



REAMERS

- Hand • Machine (Morse Taper & Chucking) • Bridge • Taper Pin
 - Morse Taper Socket • Taper Pipe • Adjustable
-



AlCrN: G6 generation coatings... a quantum leap in tool wear resistance

Aluminium Chromium Nitride

The latest tool coating formula is Aluminium Chromium Nitride (AlCrN). Coatings of this G6 generation developed, markedly expand the performance envelope versus conventional titanium based coatings (such as TiAlN, AlTiN or TiCN).

Unique coating properties

The AlCrN coating exhibits until now, an unmatched degree of oxidation resistance and hot hardness. These properties have triggered a quantum leap in tool wear resistance.

The bottom line: greater productivity!

Tools coated with AlCrN let you choose noticeably higher cutting speeds and allow you to more effectively exploit the potential of modern machine tools. You can produce more parts per time / unit to decisively boost the productivity of your manufacturing resources and hone your competitive edge.

Extraordinary performance gains have been demonstrated in dry and wet machining processes involving:

- Unalloyed steels
- High strength steels
- High hardness steels (up to 54 HRC)

Coating properties:

- Very high abrasion resistance
- High and constant temperature resistance
- Unrivalled oxidation resistance
- Titanium free coating

ISO	VDI	Material Group	Sutton
P	A	Steel	N
M	R	Stainless Steel	VA
K	F	Cast Iron	GG
N	N	Non-Ferrous Metals, Aluminiums & Coppers	Al W
S	S	Titaniums & Super Alloys	Ti Ni
H	H	Hard Materials (> 45 HRC)	H

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144	146	149	150	151	152	152	153	154
R100	R101	R102	R104	R105	R106	R107	R108	R109
HSS	HSS	HSS Co	HSS	HSS	HSS	HSS	HSS	TCA
Br	Br	Br	Br	Br	Br	Br	Br	Br
N	N	N	N	N	Roughing	Finishing	Tapered Pipe	N
DIN 206 / ISO 236	DIN 208	DIN 212 / ISO 521	-	-	-	-	-	-
L10	L10	L10	L15	L7	L7	L7	L15	Straight

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide at the back of this catalogue.

www.suttonhps.com

Catalogue Code
Material
Surface Finish
Sutton Designation
Standard
Geometry

ISO	VDI ³³²³	Material	Condition	HB	N/mm ²										
P	1	Steel - Non-alloy, cast & free cutting	- 0.15 %C	A	125	440	●	●	●	●	●	●	●	●	
	2			A	190	640	●	●	●	●	●	●	●	●	
	3		- 0.75 %C	QT	250	840	●	●	●	●	●	●	●	○	
	4			A	270	910	●	●	●	●	●	●	●	○	
	5			QT	300	1010	○	○	○	○	○	○	○	○	
	6	Steel - Low alloy & cast < 5% of alloying elements	A	180	610	●	●	●	●	●	●	●	●	●	
	7		QT	275	930	○	○	○	○	○	○	○	○	○	
	8		QT	300	1010	○	○	○	○	○	○	○	○	○	
	9		QT	350	1180										
	10	Steel - High alloy, cast & tool	A	200	680	○	○	○	○	○	○	○	○	○	
	11		HT	325	1100										
12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680	○	○	○	○	○	○	○	○	○	
13			QT	240	810										
M	14.1	Stainless Steel	Austenitic	AH	180	610	○	○	○	○	○	○	○	○	
	14.2			Duplex	250	840	○	○	○	○	○	○	○	○	
	14.3			Precipitation Hardening	250	840	○	○	○	○	○	○	○	○	
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	●	●	●	●	●	●	●	○	
	16			Pearlitic	260	880	○	○	○	○	○	○	○	○	
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	○	○	○	○	○	○	○	○	
	18			Pearlitic	250	840	○	○	○	○	○	○	○	○	
	19			Ferritic	130	460	○	○	○	○	○	○	○	○	
20	Cast Iron - Malleable	Pearlitic		230	780	○	○	○	○	○	○	○	○		
21			Aluminum & Magnesium - wrought alloy	Non Heat Treatable		60	210	○	○	○	○	○	○	○	
N	22	Aluminum & Magnesium - cast alloy <12% Si	Heat Treatable	AH	100	360	○	○	○	○	○	○	○	○	
	23				75	270	○	○	○	○	○	○	○	○	
	24	Al & Mg - cast alloy >12% Si	Non Heat Treatable	AH	90	320	○	○	○	○	○	○	○	○	
	25				130	460									
	26			Copper & Cu alloys (Brass/Bronze)	Free cutting, Pb > 1%	110	390	○	○	○	○	○	○	○	○
	27	Brass (CuZn, CuSnZn)	Brass (CuZn, CuSnZn)		90	320	○	○	○	○	○	○	○	○	
	28			Bronze (CuSn)	100	360	○	○	○	○	○	○	○	○	
	29	Non-metallic - Thermosetting & fiber-reinforced plastics													
	30	Non-metallic - Hard rubber, wood etc.													
S	31	High temp. alloys	Fe based	A	200	680									
	32			AH	280	950									
	33			Ni / Co based	A	250	840								
	34				AH	350	1180								
	35				C	320	1080								
	36	Titanium & Ti alloys	CP Titanium			400 MPa									
	37.1			Alpha alloys			860 MPa								
	37.2			Alpha / Beta alloys	A		960 MPa								
	37.3				AH		1170 MPa								
	37.4			Beta alloys	A		830 MPa								
37.5	AH					1400 MPa									
H	38.1	Hardened steel		HT		45 HRC									
	38.2			HT		55 HRC									
	39.1			HT		58 HRC									
	39.2			HT		62 HRC									
	40	Cast Iron	Chilled	C	400	1350	○	○	○	○	○	○	○		
	41			HT		55 HRC									

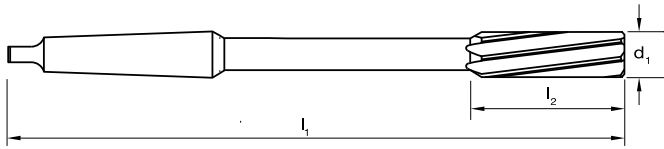
Condition: A (Annealed), AH (Age Hardened), C (Cast), HT (Hardened & Tempered), QT (Quenched & Tempered)

● Optimal ○ Effective

Reamers Machine

sutton®

- Machine use
- Suitable for toolroom & workshop use
- Produces clean, accurate holes, to a H7 tolerance



Catalogue Code	R101
Discount Group	B0302
Material	HSS
Surface Finish	Brt
Sutton Designation	N
Geometry	L10

Size Ref.	d ₁	l ₁	l ₂	l ₃	d ₂	z	MT #	Item #
1500	15.000	204	50	-	-	8	2	R101 1500
1508	15.081	19/32	210	52	-	8	2	R101 1508
1550	15.500	210	52	-	-	8	2	R101 1550
1548	15.478	39/64	210	52	-	8	2	R101 1548
1588	15.875	5/8	210	52	-	8	2	R101 1588
1600	16.000	210	52	-	-	8	2	R101 1600
1627	16.272	41/64	214	54	-	8	2	R101 1627
1650	16.500	214	54	-	-	8	2	R101 1650
1667	16.669	21/32	214	54	-	8	2	R101 1667
1700	17.000	214	54	-	-	8	2	R101 1700
1707	17.066	43/64	219	56	-	8	2	R101 1707
1746	17.463	11/16	219	56	-	8	2	R101 1746
1750	17.500	219	56	-	-	8	2	R101 1750
1786	17.859	45/64	219	56	-	8	2	R101 1786
1800	18.000	219	56	-	-	8	2	R101 1800
1826	18.256	23/32	219	56	-	8	2	R101 1826
1850	18.500	223	58	-	-	8	2	R101 1850
1900	19.000	223	58	-	-	8	2	R101 1900
1905	19.050	3/4	223	58	-	8	2	R101 1905
1950	19.500	228	60	-	-	8	2	R101 1950
2000	20.000	228	60	-	-	8	2	R101 2000
2050	20.500	232	62	-	-	8	2	R101 2050
2064	20.638	13/16	232	62	-	8	2	R101 2064
2100	21.000	232	62	-	-	8	2	R101 2100
2143	21.431	27/32	232	62	-	8	2	R101 2143
2150	21.500	237	64	-	-	8	2	R101 2150
2200	22.000	237	64	-	-	8	2	R101 2200
2223	22.225	7/8	237	64	-	8	2	R101 2223
2250	22.500	241	66	-	-	8	2	R101 2250
2300	23.000	241	66	-	-	8	2	R101 2300
2302	23.019	29/32	237	64	-	8	2	R101 2302
2350	23.500	241	66	-	-	8	3	R101 2350
2381	23.813	15/16	268	68	-	8	3	R101 2381
2400	24.000	268	68	-	-	8	3	R101 2400
2450	24.500	268	68	-	-	8	3	R101 2450
2461	24.606	31/32	268	68	-	8	3	R101 2461
2500	25.000	268	68	-	-	10	3	R101 2500
2540	25.400	1	268	68	-	8	3	R101 2540
2550	25.500	273	70	-	-	10	3	R101 2550
2600	26.000	273	70	-	-	10	3	R101 2600

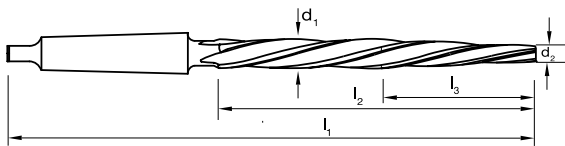
ISO	P										M				K				N						S						H																		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37.1	37.2	37.3	37.4	37.5	38.1	38.2	39.1	39.2	40	41
R101	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			

P Steel
 M Stainless Steel
 K Cast Iron
 N Non-Ferrous Metals
 S Titanium & Super Alloys
 H Hard Materials
 ● Optimal ○ Effective

Reamers Bridge

sutton®

- Machine use
- For opening out existing holes
- Ideal for alignment in fabrication & construction work



Catalogue Code	R104
Discount Group	B0302
Material	HSS
Surface Finish	Brt
Sutton Designation	N
Geometry	L15

Size Ref.	d ₁	l ₁	l ₂	l ₃	d ₂	z	MT #	Item #
1300	13.0	199	105	42	8.8	5	2	R104 1300
1400	14.0	209	115	46	9.4	5	2	R104 1400
1600	16.0	229	135	54	10.6	5	2	R104 1600
1700	17.0	251	135	54	11.6	5	3	R104 1700
1800	18.0	261	145	58	12.2	5	3	R104 1800
1900	19.0	261	145	58	13.2	5	3	R104 1900
2000	20.0	271	155	62	13.8	5	3	R104 2000
2100	21.0	271	155	62	14.8	5	3	R104 2100
2200	22.0	281	165	66	15.4	5	3	R104 2200
2300	23.0	281	165	66	16.4	5	3	R104 2300
2500	25.0	296	180	72	17.8	5	3	R104 2500
2600	26.0	296	180	72	18.8	5	3	R104 2600
2800	28.0	311	195	78	20.2	5	3	R104 2800
3000	30.0	311	195	78	22.2	5	3	R104 3000
3200	32.0	354	210	84	23.6	5	4	R104 3200

ISO	P										M					K					N										S										H								
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37.1	37.2	37.3	37.4	37.5	38.1	38.2	39.1	39.2	40	41
R104	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metals S Titanium & Super Alloys H Hard Materials

● Optimal ○ Effective

Reamers Adjustable



- For use by hand with suitable wrench
- General purpose
- Adjustable size range
- TCA (Tungsten Chrome Alloy)



Catalogue Code	R111	R112
Discount Group	B0304	B0304
Material	TCA	TCA
Surface Finish	Brt	Brt
Sutton Designation	-	-
Geometry	Pilots	Nuts

Size Ref.	Size	Range (mm)	Range (inch)	Item #	Item #
1200	MA	12.00-13.50	15/32-17/32	R111 1200	R112 1200
1350	MB	13.50-15.00	17/32-19/32	R111 1350	R112 1350
1500	MC	15.00-16.75	19/32-21/32	R111 1500	R112 1500
1675	MD	16.75-18.25	21/32-23/32	R111 1675	R112 1675
1825	ME	18.25-19.75	23/32-25/32	R111 1825	R112 1825
1975	MF	19.75-21.50	25/32-27/32	R111 1975	R112 1975
2150	MG	21.50-23.75	27/32-15/16	R111 2150	R112 2150
2375	MH	23.75-27.00	15/16-1-1/16	R111 2375	R112 2375
2700	MI	27.00-30.25	1-1/16-1-3/16	R111 2700	R112 2700
3025	MJ	30.25-34.25	1-3/16-1-11/32	R111 3025	R112 3025
3425	MK	34.25-38.00	1-11/32-1-1/2	R111 3425	R112 3425
3800	ML	38.00-46.00	1-1/2-1-13/16	R111 3800	R112 3800
4600	MM	46.00-56.00	1-13/16-2-7/32		R112 4600
5600	MN	56.00-69.75	2-7/32-2-3/4		R112 5600
6975	MO	69.75-85.00	2-3/4-3-11/32		R112 6975

MA1	Adjustable Reamer Pilot Set	Pieces
	MA to MI (Pilots Only)	9
		R111 MA1



R111 MA1

