

# Profilator - The Flexible modular Design system

The most compact combination for dry machining  
of your process requirements



# Different processes combined through modular design

Polygon & Face slot machining, Gear & Spline cutting, Gear tooth pointing,  
Shifter stop machining, Chamfering and Deburring, SCUDDING®

## Precision in modular design

Profilator is your partner, when you require complex machining processes to be carried out effectively, efficiently and with high precision using modern machine concepts.

## Advantage through Technology

High Precision, flexible Manufacturing processes, short Cycle times, reduced Investment and running costs:

These are the requirements that the operator asks of a modern machine tool.



**Profilator 320 – Machine design with pick up swing loader and transport conveyor**

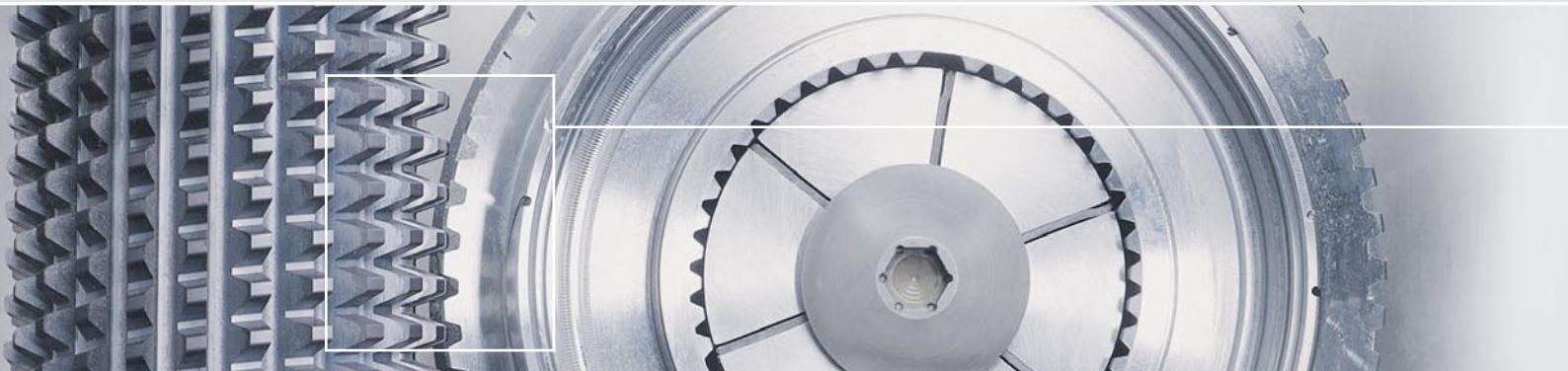
Profilator has developed a machine concept that is exactly tailored to these requirements. Using our know-how and according to process requirements, the appropriate process modules for gears, polygon milling, pointing, shifterstops,

deburring or SCUDDING® can be combined to form an efficient customer solution.

The free programmable tool and work piece synchronisation affords the greatest level of flexibility.

## Polygon & Face slot machining

The polygon turning unit for example, is deployed for castle teeth machining on automotive gearbox parts. Here, the rotating cutterhead is synchronised with the workpiece spindle and a front face coupling is produced in accordance with the carbide insert arrangement and the transmission ratio. Then, with additional inserts on the same cutterhead the part can be deburred.



## Gear tooth pointing

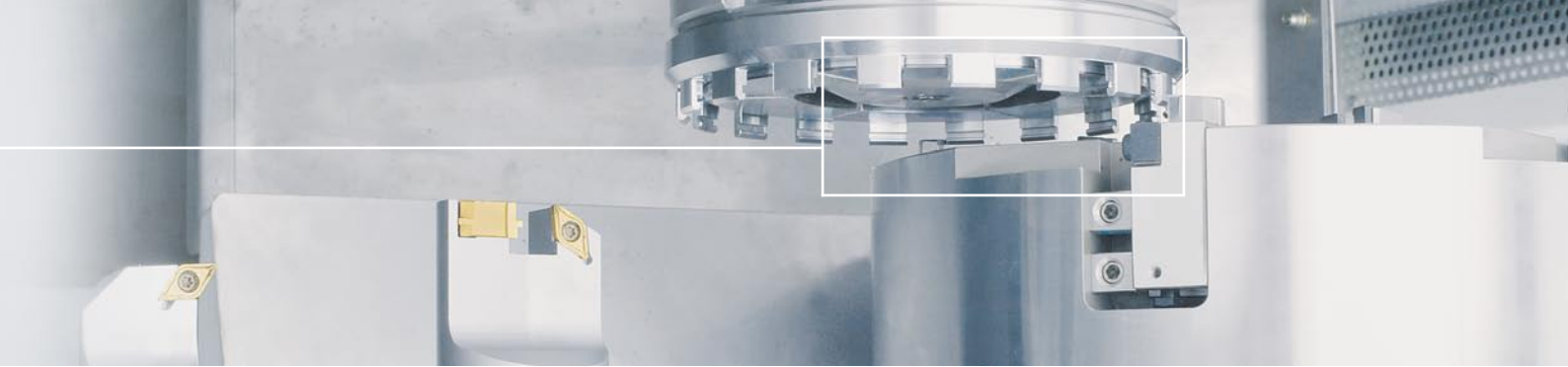
The pointing tower can be used in both rotative and indexing modes. All angle settings are digitally displayed. Because of different pointing angles and greater part diversity, both pointing units can automatically adjust in cycle through 10 CNC axis. The axis positions are determined following a CAD simulation using the data from the workpiece drawings. The CNC pointing tower is driven to the exact position by the data in the ergonomic control. Settings and corrections are through the new **Ergo Control SIMPS®** (WERA Simplified Integrated Machine Programming System) considerably simplified.



## Chamfering and Deburring

For the Chamfering and deburring of splines, gear wheels and shafts, Proficator presents the ZEM series gear deburring machine. The machine is economically deployed in medium to large series production. The optimal modular system offers the user clear advantages over conventional deburring machines.





## Gear & Spline cutting

The gear cutting unit is deployed both for Wera rotative gear cutting with inserts and for hobbing. Through the application of 'Schlagzahn tools' and carbide inserts we can achieve the most economical manufacture of splines, gears, involute gears and Front face gears.



## Shifter stop machining

The shifter stop unit is a horizontal unit mounted alongside the workpiece spindle in the same horizontal plane and synchronised so that the tool machines each tooth flank respectively in the internal spline of a synchro sleeve. Thereby, an involute form is produced, according to the design requirement.



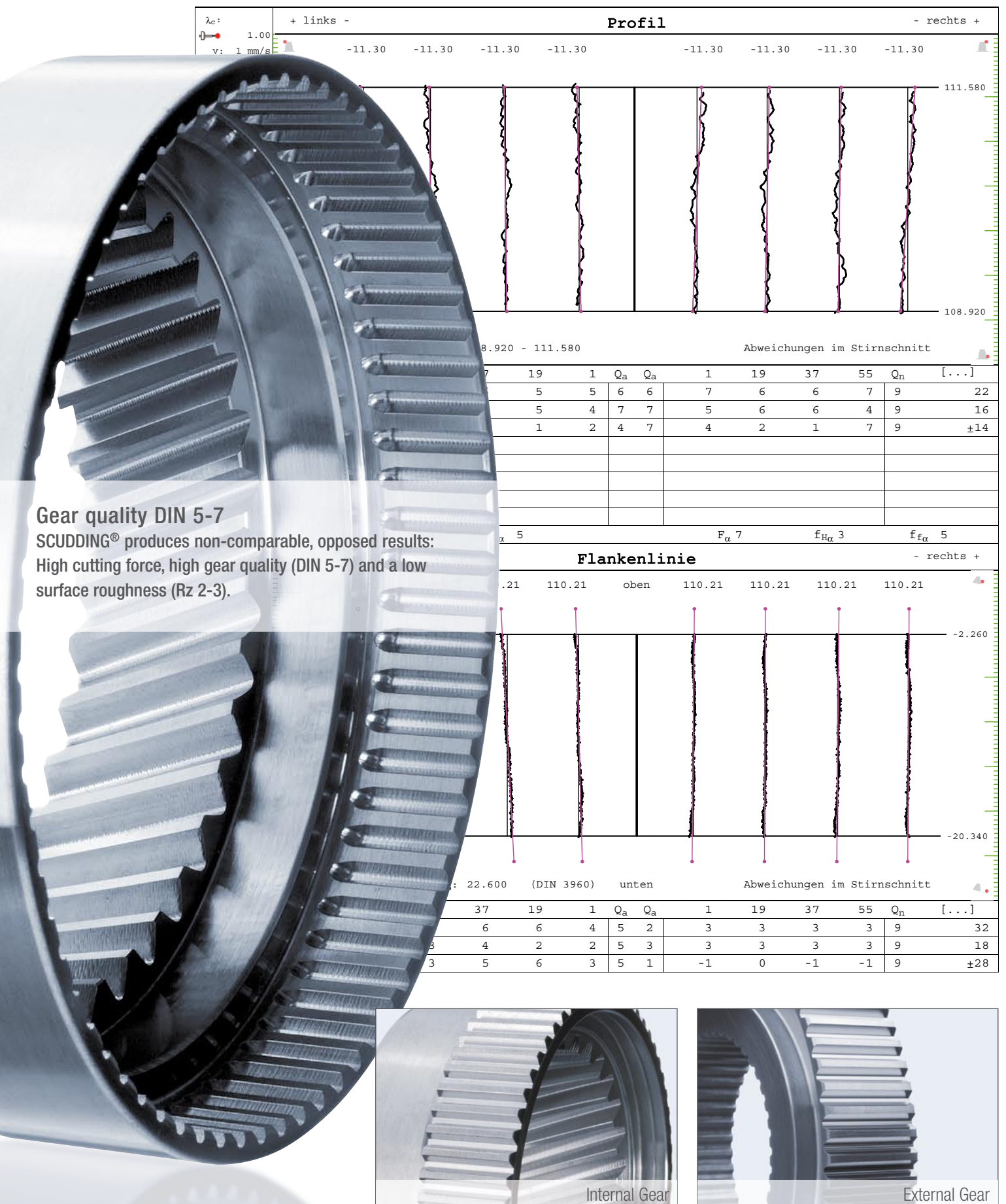
## SCUDDING® QmS - Quality meets Speed

SCUDDING® is a continuous gear generating process. The SCUDDING® process can be used for a wide range of symmetrical gear applications as well as for non-symmetrical gear or profile applications such as belt pulleys and synchronizer gears. With the Wera Profilator machine design, the same machine can be used for internal and external SCUDDING® applications.

# SCUDDING® QmS

Superior quality and speed in gear cutting

Quality meets Speed



## Your advantages:

- Development of system solutions to your requirements
- Operator and maintenance friendly modular system
- Different processes carried out on one machine
- Clear reduction in set-up and process time compared to conventional machining
- Complex processes can run parallel
- Easy access from every side

## Combinations that totally fit your agenda

You decide the requirements, we make them a reality:

- Machining operation
- 3 machine sizes
- Single- or multispindle
- Workpiece flow direction
- Position of the electrical cabinet

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