

DISTINCTIVE GEOMETRIES , APPLICATION AGILITY AND COATING TOUGHNESS

ALL MAKE **SOMTA TOOLS** PROUD LEADERS OF **WORLD CLASS CUTTING TOOLS**

THAT CAN ENDURE IN ANY MACHINED MATERIAL



P 1 2 C A T A L O G U E



## Manufacturers & Suppliers of Drills, Reamers, End Mills, Bore Cutters, Taps & Dies, Toolbits, Solid Carbide Tooling, Carbide Insert Tooling, Custom Tools and Surface Coatings

Somta Tools was founded in 1954 by Samuel Osborn Ltd of Sheffield, England, through its subsidiaries Osborn Steels and Osborn Mushet Tools. The name Somta was chosen as the acronym for these companies operating in South Africa.

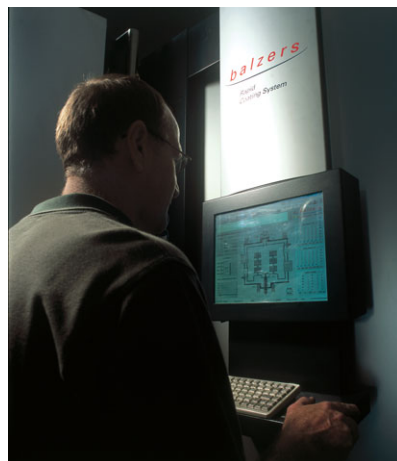
Somta continues to operate from its original site on Moses Mabhidale (formerly Edendale) Road in Pietermaritzburg. Somta's expansion has been brought about by the acquisition of two cutting tool companies during the 1980's. Additional growth is realised by continual investment in new plant, with emphasis on state of the art CNC equipment such as Junker, Normac, Rollomatic, Walter, Reinecker and Reishauer machines including new ANCA and Walter CNC grinding machines to further expand solid carbide range manufacturing capacity.

From humble beginnings in 1954 with 20 employees, Somta has grown into one of the largest cutting tool manufacturers in the southern hemisphere, operating from offices and modern manufacturing facilities laid out over 3 hectares with a complement of over 500 employees.

The factory in Pietermaritzburg manufactures 25 000 standard items and a further 6 000 made-to-order items to serve local markets and export markets in over 70 countries worldwide.

Somta Tools specialises in the design and manufacture of standard and custom tools for the industrial and "do it yourself" markets. Product categories can be summarised as drills, cutters, reamers, threading tools and toolbits, which are made in a wide range of sizes, using various materials (HSS and Solid Carbide) and Balzers PVD surface coatings to extend wear life.

The company's vision of "To manufacture and supply superior cutting tools, driven by a culture of service excellence, to global and domestic markets" is supported by ISO 9002 which was achieved in 1991 and ISO 9001 in 2003 and 2008.



Somta has integrated a state of the art Balzers PVD Rapid coating system into its manufacturing programme, offering the innovative range of Balzers BALINIT® high performance coatings on all cutting tools.




























# ICON

## LEGEND & DESCRIPTION

Material	<b>HSS</b>	High Speed Steel	<b>HSS Co5</b>	5% Cobalt High Speed Steel	<b>HSS Co8</b>	8% Cobalt High Speed Steel	<b>HSS Co8e</b>	8% Cobalt HSS, Eccentric Relief Sharpening		
	<b>HSS V3</b>	3% Vanadium High Speed Steel	<b>SOLID CARBIDE</b>	9-10% Cobalt, 0.2-0.8 µm Grain size.	<b>CARBON STEEL</b>	Carbon Steel				
Finish	<b>BLUE FINISH</b>	Steam (HOMO) Temper	<b>BRIGHT FINISH</b>	No Surface Treatment	<b>BRIGHT FINISH WITH TIN TIP</b>	TIN Coated for a length of 4 x diameter				
	<b>GOLD OXIDE</b>	Steam (HOMO) Temper Straw Colour	<b>TiAIN</b>	Titanium Aluminium Nitride (Black Finish)	<b>TiN</b>	Titanium Nitride (Gold Finish)	<b>X.TREME</b>	TiAlN suited to Solid Carbide (Violet -grey Finish)		
Type	<b>TYPE N</b>	Type N Standard	<b>TYPE W</b>	Type W For Soft Materials	<b>TYPE H</b>	Type H For Hard Materials	<b>TYPE FS</b>	Parabolic Flute Strong Core		
	<b>CBA</b>	Colour Band Application								
Milling Profile		Staggered Teeth Side & Face Cutters		Straight Teeth Side & Face Cutters						
		Fine Pitch Knuckle Type Roughing Profile		Coarse Pitch Knuckle Type Roughing Profile		Fine Pitch Flat Crest Rough Semi-finishing Profile		Coarse Pitch Flat Crest Rough Semi-finishing Profile		
Standard	<b>ISO 529</b>	ISO Standard 529	<b>DIN 371</b>	DIN Standard 371	<b>WORKS STD.</b>	Factory Specifications				
	<b>RF</b>	Refined Flute	<b>QS</b>	Quick Spiral	<b>H 7</b>	Reamer to produce H7 Tolerance				
Shank		Flatted Shank h6 Tolerance		Plain Shank h7 Tolerance		Threaded Shank h8 Tolerance		Carbide Plain Shank h6 Tolerance		
		Morse Taper Shank MT 3 - 5								
Point Angle								Drill Point Angles		
		Countersink Angles 60° & 90°								
Lengths		Drills Stub Series		Drills Jobber Series		Drills Long Series		Drills Extra Length Series		
		End Mills Regular Series		End Mills Long Series						
Flute Helix Angle										Right hand helix
				Left hand helix						
Centre Drills		Form A Standard		Form B Protected		Form R Radius				
		To Suit 1 in 10 Taper		To Suit 1 in 50 Taper		To Suit 1 in 48 Taper				

Continued on next page...

## LEGEND & DESCRIPTION... from previous page

Threads	<b>M</b>	Metric	<b>MF</b>	Metric Fine	<b>BSW</b>	British Standard Whitworth	<b>BSF</b>	British Standard Whitworth Fine	
	<b>UNC</b>	Unified National Coarse	<b>UNF</b>	Unified National Fine	<b>BSPT</b>	British Standard Pipe Taper "F" Series	<b>BSP</b>	British Standard Pipe (Fine) "G" Series	
	<b>NPS</b>	National Pipe Straight	<b>NPT</b>	National Pipe Taper	<b>BA</b>	British Association	<b>BSB</b>	British Standard Brass	
				Thread Form - with 47½°/55°/60° flank angle					
Tolerance							Tolerance on cutting Diameter		
			Woodruff Tolerance					Corner Rounding Tolerance	
Application					Direction of Cut				
		Taper, Through & Blind Hole		Through & Blind Hole		Blind Hole Tapping		Through Hole Tapping	
		Left Hand Cutting		Right Hand Cutting					Hand Taps

## GENERAL



## MATERIAL DESCRIPTIONS

Materials	Code 0	Code 1	Code 2	Code 3	Code 4	Code 5	Code 7
Free Cutting Steels	x	x	x	x	x	x	x
Carbon Steel	x	x	x	x	x	x	x
Alloy Steel	x	x	x	x	x	x	x
Stainless Steel	x	x	x	x	x	x	x
Heat Resisting Alloys		x	x				
Nimonic Alloys				x	x	x	x
Titanium	x	x	x	x	x	x	x
Tool Steel				x	x	x	x
Cast Irons	x	x	x	x	x	x	x
Nickel	x						
Manganese Steels		x	x			x	x
Aluminium Alloys	x	x	x	x	x	x	x
Magnesium Alloys		x	x			x	x
Zinc Alloys						x	x
Copper	x	x	x	x	x	x	x
Synthetics / Plastics	x	x	x	x	x	x	x

# INDEX

## MORSE TAPER SHANK DRILLS



PRODUCT	SPEC.	CODE TYPE	RANGE	PAGE
<b>Morse Taper Shank Drills</b> <b>Blue Finish - HSS</b> For general purpose drilling. 	DIN 345	<b>201-205</b> <b>211-214</b>	3-76 1/4-2"	52-53
<b>Heavy Duty MTS Drills</b> <b>Gold Oxide Finish - HSS-Co5</b> For general purpose drilling in difficult materials. 	DIN 345	<b>208</b>	14-38	54
<b>MTS Chipbreaker Drills</b> <b>Blue Finish - HSS</b> High performance production drilling. 	DIN 345	<b>2A1</b>	10-50 7/16-1.3/4	55-56
<b>MTS Oil Tube Chipbreaker Drills</b> <b>Cross Hole Feed - Blue Finish - HSS</b> High performance production drilling. 	WORKS STD.	<b>2A2</b>	12-26 5/8	57
<b>MTS Oil Tube Chipbreaker Drills - Cross Hole Feed - Gold Oxide - HSS-Co5</b> High performance production drilling. 	WORKS STD.	<b>2A7</b>	9/16-1.3/16	58
<b>MTS Armour Piercing Drills</b> <b>Blue Finish - HSS-Co8</b> Heavy duty drilling in work hardening and heat treated steels. 	WORKS STD.	<b>261</b>	10-50 1/2-15/16	59
<b>MTS Extra Length Drills - Blue Finish - HSS</b> For extra deep hole drilling. 	WORKS STD.	<b>242</b> <b>244-245</b> <b>252</b> <b>254-255</b>	10-50 1/4-1.3/4	60 61
<b>MTS Core Drills - Blue Finish - HSS</b> For enlarging diameters of existing holes whether drilled, punched or cast. 	DIN 343	<b>221-224</b>	14-42	62
<b>MTS Rail Drills - Blue Finish - HSS-Co8</b> For drilling manganese rails and other tough steels. 	WORKS STD.	<b>279</b>	22-35	63
<b>Sorgers - Bright Finish - HSS</b> A wood auger for drilling all types of wood. 	WORKS STD.	<b>291</b> <b>292</b> <b>295</b>	15-22 17.5 17.5-19	64
<b>Drill Terminology</b>	-	-	-	46-50
<b>GENERAL TERMS &amp; CONDITIONS OF SALE</b>	-	-	-	234

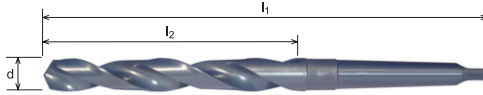




M O R S E   T A P E R   S H A N K   D R I L L S



# Morse Taper Shank Drills



Codes
<b>201 - 205</b>
<b>211 - 214</b>

Properties		
<b>M</b> INCH	<b>DIN</b> 345	<b>HSS</b>
<b>TYPE</b> N		
		<b>BLUE FINISH</b>
<b>STANDARD POINT</b>		

Suited Materials
<b>GENERAL</b>

d		l <sub>2</sub>	l <sub>1</sub>	Code	d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch				mm	inch			
<b>No. 1 Morse Taper Shank</b>									
<b>3</b>		33	114	2010300	9.922	<b>25/64</b>	87	168	2110992
<b>3.5</b>		39	120	2010350	<b>10</b>		87	168	2011000
<b>4</b>		43	124	2010400	10.319	<b>13/32</b>	87	168	2111032
<b>4.5</b>		47	128	2010450	<b>10.5</b>		87	168	2011050
<b>5</b>		52	133	2010500	10.716	<b>27/64</b>	94	175	2111072
<b>5.5</b>		57	138	2010550	<b>11</b>		94	175	2011100
<b>6</b>		57	138	2010600	11.112	<b>7/16</b>	94	175	2111111
6.350	<b>1/4</b>	63	144	2110635	<b>11.5</b>		94	175	2011150
<b>6.5</b>		63	144	2010650	11.906	<b>15/32</b>	101	182	2111191
<b>7</b>		69	150	2010700	<b>12</b>		101	182	2011200
<b>7.5</b>		69	150	2010750	<b>12.5</b>		101	182	2011250
7.937	<b>5/16</b>	75	156	2110794	12.700	<b>1/2</b>	101	182	2111270
<b>8</b>		75	156	2010800	<b>13</b>		101	182	2011300
<b>8.5</b>		75	156	2010850	13.494	<b>17/32</b>	108	189	2111349
<b>9</b>		81	162	2010900	<b>13.5</b>		108	189	2011350
<b>9.5</b>		81	162	2010950	<b>14</b>		108	189	2011400
9.525	<b>3/8</b>	87	168	2110953					

<b>No. 2 Morse Taper Shank</b>									
<b>(14)</b>		114	212	2021400	18.256	<b>23/32</b>	135	233	2121826
14.287	<b>9/16</b>	114	212	2121429	<b>18.5</b>		135	233	2021850
<b>14.5</b>		114	212	2021450	18.653	<b>47/64</b>	135	233	2121865
14.684	<b>37/64</b>	114	212	2121468	<b>19</b>		135	233	2021900
<b>15</b>		114	212	2021500	19.050	<b>3/4</b>	140	238	2121905
15.081	<b>19/32</b>	120	218	2121508	<b>19.5</b>		140	238	2021950
15.478	<b>39/64</b>	120	218	2121548	<b>20</b>		140	238	2022000
<b>15.5</b>		120	218	2021550	<b>20.5</b>		145	243	2022050
15.875	<b>5/8</b>	120	218	2121588	20.637	<b>13/16</b>	145	243	2122064
<b>16</b>		120	218	2021600	<b>21</b>		145	243	2022100
16.272	<b>41/64</b>	125	223	2121627	21.431	<b>27/32</b>	150	248	2122143
<b>16.5</b>		125	223	2021650	<b>21.5</b>		150	248	2022150
16.669	<b>21/32</b>	125	223	2121667	<b>22</b>		150	248	2022200
<b>17</b>		125	223	2021700	22.225	<b>7/8</b>	150	248	2122223
17.462	<b>11/16</b>	130	228	2121746	<b>22.5</b>		155	253	2022250
<b>17.5</b>		130	228	2021750	<b>23</b>		155	253	2022300
<b>18</b>		130	228	2021800					

<b>No. 3 Morse Taper Shank</b>									
<b>23.5</b>		155	276	2032350	<b>28</b>		170	291	2032800
23.812	<b>15/16</b>	160	281	2132381	<b>28.5</b>		175	296	2032850
<b>24</b>		160	281	2032400	28.575	<b>1.1/8</b>	175	296	2132858
<b>24.5</b>		160	281	2032450	<b>29</b>		175	296	2032900
<b>25</b>		160	281	2032500	<b>29.5</b>		175	296	2032950
25.400	<b>1"</b>	165	286	2132540	<b>30</b>		175	296	2033000
<b>25.5</b>		165	286	2032550	30.162	<b>1.3/16</b>	180	301	2133016
<b>26</b>		165	286	2032600	<b>30.5</b>		180	301	2033050
<b>26.5</b>		165	286	2032650	<b>31</b>		180	301	2033100
26.987	<b>1.1/16</b>	170	291	2132699	<b>31.5</b>		180	301	2033150
<b>27</b>		170	291	2032700	31.750	<b>1.1/4</b>	185	306	2133175
<b>27.5</b>		170	291	2032750	<b>(32)</b>		185	306	2033200



**MORSE TAPER SHANK DRILLS**

Continued on next page...

# Morse Taper Shank Drills



d		l <sub>2</sub>	l <sub>1</sub>	Code	d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch				mm	inch			

## No. 4 Morse Taper Shank

... from previous page				<b>41</b>	205	354	2044100
<b>32</b>		185	334	2043200	41.275	<b>1.5/8</b>	205 354 2144128
<b>32.5</b>		185	334	2043250	<b>41.5</b>		205 354 2044150
<b>33</b>		185	334	2043300	<b>42</b>		205 354 2044200
33.337	<b>1.5/16</b>	185	334	2143334	<b>42.5</b>		205 354 2044250
<b>33.5</b>		185	334	2043350	<b>43</b>		210 359 2044300
<b>34</b>		190	339	2043400	<b>43.5</b>		210 359 2044350
<b>34.5</b>		190	339	2043450	<b>44</b>		210 359 2044400
34.925	<b>1.3/8</b>	190	339	2143493	44.450	<b>1.3/4</b>	210 359 2144445
<b>35</b>		190	339	2043500	<b>44.5</b>		210 359 2044450
<b>35.5</b>		190	339	2043550	<b>45</b>		210 359 2044500
<b>36</b>		195	344	2043600	<b>45.5</b>		215 359 2044550
<b>36.5</b>		195	344	2043650	<b>46</b>		215 364 2044600
36.512	<b>1.7/16</b>	195	344	2143651	<b>46.5</b>		215 364 2044650
<b>37</b>		195	344	2043700	<b>47</b>		215 364 2044700
<b>37.5</b>		195	344	2043750	<b>47.5</b>		215 364 2044750
<b>38</b>		200	349	2043800	47.625	<b>1.7/8</b>	220 369 2144763
38.100	<b>1.1/2</b>	200	349	2143810	<b>48</b>		220 369 2044800
<b>38.5</b>		200	349	2043850	<b>48.5</b>		220 369 2044850
<b>39</b>		200	349	2043900	<b>49</b>		220 369 2044900
<b>39.5</b>		200	349	2043950	<b>49.5</b>		220 369 2044950
39.687	<b>1.9/16</b>	200	349	2143969	<b>50</b>		220 369 2045000
<b>40</b>		200	349	2044000	<b>50.5</b>		225 374 2045050
<b>40.5</b>		205	354	2044050	50.800	<b>2"</b>	225 374 2145080

## No. 5 Morse Taper Shank

<b>51</b>		225	412	2055100	<b>60</b>		235 422 2056000
<b>51.5</b>		225	412	2055150	<b>61</b>		240 427 2056100
<b>52</b>		225	412	2055200	<b>62</b>		240 427 2056200
<b>52.5</b>		225	412	2055250	<b>63</b>		240 427 2056300
<b>53</b>		225	412	2055300	<b>64</b>		245 432 2056400
<b>53.5</b>		230	417	2055350	<b>65</b>		245 432 2056500
<b>54</b>		230	417	2055400	<b>66</b>		245 432 2056600
<b>54.5</b>		230	417	2055450	<b>67</b>		245 432 2056700
<b>55</b>		230	417	2055500	<b>68</b>		250 437 2056800
<b>55.5</b>		230	417	2055550	<b>69</b>		250 437 2056900
<b>56</b>		230	417	2055600	<b>70</b>		250 437 2057000
<b>56.5</b>		235	422	2055650	<b>71</b>		250 437 2057100
<b>57</b>		235	422	2055700	<b>72</b>		255 442 2057200
<b>57.5</b>		235	422	2055750	<b>73</b>		255 442 2057300
<b>58</b>		235	422	2055800	<b>74</b>		255 442 2057400
<b>58.5</b>		235	422	2055850	<b>75</b>		255 442 2057500
<b>59</b>		235	422	2055900	<b>76</b>		260 447 2057600
<b>59.5</b>		235	422	2055950			

### Codes

**201 - 205**  
**211 - 214**

### Properties

<b>M</b> INCH	<b>DIN</b> <b>345</b>	<b>HSS</b>
<b>TYPE</b> <b>N</b>		
		<b>BLUE FINISH</b>
<b>STANDARD POINT</b>		

### Suited Materials

**GENERAL**

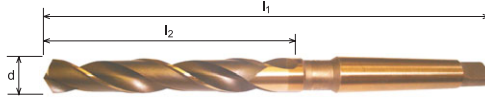


**MORSE TAPER SHANK DRILLS**





# Heavy Duty MTS Drills



Code
<b>208</b>

Properties		
<b>M</b>	<b>DIN 345</b>	<b>HSS Co5</b>
<b>TYPE N</b>		
		<b>GOLD OXIDE</b>
	<b>SPLIT POINT</b>	

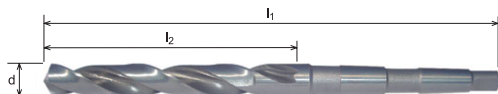
Suited Materials
<b>CARBON &amp; ALLOY STEEL</b>
<b>GENERAL</b>

d	l <sub>2</sub>	l <sub>1</sub>	Code	d	l <sub>2</sub>	l <sub>1</sub>	Code
<b>No. 1 Morse Taper Shank</b>							
14	108	189	2081400				
<b>No. 2 Morse Taper Shank</b>							
14.5	114	212	2081450	18.5	135	233	2081850
15	114	212	2081500	19	135	233	2081900
15.5	120	218	2081550	19.5	140	238	2081950
16	120	218	2081600	20	140	238	2082000
16.5	125	223	2081650	21	145	243	2082100
17	125	223	2081700	22	150	248	2082200
17.5	130	228	2081750	22.5	155	253	2082250
18	130	228	2081800	23	155	253	2082300
<b>No. 3 Morse Taper Shank</b>							
24	160	281	2082400	27	170	291	2082700
24.5	160	281	2082450	28	170	291	2082800
25	160	281	2082500	29	175	296	2082900
25.5	165	286	2082550	30	175	296	2083000
26	165	286	2082600	31	180	301	2083100
<b>No. 4 Morse Taper Shank</b>							
32	185	334	2083200	35	190	339	2083500
33	185	334	2083300	38	200	349	2083800
34	190	339	2083400				



**MORSE TAPER SHANK DRILLS**

# MTS Chipbreaker Drills



d		l <sub>2</sub>	l <sub>1</sub>	Code	d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch				mm	inch			
<b>No. 1 Morse Taper Shank</b>									
10		87	168	2A11000	11.906	15/32	101	182	2A11191
10.2		87	168	2A11020	12		101	182	2A11200
10.25		87	168	2A11025	12.2		101	182	2A11220
10.5		87	168	2A11050	12.303	31/64	101	182	2A11231
10.6		87	168	2A11060	12.5		101	182	2A11250
10.75		94	175	2A11075	12.75		101	182	2A11275
11		94	175	2A11100	13		101	182	2A11300
11.112	7/16	94	175	2A11111	13.494	17/32	108	189	2A11349
11.2		94	175	2A11120	13.5		108	189	2A11350
11.5		94	175	2A11150	13.75		108	189	2A11375
11.7		94	175	2A11170	13.891	35/64	108	189	2A11389
11.8		94	175	2A11180	14		108	189	2A11400
<b>No. 2 Morse Taper Shank</b>									
(14)		114	212	2A11401	18.25		135	233	2A11825
14.2		114	212	2A11420	18.256	23/32	135	233	2A11826
14.25		114	212	2A11425	18.5		135	233	2A11850
14.287	9/16	114	212	2A11429	18.7		135	233	2A11870
14.5		114	212	2A11450	18.75		135	233	2A11875
14.684	37/64	114	212	2A11468	19		135	233	2A11900
14.75		114	212	2A11475	19.050	3/4	140	238	2A11905
15		114	212	2A11500	19.25		140	238	2A11925
15.081	19/32	120	218	2A11508	19.4		140	238	2A11940
15.25		120	218	2A11525	19.447	49/64	140	238	2A11945
15.5		120	218	2A11550	19.5		140	238	2A11950
15.6		120	218	2A11560	19.75		140	238	2A11975
15.75		120	218	2A11575	19.844	25/32	140	238	2A11984
15.875	5/8	120	218	2A11588	20		140	238	2A12000
15.9		120	218	2A11590	20.25		145	243	2A12025
16		120	218	2A11600	20.5		145	243	2A12050
16.1		125	223	2A11610	20.637	13/16	145	243	2A12064
16.25		125	223	2A11625	21		145	243	2A12100
16.3		125	223	2A11630	21.034	53/64	145	243	2A12103
16.5		125	223	2A11650	21.25		150	248	2A12125
16.669	21/32	125	223	2A11667	21.5		150	248	2A12150
16.75		125	223	2A11675	21.828	55/64	150	248	2A12183
17		125	223	2A11700	22		150	248	2A12200
17.25		130	228	2A11725	22.25		150	248	2A12225
17.462	11/16	130	228	2A11746	22.5		155	253	2A12250
17.5		130	228	2A11750	23		155	253	2A12300
18		130	228	2A11800	23.019	29/32	155	253	2A12302
18.2		135	233	2A11820					
<b>No. 3 Morse Taper Shank</b>									
23.25		155	276	2A12325	25		160	281	2A12500
23.416	59/64	155	276	2A12342	25.003	63/64	165	286	2A12499
23.5		155	276	2A12350	25.25		165	286	2A12525
23.75		160	281	2A12375	25.400	1"	165	286	2A12539
23.812	15/16	160	281	2A12381	25.5		165	286	2A12550
24		160	281	2A12400	25.797	1.1/64	165	286	2A12579
24.5		160	281	2A12450	26		165	286	2A12600

Continued on next page...

Code

**2A1**

Properties

M INCH	DIN 345	HSS
TYPE N		
		BLUE FINISH

CHIPBREAKER FORM

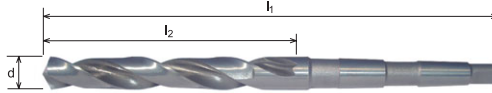
Suited Materials

**GENERAL**








MORSE TAPER SHANK DRILLS

## MTS Chipbreaker Drills



Code
<b>2A1</b>

Properties		
<b>M</b>	<b>DIN</b>	<b>HSS</b>
<b>INCH</b>	<b>345</b>	
<b>TYPE</b>		
<b>N</b>	118°	h8
		<b>BLUE FINISH</b>
		
<b>CHIPBREAKER FORM</b>		

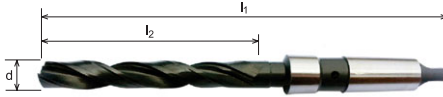
Suited Materials
<b>GENERAL</b>

d		l <sub>2</sub>	l <sub>1</sub>	Code	d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch				mm	inch			
<b>No. 3 Morse Taper Shank</b>									
... from previous page					<b>29</b>		175	296	2A12900
26.194	<b>1.1/32</b>	165	286	2A12619	29.369	<b>1.5/32</b>	175	296	2A12937
<b>26.5</b>		165	286	2A12650	<b>29.5</b>		175	296	2A12950
26.987	<b>1.1/16</b>	170	291	2A12699	<b>30</b>		175	296	2A13000
<b>27</b>		170	291	2A12700	<b>31</b>		180	301	2A13100
<b>27.5</b>		170	291	2A12750	<b>31.5</b>		180	301	2A13150
<b>28</b>		170	291	2A12800	31.750	<b>1.1/4</b>	185	306	2A13174
<b>28.5</b>		175	296	2A12850	<b>(32)</b>		185	306	2A13200
28.575	<b>1.1/8</b>	175	296	2A12858					
<b>No. 4 Morse Taper Shank</b>									
<b>32</b>		185	334	2A13201	<b>39</b>		200	349	2A13900
32.147	<b>1.17/64</b>	185	334	2A13215	<b>39.5</b>		200	349	2A13950
<b>32.5</b>		185	334	2A13250	<b>40</b>		200	349	2A14000
<b>33</b>		185	334	2A13300	<b>40.5</b>		205	354	2A14050
33.337	<b>1.5/16</b>	185	334	2A13334	<b>41</b>		205	354	2A14100
<b>33.5</b>		185	334	2A13350	<b>42</b>		205	354	2A14200
<b>34</b>		190	339	2A13400	<b>43</b>		210	359	2A14300
34.131	<b>1.11/32</b>	190	339	2A13413	<b>44</b>		210	359	2A14400
<b>34.5</b>		190	339	2A13450	44.450	<b>1.3/4</b>	210	359	2A14445
34.925	<b>1.3/8</b>	190	339	2A13493	<b>44.5</b>		210	359	2A14450
<b>35</b>		190	339	2A13500	<b>45</b>		210	359	2A14500
<b>36</b>		195	344	2A13600	<b>45.5</b>		215	364	2A14550
<b>36.5</b>		195	344	2A13650	<b>46</b>		215	364	2A14600
<b>37</b>		195	344	2A13700	<b>47</b>		215	364	2A14700
<b>38</b>		200	349	2A13800	<b>48</b>		220	369	2A14800
38.100	<b>1.1/2</b>	200	349	2A13809	<b>49</b>		220	369	2A14900
<b>38.5</b>		200	349	2A13850	<b>50</b>		220	369	2A15000



**MORSE TAPER SHANK DRILLS**

# MTS Oil Tube Chipbreaker Drills, Cross Hole Feed



d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch			
<b>No. 3 Morse Taper Shank</b>				
12		111	228	2A21200
14		124	241	2A21400
15.875	5/8	124	244	2A21588
16		124	244	2A21600
18		130	250	2A21800
20		140	260	2A22000
22		149	270	2A22200
24		158	279	2A22400
26		165	286	2A22600

Code  
**2A2**

Properties

<b>M</b> INCH	WORKS STD.	<b>HSS</b>
<b>TYPE</b> N		
		<b>BLUE FINISH</b>
 <b>CHIPBREAKER FORM</b>		

Suited Materials  
**GENERAL**



**MORSE TAPER  
SHANK DRILLS**



## MTS Oil Tube Chipbreaker Drills, Cross Hole Feed



Code  
**2A7**

Properties

INCH	WORKS STD.	HSS Co5
TYPE N	170° 70°	h8
30°	MT 3-4	GOLD OXIDE

CHIPBREAKER FORM

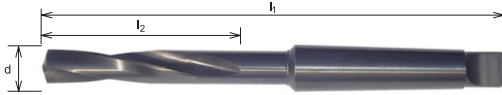
d inch	mm Equiv.	l <sub>2</sub>	l <sub>1</sub>	Code
<b>No. 3 Morse Taper Shank</b>				
9/16	14.288	124	241	2A71429
11/16	17.462	130	250	2A71746
13/16	20.638	146	266	2A72064
7/8	22.225	149	270	2A72223
15/16	23.812	158	279	2A72381
1.1/16	26.988	168	289	2A72699
<b>No. 4 Morse Taper Shank</b>				
1.1/8	28.575	174	324	2A72858
1.3/16	30.162	181	330	2A73016

Suited Materials  
**GENERAL**



MORSE TAPER SHANK DRILLS

# MTS Armour Piercing Drills



d		l <sub>2</sub>	l <sub>1</sub>	Code	d		l <sub>2</sub>	l <sub>1</sub>	Code
mm	inch				mm	inch			
<b>No. 1 Morse Taper Shank</b>									
10		56	140	2611000					
<b>No. 2 Morse Taper Shank</b>									
11		76	175	2611100	15		89	187	2611500
12		81	179	2611200	15.876	5/8	89	187	2611588
12.700	1/2	81	179	2611269	16		89	187	2611600
13		81	179	2611300	17		92	190	2611700
14		86	184	2611400	18		92	190	2611800
14.288	9/16	86	184	2611429					
<b>No. 3 Morse Taper Shank</b>									
19		95	213	2611900	22		105	222	2612200
19.051	3/4	95	213	2611905	22.226	7/8	105	222	2612223
20		95	213	2612000	23.813	15/16	105	222	2612381
20.638	13/16	102	219	2612064	24		105	222	2612400
21		102	219	2612100	25		108	225	2612500
<b>No. 4 Morse Taper Shank</b>									
26		124	270	2612600	36		146	292	2613600
28		124	270	2612800	38		149	295	2613800
30		124	270	2613000	40		152	298	2614000
32		133	280	2613200	45		152	298	2614500
35		136	292	2613500					
<b>No. 5 Morse Taper Shank</b>									
50		152	356	2615000					

Code

**261**

Properties

<b>M</b> INCH	WORKS STD.	<b>HSS</b> <b>CoB</b>
<b>TYPE</b> <b>H</b>		
		<b>BLUE</b> <b>FINISH</b>
		<b>NOTCHED</b> <b>POINT</b>

Suited Materials

HEAT RESISTING ALLOY	STAINLESS STEEL
MANGANESE STEEL	TITANIUM

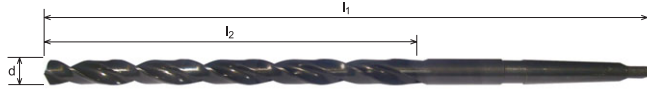


**MORSE TAPER  
SHANK DRILLS**





## MTS Extra Length Drills



Codes
<b>242, 244 - 245</b>

Properties		
<b>M</b>	<b>WORKS STD.</b>	<b>HSS</b>
<b>TYPE N</b>		
		<b>BLUE FINISH</b>
<b>STANDARD POINT</b>		

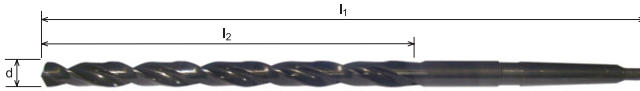
Suited Materials
<b>GENERAL</b>

d	l <sub>2</sub> l <sub>1</sub>	200 315	300 400	300 450	375 500	375 530
<b>No. 1 Morse Taper Shank</b>						
10		2421000	-	-	-	-
10.5		2421050	-	-	-	-
11		2421100	2441100	-	-	-
11.5		2421150	-	-	-	-
12		2421200	2441200	-	-	-
13		2421300	2441300	-	-	-
14		2421400	2441400	-	-	-
<b>No. 2 Morse Taper Shank</b>						
15		2421500	2441500	-	-	-
16		2421600	2441600	-	2451600	-
17		2421700	2441700	-	2451700	-
18		2421800	2441800	-	2451800	-
19		2421900	2441900	-	2451900	-
20		2422000	2442000	-	2452000	-
21		2422100	2442100	-	2452100	-
22		2422200	2442200	-	2452200	-
23		2422300	2442300	-	2452300	-
<b>No. 3 Morse Taper Shank</b>						
24		-	-	2442400	2452400	-
25		-	-	2442500	2452500	-
26		-	-	2442600	2452600	-
27		-	-	2442700	2452700	-
28		-	-	2442800	2452800	-
29		-	-	2442900	2452900	-
30		-	-	2443000	2453000	-
<b>No. 4 Morse Taper Shank</b>						
32		-	-	2443200	-	2453200
35		-	-	2443500	-	2453500
38		-	-	2443800	-	2453800
40		-	-	2444000	-	2454000
42		-	-	2444200	-	2454200
45		-	-	2444500	-	2454500
48		-	-	2444800	-	2454800
50		-	-	2445000	-	2455000



**MORSE TAPER  
SHANK DRILLS**

# MTS Extra Length Drills



d	mm Equivalent	l <sub>2</sub> l <sub>1</sub>	8" 315	12" 400	12" 450	15" 500
<b>No. 1 Morse Taper Shank</b>						
1/4	6.350		2520635	2540635	-	-
5/16	7.937		2520794	2540794	-	-
3/8	9.525		2520953	2540953	-	-
7/16	11.112		-	2541111	-	-
1/2	12.700		2521270	-	-	-
<b>No. 2 Morse Taper Shank</b>						
9/16	14.287		2521429	-	-	-
5/8	15.875		2521588	2541588	-	2551588
11/16	17.462		2521746	2541746	-	-
3/4	19.050		2521905	2541905	-	2551905
7/8	22.225		-	2542223	-	-
<b>No. 3 Morse Taper Shank</b>						
1"	25.400		-	-	2542540	-
<b>No. 4 Morse Taper Shank</b>						
1.1/2	38.100		-	-	2543810	-
1.3/4	44.450		-	-	2544445	-

Codes

**252,  
254 - 255**

Properties

INCH	WORKS STD.	HSS
TYPE N		
		BLUE FINISH
STANDARD POINT		

Suited Materials

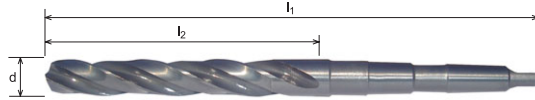
**GENERAL**



**MORSE TAPER  
SHANK DRILLS**



## MTS Core Drills



Codes
<b>221 - 224</b>

Properties		
<b>M</b>	<b>DIN 343</b>	<b>HSS</b>
<b>TYPE N</b>	<b>h8</b>	<b>25°</b>
<b>MT 1 - 4</b>	<b>BLUE FINISH</b>	

Suited Materials
<b>GENERAL</b>

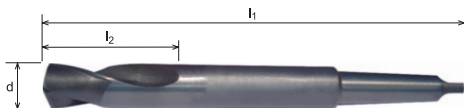
d	l <sub>2</sub>	l <sub>1</sub>	Code	d	l <sub>2</sub>	l <sub>1</sub>	Code
<b>No. 1 Morse Taper Shank</b>							
<b>14</b>	108	189	2211400				
<b>No. 2 Morse Taper Shank</b>							
<b>16</b>	120	218	2221600	<b>20</b>	140	238	2222000
<b>17</b>	125	223	2221700	<b>21</b>	145	243	2222100
<b>18</b>	130	228	2221800	<b>22</b>	150	248	2222200
<b>19</b>	135	233	2221900	<b>23</b>	155	253	2222300
<b>No. 3 Morse Taper Shank</b>							
<b>24</b>	160	281	2232400	<b>28</b>	170	291	2232800
<b>25</b>	160	281	2232500	<b>30</b>	175	296	2233000
<b>26</b>	165	286	2232600	<b>31</b>	180	301	2233100
<b>27</b>	170	291	2232700				
<b>No. 4 Morse Taper Shank</b>							
<b>32</b>	185	334	2243200	<b>37</b>	195	344	2243700
<b>33</b>	185	334	2243300	<b>38</b>	200	349	2243800
<b>34</b>	190	339	2243400	<b>40</b>	200	349	2244000
<b>35</b>	190	339	2243500	<b>41</b>	205	354	2244100
<b>36</b>	195	344	2243600	<b>42</b>	205	354	2244200

Core drills up to and including 19mm have 3 flutes.  
All sizes above 19mm have 4 flutes.



**MORSE TAPER SHANK DRILLS**

# MTS Rail Drills



d	l <sub>2</sub>	l <sub>1</sub>	Code
<b>No. 3 Morse Taper Shank</b>			
22	100	281	2792200
26	100	286	2792600
28	100	291	2792800
32	100	306	2793200
35	100	312	2793500

Code  
**279**

**Properties**

<b>M</b>	<b>WORKS STD.</b>	<b>HSS CoB</b>
<b>TYPE H</b>		
	<b>BLUE FINISH</b>	
		<b>NOTCHED POINT</b>

**Suited Materials**

<b>HEAT RESISTING ALLOY</b>	<b>STAINLESS STEEL</b>
<b>MANGANESE STEEL</b>	<b>TITANIUM</b>



**MORSE TAPER SHANK DRILLS**






## Sorgers - For Drilling All Types Of Wood

### Codes

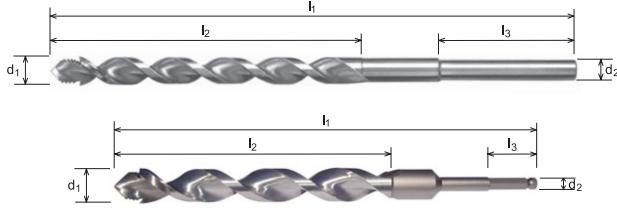
**291, 292  
& 295**

### Properties

<b>M</b>	<b>WORKS STD.</b>	<b>HSS</b>
		
<b>BRIGHT FINISH</b>		

### Suited Materials

**WOOD**



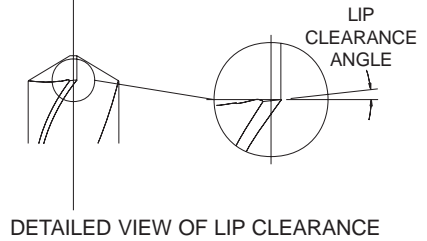
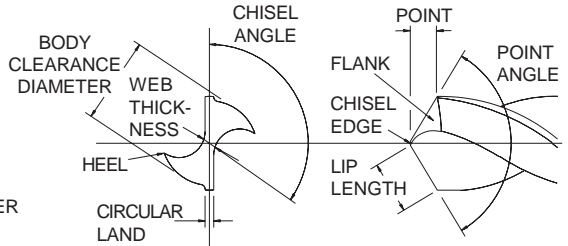
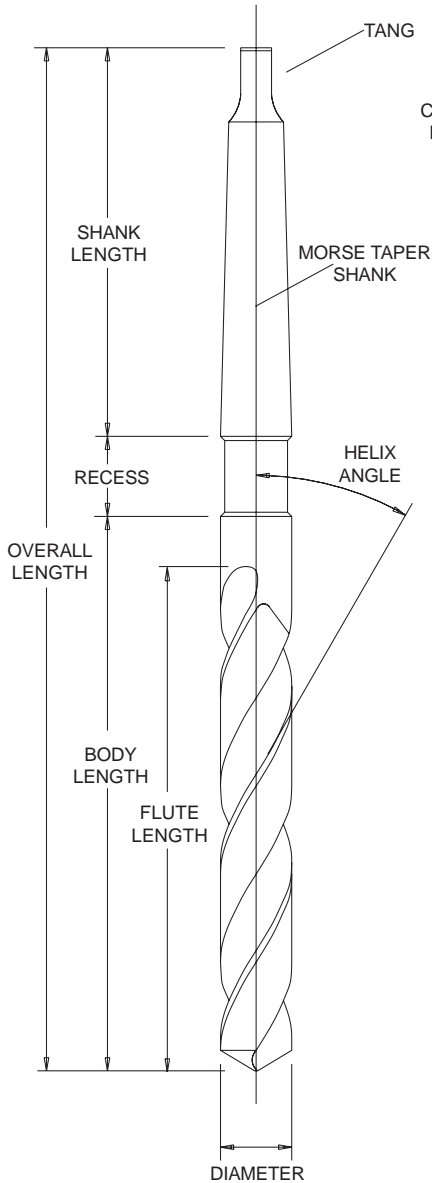
d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	Code	
					With Flat	Plain Shank
<b>STANDARD</b>						
15	300	180	80	12.3	2911500	-
17.5	300	180	80	12.3	2911750	2911751
19	300	180	80	12.3	2911900	2911901
22	300	200	80	12.3	2912200	2912201

d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	Code
<b>SORGER WITH HEXAGON SHANK</b>					
17.5	300	180	80	11.11	2921750

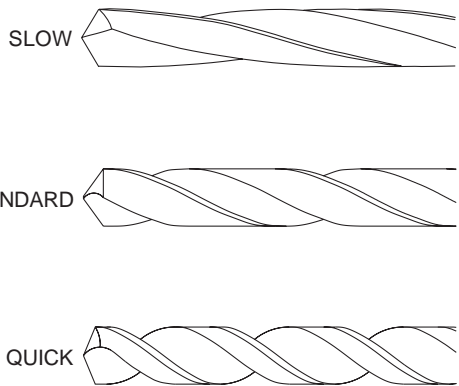
d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>2</sub>	Code
<b>MINING SORGERS</b>					
17.5	310	210	100	16	2951750
19	310	210	100	19	2951900



**MORSE TAPER  
SHANK DRILLS**



## TYPES OF SPIRAL (OR HELIX) ANGLES



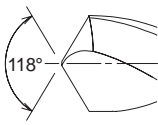
**Note :** Selecting the correct Drill  
Refer to the SOMTA User Guide for detailed information.

Continued on next page...

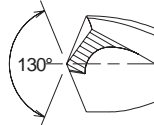
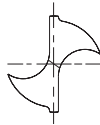




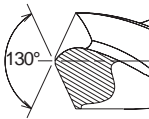
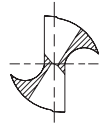
## DRILL POINT STYLES



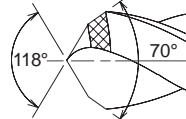
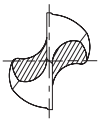
Standard Point



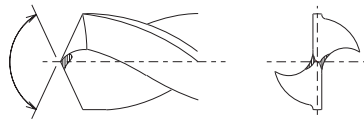
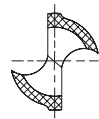
Split Point  
Din 1412 Form C



"UX Point"  
DIN 1412 TYPE B



Cast Iron Point  
"DX Point"  
DIN 1412 TYPE D



DIN 1412 TYPE A

## FLUTE FORMS



● Conventional Web



● Parabolic Flute Form  
● Thicker Web



● Chipbreaker

### Benefits of the Parabolic Flute Form

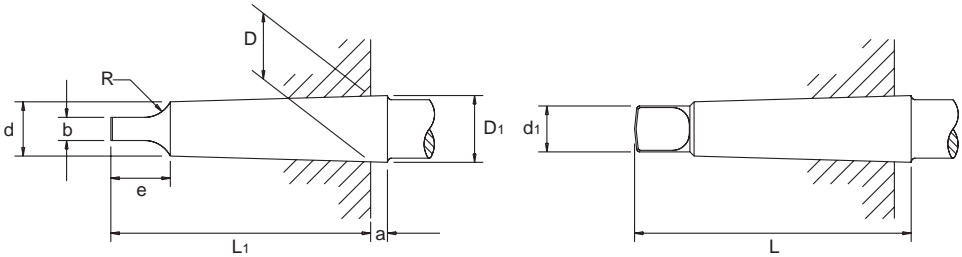
Heavy web construction increases rigidity under torsional load thus eliminating chatter at the cutting edges which cause edge break down and early failure. The Parabolic drill web is 50-90% thicker than the standard drill, depending on drill diameter.

Wider flute form, together with quicker spiral, promotes better chip removal while allowing easier coolant flow to the drill point.

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## STANDARD MORSE TAPER SHANK To I.S.O. 296 DIN228 BS1660



No. of Taper	Fitting line Diameter D	Diameter d	Overall Length Max L	D 1	a	Max L1	Max e	H13 b	Max d1	Taper / mm on Dia	Max R
1	12.065	9.0	65.5	12.2	3.5	62.0	13.5	5.2	8.7	0.04998	5.0
2	17.780	14.0	80.0	18.0	5.0	75.0	16.0	6.3	13.5	0.04995	6.0
3	23.825	19.0	99.0	24.1	5.0	94.0	20.0	7.9	18.5	0.05020	7.0
4	31.267	25.0	124.0	31.6	6.5	117.5	24.0	11.9	24.5	0.05194	8.0
5	44.399	36.0	156.0	44.7	6.5	149.5	29.0	15.9	35.7	0.05263	10.0
6	63.348	52.0	218.0	63.8	8.0	210.0	40.0	19.0	51.0	0.05214	13.0

## HOW TO ORDER SPECIALS

### MODIFIED STANDARDS

There are many instances when a special tool (a tool not found in the Somta catalogue or price list) can be manufactured from a standard product. We call this a 'modified standard'. Somta has both the capability and capacity to offer this service which, under normal circumstances, means a short delivery time.

The following are typical drill modifications:

#### Intermediate Diameters

Standard sizes can be ground down to special diameters and tolerances.

#### Reduced Overall Lengths

Standard drills can be cut to special lengths.

#### Drill Points

The standard drill point angle is 118° included. This can be modified to any angle required. Many special

*Continued on next page...*



points are available which include web thinning, notch points, split points, double angle points, spur and brad points etc.

## Tangs and Flats

Tangs can be produced to DIN, ASA and ISO, also special whistle notch flats on shanks.

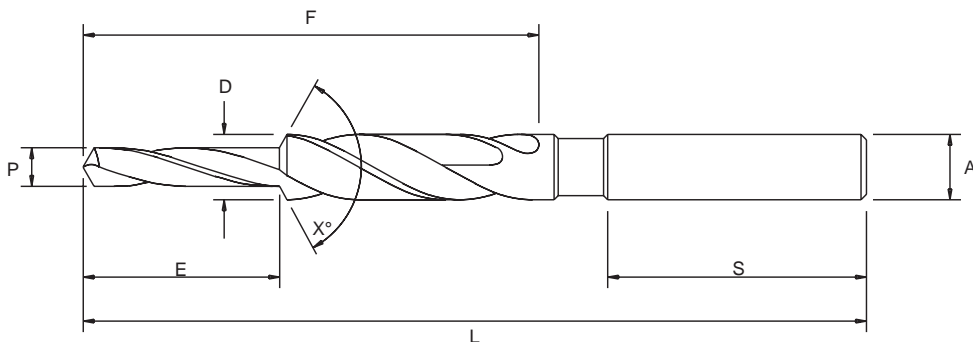
## Step Drills

Standard drills can be modified into step drills.

## Surface Treatments

A full range of surface treatments including nitriding, stream oxide, chemical blackening, gold oxide and various titanium coatings are available.

## MULTIPLE DIAMETER DRILLS



Specify whether drill is to be Step or Subland Type.

D = Diameter of large, fluted section.

P = Diameter of small, fluted section.

A = Shank Diameter.

L = Overall Length.

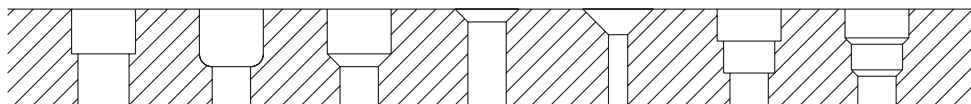
F = Flute Length.

E = Length of Small Diameter. This is measured from the extreme point to the bottom corner of the step angle.

$X^\circ$  = Included angle of the step angle.

S = Shank Length.

**It is possible to drill two or more diameters in a hole on one operation with a correctly designed drill and these are often used in mass production engineering.**



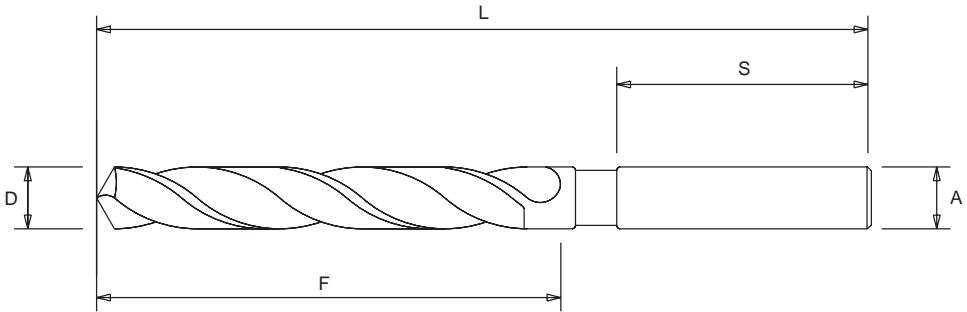
Some of the hole types that can be drilled in a single operation.

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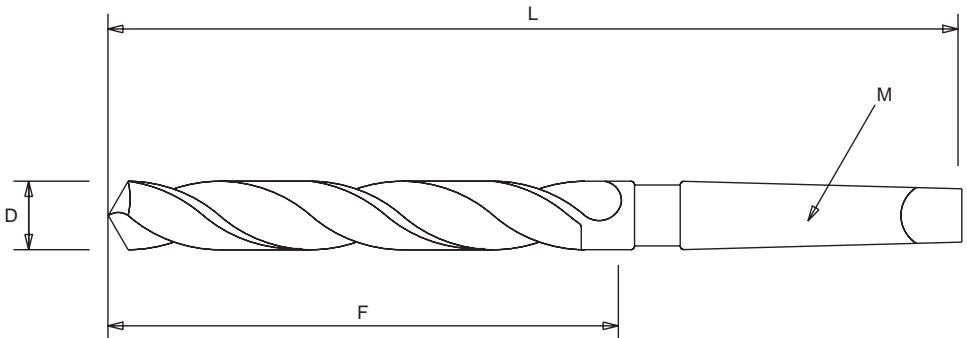
When an intermediate diameter or a non standard length of drill is required, the following diameters and lengths need to be specified.

### Straight Shank Drills



D = Drill Diameter  
A = Shank Diameter  
L = Overall Length  
F = Flute Length  
S = Shank Length

### Morse Taper Shank Drills



D = Drill Diameter  
L = Overall Length  
F = Flute Length  
M = Morse Taper Size





## General Terms and Conditions of Sale

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All deliveries of goods will be made in terms of our General Terms and Conditions of Sale, which are available in detail, on request.

No modifications or allowances will be accepted unless agreed to in writing by the Company.

### Delivery Terms

All deliveries inside the Republic of South Africa will be free of charge. The Company however reserves the right to charge a fee for special deliveries of small quantities.

For all deliveries outside the Republic of South Africa, the cost of delivery will be for the customer's account unless otherwise agreed to in writing by the Company.

### Terms of Payment

All payments will be made in accordance with our General Terms and Conditions of Sale, and other terms agreed to in writing by the Company.

### Special Tooling

Our delivery programme is based mainly on the standard tooling in this catalogue.

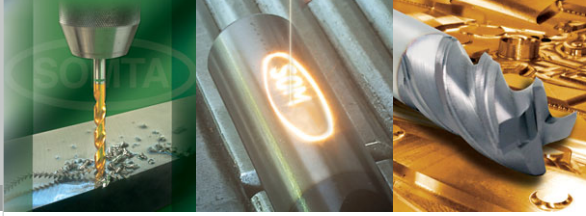
Special tooling can be provided on request, based on other international standards or customer's specifications and drawings.

Deliveries of such tooling will be subject to a quantity variation of +/- 10% of the order quantity, with a minimum quantity variation of one piece.

Request for tooling to customer specification will only be put into production against a signed copy of the customer's drawings and specifications, or a copy of our customer approval drawing.

No special tooling orders can be cancelled or returned.

***Note : All terms and conditions may be changed at the discretion of the Company.***



Manufacturers & Suppliers  
of Drills, Reamers, End Mills,  
Bore Cutters, Taps & Dies,  
Toolbits, Solid Carbide Tooling,  
Carbide Insert Tooling,  
Custom Tools and  
Surface Coatings

**Head Office and Surface Coating Division**

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