Multipurpose slipform paver

Slipform Paver SP 500
Versatile all-rounder in concrete paving

Flexibility is the main hallmark of the SP 500, for the multifunctional slipform paver is capable not only of producing concrete slabs of up to 6.0 m in width and 400 mm in thickness for motorway or airport construction, but also of paving small and large concrete profiles, such as curbs or traffic barriers. But that’s not all: the SP 500’s wide range of applications is enhanced even further by a large number of options, such as hydraulically or electrically driven vibrators, dowel bar inserter, finishing equipment, pivoting legs or wireless 3D control. Its modular design enables the paver to be fully configured to customer-specific requirements, and components to be easily retrofitted at a later date.
The SP 500 is eminently suitable for the high-quality concrete paving of country roads, motorways, airports, railway tracks and all kinds of concrete profiles.

The slipform paver has also stood the test in special applications for complex tunnel construction, and when used with the innovative 3D technology.

The hydraulically telescoping machine frame enables standard paving widths ranging from 2.0 m to 6.0 m – and even beyond 6.0 m at the customer’s request.

The modular design of the SP 500 also enables concrete pavements with a camber to be produced without difficulty.

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**Tie bar inserter**
The tie bar inserter can be used to place tie bars into the pre-compacted concrete at the sides of the concrete slab. Their purpose is to securely connect two adjoining concrete slabs.

**Vibrators**
Vibrators use high-frequency vibrations to compact the concrete, thus expelling any air voids from the construction material. The SP 500 is optionally equipped for use with a maximum number of 16 hydraulic or 18 electric vibrators.

**Slab paving mould**
The slab paving mould is of solid steel design, forming the concrete to the specified profile by means of the machine weight. It additionally produces an even, smooth surface. Inset slab paving moulds are available in many different working widths. The array of moulds on offer for the paving of concrete slabs covers widths ranging from 2.0 m to 6.0 m and thicknesses of up to 400 mm (standard).

**Spreading plough / Spreading auger**
A spreading plough or spreading auger is used to evenly spread the previously delivered concrete across the entire working width. Both spreading devices can be extended in width by means of a modular system.

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Multipurpose machine for all kinds of concrete pavements

Offset and inset paving combined in a single machine

In addition to paving concrete slabs, the SP 500 can also be used to pave high-quality concrete profiles in offset application. Whether standardized or customized concrete profiles need to be produced – most diverse profile moulds are on offer for traffic barriers, curbs, curb and gutter profiles, canals, water gutters and narrow paths. The range of applications is broadened further by options such as a trimmer, concrete feeding via belt conveyor or auger conveyor, and three-track or four-track design. It goes without saying that the paver’s modular design takes account of customer requirements also in offset paving: additional components can simply be retrofitted in a subsequent step. It is this very flexibility that makes the SP 500 such an economically efficient machine.
Experienced staff convert the slipform paver from inset paving to offset paving in no time at all right on the construction site.

Ideal in restricted space conditions: compared with inset paving, the machine frame is turned about 90° in longitudinal direction for offset paving applications.

As the offset mould can be mounted on the left or right side, the concrete mixer truck always travels with the moving traffic.

Offset paving can be effected in transverse direction if, for instance, a heavy mould is used that is mounted far to one side of the main frame.
3D control for economical concrete paving

Wireless 3D control systems will drive the future of professional concrete paving. In addition to higher paving accuracy, it offers yet another major advantage: establishing the digital terrain models is much more cost-effective than the surveying and installing of stringlines. The SP 500 masters the state-of-the-art construction method with superior ease: in the course of the last decade, it has successfully completed numerous projects, such as the first European railway track built using 3D technology. We have taken great care to test the SP 500’s compatibility with the 3D control systems of leading suppliers, thus ensuring a high degree of operational reliability. In addition, our own experts are working on continuously improving and perfecting the 3D systems.
Heavy-duty machines bearing the hallmark “Made in Germany”

At our German main production plant in Windhagen, we create the basis for a long and successful machine life.

It is guaranteed by highly qualified staff and high manufacturing quality ensured by state-of-the-art, mostly computer-controlled manufacturing methods.

In extensive testing procedures, our strict quality control attests only first-class workmanship “made in Germany”.

Wirtgen applications specialists are present on the job sites of customers around the world to ensure that their requirements are incorporated in the SP 500’s further development.
Best-in-class quality: Concrete slabs

For durable concrete pavements

- Concrete spreading by means of a spreading auger in a country road project
- Surface finish using a finishing beam and super smoother
- The SP 500 is mastering its job with great ease: perfect concrete surface at an airport

Wirtgen slipform pavers – in operation around the globe for thirty years

The SP 500 slipform paver is the ideal candidate for the fast and economically efficient production of all kinds of high-quality concrete slabs. Its modular design enables standard paving widths from 2.0 m to 6.0 m, as well as paving thicknesses of up to 400 mm. A spreading plough or spreading auger ensures homogeneous distribution of the concrete, while the sophisticated levelling and steering control system guarantees accurate paving results. Dowel bars or tie bars are inserted in a fully automatic process, if required, without interrupting the paving process. The SP 500 thus offers everything it takes for the construction of traffic arteries with a high percentage of heavy traffic, airport runways, and highly stressed industrial surfaces.
Wirtgen has many years of experience in paving concrete tunnel floors under extremely restricted space conditions.

Its modular concept enables the machine design of the SP 500 to be precisely customized to the application at hand.

We have modified the design of, for instance, the concrete feeding system, paving mould or paving screed to precisely fit specific, challenging applications.

A large number of successfully completed projects make the SP 500 a true specialist in underground concrete paving.
A job for true experts:
Slab track

Wirtgen has played a vital role right from the beginning in driving the development of the so-called “slab track”, which serves as a stable foundation, for example, for high-speed trains. The paving of slab track is very similar to the inset paving process. The SP 500 is capable of paving a “slab track” in any given shape. As high forces act on the rail structure, the rails are firmly embedded in concrete rather than in “loose” ballast. A steel reinforcement is usually laid to strengthen the track, and the SP 500 then produces a concrete slab with a specific cross-section that needs to adhere to specifications with pinpoint accuracy. Arguments in favour of the ballastless type of construction are durability, suitability for heavy-duty operation, precise rail positioning and ease of maintenance.
Ease of transport and quick conversion enable the SP 500 to complete different jobs on different job sites in the course of a single working day.

Curbs, curb and gutter profiles, small or high traffic barriers, canals of all kinds, rainwater gutters and narrow paths are paved with economic efficiency.

Following conversion to an offset paver, the SP 500’s narrow dimensions enable it to be used also on those sites where space is limited.

The paving mould can be mounted on the left or right side depending on requirements – concrete is delivered via a belt or auger conveyor.