

# **Tiny Tools** New Products



Inch 2016-17



### **CMR** Carmex Multi-Task Tiny Tools

Carmex is introducing a new and innovative Multi-Task Tiny Tool CMR for Boring, Turning, Facing and Chamfering with a single tool.



#### **Right hand**

D mm	Ordering Code	L	L1	R	F	С	Hole Dia.*	Holder **	P M		*
4.0	CMR 4 R0.1 L10	2.0	.39	.004	.07	.04	.16		Κ	MK	*
4.0	CMR 4 R0.1 L15	2.0	.59	.004	.07	.04	.16	SIMH4	Ν		*
5.0	CMR 5 R0.2 L10	2.0	.39	.008	.09	.05	.20		S		*
5.0 CI	CMR 5 R0.2 L15	2.0	.59	.008	.09	.05	.20	SIMH5	Н		
0.0	CMR 6 R0.2 L12	2.3	.47	.008	.11	.06	.24	0104 110			
6.0	CMR 6 R0.2 L18	2.3	.71	.008	.11	.06	.24	SIMH6			

#### Left hand

D	Ordening Code		14	R	F	С	Hole Dia.*	Holdor **	Ρ
mm	Ordening Code	L	LI					Holder	М
4.0	CML 4 R0.1 L10	2.0	.39	.004	.07	.04	.16		К
4.0	CML 4 R0.1 L15	2.0	.59	.004	.07	.04	.16	SIMH4	Ν
5.0	CML 5 R0.2 L10	2.0	.39	.008	.09	.05	.20	CIM LIE	S
5.0	CML 5 R0.2 L15	2.0	.59	.008	.09	.05	.20	5IMH5	Н
6.0	CML 6 R0.2 L12	2.3	.47	.008	.11	.06	.24		
6.0	CML 6 R0.2 L18	2.3	.71	.008	.11	.06	.24	5IIVI <b>H</b> 0	



### **Tiny Tools**



#### **CMR** Carmex Multi-Task Tiny Tools

- The unique design enables machining of the material without the need for a pilot hole.
- The new tool shortens the machining cycle time and the number of tools required providing High Productivity.
- Effective through coolant hole with a spiral flute, evacuates the chips out of the hole uninterruptedly.
- Unique chip breaker and flute design.
- To use with standard SIM toolholders on Swiss Type or CNC lathe machines.
- Available in **BMK** Grade only.

#### **Working Method**

- The tool penetrates the work piece and produces the hole compliant with the minimum diameter the tool allows.
- The tool can penetrate the material in one pass or several passes depending on the work piece material, coolant pressure, machine power etc.
- The hole can be enlarged by multi radial passes.



#### **CMR Cutting Data and General Recommendations**

ISO Standard	Materials	Cutting Speed ft/min
	Low and Medium Carbon Steels <0.55%C	65-245
Р	High Carbon Steels ≥0.55%C	65-245
	Alloy Steels, Treated Steels	65-200
	Stainless Steels - Free Cutting	65-200
M	Stainless Steels - Austenitic	65-165
	Cast Steels	-
K	Cast Iron	65-295
	Aluminum ≤12%Si, Copper	130-490
Ν	Aluminum >12% Si	65-295
	Synthetics, Duroplastics, Thermoplastics	130-490
S	Nickel Alloys, Titanium Alloys	15-200
Н	Hardened Steels	-

Recommended Feed Rate: .0005 - .001 inch/rev



Н

SIM...H7

#### **HK** Broaching Tools for Hexagon Keys

The HK broaching system have been developed to machine internal keyways inside blind or through holes, using CNC machines.

- To use with Carmex standard SIM Bar Holders
- The holder can be located directly in the turret or the machine spindle
- Holder with rear clamping screw for full support during operation
- Available in **BMK** Grade only.





### **Product Identification**





.004

.05

.19

S = Socket Size

5.0-8.0

HK 5 S50 L9

2.4

.37

7.0

### **Tiny Tools**



## **CBR Bars** Profiling and Boring

#### With advanced Chip Breaker

Chip evacuation is obtained thanks to advanced **C**hip **B**reaker and the internal coolant through the tool, pushing the chips out of the hole.

Excellent Solution for machining stainless steels, super alloys and other "difficult" materials that creates curly chips around the tool and the application. Can be used also as general purpose for a wide range

of materials.



New advanced carbide grade **TNX** for higher feeds and high performance, at medium to high cutting speed. Extra fine grain size with high hardness and toughness combined with triple layer reddish coating, provides high edge stability and better chip flow.



D mm	Ordering Code	L	L1	R	Н	F	Min. Bore Dia.	Holder	
4.0	CBR 4 R0.2 L10	2	.39	.008	.02	.07	.16		
4.0	CBR 4 R0.2 L15	2	.59	.008	.02	.07	.16	ЗIIVI П4	
5.0	CBR 5 R0.2 L15	2	.59	.008	.03	.09	.20		
5.0	CBR 5 R0.2 L22	2	.87	.008	.03	.09	.20		
<u> </u>	CBR 6 R0.2 L15	2	.59	.008	.04	.11	.24		
6.0	CBR 6 R0.2 L22	2	.87	.008	.04	.11	.24		

Ρ		*
М	XNT	*
Κ		*
Ν		*
S		*
Н		*

For L.H. bars specify CBL instead of CBR



### **Tiny Tools Bar Holders**





#### Inch shank version

D1 mm	Ordering Code	D in	d mm / in	L mm / in	Key	Clamping Screw	Adjusting Screw
7.0	SIM 0750 H7	3/4	19.05 / .75	88 / 3.5	K25	S25	S35
10.0	SIM 0750 H10	3/4	19.05 / .75	88 / 3.5	K25	S25	S35
10.0	SIM 1000 H10	1	25.4 / 1.0	88 / 3.5	K25	S25	S35

#### **Metric shank version**

D1 mm	Ordering Code	D mm	d mm / in	L mm / in	Key	Clamping Screw	Adjusting Screw
0.0	SIM 0022 H3K	22	22 / .87	120 / 4.7	K25	S25	S35E
3.0	SIM 0025 H3M	25	25 / .98	150 / 5.9	K25	S25	-
4.0	SIM 0022 H4K	22	22 / .87	120 / 4.7	K25	S25	S35E
4.0	SIM 0025 H4K	25	25 / .98	150 / 5.9	K25	S25	-
5.0	SIM 0022 H5K	22	22 / .87	120 / 4.7	K25	S25	S35E
5.0	SIM 0025 H5M	25	25 / .98	150 / 5.9	K25	S25	-
6.0	SIM 0022 H6K	22	22 / .87	120 / 4.7	K25	S25	S35E
6.0	SIM 0025 H6M	25	25 / .98	150 / 5.9	K25	S25	-
10.0	SIM 0016 H10	16	20 / .79	88 / 3.5	K25	S25S	S35
10.0	SIM 0022 H10	22	22 / .87	88 / 3.5	K25	S25	S35

See main catalog for full range of metric and inch shank holders.

### **Tiny Tools**



### **Tiny Tools Bar Holders**



#### **Metric shank version**

D1 mm	Ordering Code	D mm	d mm / in	L mm / in	Key	Clamping Screw	Adjusting Screw
7.0	SIM 0025 H7	25	10.8 / .43	62 / 2.4	K25	S25	S35M
8.0	SIM 0025 H8	25	10.8 / .43	62 / 2.4	K25	S25	S35M

#### **Product Identification** Tiny Bar Holders Ordering Codes



#### **Tiny Toolholder for Swiss machines**

Carmex has developed a unique external turning holder for the sub-spindle on CNC Swiss type lathes.





### **Tiny Toolholder**

D1 mm	Ordering Code	dp mm	Key	Clamping Screw
3.0	SIM 22S H3	4 / 6	K16	S24P
4.0	SIM 22S H4	4 / 6	K16	S24P
5.0	SIM 22S H5	4 / 6	K16	S24M
6.0	SIM 22S H6	4 / 6	K16	S24M

To use on Star machines





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