

# Rotary Turn-Broaching Machines

## Type DH45 / DP45



Type DH45 / DP45 for serial production

### Efficient process

Turn-broaching as effective crankshaft machining process combines the advantages of the conventional turning and broaching. All main bearings are machined ready for finish grinding in one clamping situation by one tool drum with several rows of tool segments in accordance to the main bearing quantity. The drums can hold up to 2 sets of tooling, i.e. even all pins of a 4 cylinder cranks can be machined by utilization of 180° indexing type chucks. The machines can be linked together for inline loading and unloading by gantry.

### Increased efficiency

Hegenscheidt-MFD's innovative turn broaching machines meet the objectives of the automotive industry:

- Increased productivity
- Improved quality
- Reduced operating costs

### Efficient tool system consisting of:

Each drum consists of

- Tool segments with cutting inserts
- Finishing segments with cartridges and cutting inserts

### Tool setting device

An optional device for accurate tool setting can be fitted to the machine. The tool drums can be changed without repeated measurement inside the machine.

### Tool changing device

Optionally the machine can be equipped with a semi-automatic tool change device.

### System advantages

The turn-broaching machine types DH45 and DP45 are characterized by the following:

- Short floor-to-floor time
- High machine availability
- High tool live
- Short tool change time
- High repetitive accuracy after tool change
- Particularly robust construction
- Highest workpiece accuracy
- Dry machining
- High operating comfort
- Direct chip flow downwards to the bottom
- Low maintenance cost
- Quick diameter correction

## Technical data

Type DH45 for machining of main bearings  
Type DP45 for machining of pin bearings

### Workpiece

Length dimension of  
the crankshaft: ..... 320...600 mm

### Workpiece headstock

Rating of the main drive motor: ..... 37 kW

Speed of rotation under  
cutting load: ..... 20...1500 min<sup>-1</sup>  
(infinitely variable)

### Tool headstock

Spindle torque: ..... max. 8600 Nm

Turn broaching feed  
under cutting load: ..... max. 10,5 min<sup>-1</sup>  
(infinitely variable)

Rapid traverse when indexing  
the drum: ..... max. 10,5 min<sup>-1</sup>

Tool diameter: ..... 850 mm

Travel on the X axis: ..... max. 235 mm

### Machine

Weight including associated units: ..... appr. 20.000 kg

Space requirement including  
electrical cabinet and  
tool changer (L/W/H): ..... appr. 5,8 x 6,3 x 3,4 m

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