

Overview:

Sep. 2012

**Manufacturing capabilities and technological data
deep-hole drilling**

	Unit		
Drill diameter range	mm	Starting at Ø1	> Ø20 up to Ø100
Drilling method		Drilling with single flute drills	Drilling with BTA- System
Runout (drift of the tool)	mm/100mm drilling depth	0.1 (*0.05)	
<i>*When drilling into cylindrical shaped workpieces, the tool and workpiece are contra-rotating. Due to this the tool drift can be reduced to 0.05mm per 100mm drilling depth.</i>			
Bore diameter tolerance	mm	0 to -0.03 IT8	0 to +0.1 IT8
Drill-depth tolerance	mm	± 0,1	
position tolerance	mm	⊕ 0,1	
Max. drill depth when drilling from one side	mm (inches)	2,000 (78 3/4)	
Max. drill depth when drilling from both sides:	mm (inches)	4,000 (157 1/2)	
Surface roughness (Ra)	µm	1.6 to 3.2	
Surface roughness (Rz)	µm	15 to 25	
The machining of chamfers and taps; reaming and 2.5D milling can be done in addition to the deep-hole drilling itself.			
Max. workpiece weight	lbs (kg)	12,000 (5,500)	
Basic information for premachining			
<i>For the drilling process the pre-centering or pilot-bores are not needed, besides that threads should be manufactured after the deep-hole drilling process to prevent them from being damaged by the gun drill. Listed below you will get a recommendation how the workpieces should be premachined. Except the described premachining there should not be any other.</i>			
Workpiece shape	Position of the deep-hole drilling(s)	Recommended premachining	
Cylindrical	only concentric	**Both sides faced and chamfered.	
Cylindrical	only eccentric	**Both sides faced, outer diameter turned- over (cylindrical shape).	
Cylindrical	concentric and eccentric	** Both sides faced and chamfered; outer diameter turned-over (cylindrical shape).	
Block-type / plate-type		** Milled perpendicularly on every side.	
<i>**Thin-walled and heavy workpieces may require a special way of premachining; therefore the premachining should be coordinated with us.</i>			