



suttontools
REAMERS

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

AVAILABLE IN MULTIPLE LANGUAGES



L100 V2EN



L100 V2NL



L100 V2FR



L100 V2DE



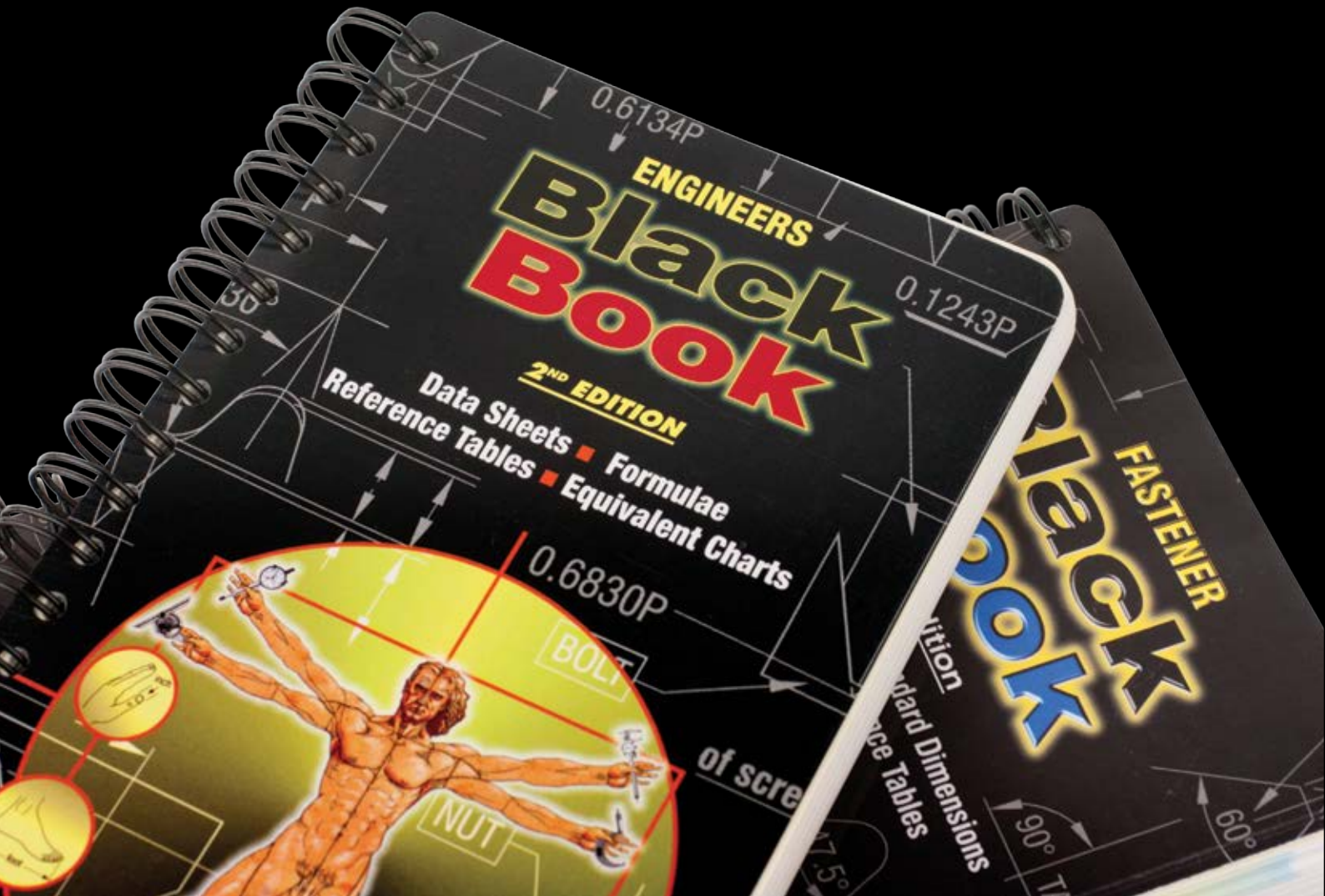
L100 V2IT



L100 V2ES



L100 V2SE



Engineers Black Book ***The Ultimate Reference Book is here...***

The easy to use pocket-size reference tools containing a wealth of detailed and updated information for the industry and trade.

The Black Book series includes the Engineer and Fastener editions. The high quality matt laminated grease proof page ensures long life and glare-free reading. It is wire bound to ensure the book stays flat on workbench when you are reading.

The book also comes with a BONUS drill point sharpening gauge (Engineer), and thread pitch identification gauge (Fastener).

Black Books are the ultimate reference books for engineers, trades people, apprentices, machine shops, tool rooms, technical colleges and purchasing officers.

- Tables
- Standards
- Illustrations
- Conversion factors
- Lubricants-coolants
- Tolerances
- Weights of metal
- Geometrical construction
- Formulae
- Engineering drawing standards
- Tapping drill sizes
- Speeds & feeds
- Equivalent charts
- Sharpening information

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

^ 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.

Page

462	465	469	471	472	472	473	474
							
R100	R101	R102	R105	R106	R107	R108	R109
HSS	HSS	HSS Co	HSS	HSS	HSS	HSS	TCA
Brt	Brt	Brt	Brt	Brt	Brt	Brt	Brt
N	N	N	N	Roughing	Finishing	Tapered Pipe	N
DIN 206 / ISO 236	DIN 208	DIN 212 / ISO 521	-	-	-	-	-
L10	L10	L10	L7	L7	L7	L15	Straight

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		~ 0.45 %C	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	○	○	○	○	○	○	○	○
M	12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680	○	○	○	○	○	○	○
	13		Martensitic	QT	240	810	○	○	○	○	○	○	○
	14.1	Stainless Steel	Austenitic	AH	180	610	○	○	○	○	○	○	○
	14.2		Duplex		250	840	○	○	○	○	○	○	○
K	14.3		Precipitation Hardening		250	840	○	○	○	○	○	○	○
	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	Cast Iron - Malleable	Ferritic		130	460	○	○	○	○	○	○	○
N	20		Pearlitic		230	780	○	○	○	○	○	○	○
	21	Aluminum & Magnesium - wrought alloy	Non Heat Treatable		60	210	○	○	○	○	○	○	○
	22		Heat Treatable	AH	100	360	○	○	○	○	○	○	○
	23	Aluminum & Magnesium - cast alloy ≤12% Si	Non Heat Treatable		75	270	○	○	○	○	○	○	○
	24		Heat Treatable	AH	90	320	○	○	○	○	○	○	○
	25	Al & Mg - cast alloy >12% Si	Non Heat Treatable		130	460	○	○	○	○	○	○	○
	26	Copper & Cu alloys (Brass/Bronze)	Free cutting, Pb > 1%		110	390	○	○	○	○	○	○	○
	27		Brass (CuZn, CuSnZn)		90	320	○	○	○	○	○	○	○
	28		Bronze (CuSn)		100	360	○	○	○	○	○	○	○
	29	Non-metallic - Thermosetting & fiber-reinforced plastics											
S	30	Non-metallic - Hard rubber, wood etc.											
	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			55 HRC									
	39.1			58 HRC									
	39.2			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 Hand



- For use by hand with suitable wrench
- Suitable for tool rooms & workshop use
- Produces clean, accurate holes, to a H7 tolerance



Alésoirs à main

- Pour utilisation universelle à main
- Tolérance H7



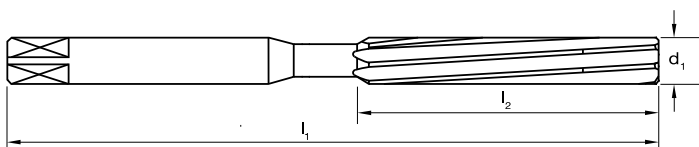
Alesatori a Mano

- Per uso manuale con propria chiave di trascinamento
- Ideale per uso in Tool rooms & reparto produttivo
- Produce fori puliti e precisi, a una tolleranza H7



Escariadores Manuales

- Para usar a mano con llave adecuada
- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



Catalogue Code	R100
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	Item #
0300	3.000	62	31	-	-	6	R100 0300
0318	3.175 1/8	66	33	-	-	6	R100 0318
0350	3.500	71	35	-	-	6	R100 0350
0357	3.572 9/64	71	35	-	-	6	R100 0357
0397	3.969 5/32	76	38	-	-	6	R100 0397
0400	4.000	76	38	-	-	6	R100 0400
0437	4.366 11/64	81	41	-	-	6	R100 0437
0450	4.500	81	41	-	-	6	R100 0450
0476	4.762 3/16	87	44	-	-	6	R100 0476
0500	5.000	87	44	-	-	6	R100 0500
0516	5.159 13/64	87	44	-	-	6	R100 0516
0550	5.500	93	47	-	-	6	R100 0550
0556	5.556 7/32	93	47	-	-	6	R100 0556
0595	5.953 15/64	93	47	-	-	6	R100 0595
0600	6.000	93	47	-	-	6	R100 0600
0635	6.350 1/4	100	50	-	-	6	R100 0635
0650	6.500	100	50	-	-	6	R100 0650
0675	6.747 17/64	100	50	-	-	6	R100 0675
0700	7.000	107	54	-	-	6	R100 0700
0714	7.144 9/32	107	54	-	-	6	R100 0714
0750	7.500	107	54	-	-	6	R100 0750
0754	7.541 19/64	107	54	-	-	6	R100 0754
0794	7.938 5/16	115	58	-	-	6	R100 0794
0800	8.000	115	58	-	-	6	R100 0800
0833	8.334 21/64	115	58	-	-	6	R100 0833
0850	8.500	115	58	-	-	6	R100 0850
0873	8.731 11/32	124	62	-	-	6	R100 0873
0900	9.000	124	62	-	-	6	R100 0900

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
R100	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

P

Steel

M

Stainless Steel

K

Cast Iron

N

Non-Ferrous Metals

S

Titanium & Super Alloys

H

Hard Materials

●

Optimal

○

Effective

Reamers Hand



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- Suitable for tool rooms & workshop use
- Produces clean, accurate holes, to a H7 tolerance



Alésoirs à main

- Pour utilisation universelle à main
- Tolérance H7



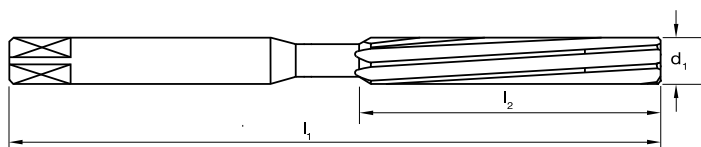
Alesatori a Mano

- Per uso manuale con propria chiave di trascinamento
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- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



Catalogue Code	R100
Discount Group	B0302
Material	HSS
Surface Finish	<i>Brt</i>
Sutton Designation	N
Geometry	L10

Size Ref.	d ₁		l ₁	l ₂	l ₃	d ₂	z	Item #
1588	15.875	5/8	175	87	-	-	8	R100 1588
1600	16.000		175	87	-	-	8	R100 1600
1627	16.272	41/64	175	87	-	-	8	R100 1627
1667	16.669	21/32	175	87	-	-	8	R100 1667
1700	17.000		175	87	-	-	8	R100 1700
1707	17.066	43/64	188	93	-	-	8	R100 1707
1746	17.463	11/16	188	93	-	-	8	R100 1746
1800	18.000		188	93	-	-	8	R100 1800
1826	18.256	23/32	188	93	-	-	8	R100 1826
1900	19.000		188	93	-	-	8	R100 1900
1905	19.050	3/4	201	100	-	-	10	R100 1905
1984	19.844	25/32	201	100	-	-	10	R100 1984
2000	20.000		201	100	-	-	8	R100 2000
2064	20.638	13/16	201	100	-	-	10	R100 2064
2100	21.000		201	100	-	-	8	R100 2100
2143	21.431	27/32	215	107	-	-	10	R100 2143
2200	22.000		215	107	-	-	8	R100 2200
2223	22.225	7/8	215	107	-	-	10	R100 2223
2300	23.000		215	107	-	-	8	R100 2300
2302	23.019	29/32	215	107	-	-	10	R100 2302
2381	23.813	15/16	231	115	-	-	10	R100 2381
2400	24.000		231	115	-	-	8	R100 2400
2461	24.606	31/32	231	115	-	-	10	R100 2461
2500	25.000		231	115	-	-	10	R100 2500
2540	25.400	1	231	115	-	-	10	R100 2540

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	4.0	4.1			
R100	●	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○				
P	Steel			M	Stainless Steel										K	Cast Iron				N	Non-Ferrous Metals										S	Titanium & Super Alloys										H	Hard Materials				●	Optimal		○	Effective	

Reamers Machine



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



Alésoirs machine cône morse

- Pour utilisation universelle sur machines
- Tolérance H7



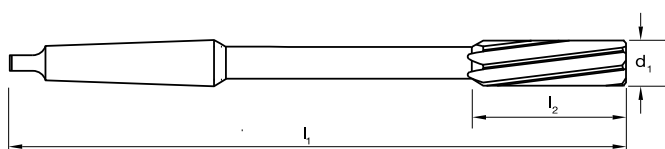
Alesatori Macchina

- Adatto a operazioni su macchine CN
- Ideale per uso in Tool rooms & reparto produttivo
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Escariadores Cono Morse

- Para usar a máquina
- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



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 #
0600	6.000	138	26	-	-	6	1	R101 0600
0635	6.350	1/4	144	28	-	6	1	R101 0635
0650	6.500	144	28	-	-	6	1	R101 0650
0675	6.747	17/64	144	28	-	6	1	R101 0675
0700	7.000	150	31	-	-	6	1	R101 0700
0714	7.144	9/32	150	31	-	6	1	R101 0714
0750	7.500	150	31	-	-	6	1	R101 0750
0754	7.541	19/64	150	31	-	6	1	R101 0754
0794	7.938	5/16	156	33	-	6	1	R101 0794
0800	8.000	156	33	-	-	6	1	R101 0800
0833	8.334	21/64	156	33	-	6	1	R101 0833
0850	8.500	156	33	-	-	6	1	R101 0850
0873	8.731	11/32	162	36	-	6	1	R101 0873
0900	9.000	162	36	-	-	6	1	R101 0900
0913	9.128	23/64	162	36	-	6	1	R101 0913
0950	9.500	162	36	-	-	6	1	R101 0950
0953	9.525	3/8	162	36	-	6	1	R101 0953
0992	9.922	25/64	168	38	-	6	1	R101 0992
1000	10.000	168	38	-	-	6	1	R101 1000
1032	10.319	13/32	168	38	-	6	1	R101 1032
1050	10.500	168	38	-	-	6	1	R101 1050
1072	10.716	27/64	175	41	-	6	1	R101 1072
1100	11.000	175	41	-	-	6	1	R101 1100
1111	11.112	7/16	175	41	-	6	1	R101 1111
1150	11.500	175	41	-	-	6	1	R101 1150
1151	11.509	29/64	175	41	-	6	1	R101 1151
1191	11.906	15/32	175	41	-	6	1	R101 1191
1200	12.000	182	44	-	-	6	1	R101 1200

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											

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

● Optimal ○ Effective

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- Pour utilisation universelle sur machines
- Tolérance H7



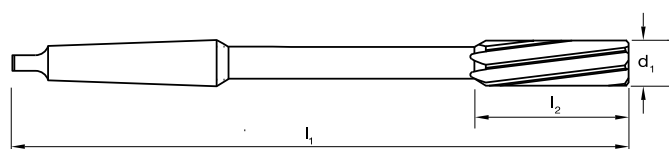
Alesatori Macchina

- Adatto a operazioni su macchine CN
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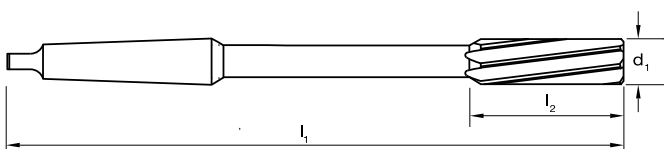


Catalogue Code	R101
Discount Group	B0302
Material	HSS
Surface Finish	<i>Brt</i>
Sutton Designation	N
Geometry	L10

Size Ref.	d ₁		l ₁	l ₂	l ₃	d ₂	z	MT #	Item #
1230	12.303	31/64	182	44	-	-	6	1	R101 1230
1250	12.500		182	44	-	-	6	1	R101 1250
1270	12.700	1/2	182	44	-	-	6	1	R101 1270
1300	13.000		182	44	-	-	6	1	R101 1300
1310	13.097	33/64	182	44	-	-	6	1	R101 1310
1349	13.494	17/32	189	47	-	-	6	1	R101 1349
1350	13.500		189	47	-	-	6	1	R101 1350
1389	13.891	35/64	189	47	-	-	6	1	R101 1389
1400	14.000		189	47	-	-	8	1	R101 1400
1429	14.288	9/16	204	50	-	-	8	2	R101 1429
1450	14.500		204	50	-	-	8	2	R101 1450
1468	14.684	37/64	204	50	-	-	8	2	R101 1468
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

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											

- 



Size Ref.	d ₁		l ₁	l ₂	l ₃	d ₂	z	MT #	Item #
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
2650	26.500		273	70	-	-	10	3	R101 2650
2699	26.987	1-1/16	277	71	-	-	10	3	R101 2699
2700	27.000		277	71	-	-	10	3	R101 2700
2750	27.500		277	71	-	-	10	3	R101 2750

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 Machine



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



Alésoirs machine cône morse

- Pour utilisation universelle sur machines
- Tolérance H7



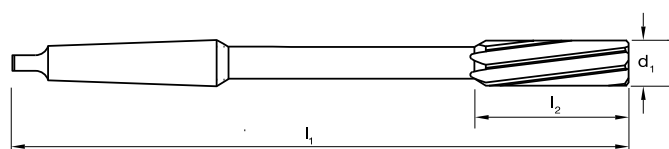
Alesatori Macchina

- Adatto a operazioni su macchine CN
- Ideale per uso in Tool rooms & reparto produttivo
- Produce fori puliti e precisi, a una tolleranza H7



Escariadores Cono Morse

- Para usar a máquina
- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



Catalogue Code **R101**

Discount Group B0302

Material	HSS
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Surface Finish *Brt*

Sutton Designation N

Geometry L10

Size Ref.	d ₁		l ₁	l ₂	l ₃	d ₂	z	MT #	Item #
2800	28.000		277	71	-	-	10	3	R101 2800
2850	28.500		281	73	-	-	10	3	R101 2850
2858	28.575	1-1/8	281	73	-	-	10	3	R101 2858
2900	29.000		281	73	-	-	10	3	R101 2900
2950	29.500		281	73	-	-	10	3	R101 2950
3000	30.000		281	73	-	-	10	3	R101 3000
3016	30.162	1-3/16	285	75	-	-	10	3	R101 3016
3050	30.500		285	75	-	-	10	3	R101 3050
3100	31.000		285	75	-	-	10	3	R101 3100
3150	31.500		285	75	-	-	10	3	R101 3150
3175	31.750	1-1/4	290	77	-	-	10	3	R101 3175
3200	32.000		317	77	-	-	10	4	R101 3200
3300	33.000		317	77	-	-	10	4	R101 3300
3334	33.338	1-5/16	317	77	-	-	10	4	R101 3334
3400	34.000		321	78	-	-	10	4	R101 3400
3493	34.925	1-3/8	321	78	-	-	10	4	R101 3493
3500	35.000		321	78	-	-	10	4	R101 3500
3600	36.000		325	79	-	-	12	4	R101 3600
3651	36.512	1-7/16	325	79	-	-	12	4	R101 3651
3700	37.000		325	79	-	-	12	4	R101 3700
3800	38.000		329	81	-	-	12	4	R101 3800
3810	38.100	1-1/2	329	83	-	-	12	4	R101 3810
3900	39.000		329	81	-	-	12	4	R101 3900
4000	40.000		329	81	-	-	12	4	R101 4000
4128	41.275	1-5/8	333	82	-	-	12	4	R101 4128
4445	44.450	1-3/4	336	83	-	-	12	4	R101 4445
4763	47.625	1-7/8	344	86	-	-	12	4	R101 4763
5080	50.800	2	344	86	-	-	12	4	R101 5080

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 Chucking



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



Alésoirs à machine queue cylindrique

- Pour utilisation universelle sur machines
- Tolérance H7



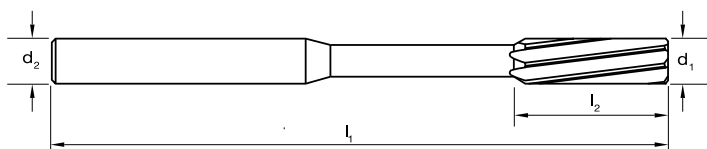
Alesatori Mandrino

- Adatto a operazioni su macchine CN
- Ideale per uso in Tool rooms & reparto produttivo
- Produce fori puliti e precisi, a una tolleranza H7



Escaradores Máquina

- Para usar a máquina
- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



Catalogue Code	R102
Discount Group	B0302
Material	HSS Co
Surface Finish	Brt
Sutton Designation	N
Geometry	L10

Size Ref.	d ₁	l ₁	l ₂	l ₃	d ₂	z	Item #
0200	2.000	49	11	-	2.0	3	R102 0200
0250	2.500	57	14	-	2.5	5	R102 0250
0300	3.000	61	15	-	3.0	5	R102 0300
0318	3.175 1/8	65	16	-	3.2	5	R102 0318
0350	3.500	70	18	-	3.5	5	R102 0350
0357	3.572 9/64	70	18	-	3.6	5	R102 0357
0397	3.969 5/32	75	19	-	4.0	6	R102 0397
0400	4.000	75	19	-	4.0	6	R102 0400
0437*	4.36 11/64	80	21	-	4.5	6	R102 0437
0450	4.500	80	21	-	4.5	6	R102 0450
0476	4.762 3/16	86	23	-	5.0	6	R102 0476
0500	5.000	86	23	-	5.0	6	R102 0500
0516	5.159 13/64	86	23	-	5.0	6	R102 0516
0550	5.500	93	26	-	5.6	6	R102 0550
0595	5.953 15/64	93	26	-	5.6	6	R102 0595
0600	6.000	93	26	-	5.6	6	R102 0600
0635	6.350 1/4	101	28	-	6.3	6	R102 0635
0650	6.500	101	28	-	6.3	6	R102 0650
0700	7.000	109	31	-	7.1	6	R102 0700
0750	7.500	109	31	-	7.1	6	R102 0750
0794	7.938 5/16	117	31	-	8.0	6	R102 0794
0800	8.000	117	33	-	8.0	6	R102 0800
0850	8.500	117	33	-	8.0	6	R102 0850
0900	9.000	125	36	-	9.0	6	R102 0900
0950	9.500	125	36	-	9.0	6	R102 0950
0953	9.525 3/8	133	38	-	10.0	6	R102 0953
1000	10.000	133	38	-	10.0	6	R102 1000
1050	10.500	133	38	-	10.0	6	R102 1050

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	
R102	●	●	●	●	●	●	●	○		○		○		○	○	○	●	○	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
P	Steel			M	Stainless Steel			K	Cast Iron			N	Non-Ferrous Metals										S	Titanium & Super Alloys										H	Hard Materials					●	Optimal		○	Effective						

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

● Optimal ○ Effective

Reamers Chucking



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



Alésoirs à machine queue cylindrique

- Pour utilisation universelle sur machines
- Tolérance H7



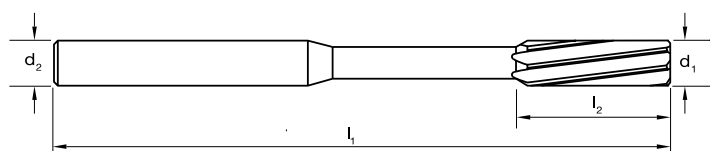
Alesatori Mandrino

- Adatto a operazioni su macchine CN
- Ideale per uso in Tool rooms & reparto produttivo
- Produce fori puliti e precisi, a una tolleranza H7



Escaradores Máquina

- Para usar a máquina
- Adecuado para mantenimiento y uso en talleres
- Produce agujeros de precisión, hasta tolerancia H7



Catalogue Code **R102**
Discount Group **B0302**
Material **HSS Co**
Surface Finish **Brt**
Sutton Designation **N**
Geometry **L10**

Size Ref.	d ₁		L ₁	L ₂	L ₃	d ₂	z	Item #
1100	11.000		142	41	-	10.0	6	R102 1100
1111	11.112	7/16	142	41	-	10.0	6	R102 1111
1150	11.500		142	41	-	10.0	6	R102 1150
1200	12.000		151	44	-	10.0	6	R102 1200
1250	12.500		151	44	-	10.0	6	R102 1250
1270	12.700	1/2	151	44	-	10.0	6	R102 1270
1300	13.000		151	44	-	10.0	6	R102 1300
1350	13.500		160	47	-	12.5	6	R102 1350
1400	14.000		160	47	-	12.5	8	R102 1400
1429	14.288	9/16	162	50	-	12.5	8	R102 1429
1450	14.500		162	50	-	12.5	8	R102 1450
1500	15.000		162	50	-	12.5	8	R102 1500
1550	15.500		170	52	-	12.5	8	R102 1550
1588	15.875	5/8	170	52	-	12.5	8	R102 1588
1600	16.000		170	52	-	12.5	8	R102 1600

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
R102	●	●	●	●	○	●	●	○		○		○		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
P	Steel			M	Stainless Steel			K	Cast Iron			N	Non-Ferrous Metals			S	Titanium & Super Alloys			H	Hard Materials																							●	Optimal		○	Effective	

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

● Optimal ○ Effective

Reamers Taper Pin



- For use by hand with suitable wrench
- For opening out parallel holes to suit 1:48 taper pins



Alésoirs à main conique en pouce

- Pour utilisation universelle à main, en reprise de trous
- Conicité 1:48



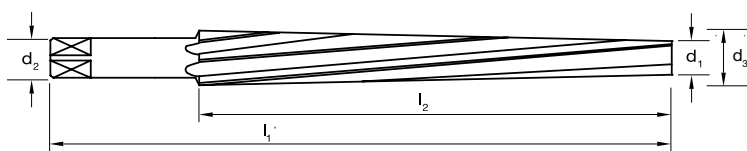
Alesatori Conico

- Per uso manuale con propria chiave di trascinamento
- Ideale per allargare conicamente 1:48 un foro già esistente



Escaradores Cónicos Guías

- Para usar a mano con llave adecuada
- Para abrir agujeros cónicos de 1:48



Catalogue Code	R105
Discount Group	B0302
Material	HSS
Surface Finish	Brt
Sutton Designation	N
Geometry	L7

Size Ref.	BS Size	Series	l_1	l_2	d_1	d_2	d_3	z	Item #
0238	3/32	#5/0	57	32	1.75	3.0	2.41	4	R105 0238
0278	7/64	#4/0	57	32	2.23	3.0	2.89	4	R105 0278
0318	1/8	#3/0	62	35	2.56	3.5	3.29	4	R105 0318
0357	9/64	#2/0	70	38	2.89	4.0	3.68	4	R105 0357
0397	5/32	#0	70	42	3.22	4.5	4.10	6	R105 0397
0437	11/64	#1	75	45	3.70	5.0	4.64	6	R105 0437
0476	3/16	#2	82	52	4.11	5.5	5.19	6	R105 0476
0556	7/32	#3	90	58	4.64	6.0	5.85	6	R105 0556
0635	1/4	#4	105	65	5.28	6.5	6.63	6	R105 0635
0714	9/32	#5	115	78	6.09	6.5	7.72	6	R105 0714
0873	11/32	#6	130	92	7.08	7.5	9.00	6	R105 0873
1032	13/32	#7	155	115	8.40	9.0	10.80	6	R105 1032
1270	1/2	#8	175	135	10.11	11.0	12.92	6	R105 1270
1429	9/16	#9	205	155	12.24	14.5	15.47	6	R105 1429
1905	3/4	#10	230	180	14.75	16.0	18.50	6	R105 1905
2223	7/8	#11	285	210	17.93	19.0	22.31	6	R105 2223

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																															
R105	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○																															
P	Steel			M			Stainless Steel			K			Cast Iron			N			Non-Ferrous Metals			S			Titanium & Super Alloys			H			Hard Materials																																																	
																																									●	Optimal		○	Effective																																			

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

● Optimal ○ Effective

Reamers Morse Taper Socket



- For use by hand with suitable wrench
- Suitable for tool rooms & workshop use
- Rougher, opens out existing parallel holes
- Finishing, to be used after rougher for final sizing



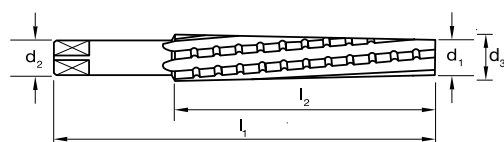
Alésoirs à main conique pour cônes morse

- Pour utilisation universelle à main
- Recommandé pour l'ébauche dans les matériaux difficiles ou en reprise de trous existants en mauvaise état.



Alesatori Presa Morse

- Per uso manuale con propria chiave di trascinamento
- Ideale per uso in Tool rooms & reparto produttivo
- Sgrossatura, allarga fori già esistenti
- Finitura, può essere usato per finire fori già sgrassati



Escaradores Cónicos Manuales

- Para usar a mano con llave adecuada
- Adecuado para salas mantenimiento y uso en talleres
- Más Basto, abre agujeros existentes
- Acabado, para ser utilizado después del desbaste para medida final



Catalogue Code	R106	R107
Discount Group	B0302	B0302
Material	HSS	HSS
Surface Finish	<i>Brt</i>	<i>Brt</i>
Sutton Designation	Roughing	Finishing
Geometry	L7	L7

Size Ref.	MT #	l_1	l_2	d_1	d_2	d_3	z	Item #	Item #
0000	0	83	57	6.59	8.72	9.24	6	R106 0000	R107 0000
0001	1	95	64	9.63	11.90	12.52	6	R106 0001	R107 0001
0002	2	114	76	14.79	16.65	18.27	6	R106 0002	R107 0002
0003	3	140	95	19.98	22.22	24.44	8	R106 0003	R107 0003
0004	4	175	117	26.14	25.40	31.90	8	R106 0004	R107 0004
0005	5	216	152	37.69	34.92	45.27	10	R106 0005	R107 0005

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

● Optimal ○ Effective

- 

- Pour utilisation universelle à main

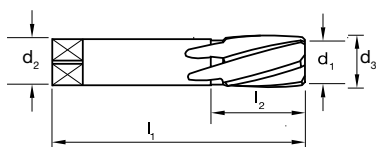
- 

- Per uso manuale con propria chiave di trascinamento

-

- Para usar a mano con llave adecuada

- 



Size Ref.	Size	d ₁	l ₁	l ₂	d ₂	d ₃	z	Item #
0803	1/8	8.00	60	15	8.00	8.97	6	R108 0803
1031	1/4	10.31	67	20	10.00	11.50	6	R108 1031
1372	3/8	13.72	75	22	12.50	15.63	6	R108 1372
1689	1/2	16.89	87	26	16.00	18.52	6	R108 1689
2225	3/4	22.25	96	29	20.00	24.00	6	R108 2225
2802	1	28.00	110	33	25.00	30.08	6	R108 2802
3668	1-1/4	36.58	119	37	31.50	38.83	6	R108 3668
4277	1-1/2	42.77	125	37	35.50	15.08	8	R108 4277
5484	2	54.84	140	41	40.00	57.40	8	R108 5484

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							
R108	●	●	●	●	●	●	○	○		○		○		○	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○																○									
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)



Alésoirs réglable

- Pour utilisation universelle à main
- Ajustable par plage de diamètres
- TCA (Alliage de Chrome Tungstène)



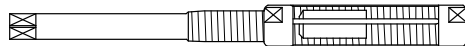
Alesatori Regolabili

- Per uso manuale con propria chiave di trascinamento
- Uso generico
- Dimensione del tagliente regolabile
- TCA (Lega di Cromo Tungsteno)



Escaradores Ajustables

- Para usar a mano con llave adecuada
- Uso general
- Rango de medida, ajustable
- TCA (aleaciones de tungsteno y cromo)



Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry



Size Ref.	Size	Range (mm)	Range (inch)	Item #	Item #	Item #	Item #
0635	MA8	6.35–7.15	1/4–9/32	R109 0635			
0715	MA7	7.15–7.95	9/32–5/16	R109 0715			
0795	MA6	7.95–8.70	5/16–11/32	R109 0795			
0870	MA5	8.70–9.50	11/32–3/8	R109 0870			
0950	MA4	9.50–10.25	3/8–13/32	R109 0950			
1025	MA3	10.25–11.00	13/32–7/16	R109 1025			
1100	MA2	11.00–12.00	7/16–15/32	R109 1100			
1200	MA	12.00–13.50	15/32–17/32	R109 1200	R110 1200	R111 1200	R112 1200
1350	MB	13.50–15.00	17/32–19/32	R109 1350	R110 1350	R111 1350	R112 1350
1500	MC	15.00–16.75	19/32–21/32	R109 1500	R110 1500	R111 1500	R112 1500
1675	MD	16.75–18.25	21/32–23/32	R109 1675	R110 1675	R111 1675	R112 1675
1825	ME	18.25–19.75	23/32–25/32	R109 1825	R110 1825	R111 1825	R112 1825
1975	MF	19.75–21.50	25/32–27/32	R109 1975	R110 1975	R111 1975	R112 1975
2150	MG	21.50–23.75	27/32–15/16	R109 2150	R110 2150	R111 2150	R112 2150
2375	MH	23.75–27.00	15/16–1-1/16	R109 2375	R110 2375	R111 2375	R112 2375
2700	MI	27.00–30.25	1-1/16–1-3/16	R109 2700	R110 2700	R111 2700	R112 2700
3025	MJ	30.25–34.25	1-3/16–1-11/32	R109 3025	R110 3025	R111 3025	R112 3025
3425	MK	34.25–38.00	1-11/32–1-1/2	R109 3425	R110 3425	R111 3425	R112 3425
3800	ML	38.00–46.00	1-1/2–1-13/16	R109 3800	R110 3800	R111 3800	R112 3800
4600	MM	46.00–56.00	1-13/16–2-7/32	R109 4600	R110 4600		R112 4600
5600	MN	56.00–69.75	2-7/32–2-3/4	R109 5600	R110 5600		R112 5600
6975	MO	69.75–85.00	2-3/4–3-11/32	R109 6975	R110 6975		R112 6975

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
R109	●	●	○	○		●				○				○			○						○	○	○	○	○	○		○																			
P	Steel			M			Stainless Steel			K			Cast Iron			N			Non-Ferrous Metals			S			Titanium & Super Alloys			H			Hard Materials													●	○	Optimal		Effective	

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)



Alésoirs réglable

- Pour utilisation universelle à main
- Ajustable par plage de diamètres
- TCA (Alliage de Chrome Tungstène)



Alesatori Regolabili

- Per uso manuale con propria chiave di trascinamento
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- Para usar a mano con llave adecuada
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Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry

R109	R110	R111	R112
B0304	B0304	B0304	B0304
TCA	TCA	TCA	TCA
Brt	Brt	Brt	Brt
N	-	-	-
Reamer	Blade Sets	Pilots	Nuts

Size Ref.	Size	Range (mm)	Range (inch)	Item #	Item #	Item #	Item #
Adjustable Reamer Set				Pieces			
M1	MA4 to ME (Reamers Only)			8	R109 M1		
M2P	MA to MH (Reamers & Pilots)			16	R109 M2P		
M3	MA4 to MH (Reamers Only)			11	R109 M3		
M6	MA8 to MK (Reamers Only)			18	R109 M6		
M8	MA to MI (Reamers Only)			9	R109 M8		
Adjustable Reamer Pilot Set							
MA1	MA to MI (Pilots Only)					R111 MA1	



R111 MA1



R109 M8

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
R109	●	●	○	○		●				○				○			○						○	○	○	○	○	○	○	○																			
P	Steel			M	Stainless Steel			K	Cast Iron			N	Non-Ferrous Metals							S	Titanium & Super Alloys										H	Hard Materials					●	Optimal		○	Effective								

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

● Optimal ○ Effective

