

Scope according to		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4		<input checked="" type="checkbox"/> AD 2000-Merkblatt W0		<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)					
Manufacturer				Work				Nationality	Date	Page No..		
Company Name: Gräf Verbindungsteile GmbH Dieselstrasse 26 Location: D-54634 Bitburg				54634 Bitburg, Dieselstraße 26				German	24.04.2024	1	TÜV Rheinland Industrie Service GmbH	
								Rev.:10	of : 4			
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max 1=t / 2=kg ↓ res ult	Technical Specifications Requirements Technical Regulations	Remarks	
					Thick- ness mm		Ø mm					
					from	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU												
<i>The use of the materials according to Directive 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.</i>												
	stainless steel	EN 10269 EN 10272	AT	fasteners			1	200			EN ISO 3506	
	carbon steel	EN 10269 EN 10272	N,QT	fasteners			1	200			EN ISO 898	
	Carbon/austenitic steel	EN 10269 EN 10272	AT	fasteners			1	200				
	special materials	EN 10269 EN 10272	AT AH	fasteners			1	200				
Remarks	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed +AH = hardened/aged			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary					



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Company Name: Gräf Verbindungsteile GmbH Dieselstrasse 26 Location: D-54634 Bitburg				54634 Bitburg, Dieselstraße 1+5+10 99996 Menteroda, Holzthalebenerstr. 30	German	24.04.2024 Rev.:10	2 of : 4	TÜV Rheinland Industrie Service GmbH				
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max		Technical Specifications Requirements Technical Regulations	Remarks
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					from	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
2. Materials according to the AD 2000-Code												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
	carbon steel	EN 10269 EN 10272	N, QT	fasteners			1	200			AD2000 W7/1 EN ISO 898	
	stainless steel	EN 10269 EN 10272	AT	fasteners			1	200			AD2000 W7/2 EN ISO 3506	
	carbon/austenitic	EN 10269 EN 10272	AT	fasteners			1	200			AD2000 W2	
	special materials	VdTÜV WB EN 10269 EN 10272	AT,S AH	fasteners			1	200			AD2000 W2	basic material according to requirements of VdTÜV
Remarks	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed +AH = hardened/aged			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary					



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3. Materials according to international standards (e. g. ASTM, ASME, IBR etc.)												
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	carbon/stainless steel	ASTM A193/ ASME SA193	AT,N,QT	bolts			M3	M39			ASTM A193/ ASME SA193	a
	carbon/stainless steel	ASTM A194/ ASME SA194	AT,N,QT	nuts			M3	M39			ASTM A194/ ASME SA194	a
	stainless steel	ASTM A276/ ASME SA276	AT	fasteners			1	200			ASTM A276/ ASME SA276	a
	stainless steel	ASTM A479/ ASME SA479	AT	fasteners			1	200			ASTM A479/ ASME SA479	a
	nickel and nickel alloys	ASTM B637/ ASME SB637	AT,AH	fasteners			1	200			ASTM B637/ ASME SB637	a
	titatium and titanium alloys	ASTM B348/ ASME SB348	S	fasteners			1	200			ASTM B348/ ASME SB348	a
	special materials duplex/superduplex	ASTM A479/ ASME SA479	AT	fasteners			1	200			ASTM A479/ ASME SA479	a
	carbon steel	ASTM A320/ ASME SA320	N,QT	fasteners			1	200			ASTM A320/ ASME SA320	a
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	carbon steel	ASTM F467	N,QT	nuts			M3	M39			ASTM F467	a
	carbon steel	ASTM F468	N,QT	bolts			M3	M39			ASTM F468	a
	stainless steel	ASTM F593	AT	bolts			M3	M39			ASTM F593	a
	stainless steel	ASTM F594	AT	nuts			M3	M39			ASTM F594	a
	stainless steel	ASTM B408/ ASME SB408	AT	fasteners			1	200			ASTM B408/ ASME SB408	a
	stainless steel	ASTM A453/ ASME SA453	AT	fasteners			1	200			ASTM A453/ ASME SA453	a
	nickel and nickel alloys	ASTM B446/ ASME SB446	S,AT,AH	fasteners			1	200			ASTM B446/ ASME SB446	a
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