Recommended Cutting Data CXD ≤ 1/4 - Inch

For applications in aluminum, brass and copper alloys use CDA series cutting data on page 140.

Workpiece Material Group	ISO	Hardness	Tool Series	TYPE	DEPTH	Drill Diameter vc - SFM 1/8	5/32	3/16	1/4	Drill Diameter f - IPR 1/8	5/32	3/16	1/4
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	CXDSS		3	390	380	370	360	.003-.005	.004-.006	.005-.007	.0055-.0080
			CXDSR		5	390	380	370	360				
			CXDCS		3	660	650	640	630				
			CXDCR		5	660	650	640	630				
			CXDCL		8	595	580	560	540				
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	CXDSS		3	330	320	310	300	.003-.005	.004-.006	.005-.007	.0055-.008
			CXDSR		5	330	320	310	300				
			CXDCS		3	575	550	540	500				
			CXDCR		5	575	550	540	500				
			CXDCL		8	430	420	410	400				
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	CXDSS		3	200	190	190	185	.0014-.0030	.0024-.0040	.003-.005	.0035-.006
			CXDSR		5	200	190	190	185				
			CXDCS		3	250	240	230	220				
			CXDCR		5	250	240	230	220				
			CXDCL		8	225	220	215	205				
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc	CXDSS		3	350	340	330	320	.003-.005	.004-.006	.005-.007	.0055-.008
			CXDSR		5	350	340	330	320				
			CXDCS		3	550	500	475	450				
			CXDCR		5	550	500	475	450				
			CXDCL		8	450	425	400	380				
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	CXDSS		3	140	135	130	125	.003-.005	.004-.006	.005-.007	.0055-.008
			CXDSR		5	140	135	130	125				
			CXDCS		3	300	290	280	270				
			CXDCR		5	300	290	280	270				
			CXDCL		8	280	270	260	250				
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	M	over 28 Rc	CXDSS		3	140	130	120	110	.0020-.0033	.0024-.0035	.0030-.0043	.0031-.005
			CXDSR		5	140	130	120	110				
			CXDCS		3	265	250	240	230	.0020-.0033	.0024-.0035	.0030-.0042	.0031-.005
			CXDCR		5	265	250	240	230				
			CXDCL		8	190	180	170	160				
High Temp Alloys Nimonics, Inconel, Monel, Hastelloy	S	up to 42 Rc	CXDSS		3	85	80	75	70	.0014-.0033	.0016-.0035	.002-.004	.0023-.0043
			CXDSR		5	85	80	75	70				
			CXDCS		3	115	100	95	90				
			CXDCR		5	115	100	95	90				
			CXDCL		8	100	100	95	95				
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S		CXDSS		3	130	125	120	115	.003-.004	.004-.006	.005-.007	.0055-.008
			CXDSR		5	130	125	120	115				
			CXDCS		3	230	220	210	200				
			CXDCR		5	230	220	210	200				
			CXDCL		8	210	190	180	170				
Cast Iron Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	CXDSS		3	480	470	460	430	.003-.005	.004-.006	.005-.007	.0055-.008
			CXDSR		5	480	470	460	430				
			CXDCS		3	660	640	620	600				
			CXDCR		5	660	640	620	600				
			CXDCL		8	500	490	480	470				
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350,400,450	K	over 240 HB	CXDSS		3	280	270	260	250				
			CXDSR		5	280	270	260	250				
			CXDCS		3	400	480	460	440				
			CXDCR		5	400	480	460	440				
			CXDCL		8	350	340	330	320				

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended Cutting Data CXD ≥ 5/16 - Inch

For applications in aluminum, brass and copper alloys use CDA series cutting data on page 140.

Workpiece Material Group	ISO	Hardness	Tool Series	TYPE	DEPTH	Drill Diameter vc - SFM 5/16	3/8	1/2	9/16	5/8	3/4	Drill Diameter f - IPR 5/16	3/8	1/2	9/16	5/8	3/4
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	CXDSS		3	350	340	320	300	275	265	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	350	340	320	300	275							
			CXDCS		3	620	600	575	550	525		.006-.009	.007-.010	.009-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	620	600	575	550	525	500						
			CXDCL		8	520	500	480	460	440							
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137,4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132,5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	CXDSS		3	290	280	270	265	260	260	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	290	280	270	265	260							
			CXDCS		3	475	450	425	400	325		.006-.009	.007-.010	.009-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	475	450	425	400	325	315						
			CXDCL		8	375	350	325	305	250							
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	CXDSS		3	185	180	180	175	175	170	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	185	180	180	175	175							
			CXDCS		3	210	210	200	200	190		.006-.009	.007-.010	.009-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	210	210	200	200	190	190						
			CXDCL		8	200	190	190	190	180							
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc	CXDSS		3	310	300	275	250	225	200	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	310	300	275	250	225							
			CXDCS		3	400	390	380	370	330		.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	400	390	380	370	330	320						
			CXDCL		8	375	370	350	340	300							
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	CXDSS		3	120	115	110	105	100	95	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	120	115	110	105	100							
			CXDCS		3	260	250	240	240	230		.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	260	250	240	240	230	220						
			CXDCL		8	240	230	220	220	210							
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	M	over 28 Rc	CXDSS		3	110	105	105	100	100	95	.003-.006	.005-.009	.007-.009	.008-.010	.009-.011	.009-.013
			CXDSR		5	110	105	105	100	100							
			CXDCS		3	220	200	190	180	170		.003-.006	.005-.009	.007-.009	.008-.010	.009-.011	.009-.013
			CXDCR		5	220	200	190	180	170	155						
			CXDCL		8	150	140	130	125	120							
High Temp Alloys Nimonics, Inconel, Monel, Hastelloy	S	up to 42 Rc	CXDSS		3	65	60	55	50	45	40	.003-.005	.004-.006	.005-.007	.005-.008	.006-.008	.009-.010
			CXDSR		5	65	60	55	50	45							
			CXDCS		3	85	85	80	80	75		.003-.005	.004-.006	.005-.007	.005-.008	.006-.008	.009-.010
			CXDCR		5	85	85	80	80	75	75						
			CXDCL		8	80	80	75	75	70							
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S	up to 42 Rc	CXDSS		3	110	105	100	100	90	90	.006-.009	.007-.010	.008-.011	.008-.010	.010-.014	.011-.015
			CXDSR		5	110	105	100	100	90							
			CXDCS		3	190	180	170	160	150		.006-.009	.007-.010	.008-.011	.008-.010	.010-.014	.011-.015
			CXDCR		5	190	180	170	160	150	150						
			CXDCL		8	160	150	140	130	125							
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	CXDSS		3	410	400	390	370	360	350	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	410	400	390	370	360							
			CXDCS		3	580	560	550	550	525		.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	580	560	550	550	525	500						
			CXDCL		8	460	450	440	440	420							
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	CXDSS		3	240	230	220	210	200	190	.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDSR		5	240	230	220	210	200							
			CXDCS		3	400	375	350	300	275		.006-.009	.007-.010	.008-.011	.009-.014	.010-.014	.011-.015
			CXDCR		5	400	375	350	300	275	250						
			CXDCL		8	300	270	250	220	200							

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended Cutting Data CXD ≤ 6mm - Metric

For applications in aluminum, brass and copper alloys, use CDA series cutting data on page 141.

Workpiece Material Group	ISO	Hardness	Tool Series	TYPE	DEPTH	Drill Diameter (mm) vc - m/min 3	4	5	6	Drill Diameter (mm) f - mm/Rev 3	4	5	6
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	CXDSS		3	119	116	113	110	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	119	116	113	110				
			CXDCS		3	201	198	195	192	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	201	198	195	192				
			CXDCL		8	181	177	171	165				
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	CXDSS		3	101	98	94	91	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	101	98	94	91				
			CXDCS		3	175	168	165	152	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	175	168	165	152				
			CXDCL		8	131	128	125	122				
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	CXDSS		3	61	58	58	56	.036-.076	.061-.102	.076-.127	.089-.152
			CXDSR		5	61	58	58	56				
			CXDCS		3	76	73	70	67	.036-.076	.061-.102	.076-.127	.089-.152
			CXDCR		5	76	73	70	67				
			CXDCL		8	69	67	66	62				
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc	CXDSS		3	107	104	101	98	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	107	104	101	98				
			CXDCS		3	168	152	145	137	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	168	152	145	137				
			CXDCL		8	137	130	122	116				
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	CXDSS		3	43	41	40	38	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	43	41	40	38				
			CXDCS		3	91	88	85	82	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	91	88	85	82				
			CXDCL		8	85	82	79	76				
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	M	over 28 Rc	CXDSS		3	43	40	37	34	.051-.076	.061-.089	.089-.102	.076-.127
			CXDSR		5	43	40	37	34				
			CXDCS		3	81	76	73	70	.051-.076	.061-.089	.089-.102	.076-.127
			CXDCR		5	81	76	73	70				
			CXDCL		8	58	55	52	49				
High Temp Alloys Nimonics, Inconel, Monel, Hastelloy	S	up to 42 Rc	CXDSS		3	26	24	23	21	.036-.089	.036-.089	.051-.102	.061-.127
			CXDSR		5	26	24	23	21				
			CXDCS		3	35	30	29	27	.036-.089	.036-.089	.051-.102	.061-.127
			CXDCR		5	35	30	29	27				
			CXDCL		8	30	30	29	29				
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S	up to 42 Rc	CXDSS		3	40	38	37	35	.076-.102	.102-.152	.127-.178	.140-.229
			CXDSR		5	40	38	37	35				
			CXDCS		3	70	67	64	61	.076-.102	.102-.152	.127-.178	.140-.229
			CXDCR		5	70	67	64	61				
			CXDCL		8	64	58	55	52				
Cast Iron Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	CXDSS		3	146	143	140	131	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	146	143	140	131				
			CXDCS		3	201	195	189	183	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	201	195	189	183				
			CXDCL		8	152	149	146	143				
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	CXDSS		3	85	82	79	76	.076-.127	.102-.152	.127-.178	.127-.203
			CXDSR		5	85	82	79	76				
			CXDCS		3	122	146	140	134	.076-.127	.102-.152	.127-.178	.127-.203
			CXDCR		5	122	146	140	134				
			CXDCL		8	107	104	101	98				

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended Cutting Data CXD ≥ 8mm - Metric

For applications in aluminum, brass and copper alloys, use CDA series cutting data on page 141.

Workpiece Material Group	ISO	Hardness	Tool Series	TYPE	DEPTH	Drill Diameter (mm) vc - m/min 8	10	12	14	16	18	20	Drill Diameter (mm) f - mm/Rev 8	10	12	14	16	18	20
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140,1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	CXDSS		3	107	104	98	91	84	81	77	.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDSR		5	107	104	98	91	84	81								
			CXDCS		3	189	183	175	168	160	152		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	189	183	175	168	160	152	145							
			CXDCL		8	158	152	146	140	134									
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137,4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132,5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2,W1 to W310	P	28 to 38 Rc	CXDSS		3	88	85	82	81	79	79	75	.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDSR		5	88	85	82	81	79	79								
			CXDCS		3	145	137	130	122	99	96		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	145	137	130	122	99	96	92							
			CXDCL		8	114	107	99	93	76									
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	CXDSS		3	56	55	55	53	53	52	49	.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDSR		5	56	55	55	53	53	52								
			CXDCS		3	64	64	61	61	58	58		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	64	64	61	61	58	58	55							
			CXDCL		8	61	58	58	58	55									
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc	CXDSS		3	94	91	84	76	69	61	55	.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDSR		5	94	91	84	76	69	61								
			CXDCS		3	122	119	116	113	101	98		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	122	119	116	113	101	98	94							
			CXDCL		8	114	113	107	104	91									
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	CXDSS		3	37	35	34	32	30	29	28	.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDSR		5	37	35	34	32	30	29								
			CXDCS		3	79	76	73	73	70	67		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	79	76	73	73	70	67	64							
			CXDCL		8	73	70	67	67	64									
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	M	over 28 Rc	CXDSS		3	34	32	32	30	30	29	27	.11-.15	.13-.23	.18-.25	.21-.27	.22-.31	.25-.33	.30-.37
			CXDSR		5	34	32	32	30	30	29								
			CXDCS		3	67	61	58	55	52	47		.11-.15	.13-.23	.18-.25	.21-.27	.22-.31	.25-.33	.30-.37
			CXDCR		5	67	61	58	55	52	47	45							
			CXDCL		8	46	43	40	38	36									
High Temp Alloys Nimonics, Inconel, Monel, Hastelloy	S	up to 42 Rc	CXDSS		3	20	18	17	15	14	12	11	.08-.13	.11-.15	.12-.17	.14-.19	.16-.21	.18-.25	.17-.24
			CXDSR		5	20	18	17	15	14	12								
			CXDCS		3	26	26	24	24	23	23		.09-.13	.11-.15	.12-.17	.14-.19	.16-.21	.18-.25	.17-.24
			CXDCR		5	26	26	24	24	23	23	22							
			CXDCL		8	24	24	23	23	21									
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S	up to 42 Rc	CXDSS		3	34	32	30	30	27	27	25	.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDSR		5	34	32	30	30	27	27								
			CXDCS		3	55	55	52	49	46	46		.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDCR		5	55	55	52	49	46	46	44							
			CXDCL		8	49	46	43	40	38									
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	CXDSS		3	125	122	119	113	110	107	102	.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDSR		5	125	122	119	113	110	107								
			CXDCS		3	177	171	168	168	160	152		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXCDR		5	177	171	168	168	160	152	145							
			CXDCL		8	140	137	134	134	128									
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	CXDSS		3	73	70	67	64	61	58	55	.16-.24	.18-.27	.21-.31	.22-.35	.25-.36	.28-.38	.30-.37
			CXDSR		5	73	70	67	64	61	58								
			CXDCS		3	122	114	107	91	84	76		.16-.24	.18-.27	.21-.31	.22-.35	.25-.35	.28-.38	.30-.37
			CXDCR		5	122	114	107	91	84	76	72							
			CXDCL		8	91	82	76	67	61									

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

For product information, call your local distributor.