



**TOOLING SYSTEMS LIMITED**



**SHORT HOLE DRILLS**

**[www.microbore.com](http://www.microbore.com)**

**MICROBORE TOOLING SYSTEMS LTD**

Whitacre Road Industrial Estate, Whitacre Road, Nuneaton, Warwickshire CV11 6BX.  
Tel: 0044 (0) 24 7637 3355 Fax: 0044 (0) 24 7637 3322 E-mail: sales@microbore.com



<u>PAGE</u>	<u>CONTENTS</u>
2	Cutting data
3	Drill range
4	Inserts and spares
5	Custom made drill request form

# MICROBORE SHORT HOLE DRILLS



The MICROBORE indexable Short Hole Drill ranges offer a wide selection of high speed/high feed drills that will produce a hole from solid prior to finish boring. The whole range will machine to depths of 3x diameter with through coolant for chip removal and long insert life. All drills throughout the range offer the following qualities:

- Unique geometry for accelerated swarf evacuation.
- Composite shank for lathes and rotary tool holders.
- Self centring drilling, even on uneven surfaces.
- Low axial and balanced radial cutting forces.
- Quick and simple insert changing.
- Special spiral flute design to eject the chips rapidly & efficiently
- Special drills made to customer specification.



## CUTTING DATA FOR MICROBORE SHORT HOLE DRILLS

CUTTING DATA FOR SHORT HOLE DRILLS									
Material		H.B.	Feed Rate MM per Rev Diameter Range				Cutting Speed Metres per Minute		Power Factor Pf
			Ø16-25	Ø26-35	Ø36-45	Ø46-55	Un-Coated	Coated	
Carbon Steel	Low	125							0.040
	Med	150	0.05-0.13	0.08-0.15	0.10-0.25	0.13-0.30	120-185	170-290	
	High	200							
Alloy Steel		180							0.045
		275	0.05-0.20	0.08-0.25	0.10-0.25	0.15-0.30	90-140	150-275	
		300							
		350							
Stainless Steel		175							0.052
		200	0.08-0.13	0.10-0.20	0.13-0.25	0.15-0.30	90-260	105-260	
Cast Steel		180							0.034
		200	0.05-0.18	0.10-0.20	0.13-0.25	0.15-0.30	80-170	105-230	
		225							
Malleable Iron		130							0.030
		230	0.08-0.13	0.13-0.25	0.15-0.30	0.18-0.35	90-150	120-230	
Cast Iron		180							0.025
		260	0.08-0.20	0.13-0.25	0.15-0.30	0.18-0.35	90-140	105-200	
Nodular SG Iron		160							0.032
		250	0.10-0.20	0.13-0.25	0.15-0.30	0.2-0.35	90-150	120-230	
Aluminium		60	0.05-0.13	0.08-0.15	0.10-0.18	0.13-0.20	180-350	240-520	0.013
Cast Alloy		75	0.05-0.13	0.08-0.15	0.10-0.23	0.13-0.30	165-275	240-455	0.013
Brass		90	0.05-0.13	0.08-0.15	0.10-0.18	0.13-0.20	90-240	150-365	0.014
Bronze		100	0.05-0.13	0.08-0.15	0.10-0.18	0.13-0.20	75-215	120-305	0.020

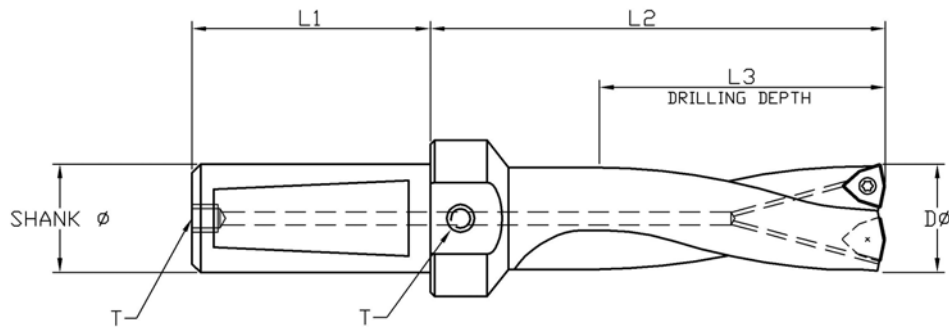
Note: The above figures are average and only applicable when drilling is performed on a machine with adequate power and rigidity together with the necessary coolant flow and pressure.

### CAUTION

On through hole operations a disc is produced on exit. With a rotating work piece this can be projected with considerable velocity. Care must be taken to provide adequate guarding



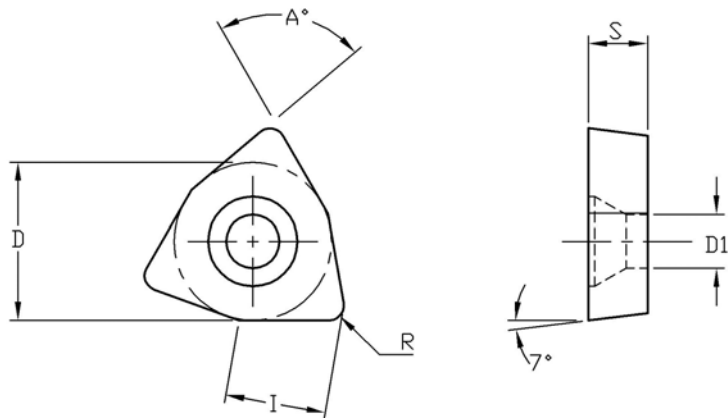
# MICROBORE SHORT HOLE DRILLS FOR 80° INSERTS



SHORT HOLE DRILLS								
Drill Code Number	DØ	Shank Ø	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub> Max	T	Insert	
16CD20-R03-H80	16	20	50	72	48	R1/8	WCGT 03 02 08_ _	
17CD20-R03-H80	17			75	51			
18CD20-R03-H80	18			78	54			
19CD20-R03-H80	19			81	57			
20CD20-R04-H80	20			84	60			
21CD25-R04-H80	21	25	55	93	63		R1/8	WCGT 04 02 08_ _
22CD25-R04-H80	22			96	66			
23CD25-R04-H80	23			99	69			
24CD25-R04-H80	24			102	72			
25CD25-R04-H80	25			105	75			
26CD25-R05-H80	26			108	78			
27CD25-R05-H80	27			111	81			
28CD25-R05-H80	28			114	84			
29CD25-R05-H80	29			117	87			
30CD25-R05-H80	30			120	90			
31CD32-R06-H80	31	32	60	131	93	R1/4	WCGT 06 T3 08_ _	
32CD32-R06-H80	32			134	96			
33CD32-R06-H80	33			137	99			
34CD32-R06-H80	34			140	102			
35CD32-R06-H80	35			143	105			
36CD32-R06-H80	36			146	108			
37CD32-R06-H80	37			149	111			
38CD32-R06-H80	38			152	114			
39CD32-R06-H80	39			155	117			
40CD32-R06-H80	40			158	120			
41CD40-R06-H80	41	40	70	175	123	R1/4	WCGT 08 04 12_ _	
42CD40-R08-H80	42			178	126			
43CD40-R08-H80	43			181	129			
44CD40-R08-H80	44			184	132			
45CD40-R08-H80	45			187	135			
46CD40-R08-H80	46			190	138			
47CD40-R08-H80	47			193	141			
48CD40-R08-H80	48			196	144			
49CD40-R08-H80	49			199	147			
50CD40-R08-H80	50			202	150			
51CD40-R08-H80	51			205	153			
52CD40-R08-H80	52			208	156			
53CD40-R08-H80	53			211	159			
54CD40-R08-H80	54			214	162			
55CD40-R08-H80	55			217	165			
56CD40-R08-H80	56			220	168			
57CD40-R08-H80	57			223	171			
58CD40-R08-H80	58			226	174			

Left hand drills and other sizes will be quoted on request.

# INSERTS AND SPARES FOR MICROBORE SHORT HOLE DRILLS



	Insert	A°	I	D	D <sub>1</sub>	S	R
03	WCGT 03 02 08	80°	3.46	5.56	2.80	2.38	0.80
04	WCGT 04 02 08	80°	3.99	6.35	3.10	2.38	0.80
05	WCGT 05 03 08	80°	5.07	7.94	3.20	3.18	0.80
06	WCGT 06 T3 08	80°	6.17	9.53	3.70	3.97	0.80
08	WCGT 08 04 12	80°	8.17	12.70	4.30	4.76	1.20

## SPARES...

Insert	Insert Screw	Insert Screw Driver
WCGT 03 02 _ _	RS2055	R27D
WCGT 04 02 _ _	RS2568	R47D
WCGT 05 03 _ _	RS3082	R67D
WCGT 06 T3 _ _	RS3590	R77D
WCGT 08 04 _ _	RS4095	

### Coolant Blanking

R1/8	BR125
R1/4	BR250

# SPECIAL MICROBORE DRILL REQUEST FORM



Drill diameter 'DØ' .....

Protrusion length 'L2' .....

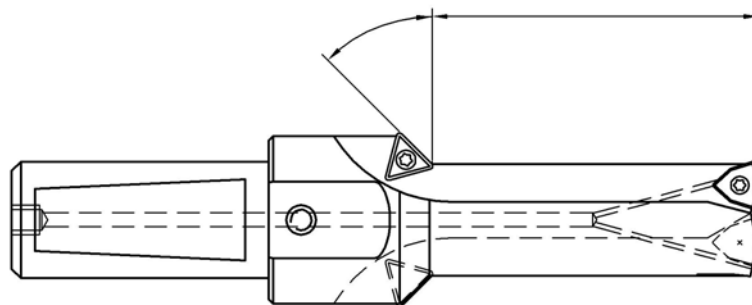
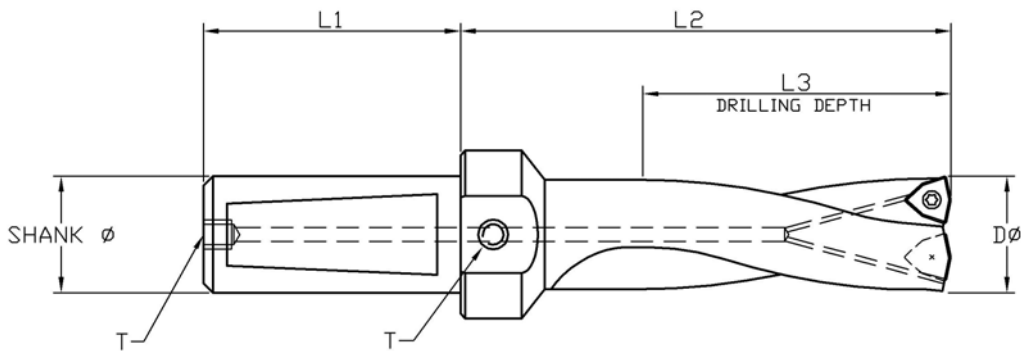
Drilling Depth 'L3' .....

Type / size of shank .....

Insert type .....

Coolant inlet thread 'T' .....

Other dimensions / features .....



Please Fax to: 0044 (0) 2476 373 322