


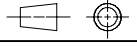
**Available executions**

Execution No.	Material ID	Cylinder No.	Attribute 1: Alignment tool type	
			SCREWS	WEDGES
001	PTAA056852	5		X
002	PTAA056853	5	X	
003	PTAA031714	6		X
004	PTAA030604	6	X	
005	PTAA093042	7		X
006	PTAA092942	7	X	

**NOTE**

The above executions can be configured using the Engine Configurator.  
Detailed guidance for the executions is provided within the Marine Installation Manual (MIM). If a specific execution of interest is not shown in the above table, then it may still be under development or not available. For further information or in case of a project-specific request, WinGD must be contacted directly.

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Prod.	X52-S2.0 X52DF-A-S1.0	X52DF-M-S1.0 X52DF-S1.0	X52DF-S2.0							
Change History	B	npa101				Drawing updated				
	A	npa101	mhu019	20.04.2023	CNAA003507	Drawing Updated		4	3	
	-	dkl021	dst009	06.05.2022	CNAA001843	new Design		-	-	
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Activity Code	E	C
 <b>WIN GD</b> <i>Winterthur Gas &amp; Diesel</i>			<b>TOOL ENGINE ALIGNMENT</b> MIDS master drawing							
separate BOM available			Dimension							
Scale	-		NX	Units [mm] [kg]	Basic Material			Net Weight	0.001	
<small>Copyright Winterthur Gas &amp; 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 &amp; Diesel Ltd.</small>				Main Design	Design Group	9710-01	Q-Code	X X M	Standard	WDS
				Qty per	A4	Item ID	PTAA031937		Drawing Page/s	1/1

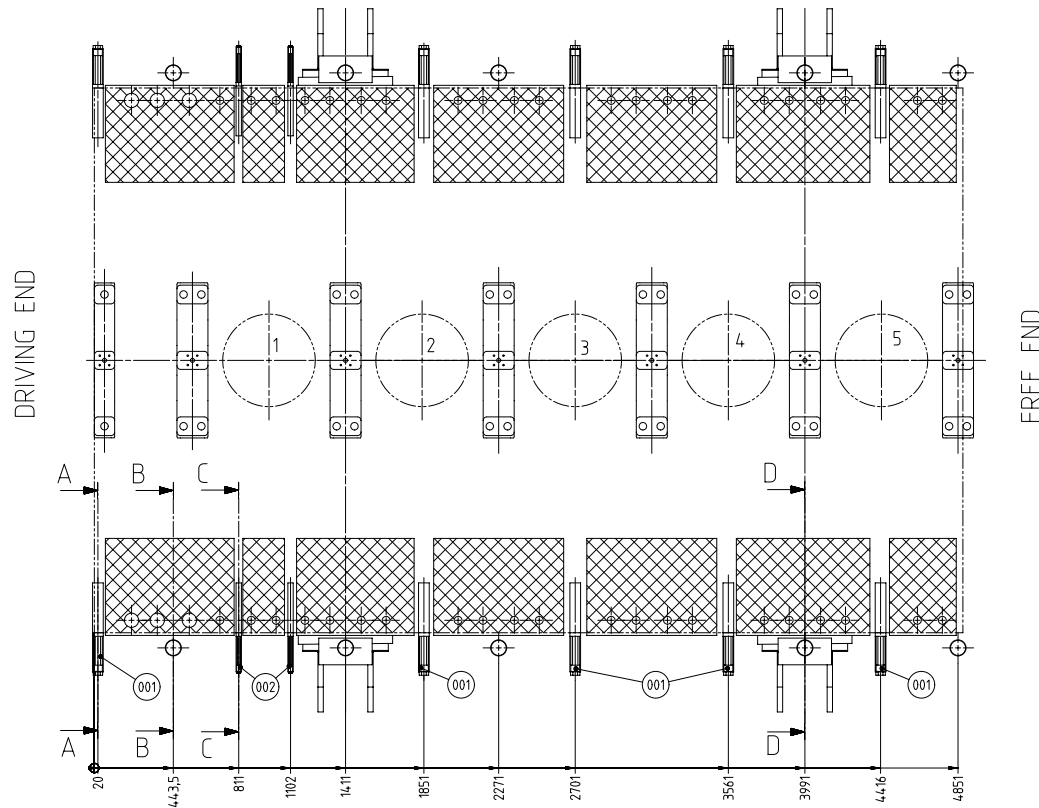
SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	10	107.245.895.200	WEDGE				8.51
002	4	107.424.346.200	WEDGE	NARROW TYPE		W-FU-235-JR	3.8
003	10	PAAD318478	HYDRAULIC JACK				
004	6	PAAD318480	SUPPORT BLOCK				
005	4	PAAD318479	SUPPORT PLATE				



Prod.	5 X52-S2.0							
Change History								
	-	npa101	nm101	03042023	<del>01003284</del>	New MainDesign		-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C

 Winterthur Gas & Diesel	<h1>TOOL ENGINE ALIGNMENT</h1> <h2>Alignment with: Wedges</h2>
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<b>Bill Of Material</b>		Dimension	
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	Main Design	Yes	Design Group 9710-01 Q-Code XXXXX
	Qty per	Engine A4	Item ID <b>PTAA056852</b>
			Net Weight 100 Standard WDS BOM Page/s 01/01



**CAUTION**

Risk:  
Tool and/or bedplate damage

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

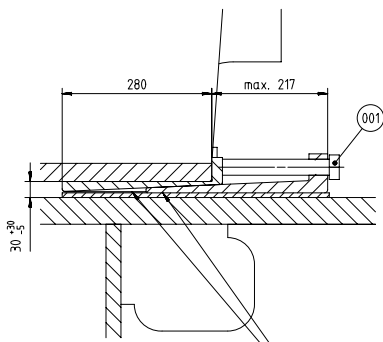
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).
- 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 RCS-1002  
Load at 700 bar: 880 kN

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

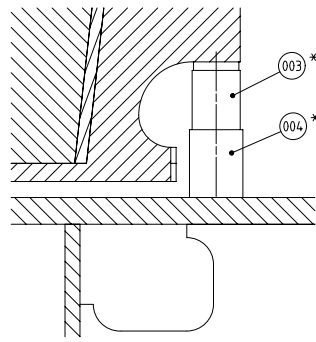
SCALE 1:5



CONTACT SURFACE  
LUBRICATED WITH  
HD-GREASE

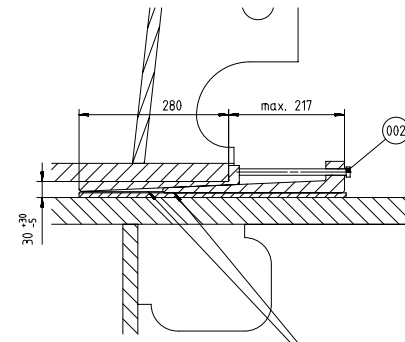
SECTION B-B  $\odot 90^\circ$

SCALE 1:5



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

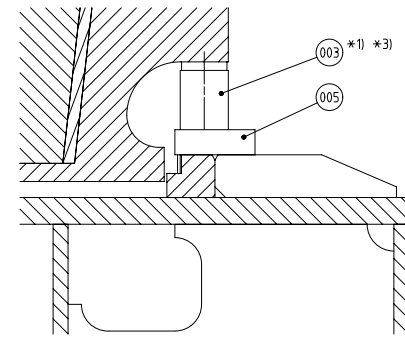
SCALE 1:5



CONTACT SURFACE  
LUBRICATED WITH  
HD-GREASE

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

SCALE 1:5




SURFACE PROTECTION SEE GROUP 0344  
TOLERANCING PRINCIPLE ISO8015  
GENERAL TOLERANCES ACCORDING TO ISO2768-mK

Title		5X52-82,0							
Change History									
Rev	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C
-	mpa101	rlm/DB	03042203	04M03394	New MainDesign			-	-
<b>WINGD</b> Wärtsilä Gas & Diesel		TOOL ENGINE ALIGNMENT Alignment with: Wedges							
separate BOM available		Dimension		Units [mm] [kg]		Basic Material		Net Weight	
Scale 1:15		NX						100,0	
Main Design		Yes		Design Group		9710-01		o-Code XXXXX	
City		Engine		A1		Item ID		PTAA056852	
Drawing		1/1							

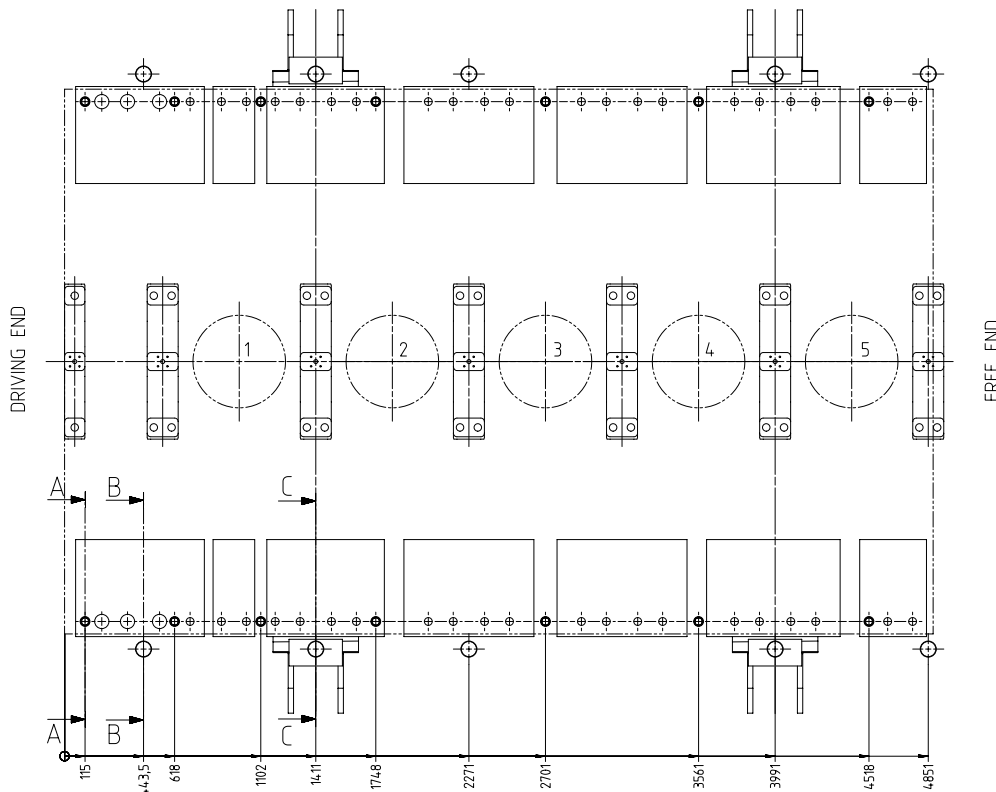
SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	14	PAAD005430	JACKING SCREW			W-FU-235-N-T	2.3
002	14	PTAA031559	SPONGE RUBBER RING				0.115
003	10	PAAD318478	HYDRAULIC JACK				
004	6	PAAD318480	SUPPORT BLOCK				
005	4	PAAD318479	SUPPORT PLATE				



Prod.	5 X52-S2.0							
Change History								
	-	npa101	nm101	03042023	<del>01003284</del>	New MainDesign		-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C

	<h2>TOOL ENGINE ALIGNMENT</h2> <p>Alignment with: Jacking Screws</p>
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<b>Bill Of Material</b>		Dimension	
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	Main Design	Yes	Design Group 9710-01 Q-Code XXXXX
	Qty per	Engine A4	Item ID <b>PTAA056853</b>
			Net Weight 33.81
			Standard WDS
			BOM Page/s 01/01



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:

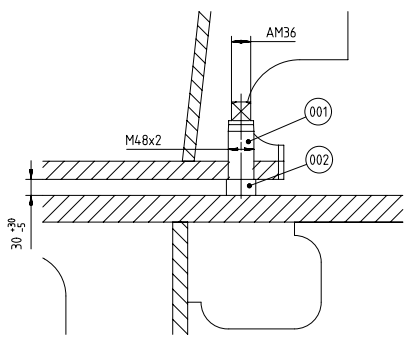
- Lift the engine into the engine room and place it on levelled , temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used)
- Apply hydraulic jacks to the protruding bedplate 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

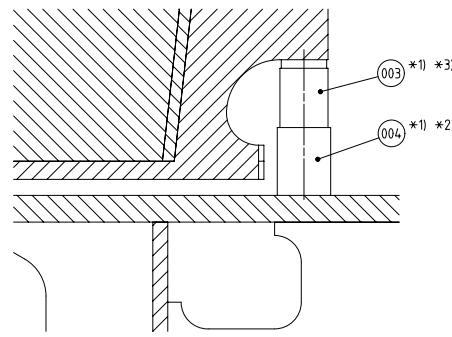
SECTION A-A  $\odot 90^\circ$

SCALE 1:5



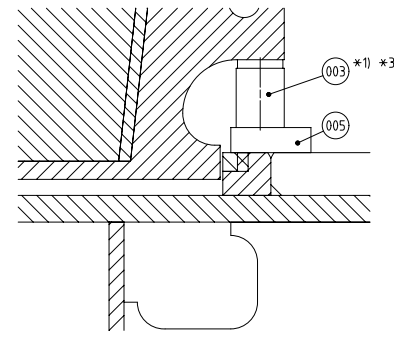
SECTION B-B  $\odot 90^\circ$

SCALE 1:5



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

SCALE 1:5



Title		5X52-82.0							
Change History									
Rev	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C
-	mpa101	rhuDB	03042023	0AMU0394	New MainDesign			-	-
separate BOM available		Dimension		Units [mm] [kg]		Basic Material		Net Weight	
Scale 1:15		NX						33.81	
SURFACE PROTECTION SEE GROUP 0344		Copyright Wintherthur Gas & Diesel Ltd. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Wintherthur Gas & Diesel Ltd.		Main Design		Yes		Design Group 9710-01	
TOLERANCING PRINCIPLE ISO8015		GENERAL TOLERANCES ACCORDING TO ISO2768-mK		City		Engine		Item ID	
				PTAA056853		Drawing		1/1	

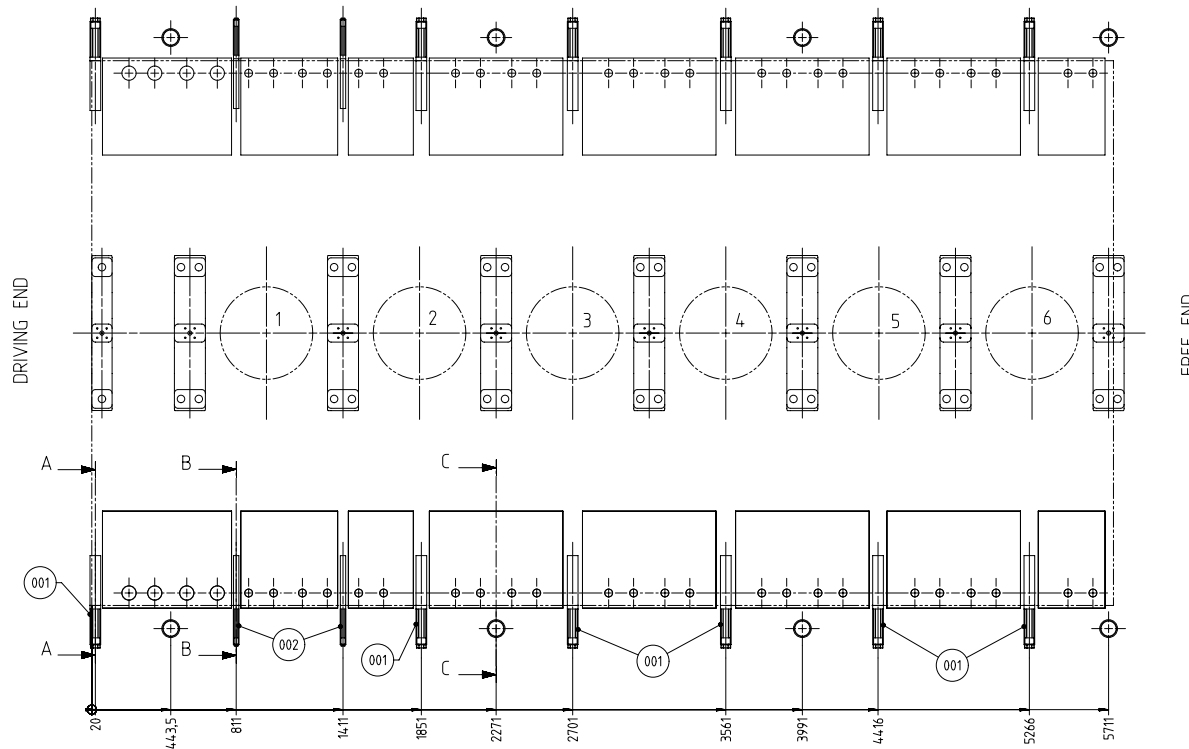
SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	12	107.245.895.200	WEDGE				8.51
002	4	107.424.346.200	WEDGE	NARROW TYPE		W-FU-235-JR	3.8
003	8	PAAD318478	HYDRAULIC JACK				
004	8	PAAD318480	SUPPORT BLOCK				



Prod.	6 X52-S2.0 6 X52DF-S1.0		6 X52DF-S2.0						
Change History									
	-	dkl021	mhu019	02.05.2022	CNAA001768	New MIDS introduced	-	-	
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E

 <b>WIN GD</b> <i>Winterthur Gas &amp; Diesel</i>	<h2>TOOL ENGINE ALIGNMENT</h2> <h3>Alignment with: Wedges</h3>
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<b>Bill Of Material</b>		Dimension					
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	Main Design	Yes	Design Group	9710-01	Q-Code XXXXX	Standard	WDS
	Qty per	Engine	A4	Item ID	<b>PTAA031714</b>		BOM Page/s



**CAUTION**

Risk:  
Tool and/or bedplate damage

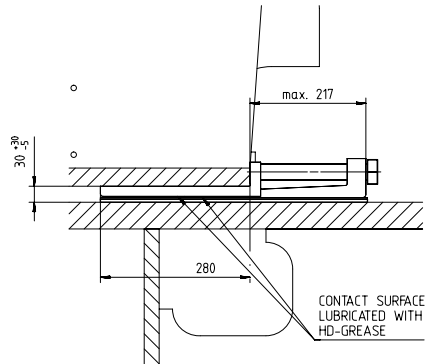
Countermeasure:  
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

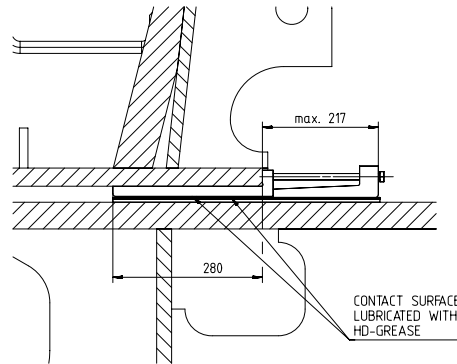
**Remarks**

- \*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 RCS-1002  
Load at 700 bar: 880 kN

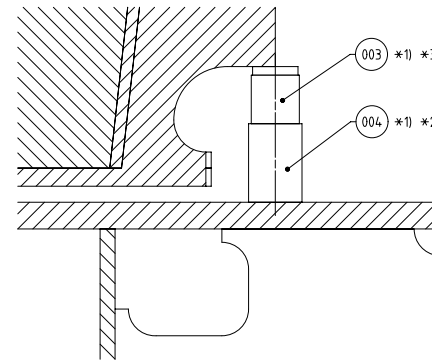
SECTION A-A  $\odot 90^\circ$   
SCALE 1:5



SECTION B-B  $\odot 90^\circ$   
SCALE 1:5



SECTION C-C  $\odot 90^\circ$   
SCALE 1:5




6X52-82.0		6X52DF-82.0			
6X52DF-81.0					
Change History					
Rev	Creator	Approved Date	Change ID	Change Synopsis	Appr. / Date
01	dk021	02.05.2022	CNA001768	new Design	-
<b>TOOL ENGINE ALIGNMENT</b> Alignment with: Wedges					
separate BOM available			Dimension		
Scale	1:3	NX	Units [mm] [kg]	Basic Material	Net Weight 117,3
SURFACE PROTECTION SEE GROUP 0344			Main Design Yes Design Group 9710-01		
TOLERANCING PRINCIPLE ISO8015			o-Code XXXXX Standard WDS		
GENERAL TOLERANCES ACCORDING TO ISO2768-mK			CNY per A1		
			Form ID PTA031714		
			Drawing Page 1/1		

SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	16	PAAD005430	JACKING SCREW			W-FU-235-N-T	2.3
002	12	PTAA031559	SPONGE RUBBER RING				0.115
003	8	PAAD318478	HYDRAULIC JACK				
004	8	PAAD318480	SUPPORT BLOCK				

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Prod.	6 X52-S2.0 6 X52DF-S1.0		6 X52DF-S2.0					
Change History								
	-	dkl021	mhu019	02.05.2022	CNAA001768	New MIDS introduced	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code

	<h2>TOOL ENGINE ALIGNMENT</h2> <h3>Alignment with: Jacking Screws</h3>
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<b>Bill Of Material</b>		Dimension						
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	Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
	Qty per	Engine	A4	Item ID	PTAA030604		BOM Page/s	01/01





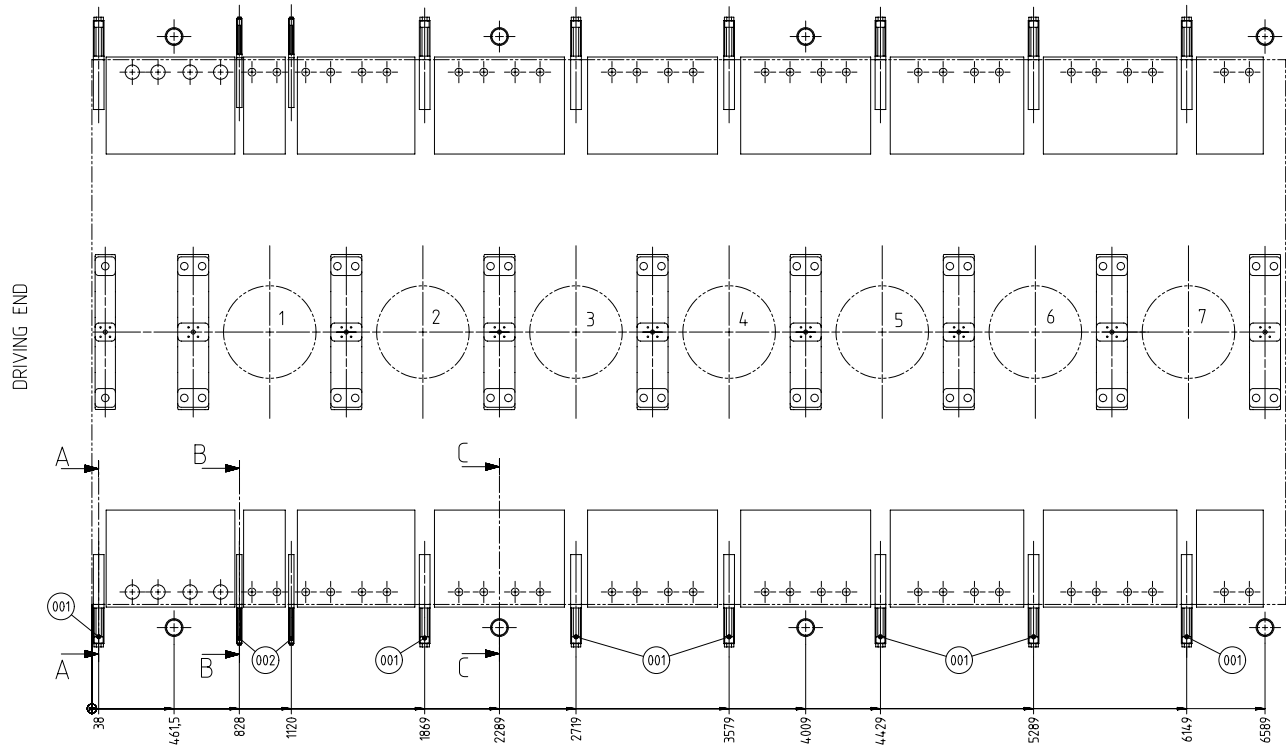
SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	14	107.245.895.200	WEDGE				8.51
002	4	107.424.346.200	WEDGE	NARROW TYPE		W-FU-235-JR	3.8
003	8	PAAD318478	HYDRAULIC JACK				
004	8	PAAD318480	SUPPORT BLOCK				



Prod.	7 X52-S2.0 7 X52DF-A-S1.0		7 X52DF-M-S1.0 7 X52DF-S1.0		7 X52DF-S2.0			
Change History								
	-	npa101	nm101	06052024	<del>01005292</del>	New MainDesign introduced	-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code

	<h2>TOOL ENGINE ALIGNMENT</h2> <p>Alignment with: Wedges</p>
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<b>Bill Of Material</b>		Alignment with: Wedges							
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Main Design		Yes	Design Group		9710-01	Q-Code	X X M	Standard	WDS
Qty per		Engine	A4	Item ID	PTAA093042		BOM Page/s	01/01	



**CAUTION**

Risk:  
Tool and/or bedplate damage

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

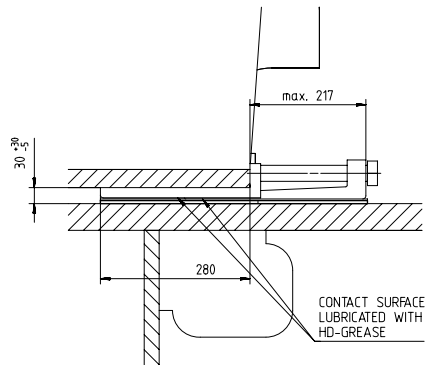
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).
- 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 RCS-1002  
Load at 700 bar: 880 kN

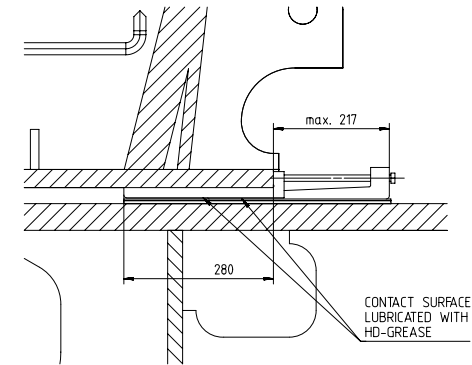
SECTION A-A  $\odot 90^\circ$

SCALE 1:5



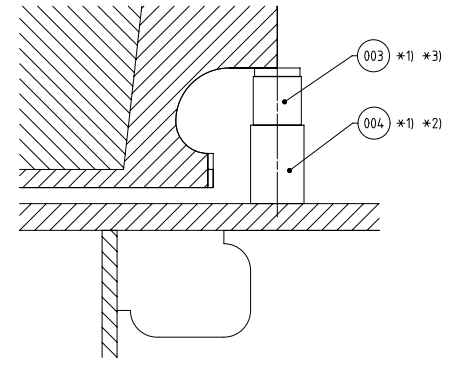
SECTION B-B  $\odot 90^\circ$

SCALE 1:5



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

SCALE 1:5




Proj.	7X52-82.0 7X52DF-a-B1.0	7X52DF-M-B1.0 7X52DF-B1.0	7X52DF-B2.0
Change History			
Rev.	01	02	03
Creator	mpa101	rlu108	0505204
Approver			0405232
Approval Date			
Change ID			
Change Synopsis	New MainDesign introduced		
Activity Code			Approved
<b>TOOL ENGINE ALIGNMENT</b> Alignment with: Wedges			
separate BOM available	Dimension	Alignment with: Wedges	
Scale 1:3	Units [mm] [kg]	Basic Material	Net Weight 134.0
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SURFACE PROTECTION SEE GROUP 0344	Design Group	9710-01	Q-Code X X M
TOOLERANING PRINCIPLE S0805	Design Group	9710-01	Standard WDS
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Design Group	9710-01	Standard WDS
Design	Engine	A1	Item ID PTA093042
Page	1	1	Drawing Page 1/1

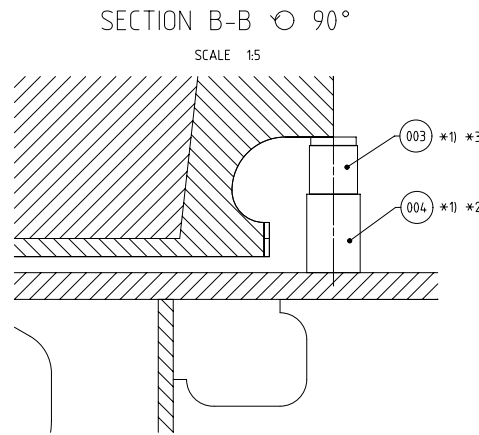
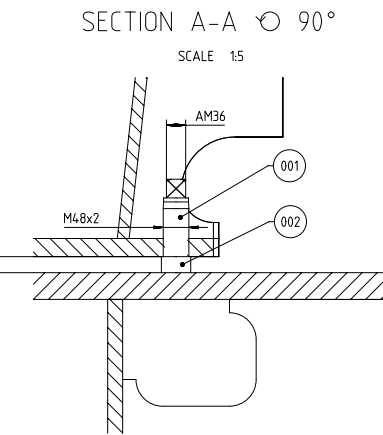
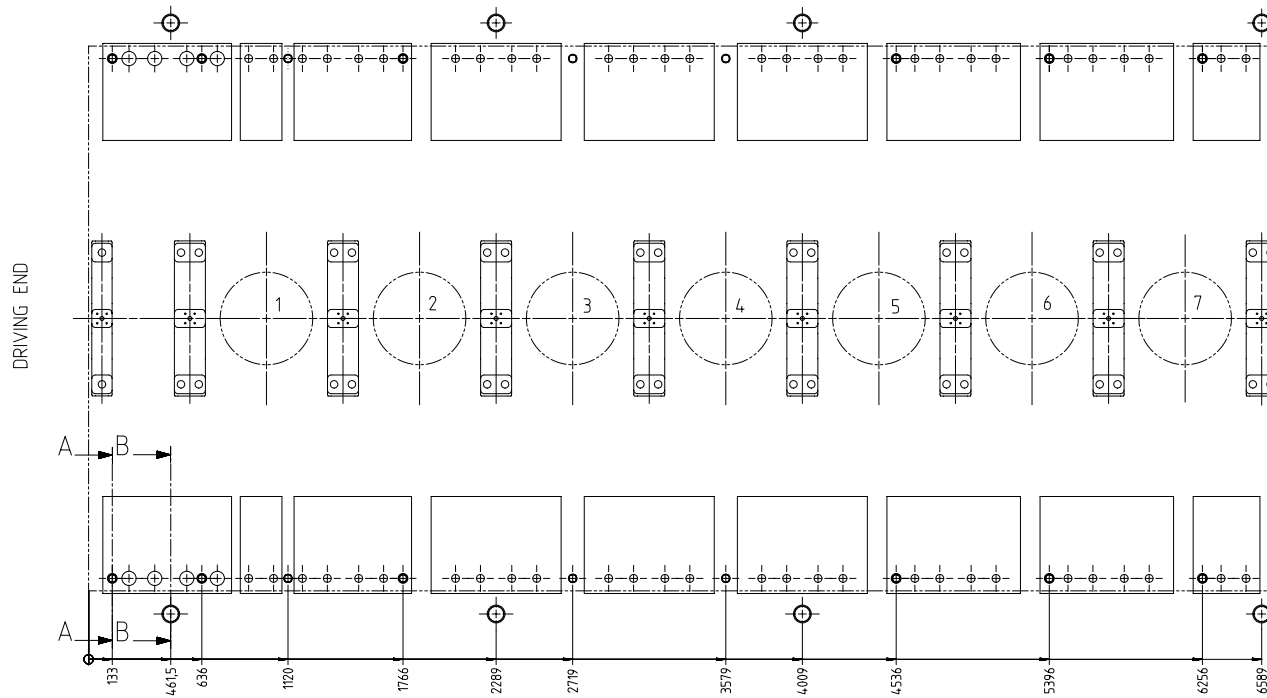
SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
001	18	PAAD005430	JACKING SCREW			W-FU-235-N-T	2.3
002	12	PTAA031559	SPONGE RUBBER RING				0.115
003	8	PAAD318478	HYDRAULIC JACK				
004	8	PAAD318480	SUPPORT BLOCK				

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Prod.	7 X52-S2.0 7 X52DF-A-S1.0		7 X52DF-M-S1.0 7 X52DF-S1.0		7 X52DF-S2.0		
Change History							
	-	npa101	nm101	06052024	<del>01A005292</del>	New MainDesign introduced	- -
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved Activity Code E C

	<h2>TOOL ENGINE ALIGNMENT</h2> <p>Alignment with: Jacking Screws</p>
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<b>Bill Of Material</b>		Alignment with: Jacking Screws								
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		Main Design	Yes	Design Group		9710-01	Q-Code	X X M	Standard	WDS
		Qty per	Engine	A4	Item ID	PTAA092942		BOM Page/s	01/01	



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.

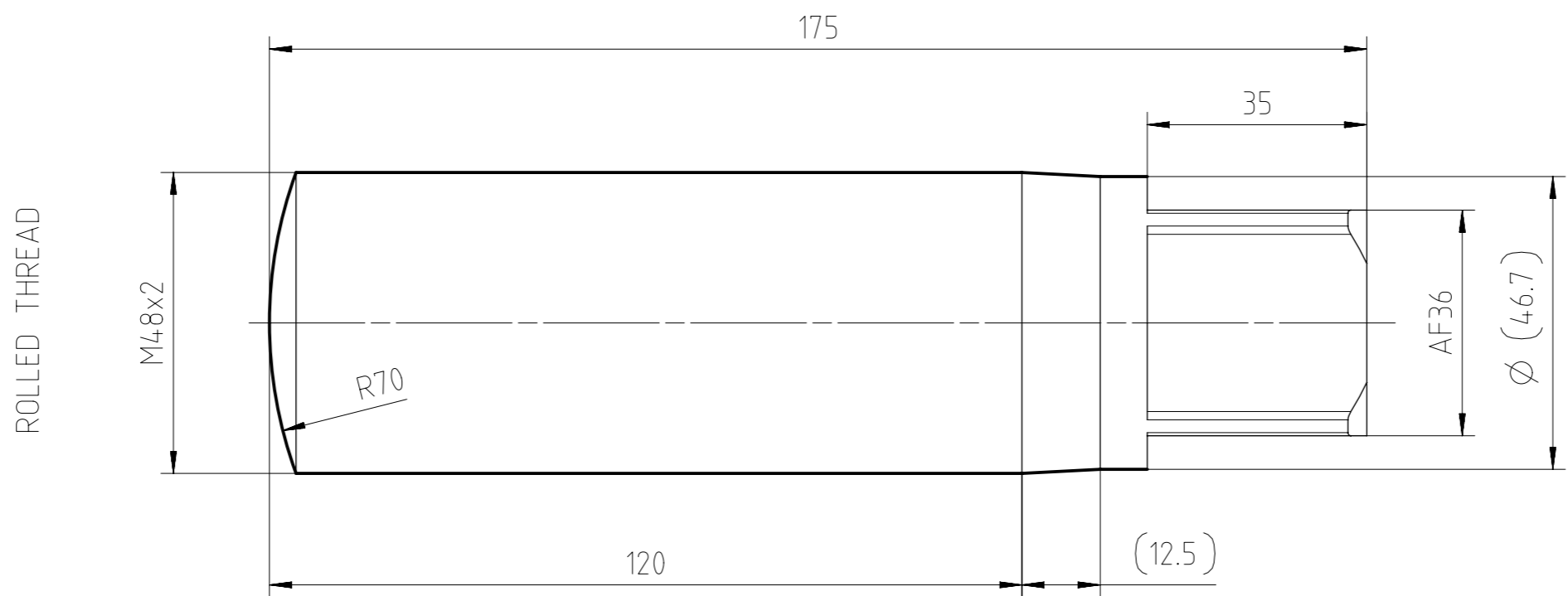
Remarks

- \*1) To be provided by the shipyard
- \*2) Height depending on the requirement (check 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

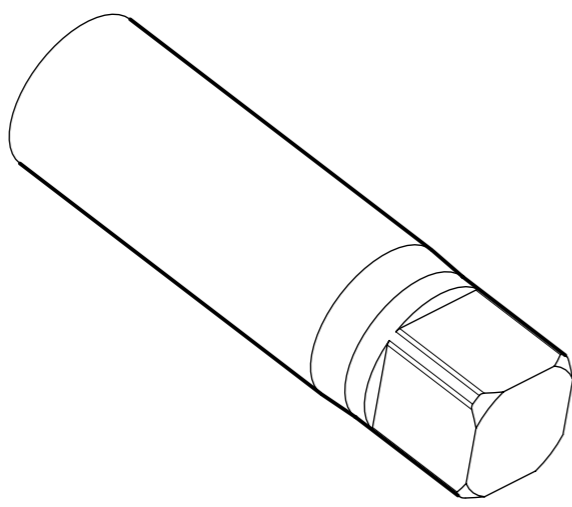
Part	7X52-82.0 7X52DF-M-B1.0	7X52DF-M-B1.0 7X52DF-B1.0	7X52DF-82.0
Change History			
Rev	01	02	03
Creator	npa101	rlu108	0505204
Approver			0405232
Change System	New MainDesign introduced		
Activity Code			Approved
<b>TOOL ENGINE ALIGNMENT</b> Alignment with: Jacking Screws			
separate BOM available	Dimension	Alignment with:	Jacking Screws
Scale 1:3	Units [mm] [kg]	Basic Material	Net Weight 43.00
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SURFACE PROTECTION SEE GROUP 0344	Main Design	Yes	Design Group 9710-01
TOLERANCING PRINCIPLE ISO8015	Design	Yes	Design Group 9710-01
GENERAL TOLERANCES ACCORDING TO ISO2768-MK	Design	Yes	Design Group 9710-01
QTY per	Engine	A1	Item ID PTA092942
			Drawing Page 1/1

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M 1:2



Free space for litc.	Q-Code XXXXXX						Main Drw.
	Standard ISO; JIS						
Modif.	A	EAAD087035	22.11.2016				
		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 2,3	
SURFACE PROTECTION SEE GROUP 0344		Made	04.06.2010	jba029	Baumann	Scale 1:1	Size A3
TOLERANCING PRINCIPLE ISO8015		Chkd	15.06.2010	wwr001 Wroblewski		Design Group	Page 1/1
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	17.06.2010	dst009 Strödecke		9710-01	Material ID PAAD005430
Drawing ID DAAD006054						Rev. A	

Approved  
ILD - INSTALLATION DRAWING - Internal

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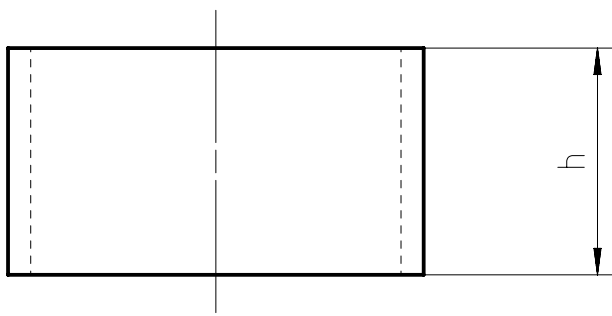
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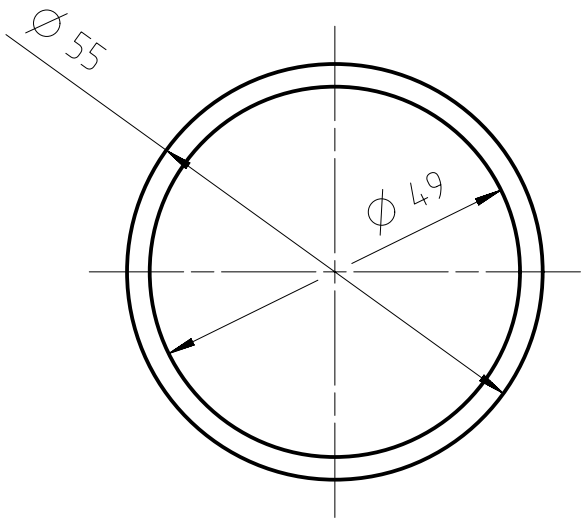
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SURFACE PROTECTION SEE GROUP 03/44  
 TOLERANCING PRINCIPLE ISO8015  
 GENERAL TOLERANCES ACCORDING TO ISO2768-mk



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h - determined after engine alignment  
 \* material according to shipyard experience

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Prod.											
Change History											
	-	dki021	mhu019	02.05.2022	CNAA001768	new Design				-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C	

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# SPONGE RUBBER RING

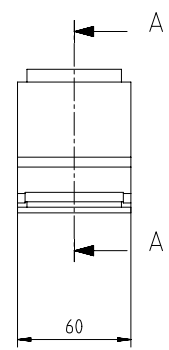
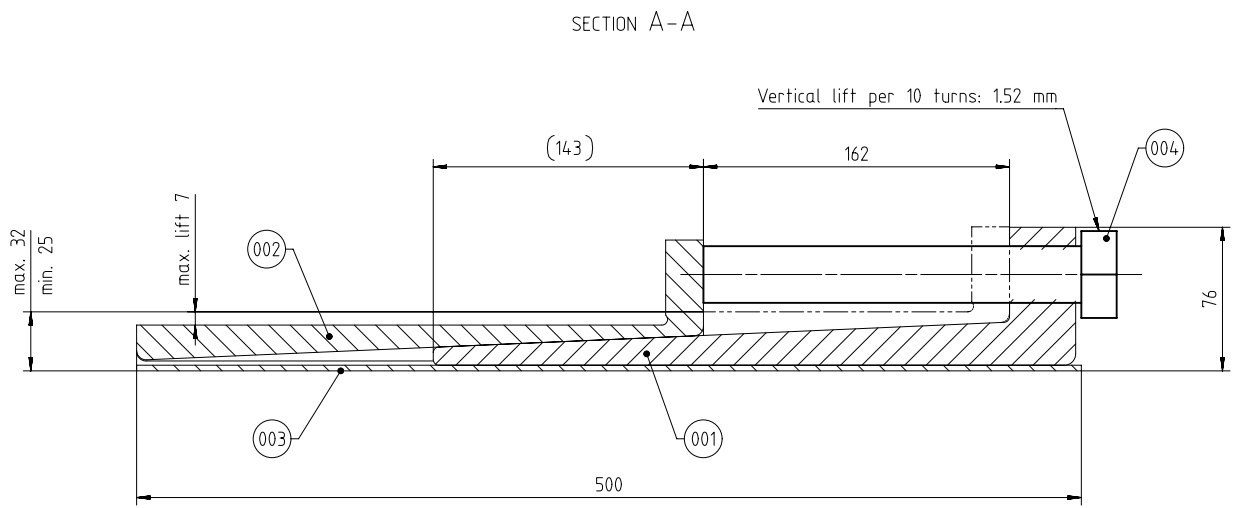
Scale 1:1				NX	Dimension					
Units [mm] [kg]	Basic Material		Net Weight		0.001					
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours these rights. Neither the whole nor any part of this drawing may be used in any way 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.	Main Design	Design Group	9710-01	Q-Code	XXXXX		Standard	WDS		
Qty per	A4	Item ID	PTAA031559		Drawing Page/s	1/1				

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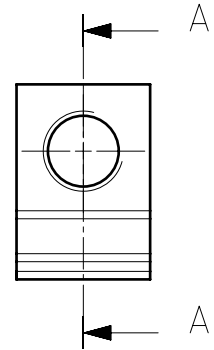
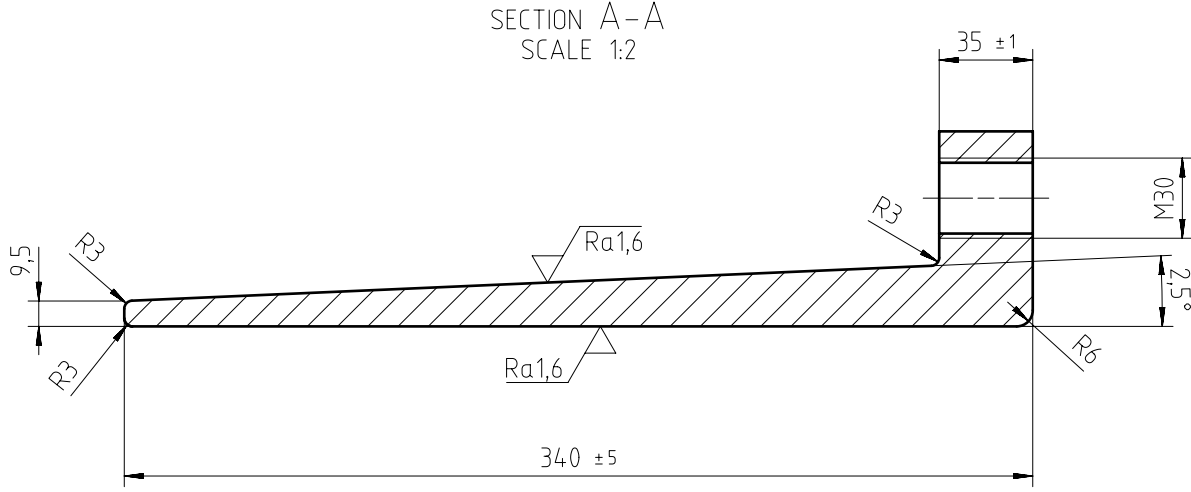
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1	004	015.151.048.701	HEXAGON HEAD SCREW M30x200	ISO 4017	8,8	1,21						
1	003	107.245.898.001	PLATE	107.245.898	W-FU-235-JR	1,0						
1	002	107.246.894.001	KEY	107.246.894	W-FU-235-JR	3,0						
1	001	107.246.895.001	KEY	107.246.895	W-FU-235-JR	3,3						
QTY	SEQ NO	Material ID	Material Name	Dimension, Occ	Standard or Drawing	Basic Material Material Standard	Weight GR./NET					
Free space for ill.						Q-Code XXXXXX Standard ISO; JIS	Main Drw.					
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		
			Product W-2S		WEDGE Schraeger Keil							
Units	mm kg	NX			Basic Material			Net Weight 8,51				
SURFACE PROTECTION SEE GROUP 034.4		Made	10.07.1996 D.Scheffler		Scale	1:2		Size	A2		Page	1/1
TOLERANCING PRINCIPLE ISO8015		Chkd			Design Group				Material ID		107.245.895.200	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	30.08.1996 WCH001 Service User		9710-01		Drawing ID		107.245.895		Rev. E	





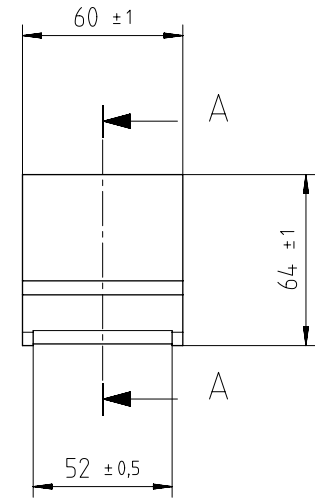
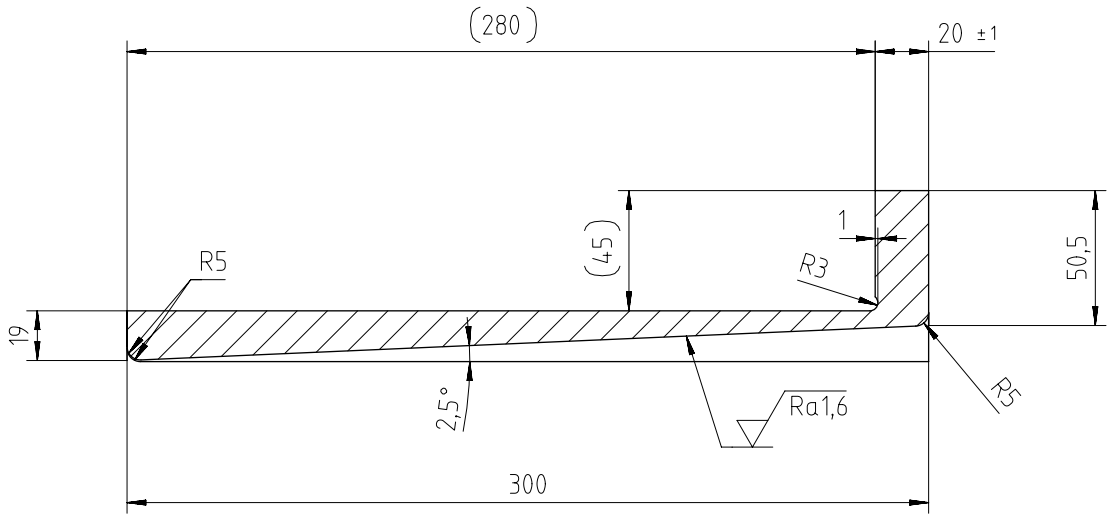
Ra50 (
 Ra1,6
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Free space for lic.	Q-Code XXXXXX								Main Drw.					
	Standard ISO; JIS													
Modif.	(A) 7-73.552	19.10.2009	(B) EAAD091472	04.11.2019										
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date						
 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								

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SECTION A-A  
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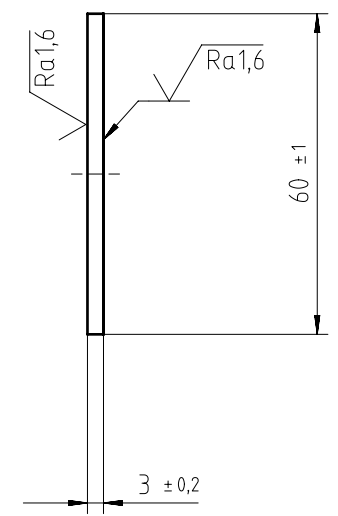
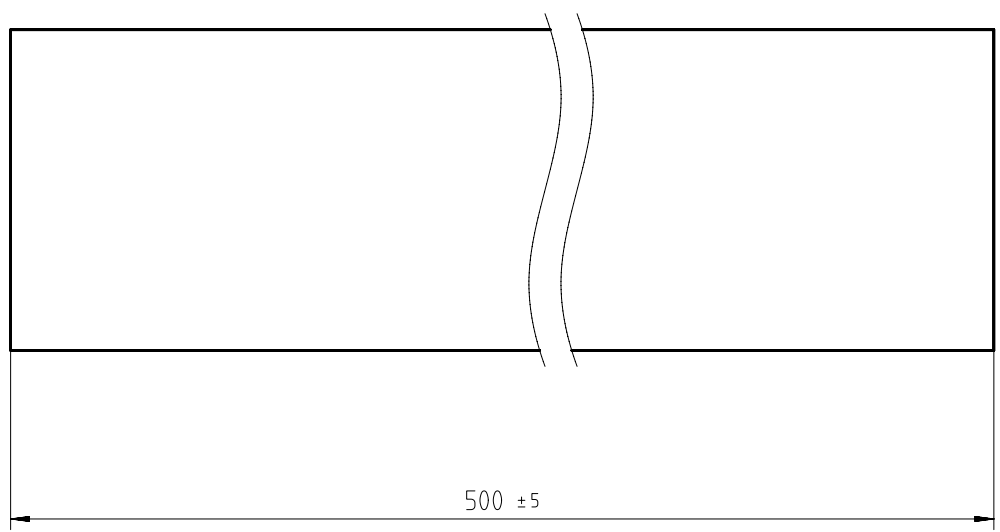
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	Standard ISO; JIS													
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	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date						
 Winterthur Gas & Diesel			Product W-2S		KEY  Keil									
Units	mm kg	NX		Basic Material	W-FU-235-JR				Net Weight 3					
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TOLERANCING PRINCIPLE ISO8015			Chkd				Design Group	9710-01		Drawing ID	107.246.894		Rev.	B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK			Appd	27.12.2001	WDMS2									

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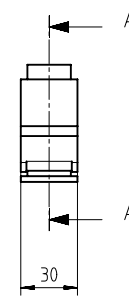
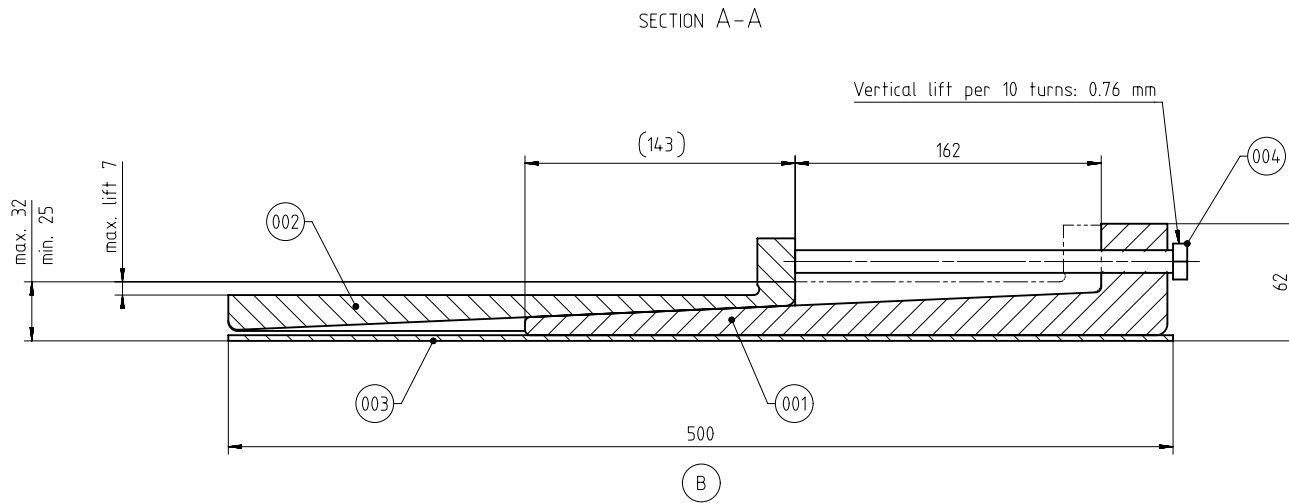
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								Standard ISO; JIS								
Modif.	Ⓐ	EAAD014305	11.09.1996	Ⓑ	EAAD091472	05.11.2019	○		○							
		Number	Drawn date		Number	Drawn date		Number	Drawn date	Number	Drawn date					
				Product W-2S		PLATE  Blech										
Units	mm kg	NX			Basic Material	W-FU-235-JR			Net Weight 1							
SURFACE PROTECTION SEE GROUP 0344				Made	11.07.1996 D. Schaeffler		Scale	1:1		Size	A3	Page	1/1	Material ID	107.245.898.001	
TOLERANCING PRINCIPLE ISO8015				Chkd			Design Group		9710-01			Drawing ID	107.245.898		Rev.	B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK				Appd	22.07.1996 MLU011 Lüthi											

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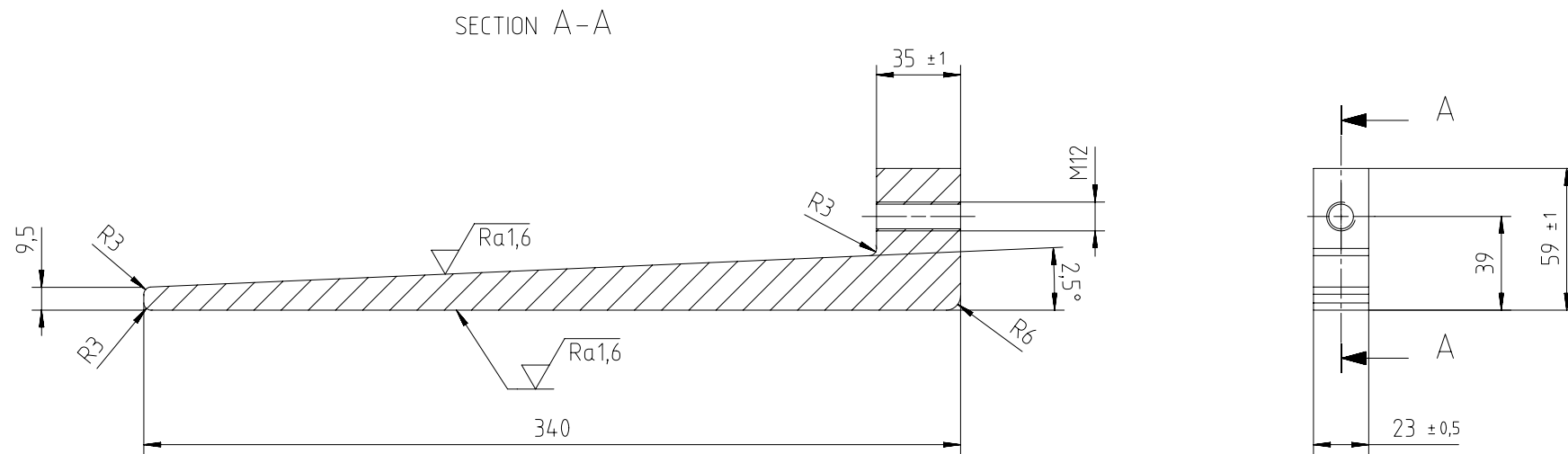


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1	003	FAAD34.3262	PLATE		DAAD1234.06	W-FU-235-JR	0,4
1	002	107.424.348.001	KEY		107.424.348	W-FU-235-JR	1,5
1	001	107.424.347.001	KEY		107.424.347	W-FU-235-JR	1,7

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
A	EAAD084635	27.06.2013	B	EAAD091472	06.11.2019			

	Product	W-2S	WEDGE			
			Schraeger Keil			
Units	mm kg	NX	Basic Material	W-FU-235-JR	Net Weight	3,8

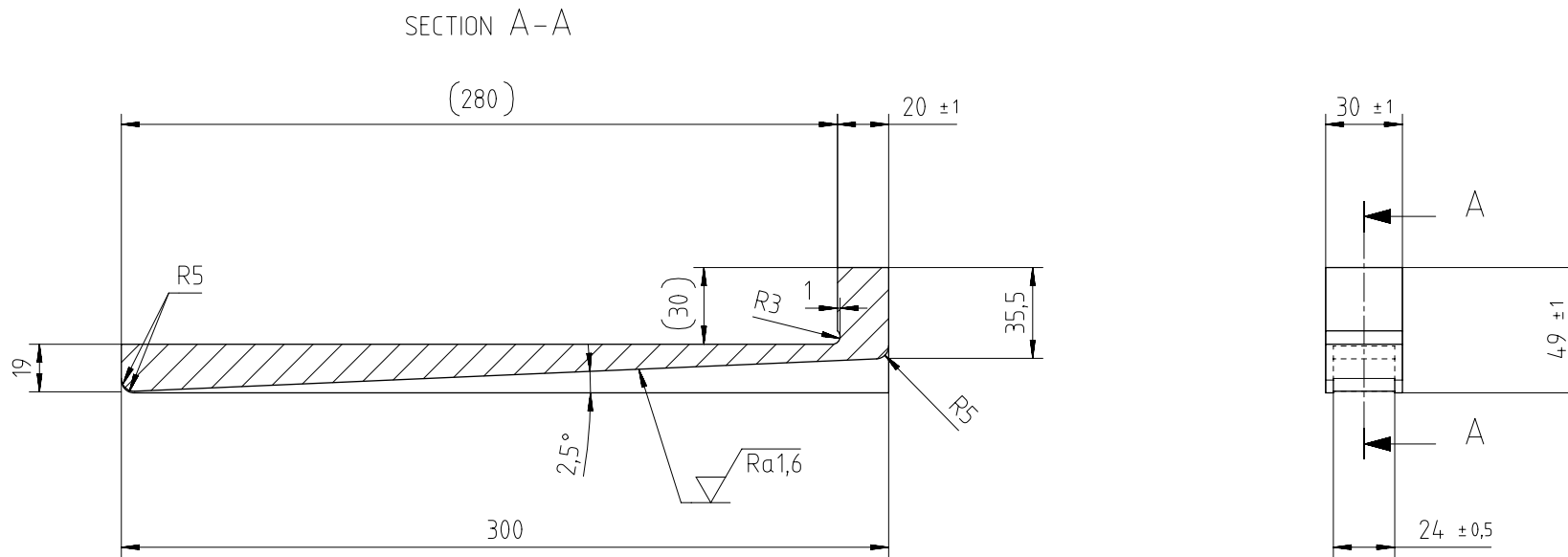
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TOLERANCING PRINCIPLE ISO8015	Chkd				Design Group		Drawing ID	107.424.346	Rev.	B		
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	28.09.2009	JBA029	Baumann	9710-01							



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

Free space for lic.	Q-Code XXXXXX								Main Drw.					
	Standard ISO; JIS													
Modif.	A	EAAD091472	05.11.2019											
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number					
				Product W-2S		KEY  Keil								
Units	mm kg	NX		Basic Material W-FU-235-JR				Net Weight 1,7						
SURFACE PROTECTION SEE GROUP 0344				Made	05.08.2009 J.BAUMANN		Scale	1:2	Size	A3	Page	1/1	Material ID	107.424.347.001
TOLERANCING PRINCIPLE ISO8015				Chkd			Design Group	9710-01		Drawing ID	107.424.347		Rev.	A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK				Appd	28.09.2009 JBA029 Baumann									

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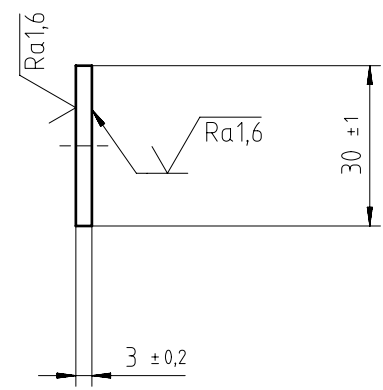
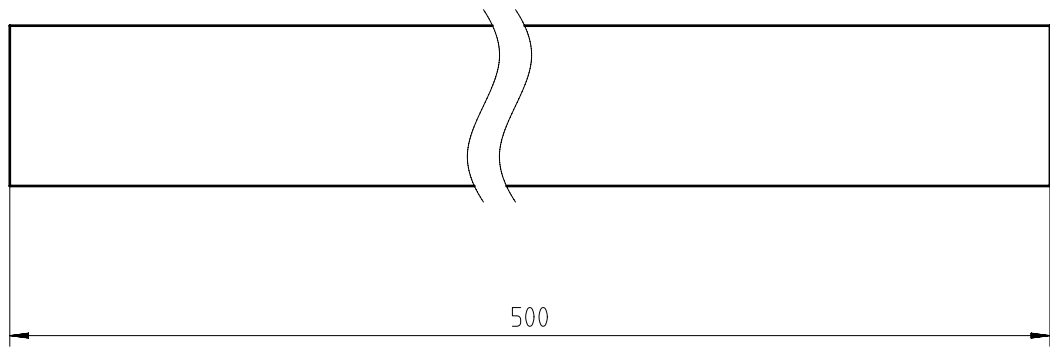
$\sqrt{Ra50}$     (     $\sqrt{Ra1,6}$  )

Free space for lic.								Q-Code XXXXXX	Main Drw.
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Modif.	A	EAAD091472	06.11.2019	○	○	○	○	○	○
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number
 <b>WIN GD</b> <i>Winterthur Gas &amp; Diesel</i>				Product W-2S		KEY  Keil			
Units	mm kg	NX			Basic Material W-FU-235-JR			Net Weight 1,5	
SURFACE PROTECTION SEE GROUP 0344		Made	05.08.2009 J.BAUMANN		Scale	1:2		Size	A3
TOLERANCING PRINCIPLE ISO8015		Chkd			Design Group		9710-01		Page
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	28.09.2009 JBA029 Baumann		Drawing ID		107.424.348		Material ID
								107.424.348.001	
								Rev. A	

UID - DIMENSIONAL DRAWING - Confidential

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									Standard ISO; JIS				
Modif.	○		○		○		○						
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date			
<b>WIN GD</b> 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		Drawing ID	DAAD123406		Rev.	-
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	02.12.2019 mhu019 Hug										

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**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
2024-05-07	PTAA092942_ PTAA093042_	7 cyl. execution - added

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