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	
B 005	PTAA093042	7		X
B 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.

Prod.								
	X52-S2.0 X52DF-A-S1.0	X52DF-M-S1.0 X52DF-S1.0	X52DF-S2.0					

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
B	npa101				Drawing updated			
A	npa101	mhu019	20.04.2023	CNAA003507	Drawing Updated		4	3
-	dki021	dst009	06.05.2022	CNAA001843	new Design		-	-

WIN GD
Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT

MIDS master drawing

separate BOM available

Dimension

Scale	-	NX	Units [mm] [kg]	Basic Material	Net Weight	0.001
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

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	npa101	nhu019	03042023	CNAA003284	New MainDesign	Approved	-	-

WIN GD
Winterthur Gas & Diesel

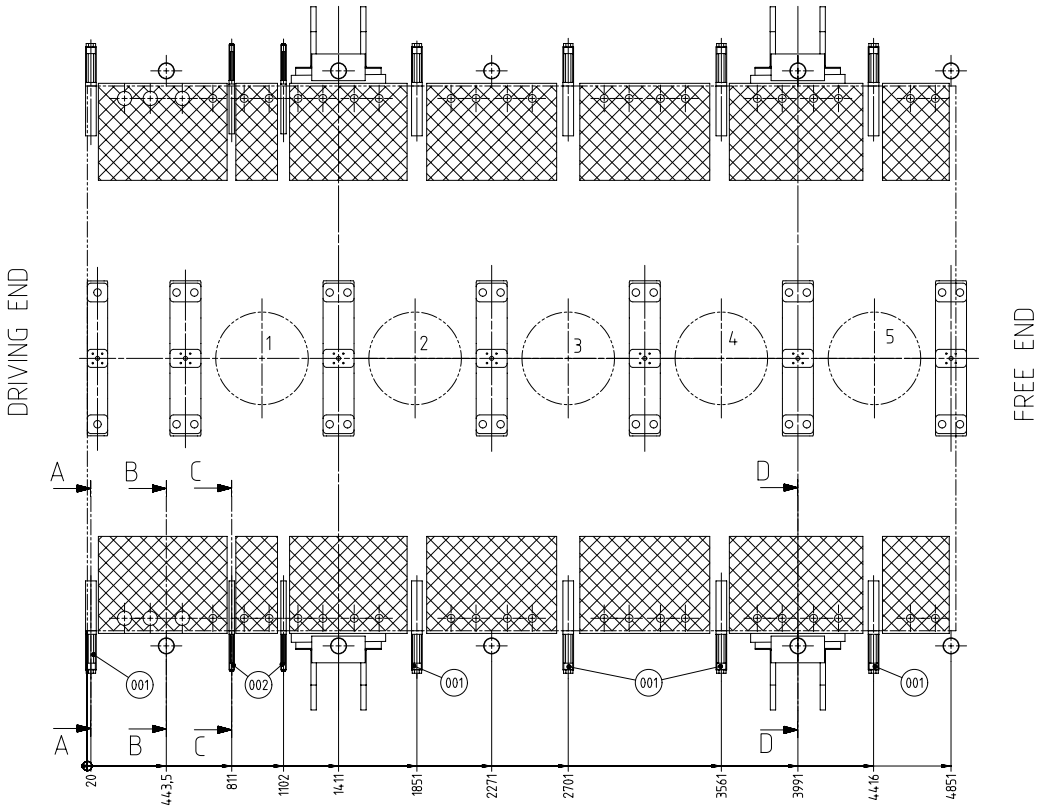
TOOL ENGINE ALIGNMENT

Alignment with: Wedges

Bill Of Material

Dimension

Units	[m] [kg]	Basic Material				Net Weight	100
Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A4	Item ID	PTAA056852		BOM Page/s	01/01



CAUTION

Risk:
Tool and/or bedplate damage

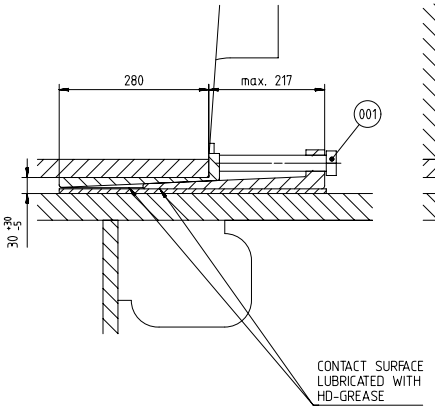
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

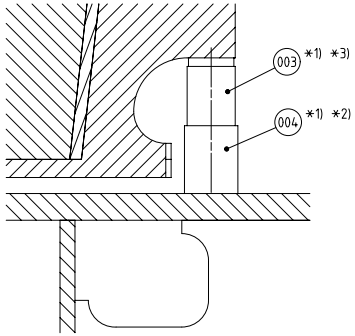
Remarks

*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

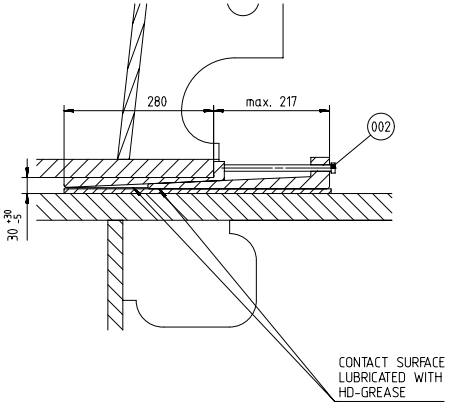
SECTION A-A ↻ 90°
SCALE 1:5



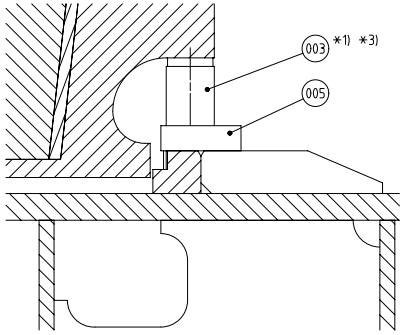
SECTION B-B ↻ 90°
SCALE 1:5



SECTION C-C ↻ 90°
SCALE 1:5



SECTION D-D ↻ 90°
SCALE 1:5



Proc.	5X52-S2.0								
Change History									
–	npa101	mhu019	03042023	CMA003284	New MainDesign			–	–
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Activity Code	E	C

Approved

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
Alignment with: Wedges

separate BOM available	Dimension						
Scale 1:15	NX	Units [mm] [kg]	Basic Material			Net Weight	100.0
Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A1	Item ID	PTAA056852		Drawing Page/s	1/1

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

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

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	npa101	nhu019	03042023	CNAA003284	New MainDesign Approved		-	-

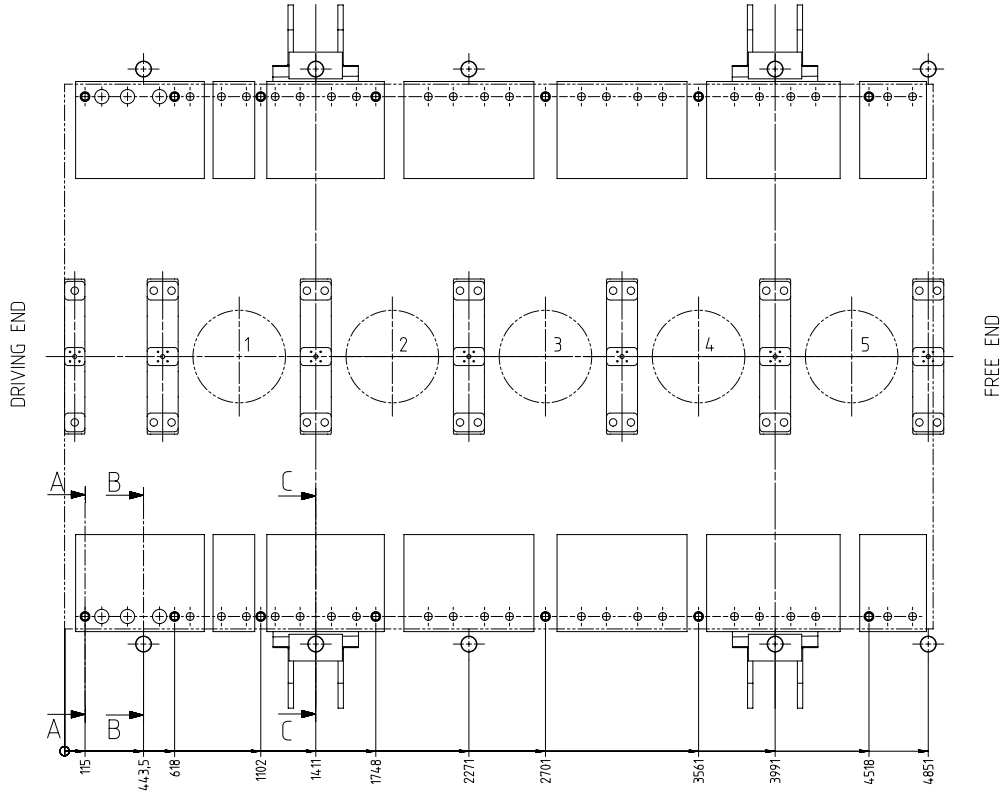
WIN GD
Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT

Alignment with: Jacking Screws

Bill **O**f **M**aterial

Dimension						
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



CAUTION

Risk:
Tool and/or bedplate damage

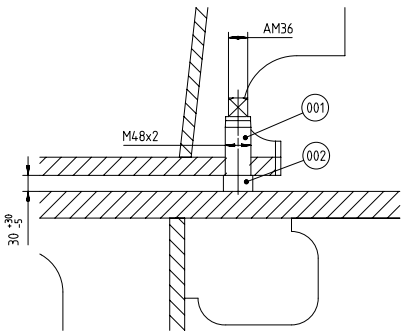
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

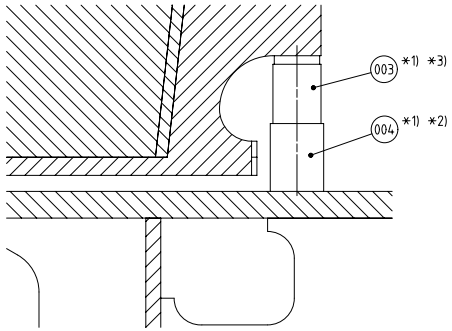
Remarks

*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

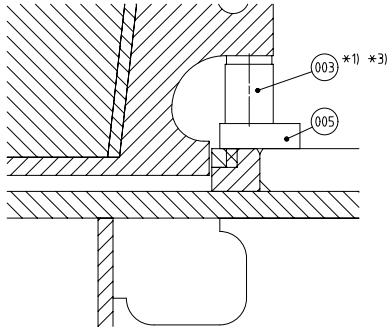
SECTION A-A ↻ 90°
SCALE 1:5



SECTION B-B ↻ 90°
SCALE 1:5



SECTION C-C ↻ 90°
SCALE 1:5



						5X52-S2.0			
-	npa101	mhu019	03042023	CMA003284	New MainDesign			-	-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Activity Code	E	C

Change History

Approved

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws

separate BOM available

Dimension

Scale 1:15 NX | Units [mm] [kg] | Basic Material | Net Weight 33.81

Main Design Yes | Design Group 9710-01 | Q-Code XXXXX | Standard WDS

Qty per Engine | A1 | Item ID PTAA056853 | Drawing Page/s 1/1

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

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

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	dki021	mhu019	02.05.2022	CNAA001768	New MIDS introduced Approved		-	-

WIN GD
Winterthur Gas & Diesel

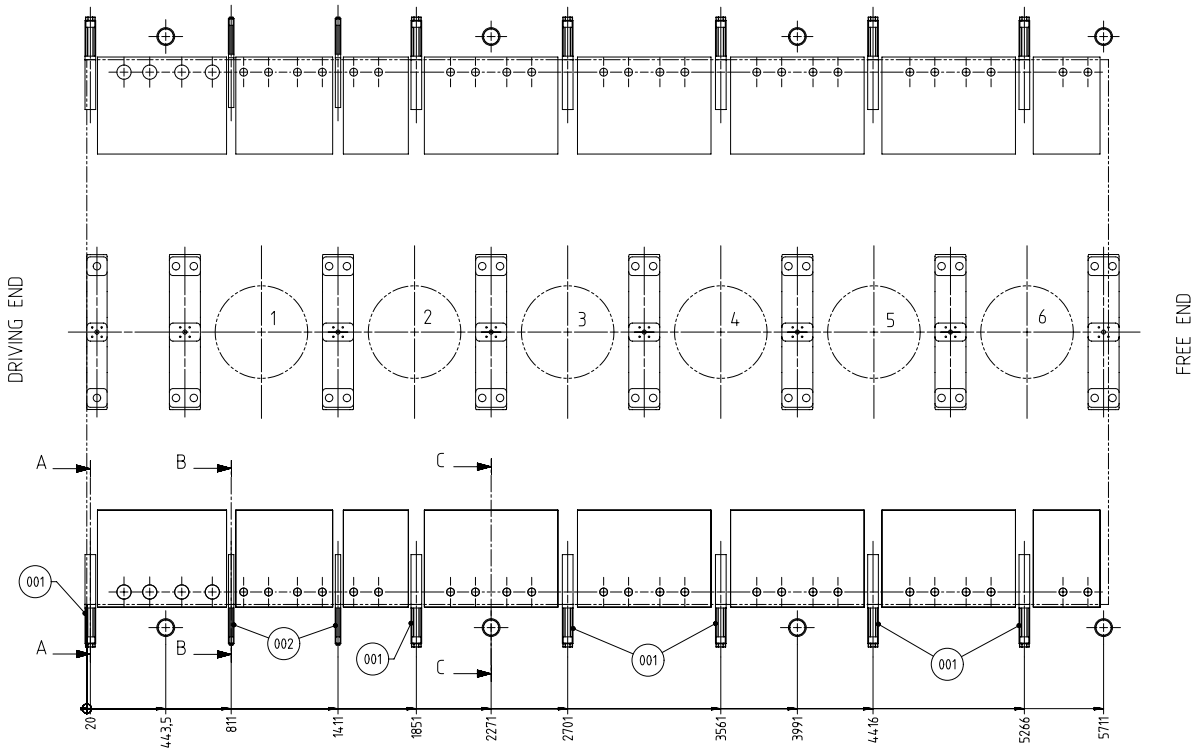
TOOL ENGINE ALIGNMENT

Alignment with: Wedges

Bill Of Material

Dimension

Units	[m] [kg]	Basic Material				Net Weight	117.3
Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A4	Item ID	PTAA031714		BOM Page/s	01/01



CAUTION

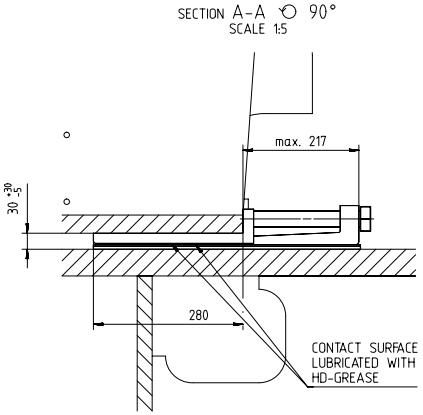
Risk:
Tool and/or bedplate damage

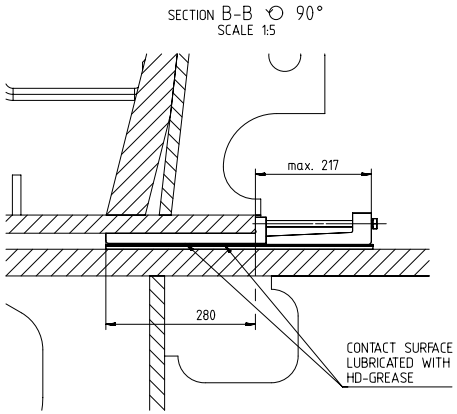
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

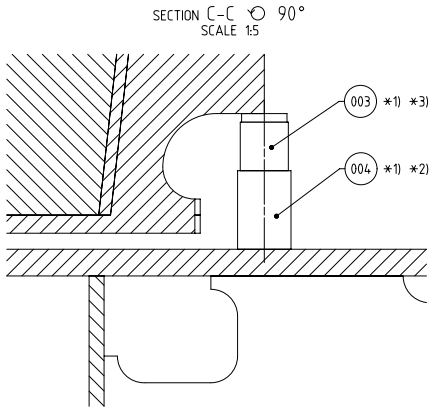
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).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







Proj.	6X52-S2.0 6X52DF-S1.0			6X52DF-S2.0			
Change History							
-	dki021	mhu039	02.05.2022	CNAA001768	new Design		
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E C

Approved

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
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	Q-Code XXXXX	Standard	WDS
TOLERANCING PRINCIPLE ISO8015	Qty per -	A1	Item ID PTAA031714	Drawing Page/s	1/1
GENERAL TOLERANCES ACCORDING TO ISO2768-mK					

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			

Prod.				
	6 X52-S2.0 6 X52DF-S1.0	6 X52DF-S2.0		

Change History

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E	C
-	dki021	mhu019	02.05.2022	CNAA001768	New MIDS introduced			-	-

WIN GD
Winterthur Gas & Diesel

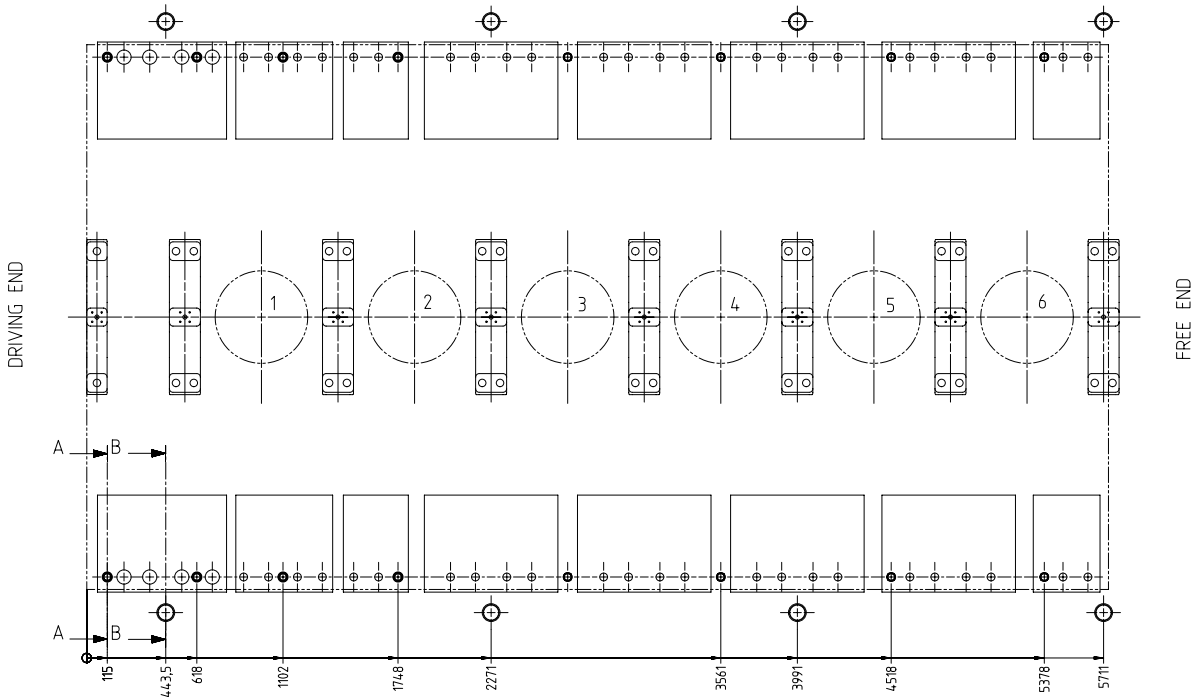
TOOL ENGINE ALIGNMENT

Alignment with: Jacking Screws

Bill Of Material

Dimension

Units	[m] [kg]	Basic Material				Net Weight	36.8
Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A4	Item ID	PTAA030604		BOM Page/s	01/01



CAUTION

Risk:
Tool and/or bedplate damage

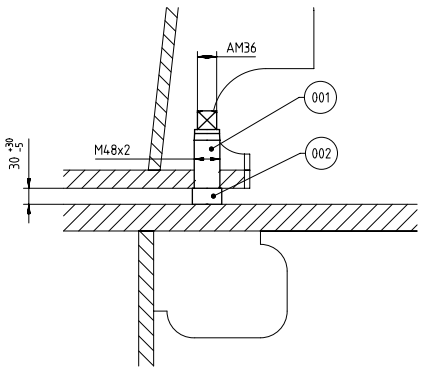
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

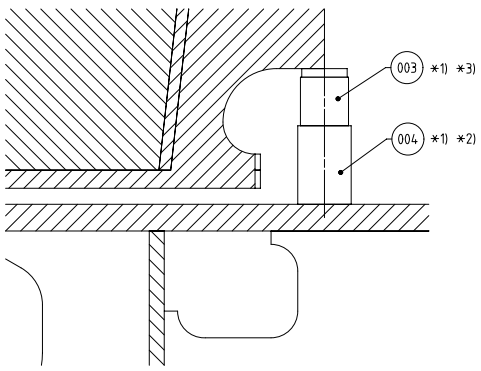
Remarks

*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 ↻ 90°
SCALE 1:5



SECTION B-B ↻ 90°
SCALE 1:5



Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	dki021	mhu039	02.05.2022	CNAA001768	new Design	Approved	-	-

6X52-S2.0
6X52DF-S1.0
6X52DF-S2.0

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws

separate BOM available

Dimension

Scale 1:3 NX | Units [mm] [kg] | Basic Material | Net Weight 36.80

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

Main Design	Yes	Design Group	9710-01	Q-Code	XXXXX	Standard	WDS
Qty per	Engine	A1	Item ID	PTAA030604		Drawing Page/s	1/1

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

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Activity Code	E	C
-	npa101	nhu019	06.05.2024	CMA005292	New MainDesign introduced	Approved		-	-

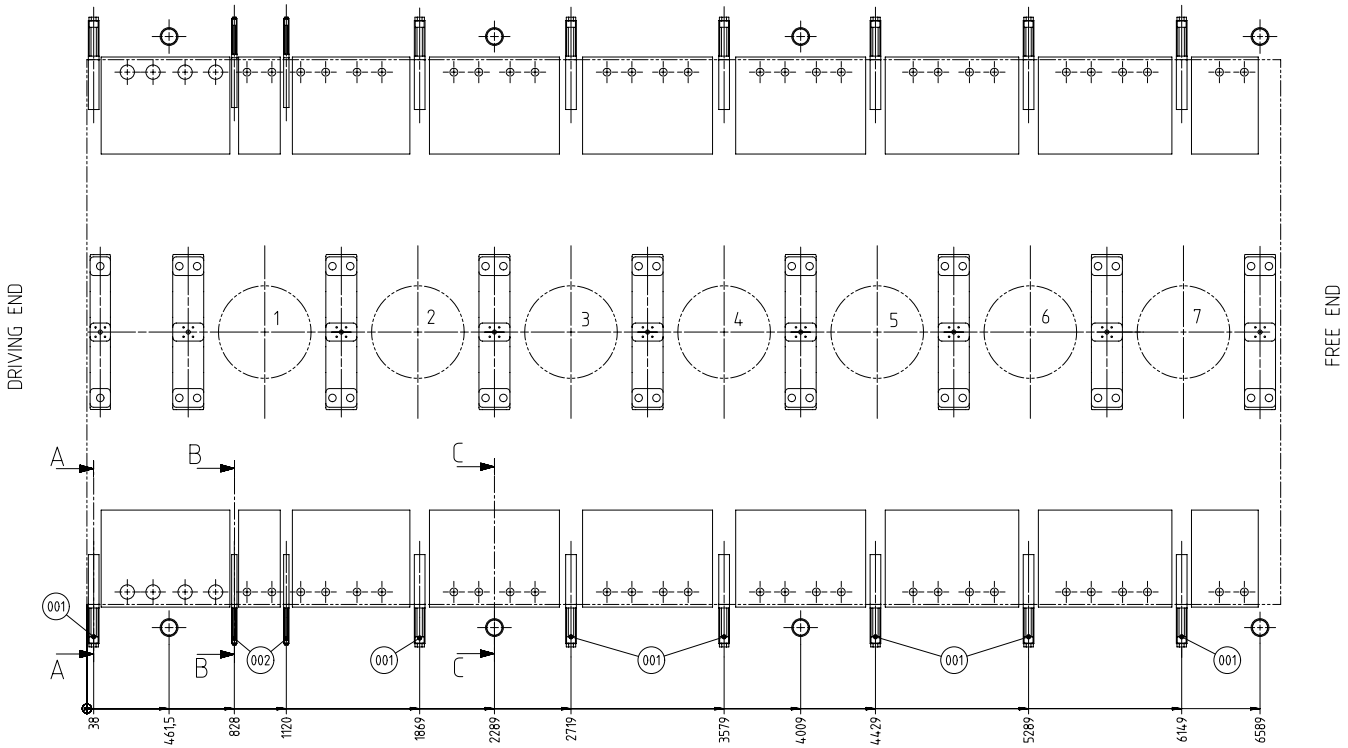
WIN GD
Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT

Alignment with: Wedges

Bill Of Material

Dimension						Alignment with: Wedges	
Units	[m] [kg]	Basic Material				Net Weight	134
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:

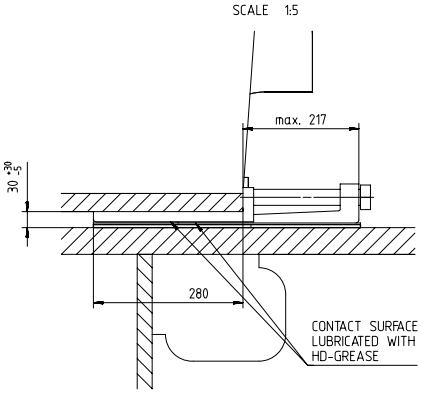
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).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

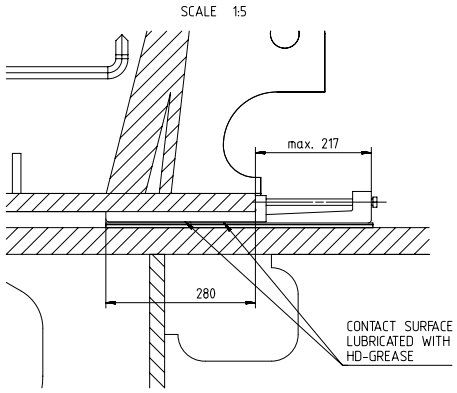
SECTION A-A ⟲ 90°

SCALE 1:5



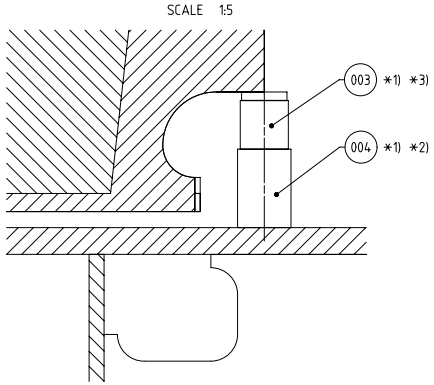
SECTION B-B ⟲ 90°

SCALE 1:5



SECTION C-C ⟲ 90°

SCALE 1:5



Proj.	7X52-S2.0 7X52DF-A-S1.0			7X52DF-M-S1.0 7X52DF-S1.0		7X52DF-S2.0			
Change History									
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis		Activity Code	E	C
-	npa101	mhu019	06052024	CMA005232	New MainDesign introduced		Approved	-	-

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
Alignment with: Wedges

separate BOM available	Dimension			Alignment with: Wedges	
Scale 1:3 NX	Units [mm] [kg]	Basic Material		Net Weight	134.0
	Main Design Yes	Design Group 9710-01	Q-Code X X M	Standard	WDS
	Qty per Engine	A1	Item ID PTAA093042	Drawing Page/s	1/1

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

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			

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

Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code	E	C
-	npa101	nhu019	06.05.2024	CNAA005292	New MainDesign introduced	Approved	-	-

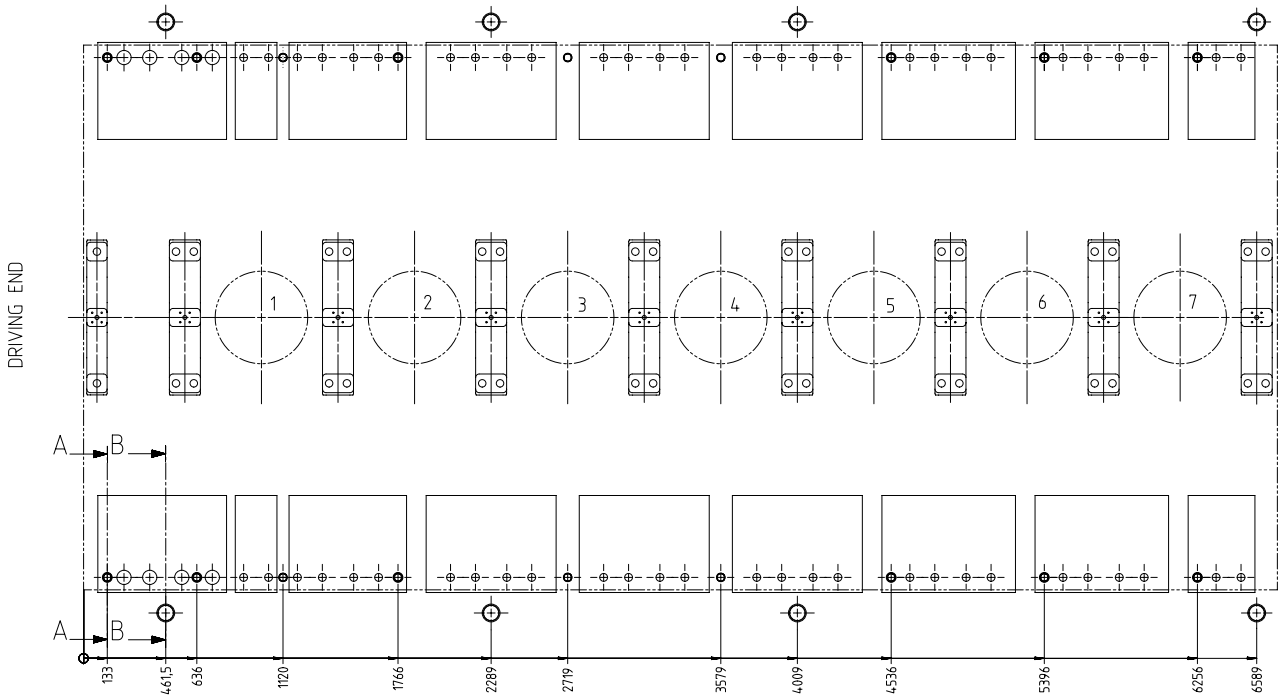
WIN GD
Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT

Alignment with: Jacking Screws

Bill Of Material

Dimension					Alignment with: Jacking Screws	
Units	[m] [kg]	Basic Material			Net Weight	43
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:

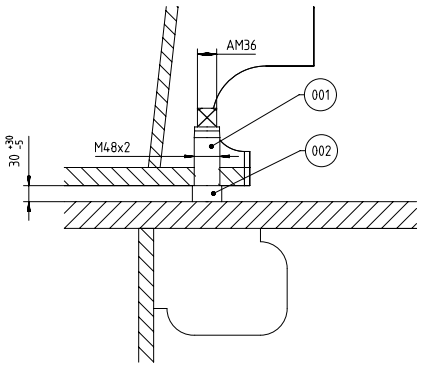
- Lift the engine into the engine room and place it on levelled , temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used)
- Apply hydraulic jacks to the protruding bedplate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

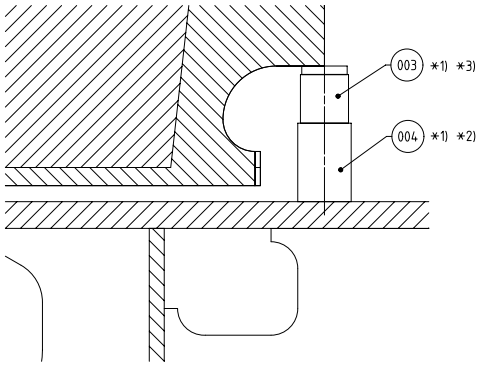
SECTION A-A ↻ 90°

SCALE 1:5



SECTION B-B ↻ 90°

SCALE 1:5



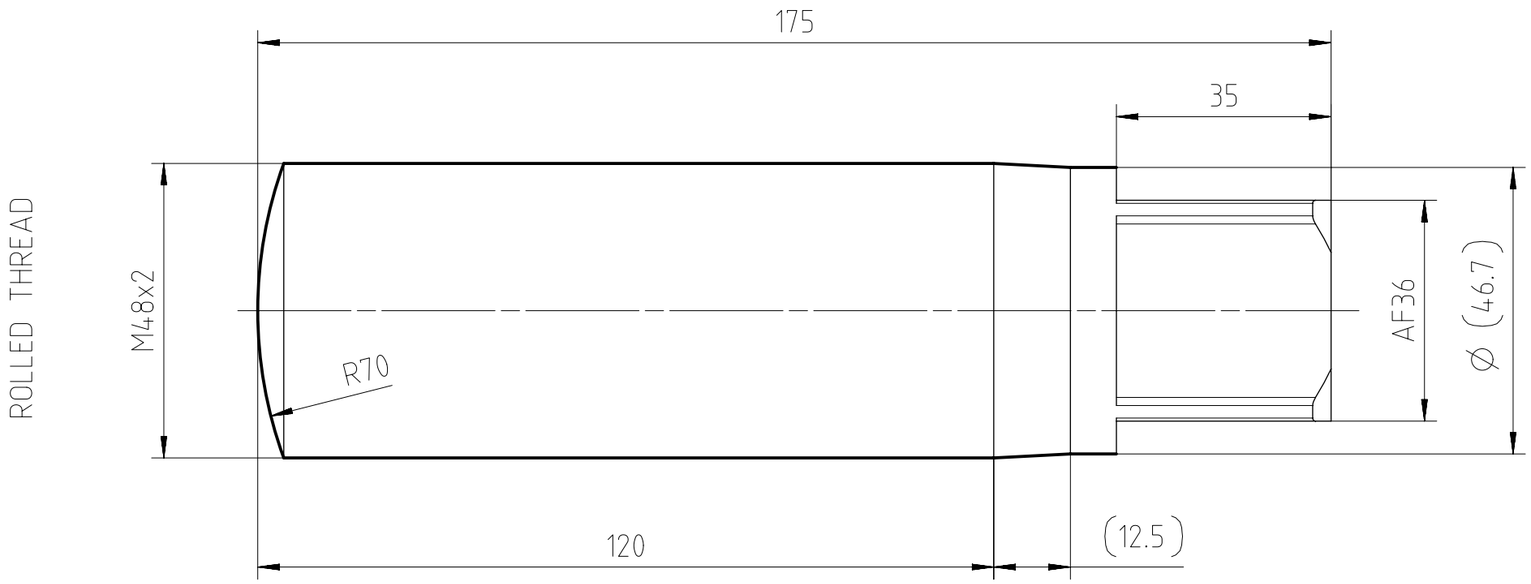
Proj.	7X52-S2.0 7X52DF-A-S1.0			7X52DF-M-S1.0 7X52DF-S1.0		7X52DF-S2.0				
Change History										
-	npa101	mhu019	06052024	CMA005232	New MainDesign introduced				-	-
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis			Activity Code	E	C

WIN GD Winterthur Gas & Diesel

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws

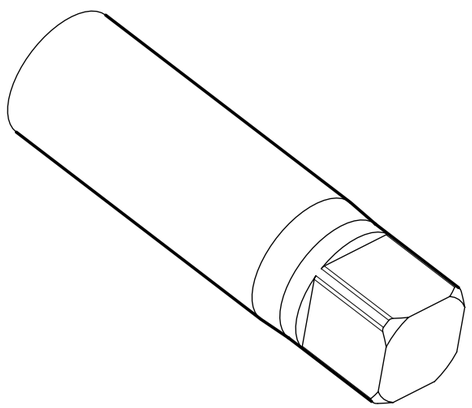
separate BOM available	Dimension	Alignment with: Jacking Screws				
Scale 1:3 NX	Units [mm] [kg]	Basic Material			Net Weight	43.00
	Main Design	Yes	Design Group	9710-01	Q-Code X X M	Standard WDS
	Qty per	Engine	A1	Item ID	PTAA092942	Drawing Page/s 1/1

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



ROLLED THREAD

M 1:2



Free space for lic.									Q-Code XXXXX		Main Drw.
									Standard ISO; JIS		
Modif.	A	EAAD087035	22.11.2016								
		Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date		

WIN GD Winterthur Gas & Diesel

Product W-2S

JACKING SCREW

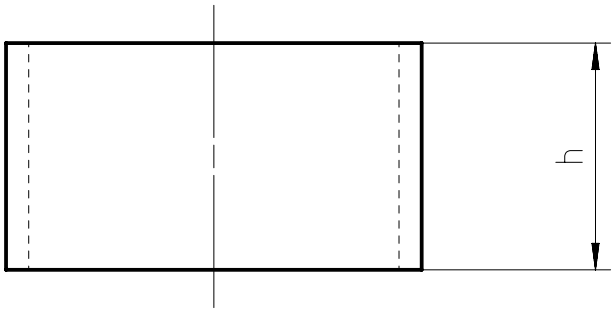
Abdrueckschraube

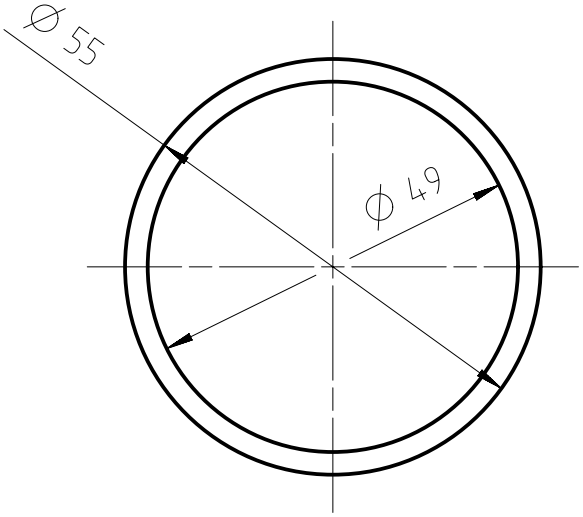
Units mm kg	NX		Basic Material W-FU-235-N-T			Net Weight 2,3
SURFACE PROTECTION SEE GROUP 0344	Made	04.06.2010 jba029 Baumann	Scale 1:1	Size A3	Page 1/1	Material ID PAAD005430
TOLERANCING PRINCIPLE ISO8015	Chkd	15.06.2010 wwr001 Wroblewski	Design Group 9710-01	Drawing ID DAAD006054		Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	17.06.2010 dst009 Strödecke				

Approved

ILD - INSTALLATION DRAWING - Internal

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





h - determinated after engine alignment
* material according to shipyard experience

Prod.

Change History

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

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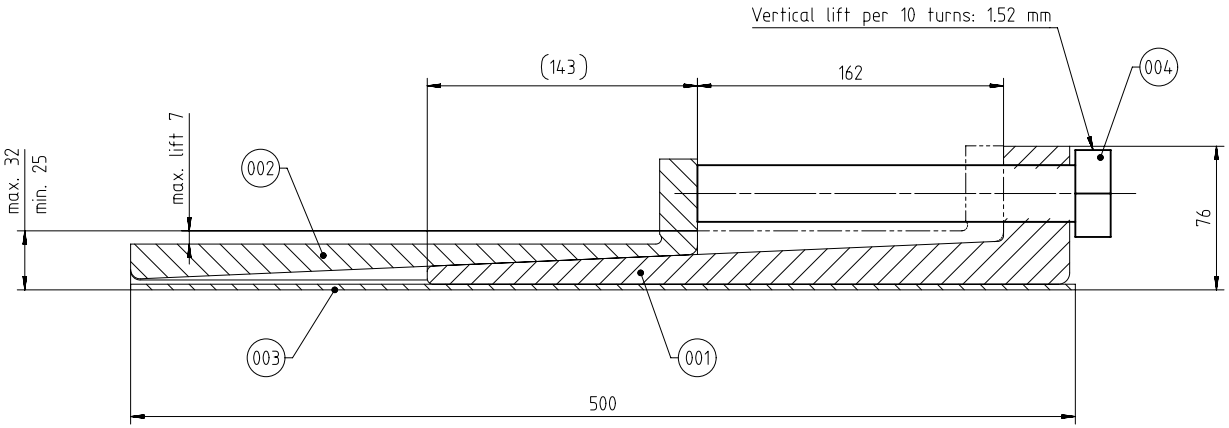
Winterthur Gas & Diesel

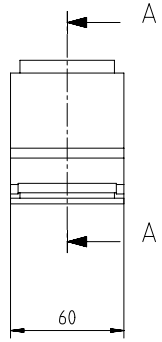
SPONGE RUBBER RING

Dimension

Scale 1:1 NX	Units [mm] [kg]	Basic Material		Net Weight 0.001
Main Design	Design Group 9710-01	Q-Code XXXXX		Standard WDS
Qty per	A4	Item ID PTAA031559		Drawing Page/s 1/1

SECTION A-A





QTY	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
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

Approved

Free space for lic.

Q-Code XXXXX

Standard ISO; JIS

Main Drw.

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
B	EAAD014493	05.02.2002	C 7-73.552	19.10.2009	D EAAD084635	27.06.2013	E EAAD091472	11.11.2019

WIN GD Winterthur Gas & Diesel

Product W-2S

WEDGE

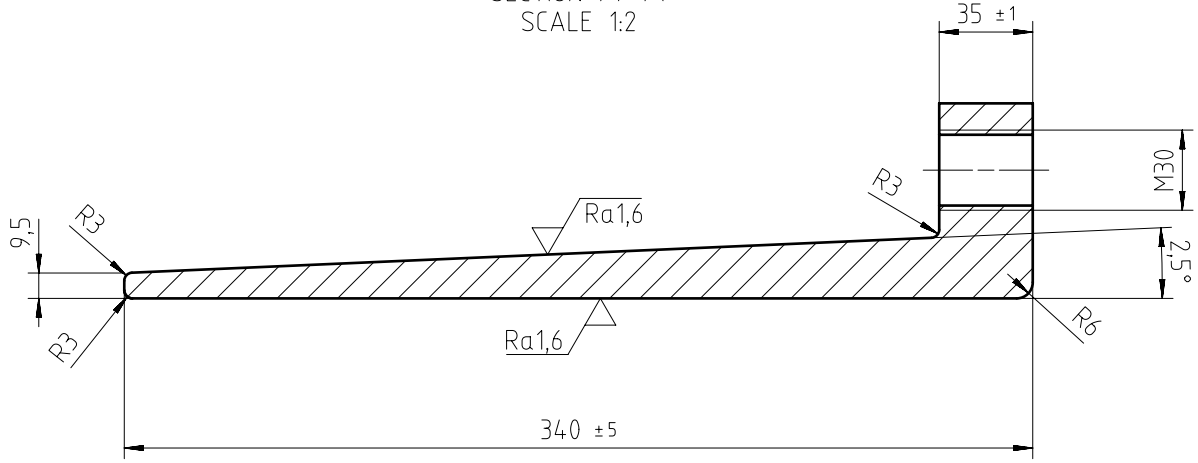
Schraeger Keil

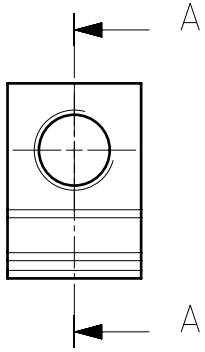
Units mm kg | NX | Basic Material | Net Weight 8,51

SURFACE PROTECTION SEE GROUP 0344	Made 10.07.1996 D.Scheffler	Scale 1:2	Size A2	Page 1/1	Material ID 107.245.895.200	
TOLERANCING PRINCIPLE ISO8015	Chkd	Design Group 9710-01	Drawing ID 107.245.895		Rev. E	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 30.08.1996 WCH001 Service User					

DID - DIMENSIONAL DRAWING - Confidential

SECTION A–A
SCALE 1:2





Ra50 (Ra1,6)

Approved

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	Number	Drawn date

WIN GD Winterthur Gas & Diesel

Product W-2S

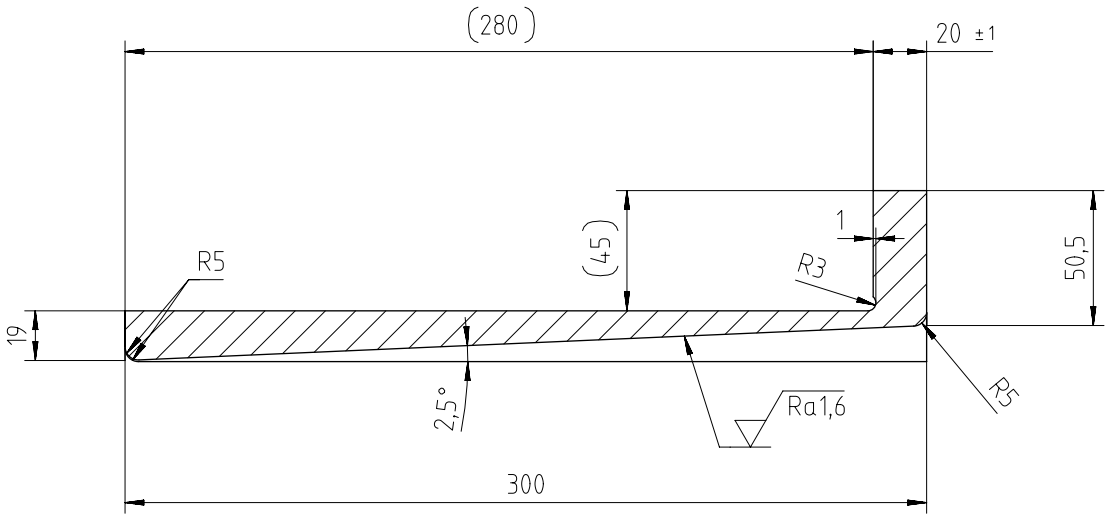
KEY

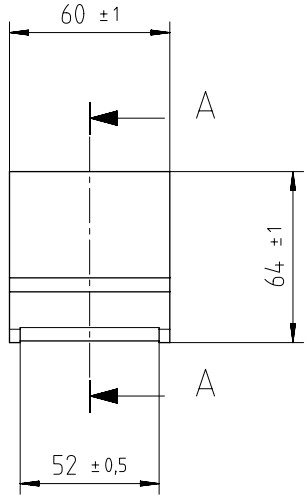
Keil

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			

DID - DIMENSIONAL DRAWING - Confidential

SECTION A-A
SCALE 1:2





Ra50 (Ra1,6)

Approved

Free space for lic.									Q-Code XXXXX		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	Number	Drawn date

WIN GD Winterthur Gas & Diesel

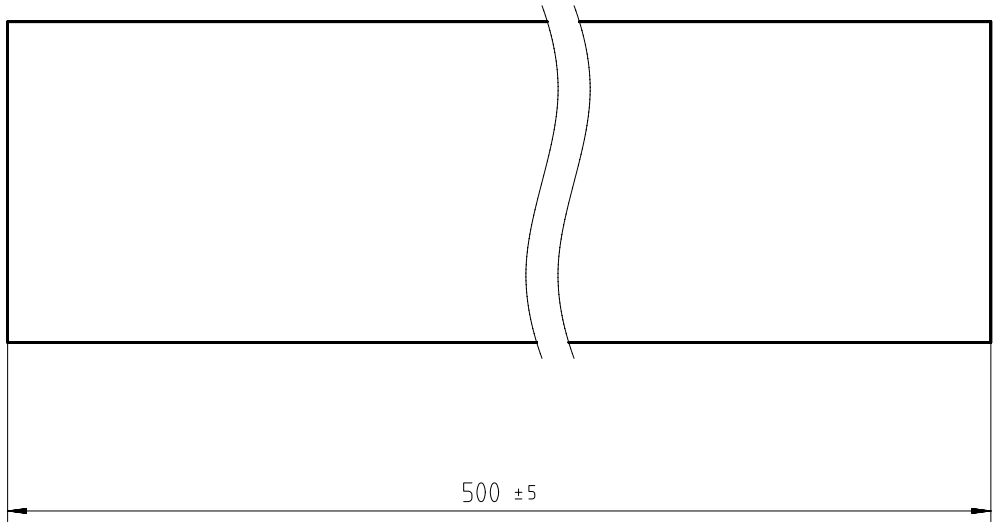
Product W-2S

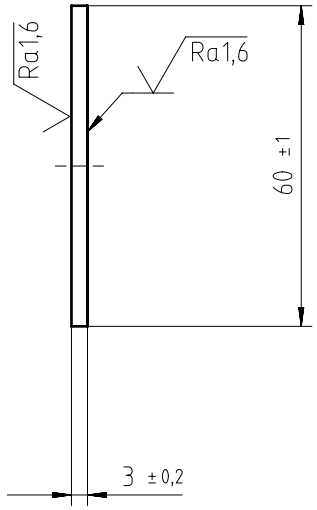
KEY

Keil

Units mm kg	NX		Basic Material W-FU-235-JR		Net Weight 3
SURFACE PROTECTION SEE GROUP 0344	Made	16.05.2001 D.ADMINISTRATOR	Scale 1:2	Size A3 / Page 1/1	Material ID 107.246.894.001
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			

DID - DIMENSIONAL DRAWING - Confidential





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

Free space for lic.								Q-Code XXXXX		Main Drw.	
								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 Winterthur Gas & Diesel

Product W-2S

PLATE

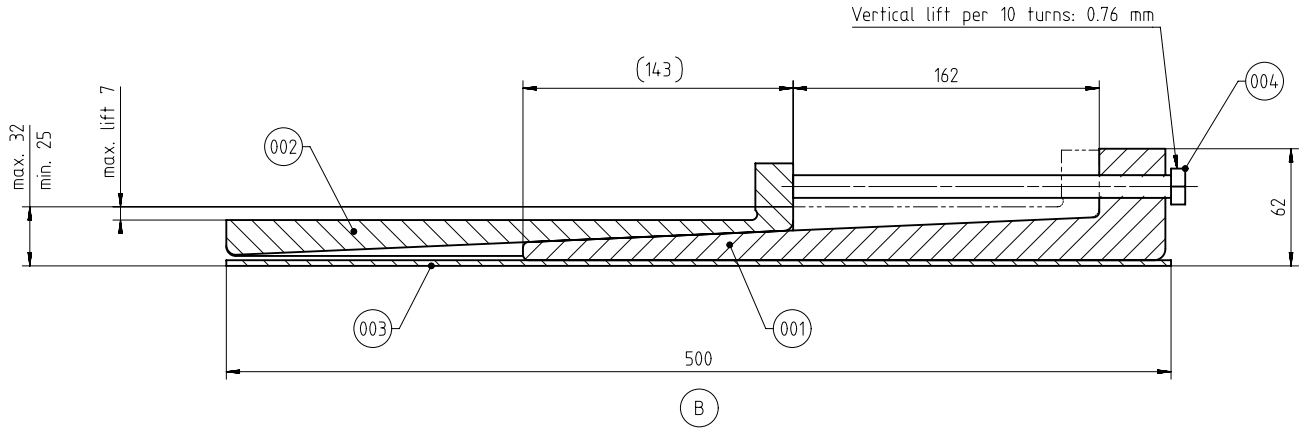
Blech

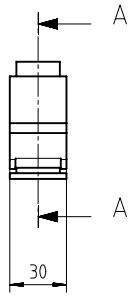
Units mm kg	NX		Basic Material W-FU-235-JR		Net Weight 1
SURFACE PROTECTION SEE GROUP 0344	Made 11.07.1996 D. Schaeffler		Scale 1:1	Size A3 / Page 1/1	Material ID 107.245.898.001
TOLERANCING PRINCIPLE ISO8015	Chkd		Design Group 9710-01	Drawing ID 107.245.898	Rev. B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 22.07.1996 MLU011 Lüthi				

Approved

DID - DIMENSIONAL DRAWING - Confidential

SECTION A-A





QTY	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
1	004	015.151.040.701	HEXAGON HEAD SCREW M12x200	ISO 4017	8.8	0,156
1	003	PAAD343262	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

Approved

Free space for lic.

Q-Code XXXXX

Standard ISO; JIS

Main Drw.

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

WIN GD Winterthur Gas & Diesel

Product W-2S

WEDGE

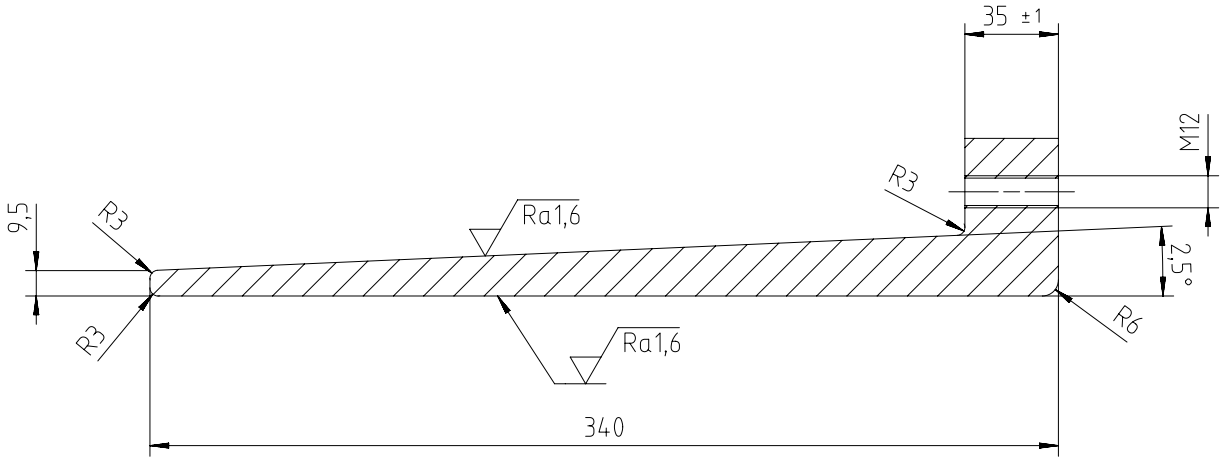
Schraeger Keil

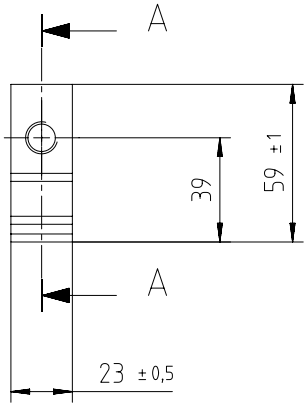
Units	mm kg	NX	Basic Material	W-FU-235-JR	Net Weight 3.8

SURFACE PROTECTION SEE GROUP 0344	Made	05.08.2009 jba029 J.BAUMANN	Scale 1:2	Size A2	Page 1/1	Material ID 107.424.346.200
TOLERANCING PRINCIPLE ISO8015	Chkd		Design Group 9710-01	Drawing ID 107.424.346		Rev. B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	28.09.2009 JBA029 Baumann				

DID - DIMENSIONAL DRAWING - Confidential

SECTION A–A





Ra50 (Ra1,6)

Approved

Free space for lic.								Q-Code XXXXX		Main Drw.	
								Standard ISO; JIS			
Modif.	A	EAAD091472	05.11.2019								
		Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date		

WIN GD Winterthur Gas & Diesel

Product W-2S

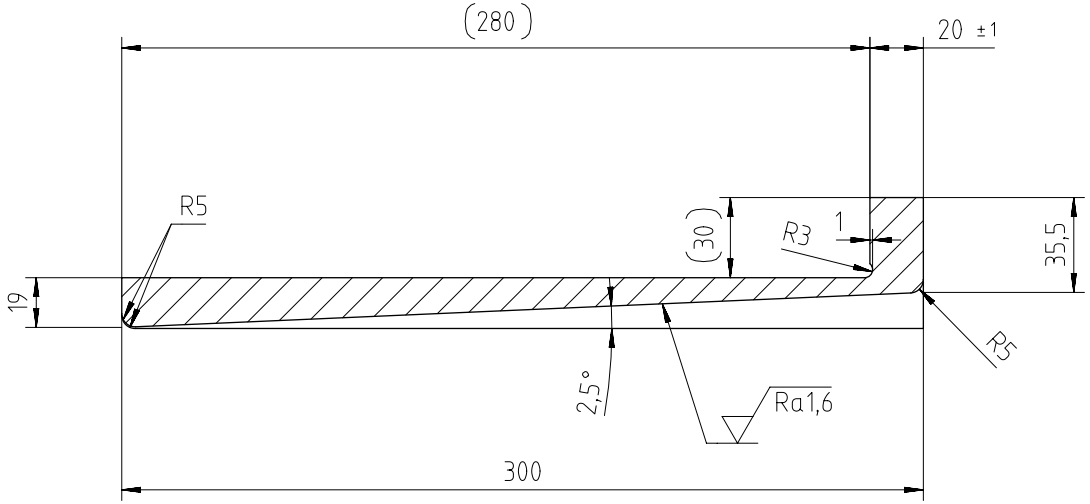
KEY

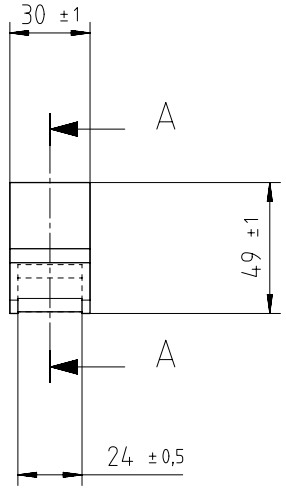
Keil

Units mm kg	NX	Basic Material W-FU-235-JR			Net Weight 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				

DID - DIMENSIONAL DRAWING - Confidential

SECTION A-A





Ra50 (Ra1,6)

Approved

Free space for lic.									Q-Code XXXXX	Standard ISO; JIS	Main Drw.
Modif.	A	EAAD091472	06.11.2019								
		Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date		

WIN GD Winterthur Gas & Diesel

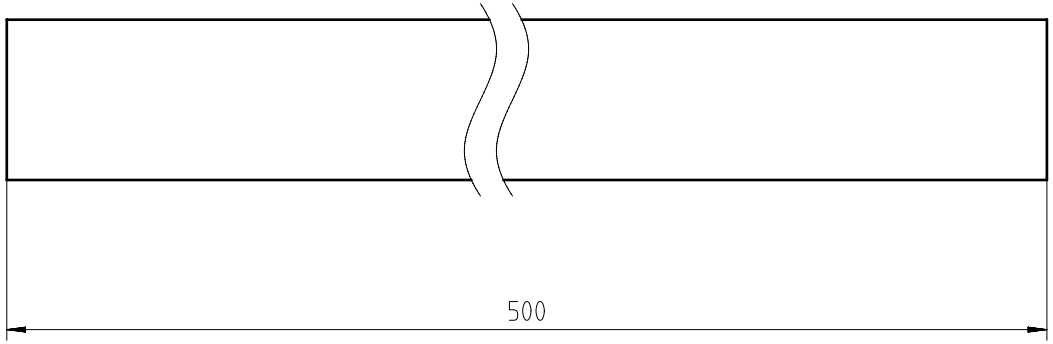
Product W-2S

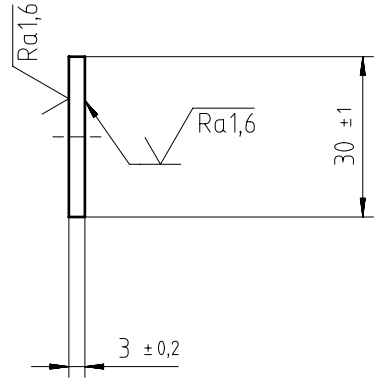
KEY

Keil

Units mm kg	NX		Basic Material W-FU-235-JR		Net Weight 1,5
SURFACE PROTECTION SEE GROUP 0344	Made 05.08.2009 J.BAUMANN	Scale 1:2	Size A3	Page 1/1	Material ID 107.424.348.001
TOLERANCING PRINCIPLE ISO8015	Chkd	Design Group 9710-01	Drawing ID 107.424.348		Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 28.09.2009 JBA029 Baumann				

DID - DIMENSIONAL DRAWING - Confidential





Ra50 (Ra1,6)

Approved

Free space for lic.								Q-Code XXXXX		Main Drw.
								Standard ISO; JIS		
Modif.	Number	Drawn date	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	Drawing ID DAAD123406		Rev. –
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 02.12.2019 mhu019 Hug				

DID - DIMENSIONAL DRAWING - Confidential

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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Winterthur Gas & Diesel AG.
Winterthur Gas & Diesel S.A.

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