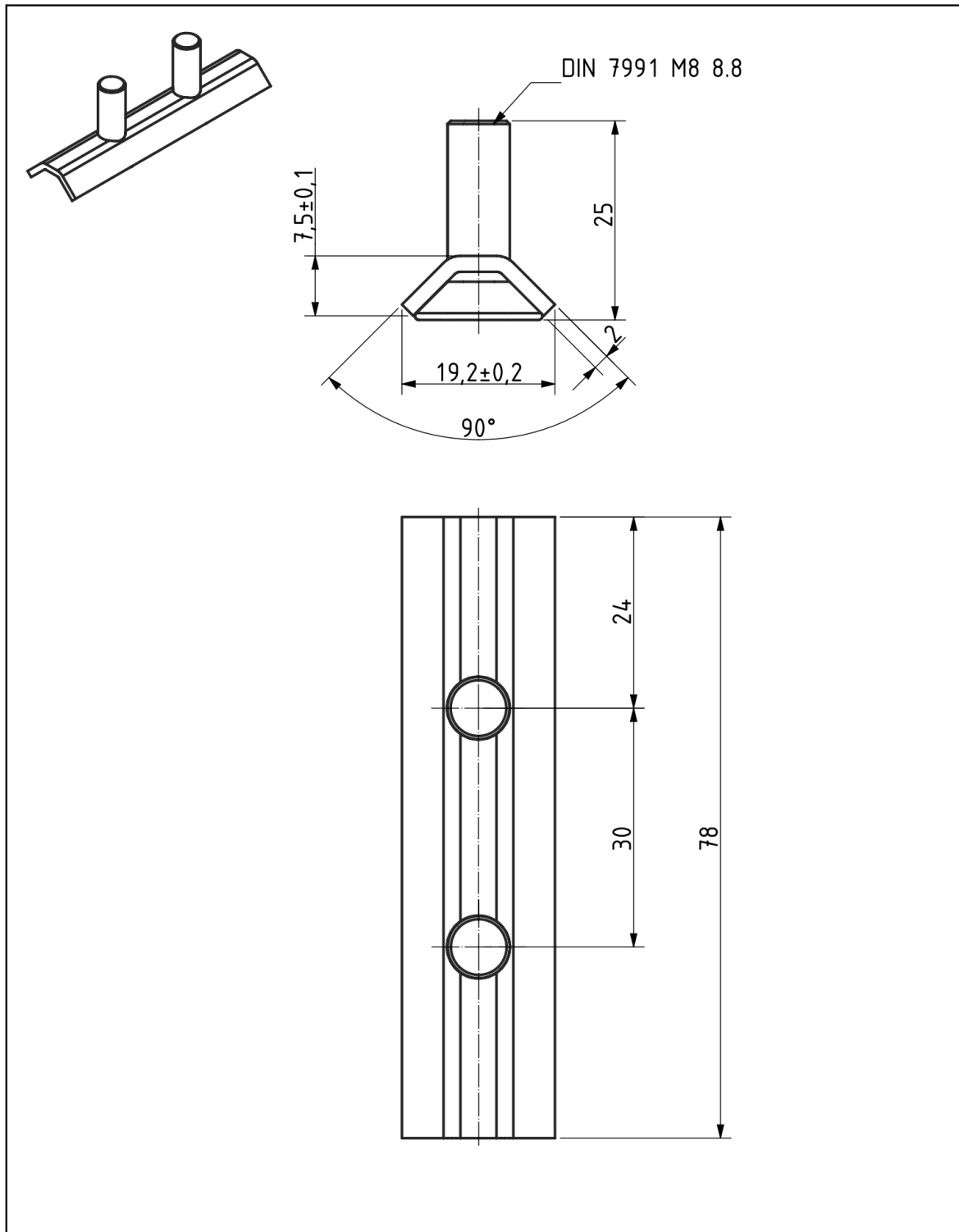




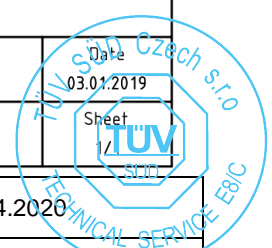
Tolerance class according to DIN 7168		0,5 - 3	3 - 6	6 - 30	30 - 120	120 - 400	400 - 1000	1000 - 2000	2000 - 4000	>4000
f	Fine	±0,05	±0,05	±0,1	±0,15	±0,2	±0,3	±0,5	±0,8	-
Designed by - date S.Chrzanowski			Checked by				Approved by			

	V-bolt single		Date 05.01.2019
	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 S.Chrzanowski			Checked by				Approved by			
		V-Bolt double							Date 03.01.2019	
		19009551							Sheet 1/1	



	Date: 06.04.2020
	Page / pages: 24/36



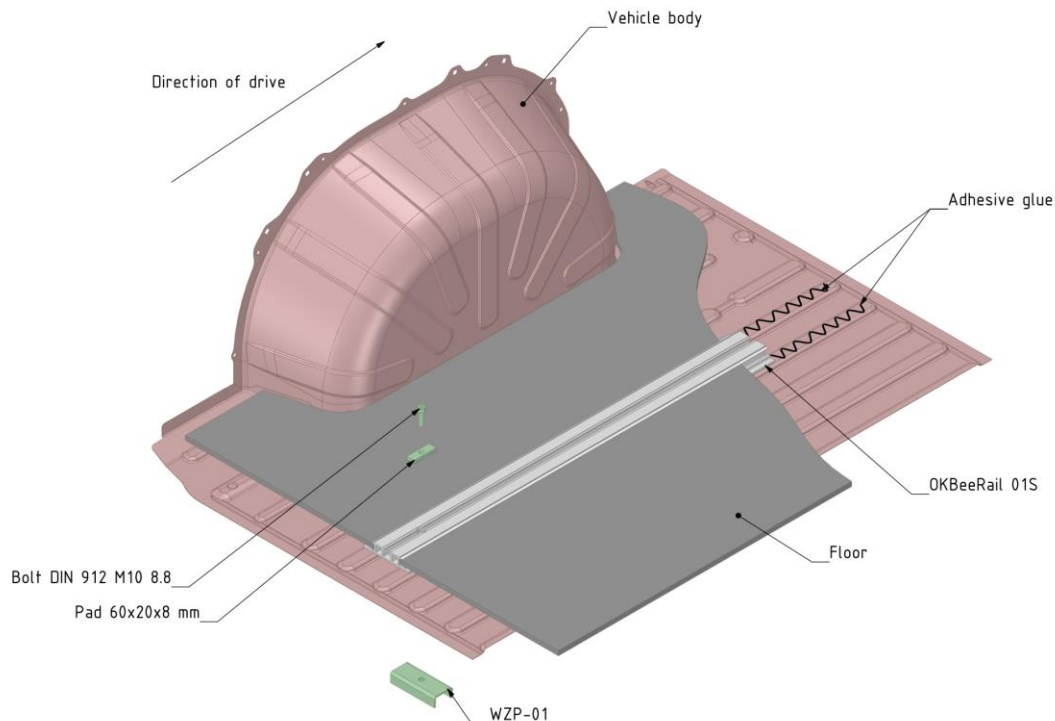
## Instrukcja klejenia szyn aluminiowych do podłogi pojazdu/ Instruction of gluing aluminium rails

Sposób przygotowania powierzchni: / *Surface preparation of:*

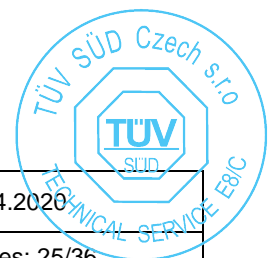
- aluminium surowe lub powlekane / *raw or coated aluminum*
- blacha lakierowana fabrycznie lub powlekana na gorąco / *originally or powder coated steel sheet*
  - 1) zmatowić / *roughen*
  - 2) odtłuścić przy pomocy Sika Aktivator 205 lub BETACLEAN 3350 / *degrease with Sika Aktivator 205 or BETACLEAN 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).*



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## Technical Data Sheet

**Dow Automotive**

# BETACLEAN 3350

### Description / Application:

BETACLEAN 3350 is a cleaner for removing dirt and grease from plastics, paints and glass

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The use of the product other than approved application have to be released in writing by the Technical Service of Dow Automotive.

### Technical Data:

<b>Basis</b>	Heptane
<b>Colour</b>	Colourless, transparent
<b>Density</b>	0,68 g/cm <sup>3</sup> at 23°C
<b>Flash point</b>	-4°C
<b>Instructions for use</b>	Wipe contaminated surface with BETACLEAN 3350 saturated, binder-free tissues or cloths. Preliminary trials carried out by our technical service department are recommended.
<b>Shelf life</b>	12 months in unopened containers
<b>Containers</b>	100, 250, 1000ml aluminium containers
<b>Protection measures</b>	See health and safety data sheet.

### DOW AUTOMOTIVE Quality Management

Quality is our highest priority. Dow Automotive works with a highly modern Quality Management System which meets all international requirements of QS 9000, VDA-6 and ISO 9001.

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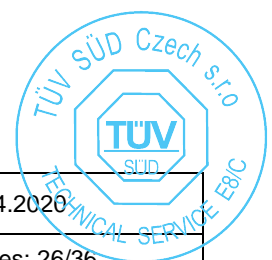
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**Dow Automotive**

## Technical Datasheet

Aftermarket Division

# BETAPRIME 5061

### Description / Application:

One-Step adhesion promoter for glass, ceramic serigraphy in combination with BETASEAL and BETAMATE PUR Adhesives. A prior cleaning of the bonding surface with BETACLEAN 3300 is necessary.

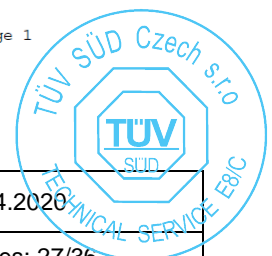
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### Technical Data:

<b>Basis</b>	Silane modified polymers
<b>Colour</b>	black
<b>Pigments</b>	carbon black
<b>Density</b>	0.91 - 0.93 g/cm <sup>3</sup>
<b>Viscosity (DIN-cup 4)</b>	10 - 14 s @ 23°C
<b>Flash Point</b>	approx. -8°C
<b>Processing temperature</b>	ideal 10 - 35°C
<b>Tack free time</b>	50 - 150 sec @ 23°C / 50 % r.h.
<b>Evaporation time</b>	min. 10 min @ 23°C / 50 % r.h., max. 8h Reactivation with BP 5061 or BW 4001/4002 possible.
<b>Instruction for use</b>	Shake container well before opening. Continue to shake for at least 60s after steel balls inside the container are released. Caution! The product is extremely hygroscopic! Close container immediately after use to preserve remaining contents. Use up remainder within a few days.
<b>Bonding surface preparation</b>	Clean bonding areas with the BETACLEAN 3300. Verify compatibility or consult our technical service department.
<b>Cleaning</b>	Clean Equipment with BETACLEAN 3000

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<b>Shelf life</b>	9 months in unopened containers (see "use before" date printed on the container)
<b>Storage once opened</b>	- applicator: single use, do not store - 100 ml bottle: 5 days in original container
<b>Storage</b>	Temperature: 5°C to 25°C Short term up to 40°C
<b>Containers</b>	Single use applicator, 100 ml aluminium bottle
<b>Protection measures</b>	See health and safety data sheet

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The above information implies no liability as to the usage of our products. Since the applications, utilisation and processing of our products are beyond our control, the information given is not intended to replace your own trials with the products to establish their suitability for your particular application. Our liability is limited to the value of the products supplied by us and used by you. The information on this data sheet corresponds to the latest findings and supersedes all previous versions.

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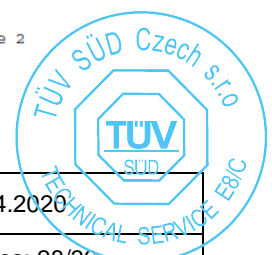
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**Dow Automotive**

# BETAMATE 7120

**Description / Application:**

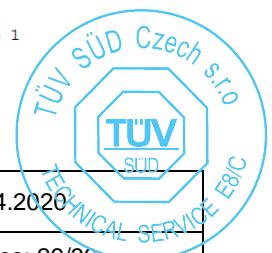
Single-component, high-viscosity, atmospheric humidity-curing polyurethane bonding/sealing compound for high-strength, permanently elastic adhesive joints.  
 This material is used in the direct glazing process of the automotive industry in combination with glass-primer and wipe and paint primer. It is also suitable for bonding certain plastic parts in conjunction with the plastic primer BETAPRIME 5404 and/or a specific pretreatment according to prior test results.

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The use of the product other than approved application have to be released in writing by the Technical Service of Dow Automotive.

**Technical Data:**

Basis	polyurethane prepolymers
Colour	black
Density	ca. 1.23 g/cm <sup>3</sup> at 23°C
Solid contents	> 98%
Viscosity (Extrusion, Ballan 4 mm nozzle, 4 bar)	pasty, pumpable 12 - 18 g/min at 23°C
Flash point	> 100°C
Processing temperature	10 - 40°C
Open time	max. 15 min at 23°C/50% rh primerless
Sagging behavior	very good, non-sagging
Tack-free time	approx. 30 min at 23°C/50% rh
Cure rate	> 4 mm in 48 h at 23°C/50%rh
Tensile strength (DIN 53 504)	9 ± 1 MPa
Elongation at break (DIN 53 504)	> 500%
Lap shear resistance (EN 1465)	min. 5 MPa (height of adhesive layer: 2mm) 23°C/50% rh,
Resistance to tear propagation (DIN 53 515)	approx. 15 N/mm
Shore A hardness (DIN 53 505)	60 +/-5
Abrasion resistance	Extremely high



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<b>Temperature stability</b>	-40°C to 100°C, for short periods up to 120°C
<b>Resistance to chemicals</b>	Highly resistant to aqueous chemicals, petrol, alcohol and mineral oils. Conditionally resistant to esters, ketones, aromatics and chlorinated hydrocarbons
<b>Bonding surface preparation</b>	All bonding surfaces must be free of dirt, dust, water, oil and grease. In general surfaces should be primed. Verify compatibility or consult our technical service department.
<b>Processing equipment</b>	Cartridges: hand-operated or pneumatic gun with mechanical piston Drums, pails: commercial pumping system with connection to automatic applicator, if required.
<b>Cleaning</b>	Uncured BETAMATE 7120 residues can easily be removed with BETACLEAN 3000 or BETACLEAN 3500. Hardened BETAMATE 7120 residues can only be removed mechanically. Immerse equipment in BETACLEAN 3000.
<b>Shelf life</b>	6 months at +5°C to +25°C in unopened containers. (See "use before" date printed on container).
<b>Containers</b>	300 ml cartridges, cardboard packs of 12 Pails: 22 litres Drums: 200 litres
<b>Protection measures</b>	See health and safety data sheet.

**Dow Automotive Quality Management**

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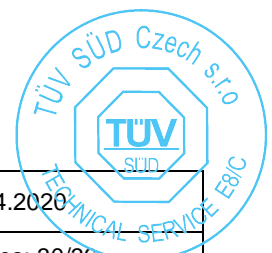
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<b>Temperature stability</b>	-40°C to 100°C, for short periods up to 120°C
<b>Resistance to chemicals</b>	Highly resistant to aqueous chemicals, petrol, alcohol and mineral oils. Conditionally resistant to esters, ketones, aromatics and chlorinated hydrocarbons
<b>Bonding surface preparation</b>	All bonding surfaces must be free of dirt, dust, water, oil and grease. In general surfaces should be primed. Verify compatibility or consult our technical service department.
<b>Processing equipment</b>	Cartridges: hand-operated or pneumatic gun with mechanical piston Drums, pails: commercial pumping system with connection to automatic applicator, if required.
<b>Cleaning</b>	Uncured BETAMATE 7120 residues can easily be removed with BETACLEAN 3000 or BETACLEAN 3500. Hardened BETAMATE 7120 residues can only be removed mechanically. Immerse equipment in BETACLEAN 3000.
<b>Shelf life</b>	6 months at +5°C to +25°C in unopened containers. (See "use before" date printed on container).
<b>Containers</b>	300 ml cartridges, cardboard packs of 12 Pails: 22 litres Drums: 200 litres
<b>Protection measures</b>	See health and safety data sheet.

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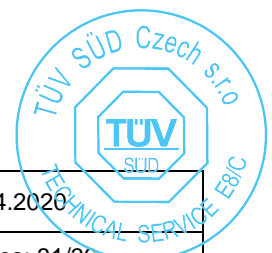
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Product Data Sheet  
Version 4 (06 / 2012)

## Sikaflex® -252

### Assembly adhesive

#### Technical Product Data

Chemical base	1-C polyurethane
Colour (CQP <sup>1</sup> 001-1)	Black, white
Cure mechanism	Moisture-curing
Density (uncured) (CQP 006-4)	depending on colour 1.2 kg/l approx.
Non-sag properties	Good
Application temperature	ambient 10 - 35°C (50 - 95°F)
Tack-free time <sup>2</sup> (CQP 019-1)	40 min. approx.
Open time <sup>2</sup> (CQP 526-1)	35 min. approx.
Curing speed (CQP 049-1)	see diagram 1
Shrinkage (CQP 014-1)	6 % approx.
Shore A hardness (CQP 023-1 / ISO 868)	50 approx.
Tensile strength (CQP 036-1 / ISO 37)	3 MPa approx.
Elongation at break (CQP 036-1 / ISO 37)	400 % approx.
Tear propagation resistance (CQP 045-1 / ISO 34)	7 N/mm approx.
Tensile lap-shear strength (CQP 046-1 / ISO 4587)	2.5 MPa approx.
Glass transition temperature (CQP 509-1 / ISO 4663)	-40°C (-40°F) approx.
Volume resistivity (CQP 079-2 / ASTM D 257-99)	5 x 10 <sup>8</sup> Ωcm approx.
Service temperature (CQP 513-1)	4 hours 1 hour -40 - 90°C (-40 - 195°F) 130°C (265°F) 150°C (300°F)
Shelf life (storage below 25°C) (CQP 016-1)	12 months

<sup>1)</sup> CQP = Corporate Quality Procedure

<sup>2)</sup> 23°C (73°F) / 50% r.h.

Industry

#### Description

Sikaflex®-252 is a non-sag 1-c polyurethane adhesive of stiff, paste-like consistency that cures on exposure to atmospheric humidity to form a durable elastomer. Sikaflex®-252 is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

#### Product Benefits

- 1-C formulation
- Elastic
- Can be overpainted
- Good gap-filling properties
- Capable of withstanding high Dynamic stresses
- Vibration-damping
- Non-corrosive
- Electrically non-conductive
- Bonds well to a wide variety of substrates

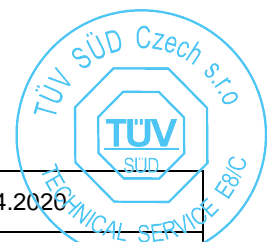
#### Areas of Application

Sikaflex®-252 is suitable for structural joints that will be subjected to dynamic stresses. Suitable substrate materials are timber, metals, particularly aluminium (incl. anodized components), sheet steel (incl. phosphated, chromated and zinc-plated components), metal primers and paint coatings (2-c systems), ceramic materials and plastics. Seek manufacturer's advice before using on plastics that are prone to stress cracking.

This product is suitable for professional experienced users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.



Sikaflex®-252 1 / 2



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**Cure Mechanism**

Sikaflex®-252 cures by reaction with atmospheric moisture. At low temperature the water content of the air is generally lower and the curing reaction proceeds slower (see diagram).

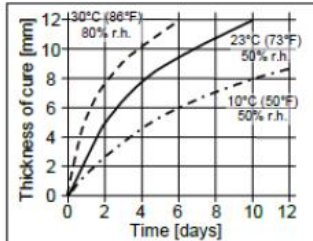


Diagram 1: Curing speed for Sikaflex®-252

**Chemical Resistance**

Sikaflex®-252 is resistant to fresh water, seawater, limewater, sewage effluent, dilute acids and caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents. The above information is offered for general guidance only. Advice on specific applications will be given on request.

**Method of Application**

**Surface preparation**

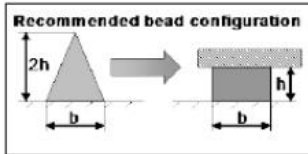
Surfaces must be clean, dry and free from grease, oil and dust. The substrates must be prepared in accordance with the instructions given in the actual corresponding Sika Pre-treatment Chart.

Advice on specific applications is available from the Technical Service Department of Sika Industry.

**Application**

Do not apply at temperatures below 10°C or above 35°C. The optimum temperature for substrate and adhesive is between 15°C and 25°C. For cartridge application we recommend the use of a compressed air piston type cartridge gun.

To ensure uniform thickness of adhesive when compressed, we recommend to apply the adhesive in the form of a triangular bead (see illustration).



For advice on selecting and setting up a suitable pump system contact the System Engineering Department of Sika Industry.

**Tooling and finishing**

Tooling and finishing must be carried out within the tack-free time of the adhesive. We recommend the use of Sika® Tooling Agent N. Other finishing agents or lubricants must be tested for suitability / compatibility.

**Removal**

Uncured Sikaflex®-252 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically.

Hands and exposed skin should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

**Overpainting**

Sikaflex®-252 can be overpainted after formation of a skin. In case the paint requires a bake process it may be necessary to wait for a full cure. 1C-PUR and 2C-acrylic based paints are usually suitable. Not suitable are oil based paints. All paints have to be tested by carrying preliminary trials under manufacturing conditions. The elasticity of paints is lower than of polyurethanes. This could lead to cracking of the paint film in the joint area.

**Further Information**

Working instructions issued for a defined application may further specify technical data contained in this Product Data Sheet. Copies of the following publications are available on request:

- Material Safety Data Sheets
- Sika Pre-treatment Chart for 1C Polyurethanes
- General Guidelines - Bonding and Sealing with Sikaflex®

**Packaging Information**

Cartridge	300 ml
Unipack	400 ml 600 ml
Pail	23 l
Drum	195 l

**Value Bases**

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

**Health and Safety Information**

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

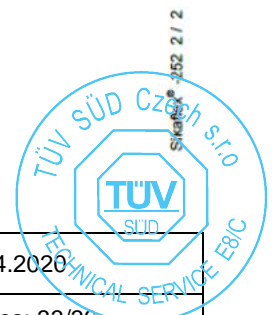
**Legal Notes**

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



Further information available at:  
[www.sika.ch](http://www.sika.ch)  
[www.sika.com](http://www.sika.com)

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Product Data Sheet  
Version 2 (06 / 2012)

## Sikaflex<sup>®</sup>-552

Assembly adhesive with reduced substrate preparation

### Technical Product Data

Chemical base		Silane Terminated Polymer
Colour (CQP <sup>1</sup> 001-1)	depending on colour	White, black
Cure mechanism		Moisture-curing
Density (uncured) (CQP 006-4)		1.45 kg/l approx.
Non-sag properties		Good
Application temperature	ambient	5 - 40°C (40 - 105°F)
Skin time <sup>2</sup> (CQP 019-1)		40 min. approx.
Curing speed (CQP 049-1)		see diagram 1
Shrinkage (CQP 014-1)		2% approx.
Shore A hardness (CQP 023-1 / ISO 868)		50 approx.
Tensile strength (CQP 036-1 / ISO 37)		3 N/mm <sup>2</sup> approx.
Elongation at break (CQP 036-1 / ISO 37)		300% approx.
Tear propagation resistance (CQP 045-1 / ISO 34)		10 N/mm approx.
Tensile lap-shear strength (CQP 046-1 / ISO 4587)		2 N/mm <sup>2</sup> approx.
Glass transition temperature (CQP 509-1 / ISO 4663)		-50°C (-60°F) approx.
Volume resistivity (CQP 079-2 / ASTM D 257-99)		3 x 10 <sup>11</sup> Ωcm approx.
Temperature resistance (CQP 513-1)		90°C (195°F)
Short term	4 hours 1 hour	140°C (285°F) 150°C (300°F)
Service temperature range		-40 - 90°C (-40 - 195°F)
Shelf life (CQP 016-1) (storage below 25°C)	cartridge / unipack drum / pail	12 months 9 months

<sup>1)</sup> CQP = Corporate Quality Procedure

<sup>2)</sup> 23°C (73°F) / 50% r.h.

#### Description

Sikaflex<sup>®</sup>-552 is a high-performance elastic gap-filling PUR-Hybrid adhesive based on the Sika Silane Terminated Polymer (STP) technology. Sikaflex-552 cures on exposure to atmospheric humidity to form a durable elastomer. Sikaflex<sup>®</sup>-552 is manufactured in accordance with ISO 9001 / 14001 quality assurance system and the responsible care program.

#### Product Benefits

- 1-C silane-terminated polymer based technology
- Ageing and weathering resistant
- Bonds well to a wide variety of substrates with practically no need for priming
- Capable of withstanding high dynamic stresses
- Can be over-painted
- Low odour
- Non-corrosive
- High electrical resistance
- Low VOC content and solvent-free
- Silicone- and PVC-free

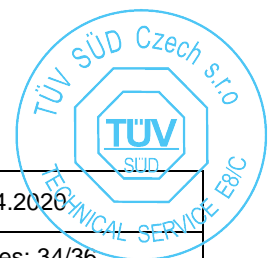
#### Areas of Application

Sikaflex<sup>®</sup>-552 is suitable for structural joints that will be subjected to dynamic stresses. Suitable substrate materials are metals, particularly aluminium (including anodised components), sheet steel (including phosphated, chromated and zinc-plated components), ceramic materials and plastics. Seek manufacturer's advice before using on plastics that are prone to stress cracking. This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Industry



Sikaflex<sup>®</sup>-552 1 / 2



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### Cure Mechanism

Sikaflex®-552 cures by reaction with atmospheric humidity. At low temperatures the water content of the air is generally lower and the curing reaction proceeds more slowly.

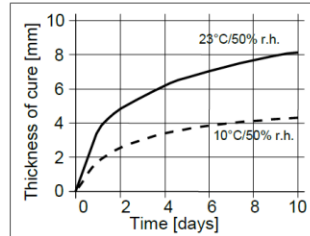


Diagram 1: Curing speed for Sikaflex®-552

### Chemical Resistance

Sikaflex®-552 is resistant to fresh water, seawater, aqueous cleaning solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

### Method of Application

#### Surface preparation

Surfaces must be clean, dry and free from grease, oil and dust. The adhesion of the adhesive can be improved by wiping the joint surfaces with Sika® Aktivator-205.

Advice on specific applications is available from the Technical Service Department of Sika Industry.

#### Application

Cut off the tip of the nozzle to give desired adhesive bead geometry. For satisfactory results the adhesive must be applied with a hand-operated cartridge gun, piston-type compressed-air gun or pump-operated bulk dispensing equipment. To ensure a uniform thickness of adhesive we recommend applying the adhesive in the form of a triangular bead (see figure 1).

The ideal temperature for substrate and sealant is between 15°C and 25°C.

For advice on selecting and setting up a suitable pump system please contact the System Engineering Department of Sika Industry.

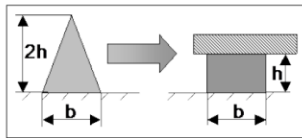


Figure 1: Recommended bead configuration

### Removal

Uncured Sikaflex®-552 may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically.

Hands and exposed skin should be washed immediately using Sika® Handclean Towel or a suitable industrial hand cleaner and water. Do not use solvents!

### Overpainting

Sikaflex®-552 can be overpainted within the skin formation time. 2 component epoxy paints are usually suitable. Other paints must be tested for compatibility by carrying out preliminary trials under manufacturing conditions. The elasticity of paints is lower than of elastomers. This could lead to cracking of the paint film in the joint area.

### Further Information

Copies of the following publications are available on request:

- Material Safety Data Sheets
- General Guidelines - Bonding and Sealing with Sikaflex®

### Packaging Information

Cartridge	300 ml
Unipack	400 / 600 ml
Pail	23 l
Drum	195 l

### Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

### Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

### Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



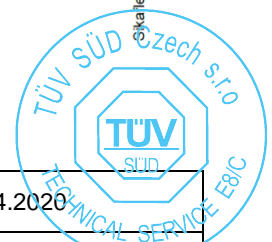
Further information available at:

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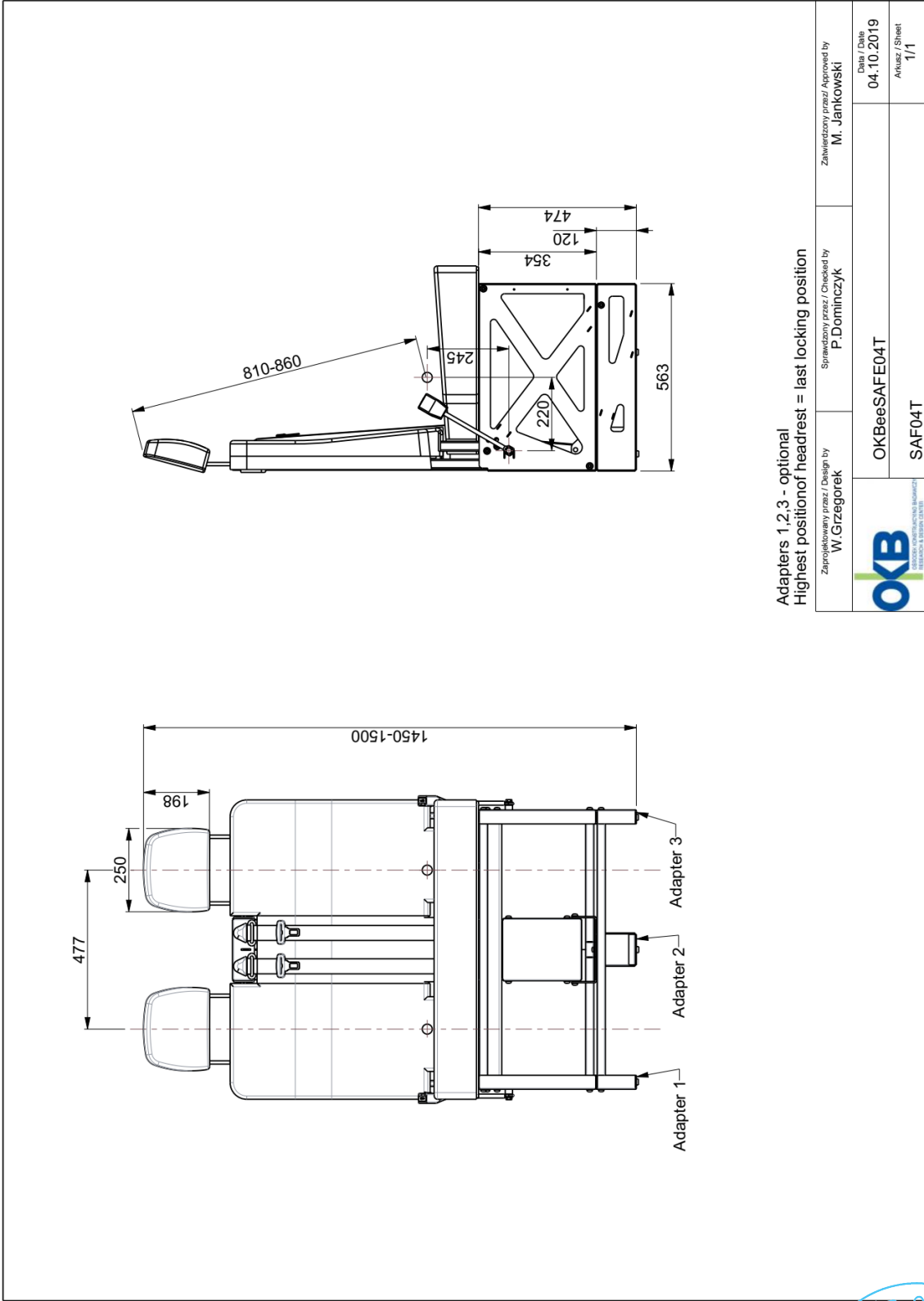


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Enclosure 4: ASSEMBLY DRAWINGS



Adapters 1, 2, 3 - optional  
 Highest position of headrest = last locking position

Zaprojektowany przez / Design by W. Grzegorek	Sprawdzony przez / Checked by P. Dominczyk	Zatwierdzony przez / Approved by M. Jankowski	Date / Date 04.10.2019
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