

# Best bore quality in stainless steel

## Solid carbide 2-fluted drill Type 123-04

Tool-Ø 6.0 up to 16.0 mm

For best drilling qualities in stainless steel materials under emulsion, the twin fluted drill Type 123-04 was developed, which is unrivalled in terms of drilling quality and tool life.




### Advantages:

- Very good hole quality (diameter, roundness, surface roughness, centerline deviation), comparable with single flute drills
- Significantly longer tool life than single flute drills when drilling stainless chrome steels under emulsion
- Low tool wear of the circular grinding chamfer and guide chamfers, thus the tool can be regrinded several times
- Enlarged cooling channels and optimised flute geometry for reliable chip evacuation
- High-precision and stable solid carbide tools
- Support in tool and process design by botek application engineers

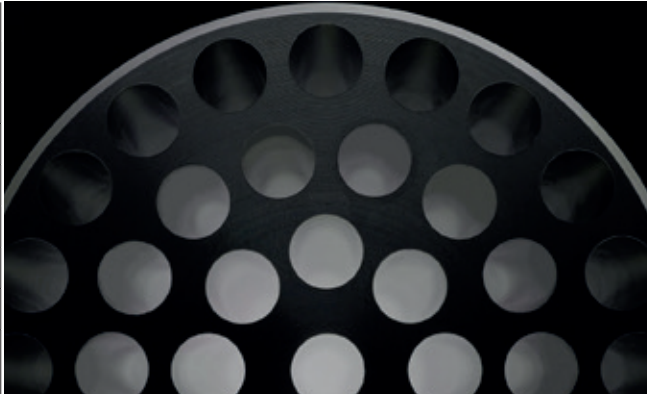
**botek**<sup>®</sup>

DEEP HOLE DRILLING SYSTEMS  
SOLID CARBIDE TOOLS

## Application examples Type 123-04

Material	1.4301 X5CrNi18-10	1.4122 X39CrMo17-1	1.2085 X33CrS16
Diameter	10 mm	10 mm	10 mm
Coolant	Emulsion	Emulsion	Emulsion
Cutting speed $V_c$	40 m/min	40 m/min	40 m/min
Feed $f$	0.04 mm	0.20 mm	0.20 mm
Surface roughness $R_a$	$\leq 0.8 \mu\text{m}$	$\leq 1.6 \mu\text{m}$	$\leq 0.8 \mu\text{m}$
Chips	$f = 0.04$ 	$f = 0.15$ 	$f = 0.20$ 

## Life time test Type 123-04 in 1.4301

Material	1.4301 (X5CrNi18-10)	
Diameter	10 mm	
Drilling depth	200 mm	
Cooling lubricant pressure $p$	75 bar, Emulsion	
Cutting speed $V_c$	40 m/min	
Feed $f$	0,04 mm	
Diameter tolerance	IT7	
Surface roughness $R_a$	$\leq 0.8 \mu\text{m}$	
Test abort after $L_f$ (end of life not reached)	54 m	

### Service:

- Regrinding and coating – botek offers prompt and cost effective in house regrinding and coating service and will gladly take over this task for you.
- Process layout
- Customer trials in our research and development department
- Individual tool design matched to your application.

Please enquire with us. You can find further information at [www.botek.de](http://www.botek.de)