

# BRAMMER STANDARD

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## HIGH ALLOY STEEL

Part Number: **BS-HAS-12** Set of 12 0.27" (7 mm ±0.7 mm) THICK DISCS

Grade	Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	B	Co	N	Nb	Sn	Ti	V	W	Other
AL6XN	BS 189A	0.0147	0.639	0.019	(0.001)	0.30	0.184	23.8	20.4	6.04	0.0129	(0.0002)	0.100	0.198	(0.13)	0.0035	0.0065	0.054	0.037	
Alloy 255	BS 179A	0.017	1.04	0.021	0.001	0.44	1.94	5.84	25.45	3.24	(0.009)	(0.001)	0.58	0.184	0.030	0.005	0.006	0.070	(0.2)	
Greek Ascology	BS 183B	0.181	0.344	0.018	0.0042	0.41	0.074	1.96	12.45	0.33	0.0009	(0.0007)	0.032	0.044	(0.0075)	0.0046	(0.0016)	0.165	3.5	
Invar 36	BS 186A	0.040	0.72	0.008	0.005	0.19	0.016	35.86	0.16	0.003	(0.001)	----	0.028	0.0026	<0.002	(0.002)	<0.003	0.001	<0.03	Se: 0.229
Carp. 20Cb3	BS 187D	0.0337	0.938	0.0155	0.0021	0.669	3.52	32.3	19.91	2.17	0.0164	0.0026	0.089	0.046	0.621	0.0085	0.0027	0.073	0.086	Ca: 0.0063
A-286	BS 188B	0.046	0.247	0.016	(0.0007)	0.266	0.120	24.81	14.32	1.30	0.168	0.0047	0.274	0.0021	0.099	0.0051	2.20	0.264	0.043	
Nitronic® 40	BS 190	0.022	9.72	0.015	0.001	0.46	0.072	6.74	19.57	0.15	(0.004)	0.0005	0.044	0.255	(0.004)	0.003	0.002	0.11	0.015	O: 0.0045
Nitronic® 50	BS 180A	0.018	5.05	0.012	0.001	0.32	0.067	13.19	21.09	2.04	0.012	(0.0024)	0.039	0.334	0.20	(0.002)	(0.002)	0.20	0.02	O: 0.003
Nitronic® 60	BS 181B	0.070	8.07	0.021	0.0009	3.94	0.206	8.18	16.17	0.173	0.0119	(0.0008)	0.044	0.158	0.026	(0.004)	0.0051	0.044	0.016	O: 0.0010
18Cr-12Mn	BS 193	0.104	12.11	0.018	0.002	0.66	0.088	1.82	18.48	0.21	(0.003)	0.0007	0.028	0.37	0.014	0.004	0.003	0.107	(0.007)	
Alloy 254SMO	BS 254	0.019	0.95	0.026	0.0009	0.312	0.612	18.47	20.2	6.07	(<0.01)	0.0018	0.08	0.210	(0.03)	0.0063	0.0019	0.062	(0.02)	O: 0.0038
16Cr-6Mn-4Si	BS 191	0.098	5.71	0.024	0.023	3.66	0.33	5.34	16.33	0.36	(0.002)	(0.0006)	0.11	0.117	0.024	(0.006)	0.012	0.083	0.033	O: 0.002

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Certificates of Analysis are supplied for each certified reference material listed in the set.