RUST AND ACID-RESISTANT STEELS, AUSTENITIC

RICHTER FORMTEILE

				MECHANICAL-TECHNOLOGICAL CHARACTERISTICS			IMPACT WORK (ISO-V)	ANNEALING HARDNESS	
DESCRIPTION	MATERIAL NO.	NORM	USUAL HEAT TREATMENT CONDITION	0,2-YIELD STRENGTH $RP_{0,2}$	TENSILE STRENGTH RM (MPA)	FRACTURE STRAIN A_5 (%)	(J)	(HB)	USAGE/ SPECIAL APPLICATION EXAMPLES
X 8 CrNiS 18 9	1.4305	DIN 17440 EN 10088	Solution annealed and quenched	≥ 175	440-640	≈20		130-200	Similar to 1.4308. For castings with extensive mechanical processing, especially thread cutting; Welding not recommended
G X 2 CrNiN 18 9 X 2 CrNi 19 11	1.4306	SEW 410 EN 10088	Solution annealed and quenched	≥ 205	440-640	≈30	80	130-200	Fittings and parts for pumps, centrifuges, etc.; suitable filler material 1.4302, 1.4551, 1.4316; Food industry, dairies, beverage industry; like 1.4309 and 304L
G X 6 CrNi 18 9 G X 5 CrNi 19 10	1.4308	DIN 17445 EN 10283	Solution annealed and quenched	≥ 175	440-640	≈30	60	130-200	Commonly used „V2A" quality; similar forged quality 1.4301 and 304; Fittings, pumps, food industry, dairies
X 5 CrNiMo 17 12 2	1.4401	DIN 17440	Solution annealed and quenched	≥ 185	440-640	≈20	60	130-200	Gussteile mit gleicher Korrosionsbeständigkeit wie Schmiedequalität, jedoch geringerer Festigkeit; als Gusswerkstoff genormt unter 1.4408; ähnlich 316 L
G X 2 CrNiMoN 18 10 X 2 CrNiMo 17 12 2	1.4404	SEW 410 EN 10088	lösungs-geglüht und abgeschreckt	≥ 205	440-640	≈30	80	130-200	Castings with the same corrosion resistance as forging quality but lower strength; as cast iron standardized under 1.4408; like 316 L
G X 2 CrNiMo 19 11 2	1.4009	EN 10283	Solution annealed and quenched	≥ 195	440-640	≈30	80	130-200	Castings that focus on resistance to intergranular corrosion. No new heat treatment required after welding; suitable filler material
G X 6 CrNiMo 18 10 G X 5 CrNiMo 19 11 2	1.4408	EN 10213 EN 10283	Solution annealed and quenched	≥ 185	440-640	≈20	60	130-200	Castings for the pulp, textile and chemical industries; Fittings, pumps; suitable filler metal 1.4403
X 2 CrNiMoN17 13 5	1.4439	DIN 17445 EN 10088	Solution annealed and quenched	≥ 210	490-630	≈20	50	130-200	Good IK resistance, resistant to high chlorine concentrations and temperatures, good pitting resistance, chemical industry
X 2 CrNiMo 18 14 3	1.4435 S31603 CF3M	DIN 17440 MR 0175 ASTM A 743	Solution annealed and quenched	≥ 200	500-700	≈30	50	≤ 215	Material according to NACE MR 0175. Similar to 1.4439, 316 L
G X 6 CrNiMo 17 13	1.4448	DIN 17445 EN 10283	Solution annealed and quenched	≥ 185	440-640	≈20	60	130-200	Higher chemical resistance, good pitting resistance in the presence of chlorine ions; Fittings and apparatus construction

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				MECHANICAL-TECHNOLOGICAL CHARACTERISTICS			IMPACT WORK (ISO-V)	ANNEALING HARDNESS	
DESCRIPTION	MATERIAL NO.	NORM	USUAL HEAT TREATMENT CONDITION	0,2-YIELD STRENGTH $RP_{0,2}$	TENSILE STRENGTH RM (MPA)	FRACTURE STRAIN A_5 (%)	(J)	(HB)	USAGE/ SPECIAL APPLICATION EXAMPLES
X 1 NiCrMoCuN 25 20 5 G X 1NiCrMoCuN 25 20 5	1.4539 1.4538	SEW 400	Solution annealed and quenched	-220 ≥ 185	≥ 450	(≈35) ≈30	-80 60		Good resistance to pitting and stress corrosion cracking; Full austenite; Especially suitable for seawater re-use; similar to 1.4584 / 1.4529
G X 5 CrNiNb 18 9 G X 5 CrNiNb 19 11	1.4552	EN 10213 EN 10283	Solution annealed and quenched	≥ 175	440-640	≈20	35	130-200	Castings in the food, film, photographic, paint, soap, paper, textile and saltpeter industries; suitable filler material 1.4551
G X 5 CrNiMoNb 18 10 G X 5 CrNiMoNb 19 11 2	1.4581	WL 1.4581 EN 10283	Solution annealed and quenched	≥ 185	440-640	≈20	35	130-200	Like 1.4552; suitable filler material 1.4576
X 45 CrNiW 18 9	1.4873	DIN 17480	Solution annealed and quenched						For thin-walled castings with good heat resistance; standardized as forging material in DIN 17 480
G X 6 CrNi 18 10	1.6902	SEW 685	Solution annealed and quenched	≥ 180	440-640	≈20	80	130-200	Cold-tough cast steel acc. SEW 685; Impact energy at -196 ° C at least 50 y.; (Iso-V) -253 ° C at least 27J..