

Material conversion table

Section	ASME(ASTM)		KS		JIS		DIN
	SPEC.	GRADE	ST'D NUMBER	SYMBOL	ST'D NUMBER	SYMBOL	
Forgings Carbon steel for piping components	SA-105		D3710	SF 50	G 3201	SF 50	
			D3710	SF 50	G 3201	SF 50PV	
			D3710	SF 45	G 3201	SF 45	
			D3752	SF 30C	G 40511	SF 30C	
			D3752	SF 25C	G 4051	SF 25C	
Seamless carbon steel pipe for high-temperature service	SA-106	Gr. A	D 3564	SPPH 38	G 3455	STS38	DIN 1629 St 35.4
			D 3570	SPHT 38-S	G 3456	STPT 38-S	DIN 17175 St 35.8
		Gr. B	D 3564	SPPH 42	G 3455	STS 42	DIN 1629 St 45.4
			D 3570	SPHT 42-S	G 3456	STPT 42-S	DIN 17175 St 45.8
		Gr. C	D 3564	SPPH 49	G 3455	STS 49	DIN 1629 St 52.4 SEW 610-17Mn4 SEW 610-19Mn5
			D 3570	SPHT 49-S	G 3456	STPT 49-S	DIN 17175 St 45.8 SEW 610-17Mn4 SEW 610-19Mn5
Forged or rolled steel pipe flanges, Forged fittings, and valves and parts for high-temperature service.	SA-182	F 1	D 4110	SFHV 12B	G 3213	SFHV 12B	SEW 550 22Mo4 SEW 620 15Mo3
		F 2	D 4110	SFHV 13B	G 3213	SFHV 13S	SEW 620 12CrMo44 SEW 620 13CrMo44
		F 5	D 4110	SFHV 25	G 3213	SFHV 25	VaTUVWb1.1207-12CrMo19
		F 9	D 4110	STS 26B	G 3213	SFHV 26B	Wat-Nr1.7388-12CrMo91
		F 11	D 4110	STS 23B	G 3213	SFHV 23B	SEW 810-12CrMo44 SEW 810-13CrMo44
		F 12	D 4110	STS 22B	G 3213	SFHV 22B	SEW 810-12CrMo44 SEW 810-13CrMo44
		F 22	D 4110	STS 24B	G 3213	SFHV 24B	SEW 810-10CrMo910
		F 304	D 3214	STS 304	G 3214	SUSF 804	SEW 880-5CrMo1810 SEW 17440-2CrMo1812
		F 304H	D 3214	STS 304H	G3214	SUSF 804H	
		F 304L	D 3214	STS 304L	G 3214	SUSF 804L	DIN 17440-2CrNi189
		F 310	D 3214	STS 301	G 3214	SUSF 810	
		F 316	D 3214	STS 316	G 3214	SUSF 816	DIN 17440-5CrNiMo1810 DIN 17440-5CrNiMo1812
		F 316H	D 3214	STS 2316H	G 3214	SUSF 816H	
		F 316L	D 3214	STS 316L	G 3214	SUSF 816L	DIN 17440-2CrNiMo1810 DIN 17440-2CrNiMo1812
		F 321	D 3214	STS 321	G 3214	SUSF 821	DIN 17440-10CrNiMo189 SEW 680-10CrNiMo1810
		F 321H	D 3214	STS 321H	G 3214	SUSF 821H	
		F 347H	D 3214	STS 347	G 3214	SUSF 847	DIN 17740-10CrNiMo189 SEW 680-10CrNiMo1810
		F 347H	D 3214	STS 347H	G 3214	SUSF 847H	SEW 870-8CrNiMo1518

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Section	ASME(ASTM)		KS		JIS		DIN
	SPEC.	GRADE	ST'D NUMBER	SYMBOL	ST'D NUMBER	SYMBOL	
Alloy-steel and stainless steel bolting materials for high-temperature service	SA-193	Gr. B5	D 3755	SNB 5	G 4107	SNB 5	
		Gr. B7	D 3755	SNB 7	G 4107	SNB 7	DIN 17240-24CrMo5
		Gr. B16	D 3755	SNB 16	G 4107	SNB 16	DIN 17240-21CrMoV55
Carbon and alloy steel nuts for high pressure and high temperature	SA-194	Gr. 2H	D 3752	SM 45C	G 4051	S 45C	DIN 17100 St 50-2
		Gr. 3	D 3755	SNB 5	G 4107	SNB 5	-
		Gr. 4	-	-	-	-	DIN 17240-24 CrMo5
Carbon steel castings suitable for fusion welding for high-temperature service	SA-216	Gr. WCA	D 4101	SC 42	G 5101	SC 42	DIN 1681 GS-38
			D 4106	SCW 42	G 5102	SCW 42	DIN 1681 GS-38.5
			D 4107	SCPH 1	G 5151	SCPH 1	DIN 1681 GS-38 DIN 1681 GS-45 DIN 17245 GS-C25
		Gr. WCB	D 4101	SC 49	G 5101	SC 42	DIN 1681 GS-52
			D 4106	SCW 49	G 5102	SCW 49	DIN 1681 GS-45.3
			D 4107	SCPH 2	G 5151	SCPH 2	DIN 1681 GS-52 DIN 17245 GS-C25
		Gr. WCC	D 4106	SCW 49	G 5102	SCW 49	DIN 1681 GS-45.3
			D 4107	SCPH 2	G 5151	SCPH 2	DIN 1681 GS-52 DIN 17245 GS-C25
Martensitic stainless steel and alloy steel casting for pressure containing parts suitable for high-temperature service	SA-217	Gr. WC1	D 4107	SCPH 11	G 5151	SCPH 11	DIN 17245 GS-22Mo4
		Gr. WC6	D 4107	SCPH 21	G 5151	SCPH 21	DIN 17245 GS-17CrMo55
		Gr. WC9	D 4107	SCPH 32	G 5151	SCPH 32	SEW 595 GS-12CrMo910
		Gr. C5	D 4107	SCPH 61	G 5151	SCPH 61	SEW 595 GS-12CrMo195 SEW 595 GS-12CrMo101
		Gr. C12	D 4107	SCPH 61	G 5151	SCPH 61	SEW 595 GS-12CrMo195 SEW 595 GS-12CrMo101

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Section	ASME(ASTM)		KS		JIS		DIN
	SPEC.	GRADE	ST'D NUMBER	SYMBOL	ST'D NUMBER	SYMBOL	
Chromium and chromium-nickel stainless steel plate, sheet, and strip for fusion-welded unfired pressure vessels.	SA-240	Type 302	D 3705	STS 302	G 4304	SUS 302	
		Type 304	D 3705	STS 304	G 4304	SUS 304	SEW 680 5CrNi 1810 DIN 17440 5CrNi 189
		Type 304L	D 3705	STS 304L	G 4304	SUS 304L	DIN 17440 2CrNi 189
		Type 309S	D 3705	STS 309S	G 4304	SUS 309S	
		Type 310S	D 3705	STS 310S	G 4304	SUS 310S	
		Type 316	D 3705	STS 316	G 4304	SUS 316	DIN 17440 5CrNiMo1812 DIN 17440 5CrNiMo1810
		Type 316L	D 3705	STS 316L	G 4304	SUS 316L	DIN 17440 7CrNiMo1812 DIN 17440 7CrNiMo1810
		Type 321	D 3705	STS 321	G 4304	SUS 321	DIN 17440 10CrNiTi1810 SEW 880 10CrNiTi1810
		Type 347	D 3705	STS 347	G 4304	SUS 347	DIN 17440 10CrNiTi189
		Type 405	D 3705	STS 405	G 4304	SUS 405	DIN 17440 7CrAl 13
		Type 410	D 3705	STS 410	G 4304	SUS 410	DIN 17440 10Cr 13
		Type 429	D 3705	STS 429	G 4304	SUS 429	-
		Type 430	D 3705	STS 430	G 4304	SUS 430	DIN 17440 8Cr 17
Low and intermediate-tensile strength carbon steel plates of structural	SA-283	Gr. C	D 3503	SB 41	G 3101	SS 41	DIN 17100 USt 37-1
		Gr. D	D 3503	SB 41	G 3101	SS 41	DIN 17100 USt 42-1
Low and intermediate-tensile strength carbon steel plates for pressure vessels	SA-285	Gr. B	D 3560	SBB 35	G 3103	SB 35	
		Gr. C	D 3560	SBB 42	G 3103	SB 42	DIN 17155 H11
Cow carbon steel externally and internally threaded standard fasteners	SA-307	Gr. B	D 3503	SM 42	G 3101	SS 41	(B) DIN 267 B1. 3-4. 6 (N) DIN 257 B1. 4-5
			D 3752	SM 25C	G 4051	S 25C	(B) DIN 267 B1. 35-6 DIN 17240 C 35, CK35 (N) DIN 267 B1. 45 DIN 17100 St 50-2

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	SPEC.	GRADE	ST'D NUMBER	SYMBOL	ST'D NUMBER	SYMBOL	
Seamless and welded austenitic stainless steel pipe	SA-312	Gr. TP 304	D 3576	STS 304TP	G 3459	SUS 304TP	DIN 2462 5CrNi 18 9 SEW 680 5CrNi 18 10
		Gr. TP 304H	D 3576	STS 304HTP	G 3459	SUS 304HTP	
		Gr. TP 304L	D 3576	STS 304LTP	G 3459	SUS 304LTP	DIN 2463 2CrNi 18 9
		Gr. TP 309	D 3576	STS 309TP	G 3459	SUS 309TP	
		Gr. TP 310	D 3576	STS 310STP	G 3459	SUS 310STP	
		Gr. TP 316	D 3576	STS 310STP	G 3459	SUS 316TP	DIN 2462 5CrNiMo 18 10 DIN 2462 5CrNiMo 18 12
		Gr. TP 316H	D 3576	STS 316TP	G 3459	SUS 316HTP	
		Gr. TP 316L	D 3576	STS 316HTP	G 3459	SUS 316LTP	DIN 2462 2CrNiMo 18 10 DIN 2462 2 CrNiMo 18 12
		Gr. TP 321	D 3576	STS 321TP	G 3459	SUS 321TP	SEW 680 10CrNiTi 18 10 DIN 2462 10CrNiTi 18 9
		Gr. TP 321H	D 3576	STS 321HTP	G 3459	SUS 321HTP	
		Gr. TP 347	D 3576	STS 347TP	G 3459	SUS 347TP	DIN 2462 10CrNiNb 13 10 SEW 680 10CrNiNb 18 9
		Gr. TP 347H	D 3576	STS 347HTP	G 3459	SUS 347HTP	DIN 2462 10CrNiNb 13 9 SEW 670 3CrNiNb 16 13
Alloy steel bolting materials for low-temperature service	SA-320	Gr. B8	D 3706	STS 304B	G 4303	SUS 304B	DIN 267 A2 SEW 650 5CrNi 18 10
		Gr. B8C	D 3706	STS 347B	G 4303	SUS 347B	SEW 680 10CrNiNb 18 10
		Gr. B8M	D 3706	STS 316B	G 4303	SUS 316B	DIN 267 A4
		Gr. B8T	D 3706	STS 321B	G 4303	SUS 321B	SEW 680 10CrNiTi 18 10
High-strength bolts for structural steel joints, including suitable nuts and plain hardened washers	SA-325	Type 1	D 3752	SM 35C	G 4051	S 35C	(B) DIN 267 Bi 35.6 DIN 17240 C45 DIN 17240 CK 45 (N) DIN 17100 St

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	SPEC.	GRADE	ST'D NUMBER	SYMBOL	ST'D NUMBER	SYMBOL	
Austenitic steel castings for high-temperature service	SA-351	Gr. CF3	D 4103	SSC 19,-CF	G 5121	SCS 19,-CF	DIN 1591 GG-15
		Gr. CF3M	D 4103	SSC 15,-CF	G 5121	SCS 15,-CF	
		Gr. CF8	D 4103	SSC 13,-CF	G 5121	SCS 13,-CF	SEW 595-70G 8CrNi 18 10 DIN 17445G 6CrMo 18 9
		Gr. CF8C	D 4103	SSC 21,-CF	G 5121	SCS 21,-CF	SEW 595-70G 8CrNiMo 18 10 DIN 17445G 6CrMoNi 18 18
		Gr. 12Cl. 2	-	-	G 4109	SCMV2NT	DIN 17155 13CrMo44
		Gr. 12Cl.1	-	-	G 4109	SCMV5A	VdTUVWb1.1207-12CrMo19 5
		Gr. 21Cl. 2	-	-	G 4109	SCMV5NT	VdTUVWb1.1207-12CrMo19 5
		Gr. 22Cl. 1	-	-	G 4109	SCMV4A	VdTUVWb1130-12CrMo9 10
		Gr. 22Cl. 2	-	-	G 4109	SCMV4NT	VdTUVWb1.110-12CrMo9 10
carbon steel plates for pressure vessels for intermediate and higher-temperature service	SA-515	Gr. 55	D 3560	SBB 35	G 3103	SBB 35	DIN 17155 H11
		Gr. 60	D 3560	SBB 42	G 3103	SBB 42	DIN 17155 H11
		Gr. 65	D 3560	SBB 46	G 3103	SBB 46	DIN 17155 H111, 17Mn4
		Gr. 70	D 3560	SBB 49	G 3103	SBB 49	DIN 17155 19Mn5, VdTUVWb 1.373 WB23
phosphor bronze plate, sheet, strip, and rolled bar	SB-103	C 51000	D 5506	PBS1/PBT1	H 3110	C 5101P	-
			D 5506	PBS1/PBT1	H 3110	C 5101R	-
		C 52100	D 5506	PBS3/PBT3	H 3110	C 5212P	DIN 17662-CuSn8 DIN 17670-CuSn8
			D 5506	PBS3/PBT3	H 3110	C 5212R	DIN 17662-CuSn8 DIN 17670-CuSn8