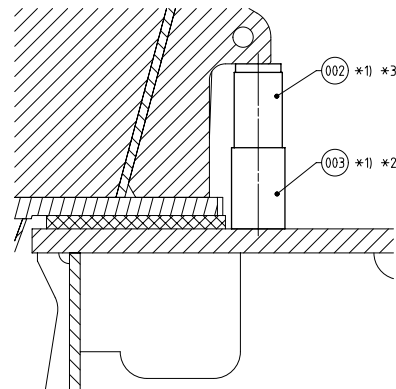
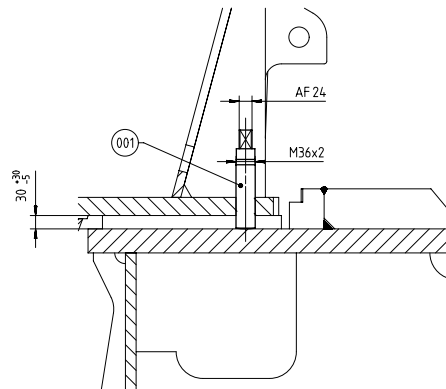


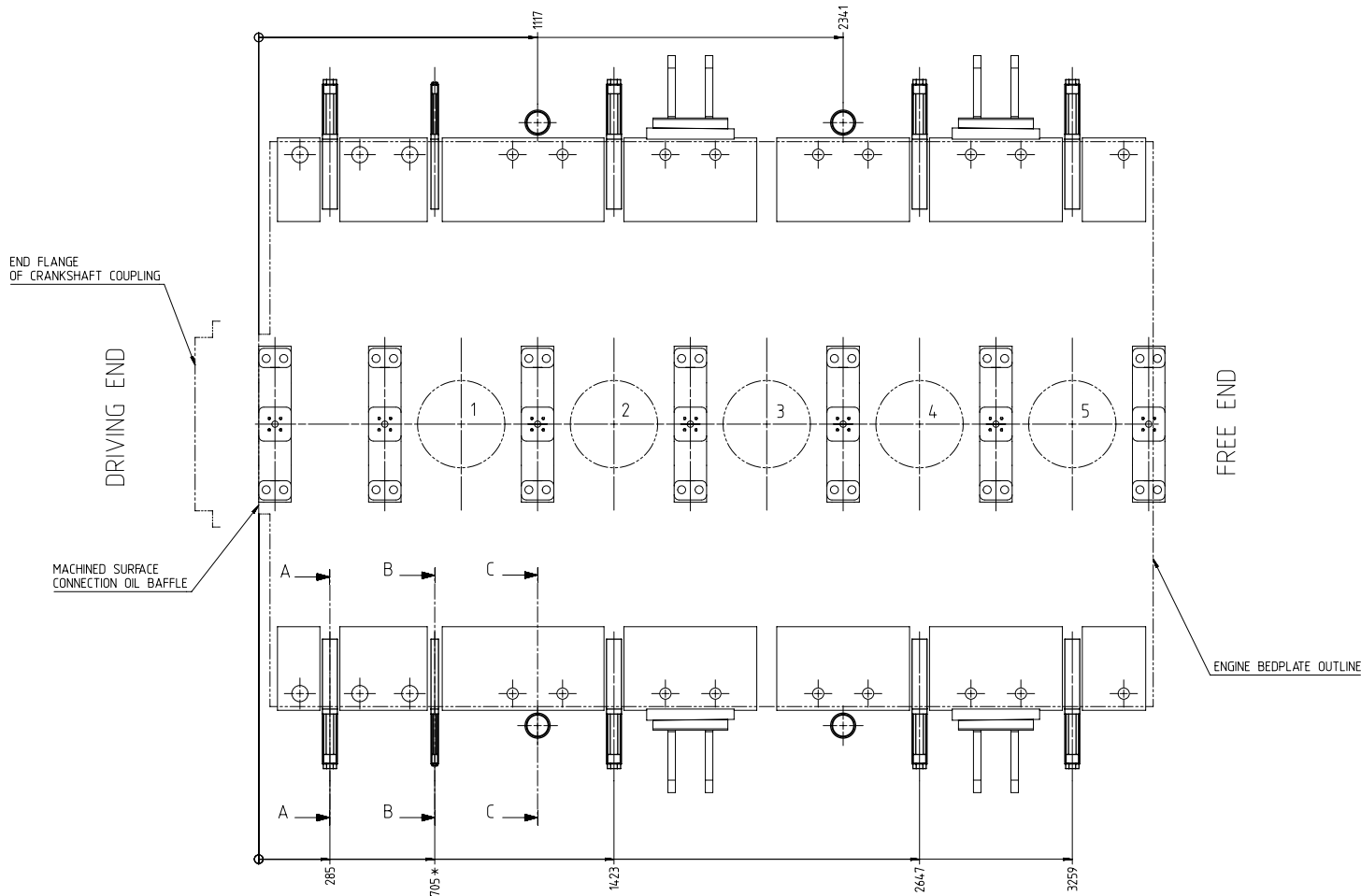


ENGINE BEDPLATE OUTLINE

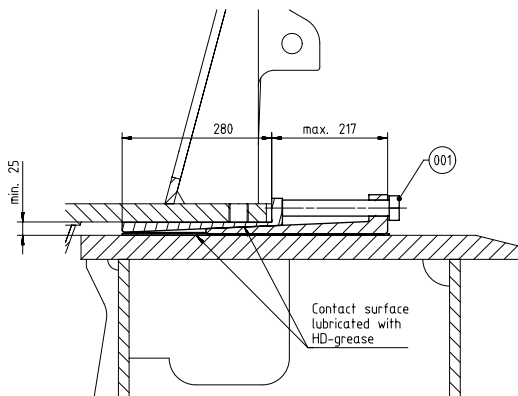


- *1) To be provided by the shipyard
- *2) Height depending on the requirement
(chock thickness in correlation with maximum permissible extension of the hydraulic jack)
- *3) Hydraulic jack proposal
Type: Enerpac RCS-1002
Load at 700 bar: 880 kN

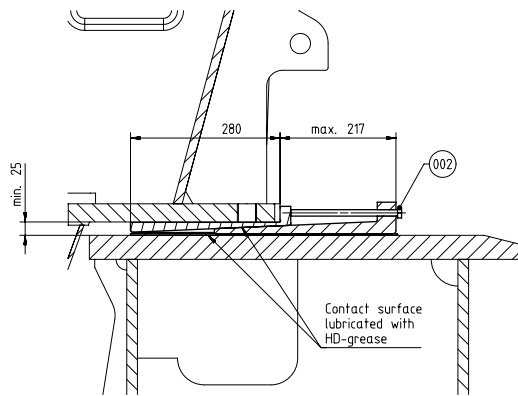
Copyright Wipac Gas & Diesel Ltd. All rights reserved. By taking possession of this drawing the recipient recognizes and honours these rights. Neither the whole nor any part of this drawing may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Wipac Gas & Diesel Ltd.



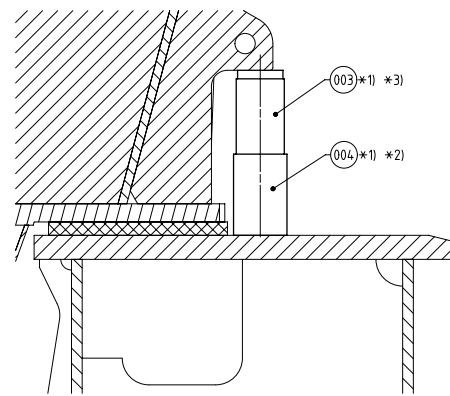
SECTION A-A 90°
SCALE 1:5



SECTION B-B 90°
SCALE 1:5



SECTION C-C 90°
SCALE 1:5



CAUTION


Risk:
Tool and/or bedplate damage

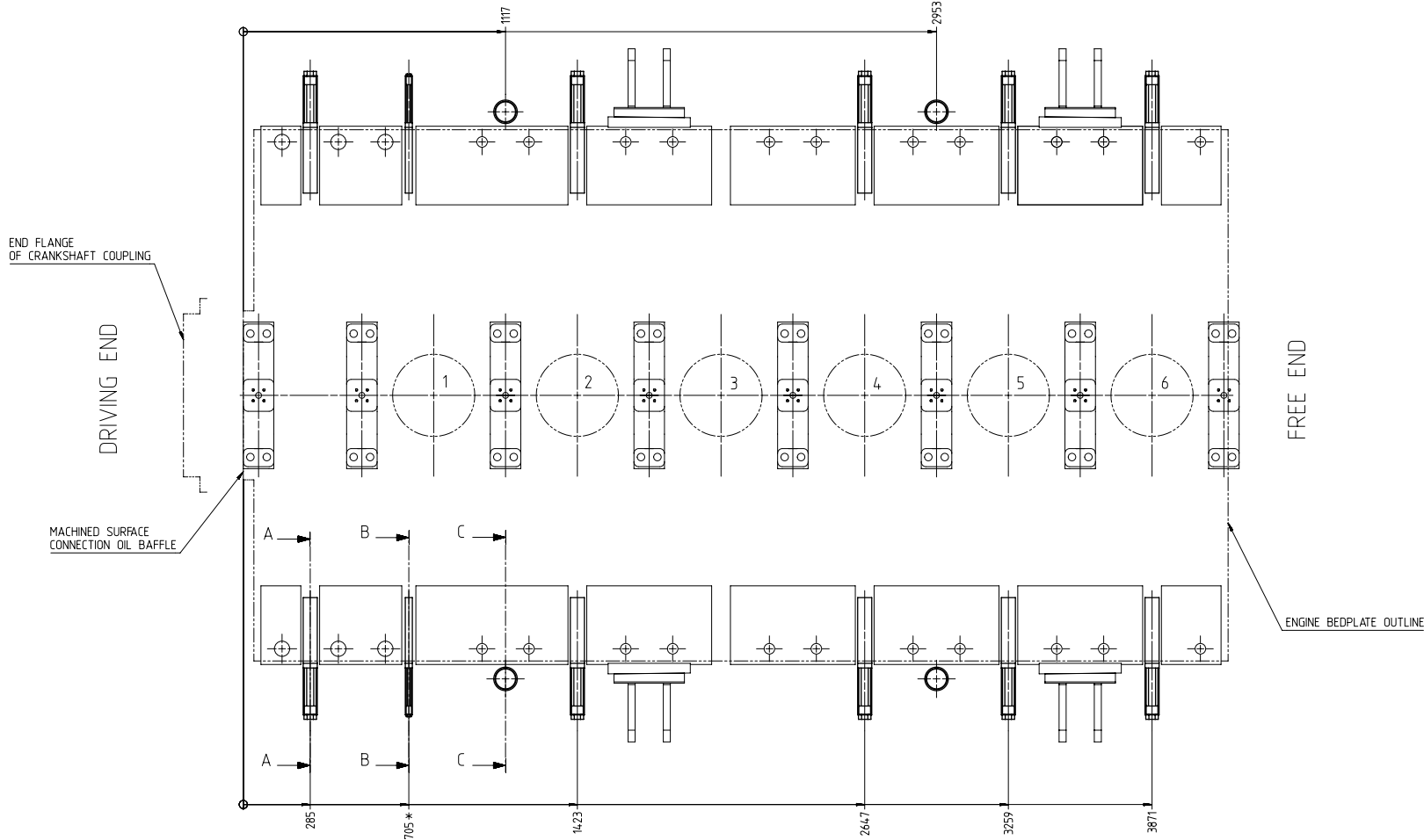
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column)
- Apply hydraulic jacks to the protruding bedplate ribs nearby the relevant wedge and/or shim as indicated in the drawing.
- Start with the engine alignment by means of wedges and/or shims. Before adjusting the height of wedges and/or shims lift the engine by the hydraulic jacks. Any height adjustment must be performed in small steps - no more than 1 mm per step. Changes in height larger than the maximum allowance (1mm) require a gradual process where all wedges and/or shims are successively adjusted in stages, to ensure the best possible load distribution.

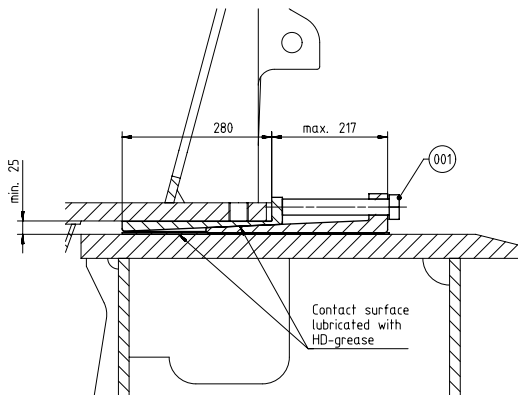
Remarks

- *1) To be provided by the shipyard
- *2) Height depending on the requirement (check thickness in correlation with maximum permissible extension of the hydraulic jack)
- *3) Hydraulic jack proposal
Type: Enerpac RCS-1002
Load at 700 bar: 887 kN

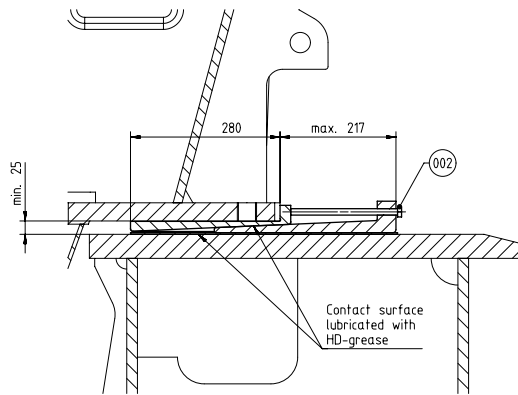
* Shown narrow type wedge									
75.7	4	004	PAAD318480	SUPPORT BLOCK					
	4	003	PAAD318478	HYDRAULIC JACK					
	2	002	107.424.346.200	WEDGE	NARROW TYPE	107.424.346	W-FU-235-JR	3.8	
	8	001	107.245.895.200	WEDGE		107.245.895		8.51	
PER ENGINE	Qty	Seq	Material ID	Material Name	Standard or Drawing	Dimension, Qty	Basic Material Material: Standard	Weight GR/NET	Man. Drw.
PAAD354266	Mod.	Free space for file					G-Code XXXXXX		H
							Standard ISO, JIS		
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	
<div></div> <div>TOOL ENGINE ALIGNMENT Engine Alignment: WEDGES Werkzeug Motorausrichtung</div>									
Units mm kg NX			Scale 1:10			Size A1		Page 1/1	
Made 09.04.2020 dk1021 DH.Kim			Design Group 9710-01			Material ID DAAD1294.64		Rev. -	
Chd 28.04.2020 jst101 Pickup									
Appd 18.05.2020 mhu019 Hug									



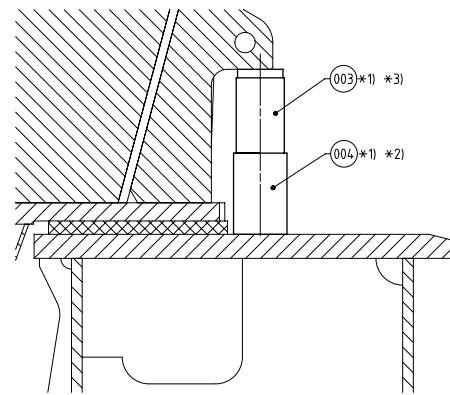
SECTION A-A 90°
SCALE 1:5



SECTION B-B 90°
SCALE 1:5



SECTION C-C 90°
SCALE 1:5



CAUTION

Risk:
Tool and/or bedplate damage

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

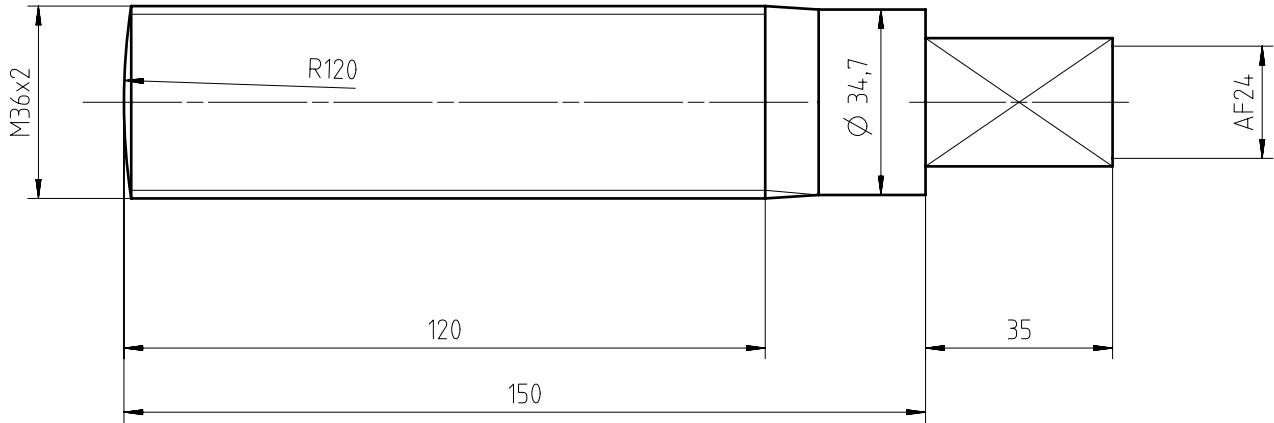
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column)
- Apply hydraulic jacks to the protruding bedplate ribs nearby the relevant wedge and/or shim as indicated in the drawing.
- Start with the engine alignment by means of wedges and/or shims. Before adjusting the height of wedges and/or shims lift the engine by the hydraulic jacks. Any height adjustment must be performed in small steps - no more than 1 mm per step. Changes in height larger than the maximum allowance (1mm) require a gradual process where all wedges and/or shims are successively adjusted in stages, to ensure the best possible load distribution.

Remarks

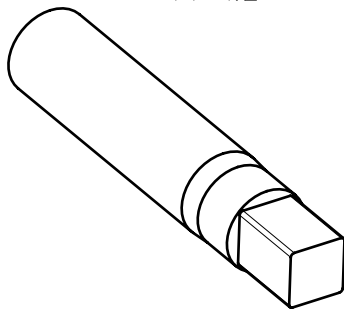
- *1) To be provided by the shipyard
- *2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack)
- *3) Hydraulic jack proposal
Type: Enerpac RLS-1002
Load at 700 bar: 887 kN



Material		Number		Drawn date		Number		Drawn date		Number		Drawn date		Number		Drawn date	
PAAD35483		004		PAAD318480		003		PAAD318478		002		107424.346.200		001		107245.895.200	
Support block		Hydraulic jack		Wedge		Wedge		Narrow type		107424.346		W-FU-235-JR		107245.895		8.51	
PER ENGINE		Material ID		Material Name		Standard or Drawing		Basic Material		Material Standard		Q-Code		Main Drw.		H	
Free space for file		XXXXXX		ISO; JIS													
WINGD		Product		W6X35-B		Tool engine alignment		Engine alignment: wedges		Werkzeug Motorausrichtung							
Units		mm kg		NX		Basic Material		Scale		1:10		Size		A1		Page	
Made		08.04.2020		dk1021		DH.Kim		Design Group		9710-01		Drawing ID		DAAD129429		Rev.	
TOLERANCING PRINCIPLE		ISO 2768		Pickup		jgt101		Design Group		9710-01		Drawing ID		DAAD129429		Rev.	
GENERAL TOLERANCES		ACCORDING TO		ISO 2768-mK		mhu019		Hug									

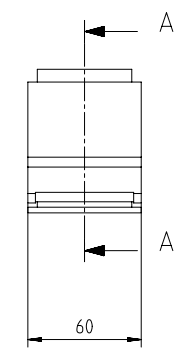
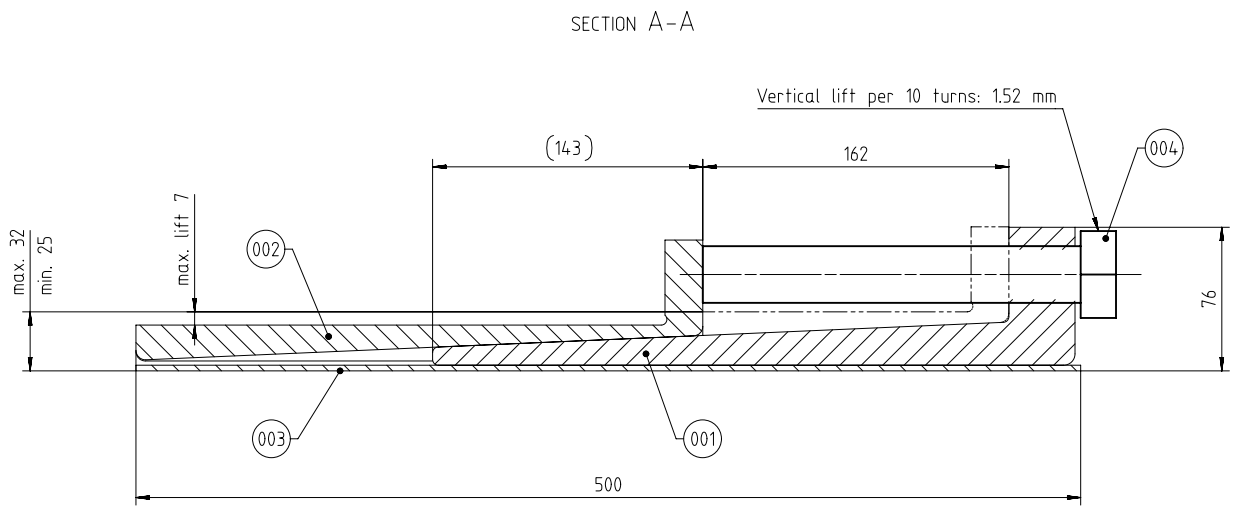
ROLLED THREAD




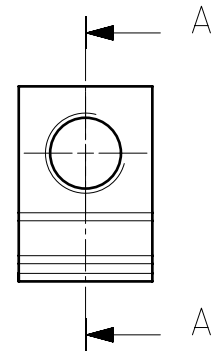
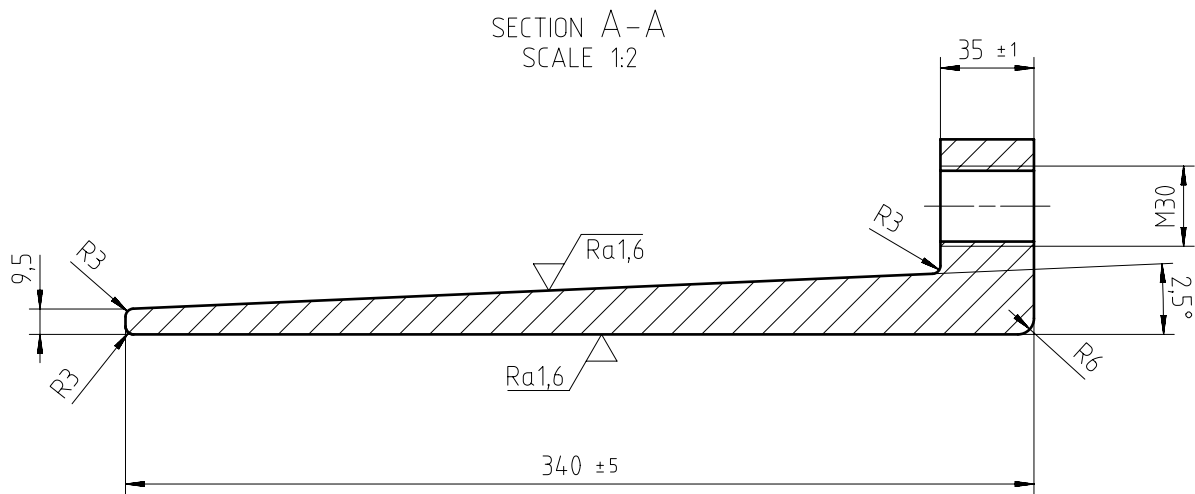
M 1:2



Free space for lic.								Q-Code XXXXXX	Main Drw.	
								Standard ISO; JIS		
Modif.	A	EAAD083926	14.08.2012	B	EAAD091472	06.11.2019				
	Number	Drawn date		Number	Drawn date		Number	Drawn date		
 Winterthur Gas & Diesel			Product W-2S			JACKING SCREW Abdrueckschraube				
Units	mm kg	NX			Basic Material		W-FU-235-N-T		Net Weight 1,34	
Made	11.02.2010 J.BAUMANN		Scale 1:1		Size A3	Page 1/1	Material ID 107.431.447.001			
Chkd	20.01.2011 sfe006 Feuerstein		Design Group		9710-01	Drawing ID 107.431.447			Rev. B	
Appd	20.01.2011 dst009 Strödecke									



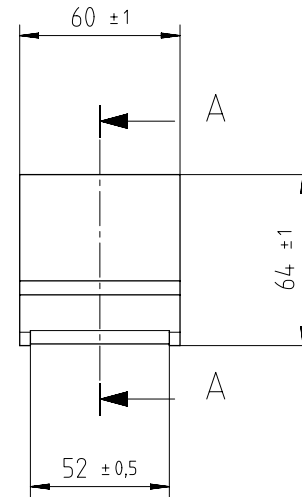
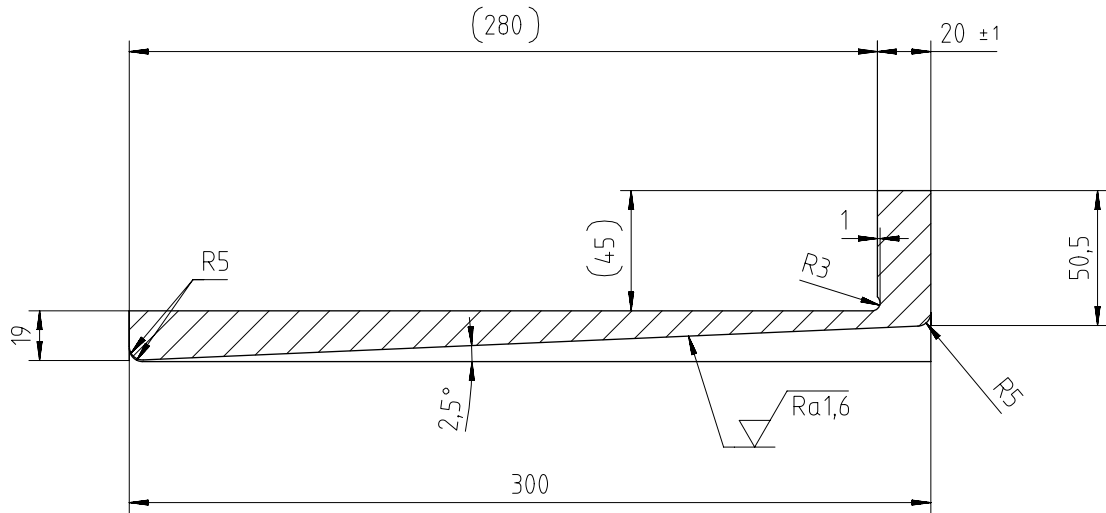
1	004	015.151.048.701	HEXAGON HEAD SCREW M30x200		ISO 4017	8.8	1,21					
1	003	107.245.898.001	PLATE		107.245.898	W-FU-235-JR	1,0					
1	002	107.246.894.001	KEY		107.246.894	W-FU-235-JR	3,0					
1	001	107.246.895.001	KEY		107.246.895	W-FU-235-JR	3,3					
QTY	SEQ NO	Material ID	Material Name		Dimension, Occ	Standard or Drawing	Basic Material Material Standard	Weight GR./NET				
Free space for lic.							Q-Code XXXXXX	Main Drw.				
							Standard ISO; JIS					
Modif.	B	EAAD014493	05.02.2002	C	7-73552	19.10.2009	D	EAAD084635	27.06.2013	E	EAAD091472	11.11.2019
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
WIN GD Winterthur Gas & Diesel			Product W-25		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			
Chkd				Design Group		Drawing ID		9710-01 107.245.895				
Appd	30.08.1996	WCH001 Service User						Rev. E				




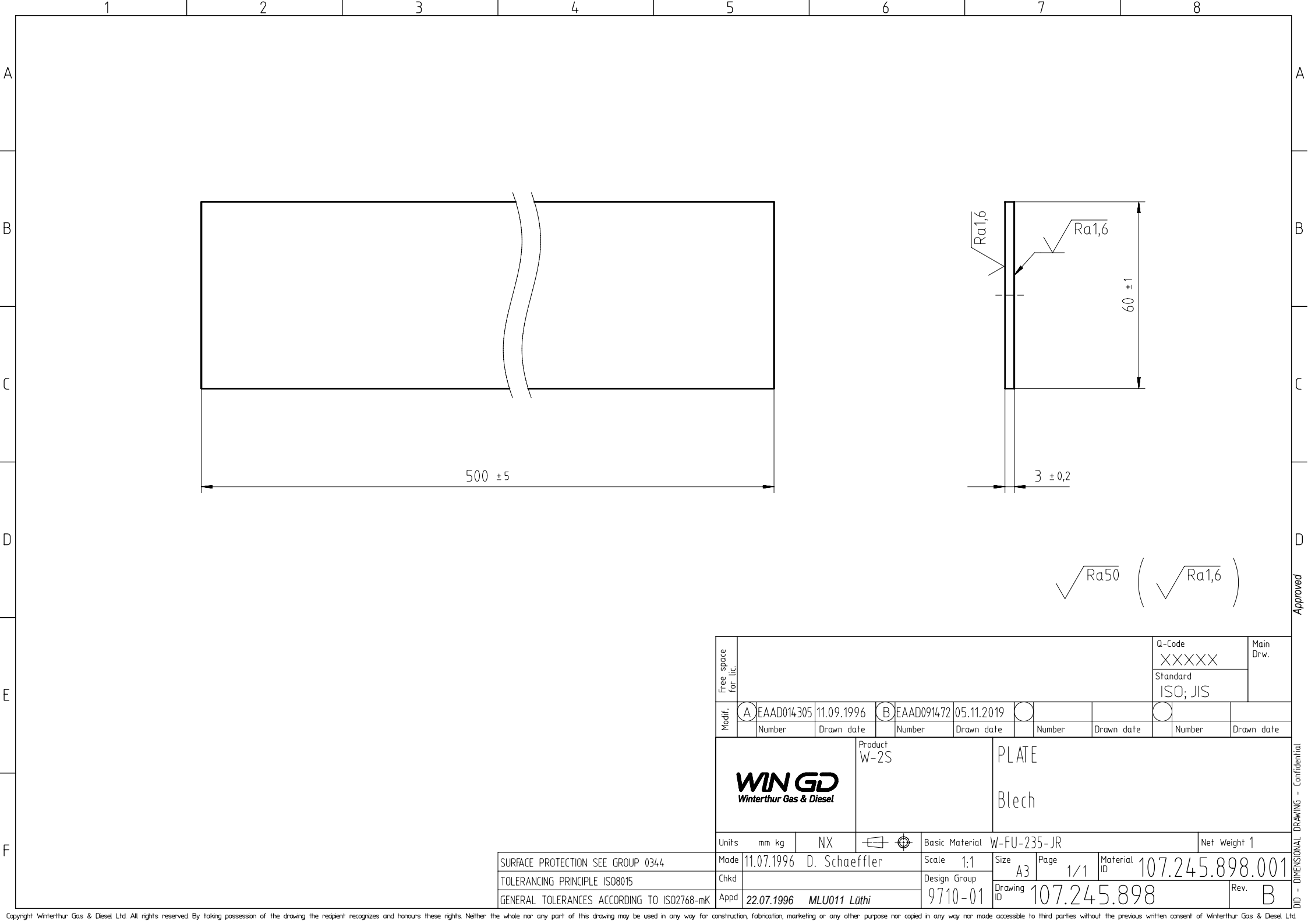
$\sqrt{Ra50}$ ($\sqrt{Ra1,6}$)

Free space for lic.								Q-Code XXXXX	Main Drw.						
								Standard ISO; JIS							
Modif.	A	7-73.552	19.10.2009	B	EAAD091472	04.11.2019									
		Number	Drawn date		Number	Drawn date		Number	Drawn date						
WIN GD Winterthur Gas & Diesel			Product W-2S			KEY Keil									
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											

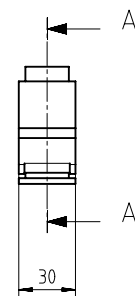
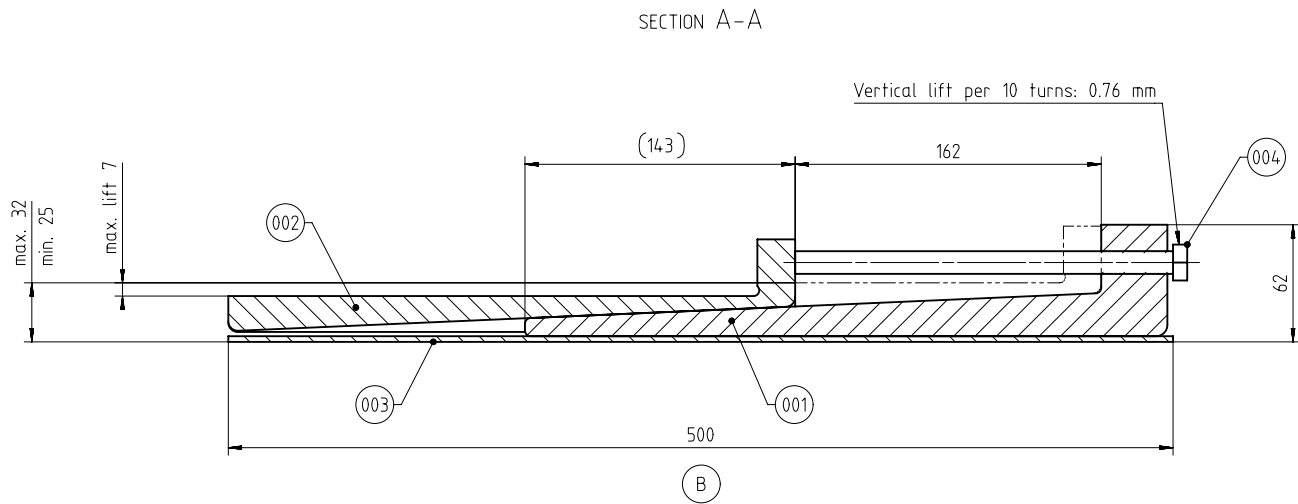
SECTION A-A
SCALE 1:2



$$\sqrt{\text{Ra}50} \quad \left(\sqrt{\text{Ra}1,6} \right)$$

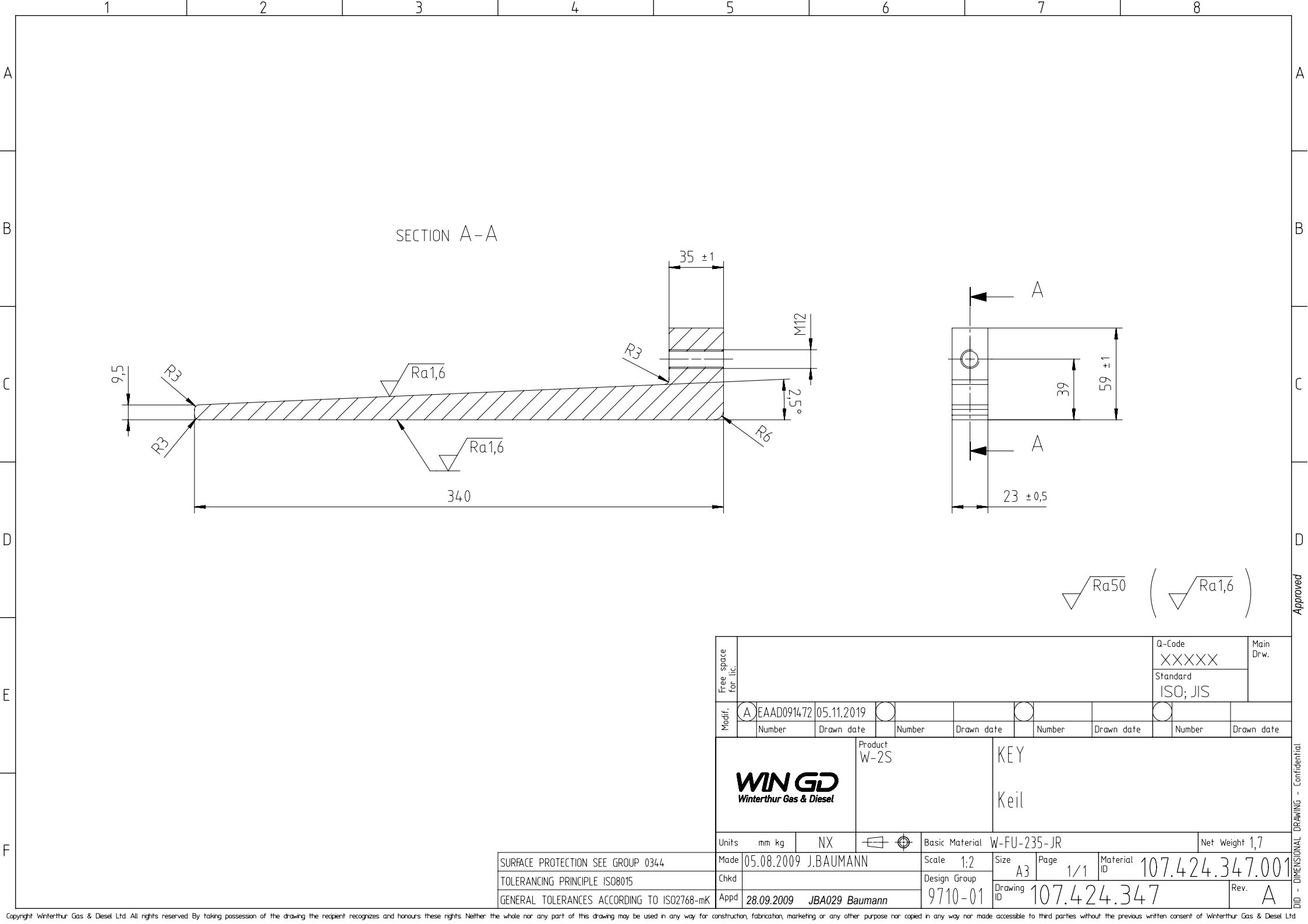
Free space for lic.							Q-Code XXXXXX		Main Drw.		
							Standard ISO; JIS				
Modif.	A	7-73.552	19.10.2009	B	EAAD091472	05.11.2019					
		Number	Drawn date		Number	Drawn date		Number	Drawn date		
<div>WIN GD</div> <div>Winterthur Gas & Diesel</div>			Product W-2S			KEY Keil					
Units	mm	kg	NX		Basic Material W-FU-235-JR				Net Weight 3		
Made	16.05.2001 D.ADMINISTRATOR				Scale	1:2		Size	Page	Material	
Chkd					Design Group	A3		1/1		107.246.894.001	
Appd	27.12.2001 WDMS2				9710-01	Drawing ID 107.246.894				Rev.	B

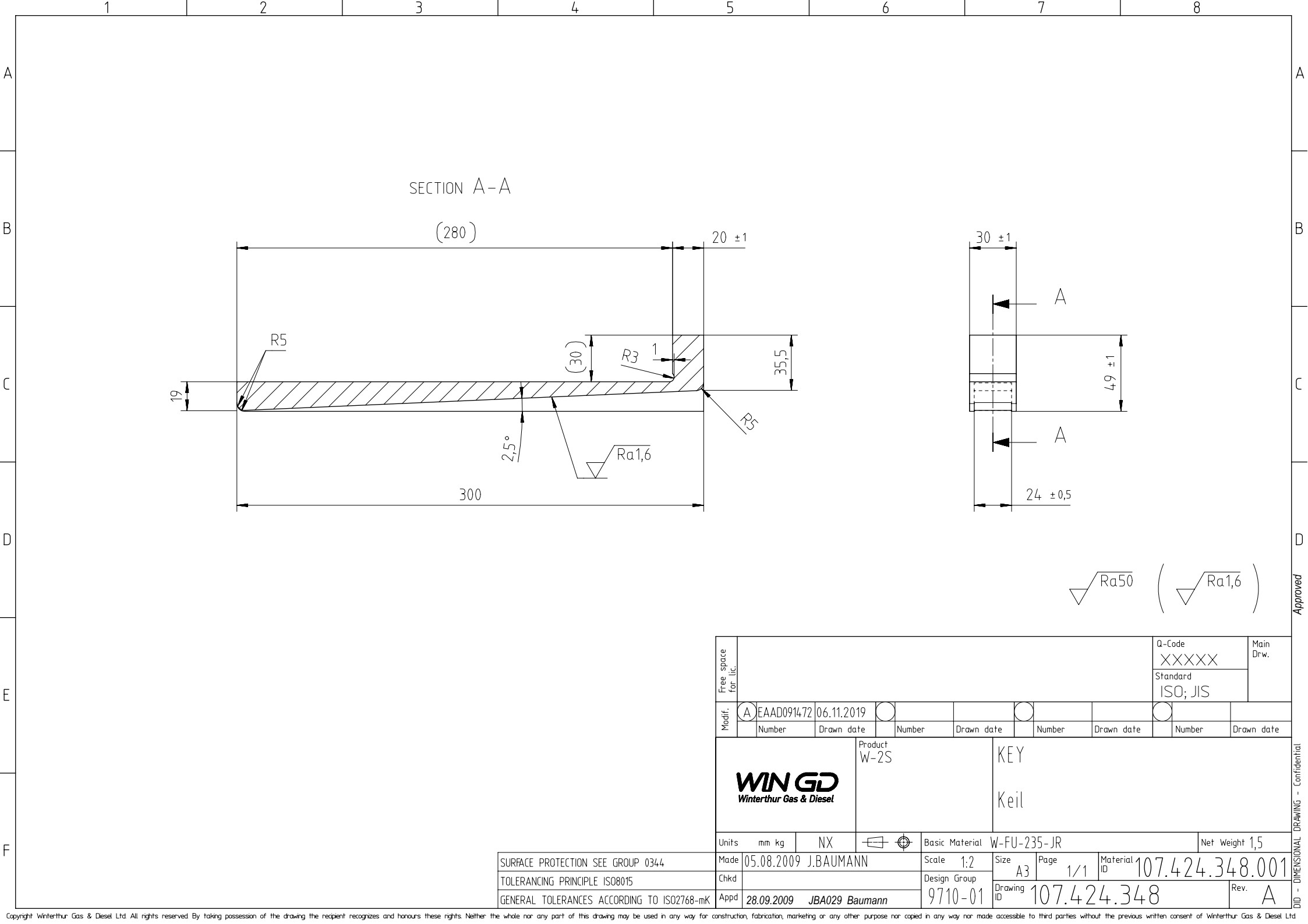


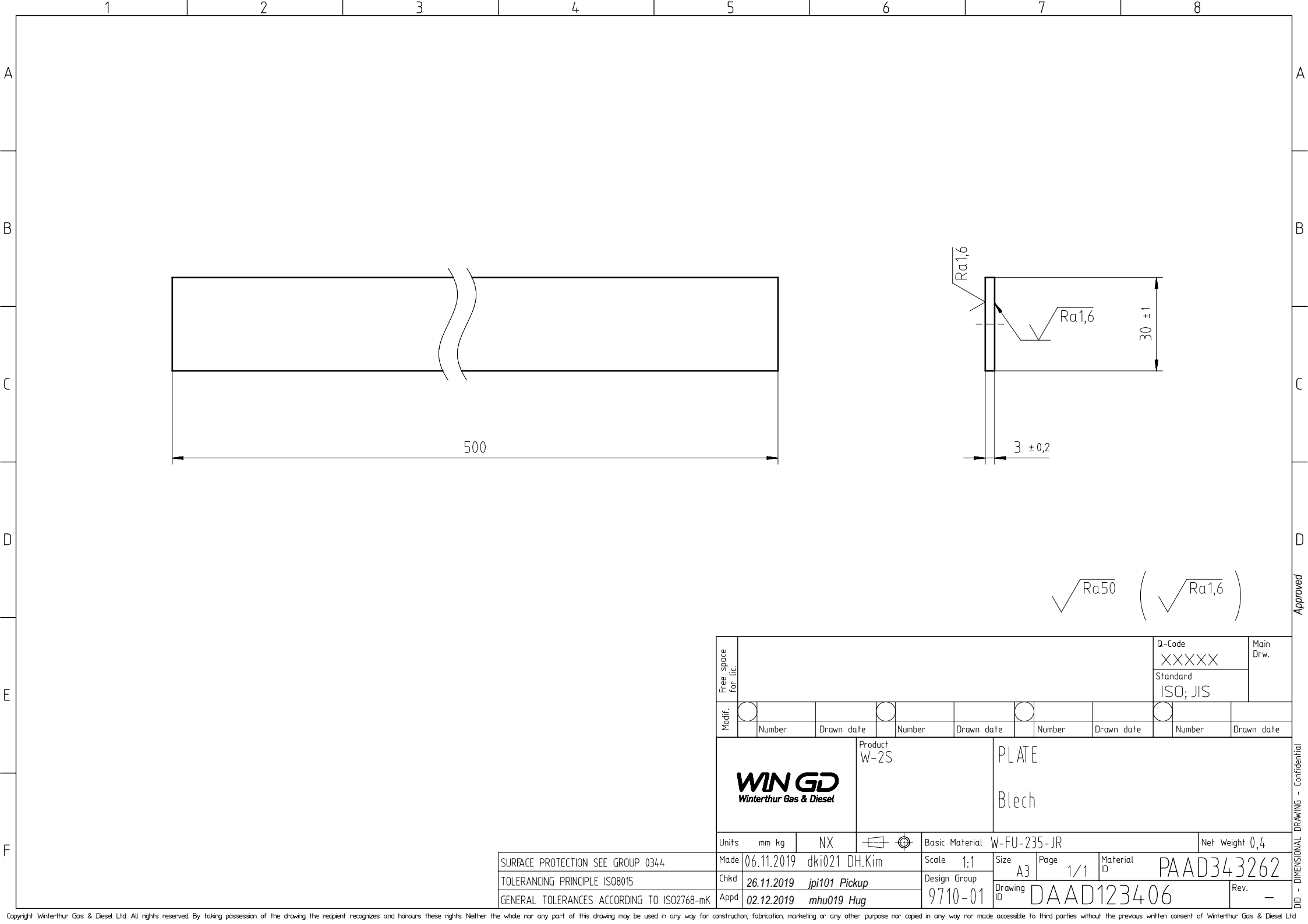
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								XXXXXX				
								Standard ISO; JIS				
Modif.	A	EAAD014305	11.09.1996	B	EAAD091472	05.11.2019						
		Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	Drawn date
WIN GD <i>Winterthur Gas & Diesel</i>			Product W-2S			PLATE 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	9710-01	Drawing ID	107.245.898			Rev.	B
Appd	22.07.1996 MLU011 Lüthi											




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				
Free space for lic.							Q-Code XXXXXX	Main Drw.				
							Standard ISO; JIS					
Modif.	A	EAAD084635	27.06.2013	B	EAAD091472	06.11.2019						
		Number	Drawn date		Number	Drawn date		Number	Drawn date			
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			
Chkd									Size	A2	Page 1/1	Material ID 107.424.346.200
Appd			28.09.2009		JBA029		Baumann		Drawing ID	107.424.346		Rev. B







Free space for lic.								Q-Code	Main Drw.			
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								Standard ISO; JIS				
Modif.	<input type="radio"/>			<input type="radio"/>			<input type="radio"/>					
		Number	Drawn date		Number	Drawn date		Number	Drawn date			
<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 0,4			
Made	06.11.2019	dki021 DH.Kim			Scale	1:1	Size	A3	Page	1/1	Material ID	PAAD343262
Chkd	26.11.2019	jpi101 Pickup			Design Group	9710-01	Drawing ID	DAAD123406			Rev.	—
Appd	02.12.2019	mhu019 Hug										

MIDS - WinGD X35-B –Tool Engine Alignment (DG 9710-01)

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2017-02-17	DRAWING SET	First web upload
2019-10-03	DAAD076769 DAAD081803	Main drgs. - new revision
2020-08-26	DAAD076769 DAAD081803 107.431.447 DAAD129464 DAAD129429 107.245.895 107.224.346	Main and system drgs - new revision Main and system drgs. (wedges) - added

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