

Grade Designation Systems

The designation systems used in the new standard are similar but not identical to EN 10025 and very different to the familiar BS 4360 designations so the guide below has been prepared to assist purchasers, specifiers, designers and users of steel.

Symbols used in EN 10025 : part 2 : 2004 Non-alloy structural steels

- S...** Structural steel
- E...** Engineering steel
- .235...** Minimum yield strength (ReH) in MPa @ 16mm
- ...JR..** Longitudinal Charpy V-notch impacts 27 J @ +20°C
- ...J0..** Longitudinal Charpy V-notch impacts 27 J @ 0°C
- ...J2..** Longitudinal Charpy V-notch impacts 27 J @ -20°C
- ...K2..** Longitudinal Charpy V-notch impacts 40 J @ -20°C
- ...+AR** Supply condition as rolled
- ...+N** Supply condition normalised or normalised rolled

Customer options

- ...C..** Grade Suitable for cold forming
- ...Z..** Grade with improved properties perpendicular to the surface

Examples: **S235JR+AR**, **S355K2C+N**

Symbols used in EN 10025 : part 3 : 2004 Normalised/normalised rolled weldable fine grain structural steels

- S...** Structural steel
- .275...** Minimum yield strength (ReH) in MPa @ 16mm
- ...N..** Longitudinal Charpy V-notch impacts at a temperature not lower than -20°C
- ...NL..** Longitudinal Charpy V-notch impacts at a temperature not lower than -50°C

Customer options

- ...Z..** Grade with improved properties perpendicular to the surface

Examples: **S275N**, **S420NL Z35**

Technical Information

Grade Designation Systems

Symbols used in EN 10025 : part 4 : 2004

Thermomechanically rolled weldable fine grain structural steels

- S...** Structural steel
- .275...** Minimum yield strength (ReH) in MPa @ 16mm
- ...M..** Longitudinal Charpy V-notch impacts at a temperature not lower than -20°C
- ...ML..** Longitudinal Charpy V-notch impacts at a temperature not lower than -50°C

Customer options

- ...Z..** Grade with improved properties perpendicular to the surface

Examples: **S355M**, **S460ML Z25**

Symbols used in EN 10025 : part 5 : 2004

Structural Steels with improved atmospheric corrosion resistance - also known as weathering steels

- S...** Structural steel
- .355...** Minimum yield strength (ReH) in MPa @ 16mm
- ...J0..** Longitudinal Charpy V-notch impacts 27 J @ 0°C
- ...J2..** Longitudinal Charpy V-notch impacts 27 J @ -20°C
- ...K2..** Longitudinal Charpy V-notch impacts 40 J @ -20°C
- ...W..** Improved atmospheric corrosion resistance
- ...P..** Greater phosphorous content (grade S355 only)
- ...+AR** Supply condition as rolled
- ...+N** Supply condition normalised or normalised rolled

Customer options

- ...Z..** Grade with improved properties perpendicular to the surface

Examples: **S235JOW+AR**, **S355K2W+N Z25**

Symbols used in EN 10025 : part 6 : 2004

Flat products of high yield strength structural steels in the quenched and tempered condition

- S...** Structural steel
- .460...** Minimum yield strength (ReH) in MPa @ 16mm
- ...Q..** Longitudinal Charpy V-notch impacts at a temperature not lower than -20°C
- ...QL..** Longitudinal Charpy V-notch impacts at a temperature not lower than -40°C
- ...QL1..** Longitudinal Charpy V-notch impacts at a temperature not lower than -60°C

Customer options

- ...Z..** Grade with improved properties perpendicular to the surface

Examples: **S460Q**, **S690QL**

Technical Information

Grades, properties and nearest equivalents

The tables below show the grades, properties and nearest equivalent grades from earlier standards. The grade designations are explained on the previous pages.

Table 1

EN 10025 : part 2 : 2004 Non-alloy structural steels						
Comparison between grades in EN 10025 : part 2 : 2004 and nearest equivalent versions in EN 10025 : 1993 and BS 4360 : 1990						
Grade	EN 10025 : part 2 : 2004		Charpy V-notch longitudinal		EN 10025 : 1993	BS 4360 : 1990
	Yield (Reh) min Strength at t = 16mm (MPa)	Tensile (Rm) 290/510	Temp (°C)	Energy (J) t = 16mm	Grade	Grade
S185	185	290/510	-	-	S185	-
- ¹	235	360/510	-	-	S235	40A
S235JR²			20	27	S235JR G1/G2	40B
S235J0			0	27	S235J0	40C
S235J2			-20	27	S235J2 G3/G4	40D
- ¹	275	410/560	-	-	S275	43A
S275JR²			20	27	S275JR	43B
S275J0			0	27	S275J0	43C
S275J2			-20	27	S275J2 G3/G4	43D
- ¹	355	470/360	-	-	S355	50A
S355JR²			20	27	S355JR	50B
S355J0			0	27	S355J0	50C
S355J2			-20	27	S355J2 G3/G4	50D
S355K2			-20	40	S355K2 G3/G4	50DD
E295	295	470/610	-	-	E295	-
S335	335	570/710	-	-	S335	-
E360	360	650/830	-	-	E360	-

1 MPa=1 N/mm²

Notes

- 1 For all products to be compliant with the EU Construction Products Directive (CPD 89/106/EC) the material must offer a guaranteed minimum impact performance. This resulted in the removal of this grade from the standard, and the lowest grade now offered is the JR version for each yield strength variation.
- 2 Verification of the specified impact value is only carried out when agreed at the time of the enquiry and order.

Grades, properties and nearest equivalents

Table 2

EN 10025 : part 3 : 2004 Normalised/normalised rolled weldable fine grain structural steels						
Comparison between grades in EN 10025 : part 3 : 2004 and nearest equivalent versions in EN 10113 : part 2 : 1993 and BS 4360 : 1990						
EN 10025 : part 3 : 2004					EN 10113 : part 2 : 1993	BS 4360 : 1990
Grade	Yield (Reh) min	Tensile (Rm)	Charpy V-notch longitudinal		Grade	Grade
	Strength at t = 16mm (MPa)		Temp (°C)	Energy (J) t = 16mm		
S275N	275	370/510	-20	40	S275N	43DD
S275NL			-50	27	S275NL	43EE
S355N	355	470/630	-20	40	S355N	50
S355NL			-50	27	S355NL	50EE
S420N	420	520/680	-20	40	S420N	-
S420NL			-50	27	S420NL	-
S460N	460	550/720	-20	40	S460N	55C
S460NL			-50	27	S460NL	55EE

1 MPa=1 N/mm²

Table 3

EN 10025 : part 4 : 2004 Thermomechanically rolled weldable fine grain structural steels						
Comparison between grades in EN 10025 : part 4 : 2004 and nearest equivalent versions in EN 10113 : part 3 : 1993						
EN 10025 : part 4 : 2004					EN 10113 : part 3 : 1993	
Grade	Yield (Reh) min	Tensile (Rm)	Charpy V-notch longitudinal		Grade	Grade
	Strength at t = 16mm (MPa)		Temp (°C)	Energy (J) t = 16mm		
S275M	275	370/510	-20	40	S275M	S275ML
S275ML			-50	27		
S355M	355	470/630	-20	40	S355M	S355ML
S355ML			-50	27		
S420M	420	520/680	-20	40	S420M	S420ML
S420ML			-50	27		
S460M	460	550/720	-20	40	S460M	S460ML
S460ML			-50	27		

1 MPa=1 N/mm²

Technical Information

Grades, properties and nearest equivalents

Table 4

EN 10025 : part 5 : 2004 Structural steels with improved atmospheric corrosion resistance - also known as weathering steels

Comparison between grades in EN 10025 : part 5 : 2004 and nearest equivalent versions in EN 10115 : 1993 and BS 4360 : 1990

EN 10025 : part 5 : 2004					EN 10115 : 1993	BS 4360 : 1990
Grade	Yield (ReH) min	Tensile (Rm)	Charpy V-notch longitudinal		Grade	Grade
	Strength at t = 16mm (MPa)		Temp (°C)	Energy (J) t = 16mm		
S235J0W	235	360/510	0	27	S235J0W	-
S235J2W			-20	27	S235J2W	-
S355J0WP	355	470/630	0	27	S355J0WP	WR50A
S355J2WP			-20	27	S355J2WP	-
S355J0W	355	470/630	0	27	S355J0W	WR50B
S355J2W			-20	27	S355J2W	WR50C
S355K2W			-20	40	S355K2W	WR50D

1 MPa=1 N/mm²

Grades, properties and nearest equivalents

Table 5

EN 10025 : part 6 : Flat products of high yield strength structural steels in the quenched and tempered condition						
Comparison between grades in EN 10025 : part 6 : 2004 and nearest equivalent versions in EN 10137 : part 2 : 1996 and BS 4360 : 1990						
EN 10025 : part 6 : 2004					EN 10137 : part 2 : 1996	BS 4360 : 1990
Grade	Yield (Reh) min	Tensile (Rm)	Charpy V-notch longitudinal		Grade	Grade
	Strength at t = 16mm (MPa)	16mm (MPa)	Temp (°C) ¹	Energy (J) t = 16mm		
S460Q	460	550/720	0	40	S460Q	-
S460QL			0	50	S460QL	-
S460QL1			0	60	S460QL1	55F
S500Q	500	590/770	0	40	S500Q	-
S500QL			0	50	S500QL	-
S500QL1			0	60	S500QL1	-
S550Q	550	640/820	0	40	S550Q	-
S550QL			0	50	S550QL	-
S550QL1			0	60	S550QL1	-
S620Q	620	700/890	0	40	S620Q	-
S620QL			0	50	S620QL	-
S620QL1			0	60	S620QL1	-
S690Q	690	770/940	0	40	S690Q	-
S690QL			0	50	S690QL	-
S690QL1			0	60	S690QL1	-
S890Q	890	940/1100	0	40	S890Q	-
S890QL			0	50	S890QL	-
S890QL1			0	60	S890QL1	-
S960Q	960	980/1150	0	40	S960Q	-
S960QL			0	50	S960QL	-

Note

Other impact temperatures can be specified.

Technical Information

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Carbon Steels

060A96	*	060A96	44, 44B	-	-	-
060A99	-	060A99	-	-	-	-
070A72	*	070A72	42	1070	-	-
070A78	*	070A78	42	--	-	-
070M20	070M20	070M20	3A, 3C	1023	1.0402	C22
070M26	070M26	070M26	-	1026	-	-
070M55	070M55	070M55	9	1055	1.0535	C55
080A15	-	080A15	-	1016	-	-
080A17	-	080A17	-	1018	-	-
080A20	-	080A20	-	1021	-	-
080A22	-	080A22	-	-	-	-
080A25	-	080A25	-	1026	-	-
080A27	-	080A27	5A	1029	-	-
080A30	080A30	080A30	5B	1030	-	-
080A32	080A32	080A32	5C	1035	1.1180	Cm 35
080A35	080A35	080A35	8A	1035	1.1180	Cm35
080A37	080A37	080A37	8B	1038	-	-
080A40	080A40	080A40	8C	1040	1.1186	Ck40
080A42	080A42	080A42	8D	1042	-	-
080A47	080A47	080A47	43B	1046	1.1730	C45W
080A52	080A52	080A52	43C	1053	-	--
080A57	080A57	080A57	-	1055	1.0535	C55
080A62	-	080A62	-	1060	1.0601	C60
080A67	080A67	080A67	43E	1065	-	-
080A72	-	080A72	-	1070	-	-
080A78	-	080A78	-	1080	-	-
080A83	-	080A83	-	1085	-	-
080A86	-	080A86	-	1085	-	-
080H36	080H36	080H36	-	1035	-	-
080H41	080H41	080H41	-	1039	-	-
080H46	080H46	080H46	-	1046	-	-
080M15	080M15	080M15	32C	1016	-	-
080M30	080M30	080M30	5	1030	1.1178	Ck30
080M36	080M36	080M36	-	1035	-	-
080M40	080M40	080M40	8	1040	1.1186	Ck40
080M46	080M46	080M46	-	1045	1.1191	Ck45
080M50	080M50	080M50	43A	1049	-	-

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Carbon Manganese Steels

<i>120M19</i>	<i>120M19</i>	<i>120M19</i>	-	-	-	-
<i>120M28</i>	<i>120M28</i>	<i>120M28</i>	-	1526	1.1161	26 Mn5
120M36	120M36	120M36	15B	-	-	-
125A15	125A15	125A15	-	-	-	-
130M15	130M15	130M15	201	-	-	-
135M44	135M44	-	-	-	-	-
150M19	150M19	150M19	14A ,14B	1524	-	-
<i>150M28</i>	<i>150M28</i>	<i>150M28</i>	<i>14A, 14B</i>	-	-	-
150M36	150M36	150M36	15	-	1.1167	36 Mn5
<i>150M40</i>	<i>150M40</i>	-	-	1541	-	-

Category 2 steels in BS 970 : 1983 are shown in italic.

Spring steels not covered by this part of the standard.

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Boron Steels

170H15	170H15	-	-	-	-	-
170H20	170H20	-	-	15B21H	1.5523	19 MnB 4
170H36	170H36	-	-	15B35H	-	-
170H41	170H41	-	-	-	1.5527	40 MnB4
173H16	173H16	-	-	-	-	-
174H20	174H20	-	-	-	-	-
175H23	175H23	-	-	-	-	-
185H40	185H40	-	-	-	-	-

Technical Information

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Carbon & Carbon Manganese Free Cutting Steels

<i>210A15</i>	<i>210A15</i>	<i>210A15</i>	-	<i>1117</i>	-	-
210M15	210M15	210M15	32M	1117	-	-
<i>212A37</i>	<i>212A37</i>	<i>212A37</i>	<i>8BM</i>	-	-	-
<i>212A42</i>	<i>212A42</i>	<i>212A42</i>	<i>8DM</i>	-	-	-
212M36	212M36	212M36	8M	-	-	-
212M44	-	212M44	8M	-	-	-
<i>214A15</i>	<i>214A15</i>	<i>214A15</i>	-	<i>1118</i>	-	-
214M15	214M15	214M15	202	1118	-	-
<i>216A42</i>	<i>216A42</i>	-	-	-	-	-
<i>216M28</i>	<i>216M28</i>	<i>216M28</i>	-	<i>1132</i>	-	-
216M36	216M36	216M36	15AM	1137	-	-
216M44	216M44	-	-	-	-	-
220M07	220M07	220M07	1A	1113	1.0711	9 S 20
<i>225M36</i>	<i>225M36</i>	<i>225M36</i>	-	-	-	-
225M44	-	225M44	-	1144	-	-
226M44	226M44	-	-	1144	-	-
230M07	230M07	230M07	-	1213	1.0715	9 SMn 28
240M07	-	240M07	1B	-	1.0736	9 SMn 36

Silico Manganese Steels

250A53	-	250A53	45	9255	1.0904	55 Si 7
250A58	-	250A58	45A	9260	1.0909	60 Si 7
250A61	-	250A61	45B	9260	1.0909	60 Si 7

Micro-Alloy Steel

280M01	280M01	-	-	-	-	-
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Category 2 steels in BS 970 : 1983 are shown in italic.

Spring steels not covered by this part of the standard.

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Stainless Heat Resisting & Valve Steels

302S25	-	302S25	58A	302	-	-
302S31	302S31	-	-	302	-	-
303S21	-	303S21	58M	303	1.4305	X12 CrNiS 18.8
303S31	303S31	-	58M	303	1.4305	X12 CrNiS 18.8
303S41	-	303S41	58M	303Se	-	-
303S42	303S42	-	-	303Se	-	-
304S11	304S11	-	-	304L	1.4306	X2 CrNi 18.9
304S12	-	304S12	-	304L	1.4306	X2 CrNi 18.9
304S15	304S15	304S15	58E	304	1.4301	X5 CrNi 18.9
304S31	304S31	-	-	304	1.4301	X5 CrNi 18.9
310S24	-	310S24	-	310	1.4842	X6 CrNi 25.20
310S31	310S31	-	-	310	1.4842	X6 CrNi 25.20
315S16	-	315S16	58H	-	1.4420	X5 CrNiMo 18.11
316S11	316S11	-	-	316L	1.4404	X2 CrNiMo 18.10
316S12	-	316S12	-	316L	1.4404	X2 CrNiMo 18.10
316S13	316S13	-	-	316L	1.4435	X2 CrNiMo 18.12
316S16	-	316S16	58J	316L	1.4435	X2 CrNiMo 18.12
316S31	316S31	-	-	316	1.4401	X5 CrNiMo 18.10
316S33	316S33	-	-	316	1.4436	X5 CrNiMo 18.12
317S12	-	317S12	-	317L	1.4438	X2 CrNiMo 18.16
317S16	-	317S16	-	317	1.4449	X5 CrNiMo 17.13
320S17	-	320S17	58J	316Ti	1.4573	X10 CrNiMoTi 18.12
320S31	320S31	-	-	316Ti	1.4571	X10 CrNiMo 18.10
231S12	-	231S12	58B, 58C	321	1.4541	X5 CrNiTi 18.9
321S20	-	321S20	58B, 58C	-	1.4878	X5 CrNiTi 18.9
321S31	321S31	-	-	321	1.4541	X5 CrNiTi 18.9
325S21	-	325S21	58M	-	-	-
325S31	325S31	-	-	-	-	-
326S36	-	326S36	-	-	-	-
331S40	+	331S40	54	EV9	-	-
331S42	+	331S42	54A	EV9	-	-
347S17	-	347S17	58F, 58G	347	1.4550	X10 CrNiNb 18.9
347S31	347S31	-	-	347	1.4550	X10 CrNiNb 18.9
349S52	+	349S52	-	EV8	1.4871	X53 CrMnNiN 21.9
349S54	+	349S54	-	EV8	1.4871	X53 CrMcNiN 21.9
352S52	+	352S52	-	-	-	-

Technical Information

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Stainless Heat Resisting & Valve Steels

352S54	+	352S54	-	-	-	--
381S34	+	381S34	-	EV4	-	-
401S45	+	401S45	52	HNV3	1.4718	X45 CrSi 9.3
403S17	<i>403S17</i>	<i>403S17</i>	-	403	1.4000	X7 Cr 13
410S21	<i>410S21</i>	<i>410S21</i>	56A	410S	1.4006	X10 Cr 13
416S21	<i>416S21</i>	<i>416S21</i>	56AM	416	1.4005	X12 Cr S 13
416S29	<i>416S29</i>	<i>416S29</i>	56BM	-	-	-
416S37	<i>416S37</i>	<i>416S37</i>	56CM	-	-	-
416S41	<i>416S41</i>	<i>416S41</i>	56AM	416Se	-	-
420S29	<i>420S29</i>	<i>420S29</i>	56B	420	1.4021	X20 Cr 13
420S37	<i>420S37</i>	<i>420S37</i>	56C	-	-	-
420S45	-	420S45	56D	-	1.4028	X30 Cr 13
430S15	-	430S15	60	430	1.4016	X8 Cr 17
430S17	<i>430S17</i>	<i>430S17</i>	60	430	1.4016	X8 Cr 17
431S29	<i>431S29</i>	<i>431S29</i>	57	431	1.4057	X22 CrNi 17
441S29	-	441S29	-	-	-	-
441S49	-	441S49	-	-	-	-
443S65	+	443S65	59	HNV6	1.4747	X80 CrNiSi 20

Category 2 steels in BS 970 : 1983 are shown in italic.

+ = valve steel not covered by this part of the standard.

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Alloy Steels

503A37	-	503A37	12B	-	-	-
503A42	-	503A42	12C	-	-	-
503H37	-	503H37	-	-	-	-
503H42	-	503H42	-	-	-	-
503M40	-	503M40	12	-	-	-
523A14	-	523A14	206	5015	1.7012	13 Cr2
523H15	<i>523H15</i>	-	-	5015	1.7012	13 Cr2

Category 2 steels in BS 970 : 1983 are shown in italic.

* Spring steels not covered by this part of the standard.

+ Valve steel not covered by this part of the standard.

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Alloy Steels

523M15	523M15	523M15	-	5015	1.7015	15 Cr3
526M60	-	526M60	11	5160	-	-
<i>527A17</i>	<i>527A17</i>	-	-	<i>5115</i>	-	-
527A19	-	527A19	207	5120	1.7121	20 Cr Mn S 33
527A60	*	527A60	48	5160	1.7176	55 Cr3
527H17	527H17	-	-	5115	-	-
527H60	*	527H60	-	5160	1.7176	55 Cr 3
527M17	527M17	-	-	5115	-	-
527M20	--	527M20	-	5120	1.7121	20 Cr MnS 33
530A30	530A30	530A30	18A	5130	1.7030	28 Cr4
530A32	530A32	530A32	18B	5140	1.7033	34Cr4
530A36	530A36	530A36	18C	5132	1.7034	37Cr4
530A40	530A40	530A40	18D	5140	1.7035	41Cr4
530H30	-	530H30	-	5130	1.7030	28Cr4
530H32	530H32	530H32	-	5130	1.7033	34Cr4
530H36	530H36	530H36	-	5132	1.7034	37Cr4
530H40	530H40	530H40	-	5140	1.7035	41Cr4
530M40	530M40	530M40	18	5140	1.7035	41Cr4
534A99	-	534A99	31	52100	1.3505	100 Cr6
535A99	535A99	535A99	31	52100	1.3505	100 Cr6
<i>590A15</i>	<i>590A15</i>	-	-	-	<i>1.7131</i>	<i>16Mn Cr5</i>
590H17	590H17	-	-	-	1.7131	16Mn Cr5
590M17	590M17	-	-	-	1.7131	16Mn Cr5
605A32	605A32	605A32	16B	-	-	-
605A37	605A37	605A37	16C	-	-	-
605H32	605H32	605H32	-	-	-	-
605H37	605H37	605H37	-	-	-	-
709M40	709M40	709M40	19	-	1.7225	42 CrMo 4
720M32	720M32	-	-	-	1.7361	32 CrMo 12
722M24	722M24	722M24	40B	-	-	-
735A50	*	735A50	47	6150	1.8159	50 CrV 4
785M19	-	785M19	13	-	-	-
805A15	-	805A15	-	8615	-	-

Category 2 steels in BS 970 : 1983 are shown in italic

* Spring steels not covered by this part of the standard

+ Valve steel not covered by this part of the standard

Technical Information

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955 En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Alloy Steels

<i>805A17</i>	<i>805A17</i>	<i>805A17</i>	-	<i>8617</i>	<i>1.6523</i>	<i>21 NiCrMo2</i>
805A20	805A20	805A20	-	8620	1.6543	21 NiCrMo 22
805A22	805A22	805A22	-	8622	1.6543	21 NiCrMo 22
805A24	-	805A24	-	8625	-	-
805A60	*	805A60	-	8660	-	-
<i>805H17</i>	<i>805H17</i>	<i>805H17</i>	-	<i>8617H</i>	<i>1.6523</i>	<i>21 NiCrMo 2</i>
805H20	805H20	805H20	-	8620H	1.6543	21 NiCrMo 22
805H22	805H22	805H22	-	8622H	1.6543	21 NiCrMo 22
805H25	-	805H25	-	8625H	-	-
805H60	*	805H60	-	8660H	-	-
<i>805M17</i>	<i>805M17</i>	<i>805M17</i>	361	<i>8617</i>	<i>1.6523</i>	<i>21 NiCrMo 2</i>
805M20	805M20	805M20	362	8620	1.6543	21 NiCrMo 22
805M22	805M22	805M22	-	8622	1.6543	21 NiCrMo 22
805M25	-	805M25	363	8625	-	21 NiCrMo 22
808H17	808H17	-	-	-	-	-
808M17	808M17	-	-	-	-	-
815A16	-	815A16	-	-	-	-
815H17	815H17	805H17	-	-	-	-
815M17	815M17	815M17	353	-	-	-
816M40	-	816M40	110	-	1.6511	36 CrNiMo 4
817A37	817A37	-	-	-	-	-
817A42	817A42	-	-	-	-	-
817M40	817M40	817M40	24	4340	1.6565	40NiCrMo 6
820A16	-	820A16	-	-	-	-
820H17	820H17	820H17	-	-	-	-
820M17	820M17	820M17	354	-	-	-
822A17	-	822A17	-	-	-	-
822H17	822H17	822H17	-	-	-	-
822M17	822M17	822M17	355	-	-	-
823M30	-	823M30	-	-	1.6580	30 CrNiMo 8
826M31	826M31	826M31	25	-	1.6743	32 NiCrMo 10 4

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+ Valve steel not covered by this part of the standard.

Related Specifications

Steel	BS 970 1983	BS 970 1970/72	BS 970 1955En	AISI/ SAE	WERK- STÖFF	KURZ- NAME
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Alloy Steels

826M40	826M40	826M40	26	-	1.6745	40 NiMoCr 10 5
830M31	-	830M31	27	-	1.6746	32 NiCrMo 14 5
<i>832H13</i>	<i>832H13</i>	<i>832H13</i>	-	-	<i>1.6657</i>	<i>14 NiCrMo 13 4</i>
<i>832M13</i>	<i>832M13</i>	<i>832M13</i>	<i>36C</i>	-	<i>1.6657</i>	<i>14 NiCrMo 13 4</i>
835A15	-	835A15	-	-	1.6723	15 NiCrMo 16 5
835H15	835H15	835H15	-	-	1.6723	15 NiCrMo 16 5
835M15	835M15	835M15	39B	-	1.6723	15 NiCrMo 16 5
835M30	835M30	835M30	30B	-	1.6747	30 NiCrMo 16 6
<i>897M39</i>	<i>897M39</i>	<i>897M39</i>	40C	-	<i>1.8523</i>	<i>39 CrMoV 13 9</i>
905M31	-	905M31	41A	-	1.8507	34 CrAllMo 5
905M39	905M39	905M39	41B	-	1.8509	41 CrAllMo 7
925A60	-	925A60	-	-	-	-
945A40	-	945A40	100C	-	-	-
<i>945M38</i>	<i>945M38</i>	<i>945M38</i>	100	-	-	-

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Data source: asdmetservices.co.uk
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Technical Information

Sheet Gauges

S.W.G	Thickness mm	B.G.
4	6.35	4
	5.89	
5	5.72	5
	5.39	
6	5.03	6
	4.88	
7	4.47	7
	4.06	
8	3.99	8
	3.64	
9	3.53	9
	3.25	
10	3.18	10
	2.95	
11	2.82	11
	2.64	
12	2.52	12
	2.34	
13	2.24	13
	2.03	
14	1.98	14
	1.83	
15	1.75	15
	1.63	
16	1.59	16
	1.42	
17	1.40	17
	1.26	
18	1.21	18
	1.12	
19	1.02	19
	.99	
20	.91	20
	.89	
21	.81	21
	.79	
22	.71	22
	.63	
23	.61	23
	.56	
24	.56	24
	.51	
25	.50	25
	.46	
26	.46	26
	.43	
27	.43	27
	.42	

N.B. Stainless Steels are denser than Carbon Steels.

Conversion Factors

To Convert	Multiply by
Centimetres to inches	0.3937
Cubic centimetres to cubic inches	0.06103
Cubic feet to cubic metres	0.02832
Cubic inches to cubic centimetres	16.39
Cubic inches to litres	0.01639
Cubic metres to cubic feet	35.32
Cubic metres to cubic yards	1.308
Cubic yards to cubic metres	0.7645
Feet to metres	0.3048
Foot pounds to kilogram metres	0.1382
Gallons to litres	4.536
Gallons to cubic feet	0.1606
Grains to grams	0.06480
Grams to pounds	0.002205
Inches to centimetres	2.540
Inches to millimetres	25.40
Kilogram metres to foot pounds	7.233
Kilograms to pounds	2.205
Kilograms to tons	0.0009842
Kilos per sq. mm to tons per sq. inch	0.635
Metres to feet	3.281
Millimetres to inches	0.0394
N/mm ² to tons f/in ²	0.06475
Pounds to kilograms	0.4536
Pounds per foot to kilos per metre	1.488
Square centimetres to sq. inches	0/1550
Square feet to sq. metres	0.09290
Square inches to sq. centimetres	6.452
Square metres to sq. feet.	10.76
Temperature conversion:-	°C = 5/9 (°F – 32) °F = (9/5 °C) + 32
Tons per sq. inch to kilos per sq. mm	1.575
Tons f/in. ² to N/mm ²	15.444
Tons to kilograms	1016.0
KSI – Nmm ² ÷ 0.145038	
Nmm ² – KSI x 0.145038	