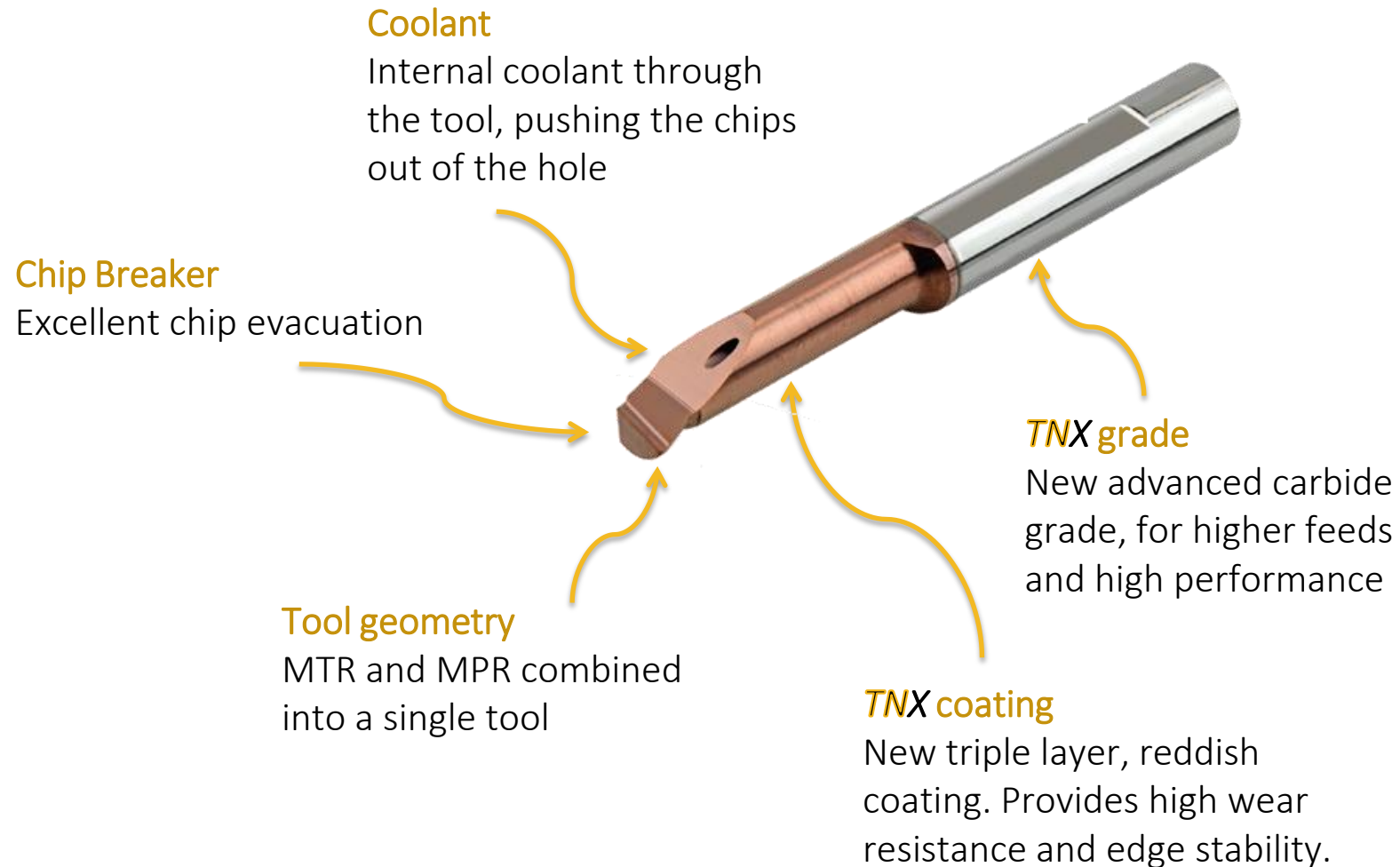


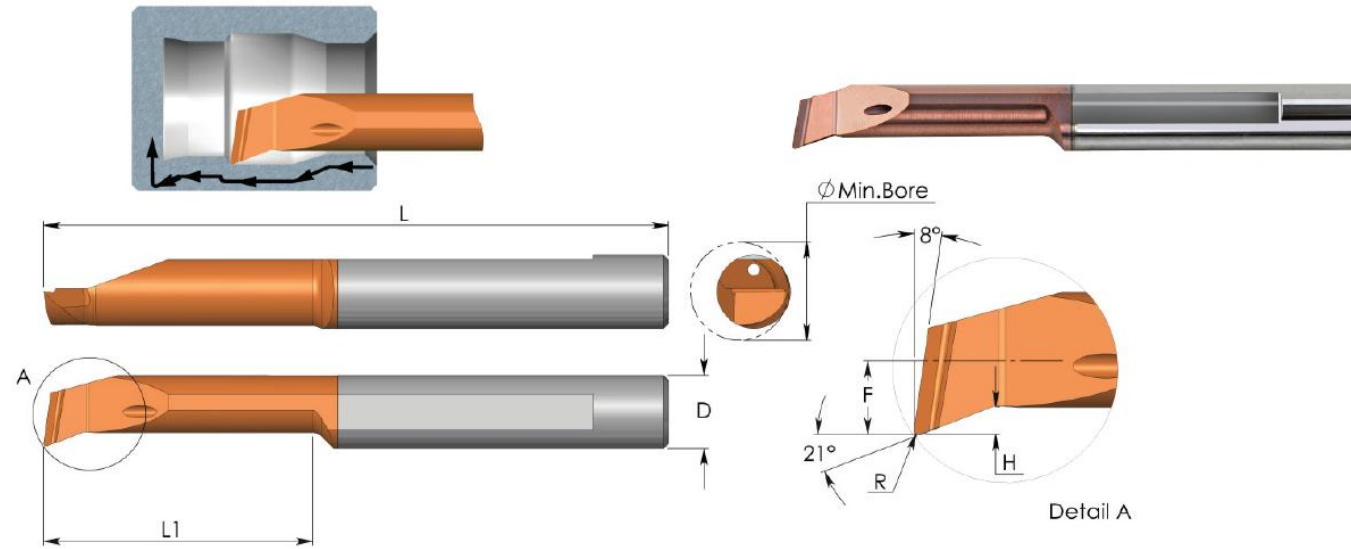
09/05/17

CBR CASE STUDY

TINY TOOLS – CBR



CBR DIMENSIONS



D	Ordering Code	L	L1	R	H	F	Ø Min. Bore Dia.	Holder
4.0	CBR 4 R0.2 L10	51	10	0.2	0.4	1.8	4.1	SIM...H4
	CBR 4 R0.2 L15	51	15	0.2	0.4	1.8	4.1	
5.0	CBR 5 R0.2 L15	51	15	0.2	0.8	2.3	5.1	SIM...H5
	CBR 5 R0.2 L22	51	22	0.2	0.8	2.3	5.1	
6.0	CBR 6 R0.2 L15	51	15	0.2	1.0	2.8	6.1	SIM...H6
	CBR 6 R0.2 L22	51	22	0.2	1.0	2.8	6.1	

For L.H. bars specify CBL instead of CBR

CBR CASE STUDY - CONDITIONS

Application

Internal boring and profiling
Boring length: 8 mm

Workpiece material

Stainless steel 316L (1.4401)
Min Bore: Ø6.1 mm



Tools

Tiny Bars (with internal coolant hole):

1. MPR 6 R0.2 L15 BXC
2. CBR 6 R0.2 L15 **TNX**

Bar Holder: SIM 0020 H6

Machine

Milling/Turning machine by INDEX
Coolant through tool (oil-based emulsion)

CBR CASE STUDY - RESULTS

Parameter	MPR 6 R0.2 L15 BXC	CBR 6 R0.2 L15 <i>TNX</i>
Cutting speed (m/min)	67	67
Feed rate (mm/rev)	0.04	0.04
Cutting depth (Radial infeed) in mm	0.1	0.1
* Total tool life	9,700 Pcs	14,260 Pcs

Result: The total tool life of the CBR bar was about **47% higher** than MPR.

* Definition: “Tool life” is calculated until the tool wears out, and the surface quality is no longer acceptable.

CBR SUMMARY

P	TNX	●
M		●
K		●
N		●
S		●
H		

The CBR product line is an excellent solution for machining stainless steels, super alloys, and other “difficult” materials that create “curly” chips around the tool and the application.

It can also be used as a general purpose tool for a wide range of materials.