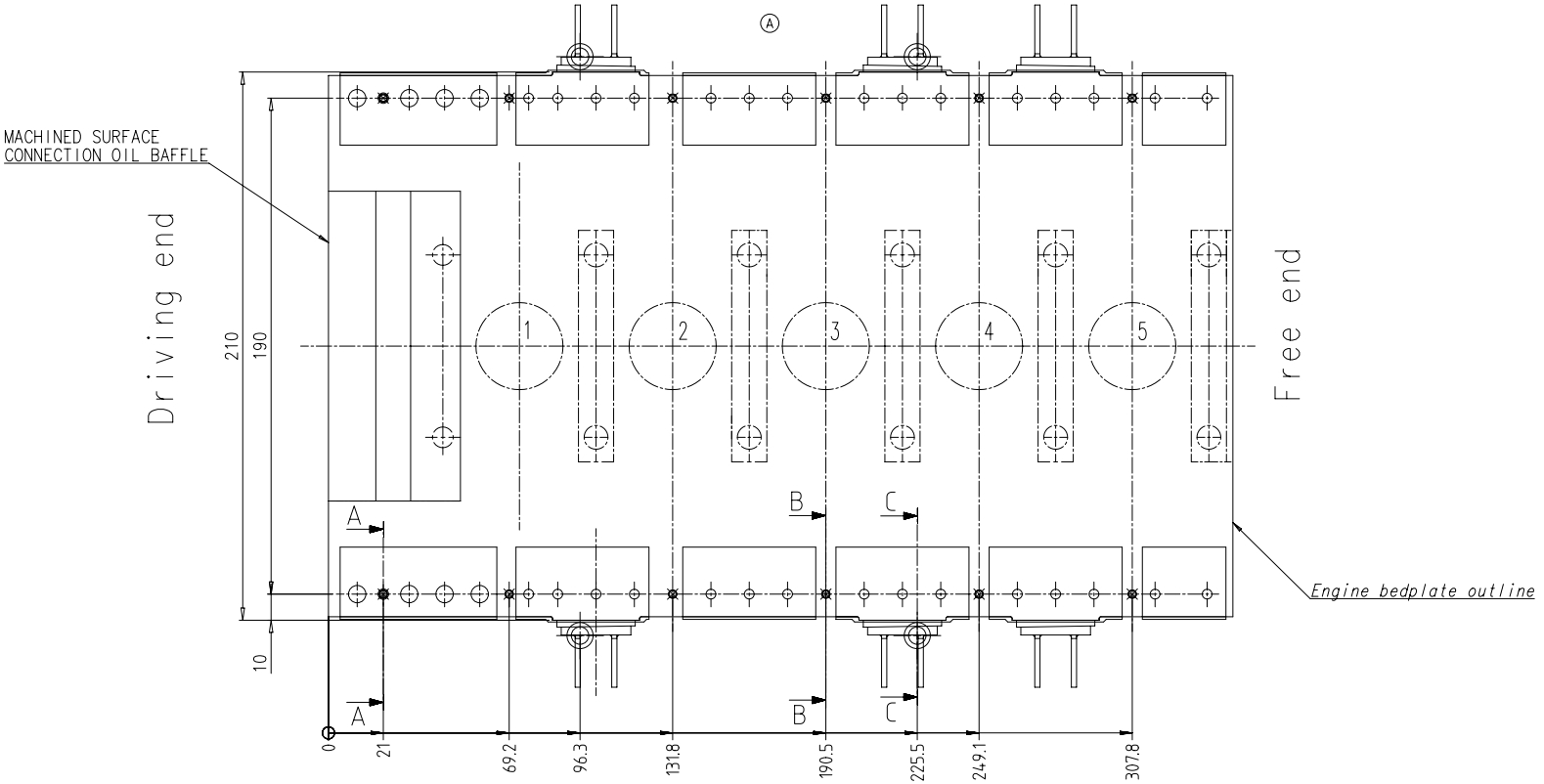


Ⓐ CAUTION

Risk:
Tool and/or bedplate damage

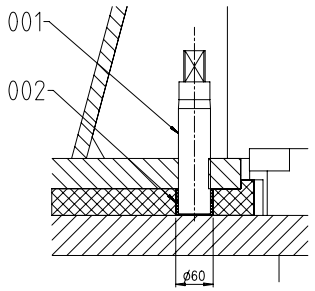
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

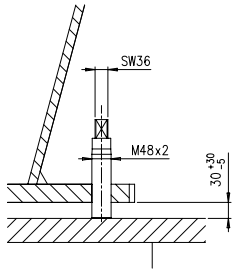
Ⓐ Remarks

*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

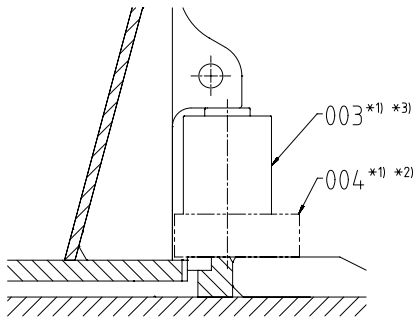
Ⓐ VIEW A-A
SCALE 1:3
Arrangement after pouring chock



Ⓐ VIEW B-B
SCALE 1:5



Ⓐ VIEW C-C
SCALE 1:5



Net Weight							
27,6							
4	004	PAAD318479	SUPPORT PLATE				
4	003	PAAD318478	HYDRAULIC JACK				
2	002	PAAD103306	SPONGE RUBBER RING	DAAD032482			0,001
12	001	PAAD005430	JACKING SCREW	DAAD006054	C45E S45C		2,3
Quantity PER ENGINE	SEQ NO	Material ID	Material Name Dimension, Occ	Standard or Drawing	Basic Material Material Standard		Weight GR./NET

PAAD005615	Free space for Mc.	Q-Code XXXXX	Main Drw. H
Material®		Standard ISO; JIS	

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
A	EAAD090713	26.09.2019						

WIN GD Winterthur Gas & Diesel

Product
SRT-flex50
SRT-flex50T-E
SRT-flex50DF

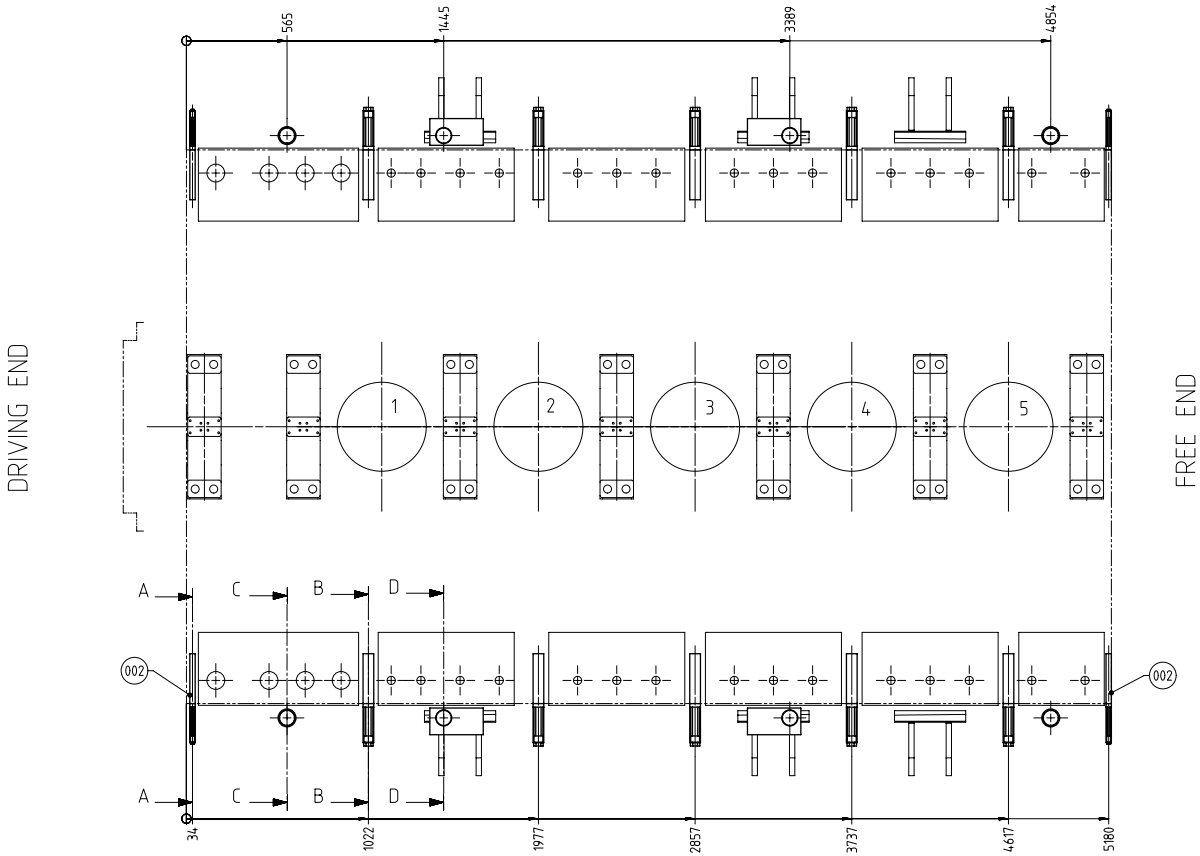
TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws
Werkzeug Motorausrichtung

Units	mm kg	NX	Basic Material	Net Weight
Made	07.06.2010	jba029 Baumann	Scale 1:20	Size A1
Chkd	15.06.2010	wwr001 Wroblewski	Design Group 9710-01	Page 1/1
Appd	17.06.2010	dst009 Ströldecke	Drawing ID DAAD006081	Material ID Rev. A

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

LD - INSTALLATION DRAWING - Internal

Approved



CAUTION

Risk:
Tool and/or bedplate damage

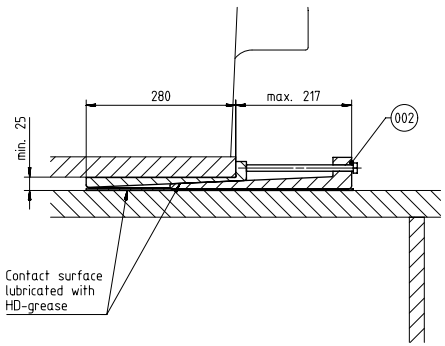
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

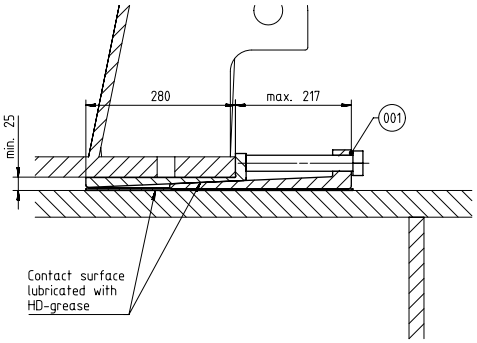
Remarks

*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: 887 kN

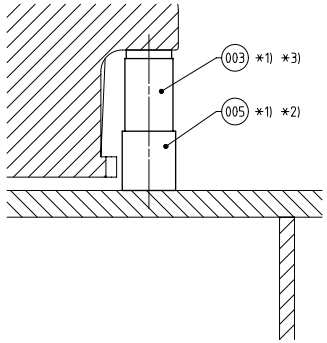
SECTION A-A ↻ 90°
SCALE 1:5



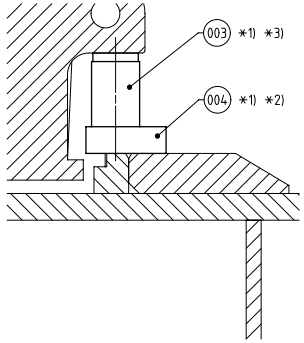
SECTION B-B ↻ 90°
SCALE 1:5



SECTION C-C ↻ 90°
SCALE 1:5



SECTION D-D ↻ 90°
SCALE 1:5



Net Weight						
100						
4	005	PAAD318480	SUPPORT BLOCK			
4	004	PAAD318479	SUPPORT PLATE			
8	003	PAAD318478	HYDRAULIC JACK			
4	002	107.424.346.200	WEDGE NARROW TYPE	107.424.346	W-FU-235-JR	3,8
10	001	107.245.895.200	WEDGE	107.245.895		8,51

Quantity PER ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
PAAD345406					Q-Code XXXXX	Main Drw. H
					Standard ISO; JIS	

Material ID | Modif. | Free space for lic. | Number | Drawn date | Number | Drawn date | Number | Drawn date | Number | Drawn date

WIN GD Winterthur Gas & Diesel

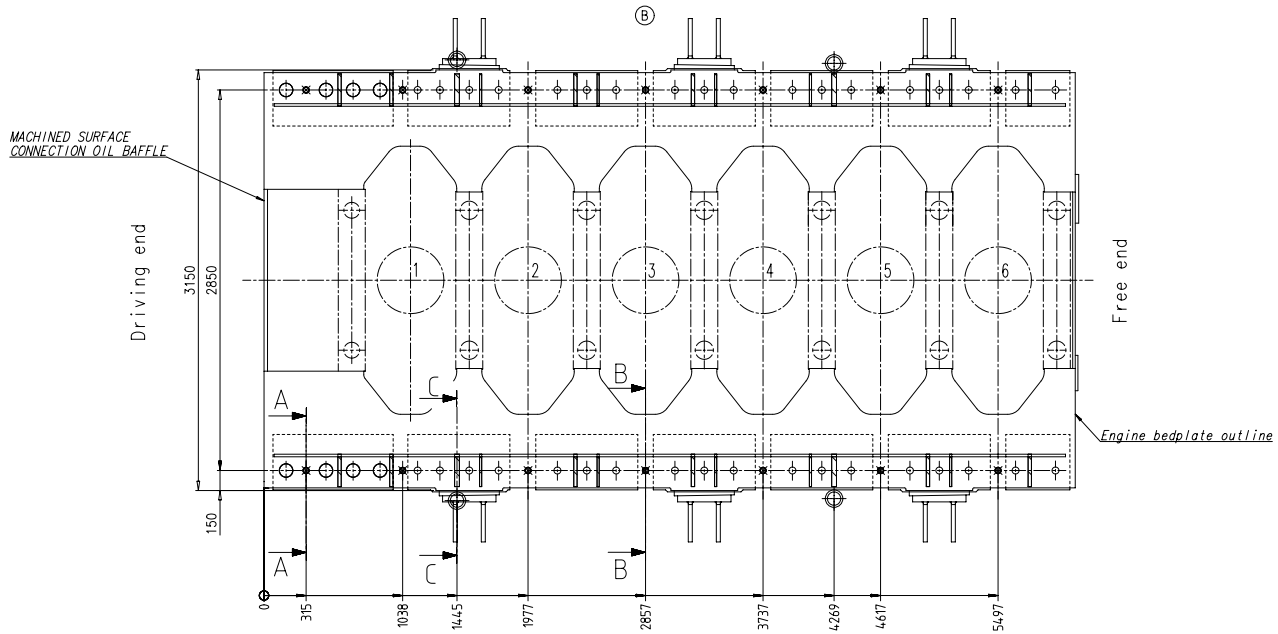
Product
5RT-flex50-D
5RT-flex50-E
5RT-flex50DF

TOOL ENGINE ALIGNMENT
Werkzeug Motorausrichtung

Units	mm kg	NX	Basic Material	Net Weight

SURFACE PROTECTION SEE GROUP 0344	Made	03.12.2019	dki021 DH.Kim	Scale 1:15	Size A1	Page 1/1	Material ID
TOLERANCING PRINCIPLE ISO8015	Chkd	04.12.2019	jpi101 Pickup	Design Group 9710-01	Drawing ID DAAD124853		Rev. –
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	05.12.2019	mhu019 Hug				

DD - DIMENSIONAL DRAWING - Confidential



Ⓑ CAUTION

Risk:
Tool and/or bedplate damage

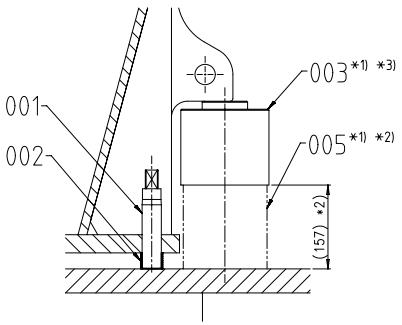
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

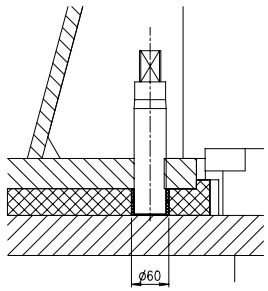
Ⓑ Remarks

*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

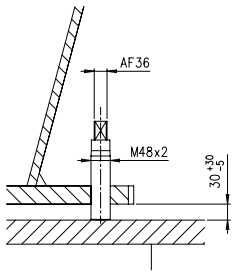
Ⓑ VIEW A-A
SCALE 1:5



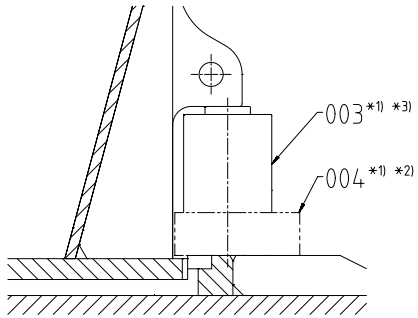
Ⓑ VIEW A-A
SCALE 1:3
Arrangement after pouring chock



Ⓑ VIEW B-B
SCALE 1:5



Ⓑ VIEW C-C
SCALE 1:5



Net Weight	Quantity PER ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
32,2							
	2	005	PAAD318480	SUPPORT BLOCK			
	2	004	PAAD318479	SUPPORT PLATE			
	4	003	PAAD318478	HYDRAULIC JACK			
	2	002	PAAD103306	SPONGE RUBBER RING	DAAD032482		0,001
	14	001	PAAD0005430	JACKING SCREW	DAAD006054	C45E S45C	2,3

Material ID: PAAD005897 | Modif. | Free space for Ic. | Q-Code: XXXXX | Standard: ISO; JIS | Main Drw.: H

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
A	EAAD084882	06.11.2013	B EAAD090713	25.09.2019				

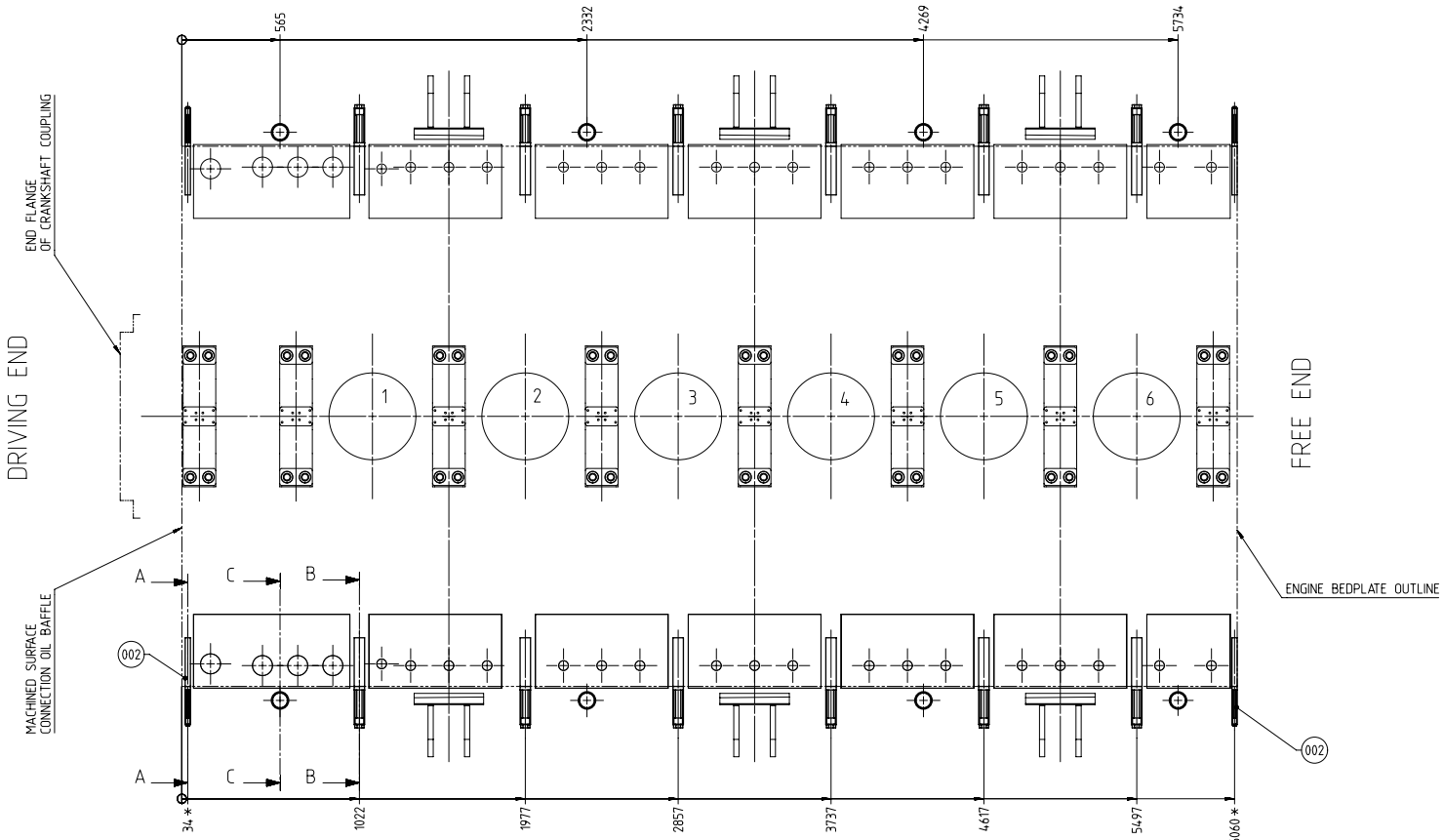
Product: 6RT-flex50-D, 6RT-flex50-E, 6RT-flex50DF

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws
Werkzeug Motorausrichtung

Units	mm kg	NX		Basic Material		Net Weight	
Made	07.06.2010	jba029	Baumann	Scale	1:20	Size A1	Page 1/1
Chkd	15.06.2010	wwr001	Wroblewski	Design Group	9710-01	Drawing ID	DAAD006164
Appd	17.06.2010	dst009	Strödecke				Rev. B

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

LD - INSTALLATION DRAWING - Internal



CAUTION

Risk:
Tool and/or bedplate damage

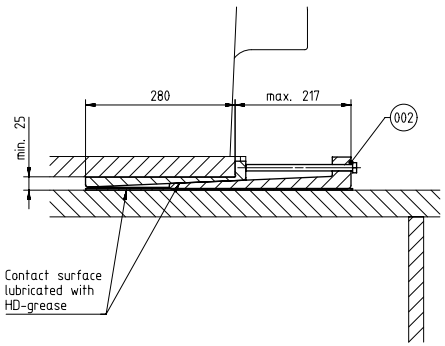
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

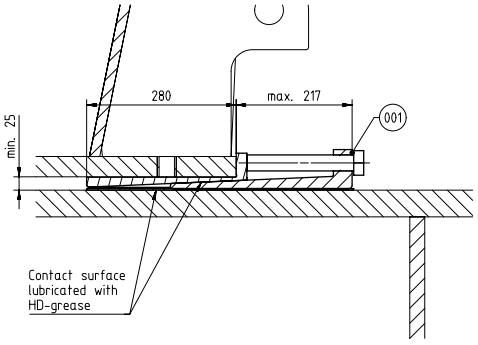
Remarks

*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: 887 kN

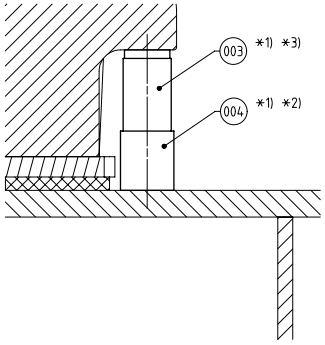
SECTION A-A ↻ 90°
SCALE 1:5



SECTION B-B ↻ 90°
SCALE 1:5



SECTION C-C ↻ 90°
SCALE 1:5



*Shown narrow type wedge

Net Weight	Quantity PER ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
117							
8	004	PAAD318480	SUPPORT BLOCK				
8	003	PAAD318478	HYDRAULIC JACK				
4	002	107.424.346.200	WEDGE NARROW TYPE		107.424.346	W-FU-235-JR	3,8
12	001	107.245.895.200	WEDGE		107.245.895		8,5

PAAD352875 Material ID | Free space for Mc. | Q-Code XXXXX | Standard ISO; JIS | Main Drw. H

Modif. | Number | Drawn date | Number | Drawn date | Number | Drawn date | Number | Drawn date

WIN GD Winterthur Gas & Diesel

Product
6RT-flex50-D
6RT-flex50-E
6RT-flex50DF

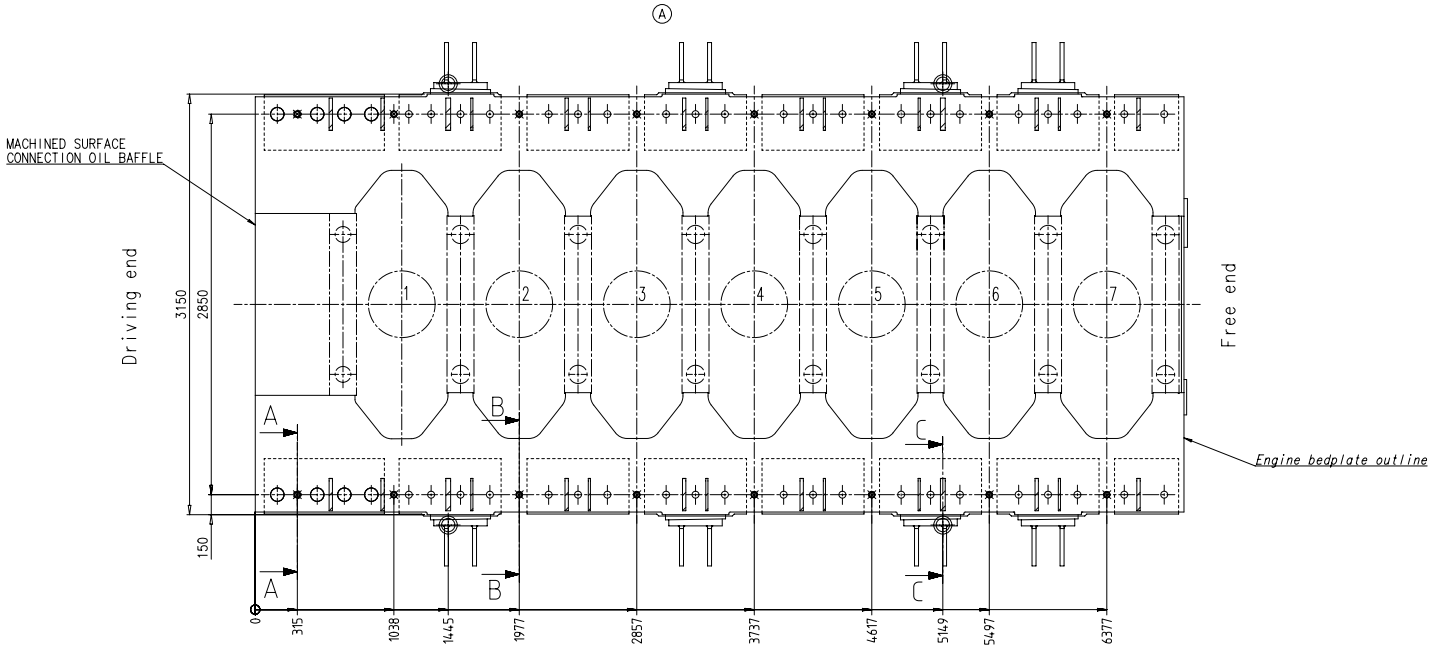
TOOL ENGINE ALIGNMENT
Engine Alignment: WEDGES
Werkzeug Motorausrichtung

Units mm kg | NX | Basic Material | Net Weight

SURFACE PROTECTION SEE GROUP 0344	Made	26.03.2020	dki021 DH.Kim	Scale 1:15	Size A1	Page 1/1	Material ID
TOLERANCING PRINCIPLE ISO8015	Chkd	29.04.2020	jpi101 Pickup	Design Group 9710-01	Drawing ID DAAD128747		Rev. -
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	18.05.2020	mhu019 Hug				

DD - DIMENSIONAL DRAWING - Confidential

Approved



Ⓐ CAUTION

Risk:
Tool and/or bedplate damage

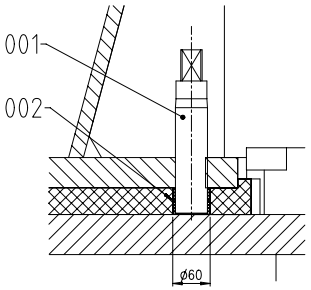
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

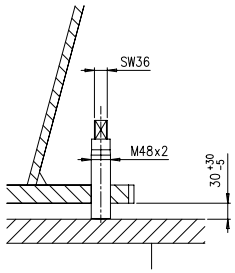
Ⓐ Remarks

*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

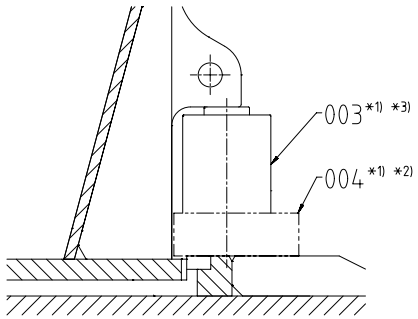
Ⓐ VIEW A-A
SCALE 1:3
Arrangement after pouring chock



Ⓐ VIEW B-B
SCALE 1:5



Ⓐ VIEW C-C
SCALE 1:5



Net Weight	Quantity PER ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
36,8							
	4	004	PAAD318479	SUPPORT PLATE			
	4	003	PAAD318478	HYDRAULIC JACK			
	2	002	PAAD103306	SPONGE RUBBER RING	DAAD032482		0,001
	16	001	PAAD005430	JACKING SCREW	DAAD006054	C45E S45C	2,3

Material ID: PAAD006489 | Free space for Mc. | Q-Code XXXXX | Standard ISO; JIS | Main Drw. H

Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
A	EAAD090713	26.09.2019						

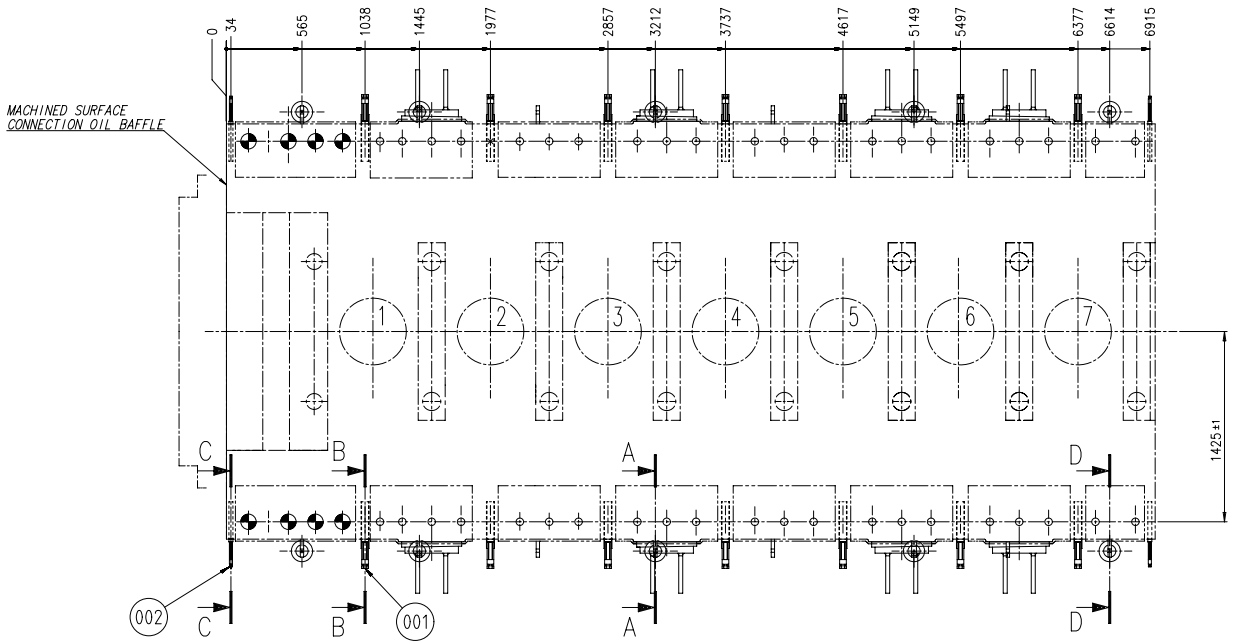
Product: 7RT-flex50-D / 7RT-flex50-E / 7RT-flex50DF

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws
Werkzeug Motorausrichtung

Units	mm kg	NX		Basic Material			Net Weight
Made	07.06.2010	jba029	Baumann	Scale	1:20	Size A1	Page 1/1
Chkd	15.06.2010	wwr001	Wroblewski	Design Group	9710-01	Drawing ID	DAAD006197
Appd	17.06.2010	dst009	Strötdecke				Rev. A

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

LD - INSTALLATION DRAWING - Internal



Ⓐ CAUTION

Risk:
Tool and/or bedplate damage

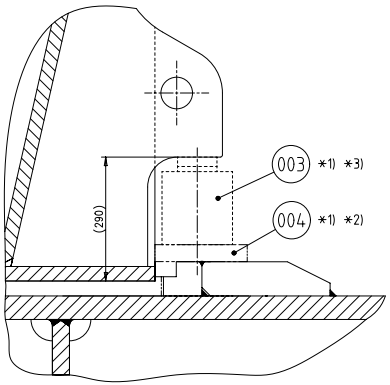
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

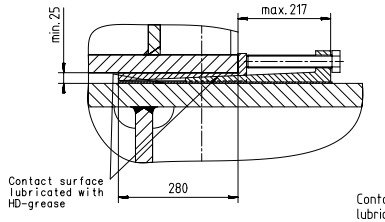
Ⓐ Remarks

*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: 887 kN

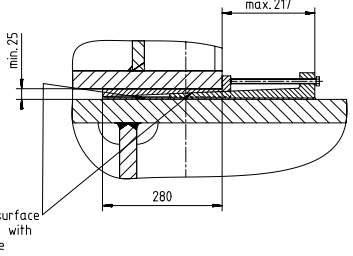
A : A 1:5



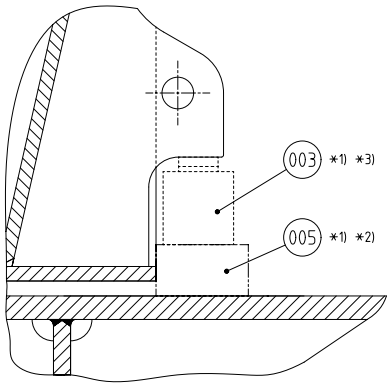
B–B 1:5



C–C 1:5



Ⓐ D–D 1:5



RefWeight						
119						
6	005	PAAD318480	SUPPORT BLOCK			
4	004	PAAD318479	SUPPORT PLATE			
10	003	PAAD318478	HYDRAULIC JACK			
4	002	107.424.346.200	WEDGE NARROW TYPE	107.424.346		3,36
14	001	107.245.895.200	WEDGE STANDARD TYPE	107.245.895		7,51

Quantity ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
PER					Q-Code XXXXX	Main Drw. H
PAAD027042					Standard ISO; JIS	

Material/ID | Modif. | Number | Drawn date | Number | Drawn date | Number | Drawn date | Number | Drawn date
Ⓐ EAAD090713 27.09.2019

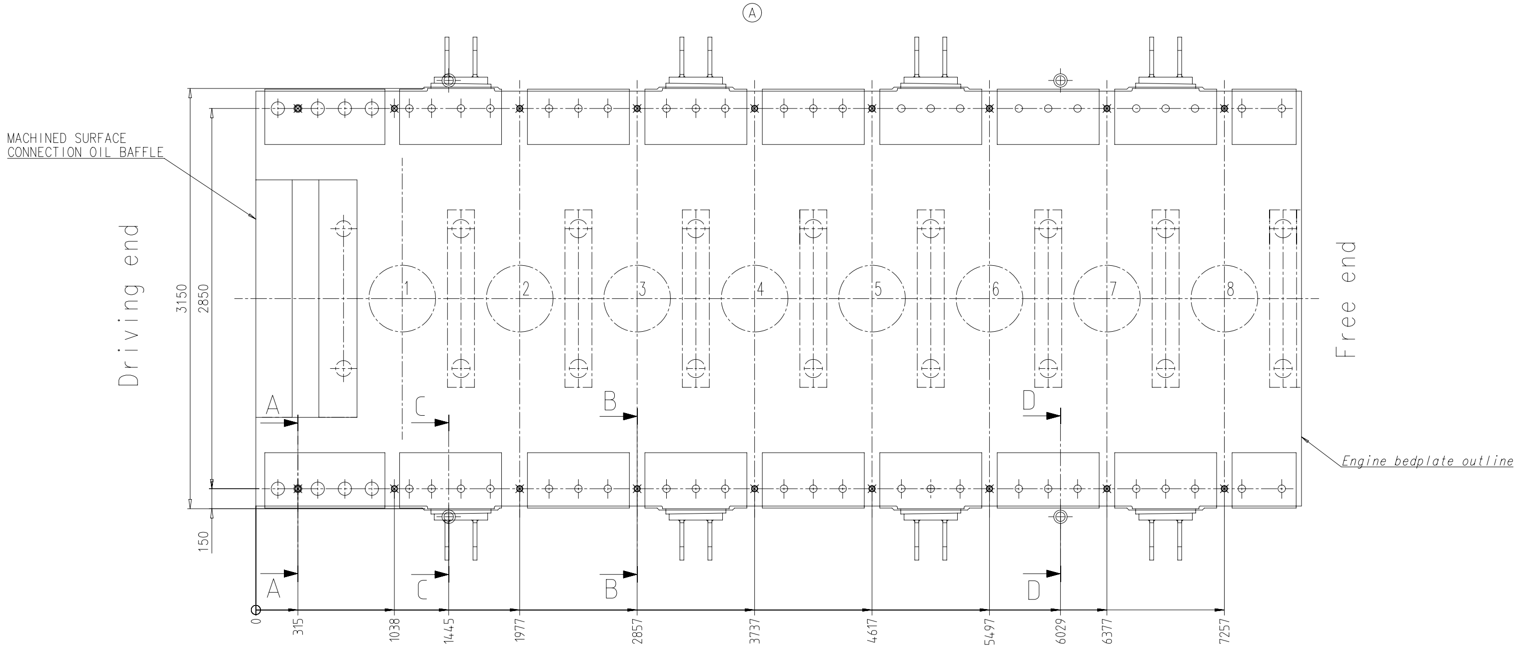
Product
7RT-flex50-D
7RT-flex50-E
7RT-flex50DF

TOOL ENGINE ALIGNMENT
Alignment with: Wedges
Werkzeug Motorausrichtung

Units mm kg | NX | Basic Material | Net Weight

SURFACE PROTECTION SEE GROUP 0344	Made	30.05.2013	sfe006 Feuerstein	Scale 1:20	Size A1	Page 1/1
TOLERANCING PRINCIPLE ISO8015	Chkd	26.11.2013	wwr001 Wroblewski	Design Group 9710-01	Drawing ID DAAD039751	Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	27.11.2013	bha009 Haag			

3D - DIMENSIONAL DRAWING - Confidential



Ⓐ CAUTION

Risk:
Tool and/or bedplate damage

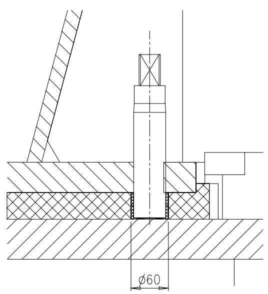
Countermeasure:
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/ assembly procedure as follows:

- 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.

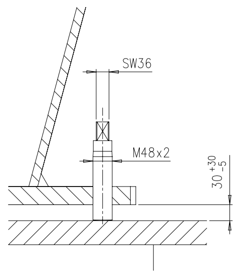
Ⓐ Remarks

*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

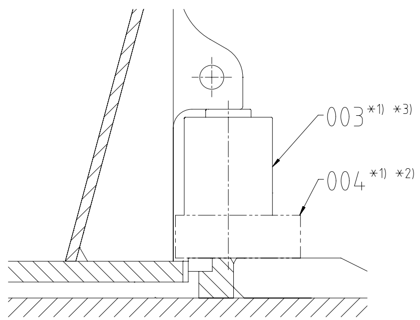
Ⓐ VIEW A-A
SCALE 1:3
Arrangement after pouring chock



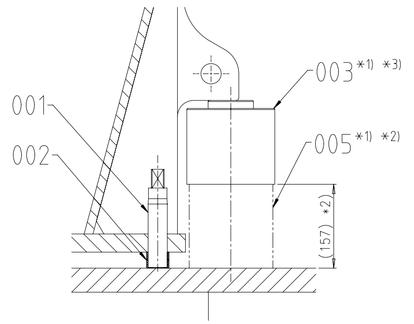
Ⓐ VIEW B-B
SCALE 1:5



Ⓐ VIEW C-C
SCALE 1:5



Ⓐ VIEW D-D
SCALE 1:5



Net Weight: 41,4

Quantity PER ENGINE	SEQ NO	Material ID	Material Name / Dimension, Occ	Standard or Drawing	Basic Material / Material Standard	Weight GR./NET
2	005	PAAD318480	SUPPORT BLOCK			
2	004	PAAD318479	SUPPORT PLATE			
4	003	PAAD318478	HYDRAULIC JACK			
2	002	PAAD103306	SPONGE RUBBER RING	DAAD032482		0,001
18	001	PAAD005430	JACKING SCREW	DAAD006054	C45E S45C	2,3

MaterialID: PAAD006509 | Free space for lic. | Q-Code: XXXXX | Standard: ISO; JIS | Main Drw.: H

Modif.	Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	Drawn date
A	EAAD090713	26.09.2019									

WIN GD Winterthur Gas & Diesel

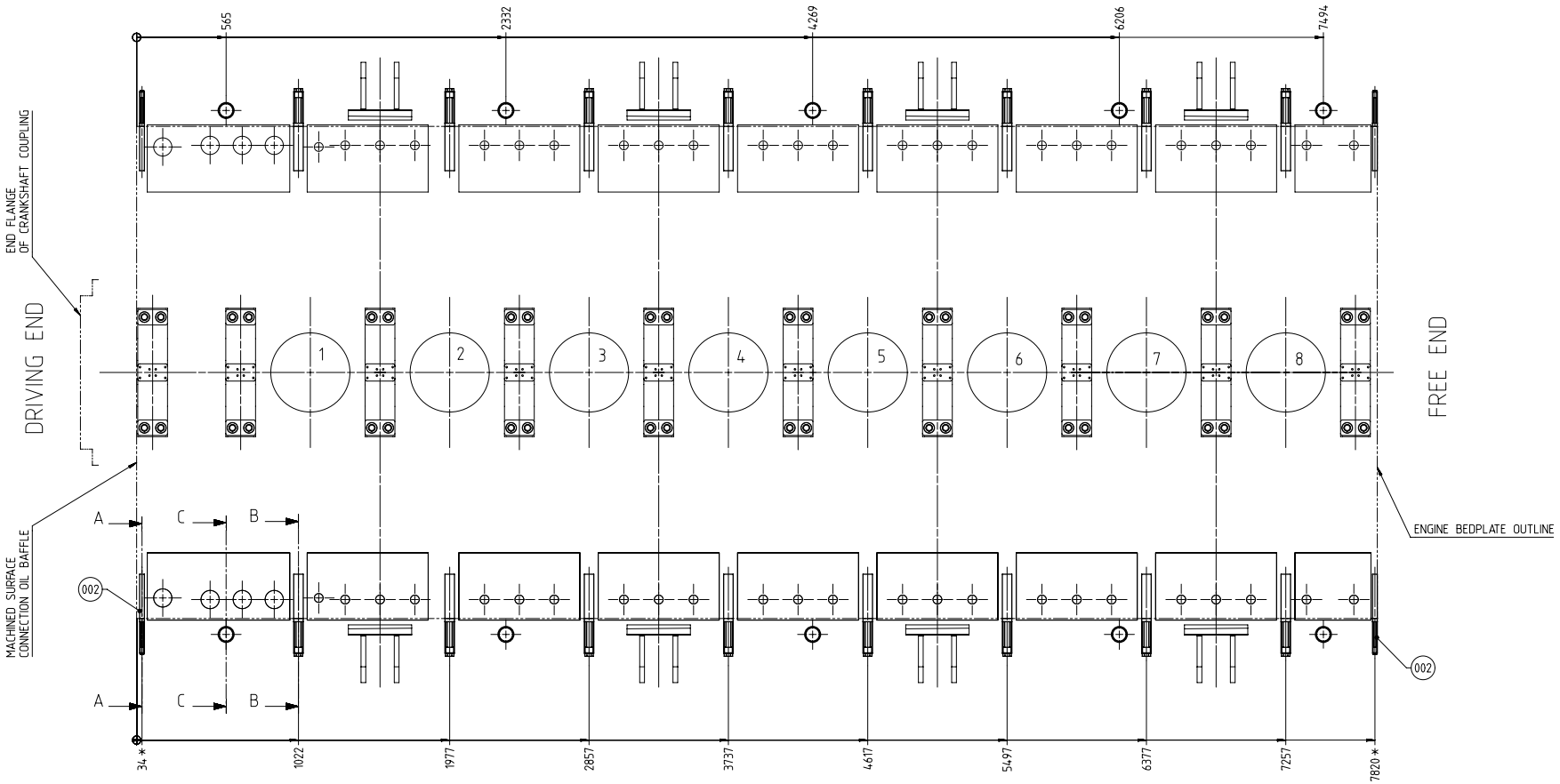
Product: 8RT-flex50-D, 8RT-flex50-E, 8RT-flex50DF

TOOL ENGINE ALIGNMENT
Alignment with: Jacking Screws
Werkzeug Motorausrichtung

Units mm kg	NX	Basic Material	Net Weight
SURFACE PROTECTION SEE GROUP 0344	Made 07.06.2010 jba029 Baumann	Scale 1:20	Size A1 · Page 1/1 · Material ID
TOLERANCING PRINCIPLE ISO8015	Chkd 15.06.2010 wwr001 Wroblewski	Design Group 9710-01	Drawing ID DAAD006203 · Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 17.06.2010 dst009 Strödecke		

Approved

ILD - INSTALLATION DRAWING - Internal



CAUTION

Risk:
Tool and/or bedplate damage

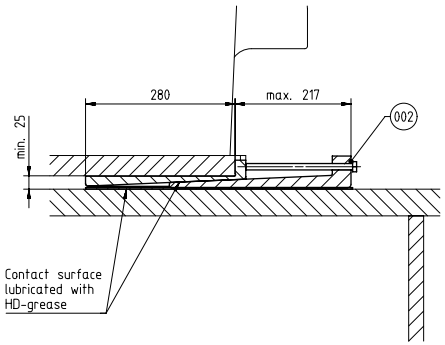
Countermeasure:
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- 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.

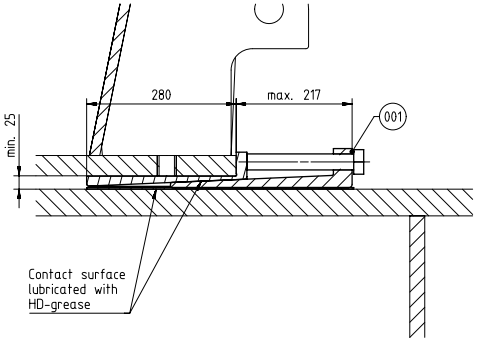
Remarks

*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: 887 kN

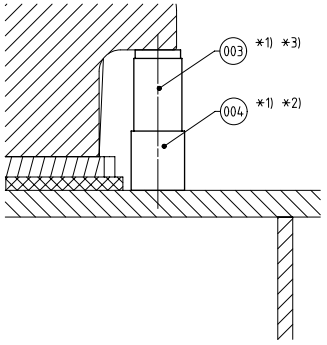
SECTION A-A ↻ 90°
SCALE 1:5



SECTION B-B ↻ 90°
SCALE 1:5



SECTION C-C ↻ 90°
SCALE 1:5



*Shown narrow type wedge

Net Weight							
151							
10	004	PAAD318480	SUPPORT BLOCK				
10	003	PAAD318478	HYDRAULIC JACK				
4	002	107.424.346.200	WEDGE NARROW TYPE	107.424.346	W-FU-235-JR		3,8
16	001	107.245.895.200	WEDGE	107.245.895			8,5
Quantity PER ENGINE	SEQ NO	Material ID	Material Name Dimension, Occ	Standard or Drawing	Basic Material Material Standard		Weight GR./NET
PAAD353020	Free space for Mc.				Q-Code XXXXX		Main Drw. H
Material®	Modif.	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date

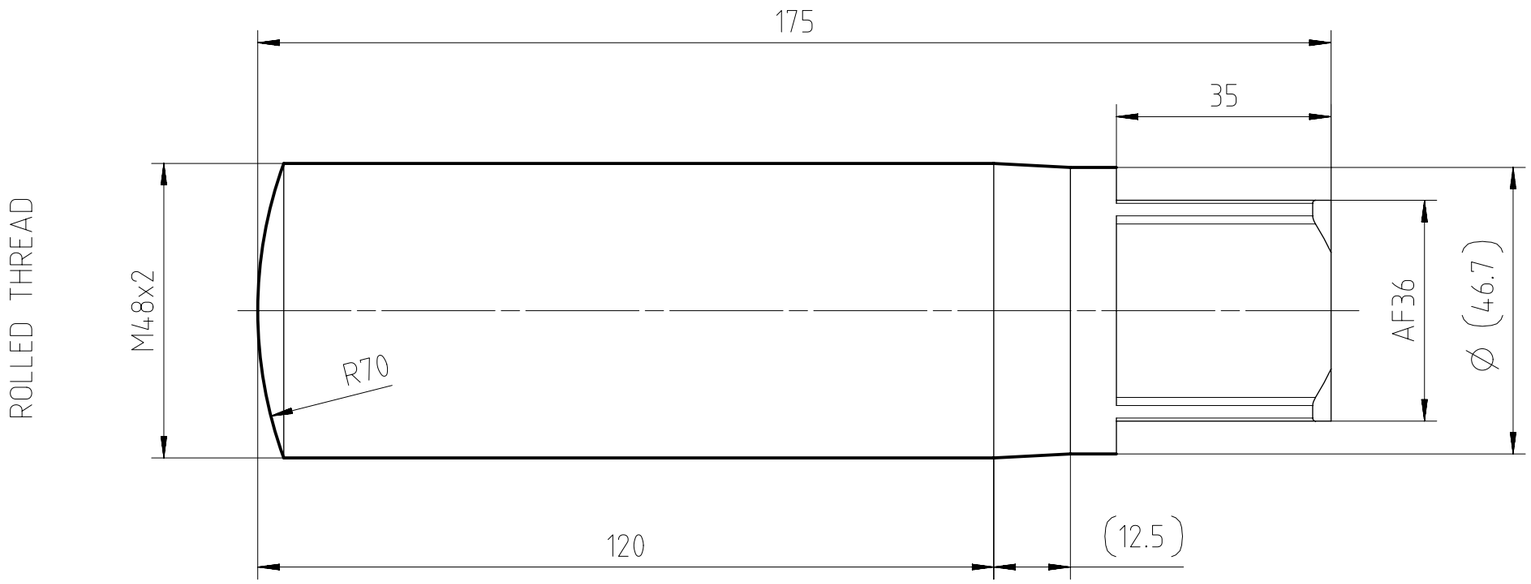
WIN GD Winterthur Gas & Diesel

Product
8RT-flex50-D
8RT-flex50-E
8RT-flex50DF

TOOL ENGINE ALIGNMENT
Engine Alignment: WEDGES
Werkzeug Motorausrichtung

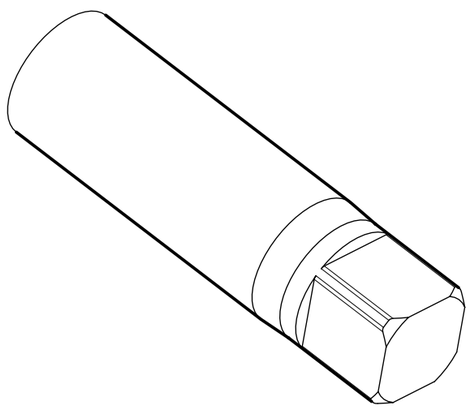
Units	mm kg	NX	Basic Material			Net Weight	
SURFACE PROTECTION SEE GROUP 0344	Made	26.03.2020	dki021 DH.Kim	Scale 1:15	Size A1	Page 1/1	Material ID
TOLERANCING PRINCIPLE ISO8015	Chkd	29.04.2020	jpi101 Pickup	Design Group 9710-01	Drawing ID DAAD128839		Rev. –
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	18.05.2020	mhu019 Hug				

DD - DIMENSIONAL DRAWING - Confidential



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				

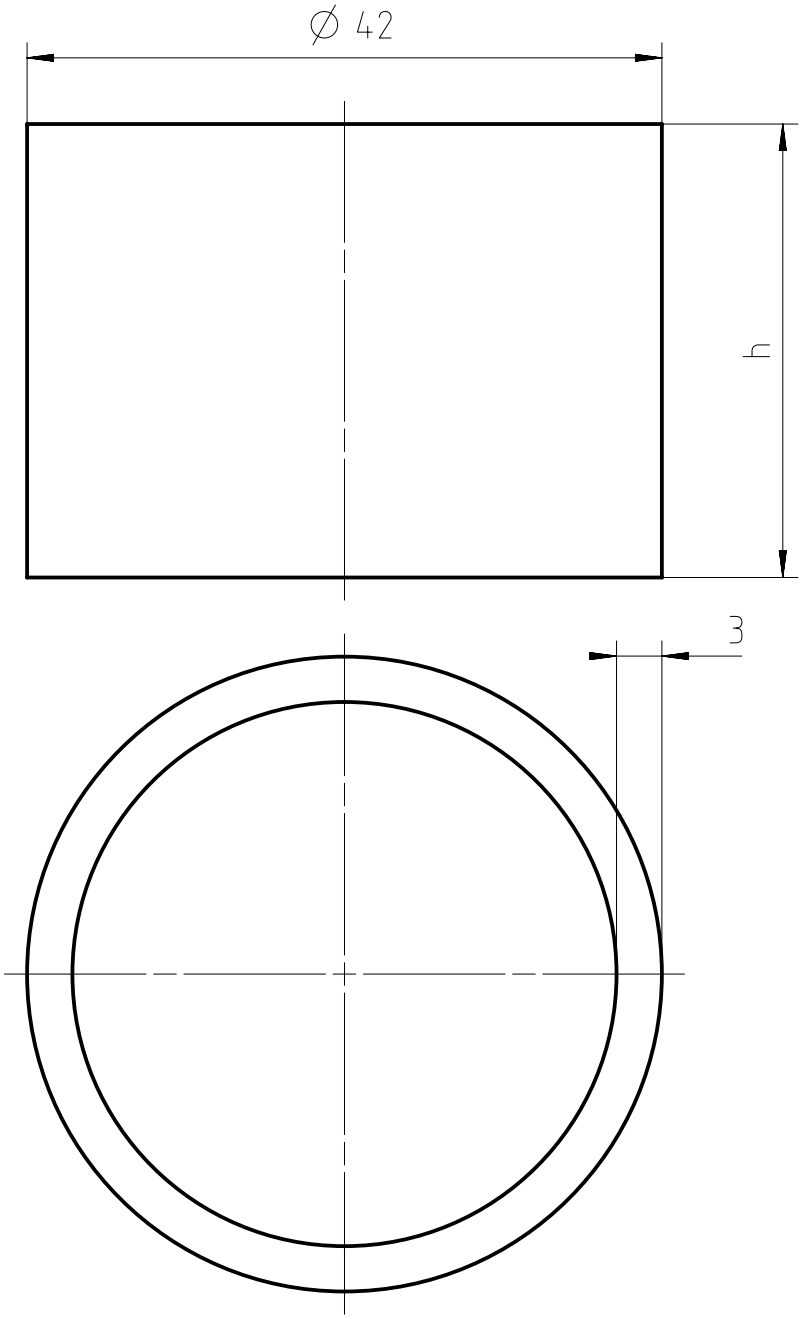
Approved

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

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
A	EAAD091472	15.11.2019						

WIN GD Winterthur Gas & Diesel

Product W-2S

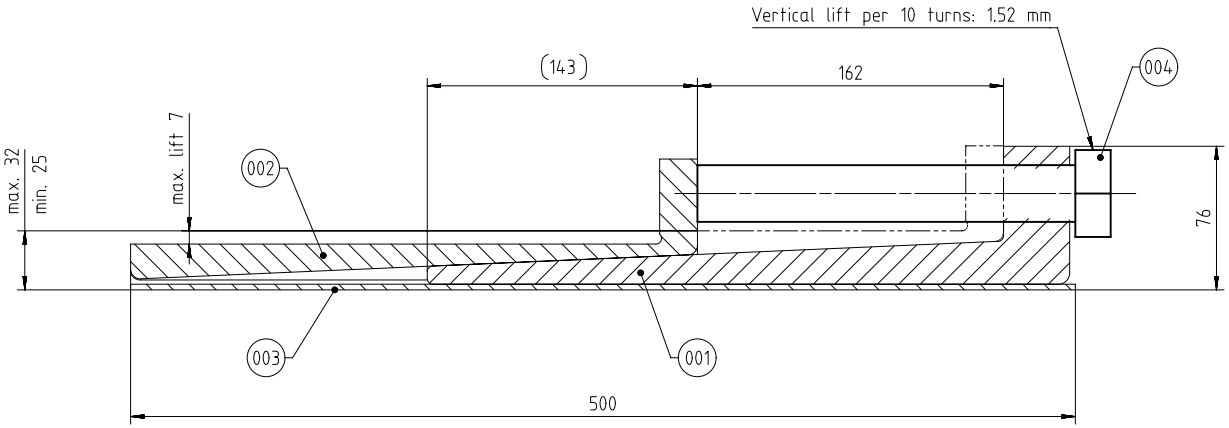
SPONGE RUBBER RING

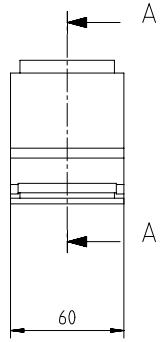
Schaumstoff Huelse

Units	mm kg	NX	Basic Material *	Net Weight 0,165
Made	20.01.2011 wwr001 W.Wroblewski	Scale 2:1	Size A4	Page 1/1	Material ID PAAD003706
Chkd	20.01.2011 sfe006 Feuerstein	Design Group 9710-01	Drawing ID DAAD005307	Rev. A
Appd	20.01.2011 dst009 Ströddecke			

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	015.151.048.701	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

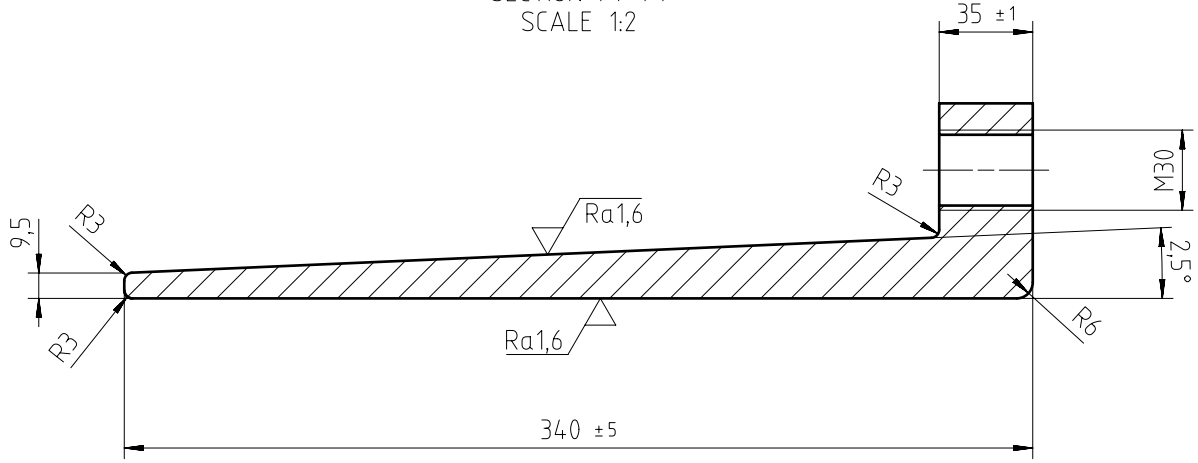
Schraeger Keil

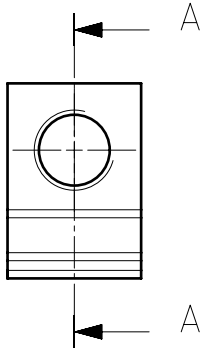
Units mm kg | NX | Basic Material | Net Weight 8,51

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

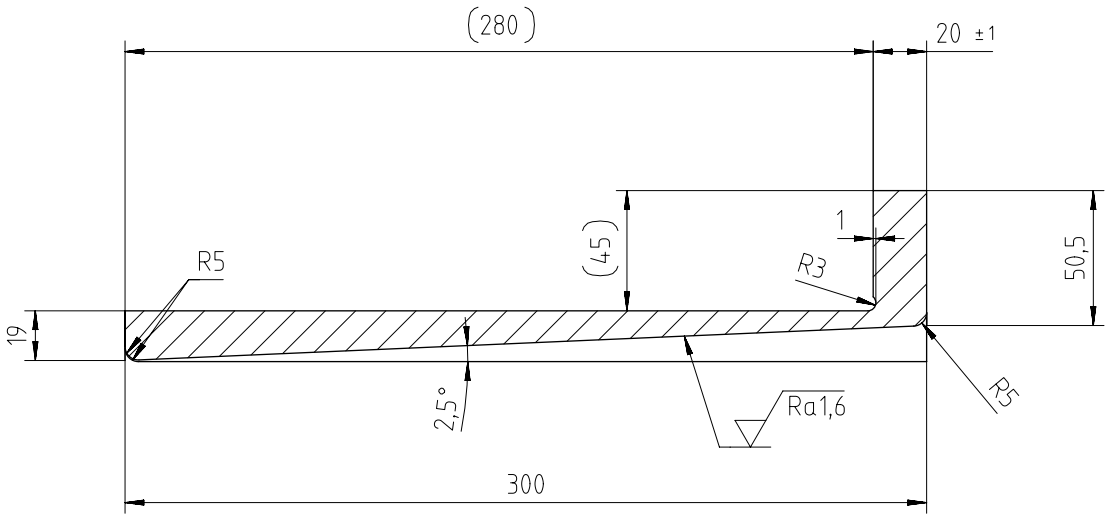
KEY

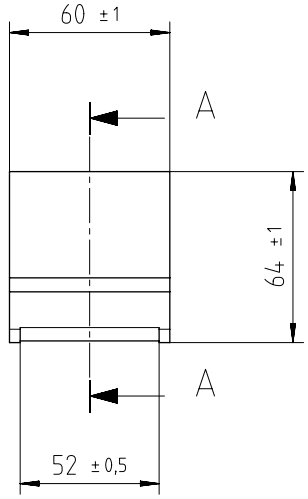
Keil

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

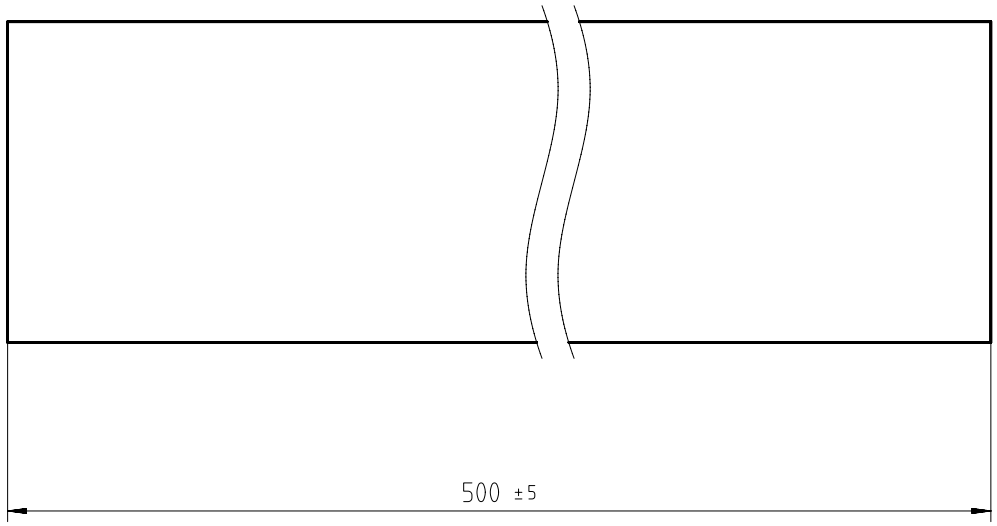
Product W-2S

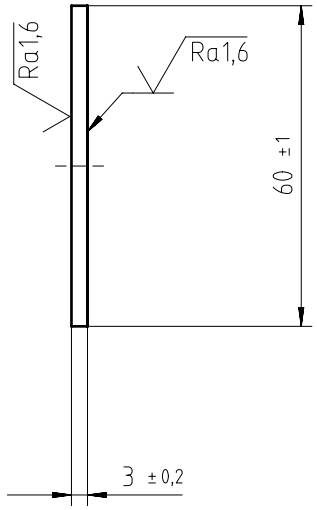
KEY

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

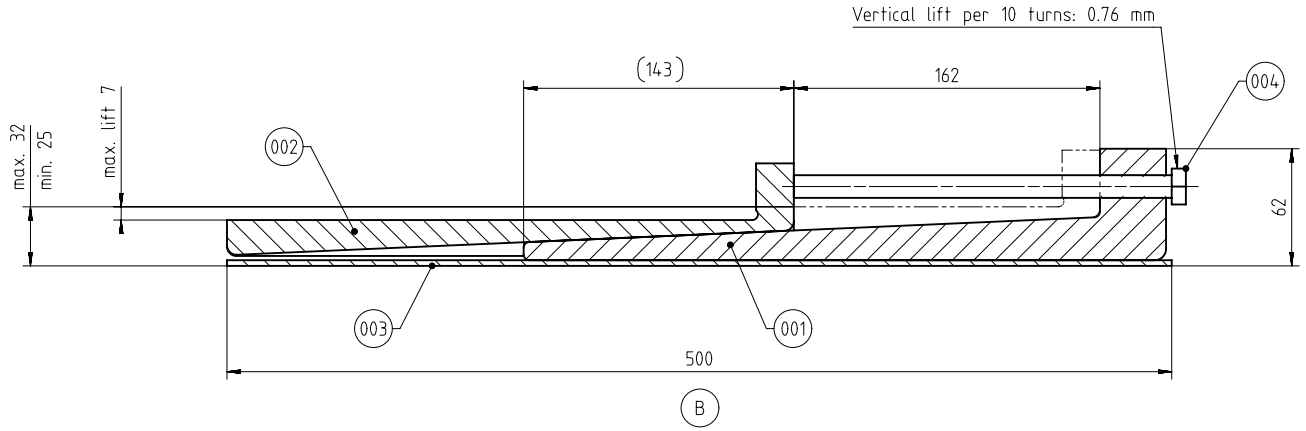
Blech

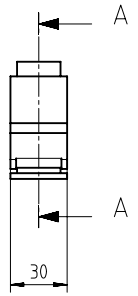
Units mm kg	NX		Basic Material W-FU-235-JR		Net Weight 1
SURFACE PROTECTION SEE GROUP 0344	Made 11.07.1996 D. Schaeffler		Scale 1:1	Size A3 / Page 1/1	Material ID 107.245.898.001
TOLERANCING PRINCIPLE ISO8015	Chkd		Design Group 9710-01	Drawing ID 107.245.898	Rev. B
GENERAL TOLERANCES ACCORDING TO ISO2768-mK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

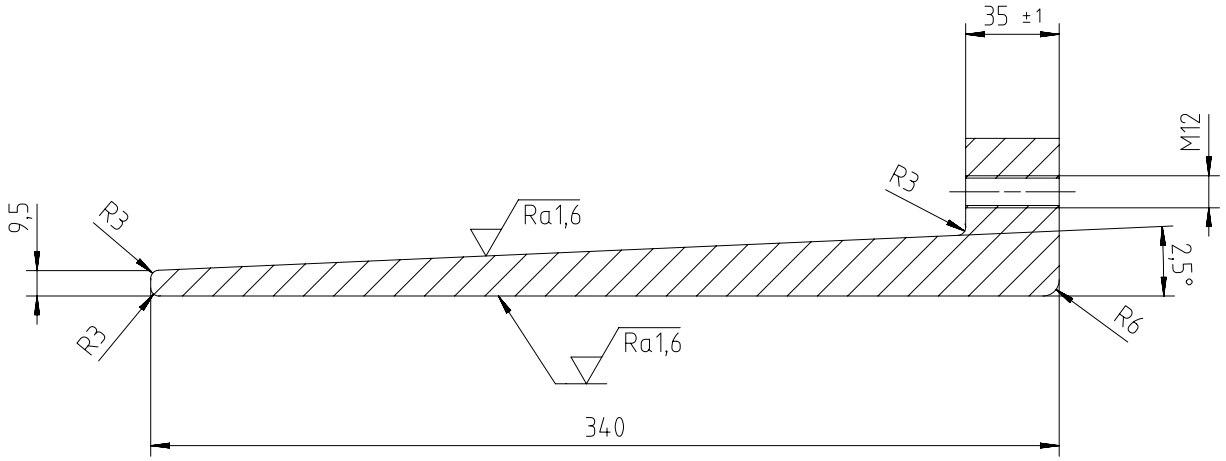
Schraeger Keil

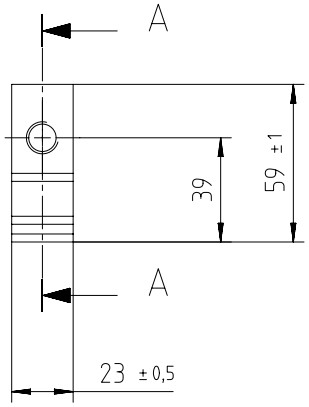
Units mm kg | NX | Basic Material W-FU-235-JR | Net Weight 3.8

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

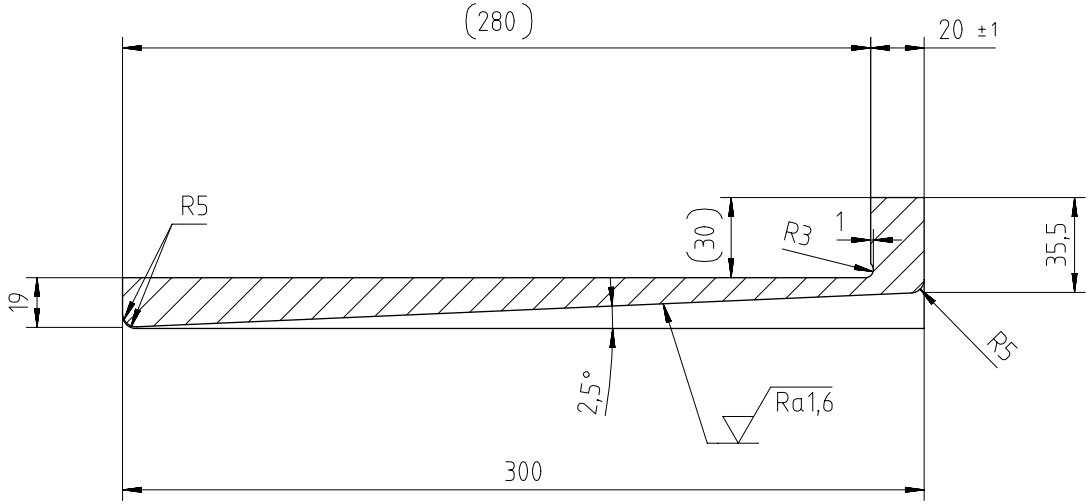
KEY

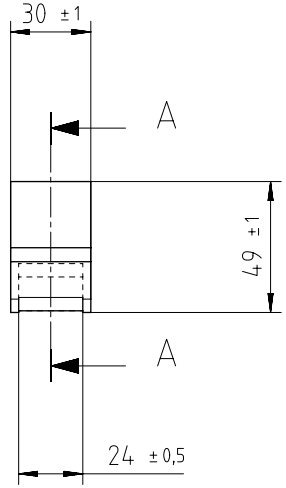
Keil

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

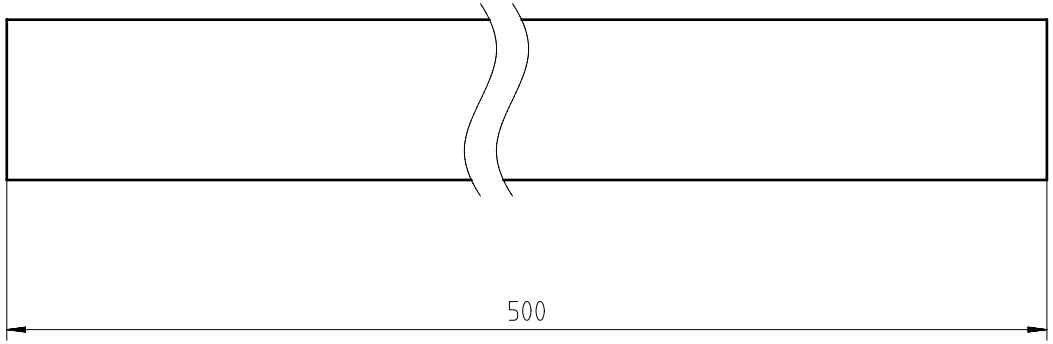
Product W-2S

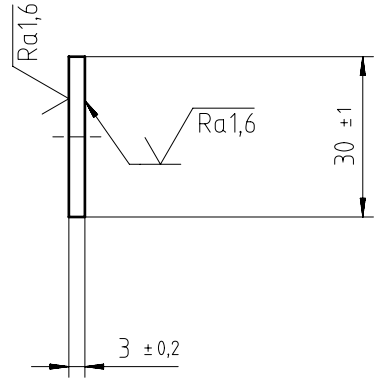
KEY

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 - WinGD RT-flex50-D/DF –Tool Engine Alignment (DG 9710-01)

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2017-02-24	DRAWING SET	First web upload
2019-10-03	DAAD006081 DAAD006164 DAAD006197 DAAD006203 DAAD039751	Tool arrangement drgs - new revision
2019-12-05	DAAD124853 107.424.346 107.424.347 107.424.348 DAAD123406 107.246.895 107.245.895 107.246.894 107.245.898	Tool arrangement drg, 5cyl with wedges – added Wedge drawings – new revision
2020-09-11	DAAD128747 DAAD128839	Main drgs for 6 and 8 cyl. (alignment by wedges) - added