



# HOLEMAKING

**SECO** 

# HOLES

**You need to make holes and we supply equipment for every holemaking application you can think of. We'll take responsibility for all aspects of the finished hole. Welcome to Seco holemaking.**

## **LARGE BATCH MANUFACTURING**

Cost per piece is the name of the game. You look for long and predictable tool life, consistency and repeatable hole quality. No variations can be accepted. And, increasing levels of automation require holemaking solutions with as little manual input as possible. Our wide range of high performance tools will allow you to reduce costs even further.



## **DIFFICULT-TO-MACHINE MATERIALS**

Process security is key, with extremely tight tolerances in both lightweight and demanding alloys. Seco holemaking tools will ensure that you meet the highest demands for repeated accuracy, predictable tool performance and consistent cutting data. We have a full range of high quality holemaking tools for the heat resistant difficult-to-machine materials.



## **MEDIUM AND SMALL BATCH PRODUCTION**

Applications are extremely varied. All kinds of materials are used. Quality requirements are stringent, with tough demands on process security. For you, tool flexibility and reliability is key. We offer easy to adjust parameters with a good result right from the start giving you cost-effective precision and flexibility.



# HOLEMAKERS

**We know your application is unique. Your workpiece material carries special demands. Your manufacturing process is custom designed. And your hole requirements are individualised.**

So, how can Seco help? We listen and understand. And we put our R&D, metal cutting expertise, experience, know-how, troubleshooting, service and support at your disposal. Did we forget something? World-class holemaking tools for the best productivity possible.

## **DRILLING**

- Solid carbide drills: Seco Feedmax™
- Exchangeable tipped drills: Crownloc®
- Indexable insert drills: Perfomax®

With optimised coatings, tip geometries and insert designs, these drills offer high quality holes and high productivity for all types of applications and workpiece materials.

Diameter range 2-85 mm (inches: .079-3.5).



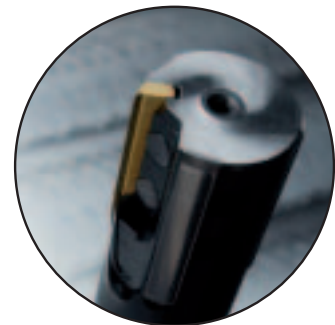
## **REAMING**

- Exchangeable head reamers: Precimaster™
- Indexable reamers: Bifix® and Precifix™

These high quality, easy-to-use reamers, are perfect for high performance machining and large batch production.

Optimised cutting grades and geometries offer high productivity in all types of materials.

Diameter range 4-60 mm (inches: .1574-2.362).



## **BORING HEADS**











- Rough boring heads: A750
- Axial type fine boring heads: AxiaBore™ type heads, A760
- Radial type fine boring heads: A780 and A790
- Bridge bars and Jumbo Bridge bars

Seco EPB boring heads cover the entire 0,3-2155 mm (inches: .012-84.843) diameter range. These tools achieve positioning accuracy, hole diameter precision and flexibility. Diameter adjustment is possible down to 2 micron (inch: .00008).





# FOR IN HOLEMAKING?

|   |   |   |   |   |   |  |   |
|---|---|---|---|---|---|--|---|
|   |  |  |  |  |  |  |  |
|  | 0,02 mm<br>.0008"   | 0,05 mm<br>.002"  | –   | 0,005 mm<br>.0002"  | 0,005 mm<br>.0002"  | Follow the<br>pre-bore   | Follow the<br>pre-bore  |
|  | 0,02 mm<br>.0008"   | 0,05 mm<br>.002"  | –   | 0,01 mm<br>.0004"   | 0,01 mm<br>.0004"   | 0,012 mm<br>.00047"  | 0,007 mm<br>.00028"   |
|  | 1,0 µm<br>40 µin  | 1,6 µm<br>64 µin  | 2,0 µm<br>80 µin  | 1,0 µm<br>40 µin  | 0,6 µm<br>24 µin  | 0,6 µm<br>24 µin   | 0,25 µm<br>10 µin   |



#### Positioning accuracy

Seco Feedmax, A750 rough boring heads and the whole range of fine boring heads are the holemaking tools that offer the best positioning accuracy.



#### Hole geometry

For excellent hole geometry, such as cylindricity and straightness, all of Seco's reaming and boring tools can be chosen.



#### Surface finish

For a really smooth hole surface Seco Feedmax and Bifix/Precifix is your first choice, with all fine boring heads as a possibility.



#### User friendly

Precimaster and Crownloc are very user friendly. These tools require no set-up time due to the fixed axial stop and consistent tip length. And the exchangeable heads eliminate the need for regrinding.



#### Cutting data / productivity

*Precimaster:*

- More cutting edges allows higher feed per revolution.

*Seco Feedmax:*

- Among the drills, Seco Feedmax offers the highest productivity.
- High cutting speed – latest coating technology.
- High feed per revolution – high strength carbide.

*Perfomax:*

- Square inserts allows for high feed per revolution.
- Strong and rigid drill body.
- Optimised geometries for different workpiece materials.

*Rough boring heads:*

- Two cutting edges allows for high feed rate.



#### Adjustability

*Fine boring heads:*

- Radial adjustment possible due to single tip tool.
- Excellent diameter setting, within 2,5 µm (inch= .00010).

*Perfomax:*

- Radial adjustment possible due to single tip tool.
- Off-centre drilling in lathe applications.

*Rough boring heads:*

- Easy diameter adjustment.



#### Batch size

When it comes to batch size, a lot of parameters must be taken into consideration to find the most economical solution, such as:

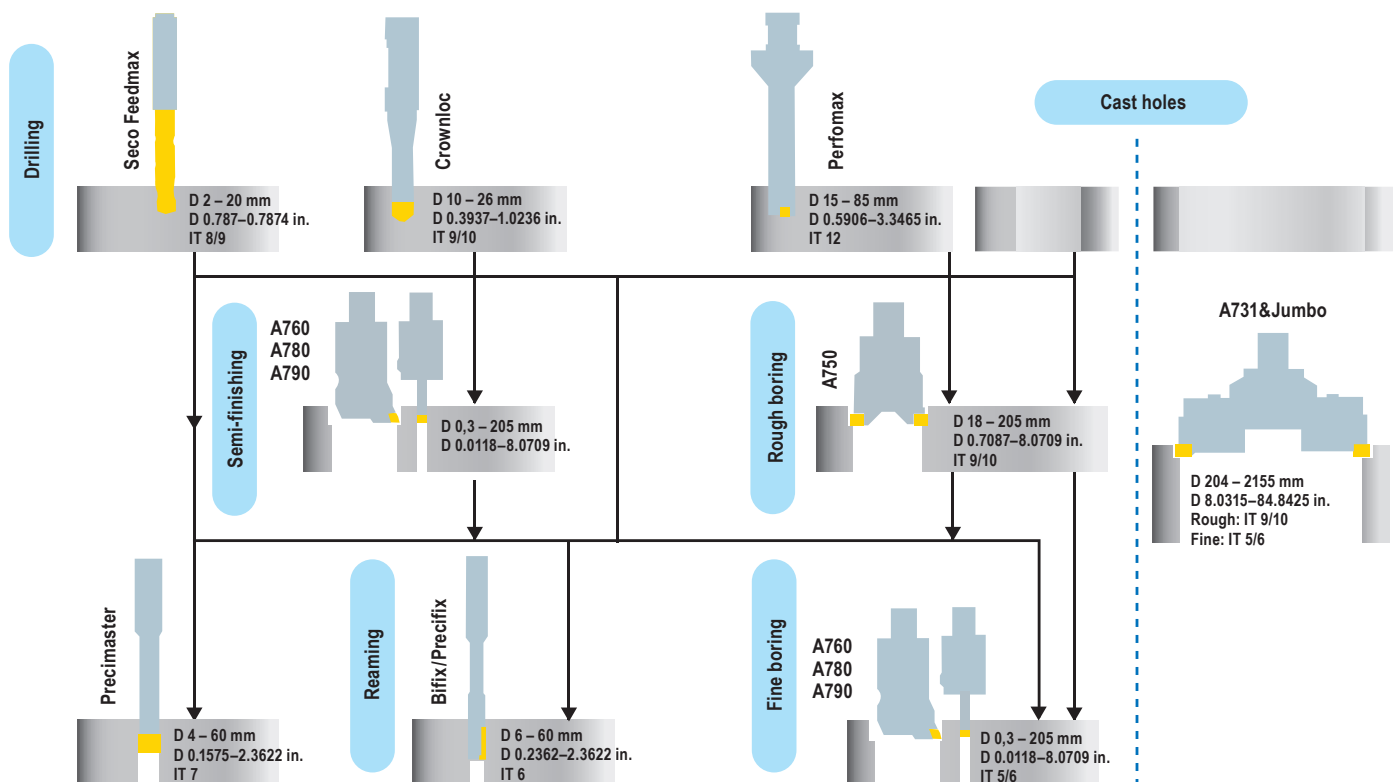
- Cost per cutting edge.
- Cycle time.
- Set up time and operating stability.

# TOOL SELECTION GUIDE

Your Seco representative will make sure that you get the optimal tool solution for your particular holmaking application. But, for a quick first idea of which tool to use, please refer to the tool selection guide where hole diameters and hole tolerances are indicated.

Seco Feedmax, Crownloc or Performax are used to drill holes from 2 to 85 mm in diameter (.0787 to 3.3465 inches), with tolerances from IT8 to IT12. For already cast holes, rough boring or semi-finishing is often used, with Bridge Bars and Jumbo Bridge Bars used for the large diameters.

Finally, high quality holes are made with reaming and boring finishing tools, reaching tolerances of IT5 or IT6.



# WE TAKE RESPONSIBILITY FOR YOUR HOLEMAKING



Kalle Schenning,  
Product Manager,  
Drilling

Jean-Bernard Hantin,  
Product Manager,  
Reaming

Denis Sprauel,  
Product Manager,  
Boring

## WHY SECO HOLEMAKING?

As a Seco customer, you are offered one-stop shopping of high quality metal cutting tools, solutions and service.

- We can help you solve your challenges by applying our complete holemaking know-how, including drilling, reaming and boring.
- We simplify your contacts, purchasing, stock, technical support, consultancy and process solutions.
- You will find precisely the tools needed for your production. We provide a large range of high performance holemaking tools covering drilling, reaming and boring.
- We take responsibility for the quality of the finished hole – or even for the complete machining of the finished part.
- You can rely on increased process security with our close cooperation.
- You will experience the highest tool quality offering great productivity and cost reduction opportunities.

For more information, please contact your Seco Tools' sales representative, or check [www.secotools.com/holemaking](http://www.secotools.com/holemaking)



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