

HSD® – HIGH SPEED DELIVERY

Increased productivity, close tolerances and maximum yield



SMS Meer's High Speed Delivery system (HSD®) is the fastest technology available for processing straight bars and rebar.

BENEFITS AT A GLANCE

- High productivity
- Tight product tolerances
- Increased overall yield
- Minimised wear and tear through long-life components
- Very precise cutting to length onto the cooling bed

HSD® – HIGH SPEED DELIVERY

Major improvements through process transparency

Today, SMS Meer's HSD® is the fastest technology available for processing straight bars onto a cooling bed. The technically mature and well-proven system is the result of a technological evolution.

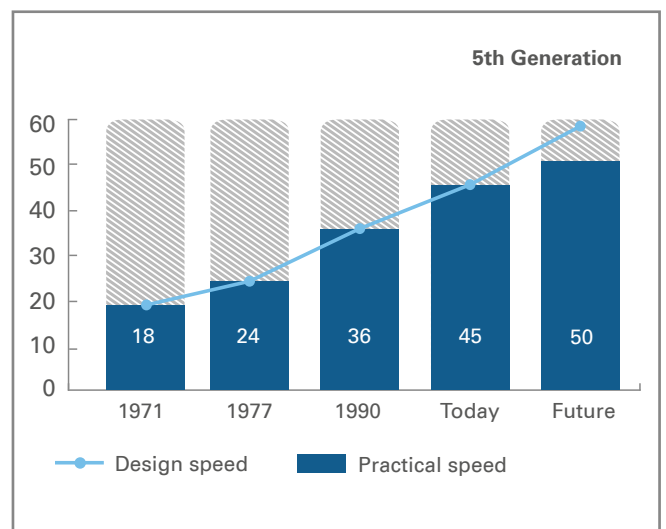
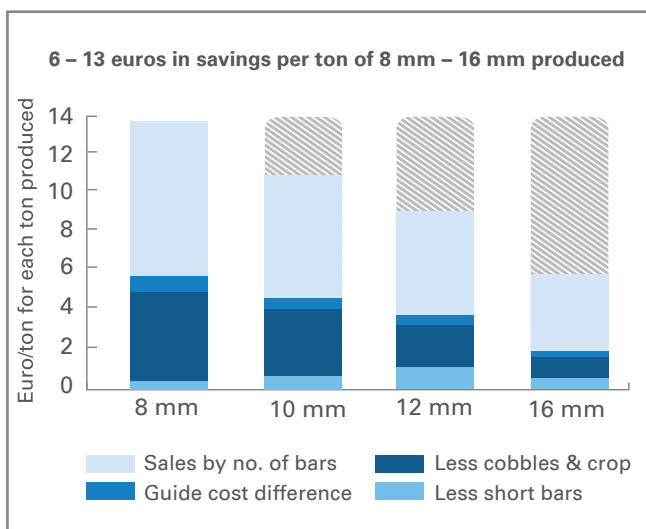
THE EVOLUTION OF HSD®

SMS Meer started the development of HSD® in 1971. Since then, speeds have constantly increased from 18 m/s in the

first installation to current tests at 50 m/s. This allows for productivities of up to 120 t/h for the full product range (8 mm – 40 mm).

IMPROVED PRODUCT QUALITY

High speed and increased productivity are by far not the only advantages of HSD®: rolling mill operators achieve closest product tolerances as well as optimum bar lengths. They also facilitate rolling management and equipment maintenance at the same time.



HSD® VS. FOUR-SLIT ROLLING

The theoretical slight advantage of four-slit rolling for small sizes, such as 8 and 10 mm, is more than matched by the much higher utilisation of a single strand mill operating at high speed. With HSD®, plant operators minimise production costs due to:

- **Better control of the bar tolerance**, since each line contains a finishing block with much higher tolerances than regular stands. In the case of two to four slitting processes, production is driven by the smallest size bar. This results in bars that are, on average, larger than needed. As products are usually sold by the number of bars, rolling with close tolerances results in considerable yield advantages.
- **Lower guide costs** as HSD® eliminates the need for slitting boxes and twister guides.

- **Less cobble and crop end losses and less trial bars** thanks to easy operation of the HSD® system, while multi-slitting of small sizes requires demanding and delicate set-up work.
- **Less short bars** due to the fact that there is only one short bar per billet, while slitting produces as many short bars as there are strands.
- **Considerably higher yield** as there is only one bar per cooling bed notch. Multiple bars per notch generate overlapping and misalignment which affect the downstream cold cutting, counting and bundling operations.

Depending on the bar sizes, the savings achieved with HSD® can amount to several million euros per year. Rolling mill operators benefit from a fast return on investment and minimised operating costs.

EXACTLY THE RIGHT LENGTH - AT ANY SPEED

One main advantage of HSD® is the sophisticated cut-to-length shear at the cooling bed entry. SMS Meer developed a solution that cuts all product sizes at any speed. The shear cuts bars from 5.5 mm to 40 mm at speeds of 2.5 m/s up to 50 m/s. Thanks to dedicated control mechanisms, the system delivers tight cutting tolerances even at maximum speed.



SOFT BREAKING-ROLLS FOR FLAWLESS BAR QUALITY

The key to efficiently discharging bars onto the cooling bed is a sensitive pressure setting of the pinch rolls. SMS Meer utilises a proportional valve that individually regulates the pressure, according to the bar's size and surface temperature. The system applies enough pressure to reliably slow the bars down without marking or deforming it. The result: top-notch bar quality.



SMOOTH PRODUCTION PROCESS THROUGH ROTATING CHANNELS

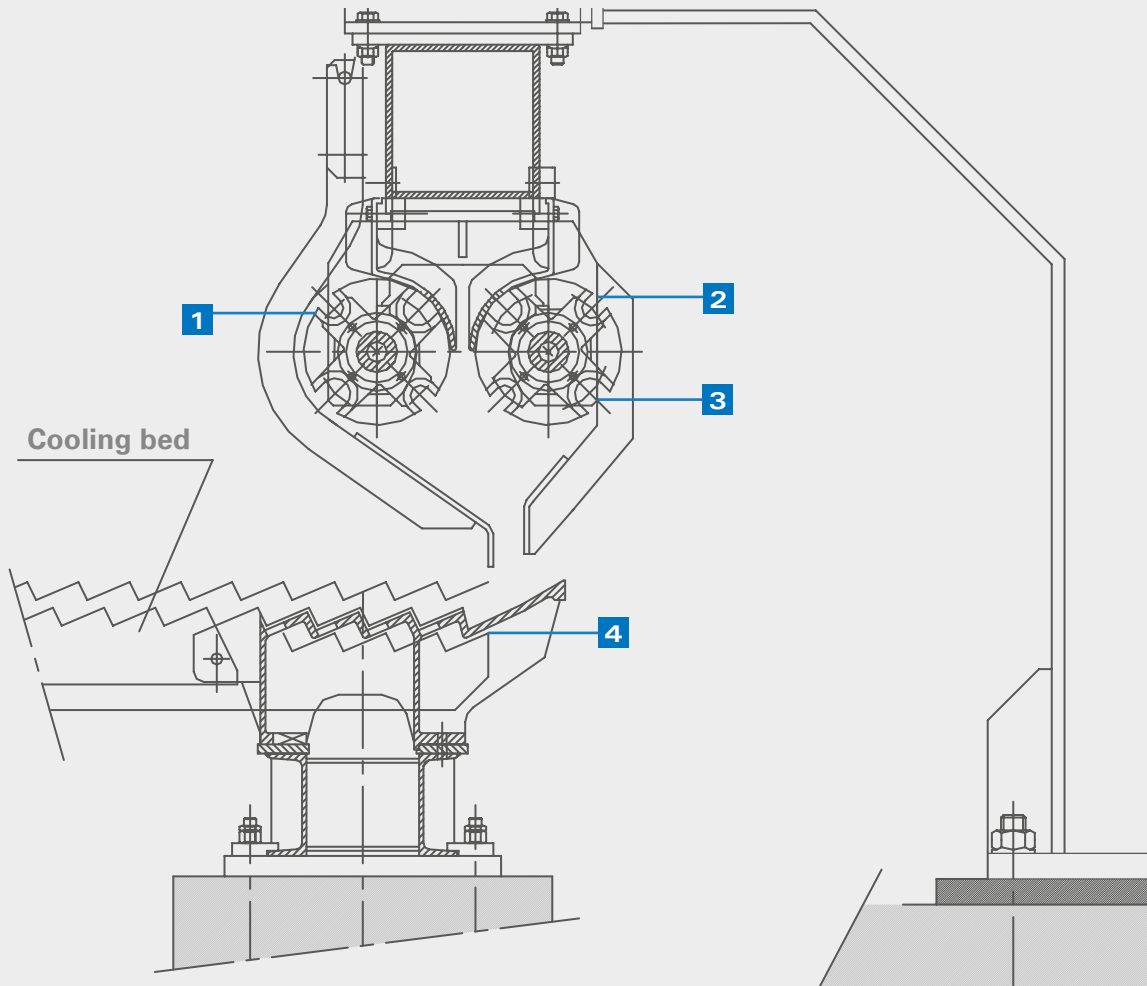
The bars are delivered onto the cooling bed via rotating channels. They are precisely synchronised with the soft bar breaking unit, the cooling bed cycle movement and the bar position monitoring system. This set-up guarantees that only one bar per notch is discharged. Plant operators benefit from trouble-free production and reliable counting of the rolled bars.



HSD®: TECHNICAL DATA

Size range for rebars/rounds	5.5 mm – 43 mm
Temperature range	500 °C – 900 °C
Speed range	2 m/s – 50 m/s
Cooling bed length	54 m – 102 m
Single HSD® capacity	Up to 100 t/h approx.
Double HSD® capacity	Up to 200 t/h approx.
Steel grades/Standards	DIN 488, NBR 7480, BS 4449, ASTM-A615-A706, GB 13014, GOST 10884, KSD 3504, IS 1786

HSD® - ADVANTAGE OVER CONVENTIONAL PROCESSING



- 1 High and consistent operational speed (8 mm @ 45 m/s)
- 2 From dia. 5.5 mm to 43 mm without equipment changes

- 3 Always one bar per notch (better counting)
- 4 5,000,000 tons per line (2 drums) without the need for spares due to wear

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MEETING your EXPECTATIONS

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