

**Scope of the approval – Manufacturer of material in accordance with
PER 2016/1105, Schedule 2, Part 4, Para. 31 (8)**

Annex to certificate no.
PER-0168-QS-M 3262202/2023/MUC-01 von / dated 2023-02-22

Name: Forgiatura Morandini S.r.l.	Country: IT	Date: rev. 0 2023-02-22	Page: 1 of 3	Competent Body of TUV SUD B A B T Unlimited
Manufacturer: Street: Via dell'Industria, 5				
City: 25040 Civate Camuno (BS)				

No.	Material Designation Material Grade	Material Specification		Delivery Condition Code	Description Product	Dimensions				Weight		Requirements Technical Rules		Report no. C-722296040/1-22 dated 2022-11-08
		Spec.	No.			Thickness [mm]		Diameter [mm]		1=t	value	Spec.	No.	Remarks
						from	to	from	to	↓				
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b	10
01*)	S235JRG2 (1.0038), S235J2G3 (1.0116), S355J2G3 (1.0570)	EN DIN	10250-2 17100	N/QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	100	-	-	-	-			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory.
02*)	S235JR (1.0038), S275JR (1.0044), S235J2 (1.0117), S275J2 (1.0145), S355J2 (1.0577), S355K2 (1.0596)	EN DIN	10025-2 17100	N	Stab / bar	-	-	-	100	-	-			
03	P250GH (1.0460), 16Mo3 (1.5415) 11CrMo9-10 (1.7383), 13CrMo4-5 (1.7335) (C 22.8, 15Mo3, 10CrMo9 10, 13CrMo4 4)	EN DIN	10222-2 17243*)	N QT QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	400	-	-	-	-			
04*)	15NiCuMoNb5 /WB 36 (1.6368)	VdTÜV	377/3	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	450	-	-	-	-			
05	StE 355 (1.0562), P355NH (1.0565), P355QH1 (1.0571)	VdTÜV EN	354/3*) 10222-4	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	400	-	400	-	-			
06	X10CrMoVNb9-1 / F 91 (1.4903)	VdTÜV	511/3*)	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	315	-	470	-	-			

Explanation: AT = solution annealed NT = normalized and tempered N = normalized S = stress relieved TM = thermo-mech. treated U = not annealed
 QT = quenched and tempered CR = temperature controlled hot formed (controlled rolled) A = annealed AR = as rolled
 a = material designation in column 10 b = condition in column 10 c = object in column 10
 d = dimensions acc. to technical rules e = weight acc. to technical rules f = technical rules reference column 10

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Manufacturer:	Street: Via dell'Industria, 5	IT	rev. 0	2 of 3	
	City: 25040 Cividate Camuno (BS)		2023-02-22		

No.	Material Designation Material Grade	Material Specification		Delivery Condition Code	Description Product	Dimensions				Weight		Requirements Technical Rules		Report no. C-722296040/1-22 dated 2022-11-08
		Spec.	No.			Thickness [mm]		Diameter [mm]		1=t	value	Spec.	No.	Remarks
						from	to	from	to	↓				
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b	10
07	X2CrNi18-9 (1.4307), X5CrNi18-10 (1.4301), X6CrNiTi18-10 (1.4541), X6CrNiNb18-10 (1.4550), X6CrNi18-10 (1.4948), X6CrNiTiB18-10 (1.4941), X7CrNiNb18-10 (1.4912), X2CrNiMo17-12-2 (1.4404), X5CrNiMo17-12-2 (1.4401), X6CrNiMoTi 17-12-2 (1.4571), X2CrNiMo17-12-3 (1.4432), X3CrNiMo17-13-3 (1.4436), X2CrNiMo18-14-3 (1.4435), X3CrNiMo18-12-3 (1.4449), X6CrNiMoNb17-12-2 (1.4580)	EN DIN	10222-5 17440	AT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	- - - -	200 - 200 200	- - - -	- 250 - -	- - - -	- - - -			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory. For the use of materials acc. to column 2 till 4 the regulations and limits of the respective standards have to be observed. The specific material operating conditions have to be approved by the pressure equipment manufacturer or respectively by the Approved Body in charge.
08*)	X10CrWMoVNb9-2 (1.4901)	VdTÜV	552/3	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	- - - -	200 - 200 200	- - - -	- 200 - -	- - - -	- - - -			
09*)	20MnMoNi4-5 (1.6311)	VdTÜV	440-3	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	- - - -	1000 - 1000 1000	- - - -	- 1000 - -	- - - -	- - - -			
10*)	12CrMo910 (1.7375)	VdTÜV	404-3	QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	- - - -	600 - 600 600	- - - -	- 900 - -	- - - -	- - - -			
11	C35 (1.1181), C35E (1.1181), 25CrMo4 (1.7218) (24CrMo 5, CK35)	EN DIN	10269 17240*)	N/QT QT	Stab / bar	- - - -	- - - -	- - - -	400 - - -	- - - -	- - - -			

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		Spec.	No.			Thickness [mm]		Diameter [mm]		1=t 2=kg ↓ value		Spec.	No.	Remarks
						from	to	from	to					
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b	10
12*)	F91 type1 and type 2	ASTM	A182 / A336	NT/QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	1080	-	-	-	-			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory. For the use of materials acc. to column 2 till 4 the regulations and limits of the respective standards have to be observed. The specific material operating conditions have to be approved by the pressure equipment manufacturer or respectively by the Approved Body in charge.
13*)	F92	ASTM	A182 / A336	NT/QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	1100	-	-	-	-			
						-	-	-	670	-	-			
						-	1150	-	-	-	-			
						-	1150	-	-	-	-			
14*)	F22, F11, F12	ASTM	A182 / A336	NT/QT	Schmiedestück / forging Stab / bar Ring, Mantel / ring, shell Hohlschmiedestück/hollow forging	-	2400	-	-	-	-			
						-	-	-	620	-	-			
						-	1250	-	-	-	-			
						-	1250	-	-	-	-			

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