

**bilz**

## Formbore – System Tools

Convert spindle rotation  
to linear tool movement



**EXCELLENT FOR  
PROFILE PROCESSING**

# Unique: Formbore system tools

With Formbore system tools, internal and external profiles can be generated in a variety of shapes and sizes. Pre-machining the forms, drilling and milling operations basically pre-form the desired shapes followed by the linear action of the Formbore cutting tool which delivers the required profile on conventional machining centers.

Formbore system tools can be used on:

- Milling machines
- Machining centres
- Lathes
- Special purpose machines

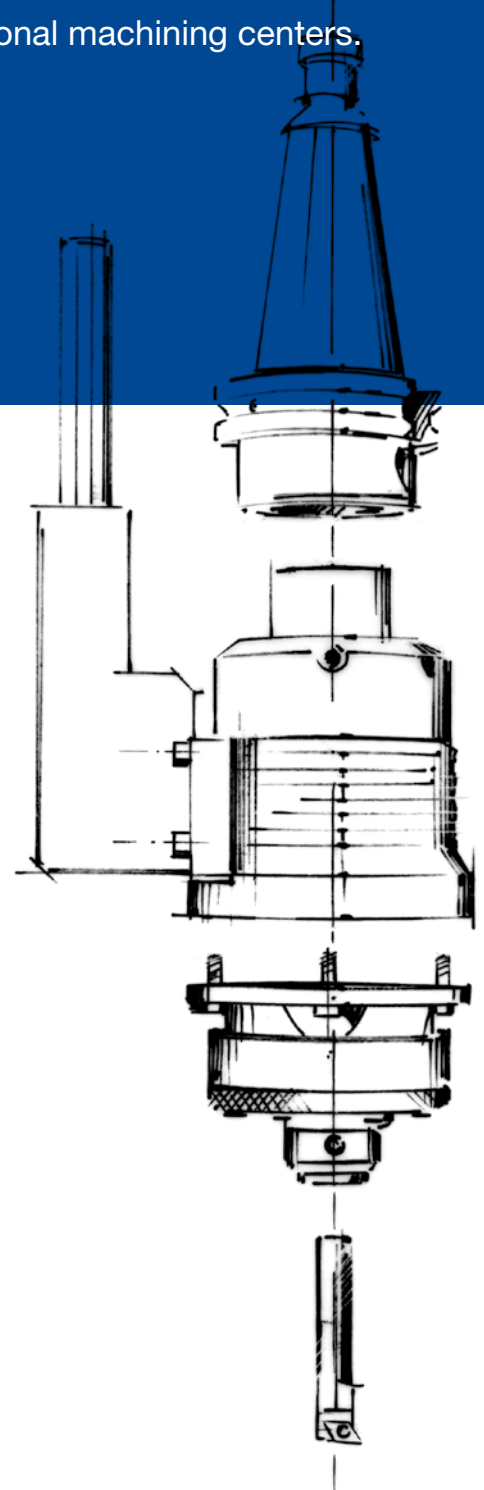
## ADVANTAGES

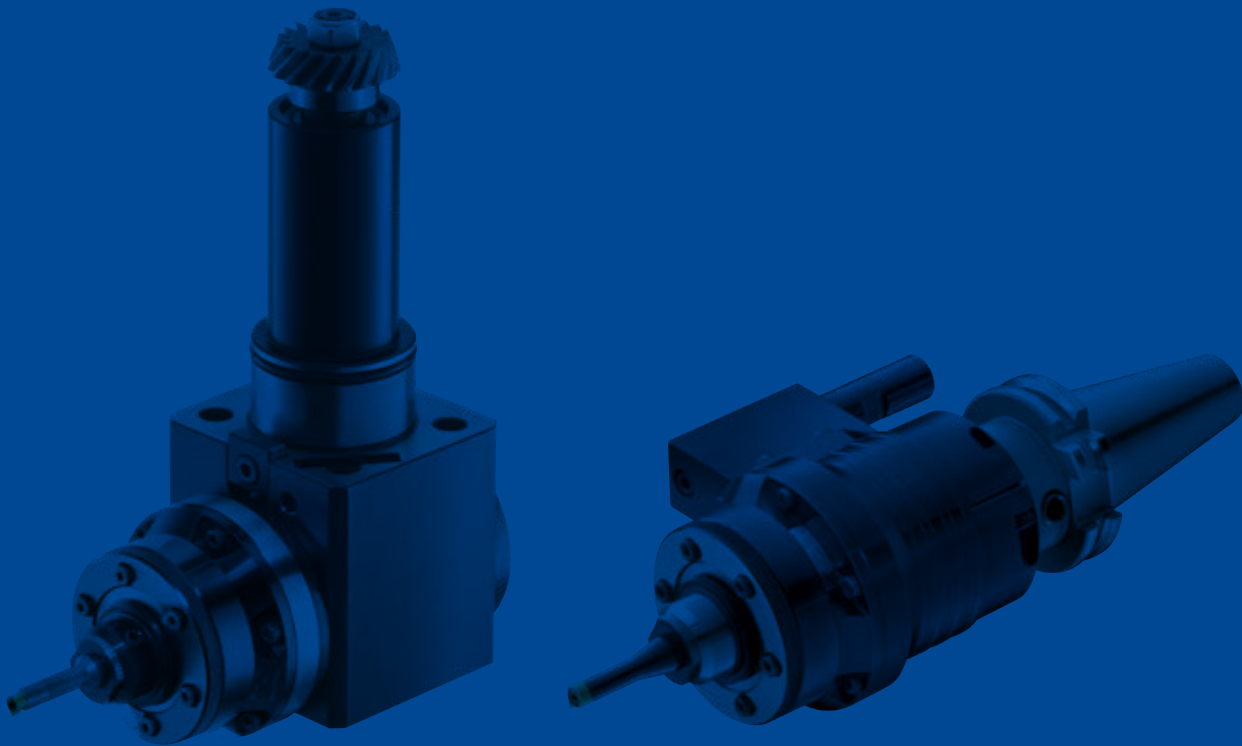
Formbore system tools work independently of the machines spindle. It doesn't have to be synchronized, can be calculated and programmed for the machine spindle. Formbore system tools are ideal for conversion of rotational movement to linear movement, Process routes can therefore be optimised by complete machining of specific forms on one machine. Formbore System tools reduce the processing time in comparison to the previously known procedures considerably.

When used on machining centers and milling machines, a stopper arm is required which can be adapted to any machine with the supply of basic information.

The Formbore system tool stands for practical versatility and flexibility. In addition, using the Formbore system tool delivers considerable time and cost savings.

Not least size control of the final contour is easily maintained with a scale adjustment on the formbore head controlling the position of the cutting edge. Convince yourself about the advantages of Formbore system tools! Contact us with your processing requirements, you will receive our solution based recommendation.





## TECHNICAL INFORMATION

### DESIGN AND MODE OF OPERATION OF THE FORMBORE SYSTEM TOOLS:

Formbore system tools essentially consist of two components: the drive and the profiling head. The rotating drive shaft is mounted in a housing.






The torque-assisted control element defines the movement sequence of the profiling head. The direction of the cutting edge is generated by rolling elements and the profiling cam.

For internal machining, a pilot hole is first made, up to max.... 0.5 mm diameter smaller than the wrench size (SW). With a profile-adapted speed and feed that corresponds to the material being machined, the required profile and the roughing process may be completed in one operation..

### Formbore cam blocks



The following profiles can be produced:

Square	Hexagon	Octagon	Area at the cylinder	Spanner size
				
04	06	08	01	02

Further profiles on request

Order example:

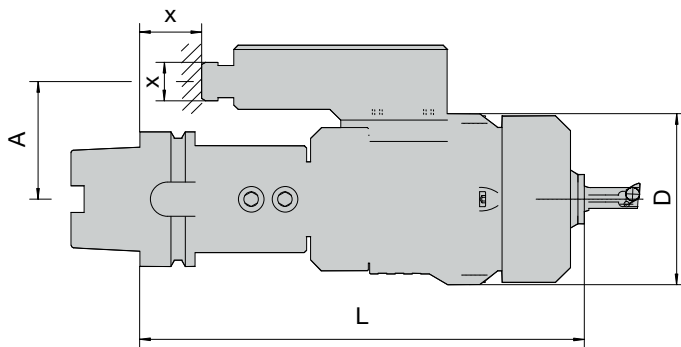
#### **FBK 1 04 - 0810 /1**

1	= Variant 1 ( e.g. Corner radius)
0810	= Measurement square= 8,10 mm
04	= Square
1	= Cam block for formbore system tool Size 1
FBT	= Formbore cam block

## Versions available



Formbore system tools for machining centres, milling and drilling machine applications



order example:

**FBT 2 / 2 9 . 2 2**

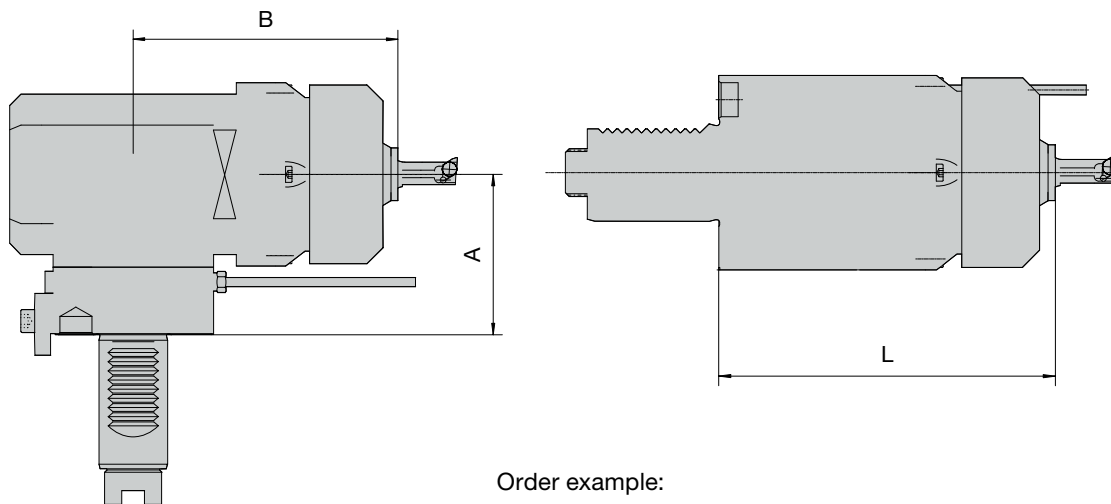
22 = Type MCH-300  
 29 = Machine manufacturer Heller  
 2 = Formbore Size 2  
 FBT = FormBoreTool

L = Dependent on the machine interface  
X = Dimensions acc. machine specification

Description	A mm	$n^{\max}$ $\text{mm}^{-1}$	$\varnothing D$ mm	Profile (spanner size) mm	
FBT 1/...	$\approx 51$	1000	80	Square: SQ4-14	Hexagon: SW4-21
FBT 2/...	$\approx 51$	500	125	Square: SQ4-22	Hexagon: SW4-38

Further versions available on request

Formbore system tools for turning machine applications



Order example:

**FBT 2 / 1 00 . 1**

1 = Type G200/V160  
 100 = Machine manufacturer Index  
 2 = formbore Size 2  
 FBT = FormBoreTool

A, B, L = Dependent on the machine interface

Description	$n^{\max}$ $\text{mm}^{-1}$	Profile (spanner size) mm	
FBT 1/...	1000	Square: SW4-14	Hexagon: SW4-21
FBT 2/...	500	Square: SW4-22	Hexagon: SW4-38

Further versions available on request

# Formbore accessories



**NOTE:**

Please include a drawing of the required contour with all enquiries and orders in order to define the exact form requirements.

The following Formbore boring bars/profiling tools work in combination with the Formbore cam-block to achieve the desired forms.

**Formbore accessories for Boring bar/profiling tool**



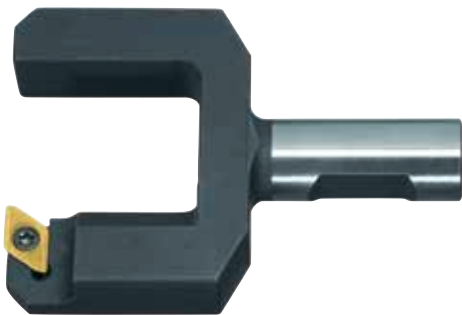
**Identification of the formbore Boring bar/profiling tools**

**ASI 12 0700 / X**

- X = Variant X (e.g. bore depth)
- 0700 = Theoretical bore diameter
- 12 = Shank diameter bore out steel
- ASI = Internal boring/profiling tools

The bore out steels The profiling tools are coordinated designed in combination with the geometry of the respective cam block.

**Formbore accessories for external profiles**



**Identification of the formbore over turning tools**


**ASA 12 0700 / 1**


- 1 = Variant 1 (e.g. bore depth)
- 0700 = Theoretical bore diameter
- 12 = Shank diameter over turning steel
- ASA = External over turning


The external-turning tools are designed in combination with the geometry respective cam-block.

Insert holder for external applications and larger internal profiles	Description
	ASA-26.00-07
	ASA-31.00-07
	ASA-38.00-07

Boring bar	Description
	ASA-26/00-ABS40-44
	ASA-31/38-ABS40-44

Female square SQ 12 mm	Speed	Feed	Machine
	550 min <sup>-1</sup>	0,04 mm/1	Lathe

Hexagon SQ 22 mm	Speed	Feed	Machine
	400 min <sup>-1</sup>	0,06 mm/1	Special machine

Keyway SQ 8 mm, depth 20 mm	Speed	Feed	Machine
	550 min <sup>-1</sup>	0,03 mm/1	Lathe
	Comment: Interrupted cut		



# 日 易 暉 机 械

台北市敦化南路二段40號2樓 郵遞區號: 106  
2/F, No. 40, Sec. 2, Tun Hwa S. Road,  
Taipei, Taiwan Zip: 106  
Tel: 886-2-2705-8448  
Fax: 886-2-2700-8430

上海市天鑰橋路325號嘉匯國際廣場A幢2101-2102室 郵編: 200030  
Room 2101-2102, Gateway International Plaza, Building A, No.325, Tian  
Yao Qiao Road, Shanghai, China Zip: 200030  
Tel: 86-21-3363-2088 & 3363-2099  
Fax: 86-21-3363-3303

上海辦事處	電話: 86-21-3363-2088	傳真: 86-21-3363-3303
天津辦事處	電話: 86-22-5817-3069	傳真: 86-22-5817-3069
成都辦事處	電話: 86-28-8526-6681	傳真: 86-28-8526-6684
重慶辦事處	電話: 86-23-6757-3205	傳真: 86-23-6757-3207
長春辦事處	電話: 86-431-8461-7085	傳真: 86-431-8461-7087
外高橋保稅庫	電話: 86-21-5868-3075	傳真: 86-21-5868-3076

台北辦事處	電話: 886-2-2705-8448	傳真: 886-2-2700-8430
台中辦事處	電話: 886-4-2463-8159	傳真: 886-4-2463-8160