

SEQ NO	QTY	Item ID	Item Name Dimension	Standard-ID	Basic Material	Net Weight
001	10	107.245.895.200	WEDGE			8.51
002	4	107.424.346.200	WEDGE NARROW TYPE		W-FU-235-JR	3.8
003	10	PAAD318478	HYDRAULIC JACK			
004	6	PAAD318480	SUPPORT BLOCK			
005	4	PAAD318479	SUPPORT PLATE			

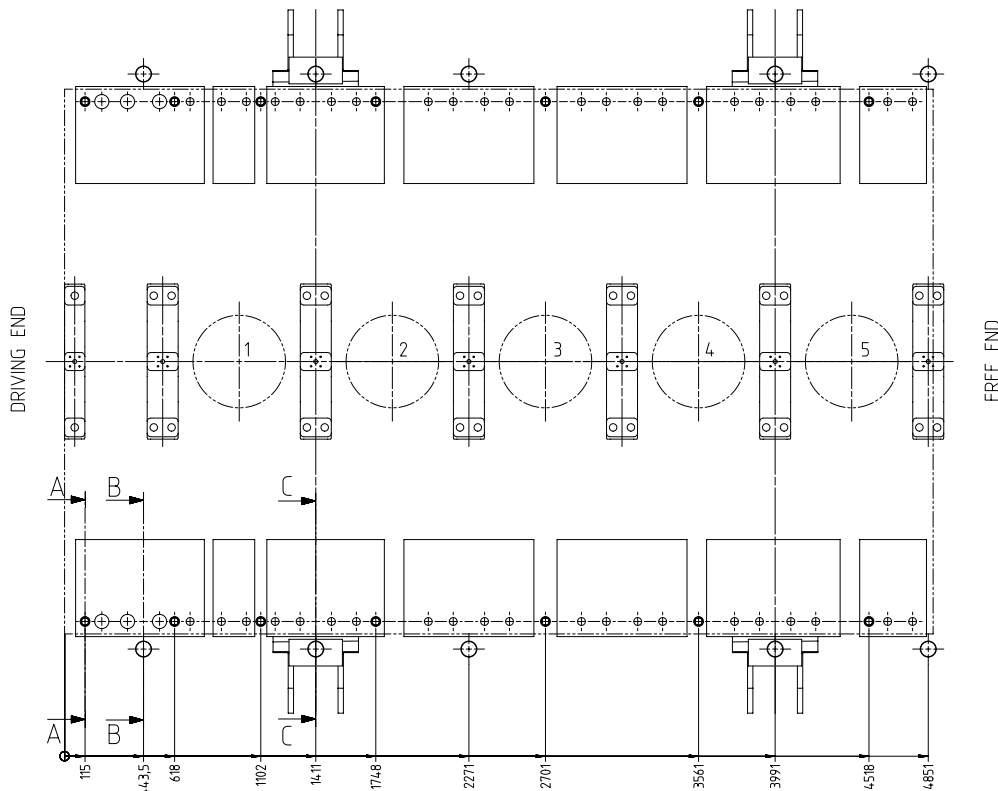
Prod.	5 X52-S2.0			
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 <p>Winterthur Gas & Diesel</p>	<h1>TOOL ENGINE ALIGNMENT</h1> <p>Alignment with: Wedges</p>
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SEQ NO	QTY	Item ID	Item Name Dimension	Standard-ID	Basic Material	Net Weight
001	14	PAAD005430	JACKING SCREW		W-FU-235-N-T	2.3
002	14	PTAA031559	SPONGE RUBBER RING			0.115
003	10	PAAD318478	HYDRAULIC JACK			
004	6	PAAD318480	SUPPORT BLOCK			
005	4	PAAD318479	SUPPORT PLATE			

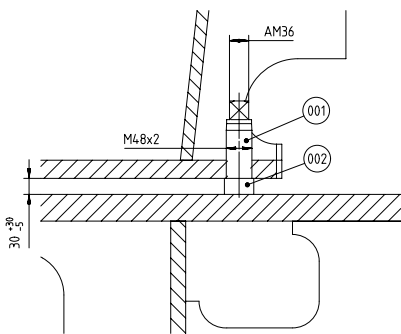
Prod.	5 X52-S2.0								
Change History									
	-	npa101	nm09	03042023	CMAC03284	New MainDesign		-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E

Bill Of Material	Dimension								
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Winterthur Gas & Diesel Ltd.	Units	[m] [kg]	Basic Material			Net Weight	33.81		
	Main Design	Yes	Design Group		9710-01	Q-Code	XXXXX	Standard	WDS
	Qty per	Engine	A4	Item ID	PTAA056853		BOM Page/s	01/01	



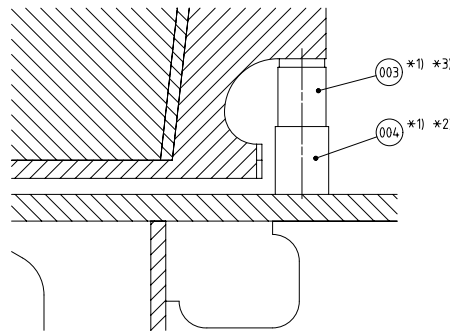
SECTION A-A $\odot 90^\circ$

SCALE 1:5



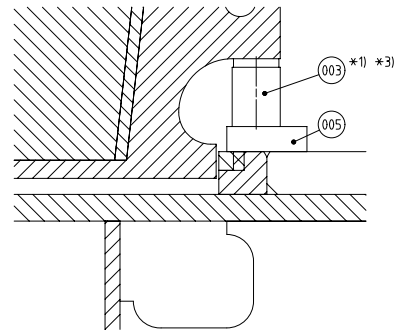
SECTION B-B $\odot 90^\circ$

SCALE 1:5



SECTION C-C $\odot 90^\circ$

SCALE 1:5



CAUTION





Risk:
Tool and/or bedplate damage

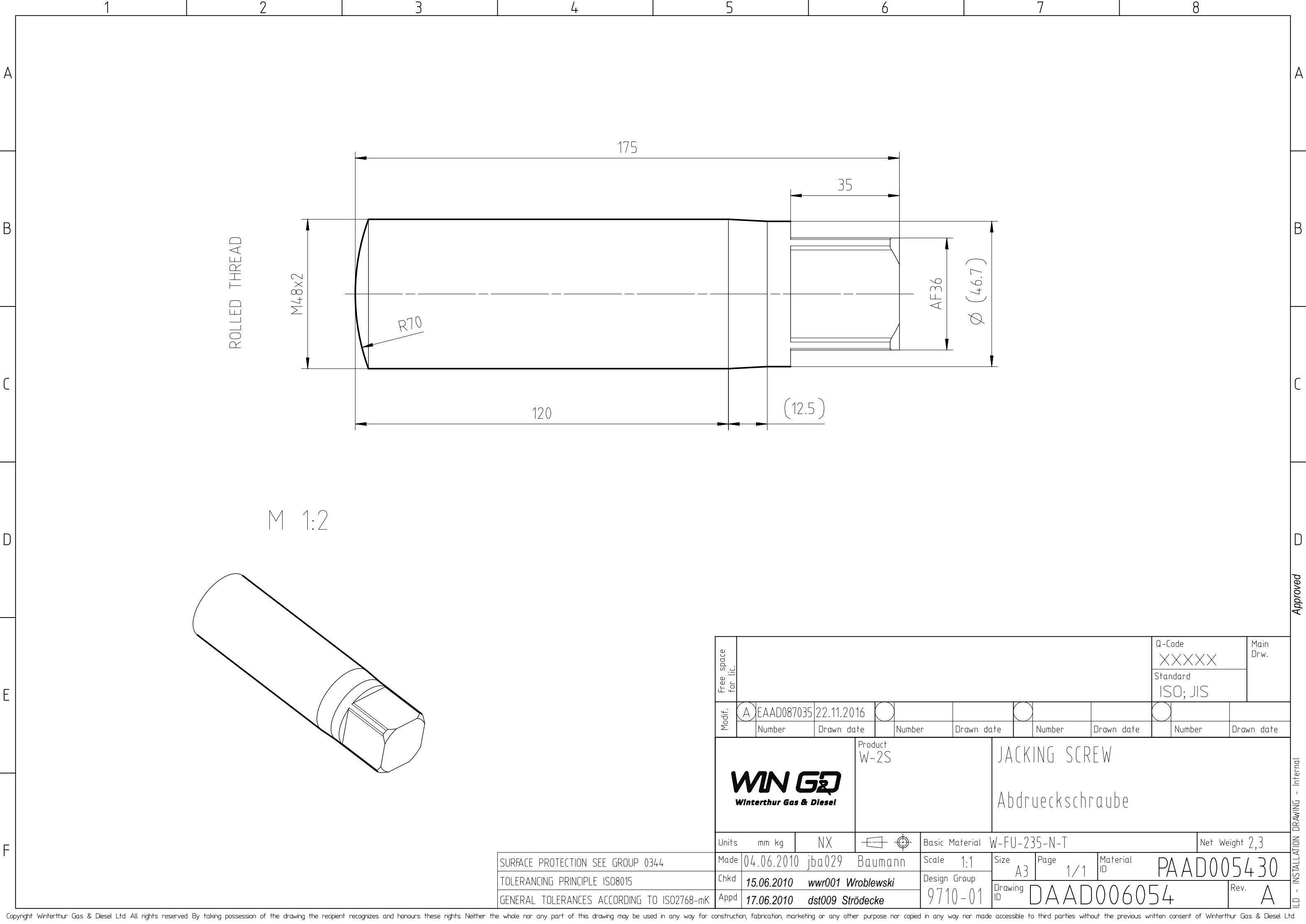
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:


- Lift the engine into the engine room and place it on levelled , temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used)
- Apply hydraulic jacks to the protruding bedplate ribs nearby the jacking screws as indicated in the drawing.
- Remove the temporary blocks by slightly lifting the engine with the hydraulic jacks.
- Start with the engine alignment by means of jacking screws. Before turning a jacking screw, reduce its load by use of the hydraulic jacks. Any height adjustment must be performed in small steps - no more than 1 mm per step (equals to 1/2 screw turn, based on 2 mm thread pitch). Changes in height larger than the maximum allowance (1 mm) require a gradual process where all jacking screws are successively adjusted in stages, to ensure the best possible load distribution.

Remarks

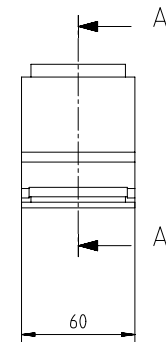
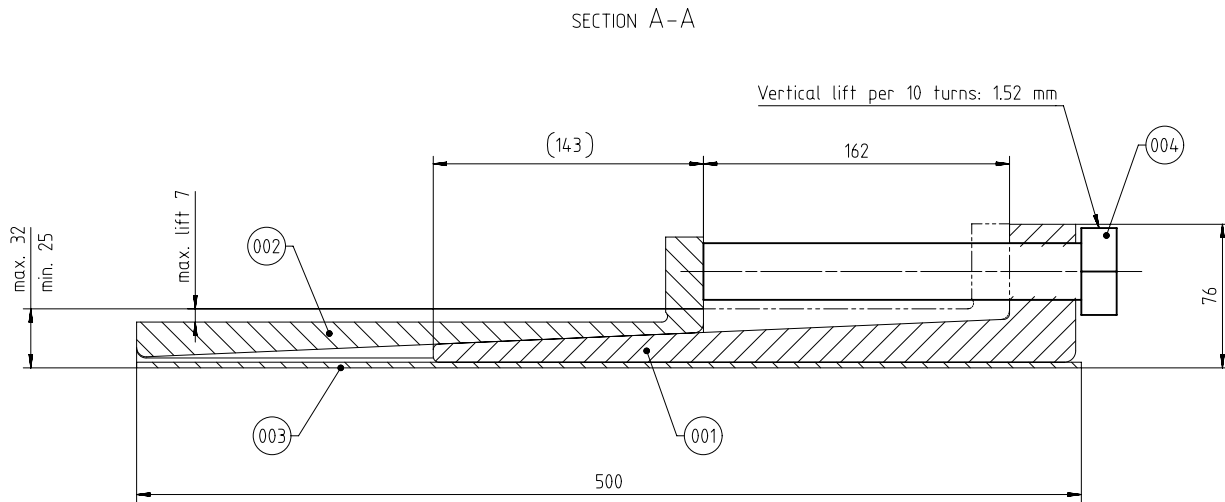
- *1) To be provided by the shipyard
- *2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack)
- *3) Hydraulic jack proposal
Type: Enerpac RCS-1002
Load at 700 bar: 880 kN


5X52-02.0							
Change History							
	000101	000109	00042203	00003334	New MainDesign	-	-
Rev	Creator	Approver	Change ID	Change Synopsis	Approved	Activity Code	E C
		TOOL ENGINE ALIGNMENT					
Winterthur Gear & Diesel		Alignment with Jacking Screws					
separate BOM available				Dimension			
Scale 1:15    NX				Units [mm] [kg]		Basic Material	
Copyright Winterthur Gear & Diesel Ltd., Winterthur, Switzerland. All rights reserved. No part of this drawing may be copied or reproduced in any form or by any means without the written permission of Winterthur Gear & Diesel Ltd. The company may not make alterations to this drawing without the written permission of Winterthur Gear & Diesel Ltd.				Main Design		Net Weight	
Yes				Design Group		33.81	
Qty per				Item ID		Standard	
Engine A1				P7AA056853		w/	
						Drawing Pages	

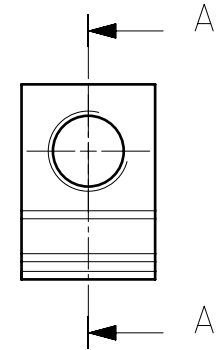
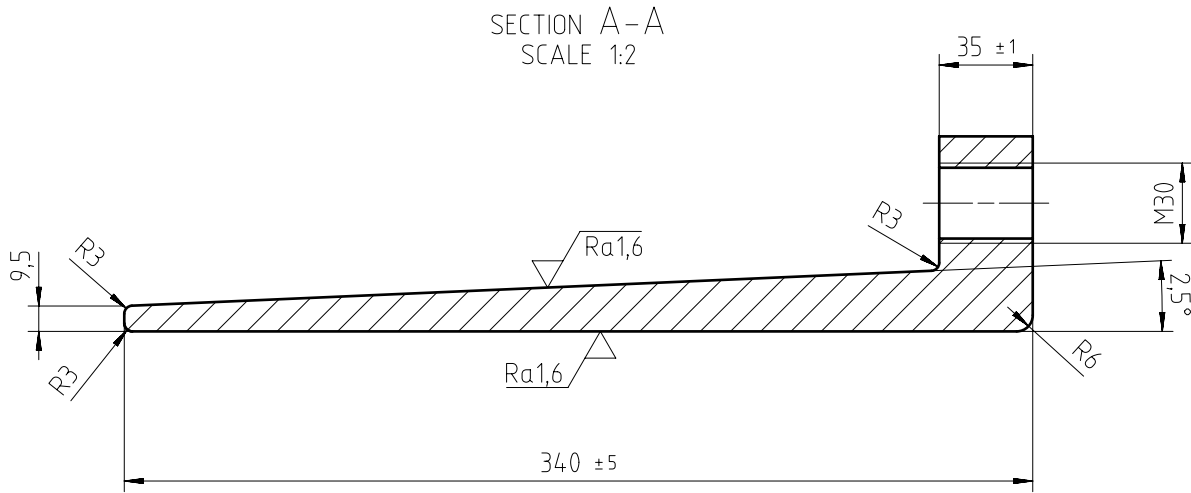


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								Standard ISO; JIS	
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		Number	Drawn date		Number	Drawn date		Number	Drawn date
WIN GD Winterthur Gas & Diesel			Product W-2S			JACKING SCREW			
						Abdrueckschraube			
Units mm kg		NX				Basic Material W-FU-235-N-T			Net Weight 2,3
SURFACE PROTECTION SEE GROUP 0344		Made	04.06.2010	jba029	Baumann	Scale 1:1	Size A3	Page 1/1	Material ID PAAD005430
TOLERANCING PRINCIPLE ISO8015		Chkd	15.06.2010	wwr001	Wroblewski	Design Group 9710-01	Drawing ID DAAD006054		Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	17.06.2010	dst009	Strödecke				

	1	2	3	4																																																																												
A	<div><div>SURFACE PROTECTION SEE GROUP 03/44</div><div>TOLERANCING PRINCIPLE ISO8015</div><div>GENERAL TOLERANCES ACCORDING TO ISO2768-mK</div></div> <div></div>				A																																																																											
B					B																																																																											
C	<div></div>				C																																																																											
D	<div>h - determinated after engine alignment</div> <div>* material according to shipyard experience</div>				D																																																																											
E	<table><tr><td>Prod.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td rowspan="5">Change History</td><td></td><td></td><td></td><td></td><td></td><td colspan="4"></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td colspan="4"></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td colspan="4"></td><td></td><td></td></tr><tr><td>-</td><td>dk1021</td><td>mhu019</td><td>02.05.2022</td><td>CNAA001768</td><td colspan="4">new Design</td><td>-</td><td>-</td></tr><tr><td>Rev.</td><td>Creator</td><td>Approver</td><td>Approval Date</td><td>Change ID</td><td colspan="4">Change Synopsis</td><td>Approved</td><td>Activity Code</td><td>E</td><td>C</td></tr></table>										Prod.											Change History																																		-	dk1021	mhu019	02.05.2022	CNAA001768	new Design				-	-	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis				Approved	Activity Code	E	C	E
Prod.																																																																																
Change History																																																																																
	-	dk1021	mhu019	02.05.2022	CNAA001768	new Design				-	-																																																																					
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis				Approved	Activity Code	E	C																																																																			
F	<div><div><div><div>WINGD</div><div>Winterthur Gas & Diesel</div></div><div>SPONGE RUBBER RING</div></div><div><div>Scale1:1<div></div>NX</div><div>Dimension</div><div><div>Units [mm] [kg]</div><div>Basic Material</div><div>Net Weight0.001</div></div><div><div>Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours these rights. Neither the whole nor any part of this drawing may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Winterthur Gas & Diesel Ltd.</div><div><div>Main Design</div><div>Design Group9710-01</div><div>Q-CodeXXXXX</div><div>StandardWDS</div></div><div><div>Qty per</div><div>A4</div><div>Item IDPTAA031559</div><div>Drawing Page/s1/1</div></div></div></div></div>										F																																																																					
	1	2	3	4																																																																												

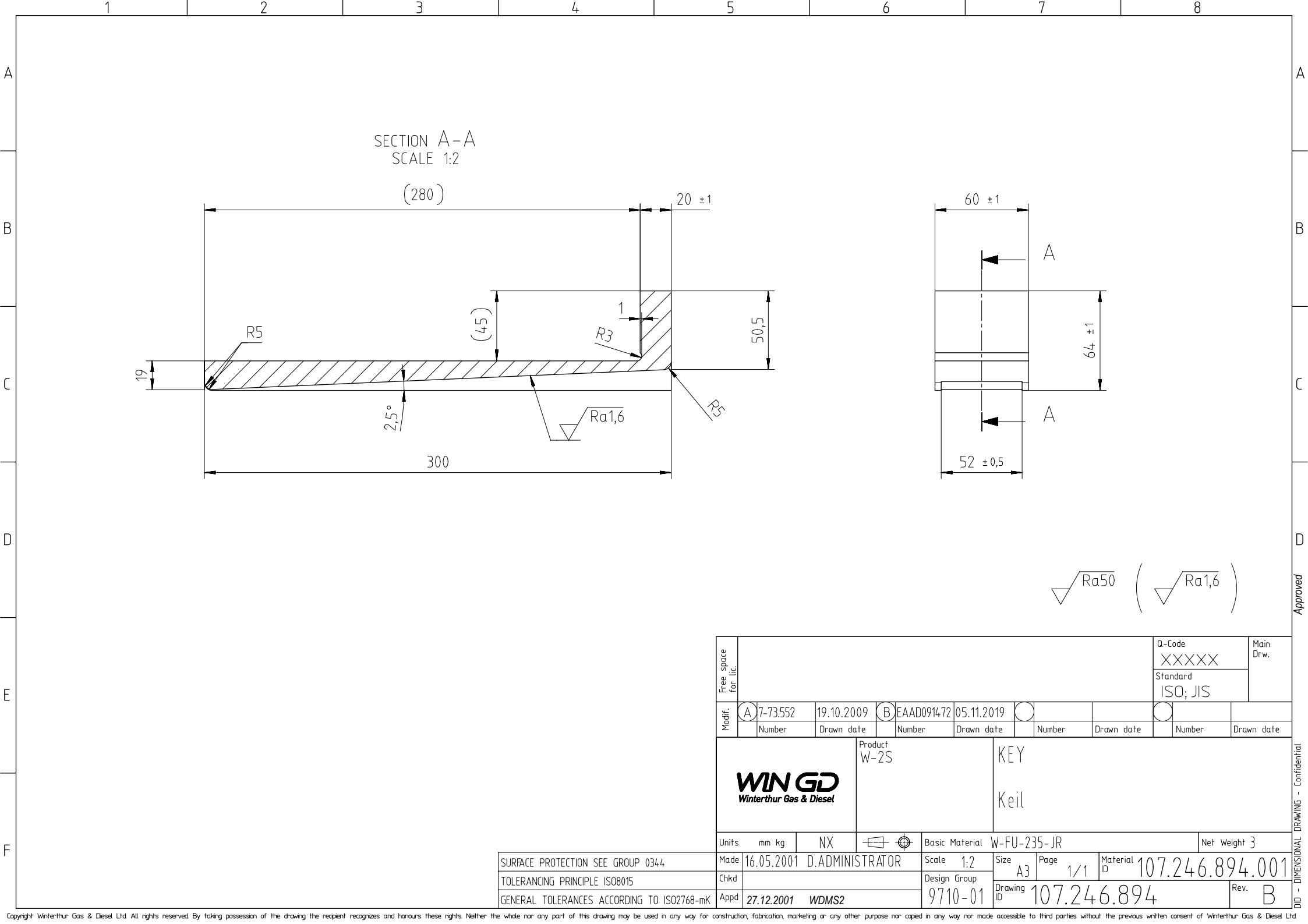


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							Standard ISO; JIS						
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	Number		Drawn date		Number		Drawn date		Number		Drawn date		
WIN GD Winterthur Gas & Diesel			Product W-2S		WEDGE Schraeger Keil								
Units		mm kg		NX				Basic Material				Net Weight 8,51	
Made		10.07.1996		D.Scheffler		Scale 1:2		Size A2		Page 1/1		Material ID 107.245.895.200	
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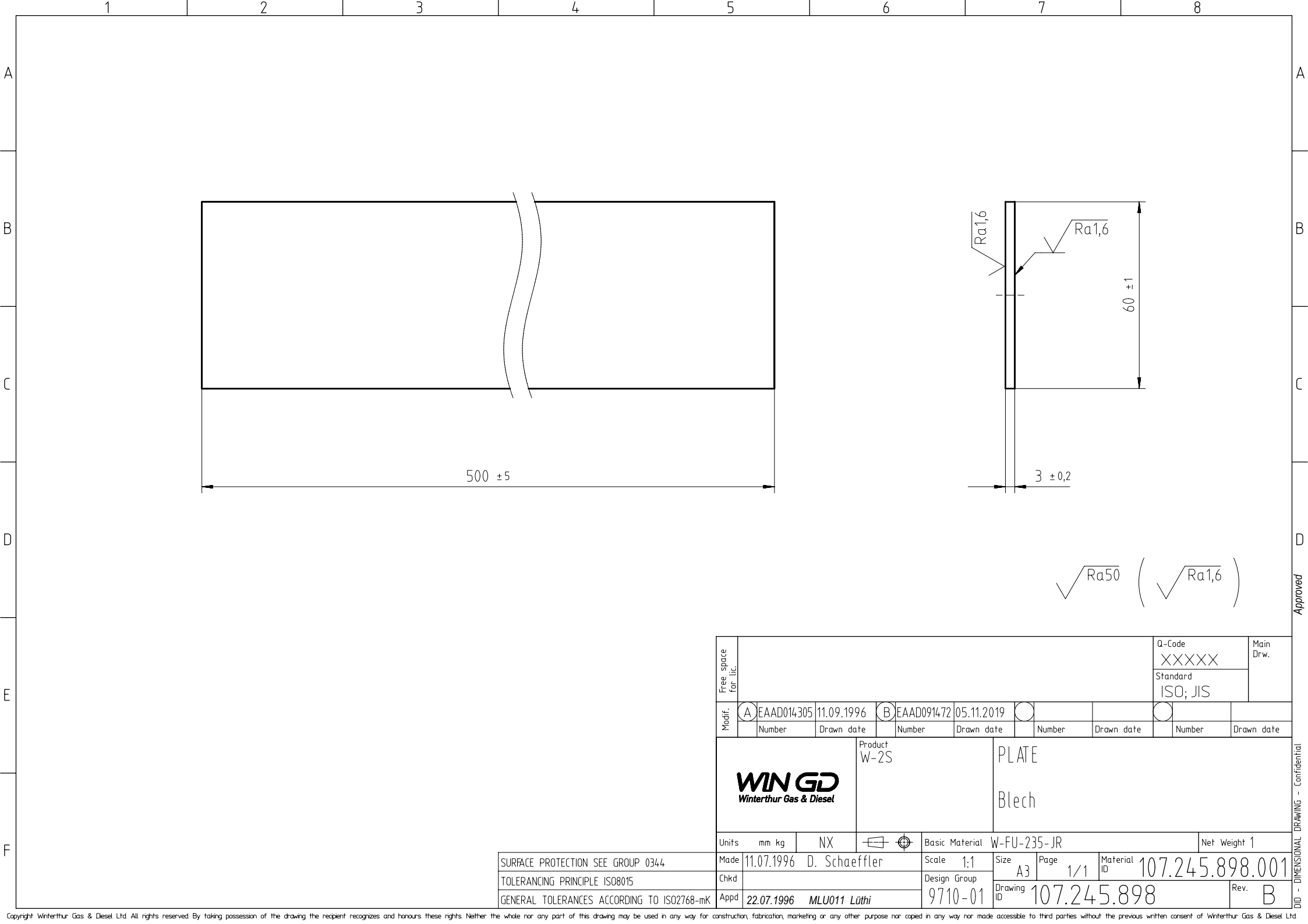



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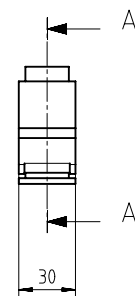
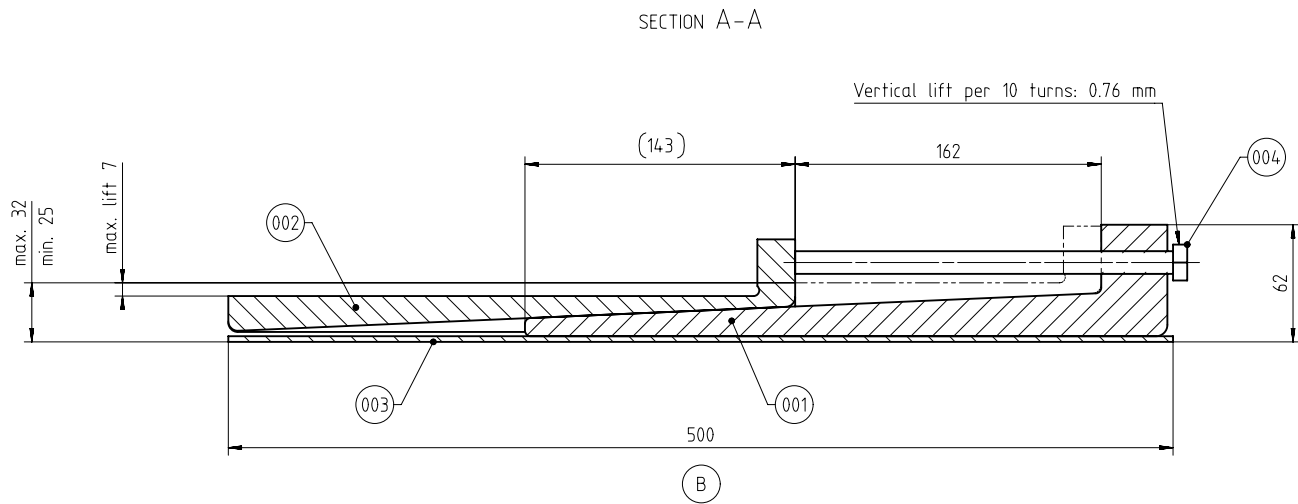
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Units	mm kg	NX				Basic Material		W-FU-235-JR		Net Weight 3,3	
SURFACE PROTECTION SEE GROUP 0344		Made	16.05.2001 D.ADMINISTRATOR		Scale	1:2		Size	A3	Page 1/1	Material ID 107.246.895.001
TOLERANCING PRINCIPLE ISO8015		Chkd			Design Group	9710-01		Drawing ID	107.246.895		Rev. B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	27.12.2001 WDMS2								





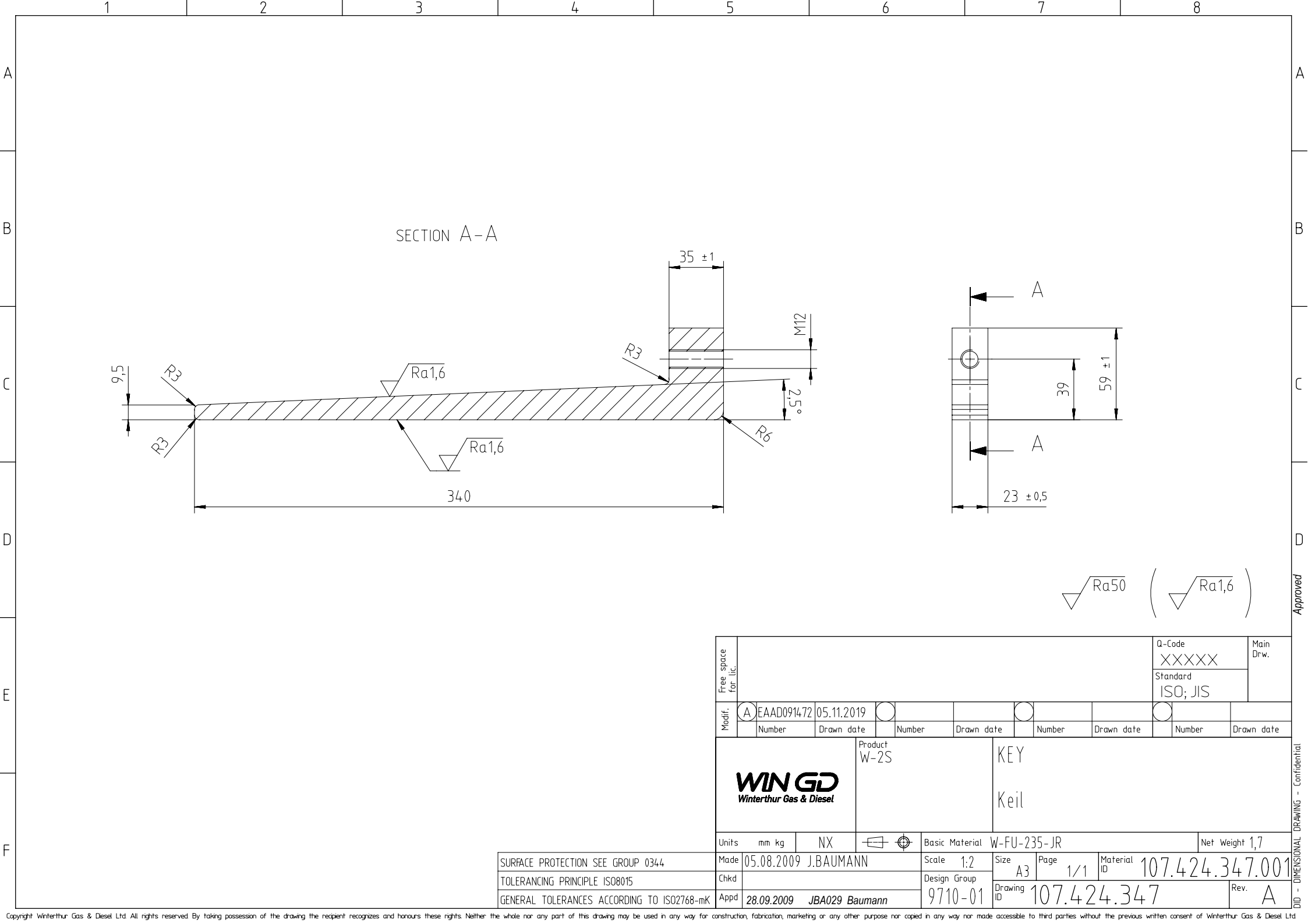
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Modif.										Standard					
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			Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	Drawn date		
<div>WIN GD</div> <div>Winterthur Gas & Diesel</div>				Product W-2S			KEY Keil								
Units		mm kg		NX				Basic Material			W-FU-235-JR			Net Weight 3	
Made		16.05.2001 D.ADMINISTRATOR				Scale 1:2		Size A3	Page 1/1	Material ID		107.246.894.001			
Chkd						Design Group		Drawing ID	107.246.894					Rev. B	
Appd		27.12.2001 WDMS2				9710-01									

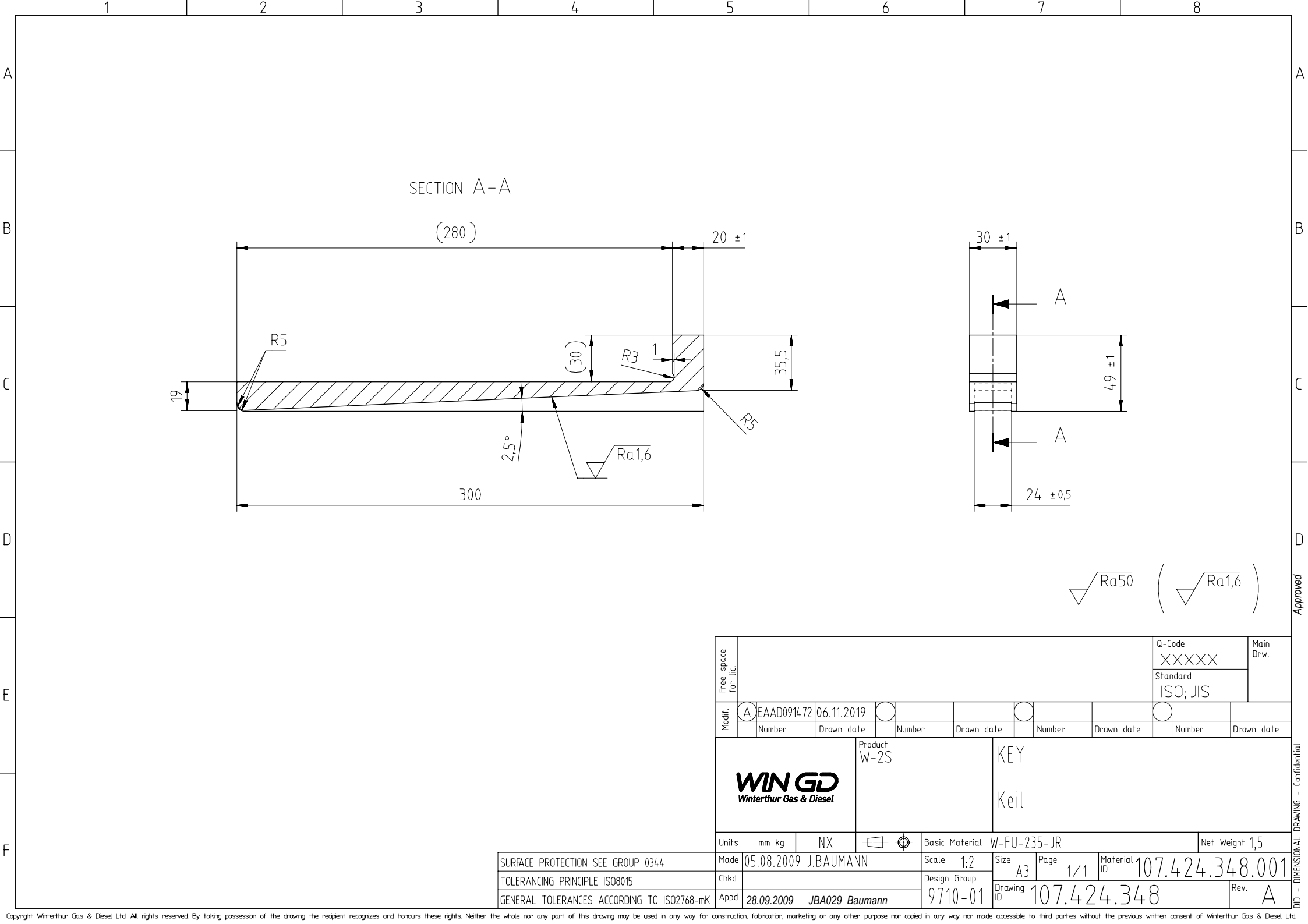


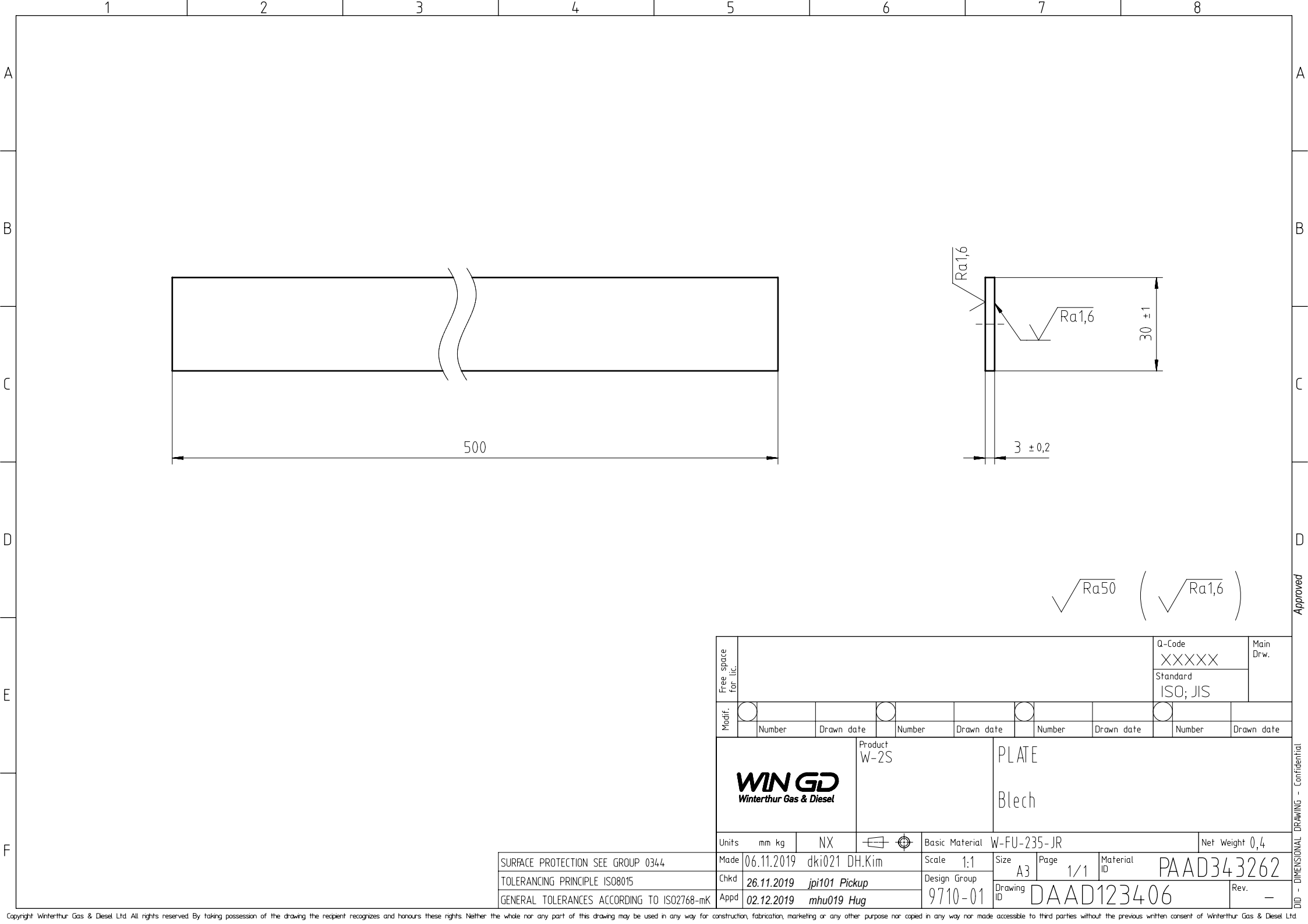
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<div>WIN GD</div> <div>Winterthur Gas & Diesel</div>			Product W-2S			PLATE Blech					
Units	mm kg		NX			Basic Material W-FU-235-JR				Net Weight 1	
Made	11.07.1996 D. Schaeffler				Scale 1:1		Size A3	Page 1/1	Material ID 107.245.898.001		
Chkd					Design Group		Drawing ID 107.245.898		Rev. B		
Appd	22.07.1996 MLU011 Lüthi				9710-01						



1	004	015.151.040.701	HEXAGON HEAD SCREW M12x200		ISO 4017	8.8	0,156	
1	003	PAAD34.3262	PLATE		DAAD123406	W-FU-235-JR	0,4	
1	002	107.424.348.001	KEY		107.424.348	W-FU-235-JR	1,5	
1	001	107.424.347.001	KEY		107.424.347	W-FU-235-JR	1,7	
QTY	SEQ NO	Material ID	Material Name		Dimension, Occ	Standard or Drawing	Basic Material Material Standard	Weight GR./NET
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 Winterthur Gas & Diesel			Product W-25		WEDGE			
					Schraeger Keil			
Units	mm kg	NX				Basic Material W-FU-235-JR		Net Weight 3.8
Made	05.08.2009	jba029	J.BAUMANN		Scale 1:2	Size A2	Page 1/1	Material ID 107.424.346.200
Chkd					Design Group 9710-01	Drawing ID 107.424.346		Rev. B
Appd	28.09.2009	JBA029 Baumann						







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								XXXXXX	
Modif.								Standard	
								ISO; JIS	
		Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
WIN GD Winterthur Gas & Diesel		Product W-2S		PLATE Blech					
Units	mm kg	NX			Basic Material	W-FU-235-JR			Net Weight 0,4
SURFACE PROTECTION SEE GROUP 0344		Made	06.11.2019 dki021 DH.Kim		Scale 1:1	Size A3	Page 1/1	Material ID	PAAD343262
TOLERANCING PRINCIPLE ISO8015		Chkd	26.11.2019 jpi101 Pickup		Design Group	9710-01			Rev. -
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	02.12.2019 mhu019 Hug		Drawing ID	DAAD123406			

MIDS – Tool Engine Alignment (DG9710-01)

WinGD X52-S2.0/DF-S1.0/DF-S2.0/DF-A -S1.0/DF-M-S1.0

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2022-05-05	DRAWING SET	First web upload
2023-04-04	PTAA056852 PTAA056853	5 cyl. execution - added

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