

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

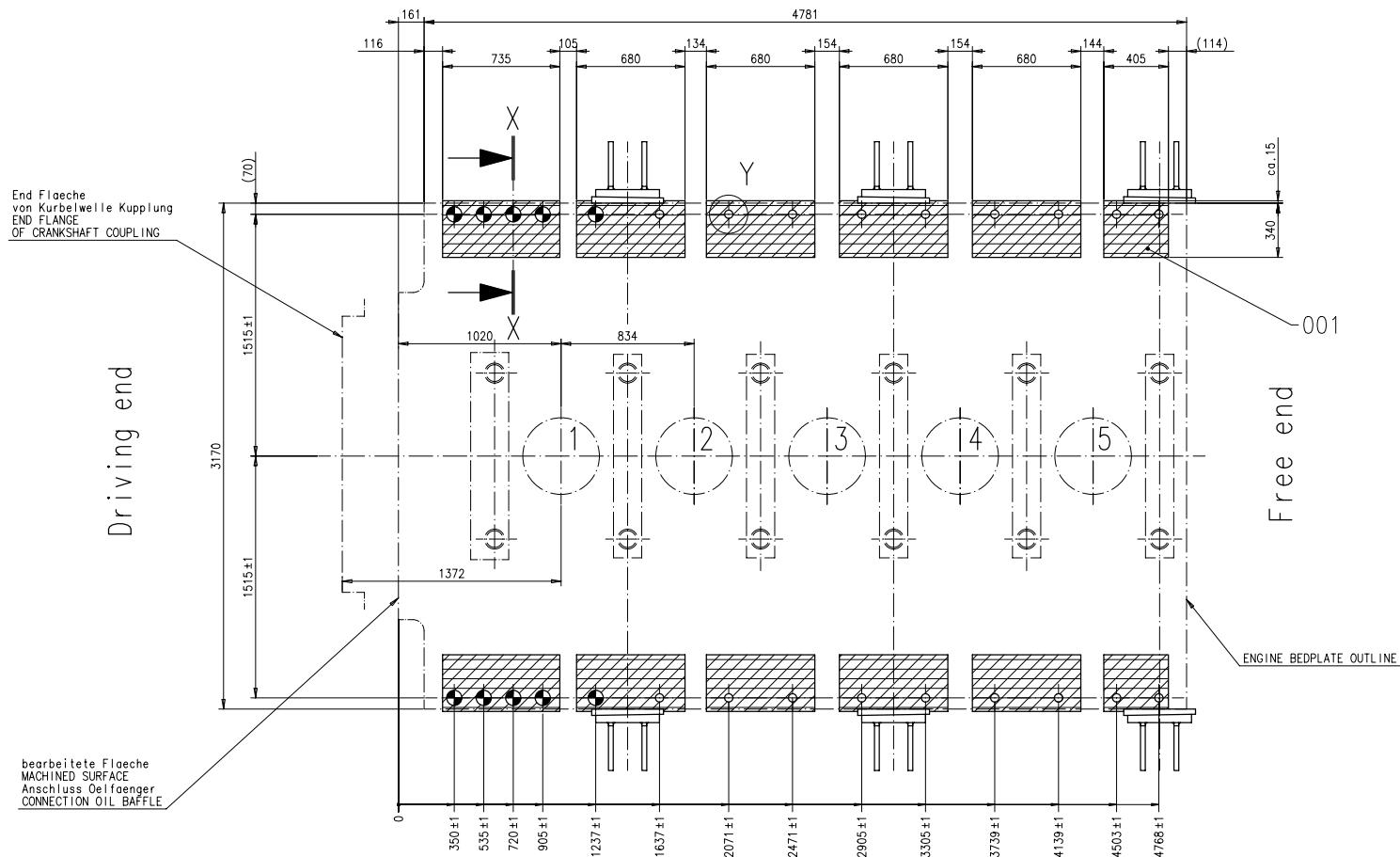


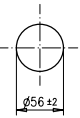
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of cchock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min. (dm ³)	max. (dm ³)
5	4.5	3860	26948	68	162
No. of cyls.	Total No. of holes	No. of thrust sleeves			
5	28	10			

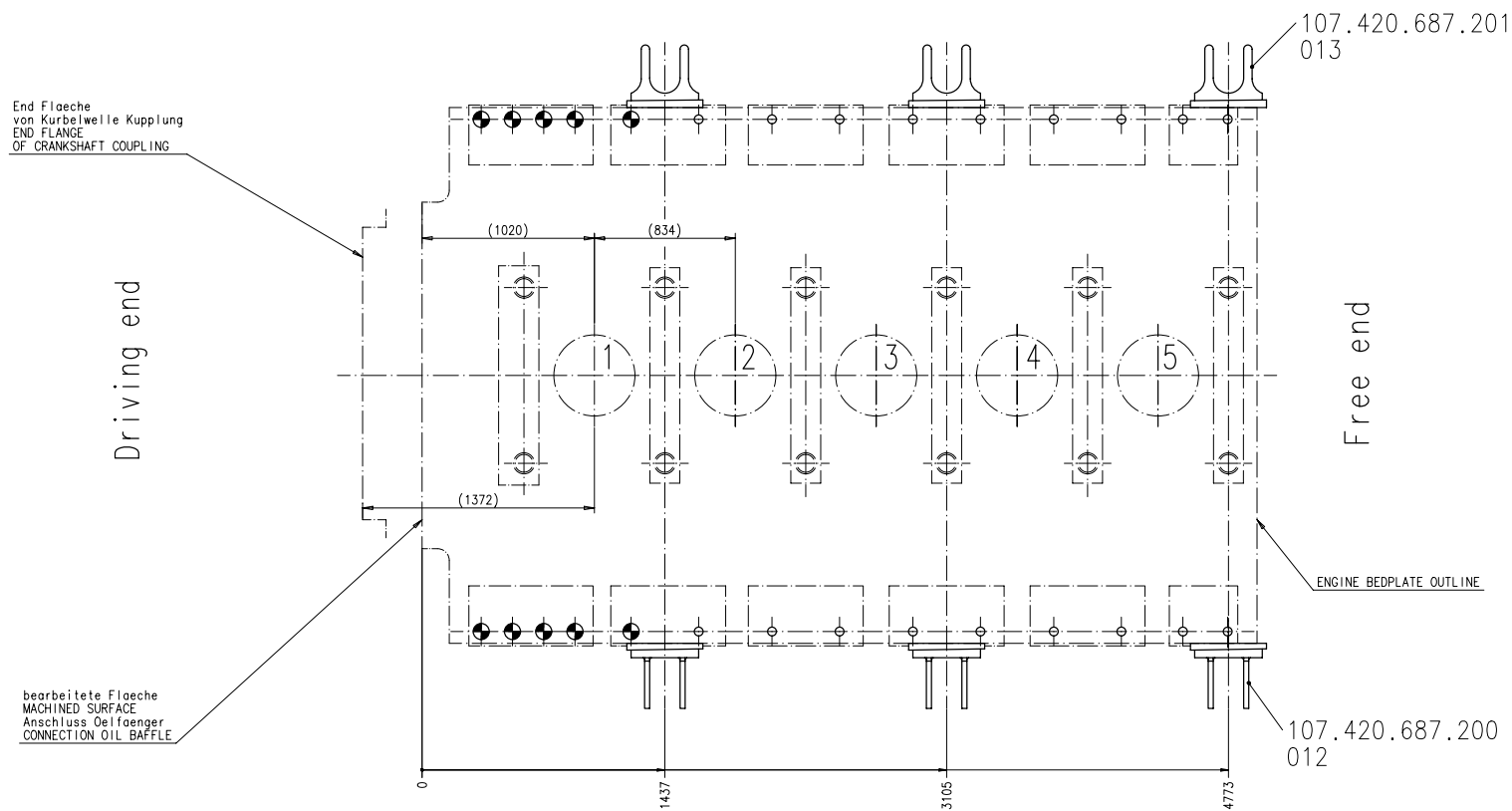
Remarks:

- *1) For the layout is taken into consideration:
- A max. permissible static load of 0.7 N/mm².
- Engine holding down studs fully tightened according to fitting instructions
- Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
*2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
*3) Referring to a standardized chock thickness of 25 up to 60mm.

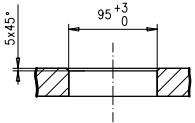
Y 1:5



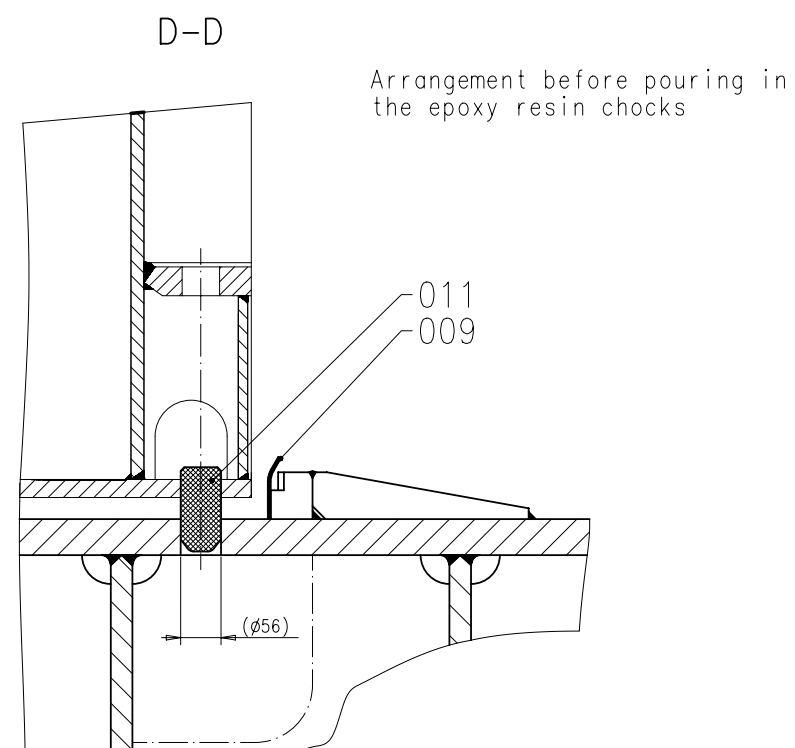
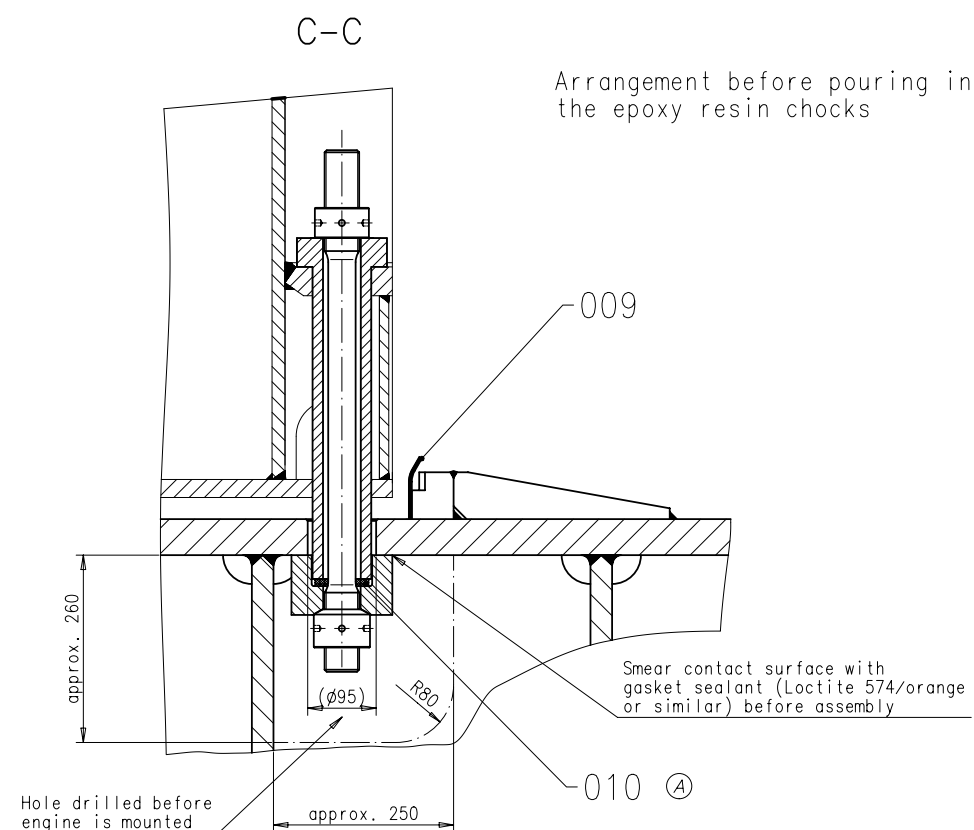
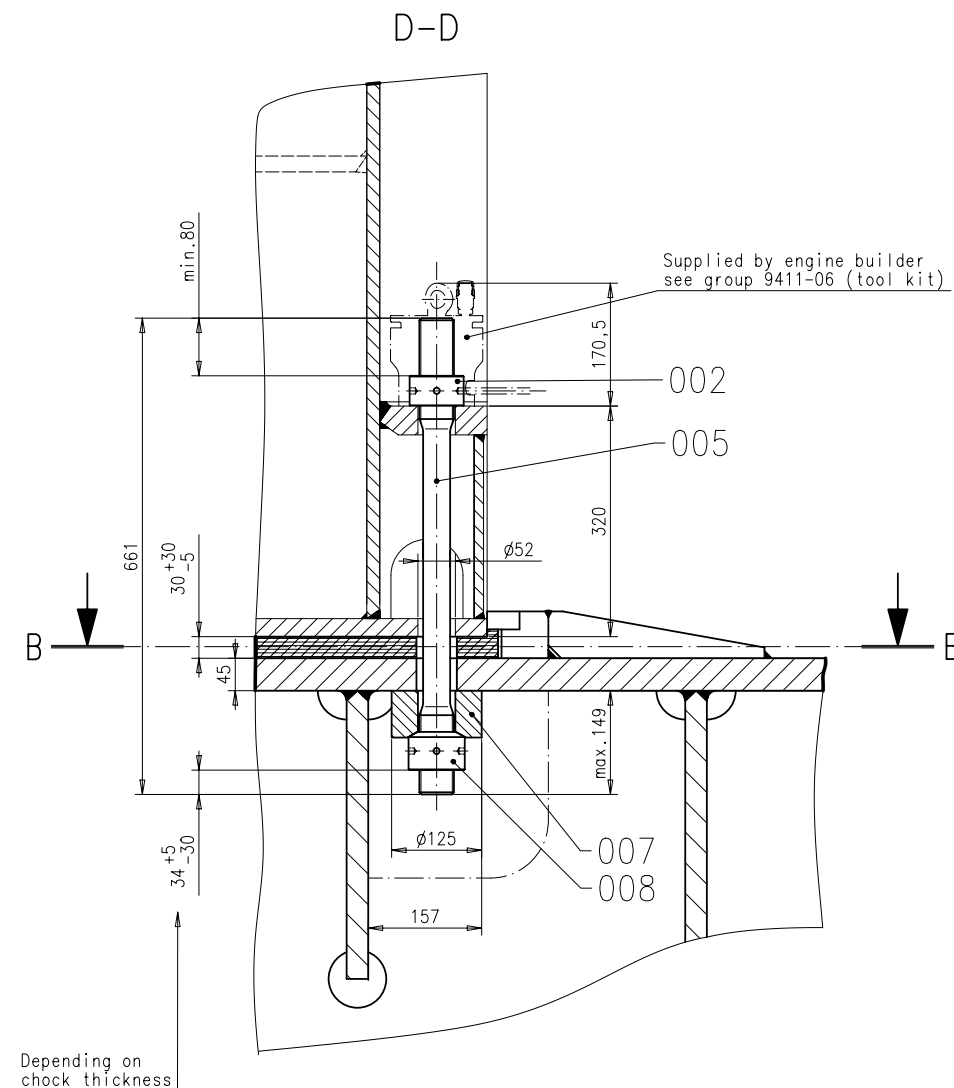
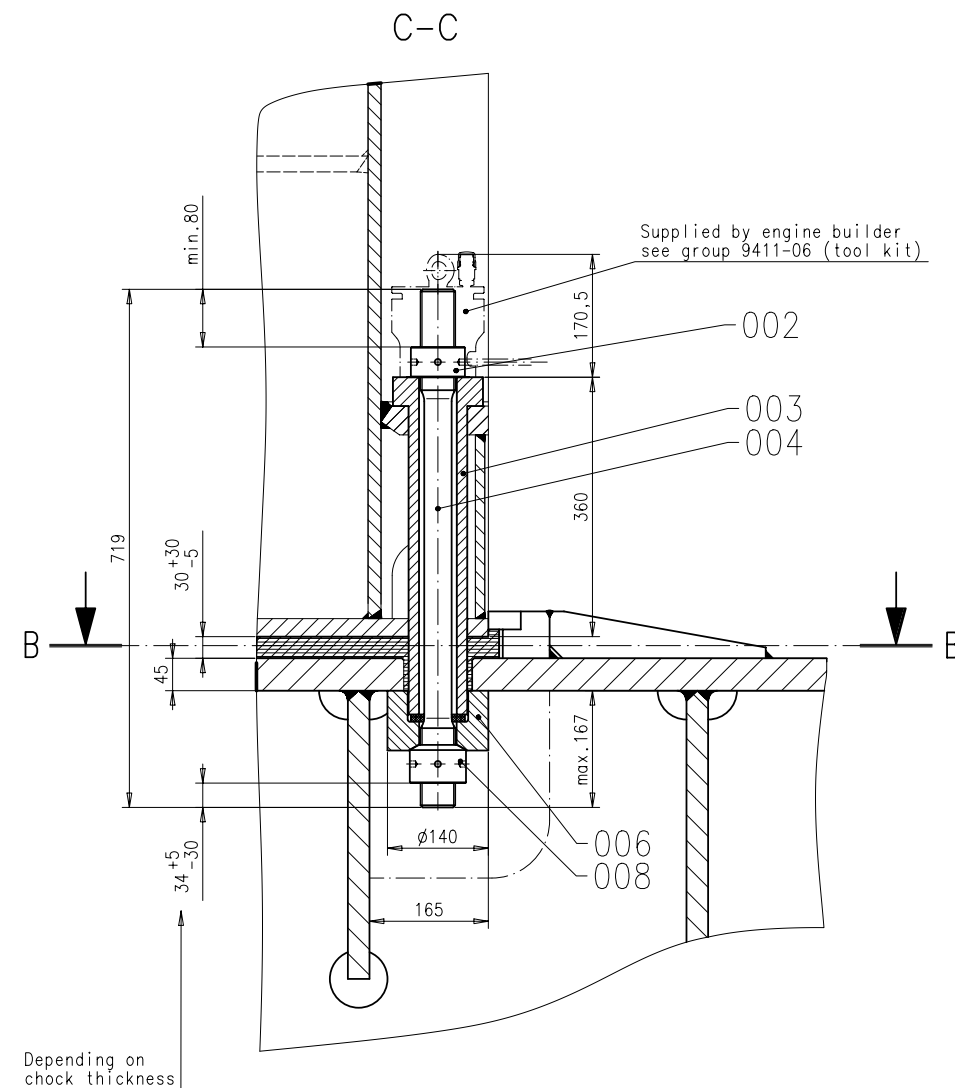
B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



X-X 1:5



WARTSILA		ENGINE SEATING/FOUNDATION THRUST SLEEVES	
Scale: 1:14	Page: 2/3	Material: 107.420.687	Rev: A
SURFACE PROTECTION SEE GROUP 0344		TOLERANCING PRINCIPLE: ISO 8015	
GENERAL TOLERANCES ACCORDING TO: ISO 2768-mS		Appr: 16.07.2010	




Free space for file		Q-Code XXXXX		Main Dwg.	
Standard ISO		JIS		H	
Matr. A	EAAD082040	23.06.2010			
Number	Drawn date	Number	Drawn date	Number	Drawn date
Product		ENGINE SEATING/FOUNDATION		THRUST SLEEVES	
WÄRTSILÄ		5RT-flex48T-D		5RTA48	
		5RTA48T		5RTA48T-B	
		5RTA48T-D			
Units	mm kg	IDE	Basic Material	Net Weight	
SURFACE PROTECTION SEE GROUP 0344		Mode	21.05.2010 jba029 Baumann	Scale	1:14
TOLERANCING PRINCIPLE ISO8015		Chkd		Size	A1
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	16.07.2010	Page	3/3
		Design Group	9710	Material	10
		Drawing ID	107.420.687	Rev.	A

[illegible]

*2) Chock thickness 30 ± 5^{30} .
- Final chock thickness to be determined by shipyard.

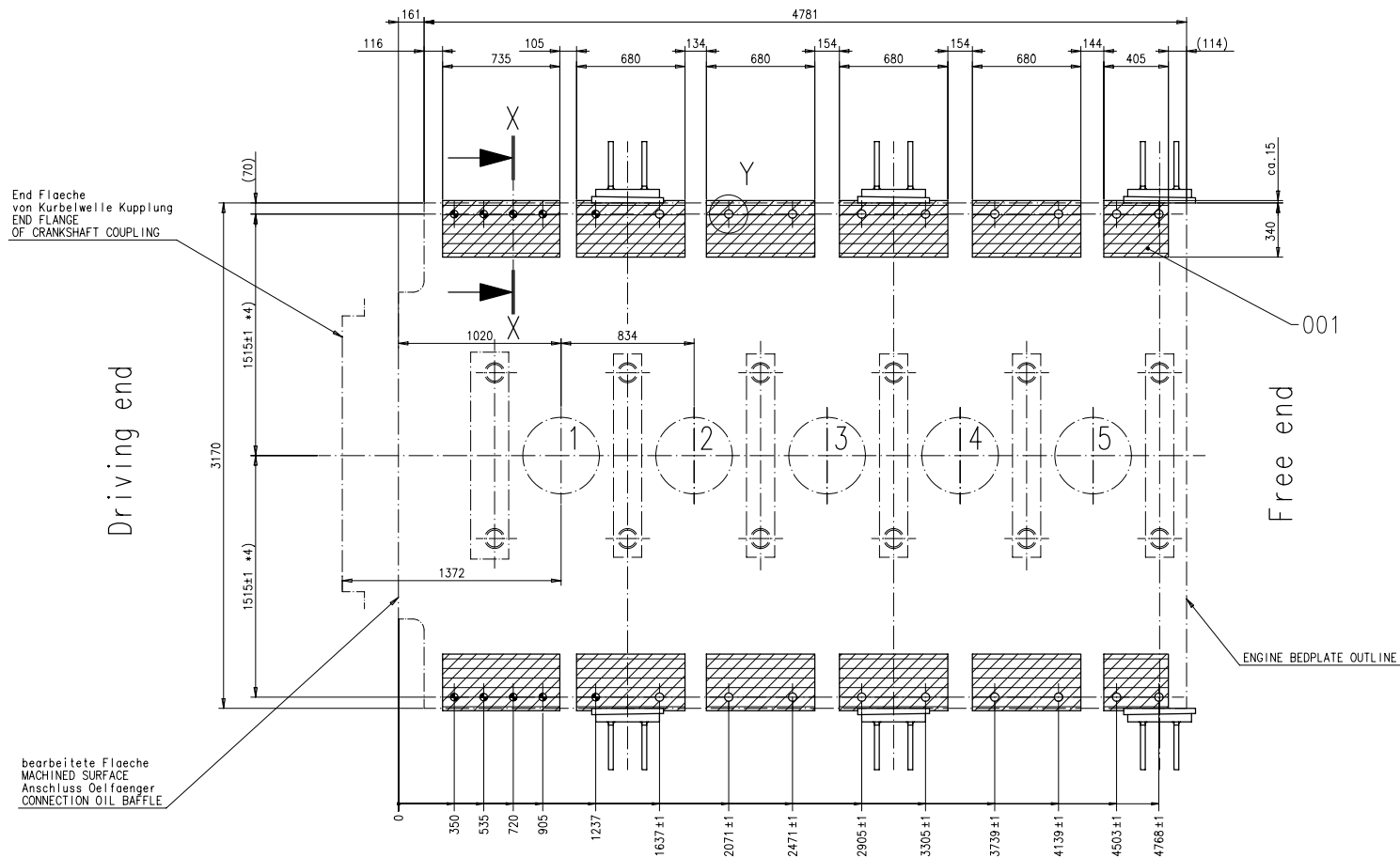
107.422.462.200	5 Cyl	Execution with side stoppers welded type
107.422.462.201	5 Cyl	Execution with side stoppers flame-cut type

Net Weight		107.422.462.201		5 Cyl		Execution with side stoppers flame-cut type					
550	611										
1	1	011	PAAD008160	FITTING INSTRUCTIONS		DAAD006574	0.001				
3	-	010	107.422.180.200	ENGINE SIDE STOPPER		107.422.180	65.4				
-	3	009	107.376.678.200	ENGINE SIDE STOPPER		107.376.678	45				
18	18	008	107.423.297.001	PIN		107.423.297	0.001				
1	1	007	107.367.119.001	SEALING PIECE		107.367.119	0.001				
28	28	006	107.246.051.001	SPHERICAL ROUND NUT M48		107.246.051	34CrMo4 1.2				
28	28	005	107.422.174.001	CONICAL SOCKET		107.422.174	34CrMo4 SOM 435 5.1				
18	18	004	107.422.171.001	ELASTIC BOLT		107.422.171	34CrMo4 SOM 435 7.3				
10	10	003	107.422.461.001	FITTED STUD		107.422.461	34CrMo4 SOM 435 8.2				
28	28	002	107.246.021.001	ROUND NUT		M48 107.246.021	0.9				
Quantity	1	001	107.398.394.500	EPOXY RESIN		107.398.394	0.001				
PER ENGINE				SEQ NO	Material ID	Material Name	Dimension/Occ.Dimension	Standard or Drawing	Basic Material Material Standard	Weight SOR / NET	
107.422.462.201	107.422.462.200	Free space for inspection		A EAAD082040 23.06.2010							Main Dwg.
Material ID	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	
									XXXXXX Standard ISO JIS	H	

	Product 5RT-flex48T-D 5RTA48 5RTA48T 5RTA48T-B 5RTA48T-D	ENGINE SEATING/FOUNDATION FITTED STUDS
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[illegible]

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE



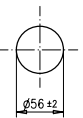
Remarks:

- *1) For the layout is taken into consideration:
 - A max. permissible static load of 0.7 N/mm².
 - Engine holding down studs fully tightened according to fitting instructions
 - Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
- *2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
- *3) Referring to a standardized chock thickness of 25 up to 60mm.
- *4) Tolerance does not apply for fitted studs.

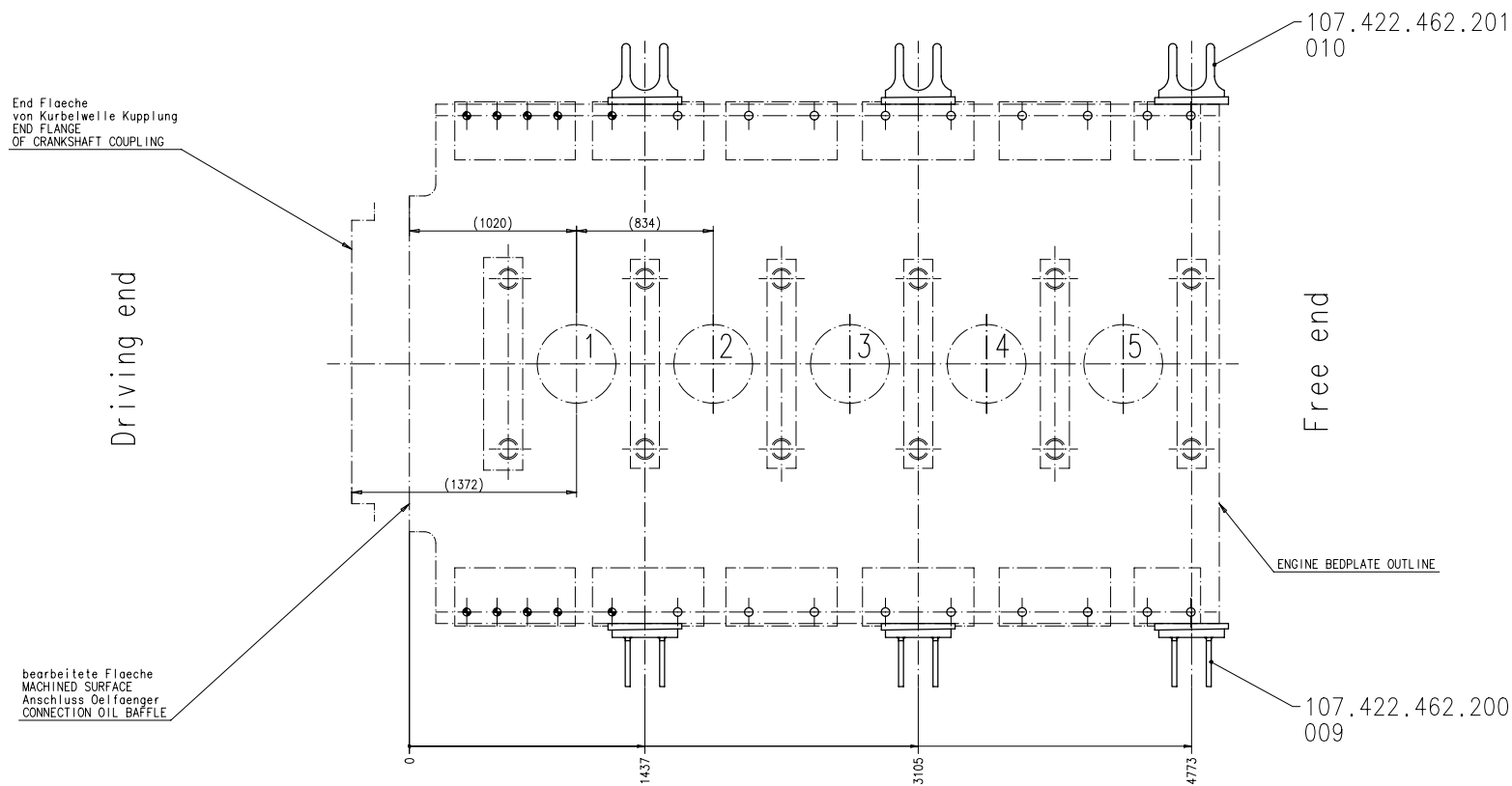
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of chock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min. (dm ³)	max.
5	4.5	3860	26948	68	162
No. of cyls.	Total No. of holes	No. of fitted studs			
5	28	10			

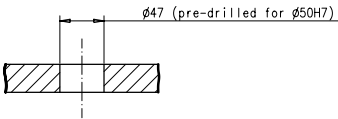
Y 1:5



B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



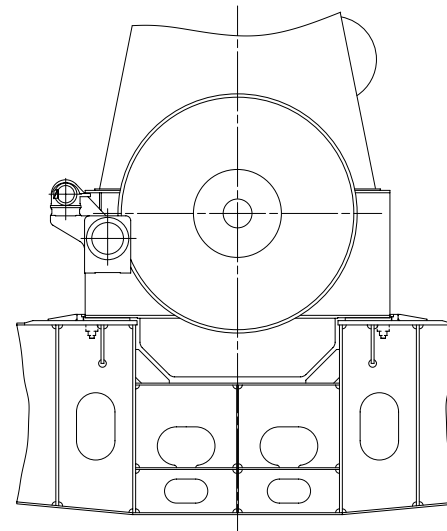
X-X 1:5





WÄRTSILÄ		ENGINE SEATING/FOUNDATION FITTED STUDS	
Scale: 1:1	Page: 2/3	Material: 107.422.462	Rev. A

[illegible]

*2) Chock thickness $30 \pm \frac{30}{5}$.
- Final chock thickness to be determined by shipyard.



Net Weight							
KGS	TONS	107.420.688.201		4 Cyl		Execution with side stoppers flame-cut type	
1	1	014	PAAD008160	FITTING INSTRUCTIONS	DAA0006574		0.001
3	-	013	107.422.180.200	ENGINE SIDE STOPPER	107.422.180		65.4
-	3	012	107.376.678.200	ENGINE SIDE STOPPER	107.376.678		45.0
22	22	011	107.423.297.001	PIN	107.423.297		0.001
10	10	010	PAAD004345	JOINT DISC	DAA0005525	Rubber750 Rubber750	0.01
1	1	009	107.367.119.001	SEALING PIECE	107.367.119		0.001
32	32	008	107.246.051.001	SPHERICAL ROUND NUT M48	107.246.051	34CrNiMo4 34CrNiMo4	1.2
22	22	007	107.422.174.001	CONICAL SOCKET	107.422.174	34CrNiMo4 SCM 435	9.1
10	10	006	107.422.173.001	CONICAL SOCKET	107.422.173	34CrNiMo4 SCM 435	7.4
22	22	005	107.422.171.001	ELASTIC BOLT	107.422.171	34CrNiMo4 SCM 435	7.3
10	10	004	107.422.170.001	ELASTIC BOLT	107.422.170	34CrNiMo4 SCM 435	7.8
10	10	003	107.422.172.001	SLEEVE	107.422.172	34CrNiMo4 SCM 435	13.8
32	32	002	107.246.021.001	ROUND NUT	M48 107.246.021		0.9
1	1	001	107.398.394.500	EPOXY RESIN	107.398.394		0.001
Quantity		STD NO.	Material ID	Material Name	Dimension/Occ.Dimension	Standard or Drawing	Basic Material / Material Standard
PER ENGINE		Weight					Weight GR./NET
107.420.688.201	TON	From specification	A	B	C	D	H
107.420.688.201	TON		Number	Date date	Number	Date date	

		Product GRT-f1ex48T-D 6RTA48 6RTA48T 6RTA48T-B 6RTA48T-D		ENGINE SEATING/FOUNDATION THRUST SLEEVES			
Units mm kg		IDE 		Basic Material		Net Weight	
date	25.05.2010	jbo029 Baumann		Scale	1:10	Size A1	Page 1/3
chek				Design Group		Material	
Appr	29.09.2009	jbo029 Baumann		9710	Drawing ID	107.420.688	Rev. B

Technical drawing of a crankshaft assembly, showing dimensions and labels. The drawing includes a top view and a side view. The top view shows the crankshaft with six crankpins labeled 1 through 6. The side view shows the crankshaft with dimensions for the crankpins and the crankshaft itself. The drawing is labeled with dimensions in millimeters (mm) and includes a scale of 1:1.

Labels and dimensions:

- End Flaeche von Kurbelwelle Kupplung (END FLANGE OF CRANKSHAFT COUPLING)
- Driving end
- Free end
- ENGINE BEDPLATE OUTLINE
- 001
- 116, 161, 735, 105, 680, 134, 680, 154, 680, 154, 680, 154, 680, 144, 405, (114)
- 5615
- ca. 15
- 335
- 1515 ±1
- 3170
- 1020
- 834
- 1372
- 350 ±1, 535 ±1, 905 ±1, 1237 ±1, 1637 ±1, 2071 ±1, 2471 ±1, 2905 ±1, 3305 ±1, 3739 ±1, 4139 ±1, 4571 ±1, 4973 ±1, 5337 ±1, 5602 ±1
- 0
- bearbeitete Flaeche (MACHINED SURFACE)
- Anschluss Oilraenger (CONNECTION OIL BAFFLE)

No. of cyls.	Max. perm. mean surface pressure of chock #2)	Total chock length (mm)	Total net chocking area (cm ²)	Required quantity of epoxy resin material #3)	
	(N/mm ²)			min. (kg)	max. (kg)
6	4.5	4540	30444	77	183
No. of cyls.	Total No. of holes	No. of thrust sleeves			
6	32	10			

- *1) For the layout is taken into consideration:
 - A max. permissible static load of 0.7 N/mm²
 - Engine holding down studs fully tightened according to fitting instructions
 - Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
- *2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
- *3) Referring to a standardized chock thickness of 25 up to 60mm.

End Flaeche von Kurbelwelle Kupplung
END FLANGE OF CRANKSHAFT COUPLING

Driving end

Free end

ENGINE BEDPLATE OUTLINE

bearbeitete Flaeche
MACHINED SURFACE
Anschluss Gelfoenger
CONNECTION OIL BAFFLE


107.420.688.201 013

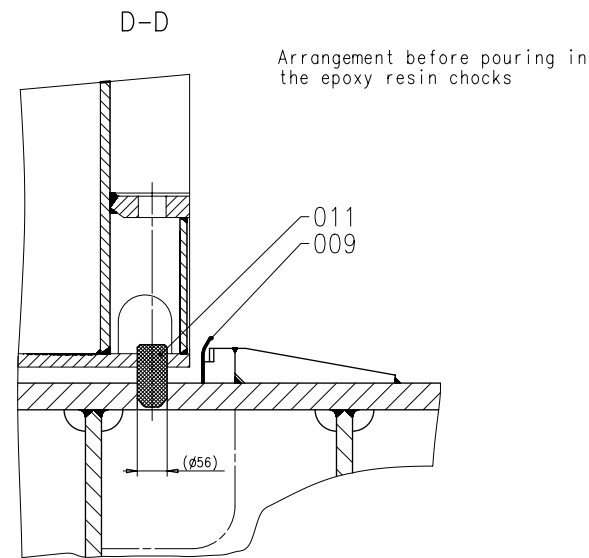
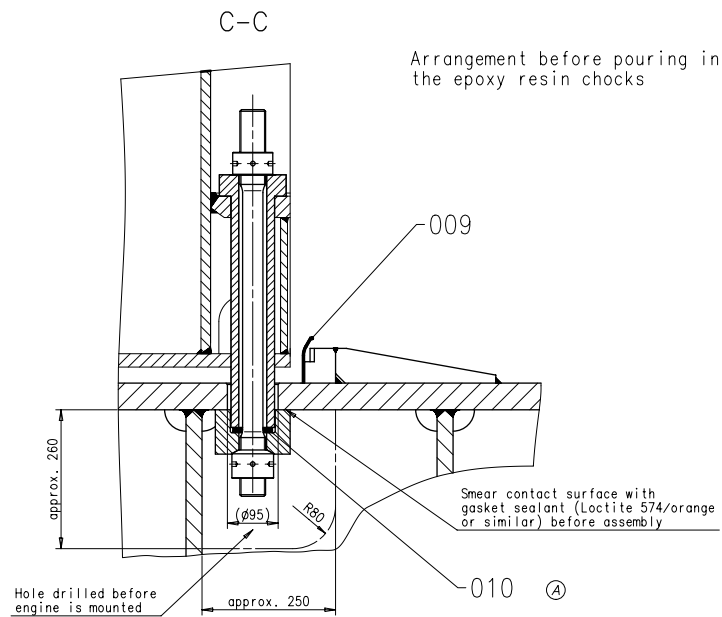
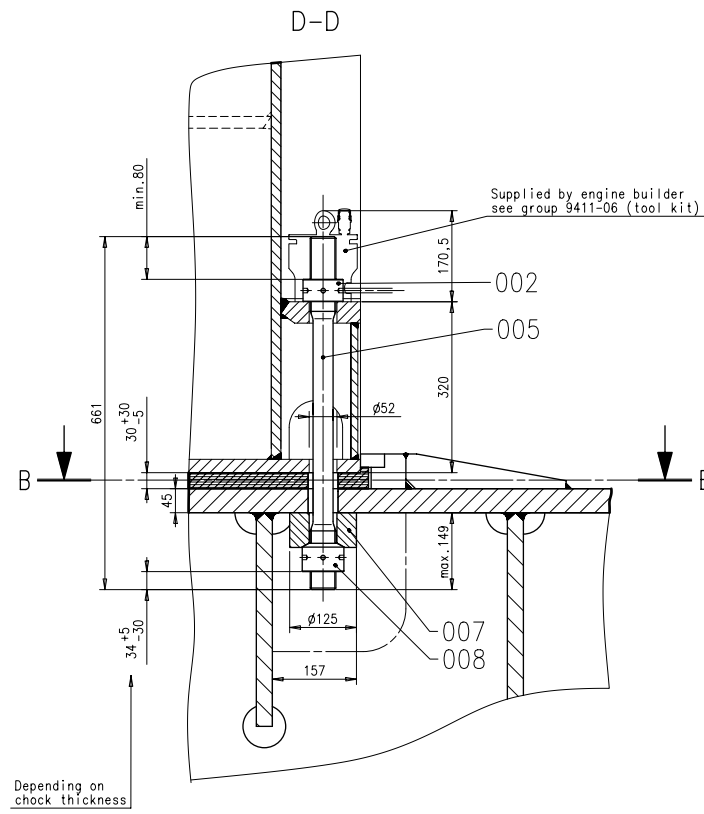
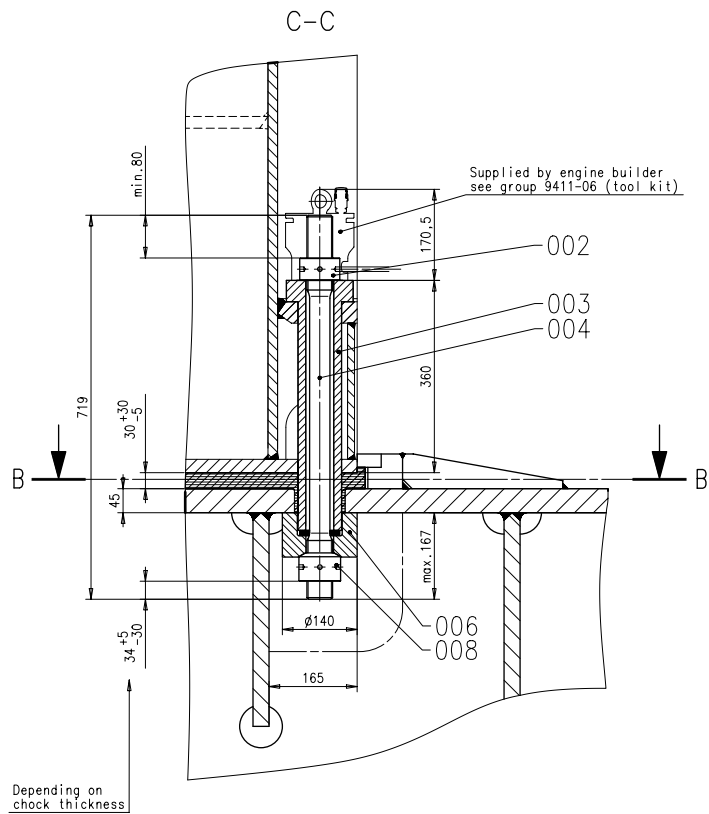
107.420.688.200 012

Dimensions: 1020, 834, 1372, 1437, 3105, 4773

Labels: 1, 2, 3, 4, 5, 6



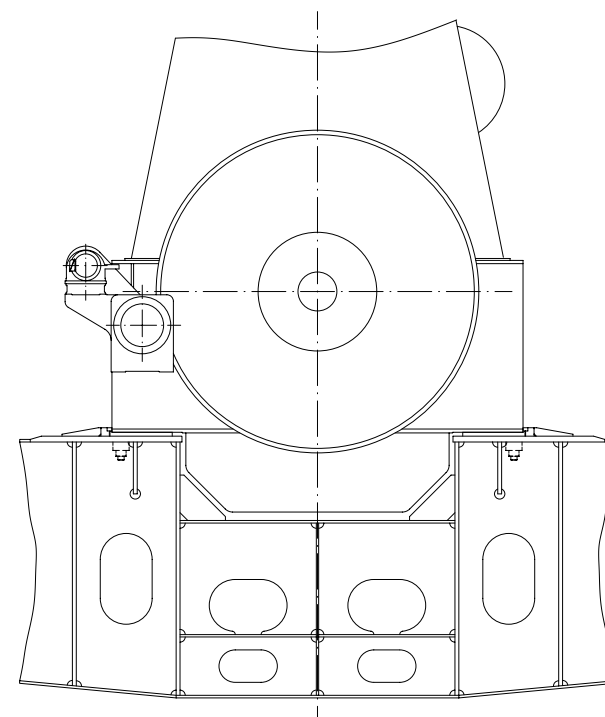
Type Part	A (XXXXXXXX) 19.25.2010				A (XXXXXXXX) 26.01.2014				S-Code XXXXXX Standard ISO JIS		Rev. Part H		
	Number	Draw date	Number	Draw date	Number	Draw date	Number	Draw date					
 ENGINE SEATING/FOUNDATION THRUST SLEEVES													
Qty/Type	Item No.	IDE	Rev.		Scale		1:15	Size	AD	Page	2/2	Material	Net Weight
001	25.05.2010	250209	Brunner		Drawn								
002	29.01.2009	250209	Brunner		Drawn								
								9710	107.420.688				Rev.



Modell: Free space for I.C.		Q-Code XXXXX		Main Draw. H	
Number		Drawn date		Number	
25.05.2010		jba029 Baumann		26.01.2016	
Basic Material		Scale 1:15		Page 3/3	
WIN G3		Product: 6RT-flex48T-D		ENGINE SEATING/FOUNDATION THRUST SLEEVES	
6RTA48		6RTA48T		6RTA48T-B	
6RTA48T-D		6RTA48T-D		6RTA48T-D	
Units mm kg IDE		Material		Net Weight	
Made 25.05.2010		Design Group		Material ID	
Chkd		Appd 29.09.2009		Drawing ID 107.420.688	
Surface Protection SEE GROUP 0344		TOLERANCING PRINCIPLE ISO8015		GENERAL TOLERANCES ACCORDING TO ISO2768-mK	
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.		Rev. B		Rev. B	

*2) Chock thickness 30 ± 5^{30} .
- Final chock thickness to be determined by shipyard.

This technical drawing shows a cross-section of a ship's hull. The hull is divided into several vertical sections by ribs. The keel is at the bottom, and the bilge keel runs along the side. The drawing is labeled with A, B, C, D, and E. A is at the top, B is at the bottom, C is on the left, D is on the right, and E is at the bottom right. The drawing shows the internal structure of the hull, including the keel, ribs, and various internal components like the bilge keel and stringer.



SURFACE PROTECTION SEE GROUP 0344	Made	26.05.2010	jbo29 Baumann	Scale	1:10	Size	A1	Page	1/3	Material ID		Rev.	
TOLERANCING PRINCIPLE ISO8015	Chkd			Design Group		Drawing ID	107.422.463						
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	16.07.2010			9710							A	

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

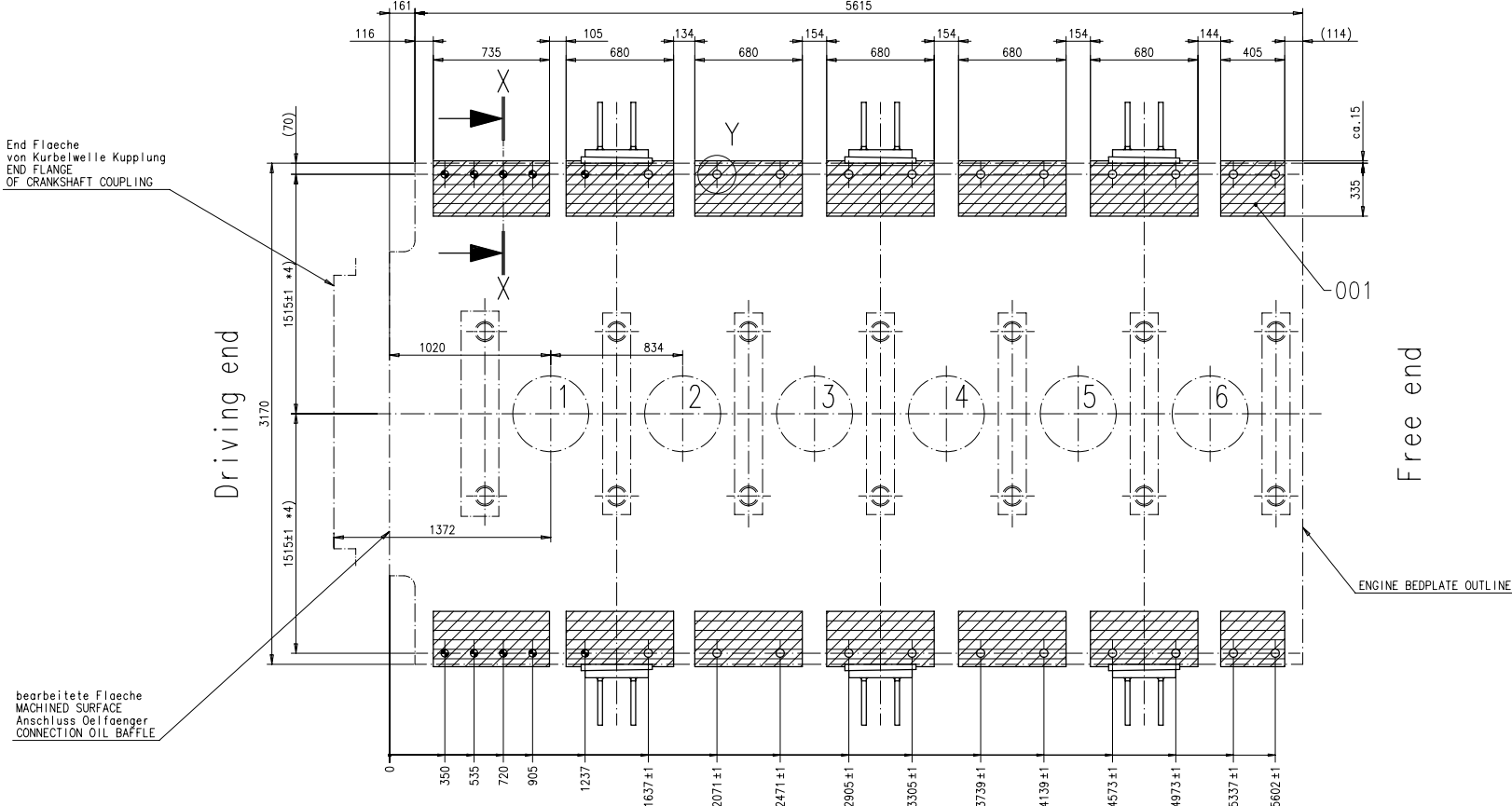


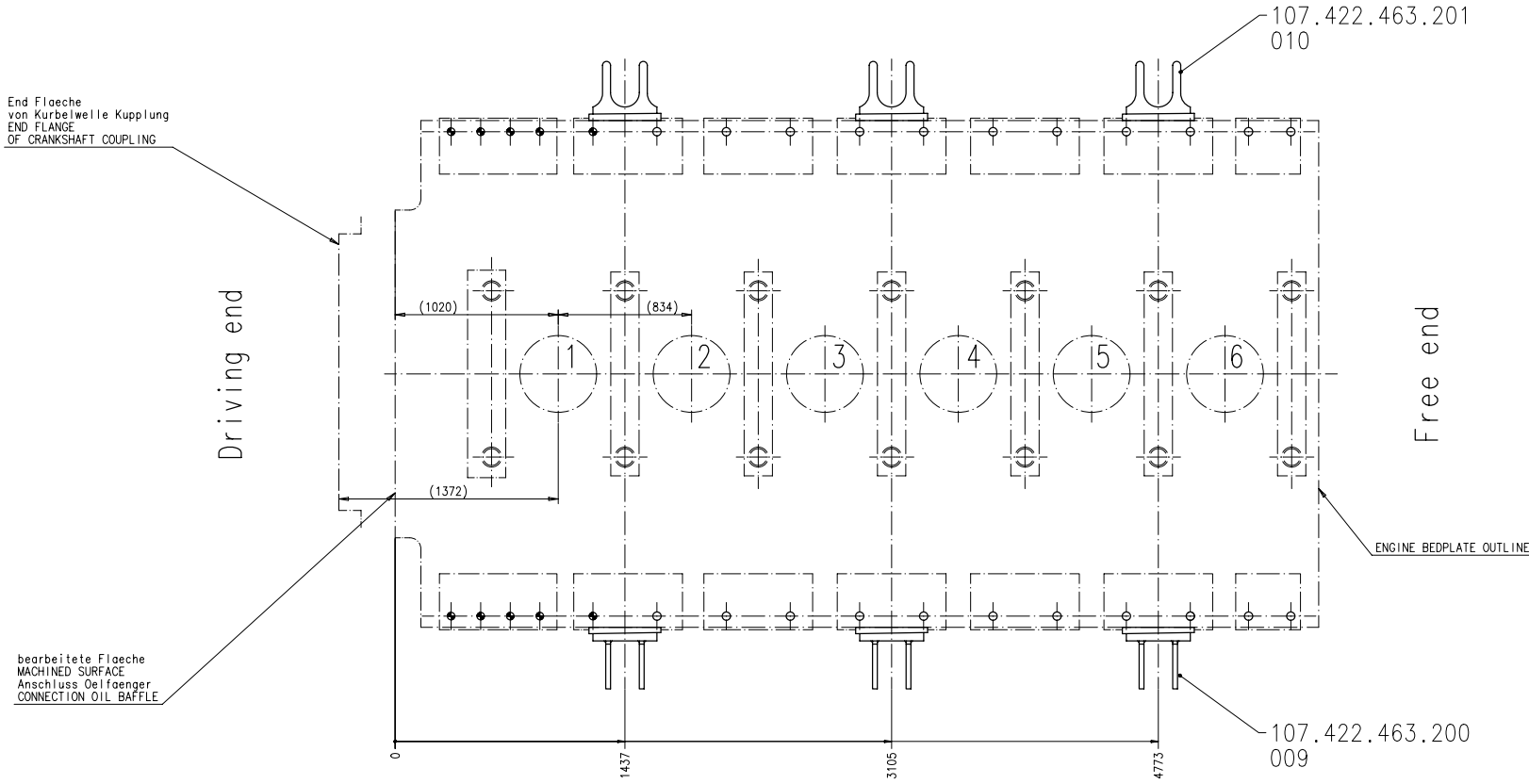
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of chock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min.	max.
6	4.5	4540	30444	77	183
No. of cyls.	Total No. of holes	No. of fitted studs			
6	32	10			

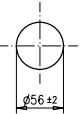
Remarks:

- *1) For the layout is taken into consideration:
- A max. permissible static load of 0.7 N/mm².
- Engine holding down studs fully tightened according to fitting instructions
- Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
- *2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
- *3) Referring to a standardized chock thickness of 25 up to 60mm.
- *4) Tolerance does not apply for fitted studs.

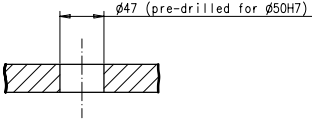
B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



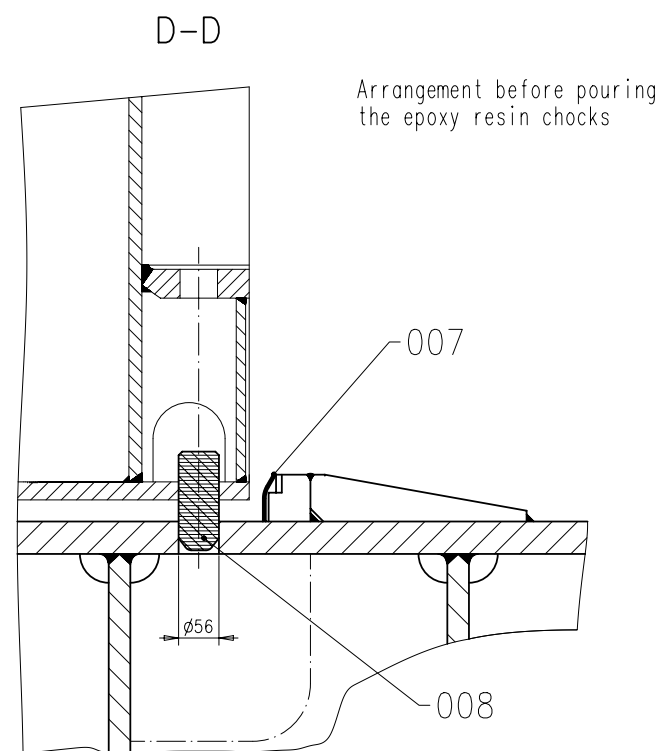
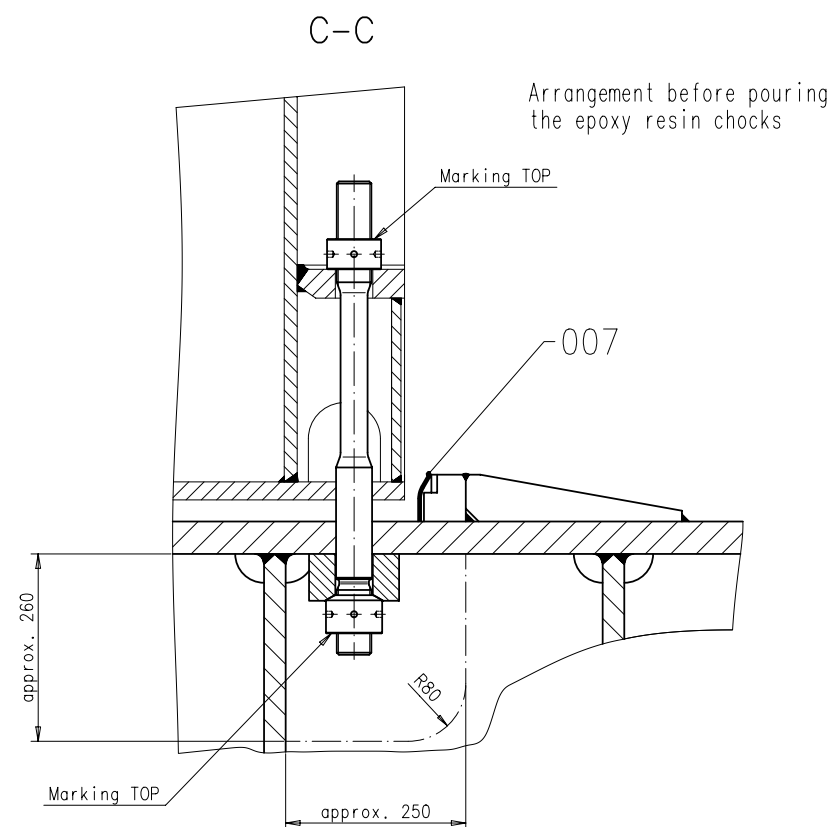
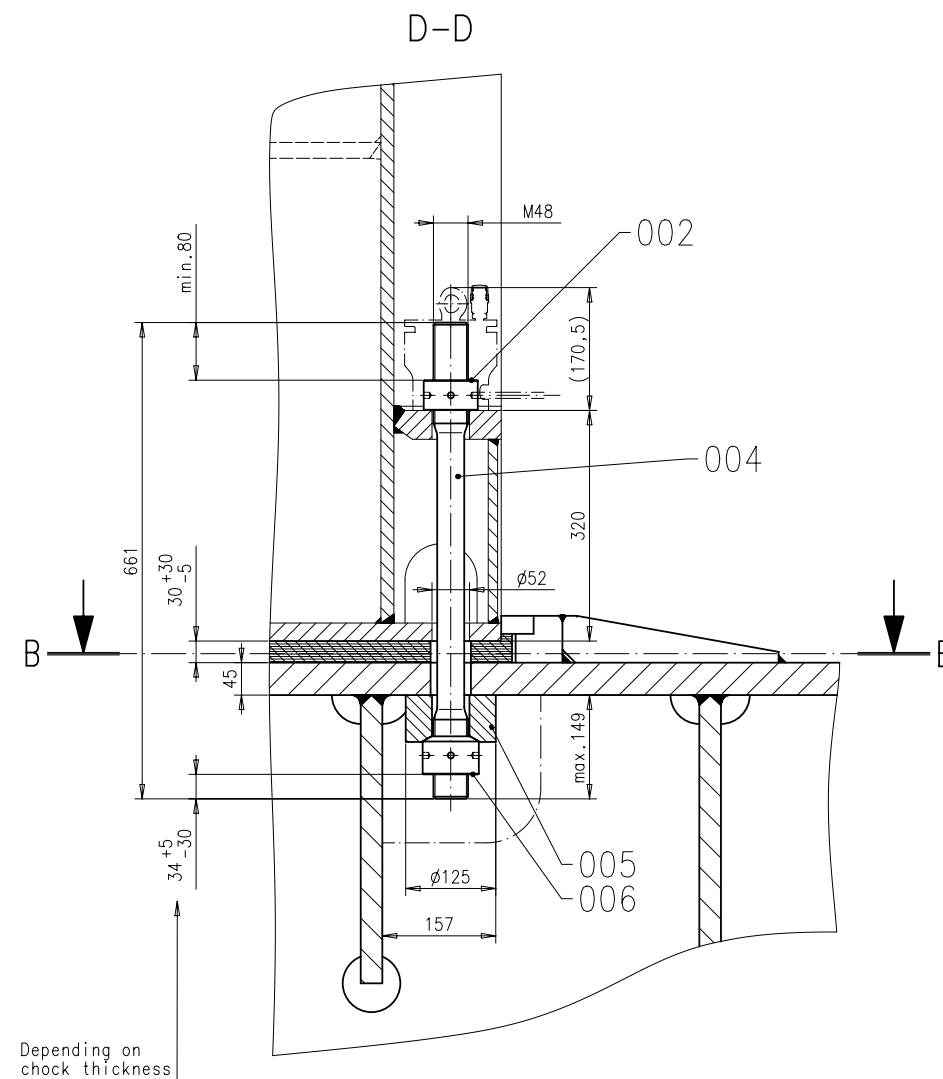
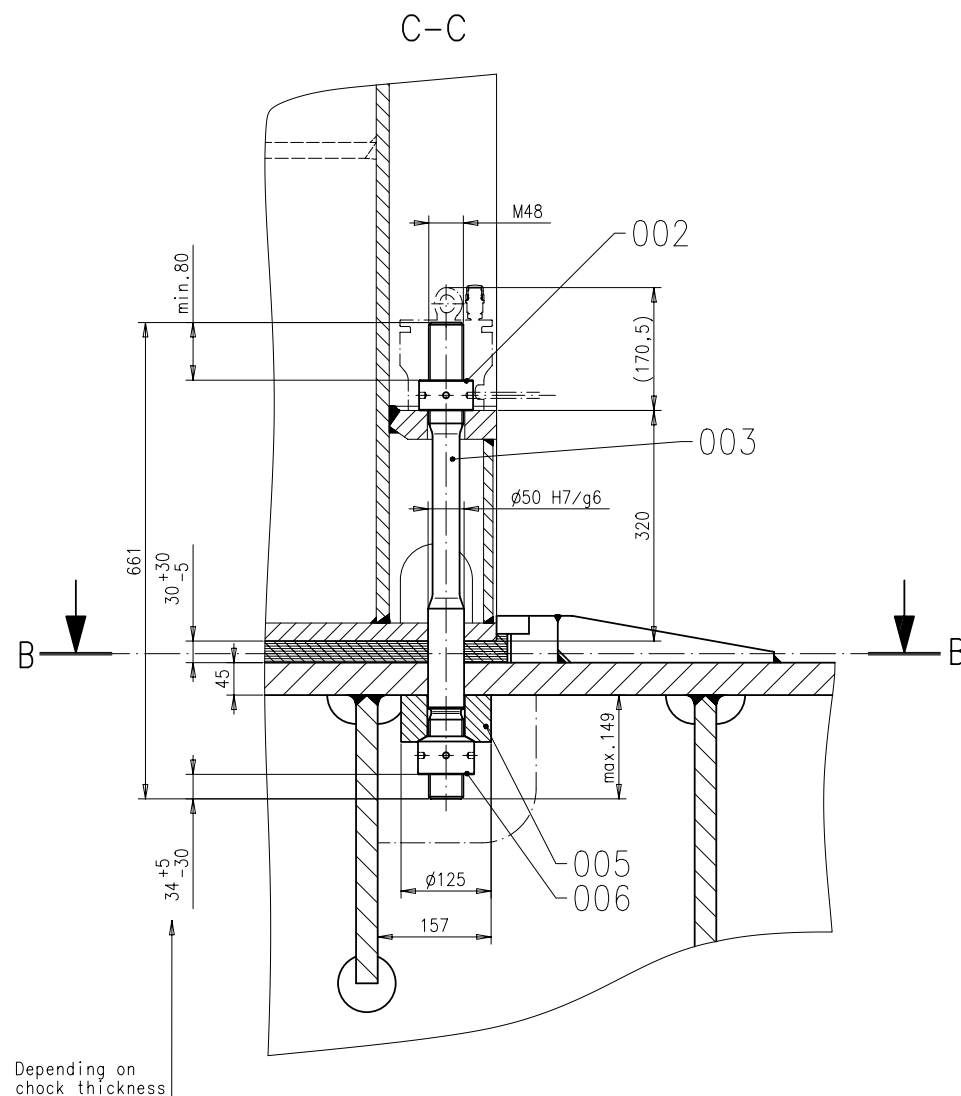
Y 1:5



X-X 1:5



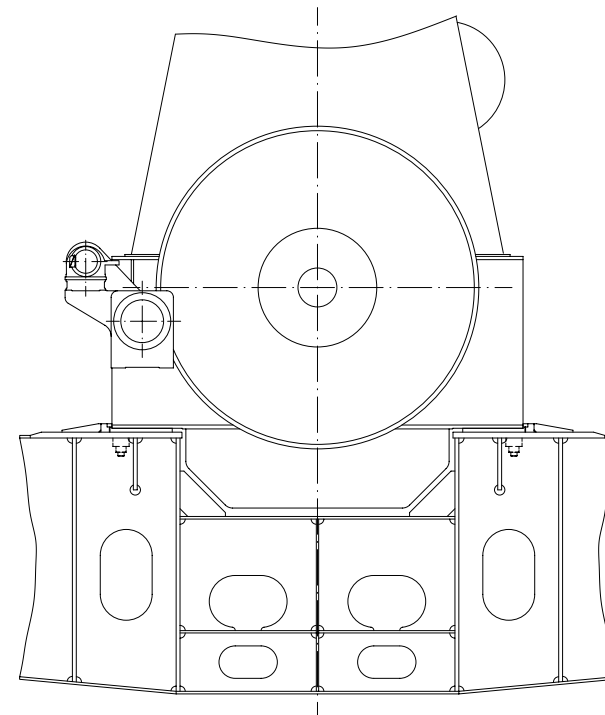
WÄRTSILÄ		Product 6RT-flex48T-D 6RTA48 6RTA48T 6RTA48T-B 6RTA48T-D		ENGINE SEATING/FOUNDATION FITTED STUDS	
Scale	1:14	Page	2/3	Material	107.422.463
Design Group	9710	Drawing ID	107.422.463	Rev.	A



Free space for file		Q-Code XXXXX		Main Draw.	
Material		Standard		ISO JIS	
A		EAD082040		23.06.2010	
Number	Drawn date	Number	Drawn date	Number	Drawn date
Product		ENGINE SEATING/FOUNDATION		Fitted Studs	
WÄRTSILÄ		6RT-flex48T-D		6RTA48	
		6RTA48T		6RTA48T-B	
		6RTA48T-D			
Units	mm kg	IDE	Basic Material	Net Weight	
SURFACE PROTECTION SEE GROUP 0344		Made		26.05.2010 jba029 Baumann	
TOLERANCING PRINCIPLE ISO8015		Chkd		Design Group	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd		16.07.2010	
		Scale		1:14	
		Size		A1	
		Page		3/3	
		Material ID		107.422.463	
		Rev.		A	

[illegible]

*2) Chock thickness 30 ± 5 .
- Final chock thickness to be determined by shipyard.



SURFACE PROTECTION SEE GROUP 0344	Make Date	26.05.2010	Drawn by <i>jbo29 Baumann</i>	Scale 1:10	Size A1	Page 1/3	Material ID	Rev.	A
TOLERANCING PRINCIPLE ISO8015	Chkd			Design Group 9710	Drawing ID 107.420.689			Rev. A	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd	16.07.2010							

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

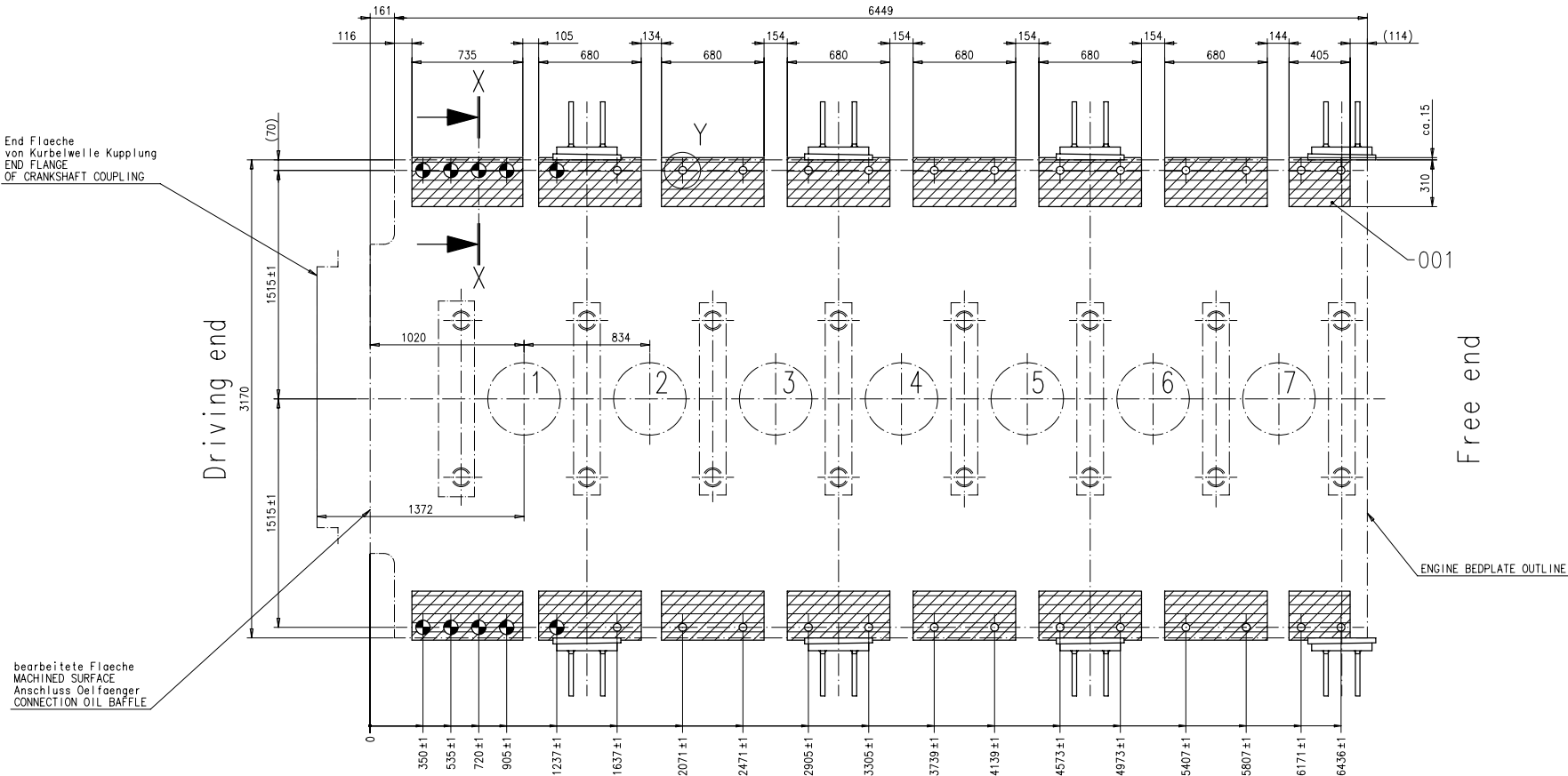


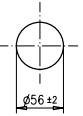
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of cchock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min. (dm ³)	max.
7	4.5	5220	32489	82	195
No. of cyls.	Total No. of holes	No. of thrust sleeves			
7	36	10			

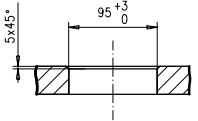
Remarks:

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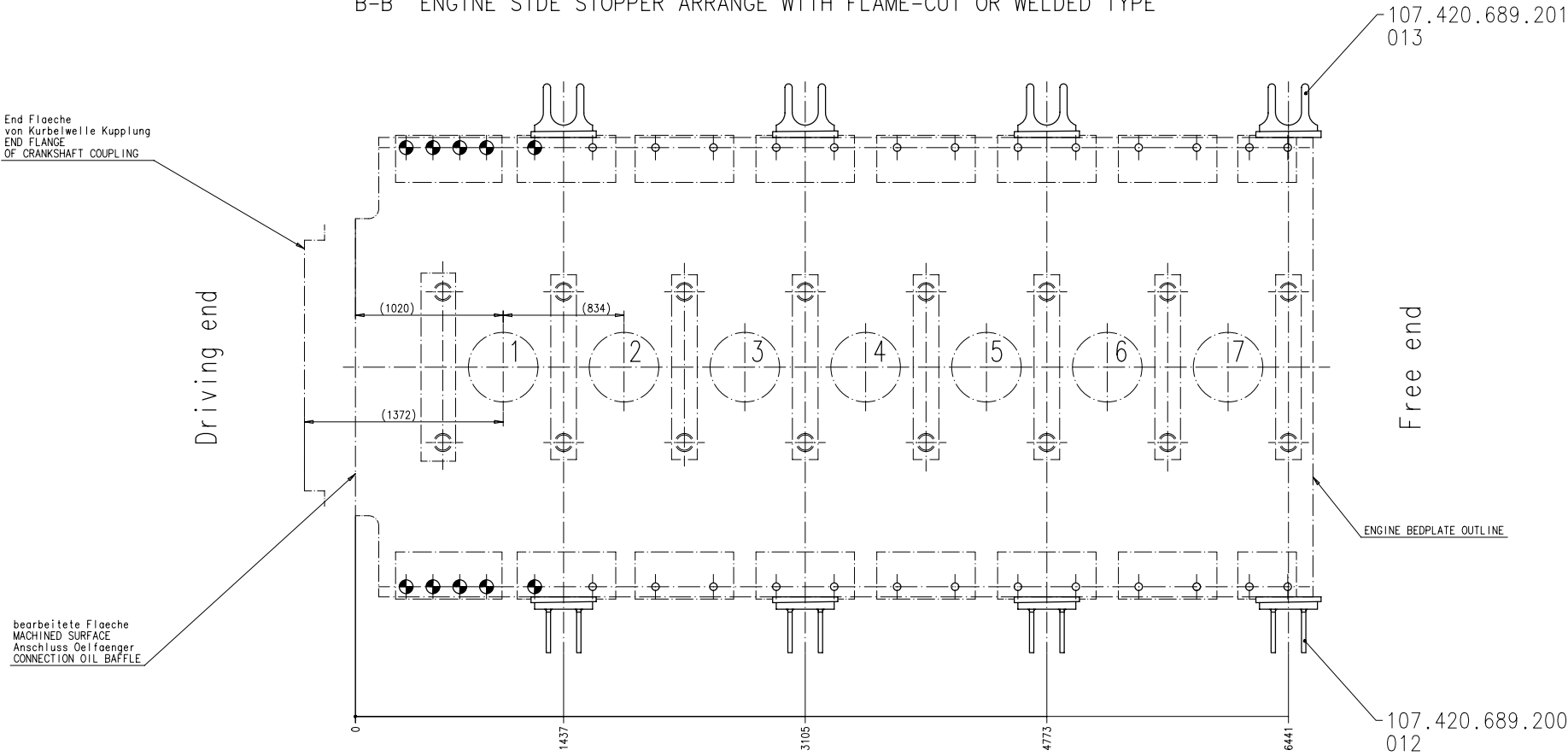
Y 1:5



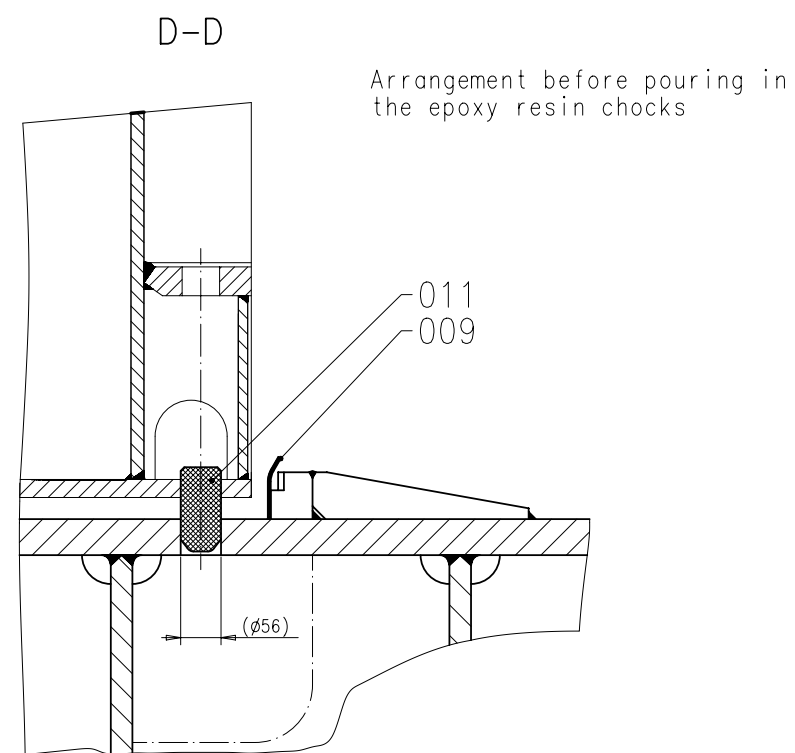
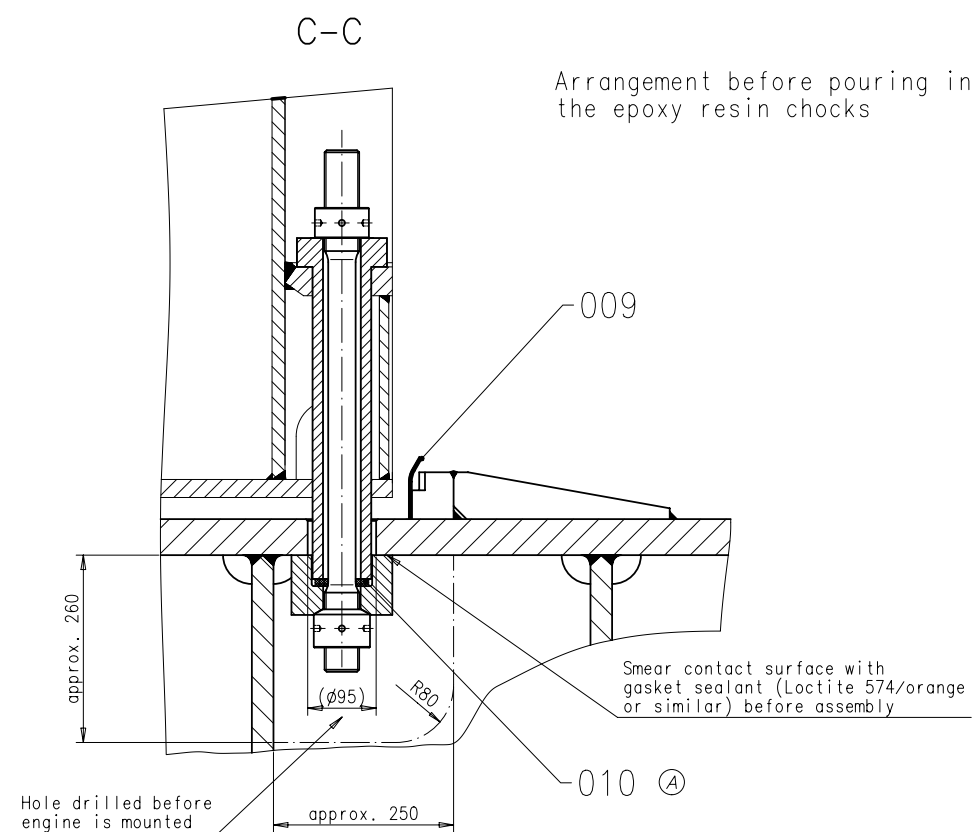
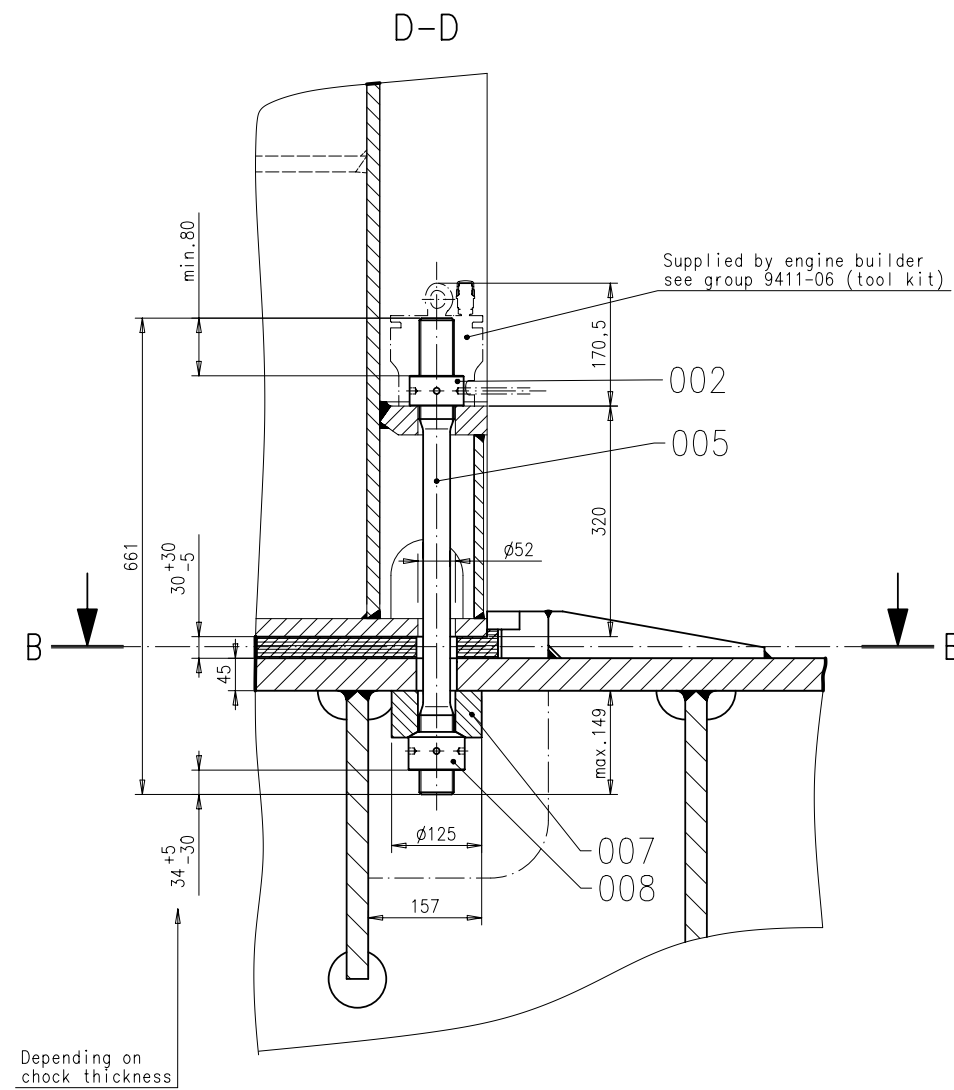
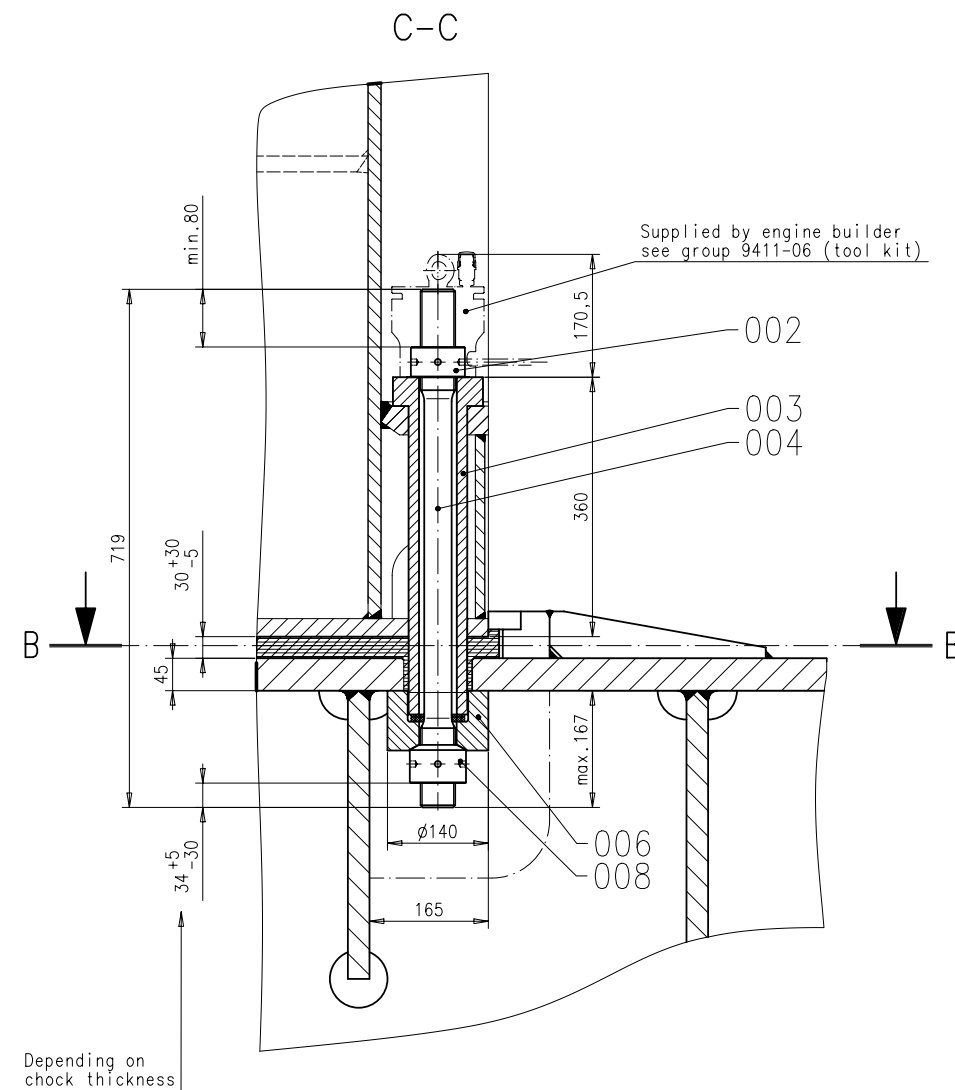
X-X 1:5



B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



WARTSILA		Product 7RT-flex48T-D 7RTA48 7RTA48T 7RTA48T-B 7RTA48T-D		ENGINE SEATING/FOUNDATION THRUST SLEEVES	
Scale: 1:14	Page: 2/3	Material: 10	Rev: A	107.420.689	

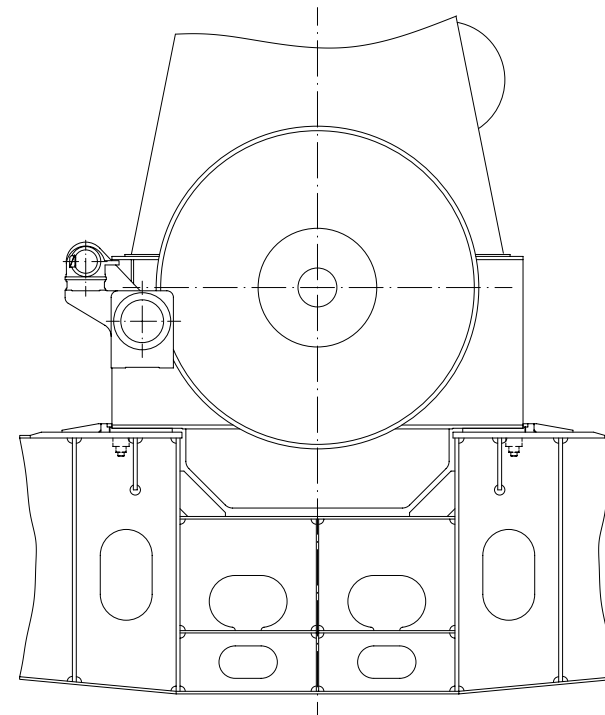


Free space for file		Q-Code XXXXX		Main Drw. H	
Material		Standard ISO JIS			
EAAD082040	23.06.2010				
Number	Drawn date	Number	Drawn date	Number	Drawn date
Product		ENGINE SEATING/FOUNDATION THRUST SLEEVES			
7RT-flex48T-D					
7RTA48					
7RTA48T					
7RTA48T-B					
7RTA48T-D					
Units	mm kg	IDE	Basic Material	Net Weight	
SURFACE PROTECTION SEE GROUP 0344		Scale	1:14	Size	A1
TOLERANCING PRINCIPLE ISO8015		Page	3/3	Material	10
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Design Group	9710	Drawing ID	107.420.689
Appd 16.07.2010				Rev.	A

[illegible]

- *1) Height to be determined by shipyard. For dimensions layout of lub. oil drain tank and drains refer to design group 9722.
- *2) Chock thickness $30 \pm_{-5}^{+30}$.
 - Final chock thickness to be determined by shipyard.

Net Weight					107.422.464.201		7 Cyl		Execution with side stoppers flame-cut type	
793	711									
1	1	011	PAAD008160		FITTING INSTRUCTIONS		DAAD006574		0.001	
4	-	010	107.422.180.200		ENGINE SIDE STOPPER		107.422.180		65.4	
-	4	009	107.376.678.200		ENGINE SIDE STOPPER		107.376.678		45	
26	26	008	107.423.297.001		PIN		107.423.297		0.001	
1	1	007	107.367.119.001		SEALING PIECE		107.367.119		0.001	
36	36	006	107.246.051.001		SPHERICAL ROUND NUT M48		107.246.051		34CrMo4 1.2	
36	36	005	107.422.174.001		CONICAL SOCKET		107.422.174		34CrMo4 SOM 435 5.1	
26	26	004	107.422.171.001		ELASTIC BOLT		107.422.171		34CrMo4 SOM 435 7.3	
10	10	003	107.422.461.001		FITTED STUD		107.422.461		34CrMo4 SOM 435 8.2	
36	36	002	107.246.021.001		ROUND NUT		107.246.021		M48 0.9	
1	1	001	107.398.394.500		EPOXY RESIN		107.398.394		0.001	
Quantity			SEQ NO		Material ID		Material Name		Dimension/Occ.Dimension	
PER ENGINE			Material ID		Material Name		Dimension/Occ.Dimension		Standard or Drawing	
107.422.464.201			Free space for material		Basic Material		Material Standard		Weight GP/AET	
107.422.464.200			Q-Code		XXXXXX		Main Drw.		H	
Material ID			Standard ISO JIS							
A			EAAD082040		23.06.2010					
Number			Draw date		Number		Draw date		Number	



B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

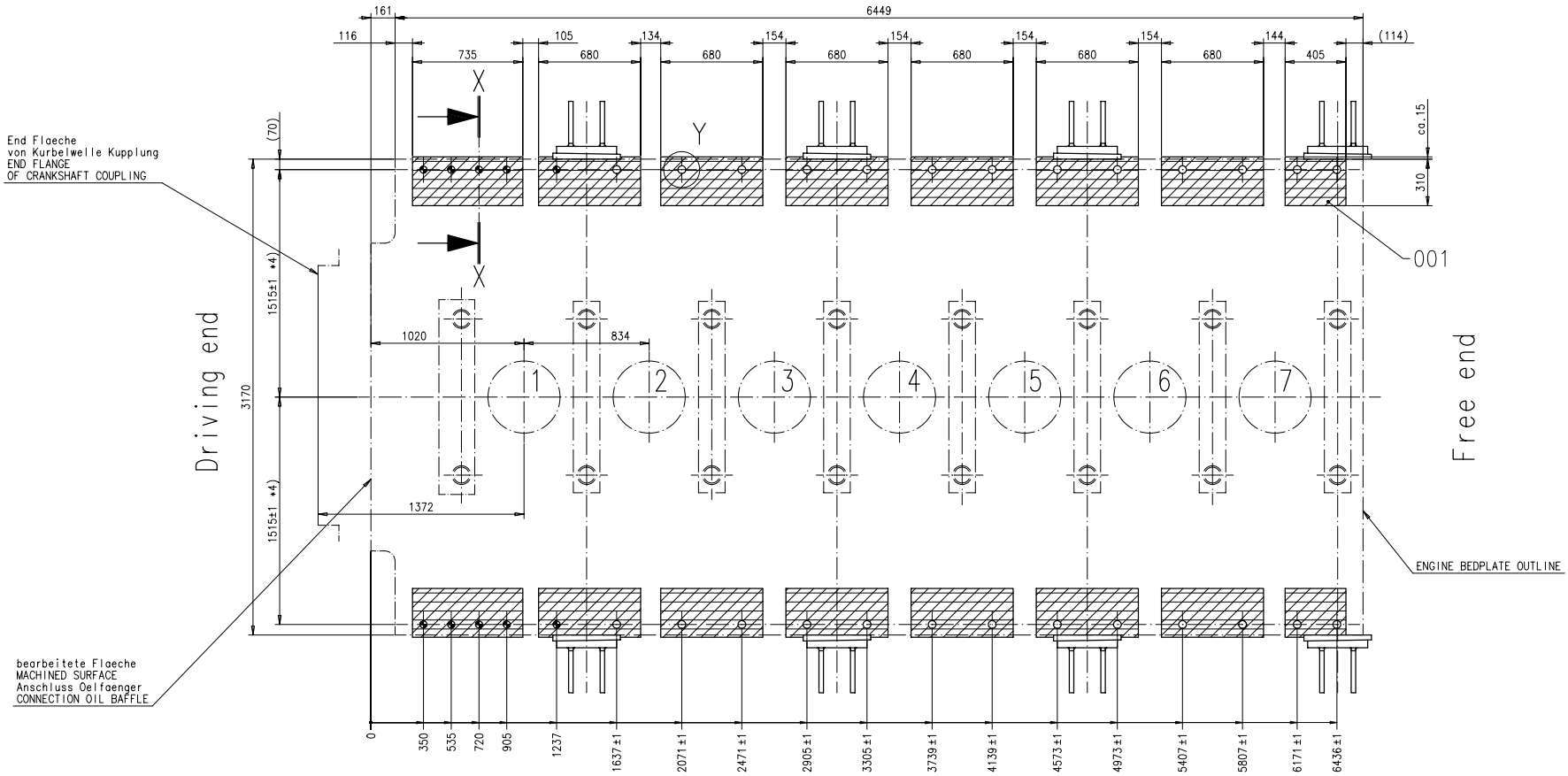


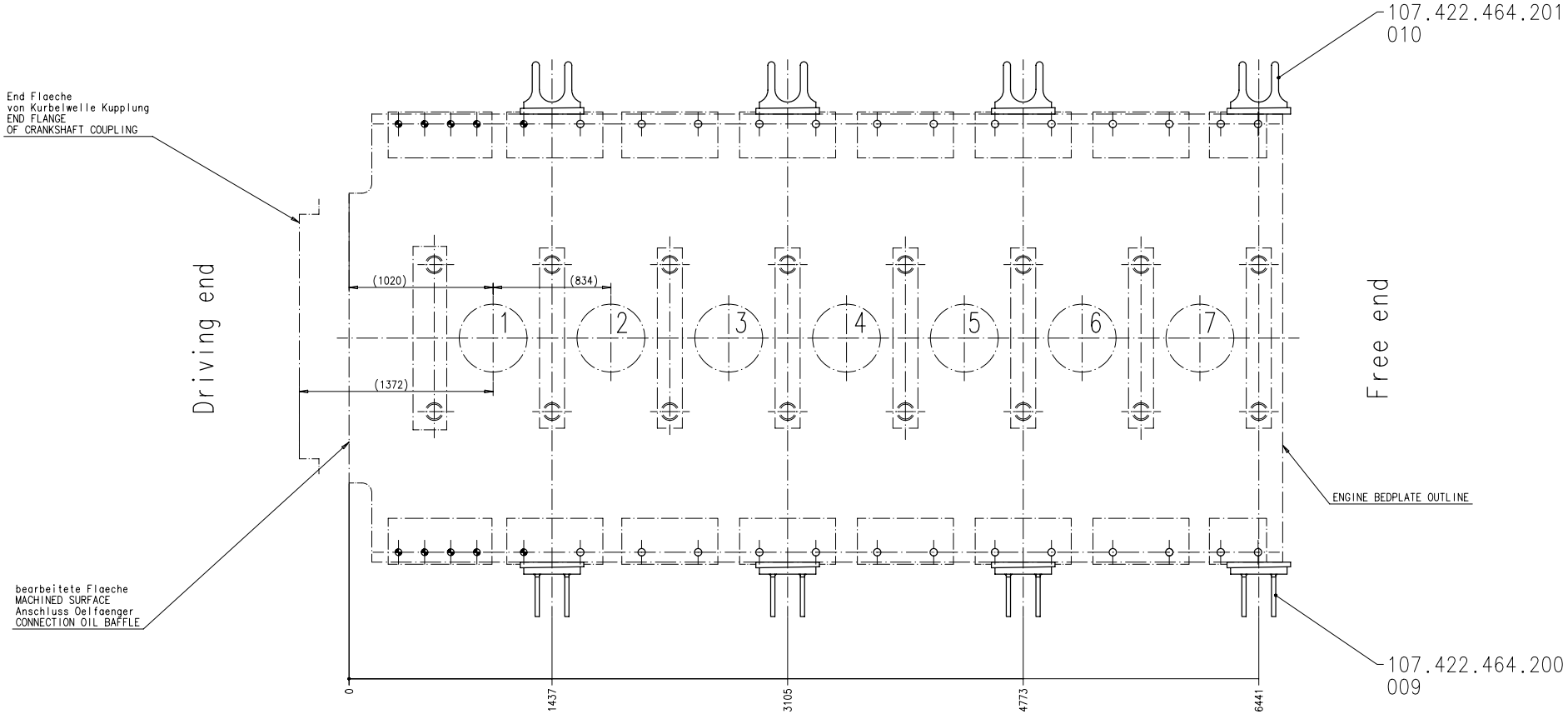
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of cchock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min.	max.
7	4.5	5220	32489	82	195
No. of cyls.	Total No. of holes	No. of fitted studs			
7	36	10			

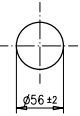
Remarks:

- *1) For the layout is taken into consideration:
 - A max. permissible static load of 0.7 N/mm².
 - Engine holding down studs fully tightened according to fitting instructions
 - Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
- *2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
- *3) Referring to a standardized chock thickness of 25 up to 60mm.
- *4) Tolerance does not apply for fitted studs.

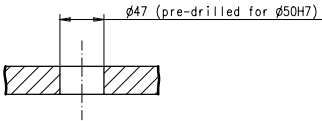
B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



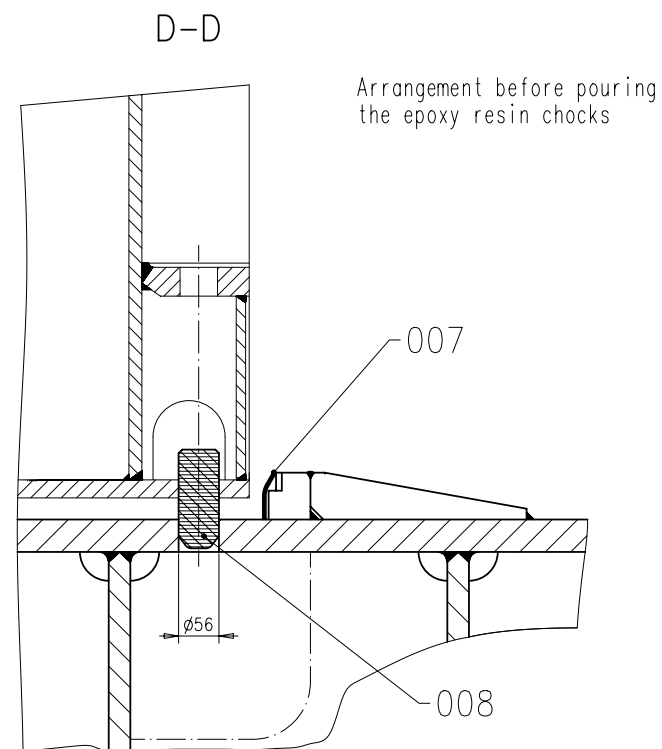
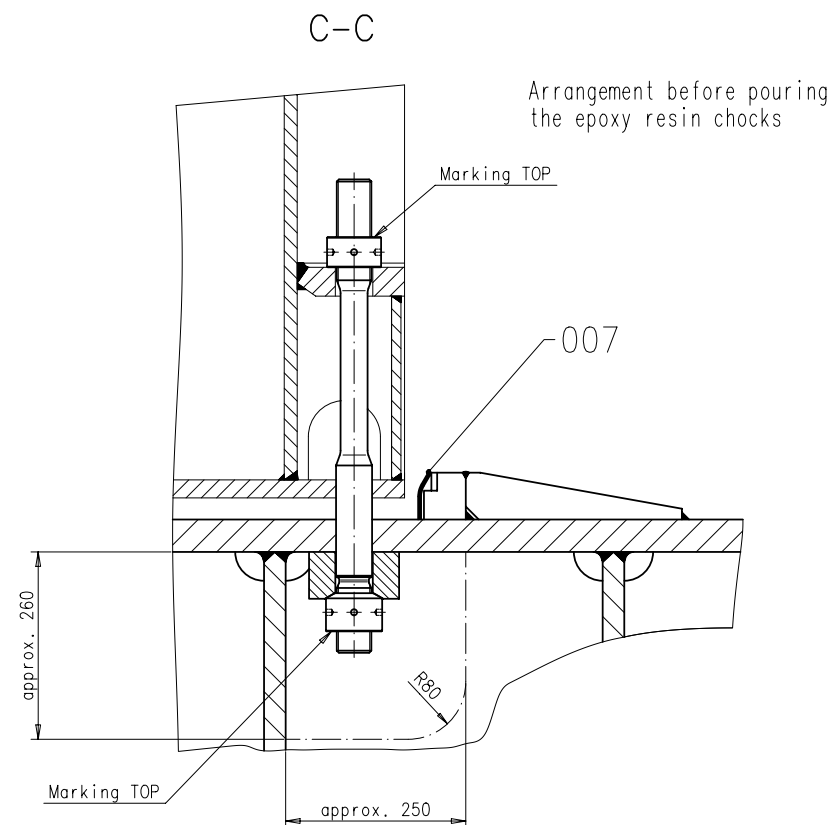
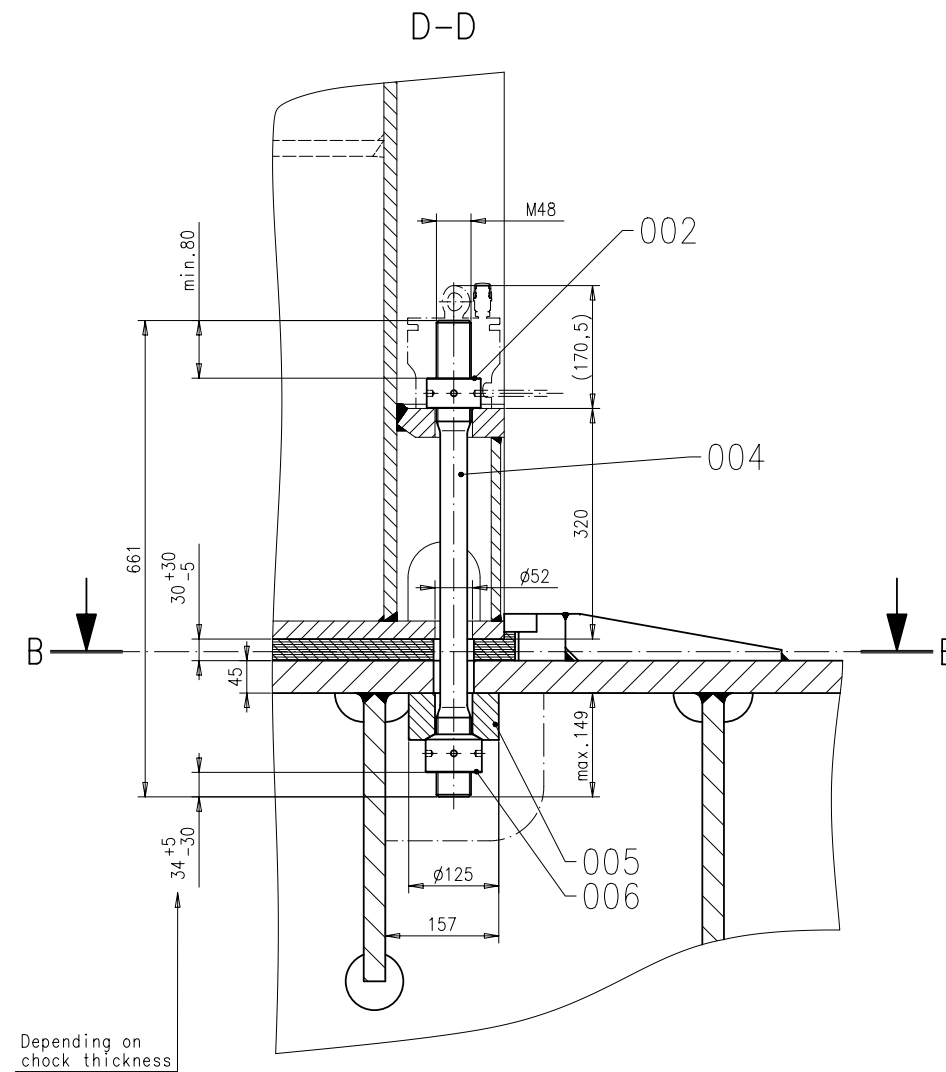
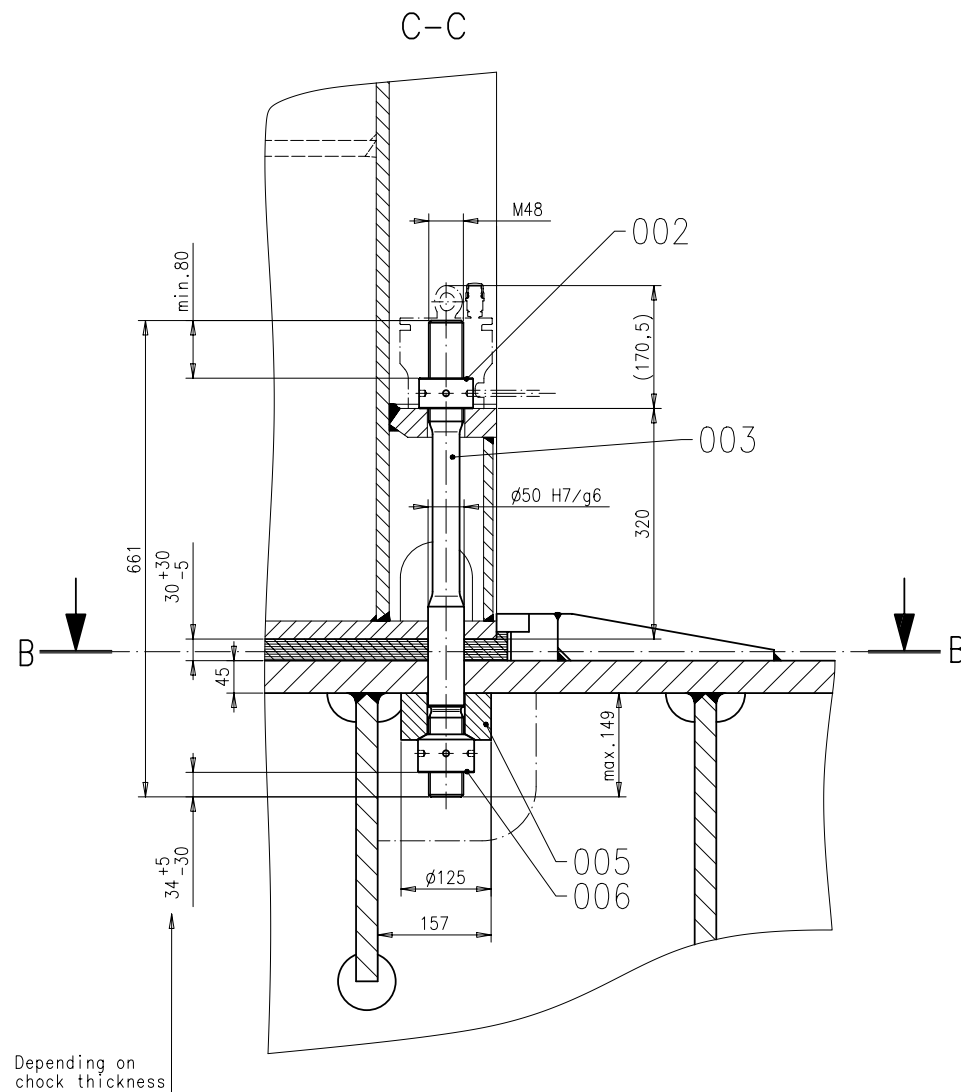
Y 1:5



X-X 1:5

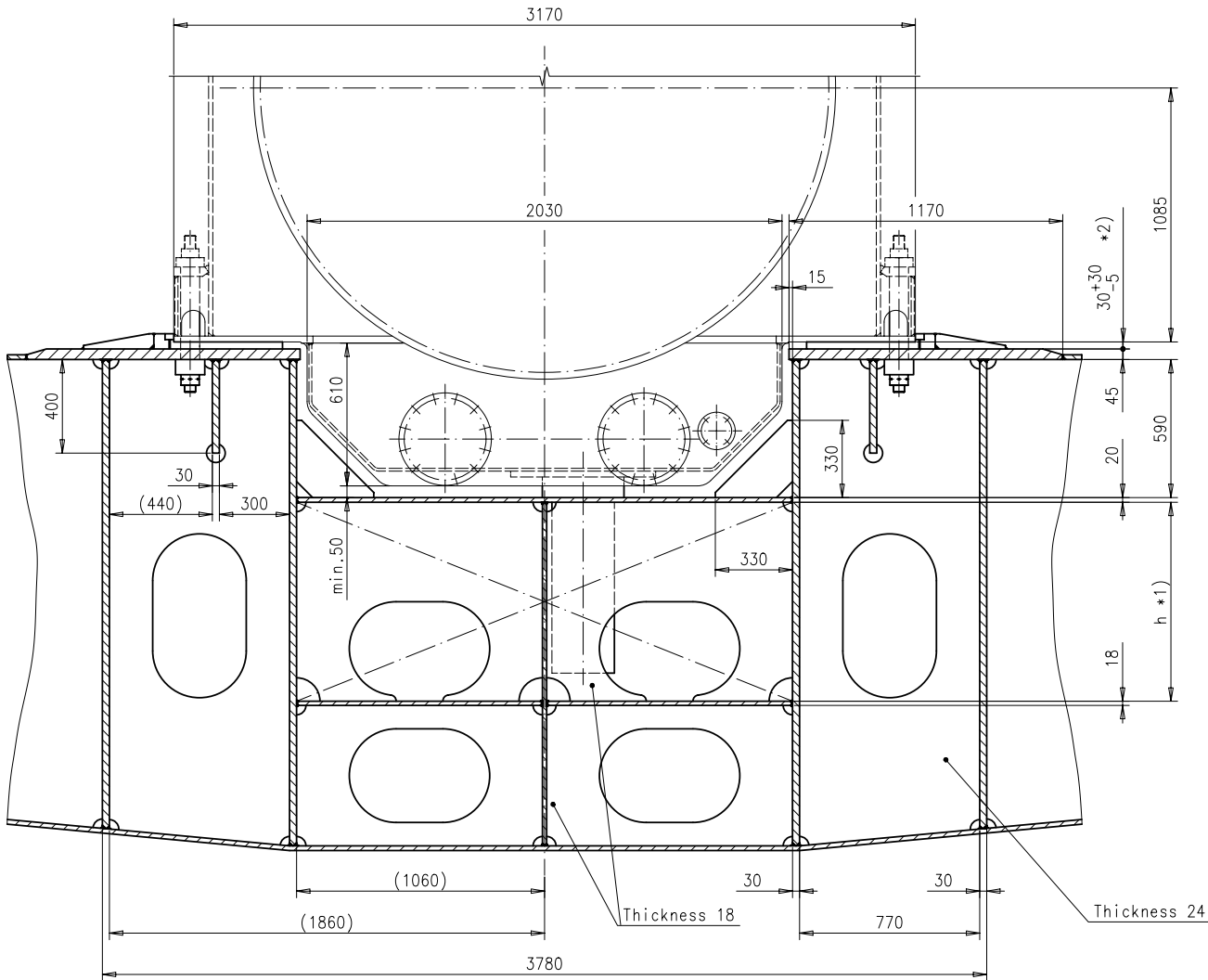


Wärtsilä		Product 7RT-flex48T-D 7RTA48 7RTA48T 7RTA48T-B 7RTA48T-D		ENGINE SEATING/FOUNDATION FITTED STUDS	
Scale 1:14	Page 2/3	Material 10	Rev. A	Drawing ID 107.422.464	
SURFACE PROTECTION SEE GROUP 0344		TOLERANCING PRINCIPLE ISO8015		GENERAL TOLERANCES ACCORDING TO ISO2768-mS	
Date 26.05.2010		Drawn 16.07.2010		Checked 16.07.2010	
Scale 1:14		Page 2/3		Material 10	
Design Group 9710		Drawing ID 107.422.464		Rev. A	



Free space for file		Q-Code XXXXX		Main Draw.	
Material		Standard		ISO JIS	
A		EAD082040		23.06.2010	
Number	Drawn date	Number	Drawn date	Number	Drawn date
Product		ENGINE SEATING/FOUNDATION		Fitted studs	
7RT-flex48T-D		7RTA48		7RTA48T	
7RTA48T-B		7RTA48T-D			
Units	mm kg	IDE	Basic Material	Net Weight	
SURFACE PROTECTION SEE GROUP 0344		Made		26.05.2010 jba029 Baumann	
TOLERANCING PRINCIPLE ISO8015		Chkd		Design Group	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd		16.07.2010	
Scale 1:14		Size A1		Page 3/3	
Drawing ID		107.422.464		Rev. A	

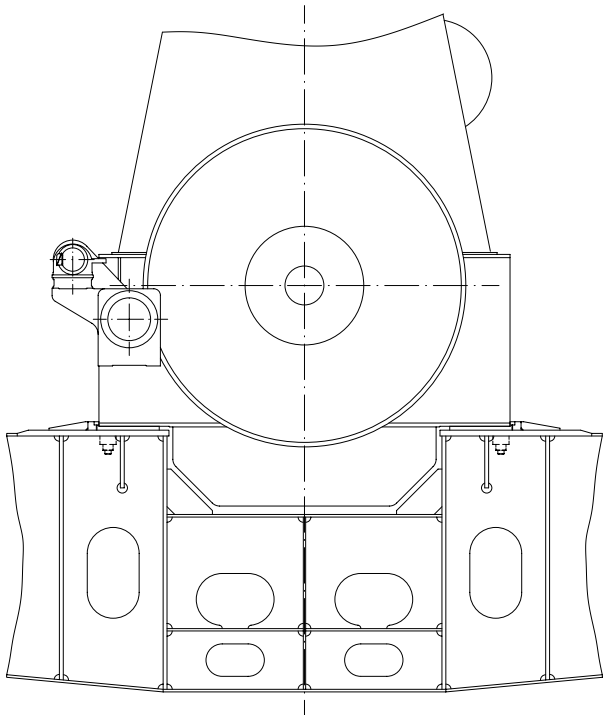
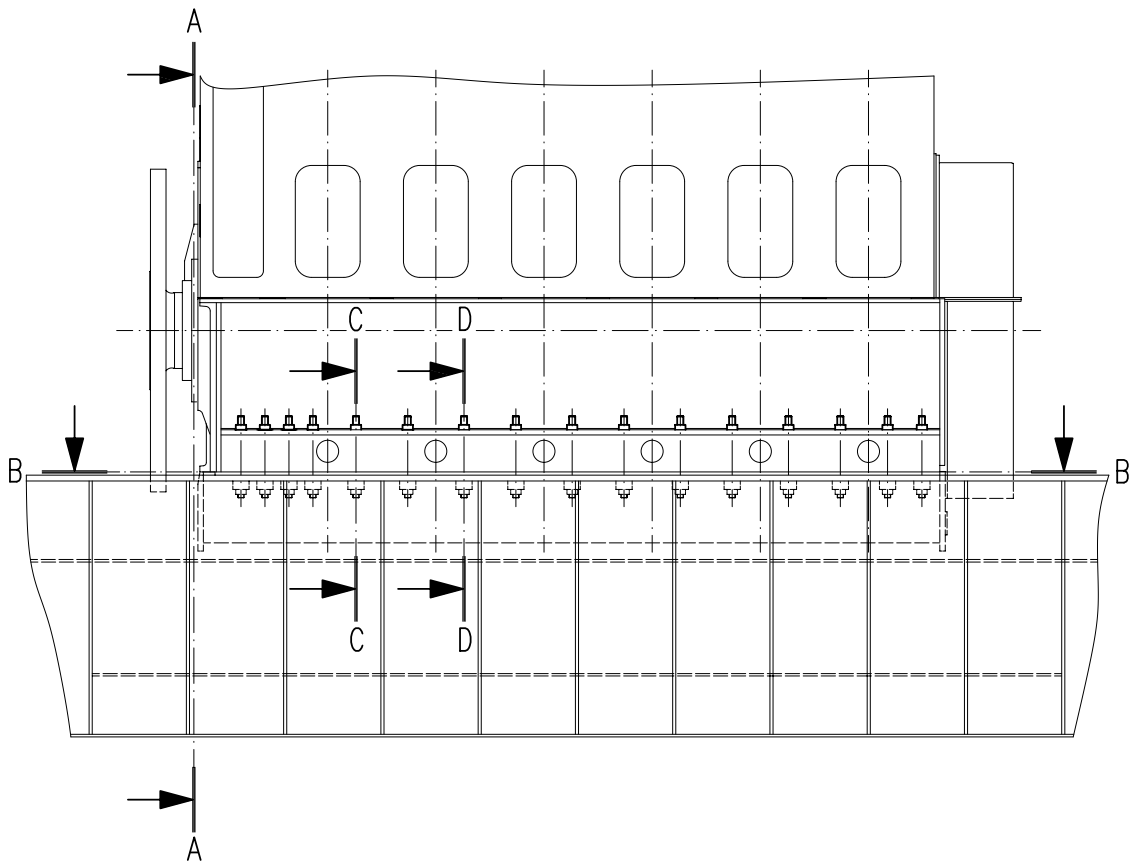
A-A (1:14)



Remarks:

- *1) Height to be determined by shipyard. For dimensions layout of lub. oil drain tank and drains refer to design group 9722.
- *2) Chock thickness $30 \pm \frac{30}{5}$.
- Final chock thickness to be determined by shipyard.

107.420.691.200	8 Cyl.	Execution with side stoppers welded type
107.420.691.201	8 Cyl.	Execution with side stoppers flame-cut type



Quantity	Material ID	Material Name	Dimension/Occ.	Dimension	Standard or Drawing	Basic Material Material Standard	Weight GR./AE	Net Weight
1	014	PAAD008160	FITTING INSTRUCTIONS		DAAD006574			0.001
4	-	013	107.422.180.200	ENGINE SIDE STOPPER	107.422.180			65.4
-	4	012	107.376.678.200	ENGINE SIDE STOPPER	107.376.678			45
30	30	011	107.423.297.001	PIN	107.423.297			0.001
10	10	010	PAAD004345	JOINT DISC	DAAD005525	Rubber750		0.01
1	1	009	107.367.119.001	SEALING PIECE	107.367.119			0.001
40	40	008	107.246.051.001	SPHERICAL ROUND NUT M48	107.246.051	34CrMo4		1.2
30	30	007	107.422.174.001	CONICAL SOCKET	107.422.174	34CrMo4 SOM 435		5.1
10	10	006	107.422.173.001	CONICAL SOCKET	107.422.173	34CrMo4 SOM 435		7.4
30	30	005	107.422.171.001	ELASTIC BOLT	107.422.171	34CrMo4 SOM 435		7.3
10	10	004	107.422.170.001	ELASTIC BOLT	107.422.170	34CrMo4 SOM 435		7.8
10	10	003	107.422.172.001	SLEEVE	107.422.172	34CrMo4 SOM 435		13.8
40	40	002	107.246.021.001	ROUND NUT	M48	107.246.021		0.9
1	1	001	107.398.394.500	EPOXY RESIN	107.398.394			0.001

SURFACE PROTECTION SEE GROUP 0344	Material ID	EAAD082040	23.06.2010	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
TOLERANCING PRINCIPLE ISO8015	Material ID	EAAD082040	23.06.2010	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Material ID	EAAD082040	23.06.2010	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

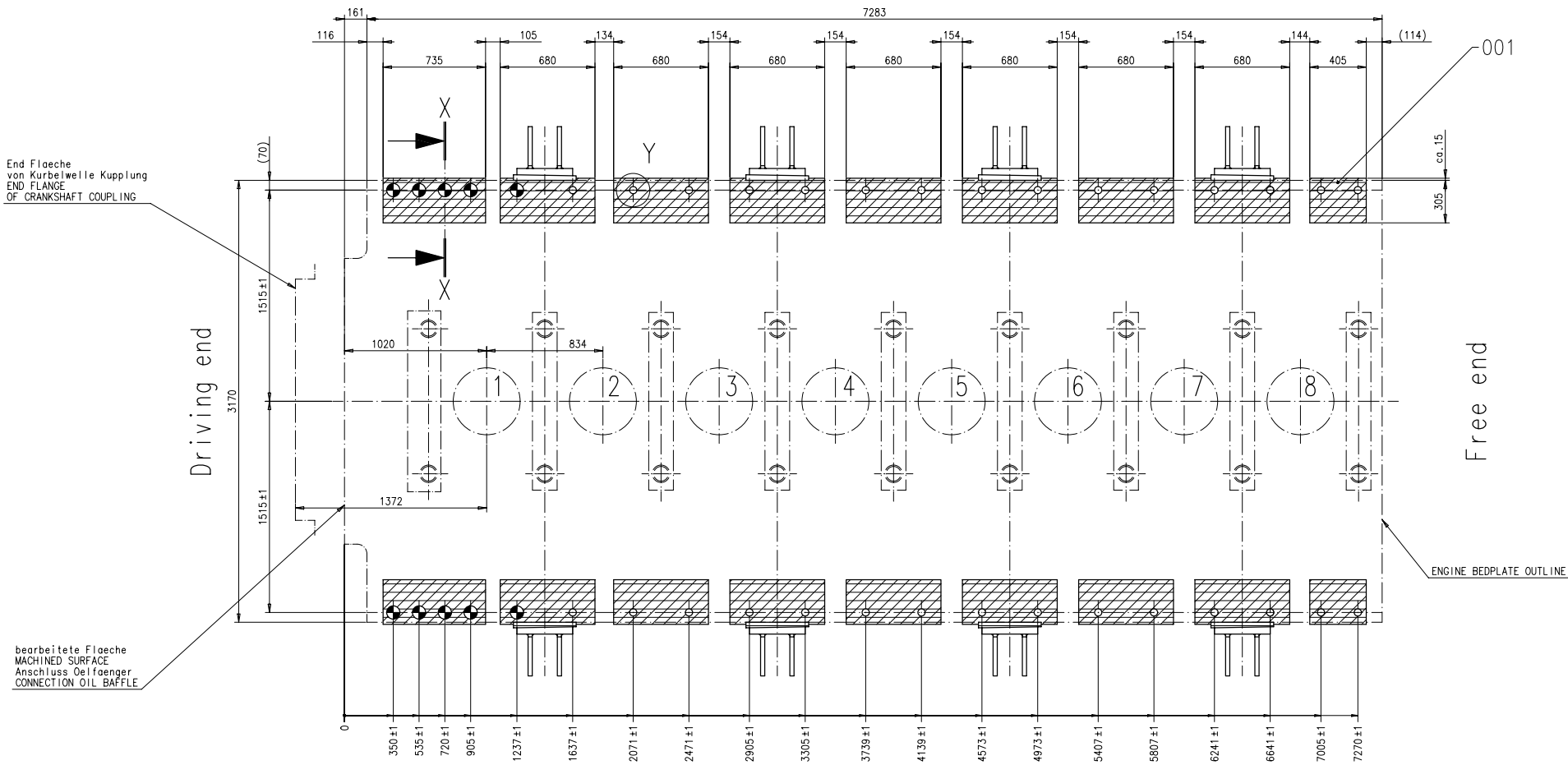


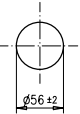
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of chock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min.	max.
8	4.5	5900	36213	91	218
No. of cyls.	Total No. of holes	No. of thrust sleeves			
8	40	10			

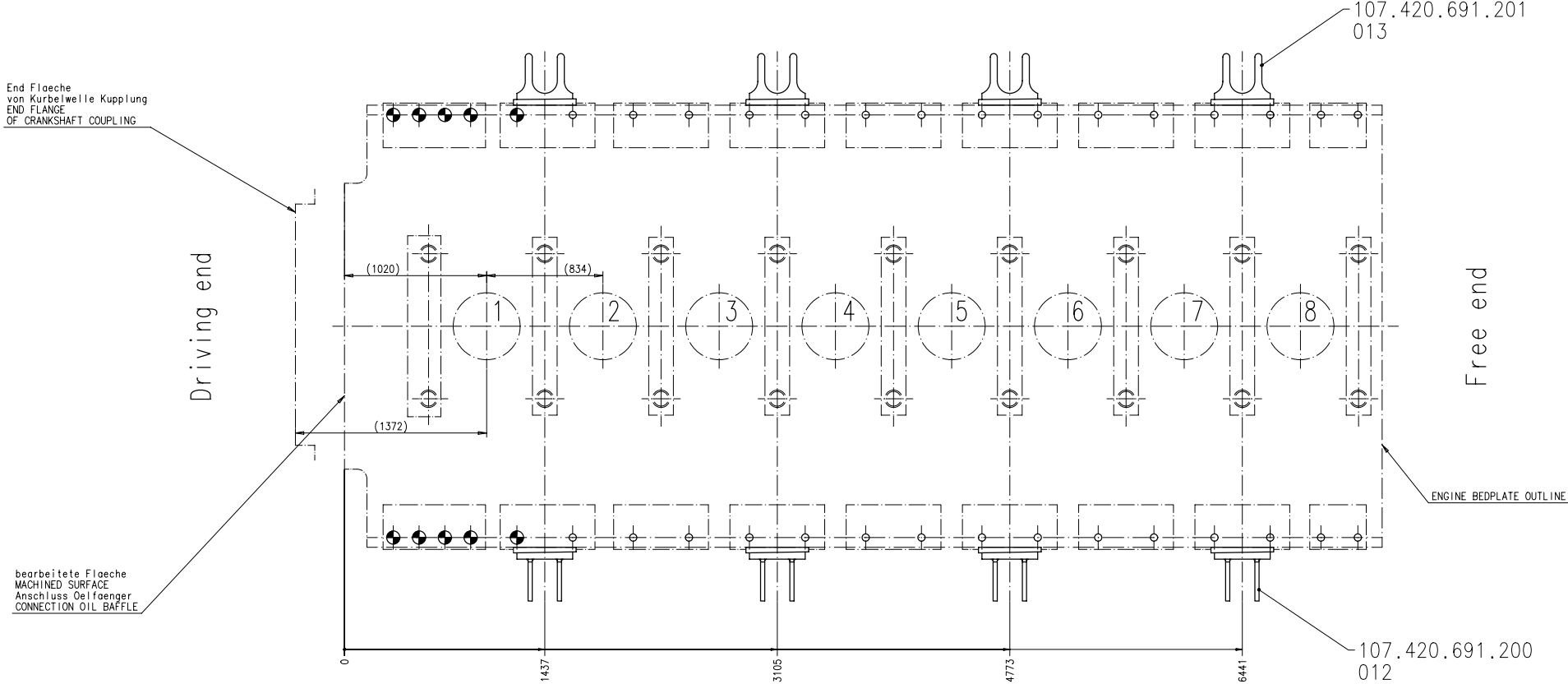
Remarks:

- *1) For the layout is taken into consideration:
- A max. permissible static load of 0.7 N/mm².
- Engine holding down studs fully tightened according to fitting instructions
- Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
*2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
*3) Referring to a standardized chock thickness of 25 up to 60mm.

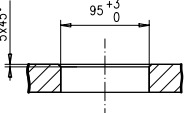
Y 1:5



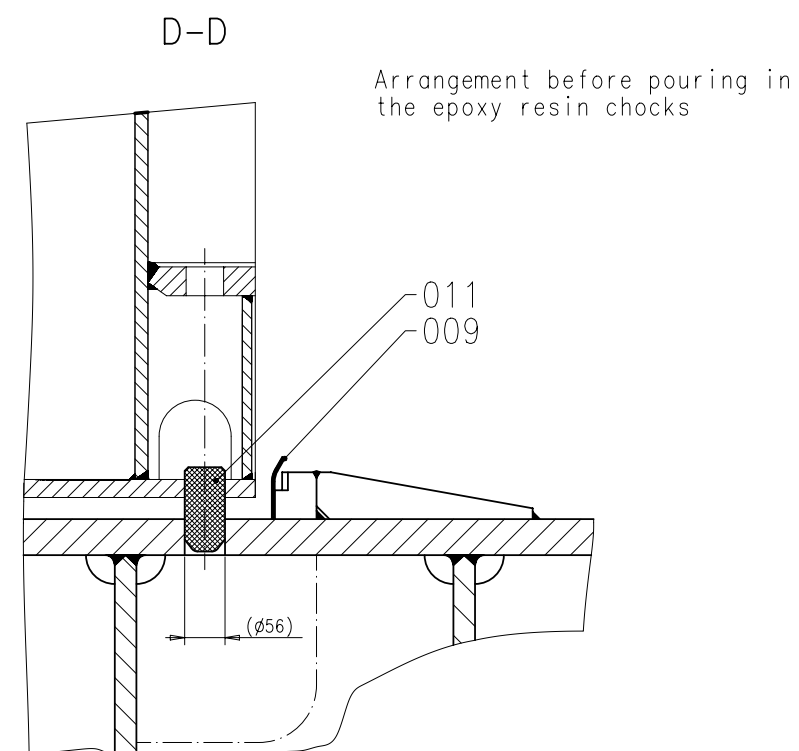
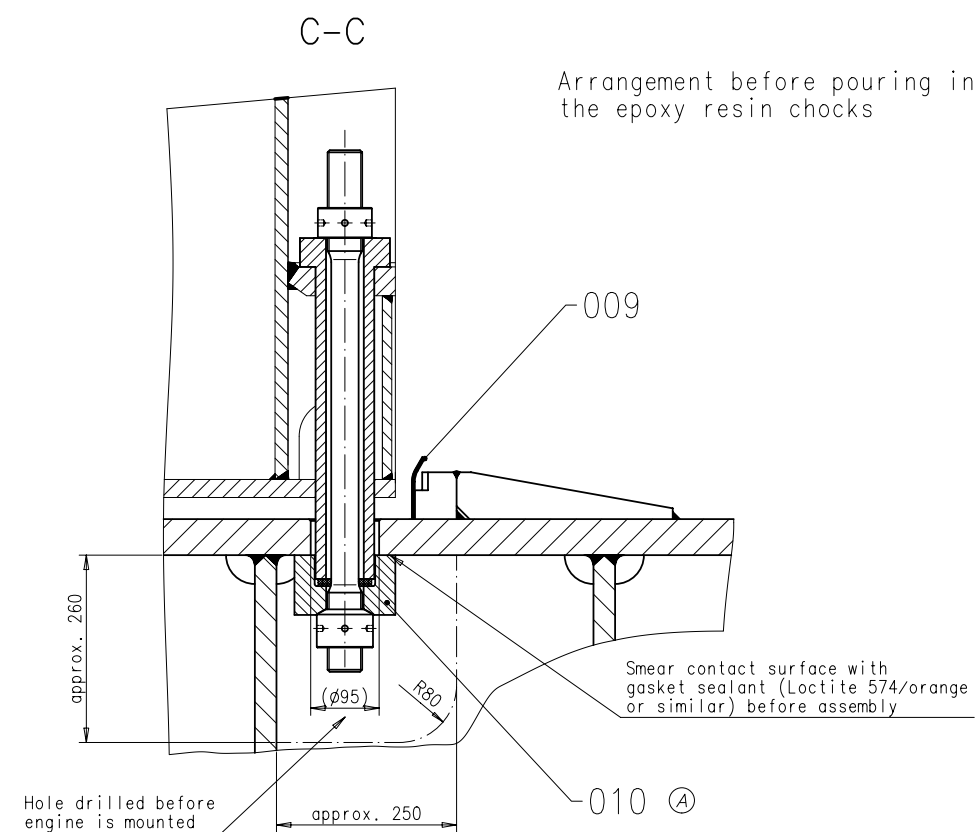
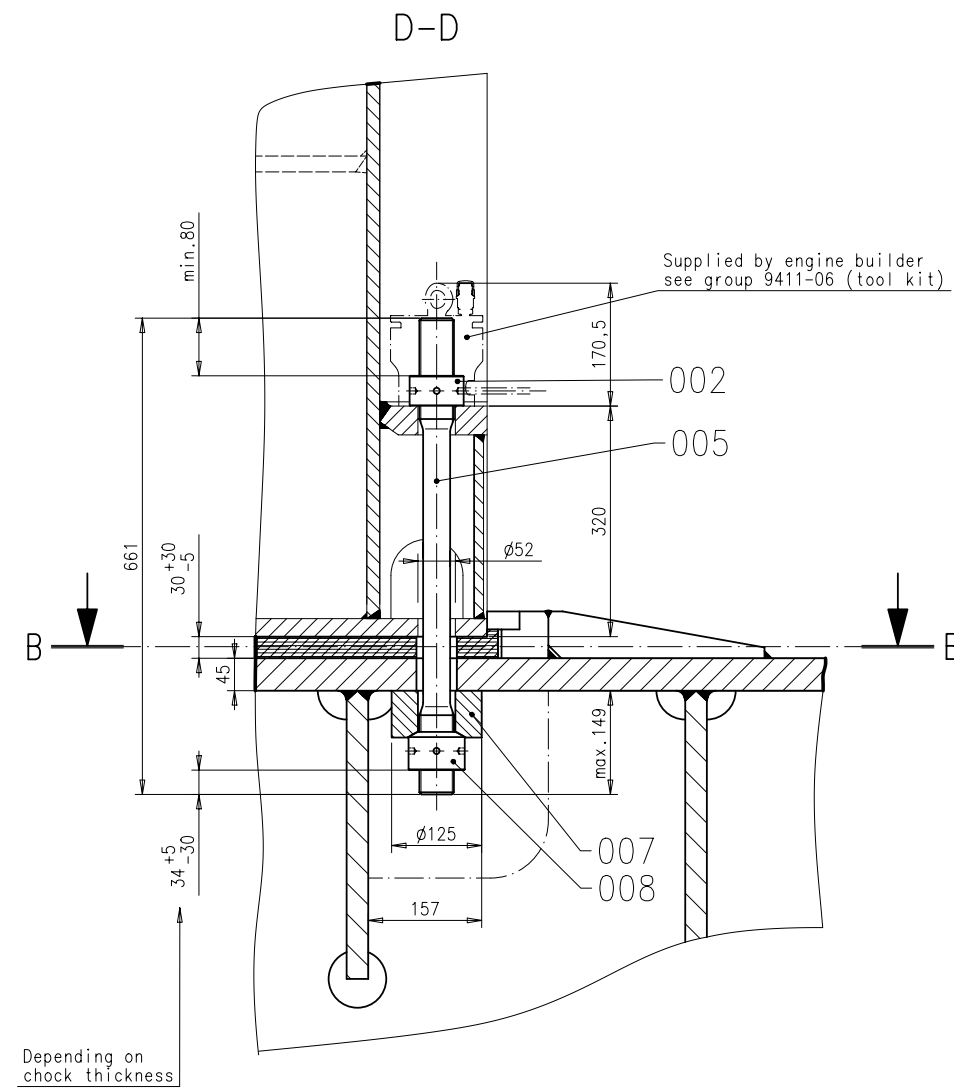
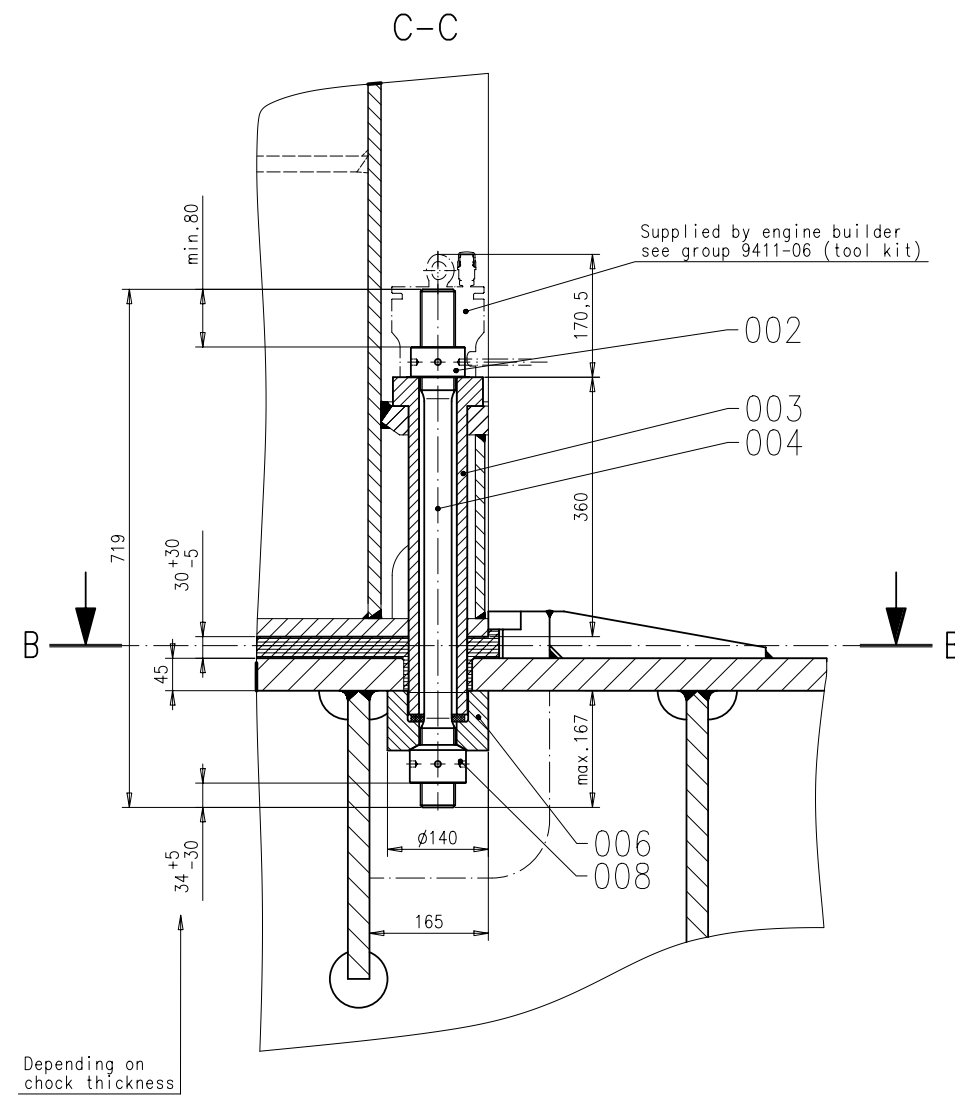
B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE



X-X 1:5



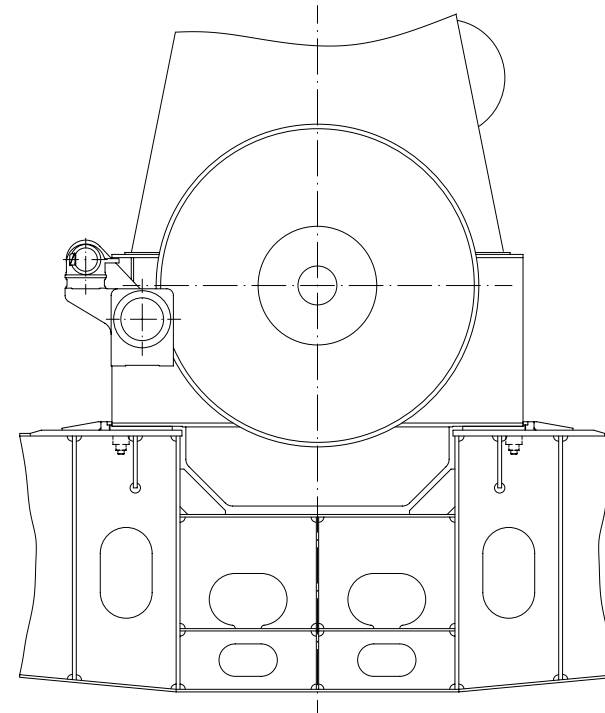
WÄRTSILA		ENGINE SEATING/FOUNDATION THRUST SLEEVES	
Scale: 1:14	Page: 2/3	Material: 107.420.691	Rev: A
Design Group: 9710	Drawing ID: 107.420.691	Rev: A	



SURFACE PROTECTION SEE GROUP 0344		Made		Scale		Size		Page		Material	
TOLERANCING PRINCIPLE ISO8015		Chkd		Design Group		Drawing ID		3/3		10	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd		9710		107.420.691		Rev.		A	

[illegible]

- *1) Height to be determined by shipyard. For dimensions layout of lub. oil drain tank and drains refer to design group 9722.
- *2) Chock thickness $30 \pm \frac{30}{5}$.
- Final chock thickness to be determined by shipyard.

[illegible]

SURFACE PROTECTION SEE GROUP 0344	Made	Date	ID#	Name	Scale	Size	A1	Page	Material ID	Rev.	Margin
TOLERANCING PRINCIPLE ISO8015	Chkd	Date	ID#	Name	Design Group	Drawing ID	9710	107.422.465	Rev.	A	
GENERAL TOLERANCES ACCORDING TO ISO2768-mk	Appd	Date	ID#	Name							

B-B CHOCKING AND DRILLING PLAN FOR THRUST SLEEVE

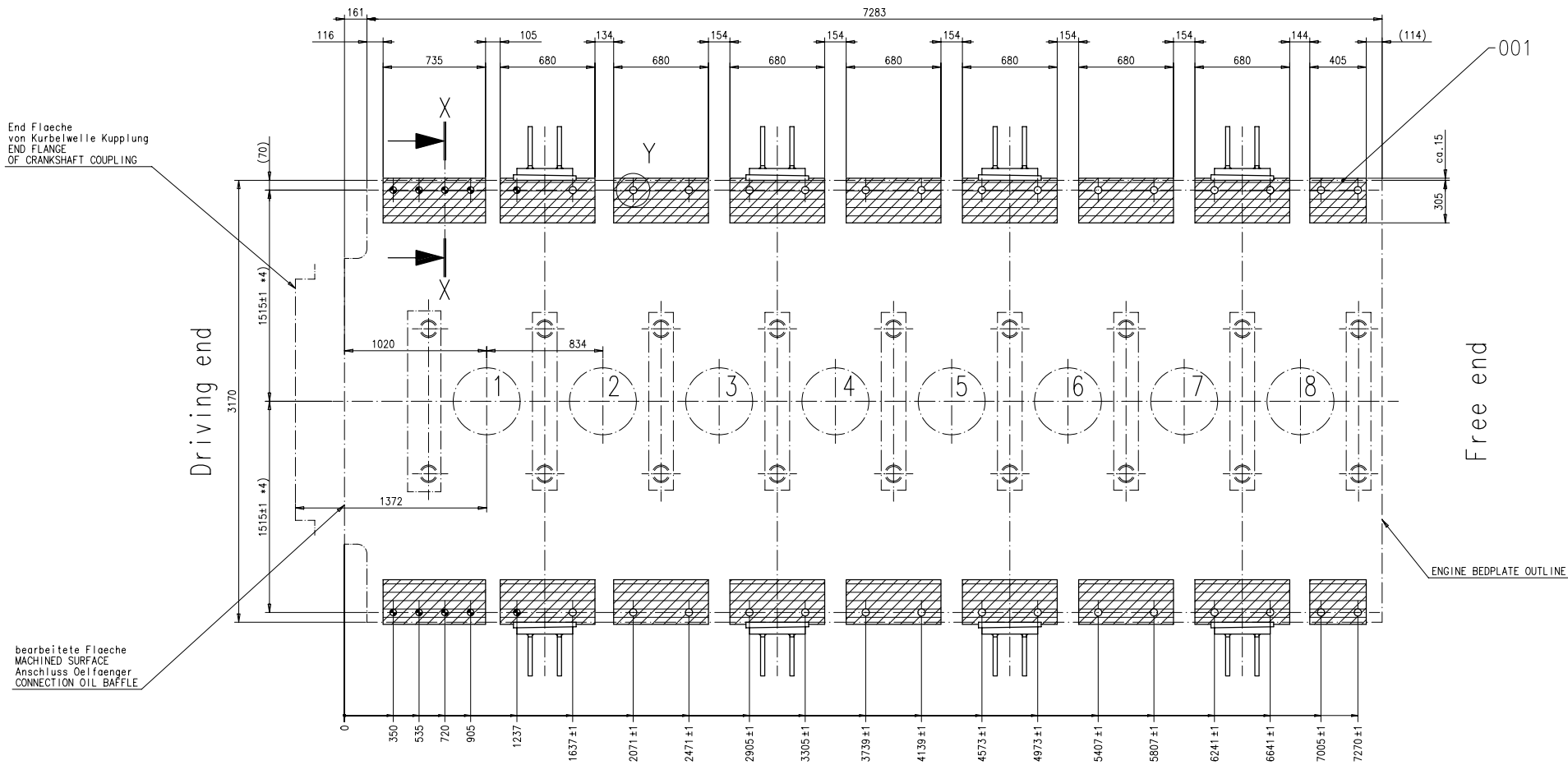


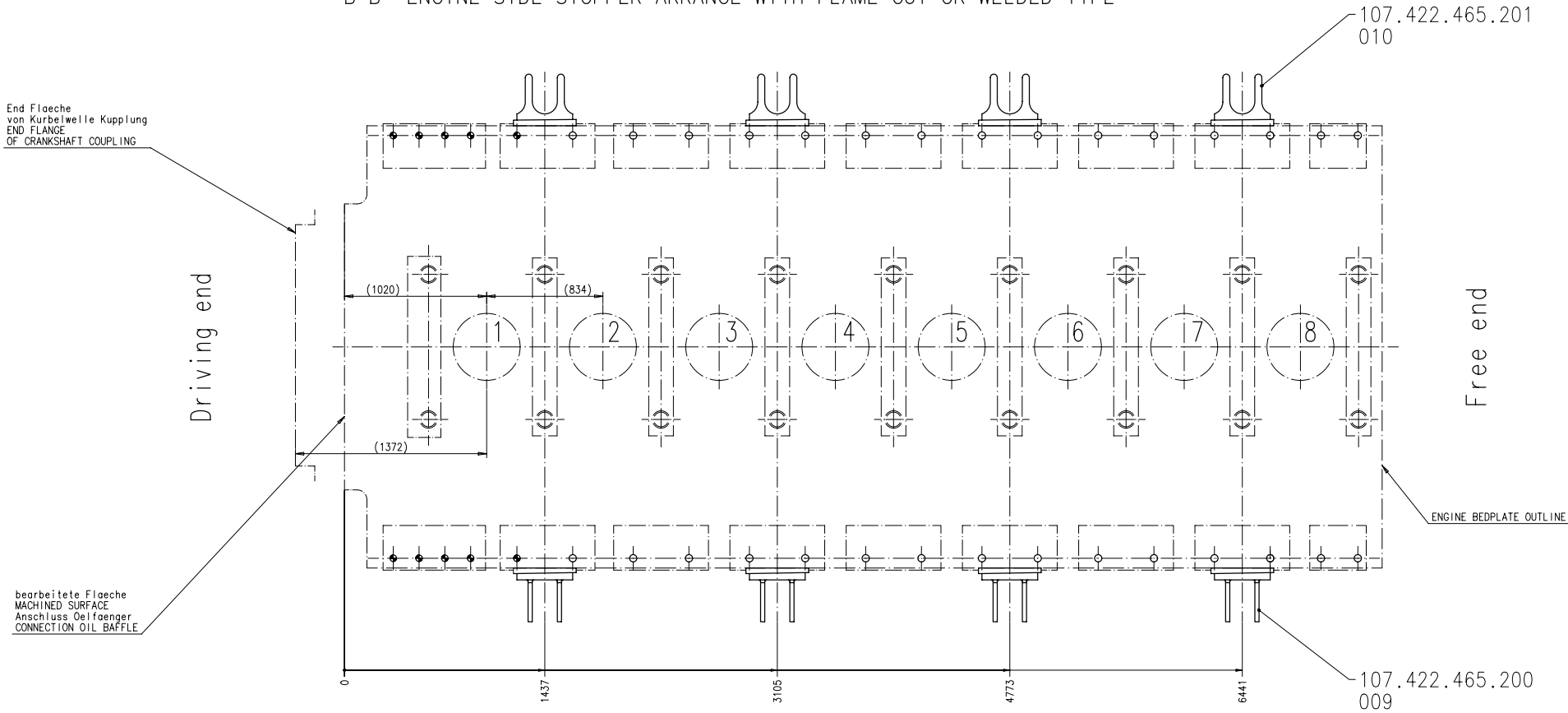
Table 1: Dimensions of epoxy resin chocks *1)

No. of cyls.	Max. perm. mean surface pressure of chock *2)	Total chock length	Total net chocking area	Required quantity of epoxy resin material *3)	
	(N/mm ²)	(mm)	(cm ²)	min.	max.
8	4.5	5900	36213	91	218
No. of cyls.	Total No. of holes	No. of fitted studs			
8	40	10			

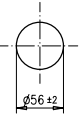
Remarks:

- *1) For the layout is taken into consideration:
 - A max. permissible static load of 0.7 N/mm².
 - Engine holding down studs fully tightened according to fitting instructions
 - Engine mass (incl. net engine mass according to ESPM, vibration damper, flywheel, water and oil)
- *2) The max. permissible mean surface pressure of the epoxy resin chocks is to be determined by the shipyard in accordance with the relevant classification society/rules.
- *3) Referring to a standardized chock thickness of 25 up to 60mm.
- *4) Tolerance does not apply for fitted studs.

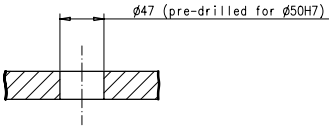
B-B ENGINE SIDE STOPPER ARRANGE WITH FLAME-CUT OR WELDED TYPE





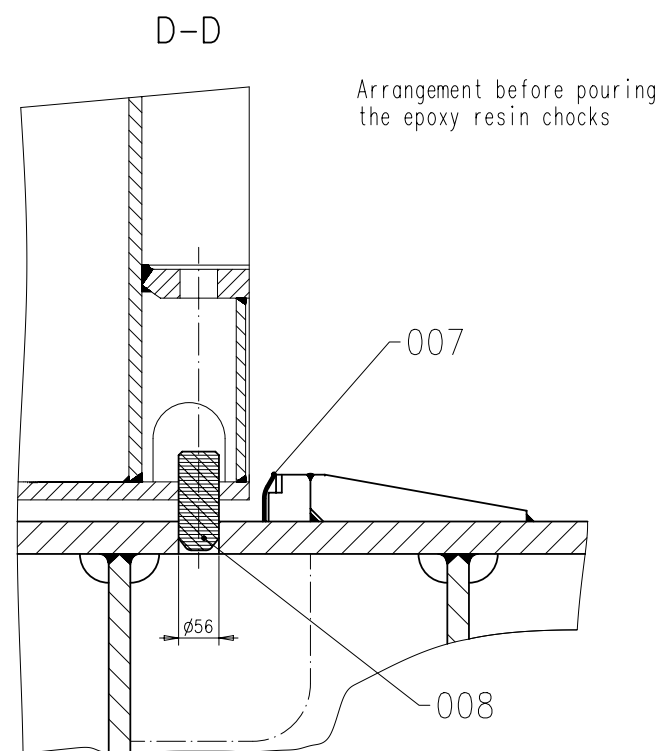
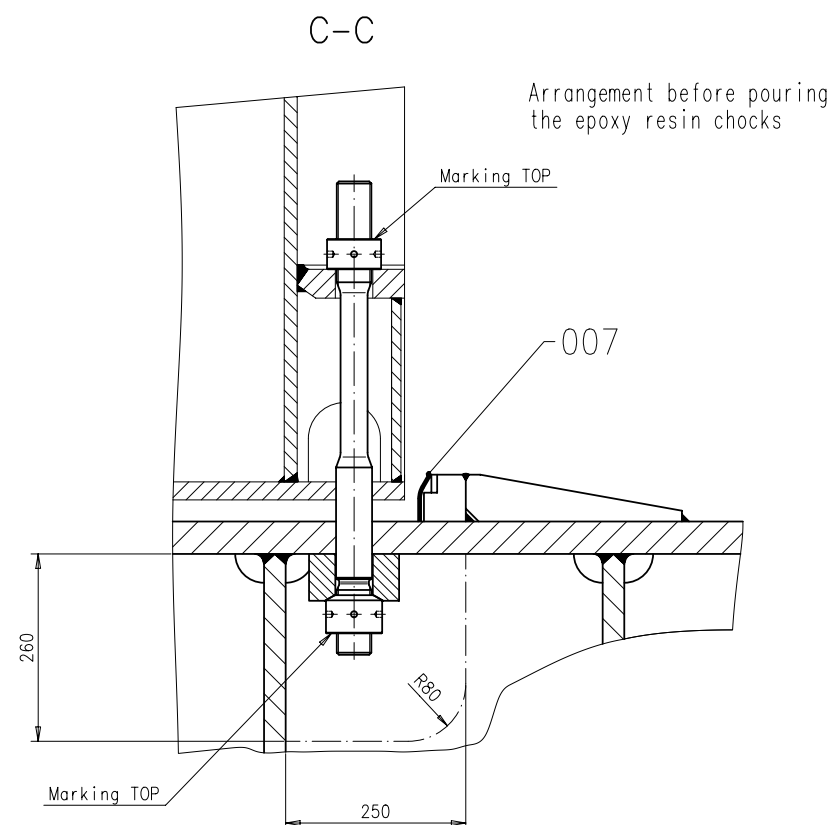
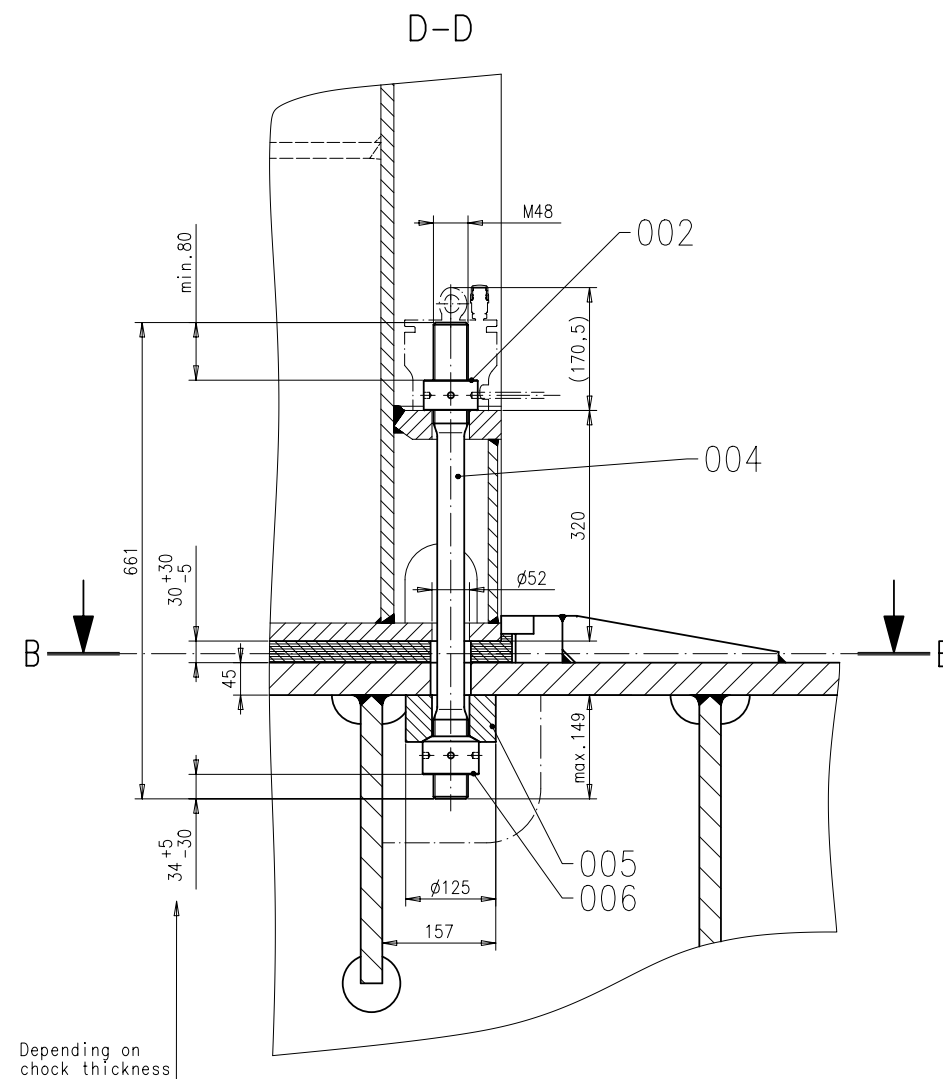
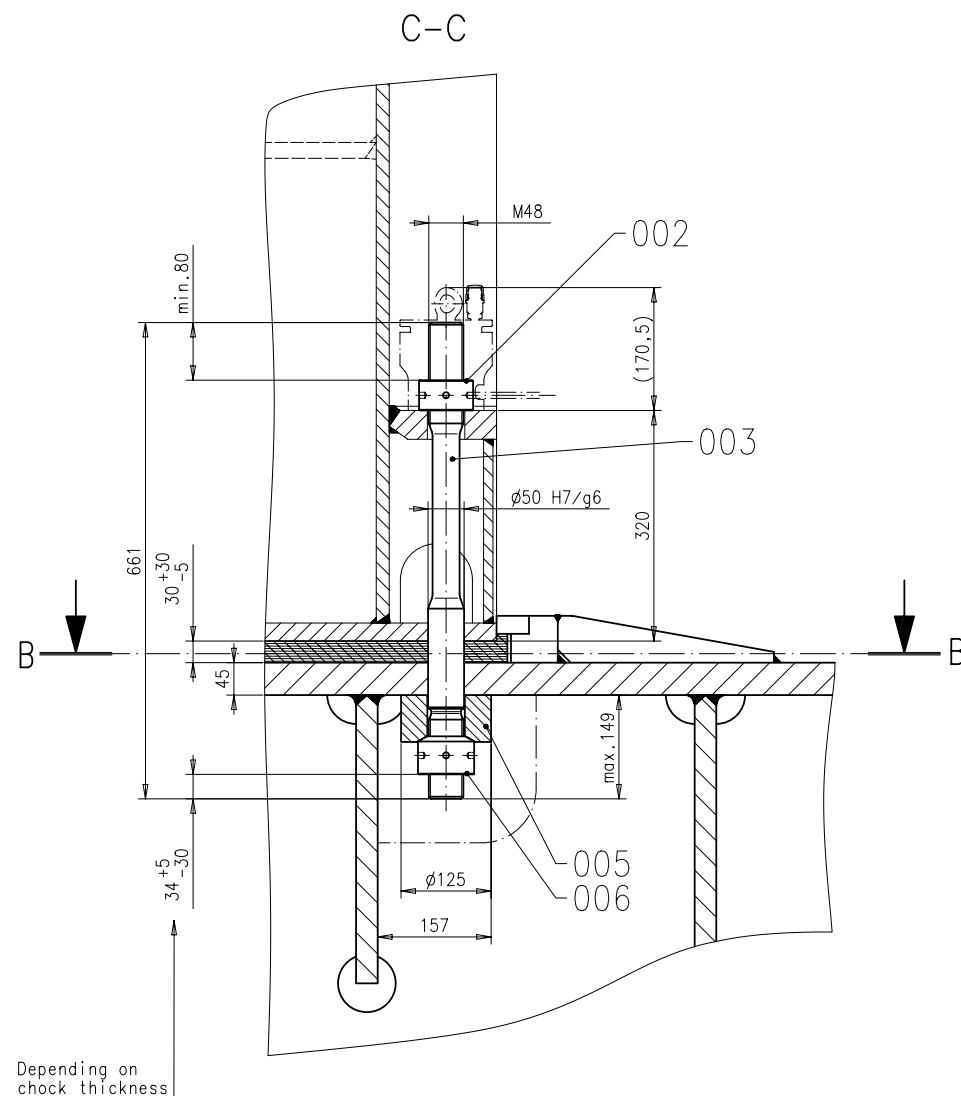
Y 1:5



X-X 1:5



Q-Code		XXXXX		Rev. Item	
Standard		ISO JIS		H	
A) ENH00R200 23.06.2010					
Material	Number	Drawn date	Number	Drawn date	Number
Product BRT-flex48T-D BRTA48 BRTA48T BRTA48T-B BRTA48T-D		ENGINE SEATING/FOUNDATION FITTED STUDS			
					
Units mm kg		IDE		Basic Material	Net Weight
Made 26.05.2010		Scale 1:14		Page 3/3	Material
Appr 16.07.2010		Design Group 9710		Drawing No 107.422.465	
				Rev. A	



Free space for file		Q-Code XXXXX		Main Draw.	
Material		Standard		ISO JIS	
A		EAD082040		23.06.2010	
Number	Drawn date	Number	Drawn date	Number	Drawn date
Product		ENGINE SEATING/FOUNDATION		FITTED STUDS	
8RT-flex48T-D		8RTA48		8RTA48T	
8RTA48T-B		8RTA48T-D			
Units	mm kg	IDE	Basic Material	Net Weight	
SURFACE PROTECTION SEE GROUP 0344		Made		26.05.2010 jba029 Baumann	
TOLERANCING PRINCIPLE ISO8015		Chkd		16.07.2010	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd		9710	
		Scale		1:14	
		Size		A1	
		Page		3/3	
		Material		107.422.465	
		Rev.		A	

Properties	Standart	Values
Ultimate compression strength	ASTM D-695	min. 130 MPa
Compression yield point	ASTM D-695	min. 100 MPa
Compressive modulus of elasticity	ASTM D-695	min. 3100 MPa
Deformation under load Load 550 N / 70°C Load 1100 N / 70°C	ASTM D-621	max. 0.10% max. 0.15%
Curing shrinkage	ASTM D-2566	max. 0.15%
Coefficient of thermal expansion (0-60 K)	ASTM D-696	max. 50×10^{-6} 1/K
Coefficient of friction normal		min. 0.3


Required properties of epoxy resin material

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Free space for lic.

First introduced at

RTMOT

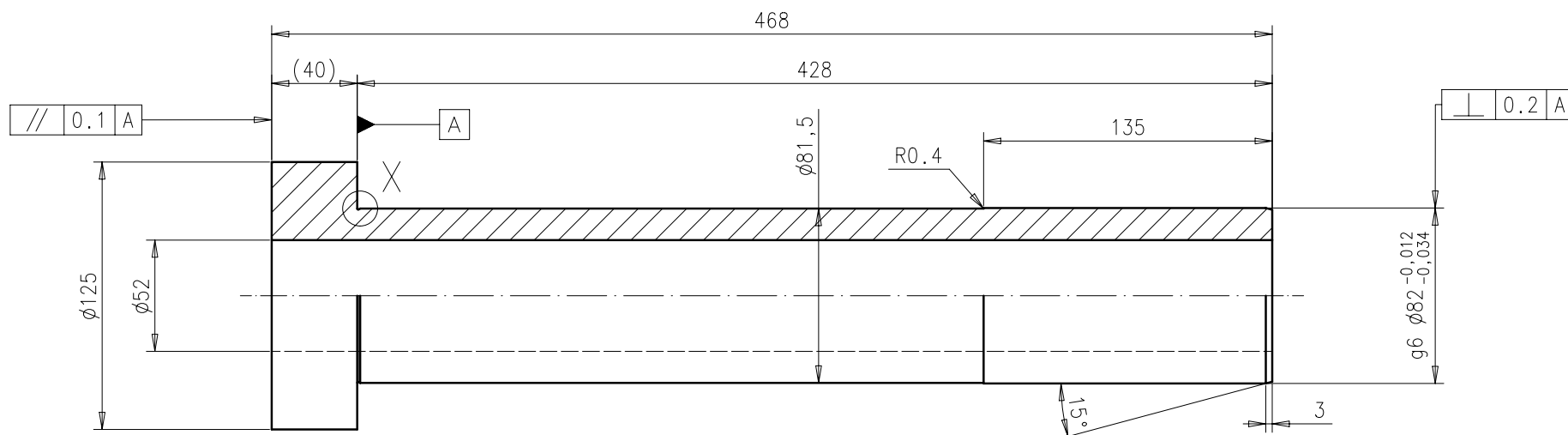
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	Q-Code	X	Q	X	X	Substitute for	Scale %
	Epoxydharz						Drawn: M.PRSTEC 02.04.08
EPOXY RESIN						Wartsila Switzerland Ltd	
Design group						CAD	 WÄRTSILÄ
9710	ISO JIS	4-107.398.394				Page:	

SURFACE PROTECTION SEE GROUP 0344	GENERAL TOLERANCES ACCORDING TO ISO/2768-m	Exec. code no	Pos. code no	Article number	Designation	Source of supply	Modification letter																																																																																
		Number of 1	001	107.246.021.001	Rundmutter M48	~ mass kg/piece	b																																																																																
			4-		34CrMo4	1.1																																																																																	
					ROUND NUT																																																																																		
<div></div>																																																																																							
<div><p>Wärtsilä NSD Switzerland Ltd. retains all rights to this drawing. 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 or marketing or any other purpose nor copied in any way, nor made accessible to third parties without the previous written consent of Wärtsilä NSD Switzerland Ltd. In case of violation, the recipient will be liable to damages.</p></div>																																																																																							
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Modifications	Free space for lic.																																																																																						
a	7-14.289	23.01.96																																																																																					
b	7-14.323	04.12.96																																																																																					
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				ROUND NUT			M. Luethi 05.02.96																																																																																
Design group	9710		ISO	4-107.246.021			Wärtsilä NSD Switzerland Ltd																																																																																
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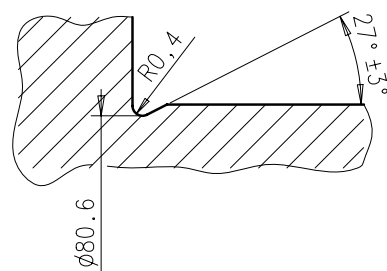
Exec. code number	Pos. code no	Article number	Designation	Source of supply	Modifi- cation letter
		Drawing number	Material and remarks	mass kg/piece	
Number of	1	001	107.422.172.001 Huelse		
		3-	34CrMo4 ; SCM 435	13,8	
			SLEEVE		

Ra3,2/
▽

Kanten gebrochen
SHARP EDGES REMOVED



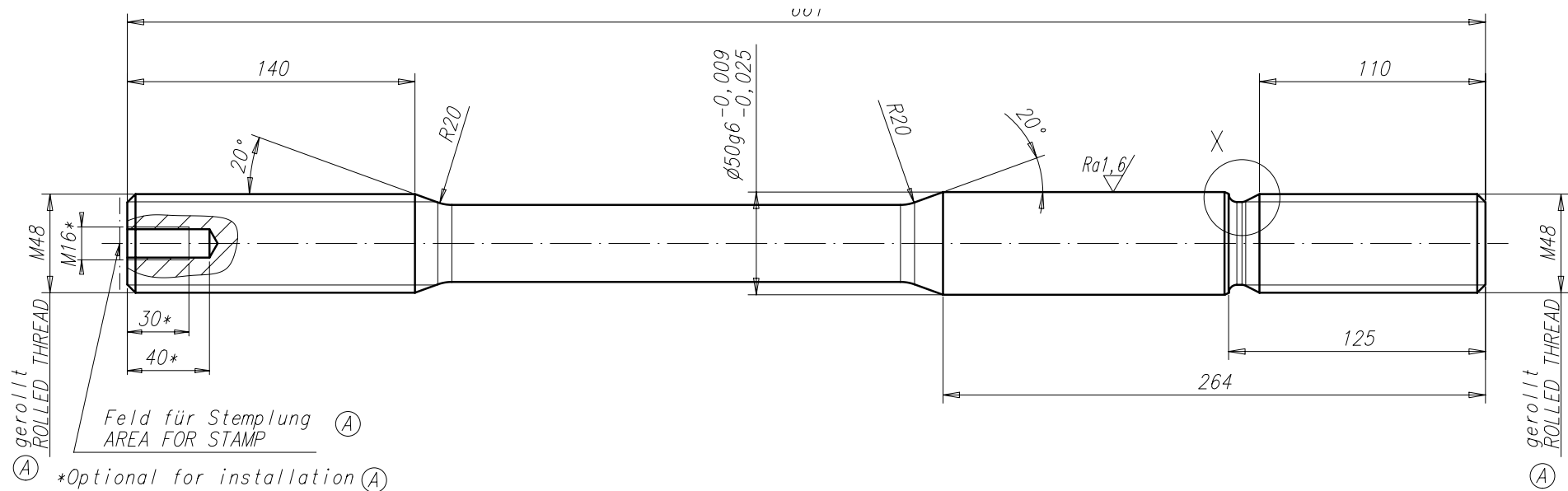
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SURFACE PROTECTION SEE GROUP 0344

GENERAL TOLERANCES ACCORDING TO ISO/2768-m

First introduced at		RT-flex48T-D		Free space for lic.	
Modifications	Number	Drawn date	Number	Drawn date	Number
Q-Code	X	X	X	X	X
Substitute for				Scale	1:2 / 1:5
Huelse				Drawn: J.BAUMANN 17.06.09	
SLEEVE				Wartsila Switzerland Ltd	
Design group				CAD	
9710				Page:	
ISO				3- 107.422.172	
JIS				WÄRTSILÄ	



Ra3.2/ (✓) (✓)

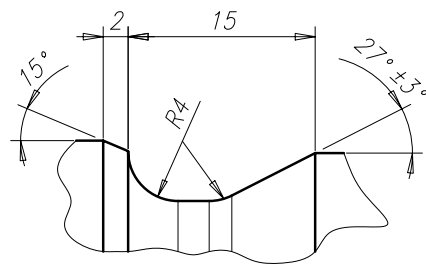
Bearbeitet vor dem Gewinderollen
MACHINED BEFORE THREAD ROLLING
verguetet, $R_m = 800^{+150}_0 \text{ N/mm}^2$
QUENCH HARDENED AND TEMPERED
Streckgrenze $R_e = \min. 550 \text{ N/mm}^2$
YIELD POINT

Bruchdehnung $A(Lo = 5do) = \min. 14\%$
ELONGATION AT BREAK

Kerbschlagarbeit ISO-V = 45J (Temp. 20°C)
IMPACT ENERGY

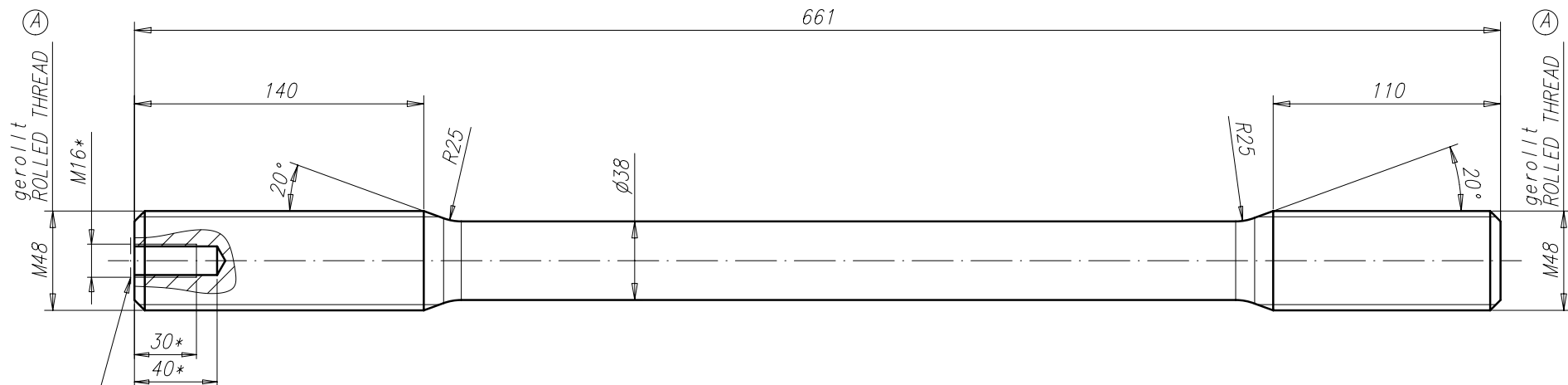
INSPECTION DOCUMENTS ACCORDING DIN EN 10204		
SOME SPECIFIC REQUIREMENTS MAY HAVE TO BE FOLLOWED. THIS IS TO BE AGREED WITH THE APPROPRIATE CLASSIFICATION SOCIETY		
TEST TYPE	CERTIFICATE TYPE	TESTING FREQUENCY
MATERIAL	MATERIAL IDENTIFICATION	-
CHEMICAL ANALYSIS	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
TENSILE TEST	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
IMPACT TEST	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
HARDNESS TEST	INSPECTION CERTIFICATE 3.1 (INDEPENDENT AUTHORITY)	EXAMINATION OF EACH PART
SURFACE CRACK DES. TEST	CLASSIFICATION CERTIFICATE 3.2	EXAMINATION OF EACH PART

X 5:1



Free space for lic.	Q-Code XXXXX				Main Drw.
	Standard ISO JIS				
Modif.	(A) EAAD083605	14.02.2012			
	Number	Drawn date	Number	Drawn date	Number
Product RT-flex48T-D		FITTED STUD			
WÄRTSILÄ		Passbolzen			
Units	mm kg	IDE	Basic Material	34CrMo4 SCM 435	Net Weight 8,2
Made	24.06.2009 J. BAUMANN	Scale	1:2	Size A3	Page 1/1
Chkd		Design Group	9710	Material ID	107.422.461.001
Appd	29.09.2009 jba029 Baumann	Drawing ID	107.422.461	Rev.	A

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



Feld für Stempelung (A)
AREA FOR STAMP

* Optional for installation (A)

Ra3.2/ Bearbeitet vor dem Gewinderollen
MACHINED BEFORE THREAD ROLLING
verguetet, $R_m = 800^{+150}_0 \text{ N/mm}^2$
QUENCH HARDENED AND TEMPERED
Streckgrenze $R_e = \text{min. } 550 \text{ N/mm}^2$
YIELD POINT
Bruchdehnung $A(L_0 = 5d_0) = \text{min. } 14\%$
ELONGATION AT BREAK
Kerbschlagarbeit ISO-V = 45J (Temp. 20°C)
IMPACT ENERGY

INSPECTION DOCUMENTS ACCORDING DIN EN 10204		
SOME SPECIFIC REQUIREMENTS MAY HAVE TO BE FOLLOWED. THIS IS TO BE AGREED WITH THE APPROPRIATE CLASSIFICATION SOCIETY		
TEST TYPE	CERTIFICATE TYPE	TESTING FREQUENCY
MATERIAL	MATERIAL IDENTIFICATION	-
CHEMICAL ANALYSIS	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
TENSILE TEST	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
IMPACT TEST	CLASSIFICATION CERTIFICATE 3.2	TEST PER ORDER LOT OR PER CHARGE IF SEVERAL CHARGES
HARDNESS TEST	INSPECTION CERTIFICATE 3.1 (INDEPENDENT AUTHORITY)	EXAMINATION OF EACH PART
SURFACE CRACK DES. TEST	CLASSIFICATION CERTIFICATE 3.2	EXAMINATION OF EACH PART

Free space for lit.	Q-Code XXXXX				Main Drw.				
	Standard ISO JIS								
Modif.	(A)	EAAD083605	10.02.2012						
	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	
		Product RT-flex48T-D		ELASTIC BOLT					
				Dehnbolzen					
Units	mm kg	IDE		Basic Material	34CrMo4	SCM 435	Net Weight 7.3		
Made		17.06.2009 J. BAUMANN		Scale	1:2	Size	A3	Page	1/1
Chkd				Design Group	9710	Material ID	107.422.171.001		
Appd		29.09.2009 jba029 Baumann		Drawing ID	107.422.171			Rev.	A

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

SURFACE PROTECTION SEE GROUP 0344	GENERAL TOLERANCES ACCORDING TO ISO/2768-m	Exec. code no	Pos. code no	Article number	Designation	Source of supply	Modification letter		
		Number of		Drawing number	Material and remarks	mass kg/piece			
		1	001	107.422.173.001	Konische Buechse				
			4-		34CrMo4 ; SCM 435	7.400			
					CONICAL SOCKET				
<div>Ra6,3/<div>Kanten gebrochen SHARP EDGES REMOVED</div></div> <div></div>									
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	First introduced at	Modifications							
	RT-flex48T-D		Number	Drawn date	Number	Drawn date	Number	Drawn date	
	Q-Code	X	X	X	X	X	Substitute for	Scale 1:2	
	Konische Buechse						Drawn: J.BAUMANN 17.06.09		
CONICAL SOCKET						Wartsila Switzerland Ltd			
Design group 9710						CAD			
ISO JIS 4-107.422.173						Page:			

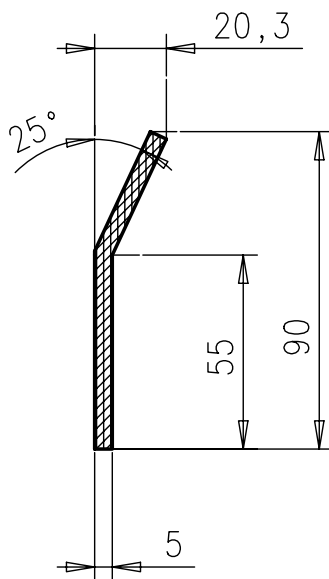
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		1	001	107.422.174.001	Konische Buechse																																		
			4-		34CrMo4 ; SCM 435	5.100																																	
					CONICAL SOCKET																																		
<div>Ra6,3/<div>Kanten gebrochen SHARP EDGES REMOVED</div></div>																																							
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SURFACE PROTECTION SEE GROUP 0344	Exec. code no	Pos. code no	Article number		Designation		Source of supply	Modification letter																																								
			Drawing number		Material and remarks		~ mass kg/piece																																									
			Number of 1	001	107.246.051.001		Konische Rundmutter M48		1.2																																							
					4-		34CrMo4																																									
		SPHERICAL ROUND NUT																																														
GENERAL TOLERANCES ACCORDING TO ISO/2768-m																																																
<div>N9/ Kanten gebrochen SHARP EDGES REMOVED</div> <div></div>																																																
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Number	Date	Number	Date	Number	Date	Number	Date	Number	Date																																							
Engine type RT48T	Version	Konische Rundmutter M48		Drawn: R. Nideroest 13.11.95																																												
		SPHERICAL ROUND NUT		M. Luethi 20.11.95																																												
Design group 9710	ISO JIS	4-107.246.051		Wärtsilä NSD Switzerland Ltd																																												
		Page:		CAD																																												


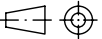
SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

GENERAL TOLERANCES ACCORDING TO ISO2768-mK



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Modif.		Free space for lic.				Q-Code XXXXXX		Main Drw.	
A						Standard ISO JIS			
EAAD082947	21.06.2011								
Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date	Number	Drawn date
		Product RTMOT		SEALING PIECE FOR CHOCKING FAST Dichtleiste fuer chocking fast					
Units	mm kg	IDE			Basic Material material acc.to shipyards experience			Net Weight 0.001	
Make	13.02.2006 R. ZUCCHI		Scale 1:1		Size A4	Page 1/1	Material ID 107.367.119.001		
Chkd			Design Group 9710		Drawing ID 107.367.119			Rev. A	
Appd	03.04.2006 sna001 Natali								

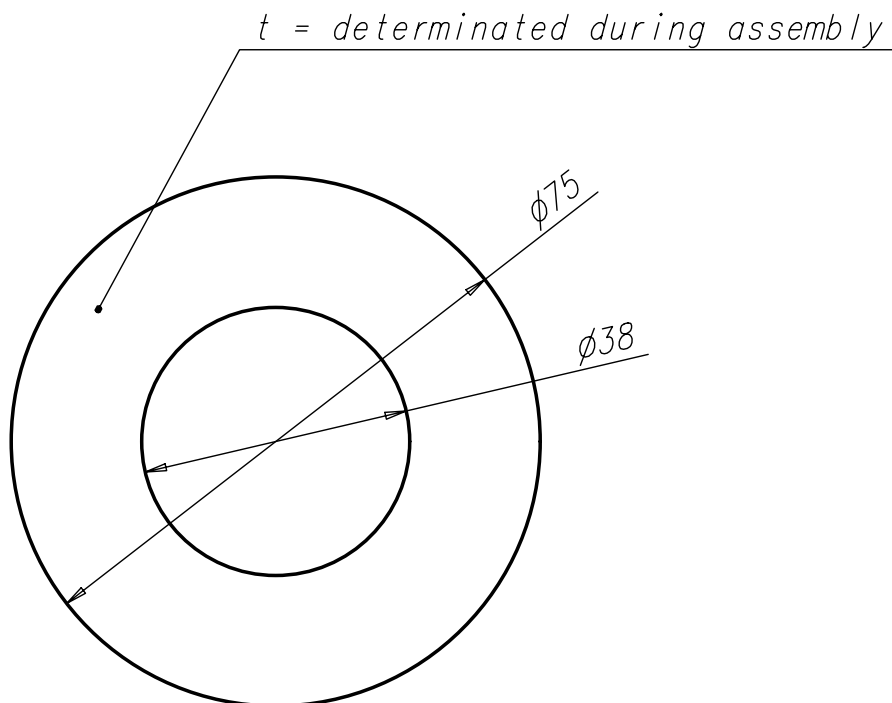
Approved

PD - PRODUCTION DRAWING - Confidential


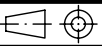
SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

GENERAL TOLERANCES ACCORDING TO ISO2768-mK



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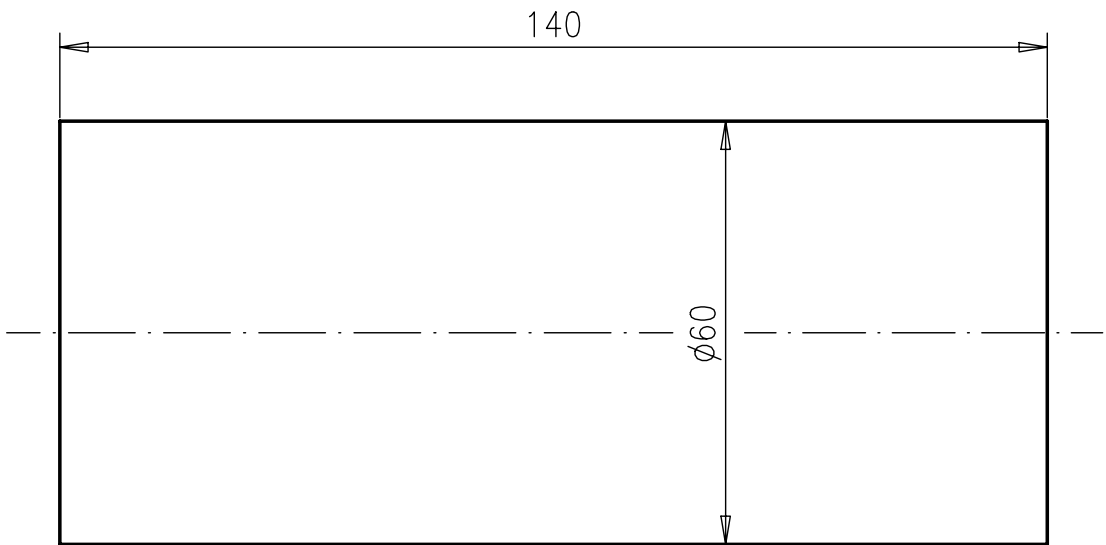
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		Product RT-flex48T-D RTA48 RTA48T RTA48T-B RTA48T-D		JOINT DISC Dichtscheibe								
Units mm kg		IDE				Basic Material Rubber750		Net Weight 0.01				
Make	25.05.2010 jba029 Baumann			Scale 1:1		Size A4	Page 1/1	Material ID PAAD004345				
Chkd	23.06.2010 wwr001 Wroblewski			Design Group 9710		Drawing ID DAAD005525		Rev. —				
Appd	24.06.2010 dst009 Stroedecke											

Approved

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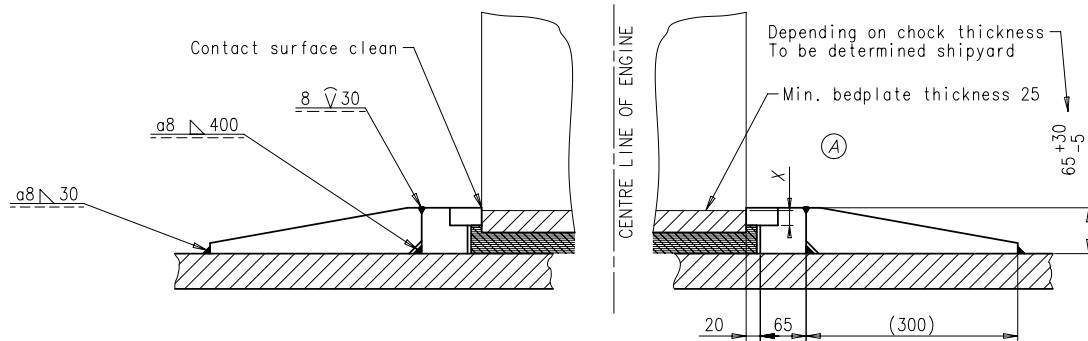
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Standard ISO JIS					
Modif.	A	EAAD082947	27.06.2011		
	Number	Drawn date		Number	Drawn date
Units mm kg		IDE	Basic Material material acc.to shipyards experience		Net Weight 0.001
Make 20.09.2010 jba029 Baumann		Scale 1:1		Size A4	Page 1/1
Chkd		Design Group 9710		Material ID 107.423.297.001	
Appd 29.09.2009 jba029 Baumann		Drawing ID 107.423.297		Rev. A	

Product
RT-flex48T-D

PLUG
FOR CHOCKING FAST

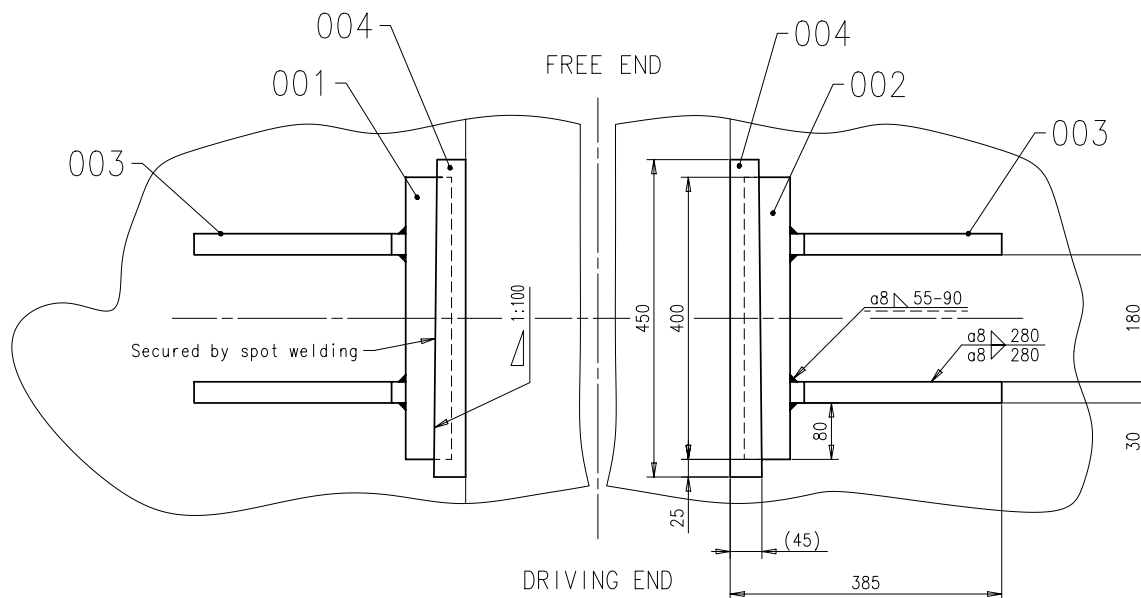
Stopfen
fuer chocking fast

Approved
DID - DIMENSIONAL DRAWING - Confidential



Contact surface between wedge and engine bedplate:

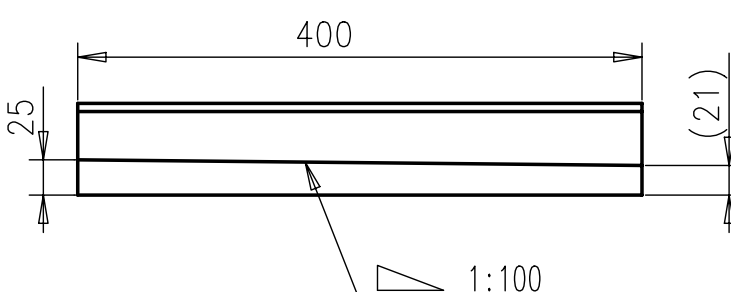
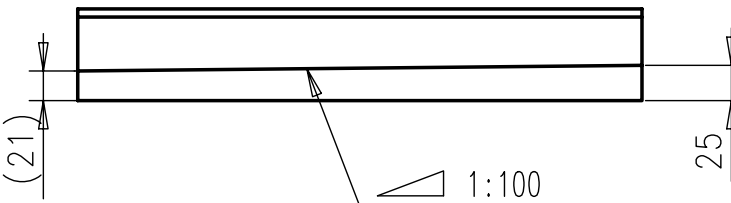
Ⓐ	RT-flex48T-D
X [mm]	min. 12



Pos. 001-003: These parts cover a standardized chock thickness from 25mm up to 60mm

WELD QUALITY LEVEL Q3

2	004	107.325.275.001	FLAT BAR	45x25x450	107.325.275	St 37-2 St 37-2	3.8
4	003	107.422.179.001	FLAT BAR		107.422.179	S235JRH SS400	1.5
1	002	107.376.672.002	FLAT BAR	65x90x400	107.376.672	S235JRH SS400	15.7
1	001	107.376.672.001	FLAT BAR	65x90x400	107.376.672	S235JRH SS400	15.7
QTY	SEQ NO	Material ID	Material Name	Dimension/Occ.Dimension	Standard or Drawing	Basic Material Material Standard	Weight GR./NET
Free space for lib.						Q-Code XXXXX Standard ISO JIS	Main Dwg.
Modif.	A	EAAD084051	05.09.2012				
	Number	Drawn date		Number	Drawn date		Number
Product W2-S		ENGINE SIDE STOPPER WELDED TYPE Motor-Seitenstopper					
Units	mm kg	IDE		Basic Material			Net Weight 45.0
SURFACE PROTECTION SEE GROUP 0344				Made	10.10.2006	M.Prstec	Scale 1:5
TOLERANCING PRINCIPLE ISO8015				Chkd			Size A2
GENERAL TOLERANCES ACCORDING TO ISO2768-mK				Appd	29.09.2009	jba029 Baumann	Page 1/1
							Material ID 107.376.678.200
							Drawing ID 107.376.678
							Rev. A

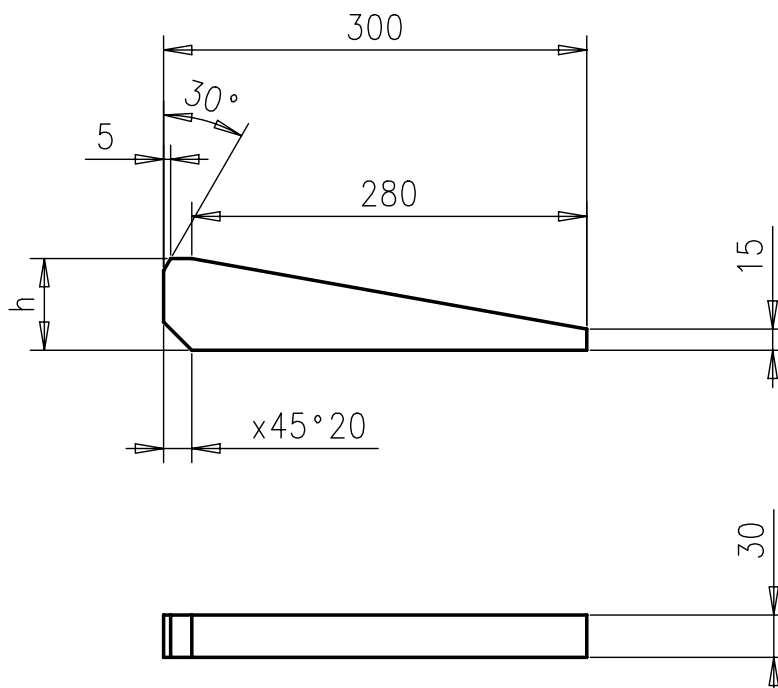
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		Number of	1			Drawing number		Material and remarks		mass kg/piece			
				001		107.376.672.001		Flachstahl 65x90x400					
						4-		S235JRH ; SS400		15.7			
								FLAT BAR					
				002		107.376.672.002		Flachstahl 65x90x400					
						4-		S235JRH ; SS400		15.7			
								FLAT BAR					
	kg												
	31.4												
h = 65-100 Abhaengig von Chockdicke, durch Werft zu bestimmen DEPENDING ON CHOCK THICKNESS, TO BE DETERMINED BY THE SHIPYARD													
Ra6,3													
001													
													
002													
													
Free space for lic.													
First introduced at													
RT-flex48T-D													
Modifications													
Q-Code X X X X X Substitute for													
Scale 1:5													
Drawn: M.Prstec 10.10.06													
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Design group 9710													
ISO JIS													
4- 107.376.672													
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WÄRTSILÄ													


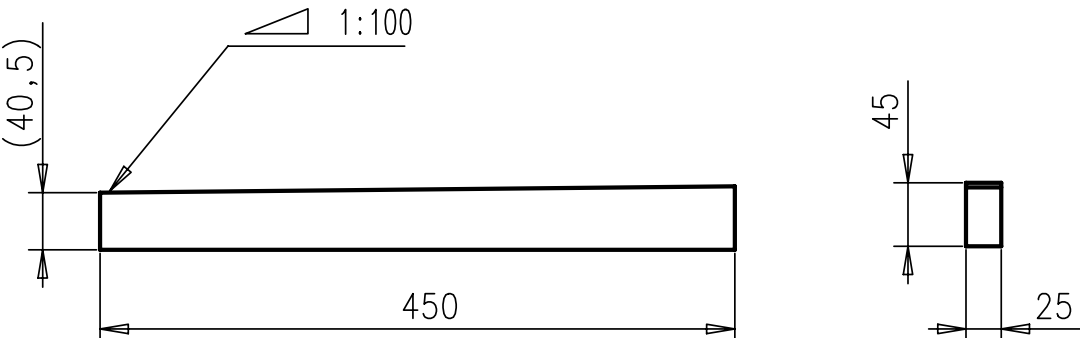
Switzerland Ltd. in case of violation, the recipient will be liable to damages.

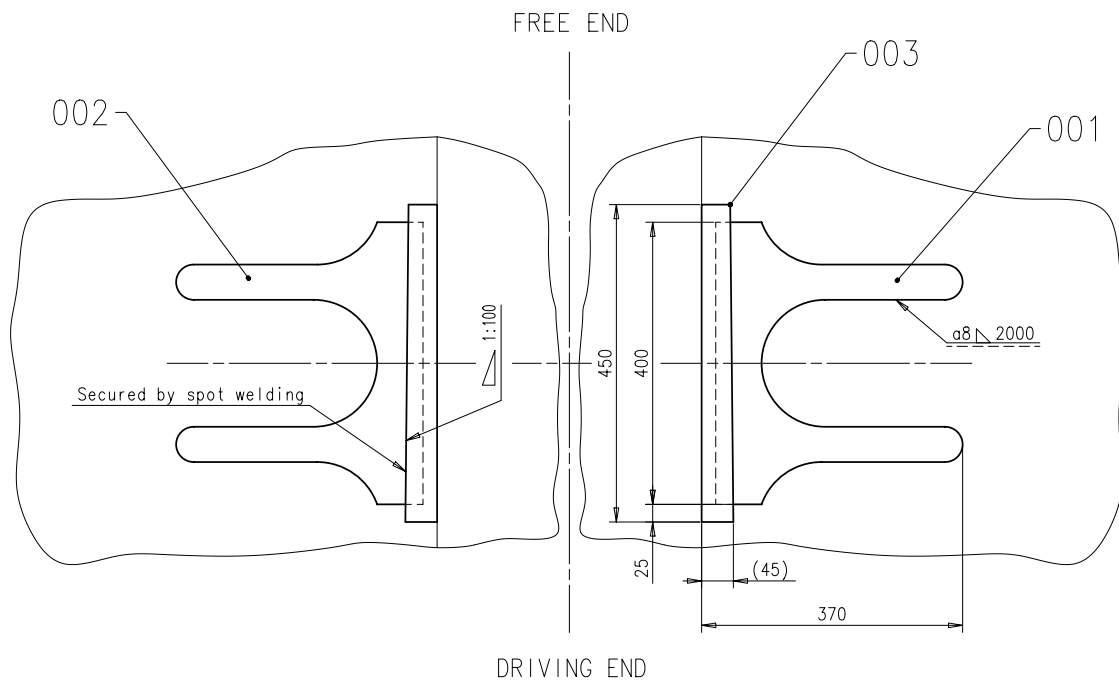
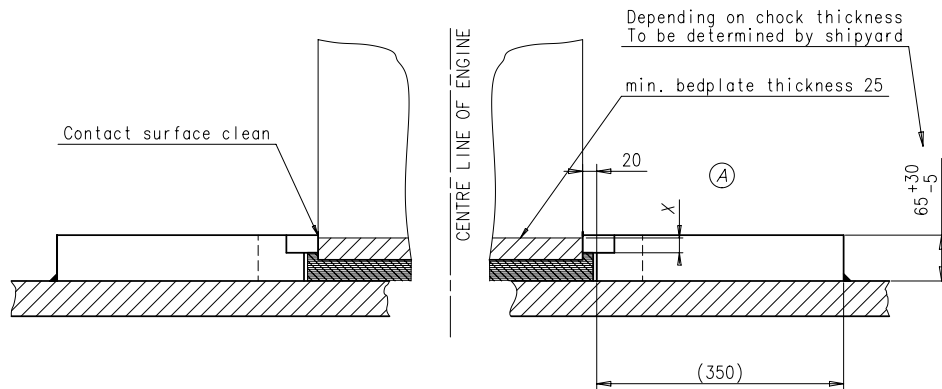
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First introduced at		Modifications		<div><div></div><div></div></div>			<div><div></div><div></div></div>			<div><div></div><div></div></div>		
RT-flex48T-D					Number	Drawn date		Number	Drawn date		Number	Drawn date
				Q-Code	X	X	X	X	X	Substitute for	Scale	1:5
		Flachstahl									Drawn: J.BAUMANN 17.06.09	
		FLAT BAR									Wartsila Switzerland Ltd	
											CAD	<div><div></div></div>
Design group		ISO		4-107.422.179							Page:	
9710		JIS										
<div><div></div></div> <div>WÄRTSILÄ</div>												

h = 60-95 Abhaengig von Chockdicke,
durch Werft zu bestimmen.
DEPENDING ON CHOCK THICKNESS,
DETERMINED BY THE SHIPYARD



SURFACE PROTECTION SEE GROUP 0344	GENERAL TOLERANCES ACCORDING TO ISO/2768-m	Exec. code no	Pos. code no	Article number	Designation	Source of supply	Modifi- cation letter																			
		Number of 1		Drawing number	Material and remarks	mass kg/piece																				
			001	107.325.275.001	Flachstahl 45x25x450																					
			4-		St 37-2	3.800																				
					FLAT BAR																					
<div>N9/  Kanten gebrochen SHARP EDGES REMOVED</div>																										
<div></div>																										
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Modifications																										
	Number	Date		Number	Date		Number	Date																		



Contact surface between wedge and engine bedplate:

Ⓐ	RT-flex48T-D
X [mm]	min. 12



Pos. 001-002: These parts cover a standardized chock thickness from 25mm up to 60mm

WELD QUALITY CLASS Q3

2	003	107.325.275.001	FLAT BAR	45x25x450	107.325.275	St 37-2 St 37-2	3.8
1	002	107.246.025.002	SHEET METAL		107.246.025	RS1 37-2 RS1 37-2	28.9
1	001	107.246.025.001	SHEET METAL		107.246.025	RS1 37-2 RS1 37-2	28.9

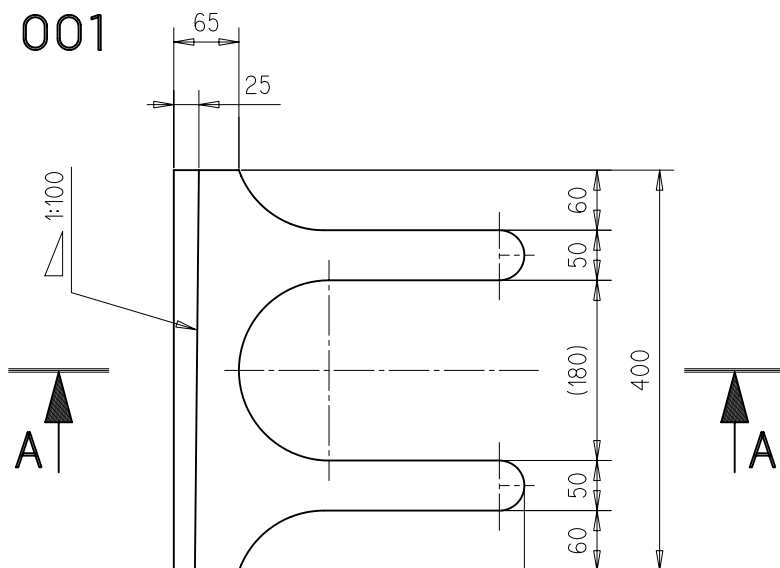
QTY	SEQ NO	Material ID	Material Name	Dimension/Occ.Dimension	Standard or Drawing	Basic Material Material Standard	Weight GR./NET
						Q-Code XXXXX Standard ISO JIS	Main Drw.

Modif.	Number	Drawn date	Product	Number	Drawn date	Number	Drawn date
A	EAAD084051	25.09.2012	W-2S				

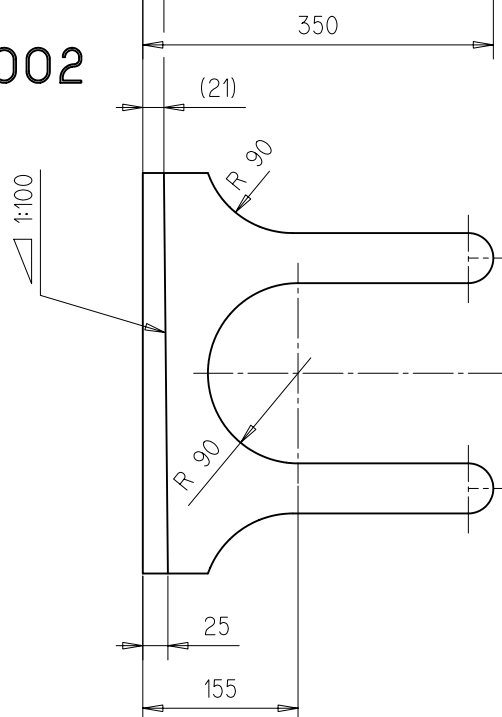
 WÄRTSILÄ		Product W-2S	ENGINE SIDE STOPPER FLAME-CUT Seitenstopper	
Units	mm kg	IDE	 Basic Material	Net Weight 65.4

SURFACE PROTECTION SEE GROUP 0344	Made 17.06.2009 J. Baumann	Scale 1:5	Size A2	Page 1/1	Material ID 107.422.180.200
TOLERANCING PRINCIPLE ISO8015	Chkd	Design Group	9710	Drawing ID 107.422.180	Rev. A
GENERAL TOLERANCES ACCORDING TO ISO2768-mK	Appd 29.09.2009 jba029 Baumann				

001



002



SURFACE PROTECTION SEE GROUP 0344

GENERAL TOLERANCES ACCORDING TO ISO/2768-m

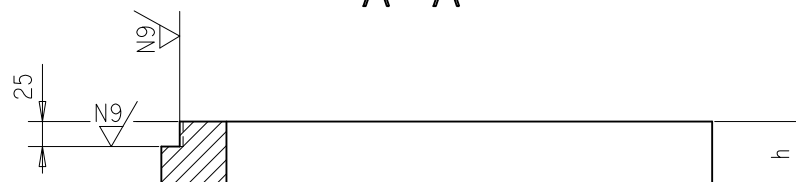
Exec. code number	Pos. code no	Article number	Designation	Source of supply ~ mass kg/piece	Modification letter
Number of		Drawing number			
1	001	107.246.025.001	Blech 350xhx400		
	3-		RSt37-2	28.9	
			SHEET METAL		
1	002	107.246.025.002	Blech 350xhx400		
	3-		RSt37-2	28.9	
			SHEET METAL		

N12/ (N9/)

Kanten gebrochen
SHARP EDGES REMOVED

h =(65-85mm) Abhaengig von Chockdicke,
durch Werft zu bestimmen
DEPENDENT ON CHOCK THICKNESS,
TO BE DETERMINED BY SHIP YARD


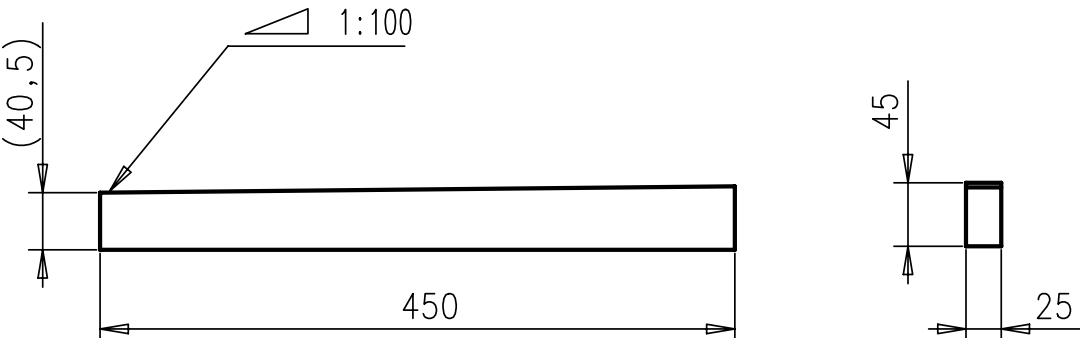
A-A



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Modifications | Free space for lic.

Q-Code	Number	Date	Substitute for	Scale	Drawn	Page
X	X	X	X	1 : 5	G. Giacometti 09.12.96	
Engine type	Version	Blech zu Motor-Seitenstopper			Wärtsilä NSD Switzerland Ltd	
RT48T		SHEET METAL TO ENGINE SIDE STOPPER			CAD	
Design group	ISO	3-107.246.025			WÄRTSILÄ NSD CORPORATION	
9710	JIS					

SURFACE PROTECTION SEE GROUP 0344	GENERAL TOLERANCES ACCORDING TO ISO/2768-m	Exec. code no	Pos. code no	Article number	Designation	Source of supply	Modifi- cation letter																			
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<div>N9/  Kanten gebrochen SHARP EDGES REMOVED</div>																										
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Modifications																										
	Number	Date		Number	Date		Number	Date																		

MIDS_WinGD-RT-flex48T-D_ENGINE-SEATING_and_FOUNDATION

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2017-08-21	DRAWING SET	First web upload

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