## **Profilator 300-V**

the perfect machine platform for your gear cutting tasks and of course also for e-mobility

### SCUDDING® of Stepped Gears

Machining of parallel gear profiles with undercut, both gears are machinable with a double tool





### SCUDDING® of Internal Gears

Cost-efficient production of internal gears with high flexibility

### **Chamfer Cutting**

Chamfering of the entry and exit side by cutting in one setting with the SCUDDING<sup>®</sup>. Fast and precise chamfering process with minimal space requirement





### SCUDDING® of Shafts

Production of rotors, drives, and shafts

### High Gearing Quality DIN 5-7

With SCUDDING<sup>®</sup> previously unattainable machining results are possible, namely exemplary cutting performance (DIN 5-7) with simultaneous low surface roughness (Rz 2-3)



## **Technical data**

Workspace		
Workpiece diameter	mm	350*
Swing Diameter	mm	475
Machining diameter	mm	300
Axis Travel		
Travel X	mm / linear drive	800 - 3800 (type dependent)
Travel Y	mm / linear drive	-145 / +95
Travel Z	mm	480
Swivel angle B	Degree	-60° / +135°
Workpiece Spindle		
Power	kW	41,6
Torque	Nm	265
Max. RPM	min -1	3.500
Spindle Nose Interface	Size	DIN 55026-A8
Tool Spindle		
Power	kW	24,5
Torque	Nm	65
Max. RPM	min -1	4.000
Automatic clamping system	Туре	optional
Tool interface	Туре	Capto C8x
General Data		
Dimensions	mm (LxWxH)	2.440 x 2.730 x 3.200 (for size 1800 mm)
Weight	kg	10.000 (for size 1800 mm)
* subject to geometric verification		

## **About Profilator**

- Founded in 1967 as an in-house machining solution for the hand tool manufacturer Wera
- Locations:
  - Wuppertal, Germany (headquarters)
  - Ann Arbor, Michigan, USA
  - Queretaro, Mexico
  - Shanghai, China



### Profilator GmbH & Co. KG

Zum Alten Rangierbahnhof 18 D-42329 Wuppertal Phone: +49 (0)202 27 88-0 Fax: +49 (0)202 27 88-100

Certificate DIN EN ISO 9001

Internet: www.profilator.de E-Mail: info@profilator.de





# **Profilator 300-V**

Vertical Modular Machine Platform





## **Features**

- Modular machine platform in a compact design for gear production
- Maximum flexibility due to the modular design, configurable for a wide variety of machining processes (e.g. SCUDDING®, hobbing, pointing, cycloidal milling, chamfering and deburring)
- State-of-the-art linear drives in the X and Y-Axis with torque-drive in the A-axis:
  - High machine dynamics for short cycle times
  - · Highest levels of accuracy and low maintenance costs due to backlash-free and wear-free linear drives

- High machine rigidity for HARD SCUDDING® application
- Optional tool changer for maximum machining flexibility
- User friendly interface for easy setup and programming
- Industry 4.0 capable, expandable with additional sensors for machine monitoring
- Multiple automation concepts available
- Easy setup and access due to open walk-in work area



## **Modular Components for Single- and Double Spindle Machines**



## **Available Machine Technologies**



### SCUDDING<sup>®</sup> Quality meets Speed

SCUDDING<sup>®</sup> is a continuous gear cutting process. Many different tooth variations can be produced with SCUDDING<sup>®</sup>. Involute profiles for gears (rings - pinions) along with non-involute and non-symmetrical profiles can be produced for pulleys and block wheels. The Profilator machine concept allows the production of both internal and external gears using SCUDDING<sup>®</sup> all on one machine.

### **Polygon and Castle Teeth**

The polygon milling unit is used to machine face slot/castle teeth in automatic transmission parts. The revolving cutter head is synchronized with the workpiece spindle can create many possible tooth geometries (e.g. a front clutch), which can also be deburred with additional tools in the same processing step.

### **Gear & Spline Cutting**

The modular system can accommodate fly cutter or hob process. When using a fly cutter tool, machining is carried out with indexable inserts, which produce spline gears, short gears and front gears very economically.

### Pointing

The pointing unit can be operated via a rotary or indexed process. To produce different pointing angles, both pointing units can be adjusted during the cutting cycle using a total of 10 NC axes.



### Chamfering

For the chamfering of gears, Profilator offers a chamfering unit for cutting processing in one clamping with the SCUDDING<sup>®</sup>, which allows a fast and very precise chamfering process to be integrated into the machine with little space requirement.

