


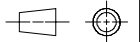
Available executions

Execution No.	Material ID	Cylinder No.
001	PTAA003595	5
002	PTAA003592	6,7,8

NOTE

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

This publication is designed to provide accurate and authoritative information with regard to the subject-matter covered as it was available at the time of printing. However, the publication deals with complicated technical matters suited only for specialists in the area, and the design of the subject-products is subject to regular improvements, modifications and changes. Consequently, the publisher and copyright owner of this publication cannot accept any responsibility or liability for any eventual errors or omissions in this document or for discrepancies arising from the features of any actual item in the respective product being different from those shown in this publication. The publisher and copyright owner shall under no circumstances be held liable for any financial consequential damages or other loss, or any other damage or injury, suffered by any party making use of this publication or the information contained herein.

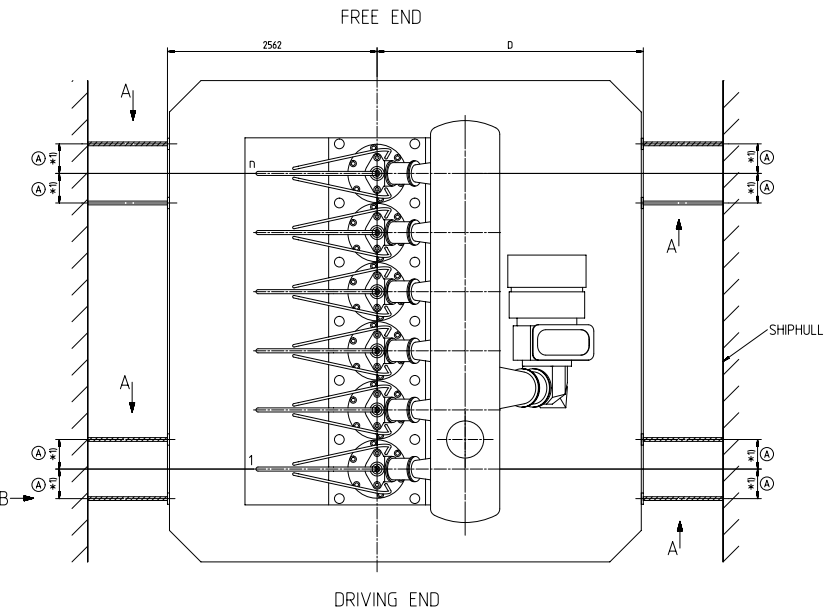
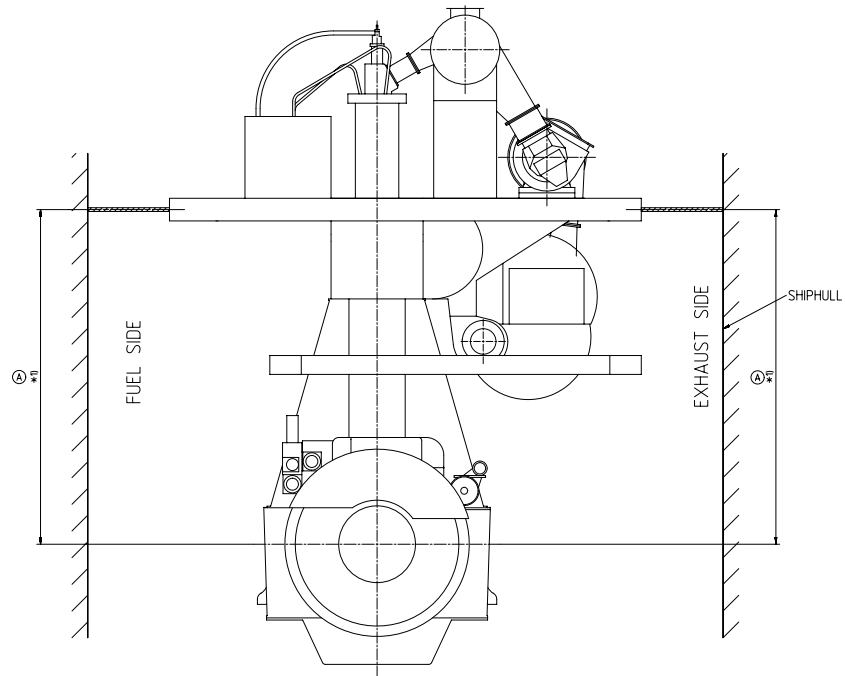
Prod.	X52-S2.0										
Change History											
	-	sde101				MIDS master drawing					
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis			Activity Code	E C	
 Winterthur Gas & Diesel				ENGINE STAYS MIDS master drawing							
separate BOM available				Dimension							
Scale	-		NX	Units [mm] [kg]		Basic Material			Net Weight 12957		
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the drawing the recipient recognizes and honours these rights. Neither the whole nor any part of this drawing may be used in any way for construction, fabrication, marketing or any other purpose nor copied in any way nor made accessible to third parties without the previous written consent of Winterthur Gas & Diesel Ltd.				Main Design		Design Group 9715		Q-Code X X M		Standard WDS	
				Qty per		A4	Item ID PTAA030326		Drawing Page/s 1/1		

SEQ NO	QTY	Item ID	Item Name Dimension	Standard-ID	Basic Material	Net Weight
1	1	PTAA003582	ENGINE STAYS Longitudinal Stays			3590
4	1	PTAA003591	ENGINE STAYS BS, STD			0

Prod.	5 X52-S2.0			
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 <p>Winterthur Gas &amp; Diesel</p>	<p>ENGINE STAYS</p> <p>PAAD300935</p>
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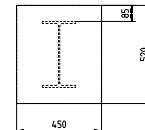
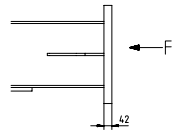
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Prod.	6,7,8 X52-S2.0						
Change History							
	A	sde101	mhu019	23.06.2023	CNAA003995	Drawing update	4 3
	-	sde101	mhu019	22.06.2023	CNAA003978	Main Design/Drawing Introduced	- -
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Activity Code E C
<div>WIN GD Winterthur Gas &amp; Diesel</div>			ENGINE STAYS				
Bill Of Material			Dimension				
Copyright Winterthur Gas & Diesel Ltd. All rights reserved. By taking possession of the document the recipient recognizes and honours these rights. Neither the whole nor any part of this document 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.			Units [m] [kg]		Basic Material		Net Weight 3590
			Main Design Yes		Design Group 9715 Q-Code XXXXX		Standard WDS
			Qty per Engine	A4	Item ID PTAA003592		BOM Page/s 01/01



Layout of engine stays attachment points on platform side according to WinGD standard design

VIEW AⒶ  
SCALE 1:10

VIEW BⒶ  
SCALE 1:10



#### Ⓐ Requirements for the installation and operation of hydraulic type engine stays

- Depending on the project specific requirements and selected engine stays type, the engine stays can be installed with one of the following arrangements:

- 1) engine stays on exhaust side
- 2) engine stays on fuel side
- 3) engine stays on both sides

- Recommendation regarding the required number of engine stays is provided in the Marine Installation Manual (MIM).

- The finally required number of engine stays must be determined by the shipyard and depends on the transferred forces and ship structural stiffness. The transferred forces consist of the static engine stays pre-tensioning forces (as provided by the engine stays supplier) and the dynamic forces from the engine (as defined in the WinGD engine dynamic data sheet "Forces and Moments").

- The engine stays must adapt to the ship hull deformation and reduce the static reaction force acting on the engine and ship hull attachment points.

- The engine stays must increase the total stiffness of the system to avoid harmful resonance conditions. The dynamic stiffness of the engine stays (dynamic spring rate) is provided by the engine stays supplier.

- The engine stays must have a damping function to ensure that the acceptable vibrations (RMS limits) for the WinGD 2-stroke engine are maintained.

- The performance of the engine stays must be checked with vibration measurements during sea trial.

- The installation and commissioning of the engine stays must be in accordance with the supplier's instructions.

- The hydraulic type engine stays, as provided by the following suppliers, have WinGD makers' acceptance:

Green & Clean Technology Co., Ltd (Korea)  
Hanmi Hydraulic Machinery Co., Ltd (Korea)  
Nantong Navigation Machinery Group Co., Ltd (China)

- WinGD layout of the support points on the engine side meets the requirements for the engine stays as provided from the above listed suppliers, i.e. the max. transferred forces and required support plate sizes are covered by the design accordingly. If an engine stays type from another supplier is selected, WinGD must be consulted.

Requirements for engine stays attachment points at ship hull side (per engine stay)

Max. force acting on ship hull	$F_{h_{max}}$ (kN)	*1)
Minimum stiffness	$k_{min}$ (N/m)	$0.5 \times 10^9$
Permissible deflection per 100 kN	$Def_{max}$ (mm)	0.2

#### Ⓐ Remarks:

\*1) The engine stays positions are defined in the "DG7602-01/02 Platform Outline Views".

\*2) Maximum engine force results from lateral moments of X/H type at the project specific rating plus engine stays pre-tensioning force according to stays supplier's specification.

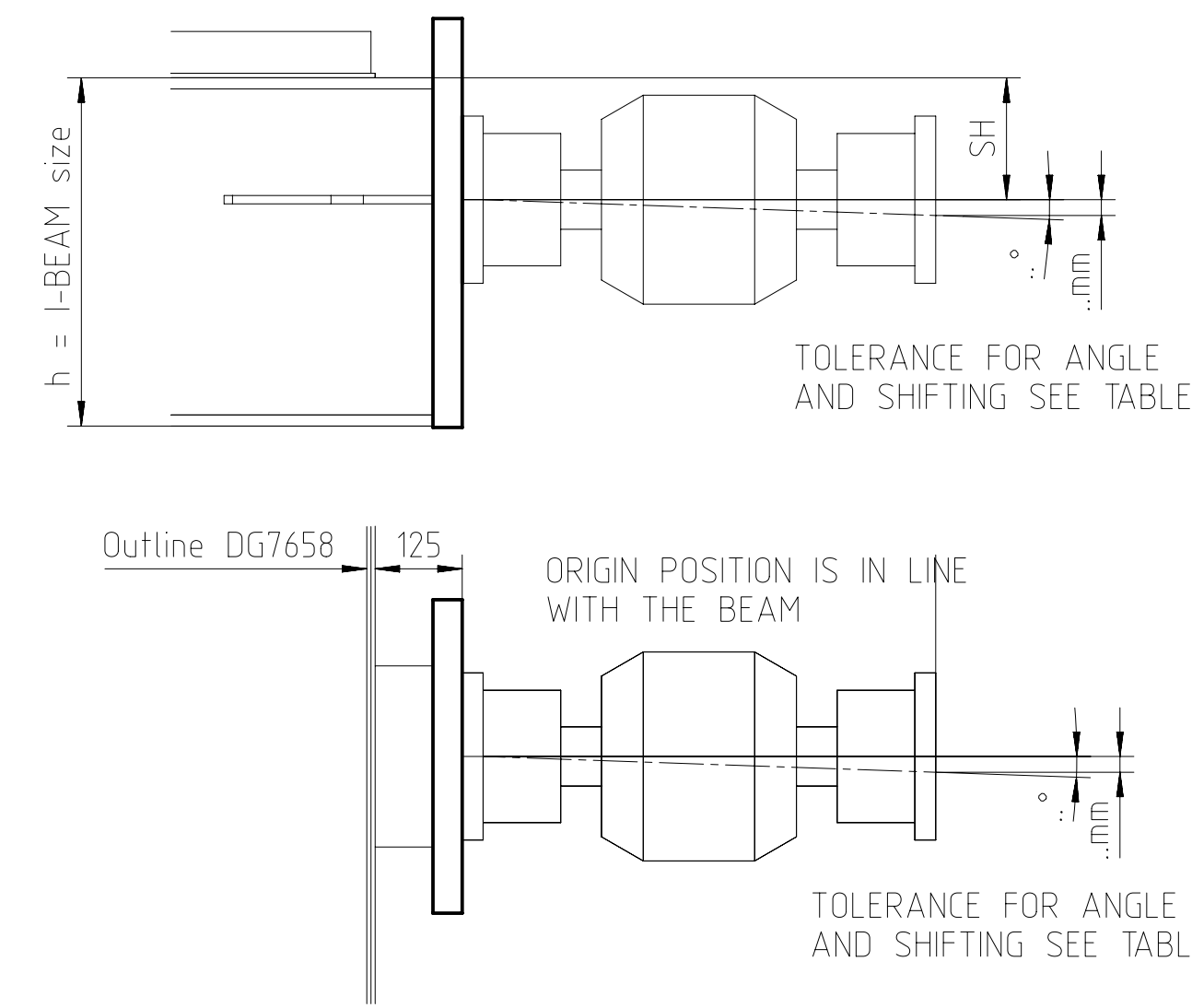
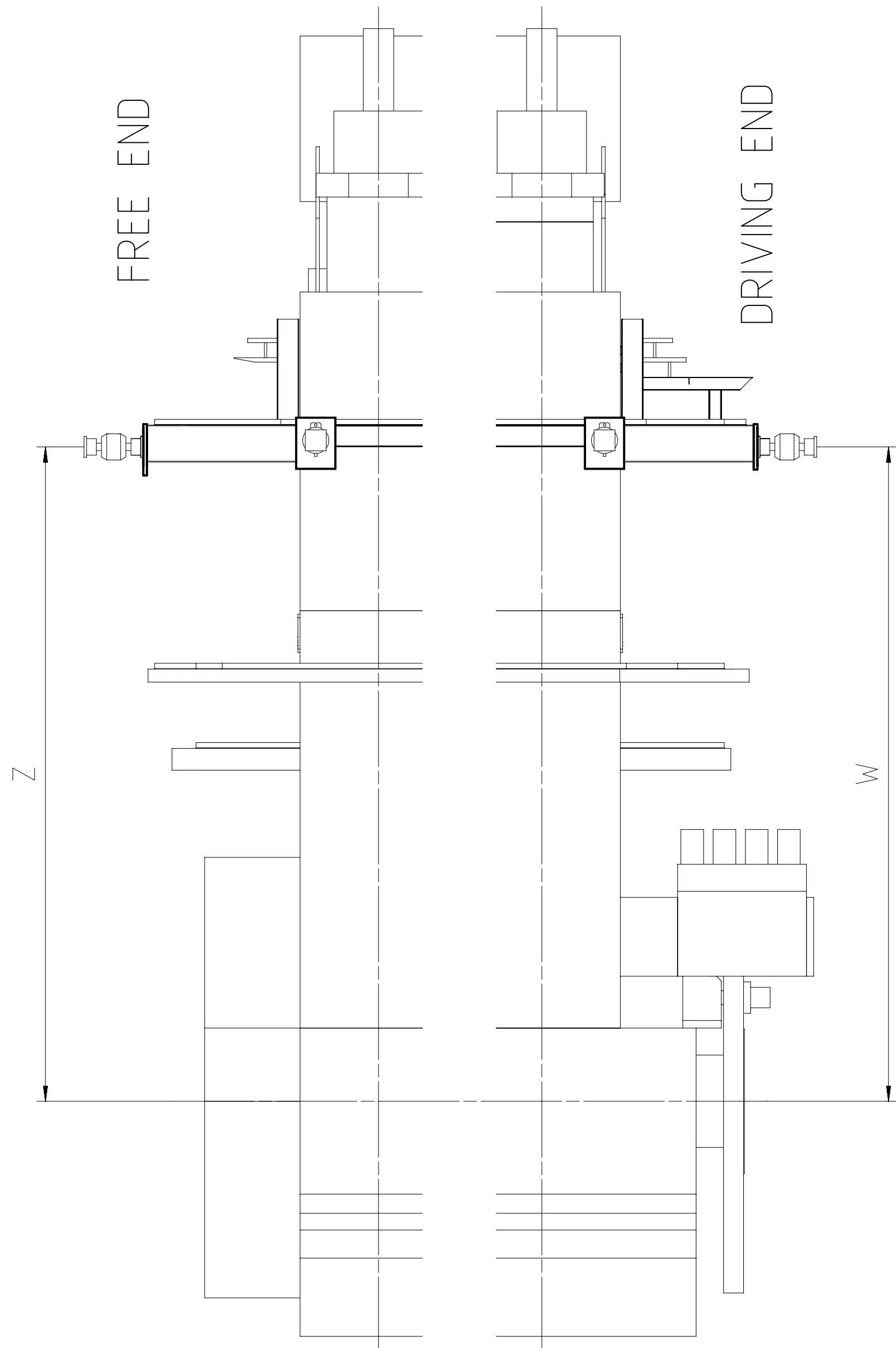
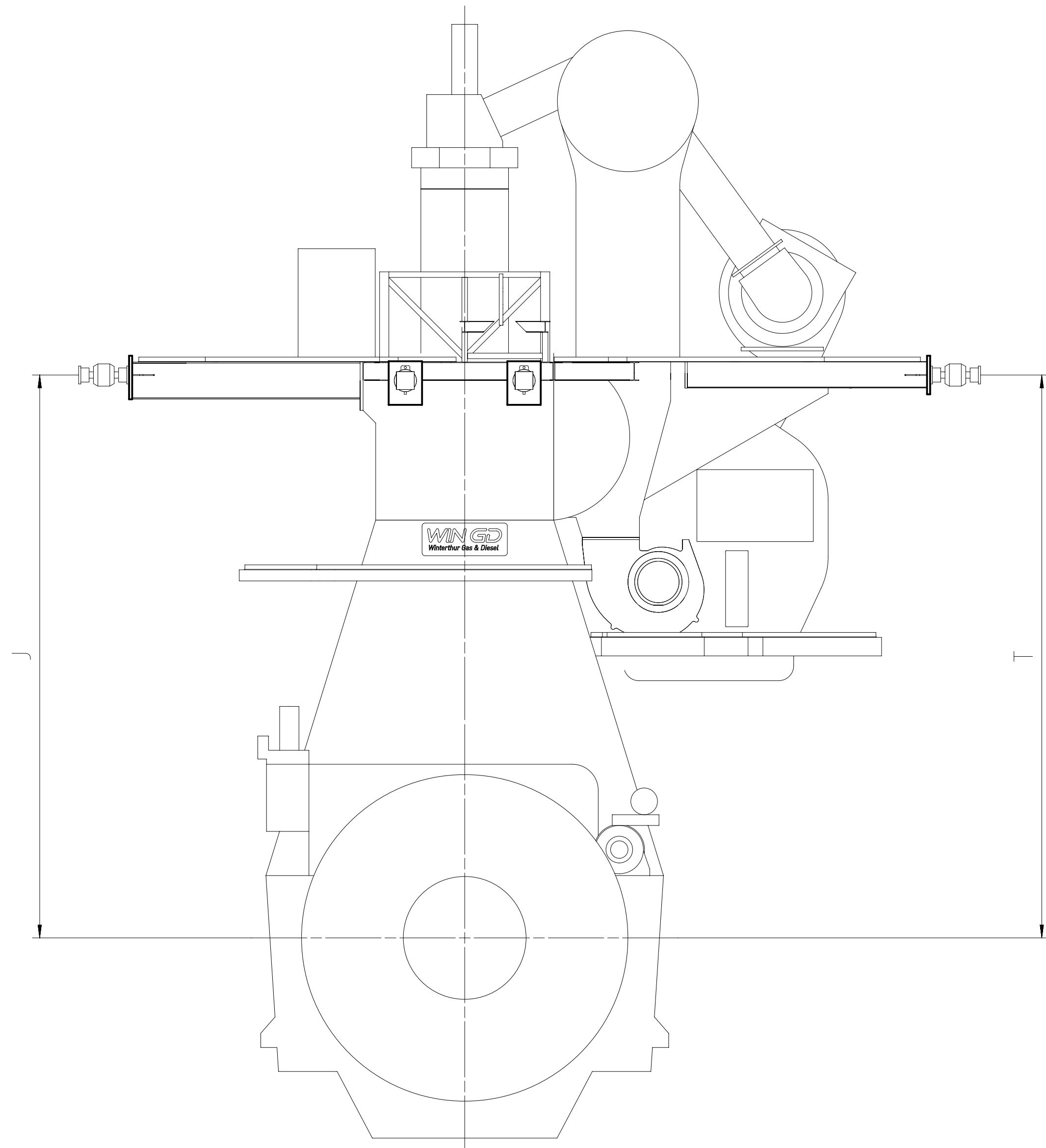
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DRIVING END

FUEL SIDE

DE & FE - LONGITUDINAL CONNECTION

FRICION STAYS  
AS ALTERNATIVE SOLUTION FOR LONGITUDINAL STAYS

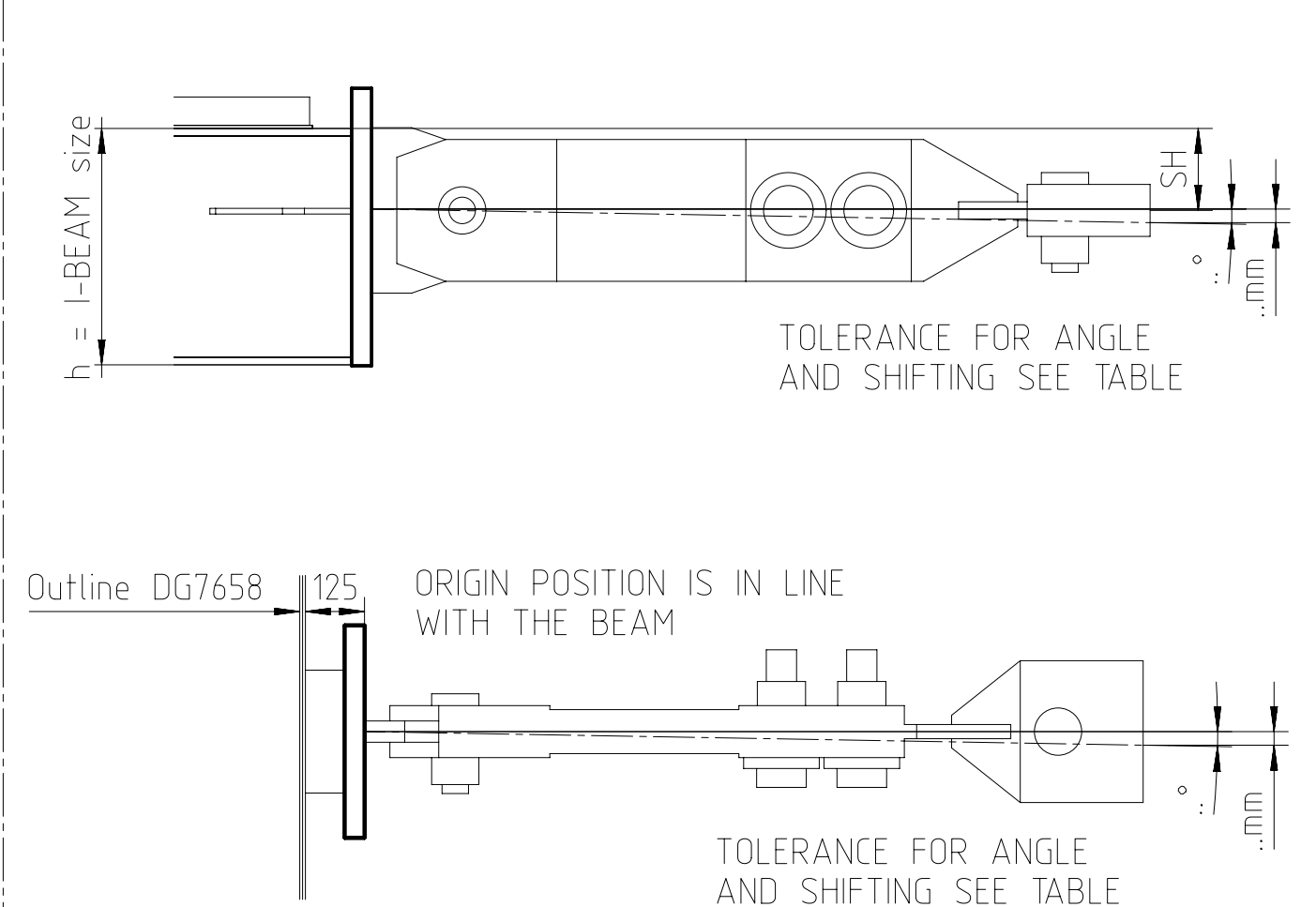


DRIVING END only for 5 cyl. necessary

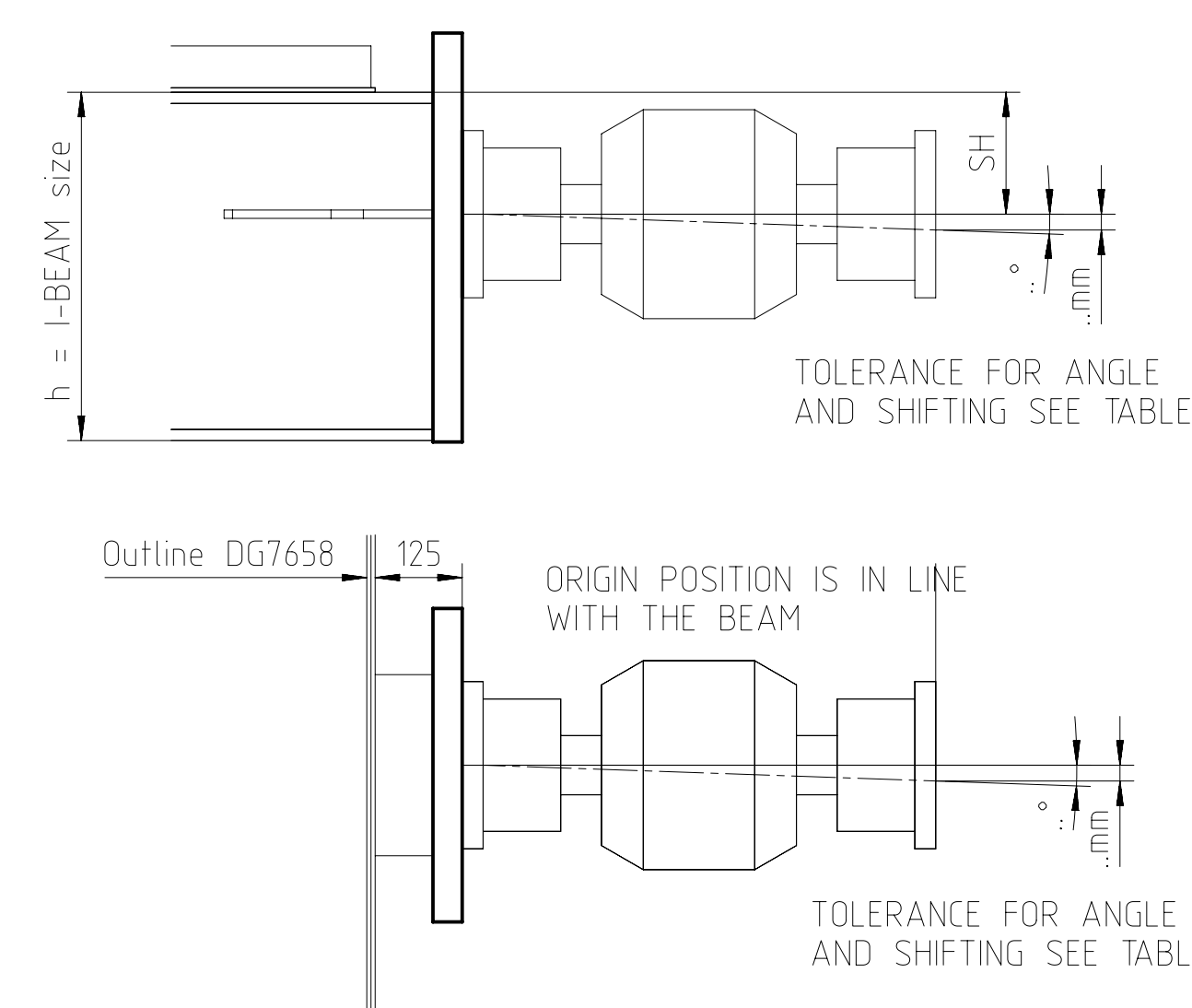
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	DF	dimensions are on request				
	iSCR	595	595	2425	2425	4715

FREE END only for 5 cyl. necessary

Cyl. No.	Attribute	X-FS	X-ES	Y-FS	Y-ES	Z
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	DF	dimensions are on request				
	iSCR	595	595	2325	2325	4715



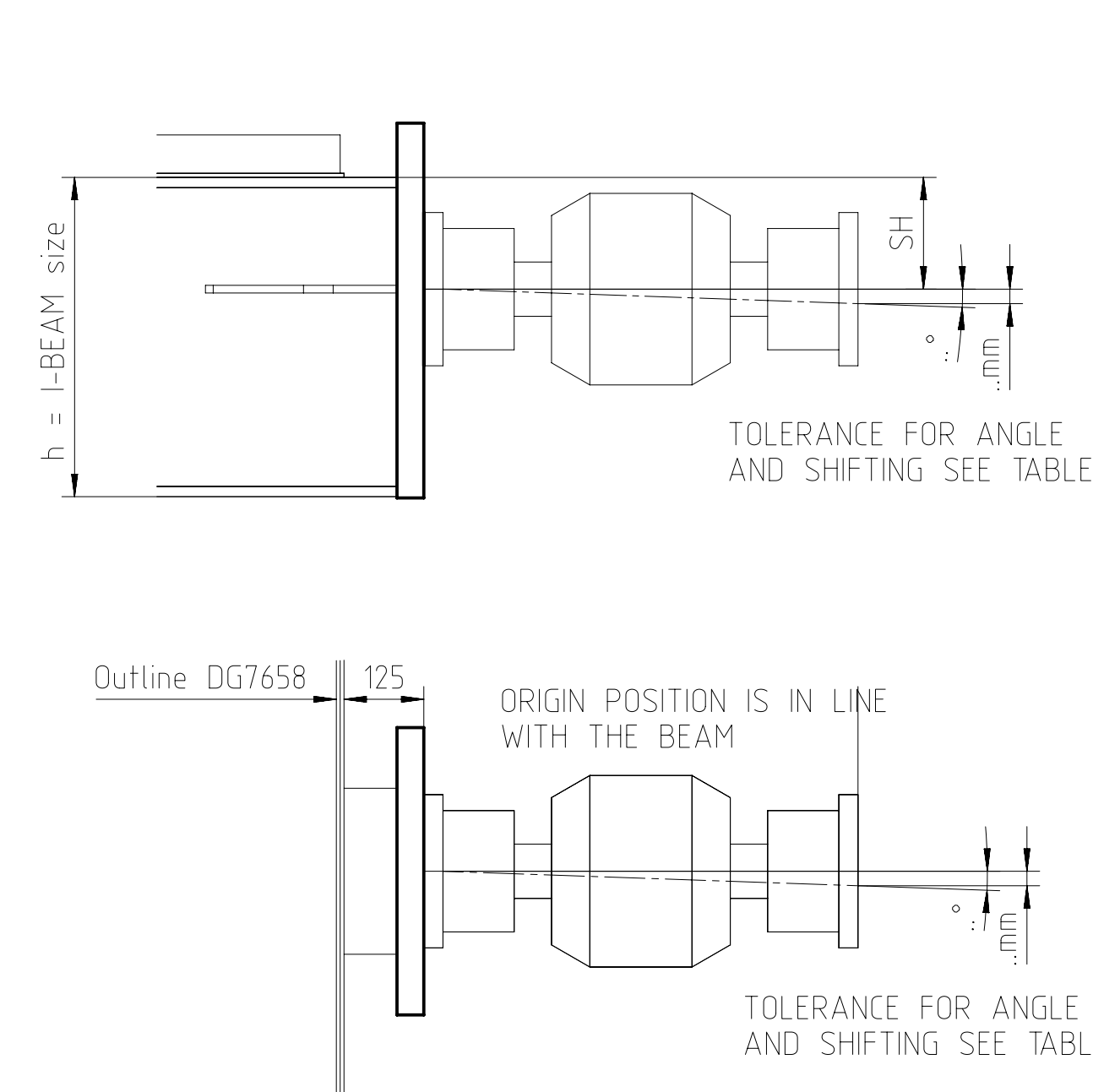
FUEL SIDE - LATERAL CONNECTION



\* only for engines with 11 and more cylinders

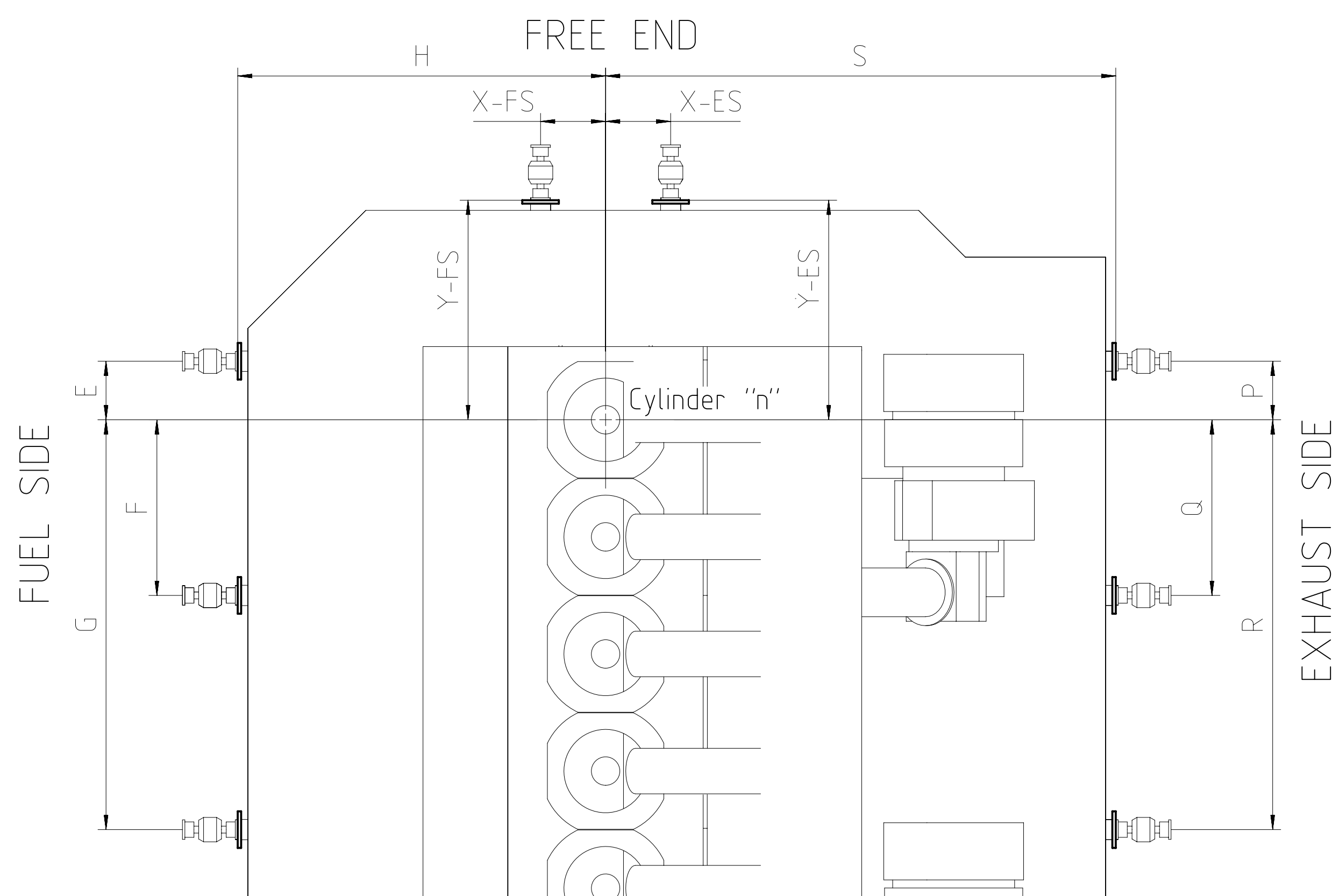
Cyl. No.	A	B	C *	D	E	F	G *	H	J
5	430	1290	-	3725	430	430	-	3725	4690
6	430	1290	-	3725	430	1290	-	3725	4690
7	dimensions are on request								
8	dimensions are on request								
9	according to the GTD - not necessary								
10	according to the GTD - not necessary								
11	according to the GTD - not necessary								
12	according to the GTD - not necessary								

EXHAUST SIDE - LATERAL CONNECTION



\* only for engines with 11 and more cylinders

Cyl. No.	Attribute	TC No.	A1xx-L	A2xx-L	METxxMB	METxxMBII	K	L	M *	N	P	Q	R *	S	T
5	iSCR	1	-	-	MET37MB	MET37MBII	430	1290	-	4425	430	430	-	4475	4690
6	Diesel	1	A165-L	A265-L	-	-	430	1290	-	4425	430	1290	-	4475	4690
7	dimensions are on request														
8	dimensions are on request														
9	according to the GTD - not necessary														
10	according to the GTD - not necessary														
11	according to the GTD - not necessary														
12	according to the GTD - not necessary														



\* ALLOWED ASSEMBLY DISPLACEMENT

HYDRAULIC TYPE STAY - ALL POSITION

VERTICAL DIMENSION	= ± 50mm
HORIZONTAL DIMENSION	= ± 15mm
VERTICAL ANGLE	= ± 3,5°
HORIZONTAL ANGLE	= ± 1,0°

FRICION TYPE STAY - ONLY FOR LONGITUDINAL POSITION

VERTICAL DIMENSION	= ± 50mm
HORIZONTAL DIMENSION	= ± 50mm
VERTICAL ANGLE	= ± 0,0°
HORIZONTAL ANGLE	= ± 0,0°

ENGINE SIDE INTERFACE SPECIFICATION

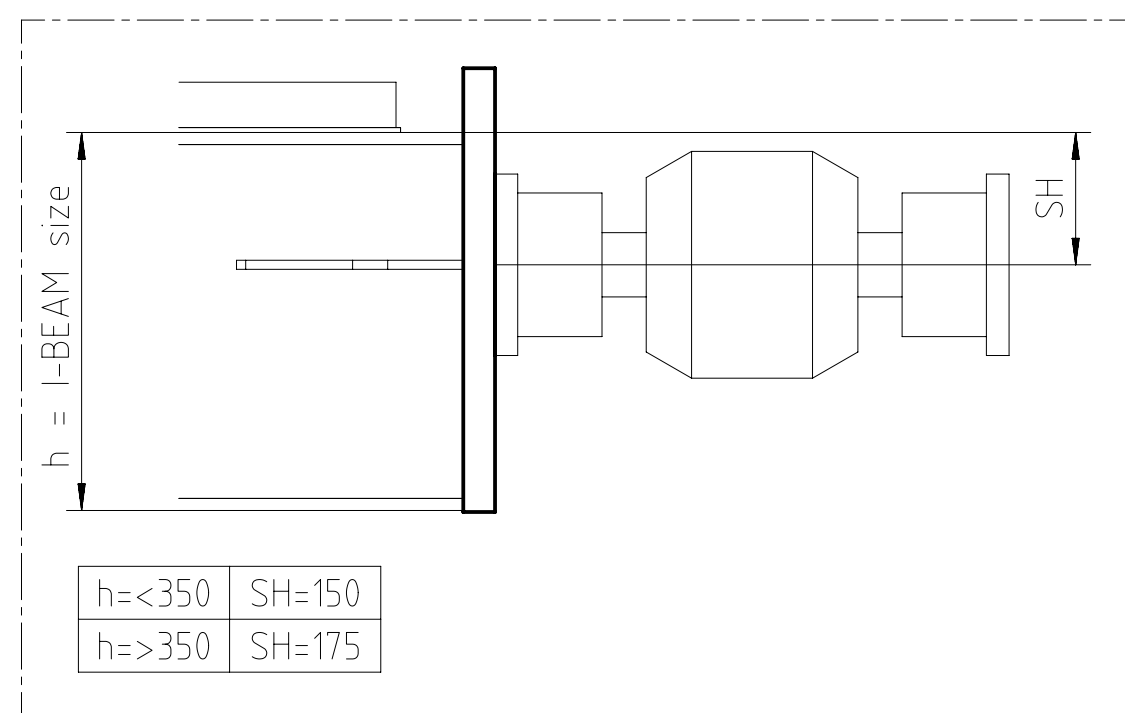
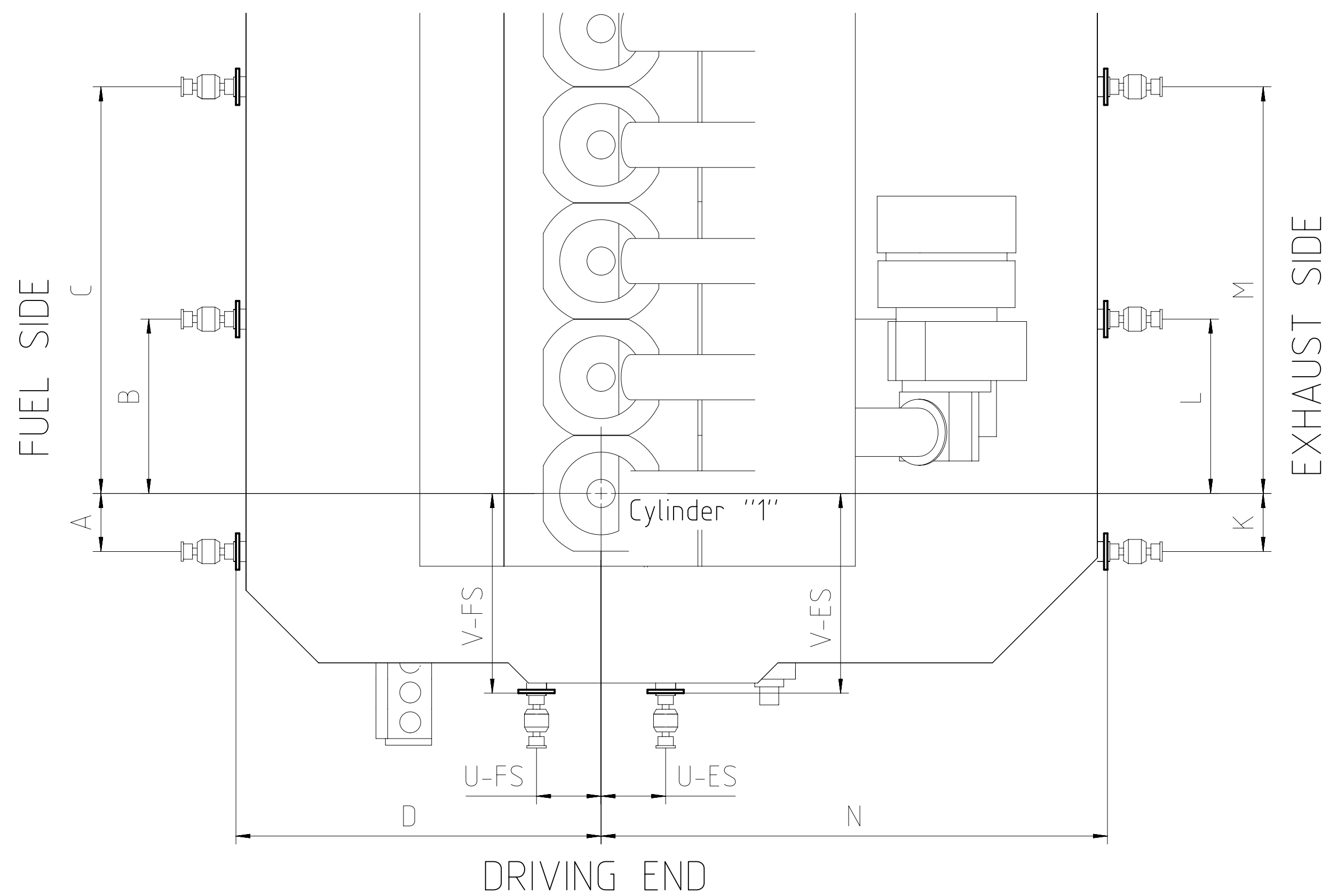
THESE VALUES ARE VALIDE FOR ENGINES IN BORE SIZE RANGE OF 620 TO 960MM.

PERMISSIBLE FORCE LONGITUDINAL	= 185 kN
PERMISSIBLE FORCE LATERAL	= 185 kN
STIFFNESS LONGITUDINAL	= ± 320 kN/mm (0,32~e-9 N/m)
STIFFNESS LATERAL	= ± 320 kN/mm (0,32~e-9 N/m)

ENGINE SIDE INTERFACE SPECIFICATION

THESE VALUES ARE VALIDE FOR ENGINES IN BORE SIZE RANGE UNTIL 610MM.

PERMISSIBLE FORCE LONGITUDINAL	= 185 kN
PERMISSIBLE FORCE LATERAL	= 185 kN
STIFFNESS LONGITUDINAL	= ± 320 kN/mm (0,32~e-9 N/m)
STIFFNESS LATERAL	= ± 320 kN/mm (0,32~e-9 N/m)



ENGINE OUTLINE VIEW - SEE GROUP 0812-01 OR 0812-02  
DISMANTING DIMENSIONS - SEE GROUP 0816-01 OR 0816-02  
PLATFORM BEAM DIMENSION - SEE GROUP 7644 TO 7648  
RAILING - SEE GROUP 7653  
WALK AREA - SEE GROUP 7658  
PIPE CONNECTION PLAN - SEE GROUP 8020  
ENGINE STAYS - SEE GROUP 9715  
THE SUPPORTS THEMSELVES ARE DEFINED IN DG9715

X82-1.0 - 2x270 SHOWN AS REFERENCE.  
THE DRAWING IS VALID FOR ALL CYLINDER NUMBERS AND TURBOCHARGER EXECUTIONS.  
THE SPECIFIC POSITIONS ARE PROVIDED BY THE TABLE ABOVE.

DIMENSIONS FOR REFERENCE ONLY!  
THIS DRAWING CAN NOT BE USED FOR FINAL DESIGN!  
PLEASE TAKE THE CORRESPONDING DESIGN GROUP!


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

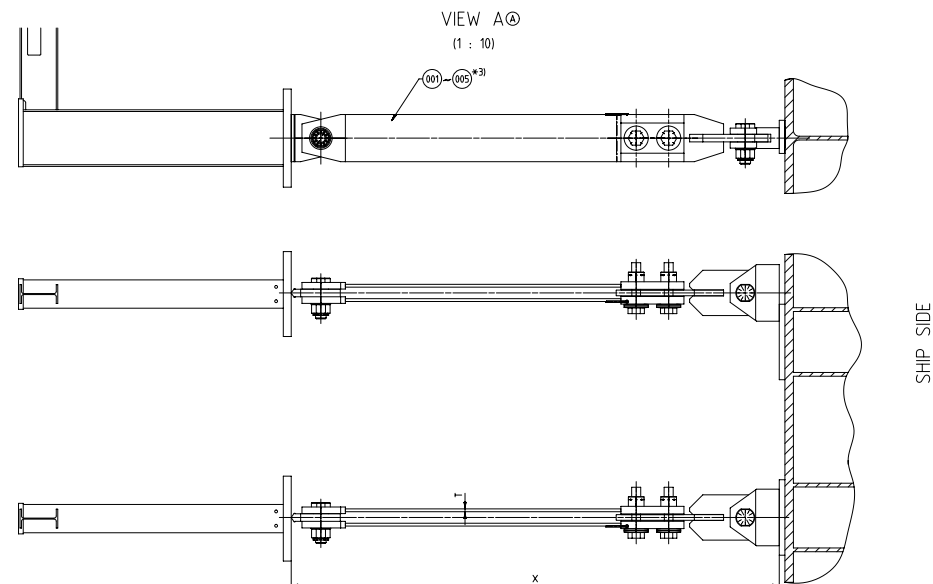
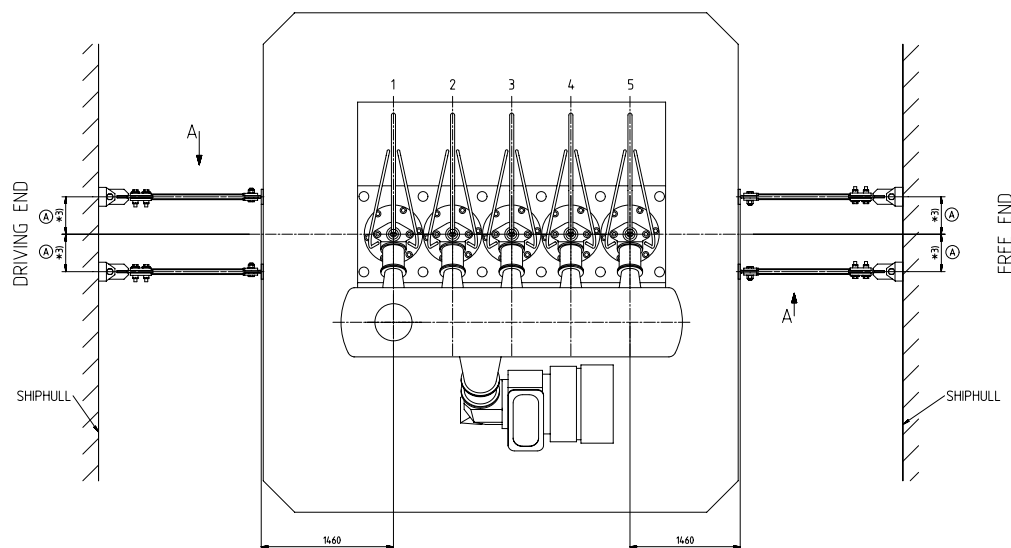
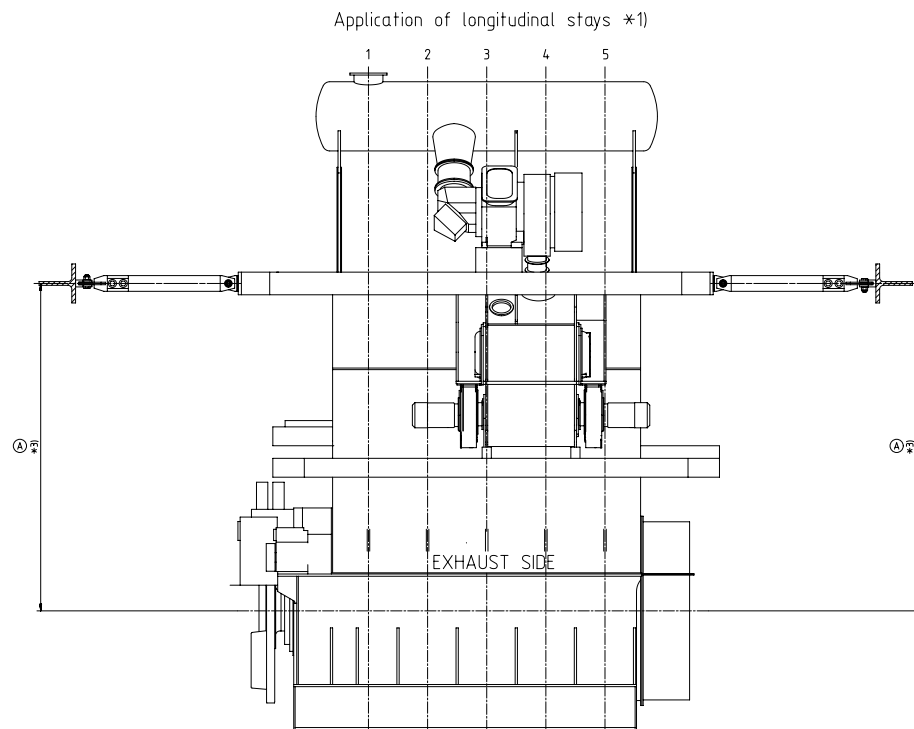
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	A	zh101	r11002	11.10.2023	01A-A004566	Drawing update						4	
	-	j105	stf0107	24.08.2023	01A-A004238	new Design						-	
Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis						Approved	Activity Code	E
<div><div><div>WIN GD</div><div>Winterthur Gas &amp; Diesel</div></div><div><div>TOP BRACING SYSTEM</div><div>POSITION OF THE EXTERNAL ENGINE STAYS</div></div></div>													
Dimension													
Scale	1:50			NX	Units	[mm]	[kg]	Basic Material		Net Weight		0.00	
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Drawing Pages													
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SEQ NO	QTY	Item ID	Item Name	Dimension	Standard-ID	Basic Material	Net Weight
1	2	PAAD046700	ENGINE STAYS/ FRICTION TYPE				302
2	2	PAAD046701	ENGINE STAYS/ FRICTION TYPE				330
3	2	PAAD046702	ENGINE STAYS/ FRICTION TYPE				359
4	2	PAAD046703	ENGINE STAYS/ FRICTION TYPE				387
5	2	PAAD046704	ENGINE STAYS/ FRICTION TYPE				417
6	1	107.246.429.500	ASSEMBLY INSTRUCTIONS				0.001



Prod.	X52-S2.0								
Change History									
	A	npa101	st h017	24.08.2023	CNAA004238	Drawing updated		4	3
	-	sde101	mhu019	22.06.2023	CNAA003978	new Design		-	-
	Rev.	Creator	Approver	Approval Date	Change ID	Change Synopsis	Approved	Activity Code	E C

		ENGINE STAYS							
Bill Of Material		Dimension				Longitudinal Stays			
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		Main Design		Design Group		9715	Q-Code	X X M	Standard WDS
		Qty per		A4	Item ID		PTAA003582		BOM Page/s 01/01



④ Requirements for the installation and operation of friction type \*1) engine stays according to WinGD design

- Depending on the project specific requirements the engine stays can be installed with one of the following arrangements:
  - 1) two engine stays on engine driving end side
  - 2) two engine stays on engine free end side
- The engine stays must adapt to the ship hull deformation and reduce the static reaction force acting on the engine and ship hull attachment points.
- The engine stays must increase the total stiffness of the system to avoid harmful resonance conditions.
- The performance of the engine stays must be checked with vibration measurements during sea trial.
- WinGD layout of the support points on the engine side meets the requirements for the friction type engine stays according to WinGD design, i.e. the max. transferred forces and required support plate sizes are covered by the design accordingly.
- The installation and commissioning of the friction type engine stays must be done according to the instructions, as provided in the "Fitting instruction for friction type engine stays".
- If an engine stays type from another supplier or an hydraulic type stay is selected, WinGD must be consulted accordingly.

### Requirements for ship side attachment point

Max. force acting on ship hull #2)	$F_{h_{max}}$	(kN)	90
Minimum stiffness	$k_{min}$	(N/m)	$0.8 \times 10^6$
Permissible deflection per 100 kN	$Def_{max}$	(mm)	0.125

④ Remarks:

- \*1) Engine stays of friction type must be only installed in longitudinal direction. As an alternative also engine stays of hydraulic type can be applied.
- \*2) Relevant engine forces resulting from lateral moments of X/H-type at R1 rating are considered. The provided value represents the transmitted force per stay (2 pcs per side) which must be considered for the layout of the attachment points on ship hull side.
- \*3) The engine stays positions are defined in the "DG7602-01-02 Platform Outline Views".

Pos. No. *4)	Material ID	X ( mm )	T ( mm )
001	PAAD046700	2000 - 2280	15
002	PAAD046701	2281 - 2560	20
003	PAAD046702	2561 - 2840	25
004	PAAD046703	2841 - 3120	30
005	PAAD046704	3121 - 3400	35

X defines the clear width between engine attachment points and ship side  
(to be determined by shipyard)

X min. = 2000 mm  
X max. = 3400 mm

- Ⓐ \*4) Depending on the requirement, either the stay execution of Pos. 001, 002, 003, 004 or Pos. 005 must be selected.

[illegible]

# Friction type stays according to WinGD design

ONLY to be installed  
in longitudinal direction on  
engine driving end or free end

Please consult WinGD directly in case you have  
a specific question or need support.

## DISCLAIMER

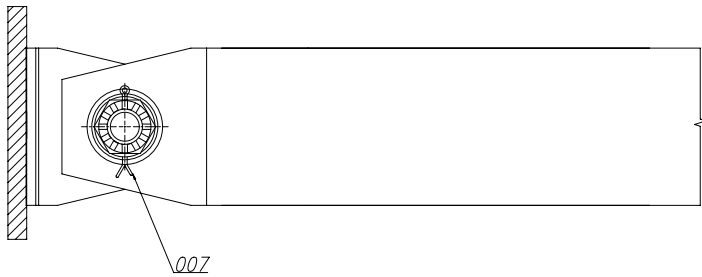
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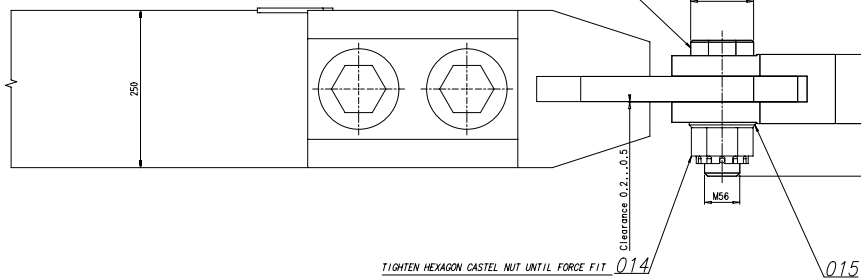


Engine side

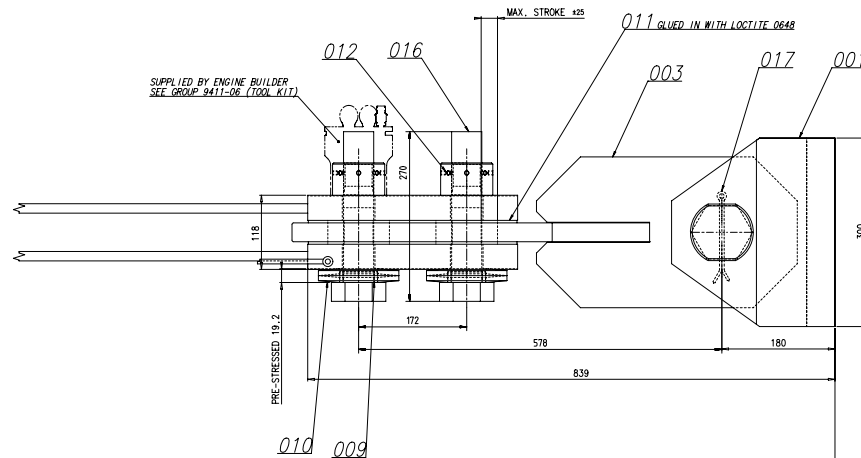
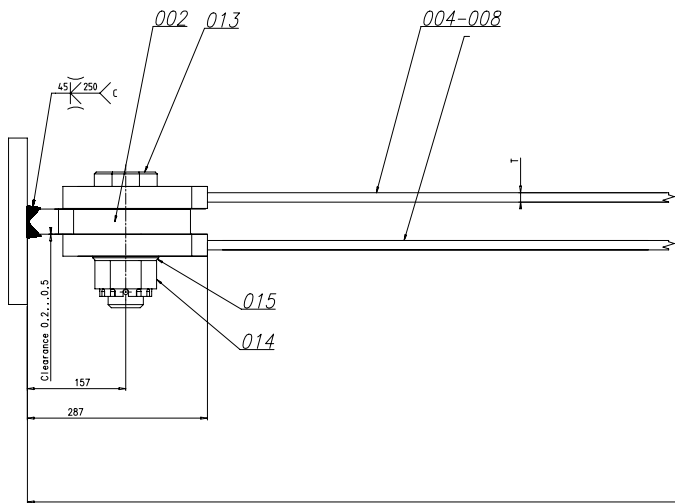


LUBRICATED WITH MOLYCOTE 013

Ship side



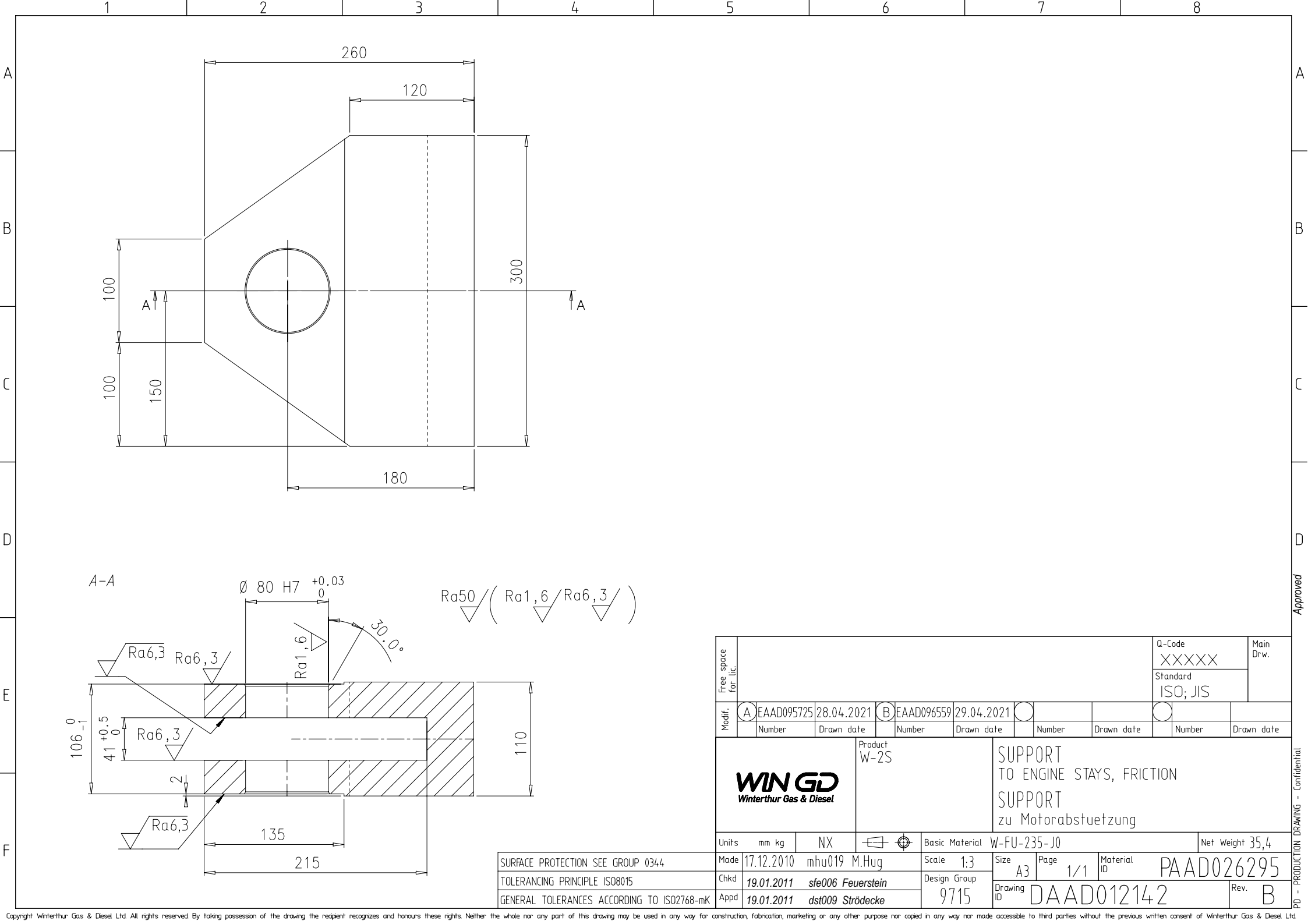
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PAAD046702	2561-2840	25
PAAD046703	2841-3120	30
PAAD046704	3121-3400	35

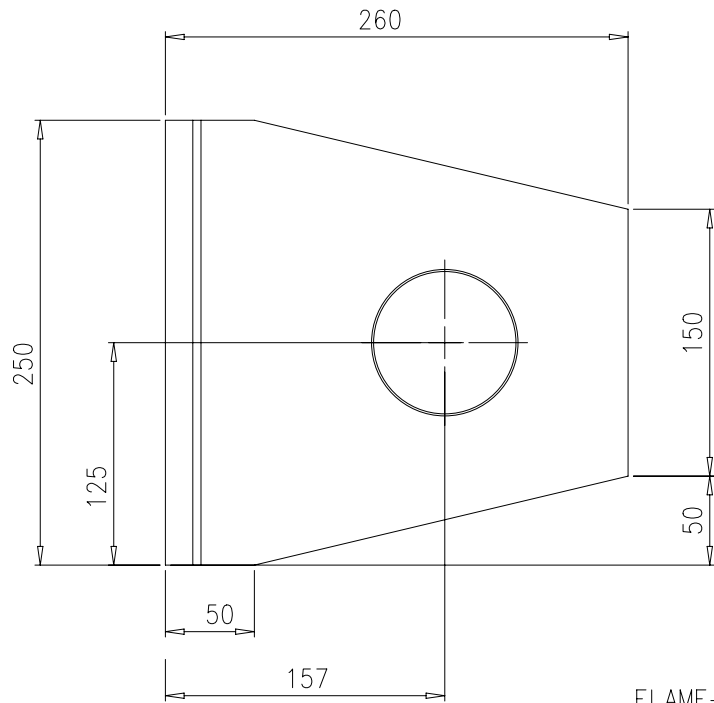


NOTE:  
X= CLEAR WIDTH BETWEEN ENGINE AND SHIP SIDE; TO BE DETERMINED BY SHIPYARD (SEE MAIN DRAWING)

Qty	Part No.	Part Name	Material	Quantity	Unit	Weight
2	017	SPLIT PIN	ISO 1234	8x100	Steel Zn-plated	0.05
2	016	HEXAGON HEAD BOLT	M16x240	ISO 4014	BB	4.25
2	015	WASHER	58	DIN 125-1	Steel blank	0.425
2	014	CASTLE NUT	M56	Acc. WINGED	CASE/SASC	1.63
2	013	BOLT	PAAD026437	DAAD02368	CASE	7.17
2	012	ROUND NUT	M16	W-R-420-M5-1	W-R-420-M5-1	1.62
2	011	SHIM	4THICK	DAAD02593		2.3
4	010	DISC SPRING	125 X 61 X 8	W2246.311		0.55
2	009	RNG	60 x 50 x 17	RSP 37-2		0.12
2	008	ENGINE STRIPS	DAAD02592			137
2	007	ENGINE STRIPS	DAAD02592			122
2	006	ENGINE STRIPS	DAAD02592			108
2	005	ENGINE STRIPS	DAAD02592			93.8
2	004	ENGINE STRIPS	DAAD02592			79.6
1	003	CLAMPING PART	DAAD02576			54.9
1	002	SUPPORT	DAAD02614	W-FU-355-X		15.6
1	001	SUPPORT	DAAD02625	W-FU-225-X		35.4

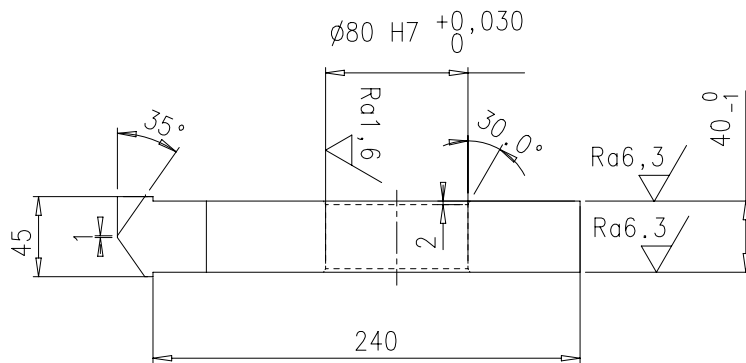
				Project M-25		ENGINE STMS/1 FRICTION TYPE	
						Motorenabstuetzung mit Reibbelag	
Info		mto no. to NIX		Basic Material		Net Weight	
SOURCE PROTECTION SEE GROUP DATA		Week 10.06.2017 15:05:05		Feuerstein		Scale 1:3	
TOLERANCE PRINCIPLE COURTS		Chm 17.07.2017		awrllf Wlbbelwsl		Size All 1/1 Material	
GENERAL TOLERANCES ACCORDING TO ISO2768-MS		17.07.2017		awrllf Stlbbelwsl		Drawing 9715	
						DAAD018242	
						Rev. B	





Ra50 FLAME-CUT

(Ra1,6 / Ra6,3)

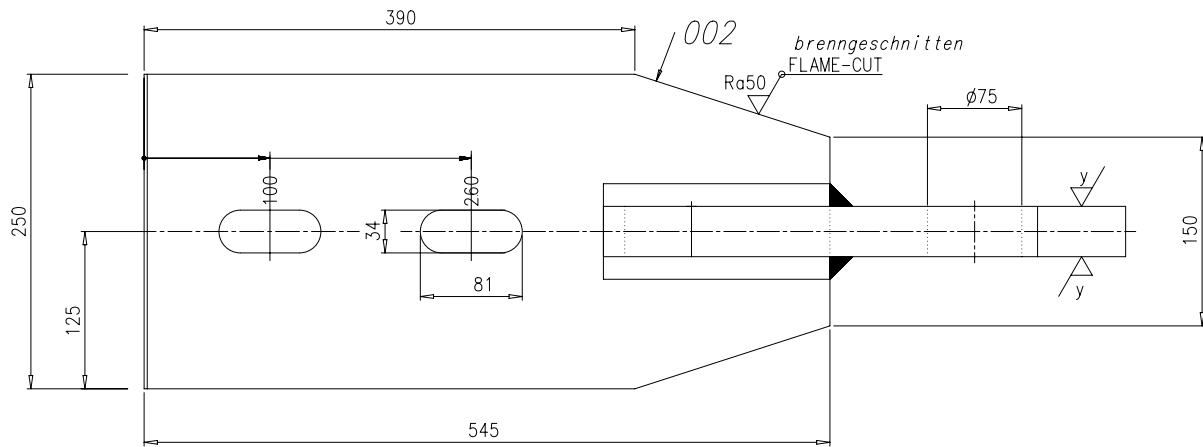


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								Standard ISO; JIS			
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	Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	
Units		mm kg	NX	Basic Material		W-FU-355-J0			Net Weight 15,6		
SURFACE PROTECTION SEE GROUP 0344		Made	20.12.2010	mhu019 M.Hug		Scale	1:3	Size	A3	Page	1/1
TOLERANCING PRINCIPLE ISO8015		Chkd	19.01.2011	sfe006 Feuerstein		Design Group	9715	Drawing ID	DAAD012141		
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	19.01.2011	dst009 Strödecke					Rev.	B	

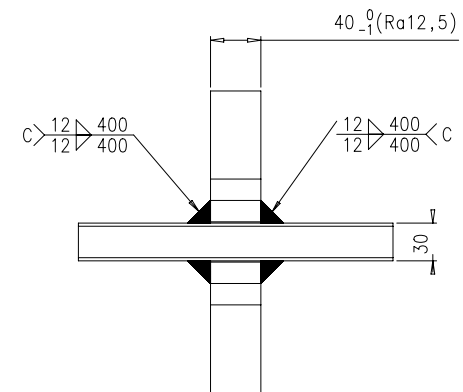
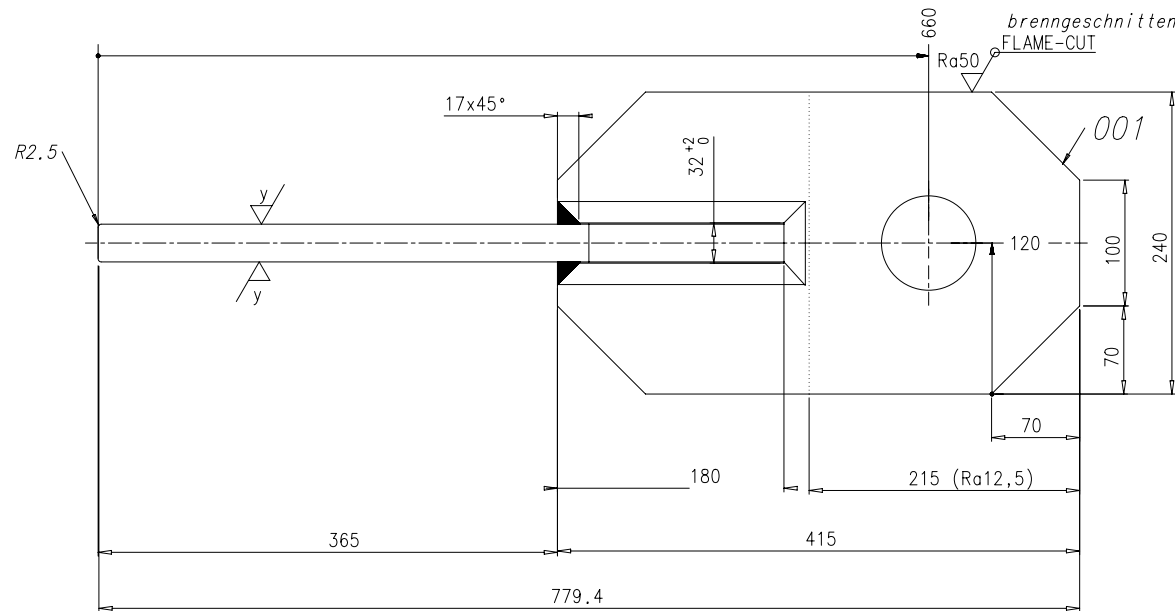
**WIN GD**  
Winterthur Gas & Diesel


Product  
W-2S

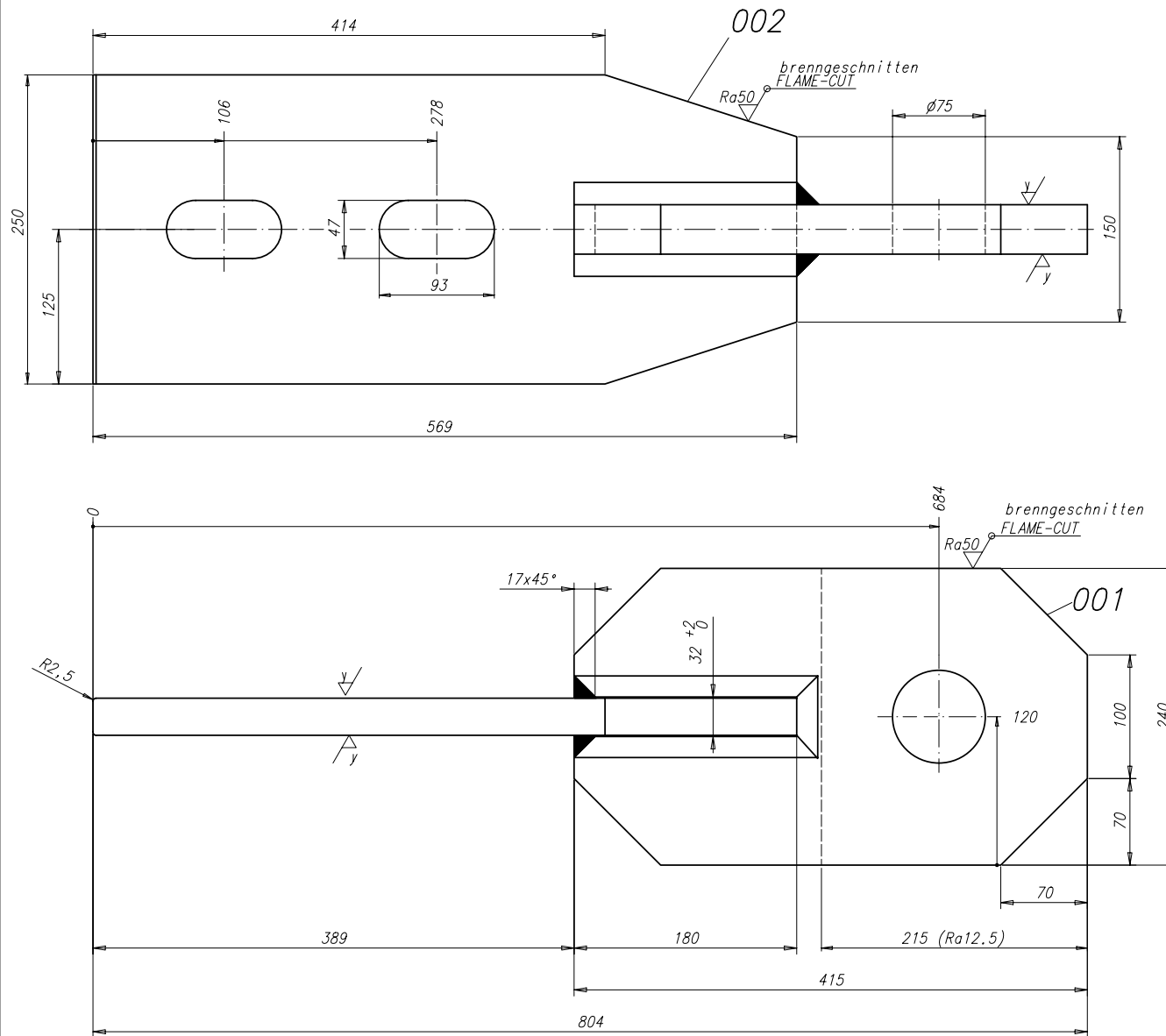
SUPPORT  
TO ENGINE STAYS, FRICTION  
Support  
zu Motorabstuetzung



RA50 (✓)  
y/ = Ra12.5  
SANDBLASTED BEFORE WELDING



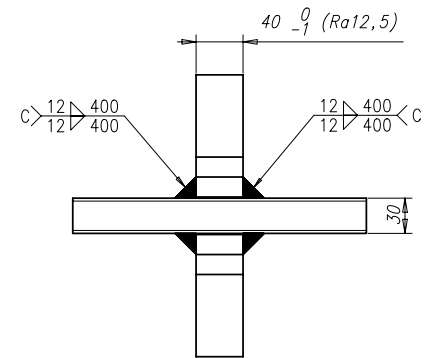
1	002	PAAD027199	PLATE		DAAD012457	W-FU-355-J0	26,9						
1	001	PAAD027091	PLATE		DAAD012457	W-FU-235-J0	37,7						
QTY	SEQ NO	Material ID	Material Name		Standard or Drawing	Basic Material Material Standard	Weight GR./NET						
Free space for lic.						Q-Code	Main Drw.						
						XXXXXX							
						Standard ISO; JIS							
Modif.	A	EAAD082648	12.07.2011	B	EAAD095725	28.04.2021	C	EAAD096559	29.04.2021				
		Number	Drawn date		Number	Drawn date		Number	Drawn date		Number	Drawn date	
			Product W-25		CLAMPING PART WELDED, TO ENGINE STAYS Klemmteil geschweisst, zu Motorabstuetzung								
WIN GD Winterthur Gas & Diesel													
Units	mm	kg	NX				Basic Material				Net Weight 64,6		
Made	22.12.2010	mhu019	M.Hug		Scale	1:1	Size	A2	Page	1/1	Material ID	PAAD027261	
Chkd	19.01.2011	sfo006	Feuerstein		Design Group		9715		Drawing ID		DAAD012457	Rev.	C
Appd	19.01.2011	dst009	Strödecke										
mK													




Ra50/ (✓)

y/ Ra12.5/

Vor dem Bearbeiten sandgestrahlt  
SANDBLASTED BEFORE WELDING



1	002	PAAD902229	PLATE	30 THICK	DAAD902577	S235JRG2 SS400	30.1				
1	001	PAAD902253	PLATE	40 THICK	DAAD902577	S355J2G3 SME20C	24.7				
QTY	SEQ NO	Material ID	Material Name	Dimension/Occ.	Dimension	Standard or Drawing	Basic Material Material Standard	Weight GR./NET			
Free Space for Use							Q-Code XXXXXX Standard ISO JIS	Main Drw.			
Modif.											
	Number	Drawn date		Number	Drawn date		Number	Drawn date			
WIN GD Winterthur Gas & Diesel			Product W-2S		CLAMPING PART WELDED, TO ENGINE STAYS Klemnteil geschweisst, zu Motorabstuetzung						
Units	mm kg	IDE		Basic Material			Net Weight 55.0				
Mode	31.05.2011 Pradij Soman			Scale	1:3	Size	A2	Page	1/1	Material ID	PAAD902230
Chkd	07.07.2011 mhu019 Hug			Design Group							
Appd	07.07.2011 dt009 Stroedecke			9715		Drawing ID		DAAD902577		Rev.	—

Approved

100% MECHANICAL DRAWING - Confidential

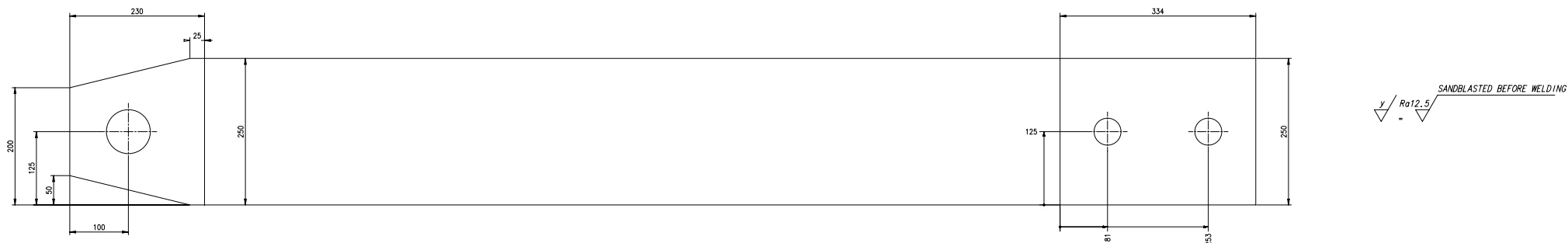
SURFACE PROTECTION SEE GROUP 0344  
TOLERANCING PRINCIPLE ISO8015  
GENERAL TOLERANCES ACCORDING TO ISO2768-mK

Made 31.05.2011 Pradip Saman  
Chkd 07.07.2011 mhu019 Hug  
Appd 07.07.2011 dst009 Stroedecke

Scale 1:3  
Size A2  
Page 1/1  
Material ID PAAD902230  
Drawing ID DAAD902577

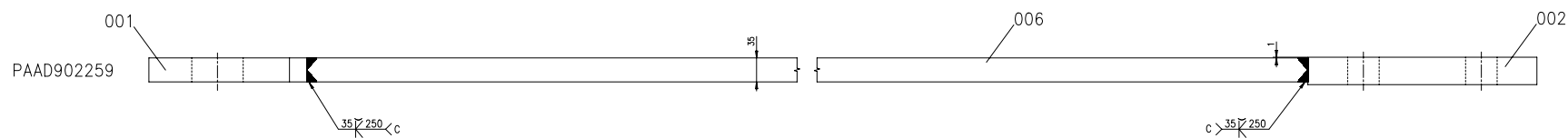
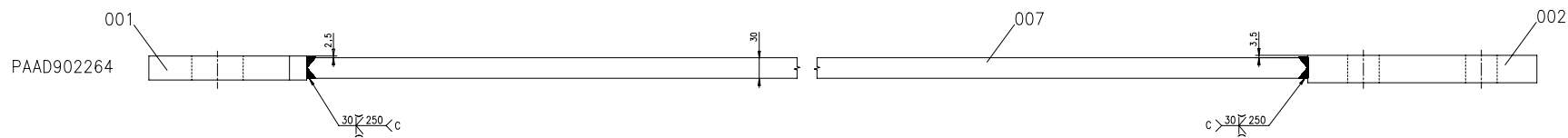
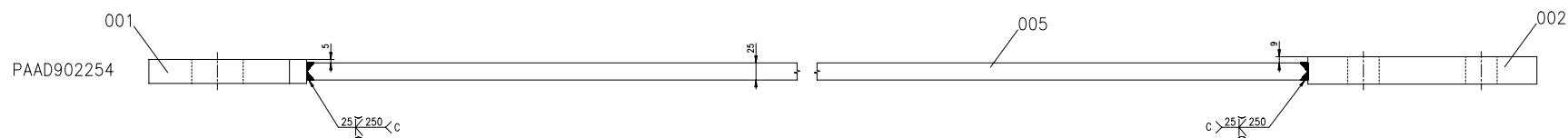
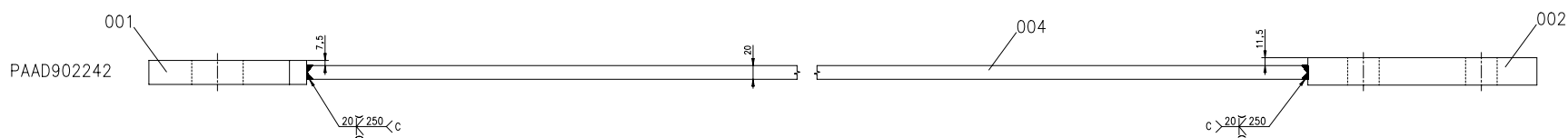
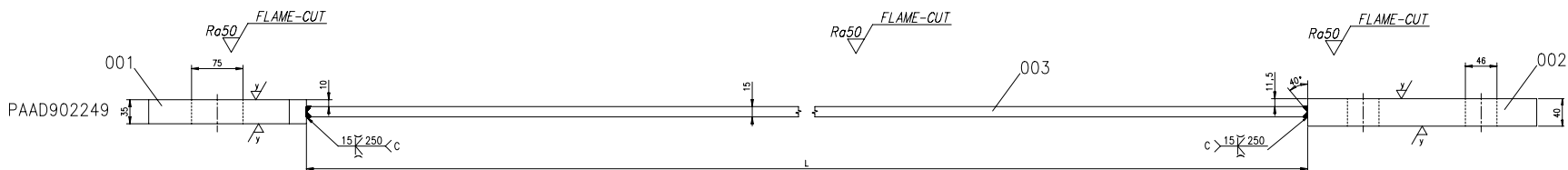
Rev. -





MATERIAL ID	DIMENSIONS IN MM		
	X	T	L
PAAD902249	2000-2280	15	X = 1126
PAAD902242	2281-2560	20	
PAAD902254	2561-2840	25	
PAAD902264	2841-3120	30	
PAAD902259	3121-3400	35	

Fuer Mass X siehe H-Zeichnung  
FOR MEASURE X SEE MAIN DRAWING

[illegible]





# 001 DISC SPRING

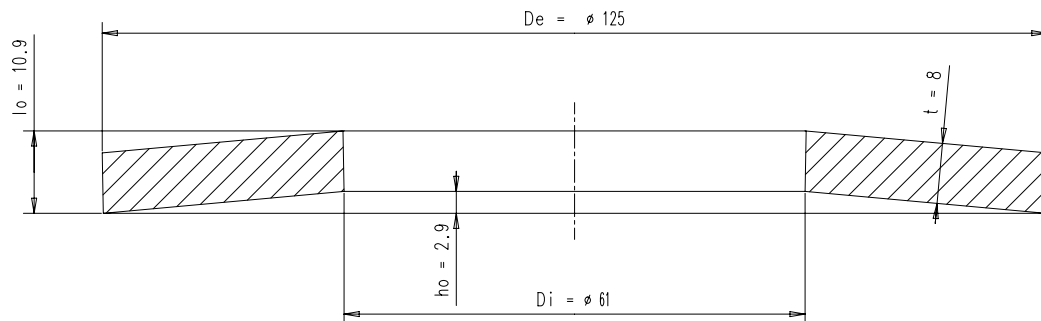
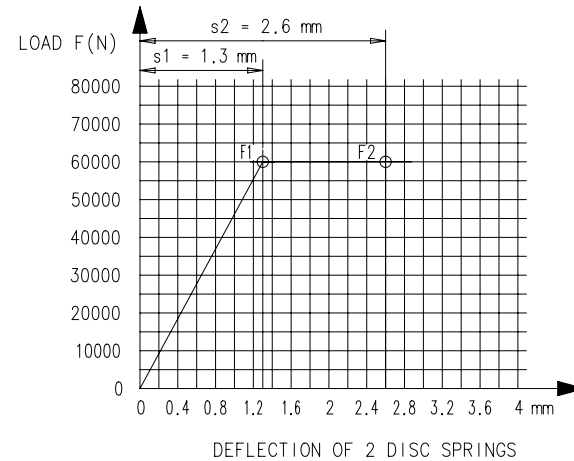
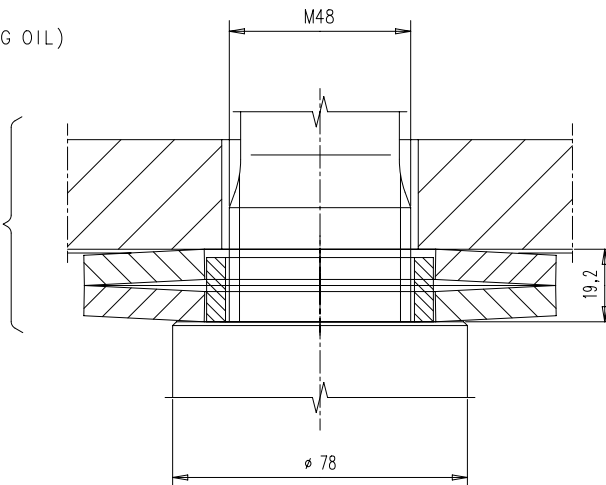
MATERIAL 50 Cr V 4  
 MODULUS OF ELASTICITY  $E = 2,06 \times 10^5 \text{ N/mm}^2$   
 OPERATING TEMPERATURE  $-50...+200 \text{ }^\circ\text{C}$   
 SURFACE PROTECTION PHOSPHATED AND OILED (RUST PREVENTING OIL)

FOR ASSEMBLY OF THE DISC SPRING PACKET SEE SKETCH

$F_1 = 60000 \text{ N}$  BY DEFLECTION  $s_1 = 1.3 \text{ mm}$  OF 1 DISC  
 $F_2 = F_1$  BY DEFLECTION  $s_2 = 2.6 \text{ mm}$  OF 2 DISCS

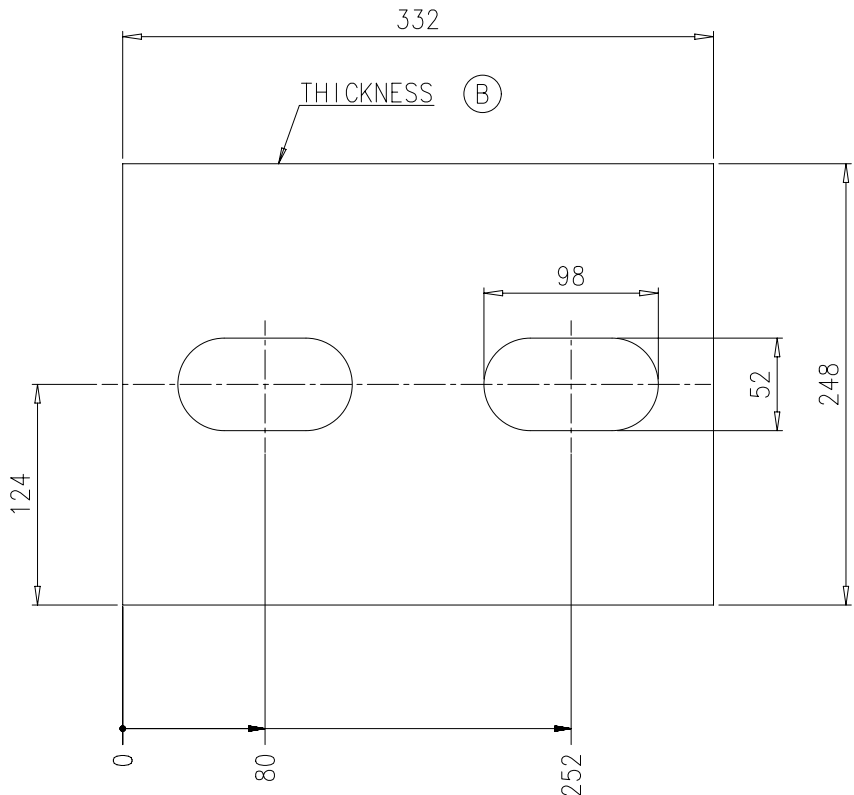
$$\frac{h_0}{s} = 0.50$$

$$s = \frac{h_0}{0.50}$$



SUPPLIER: URS INGOLD  
 P.O. Box 180  
 Oelestrasse 7  
 CH-3800 Interlaken

Free space for file	Q-Code				Main Drw.	
	XXXXX				Standard ISO; JIS	
Modif.	A	7-29.688	25.10.2004	B	EAAD083026	25.07.2011
	Number	Drawn date	Number	Drawn date	Number	Drawn date
					C	EAAD095725
					Number	Drawn date
					D	EAAD096559
					Number	Drawn date
Product		W-25		DISC SPRING TO ENGINE STAYS, FRICTION TYPE		
WIN GD		Winterthur Gas & Diesel		Tellerfeder		
Units	mm kg	NX		Basic Material		Net Weight 0,55
SURFACE PROTECTION SEE GROUP 0344		Made		Scale	Size	Page
TOLERANCING PRINCIPLE ISO8015		08.09.1998 S. Natali		-	A2	1/1
GENERAL TOLERANCES ACCORDING TO ISO2768-nK		Chkd		Design Group		Material ID
		08.09.1998 WCH001 Service User		9715		107.246.311
		Appd		Drawing ID		Rev. D


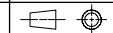


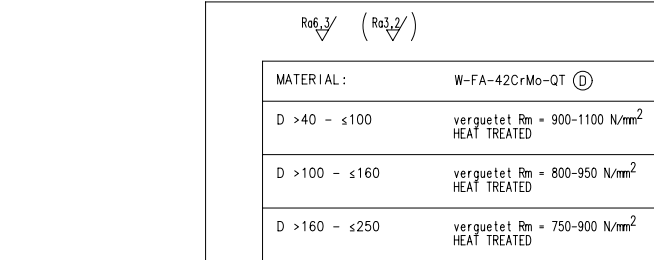
(B)

SPECIFICATION:

TECHNICAL DATA: AVERAGE COEFFICIENT OF FRICTION DRY:  $\mu = 0,42$   
MAX. PERMISSIBLE SURFACE PRESSURE:  $p = 250\text{N/cm}^2$

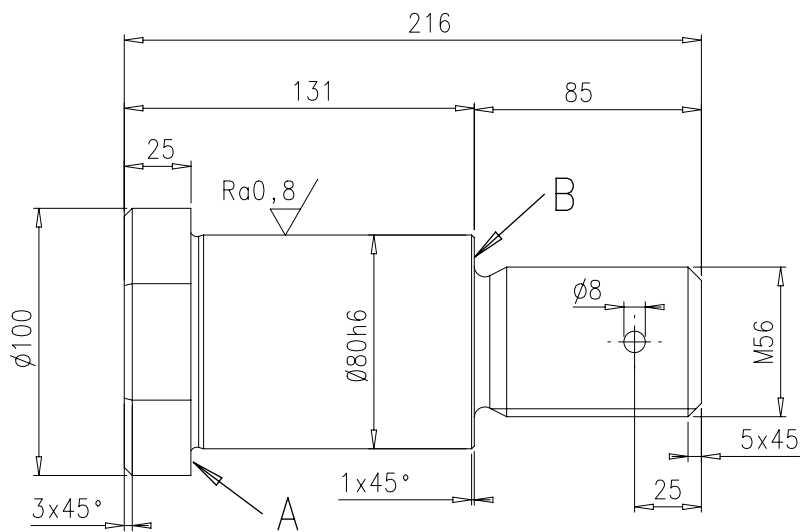
MATERIAL: ASBESTOS FREE FRICTION MATERIAL,  
ALSO SUITABLE FOR USING IN OIL.

Free space for lic.								Q-Code XXXXX	Main Drw.		
								Standard ISO; JIS			
Modif.	(A)	EAAD095725	28.04.2021	(B)	EAAD096559	29.04.2021					
		Number	Drawn date		Number	Drawn date		Number	Drawn date		
 Winterthur Gas & Diesel		Product W-2S		SHIM TO ENGINE STAYS, FRICTION Beilage zu Motorabstutzung							
Units	mm kg	NX				Basic Material			Net Weight 2,3		
SURFACE PROTECTION SEE GROUP 0344		Made	31.05.2011 Pradip Soman		Scale	1:3		Size	A3	Page	1/1
TOLERANCING PRINCIPLE ISO8015		Chkd	07.07.2011 mhu019 Hug		Design Group		9715		Drawing ID	DAAD902593	
GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Appd	07.07.2011 dst009 Strödecke						Material ID	PAAD902269	
										Rev.	B

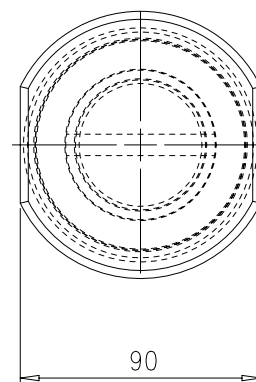


1	020	107.345.876.020	ROUND NUT	M100	107.345.876	W-FA-42CrMo-Cl	13,
1	019	107.345.876.019	ROUND NUT	M95	107.345.876	W-FA-42CrMo-Cl	11,
1	018	107.345.876.018	ROUND NUT	M90	107.345.876	W-FA-42CrMo-Cl	9,
1	017	107.345.876.017	ROUND NUT	M85	107.345.876	W-FA-42CrMo-Cl	8
1	016	107.345.876.016	ROUND NUT	M80	107.345.876	W-FA-42CrMo-Cl	6,
1	015	107.345.876.015	ROUND NUT	M76	107.345.876	W-FA-42CrMo-Cl	5,
1	014	107.345.876.014	ROUND NUT	M72	107.345.876	W-FA-42CrMo-Cl	5,
1	013	107.345.876.013	ROUND NUT	M68	107.345.876	W-FA-42CrMo-Cl	4,
1	012	107.345.876.012	ROUND NUT	M64	107.345.876	W-FA-42CrMo-Cl	3,
1	011	107.345.876.011	ROUND NUT	M60	107.345.876	W-FA-42CrMo-Cl	2,
1	010	107.345.876.010	ROUND NUT	M56	107.345.876	W-FA-42CrMo-Cl	2,3
1	009	107.345.876.009	ROUND NUT	M52	107.345.876	W-FA-42CrMo-Cl	1,8
1	008	107.345.876.008	ROUND NUT	M48	107.345.876	W-FA-42CrMo-Cl	1,4
1	007	107.345.876.007	ROUND NUT	M45	107.345.876	W-FA-42CrMo-Cl	1,
1	006	107.345.876.006	ROUND NUT	M42	107.345.876	W-FA-42CrMo-Cl	0,9
1	005	107.345.876.005	ROUND NUT	M39	107.345.876	W-FA-42CrMo-Cl	0,7
1	004	107.345.876.004	ROUND NUT	M36	107.345.876	W-FA-42CrMo-Cl	0,6
1	003	107.345.876.003	ROUND NUT	M33	107.345.876	W-FA-42CrMo-Cl	0,4
1	002	107.345.876.002	ROUND NUT	M30	107.345.876	W-FA-42CrMo-Cl	0,3
1	001	107.345.876.001	ROUND NUT	M27	107.345.876	W-FA-42CrMo-Cl	0,2

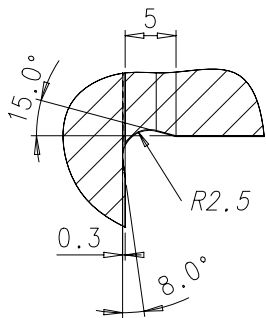
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GENERAL TOLERANCES ACCORDING TO ISO2768-mK		Chkd			Design Group	Size	A1	Page 1/1
		Appd	20.08.2004	PNE001	Neracher	Drawing ID	107.345.876	
								Rev. D



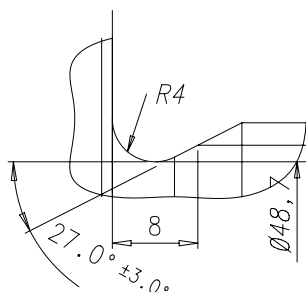
Ra3,2 (✓) NORMALIZED, SHARP EDGES REMOVED, BURNISHED



A M2:1



B M2:1



Free space for lic.								Q-Code XXXXXX		Main Drw.												
								Standard ISO; JIS														
Modif.	A	EAAD095725	28.04.2021	B	EAAD096559	29.04.2021																
	Number		Drawn date		Number		Drawn date		Number		Drawn date											
<b>WIN GD</b> Winterthur Gas & Diesel			Product W-2S			BOLT TO ENGINE STAYS, FRICTION  Bolzen zu Motorabstutzung																
Units		mm kg		NX				Basic Material				W-FU-325-N		Net Weight 7.17								
Made	16.12.2010		mhu019		M.Hug		Scale		1:2		Size		A3		Page		1/1		Material ID		PAAD026437	
Chkd	19.01.2011		sfe006		Feuerstein		Design Group		9715		Drawing ID		DAAD012368		Rev.		B					
Appd	19.01.2011		dst009		Strödecke																	

## MIDS - Engine Stays (DG9715)

WinGD X52-S2.0

### TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2023-06-22	DRAWING SET	First web upload
2023-08-31	PTAA074114— PTAA003582-A PTAA003591-A	new drawings/ new drawing revision
2024-01-26	PTAA074114-B	New execution

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