

Concrete Slipform Paving Manual.

# **Curb, barrier, sidewalk and multipurpose applications**



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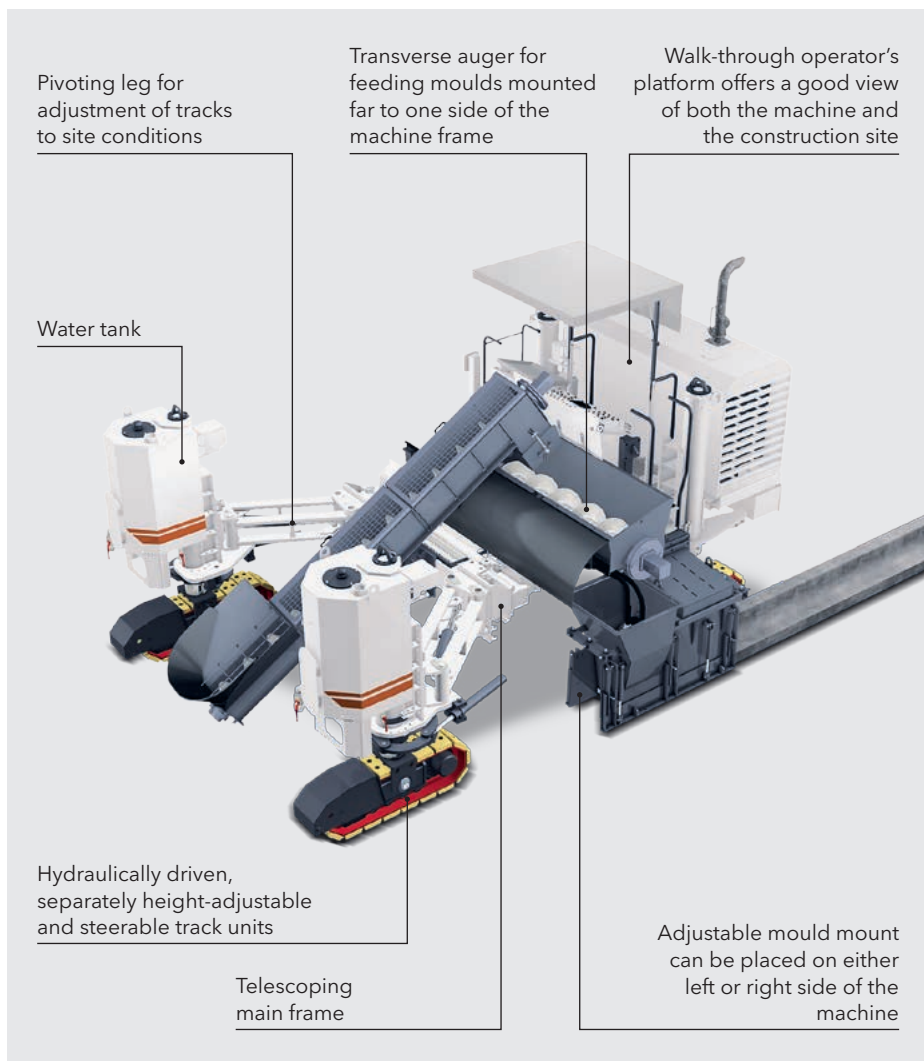
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# 1 Basic design of multipurpose slipform pavers

## 1.1 PAVER COMPONENTS



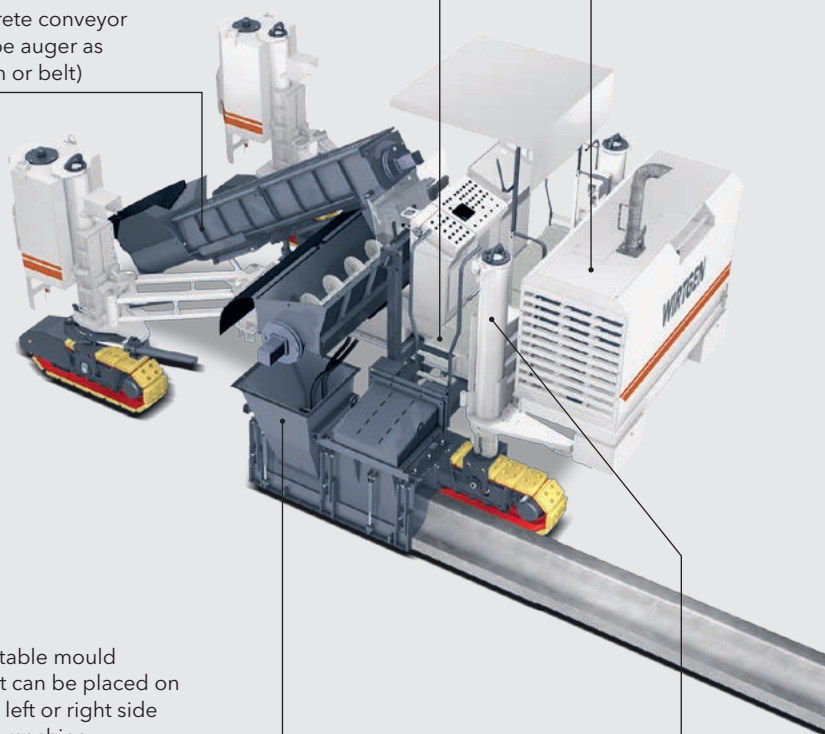
Concrete conveyor  
(can be auger as  
shown or belt)

Heavy-duty  
main frame

Power unit

Adjustable mould  
mount can be placed on  
either left or right side  
of the machine

Machine post with  
lifting cylinder shown  
telescoped to one side



## 2 Machines and application examples

### 2.1 MACHINE MODELS AND PERFORMANCE RANGES

#### 2.1.1 Slipform paver SP 15/SP 15i

This slipform paver from WIRTGEN is suitable for curb, curb and gutter, barrier, sidewalk and other offset applications. It can be modified quickly on site to pour from either side.

The machine's compact design ensures ease of transport.



	Slipform paver SP 15	Slipform paver SP 15i
Paving width *	up to 1.8 m/5'11" inset	
Max. offset height	1,300 mm/4'3" offset	
Engine rating	92 kW/ 123 HP/125 PS	95 kW/ 127 HP/129 PS
Operating weight**	9.8 - 13.0 t/21.600 - 28.500 lbs	
Number of tracks	3	
Travel drive	hydraulic/tracks	
Offset mould	yes	

\* = Please consult factory for special paving widths and options  
\*\* = Weights depend on machine configuration and working width



2.1.2 Slipform paver SP 25/SP 25i

The SP 25/SP 25i is also used mainly for offset applications. Moulds can be mounted on the left or right side of the machine. When pouring offset, the standard three-tracked machine is capable of placing concrete slabs at widths of up to 1.80 m (5'11"), while the four-tracked model can pave at widths of up to 2.50 m (8'2"). The machine's maximum paving width

when paving inset is 2.50 m (8'2") - or 3.50 m (11'6") when used with a special adapter. Customized modifications additionally permit to pour a multitude of special applications or widths.



	Slipform paver SP 25	Slipform paver SP 25i
Paving width*	up to 3.5 m / 11'6" inset	
Max. offset height	2,000 mm / 6'7" offset	
Engine rating	118 kW / 158 HP / 160 PS	115 kW / 154 HP / 156 PS
Operating weight**	13.0 - 20.0 t / 28,700 - 44,000 lbs	
Number of tracks	3 (optional 4)	
Travel drive	hydraulic / tracks	
Offset mould	yes	

\* = Please consult factory for special paving widths and options

\*\* = Weights depend on machine configuration and working width

# 4 Preparation of the base

## 4.1 THE BASE OF CONCRETE PROFILES

Concrete profiles should always be placed on top of a stabilized or compacted base. This may be either stabilized topsoil or a base layer of crushed stone, possibly with an underlying additional frost blanket. Depending on the specification and intended use, however, the base may also be cement-stabilized.

Stabilized soil or a base layer of crushed stone is generally suitable as a base for curb and gutter profiles or narrow slabs, whilst a base layer is the preferred base for concrete safety barriers.

Base of profile	Curb and gutter	Bicycle path / Narrow slab	Concrete safety barrier
Soft, unstabilized subsoil	suitable to a limited extent	suitable to a limited extent	suitable to a limited extent
Stabilized soil	well suitable depending on load	well suitable depending on load	unsuitable
Crushed stone	well suitable depending on load	well suitable depending on load	unsuitable
Asphalt	suitable	suitable	suitable
Cement-stabilized or hydraulically bound base layer	well suitable	well suitable	well suitable



Paving a concrete profile on a base of crushed stone



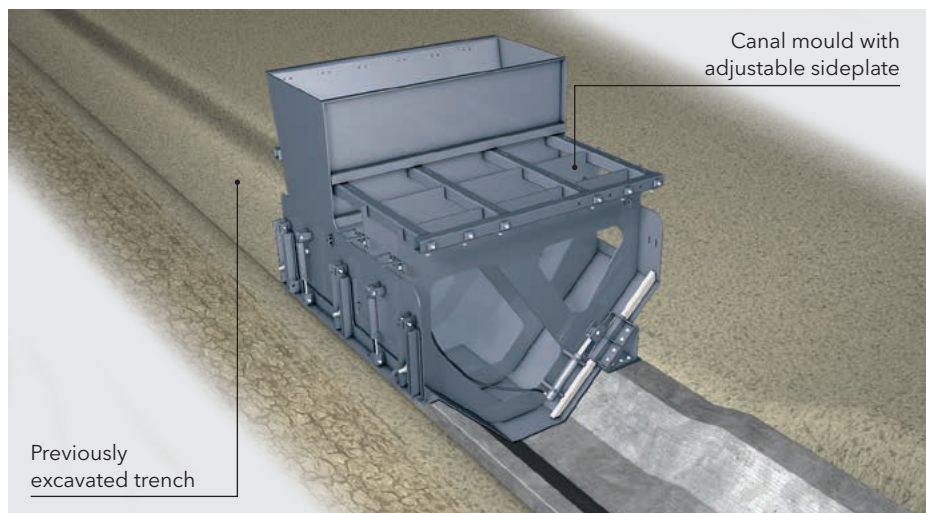
Paving a concrete safety barrier on an asphalt base

## 6 Concrete slipforming / Offset moulds

### 6.5 SPECIAL OFFSET MOULDS



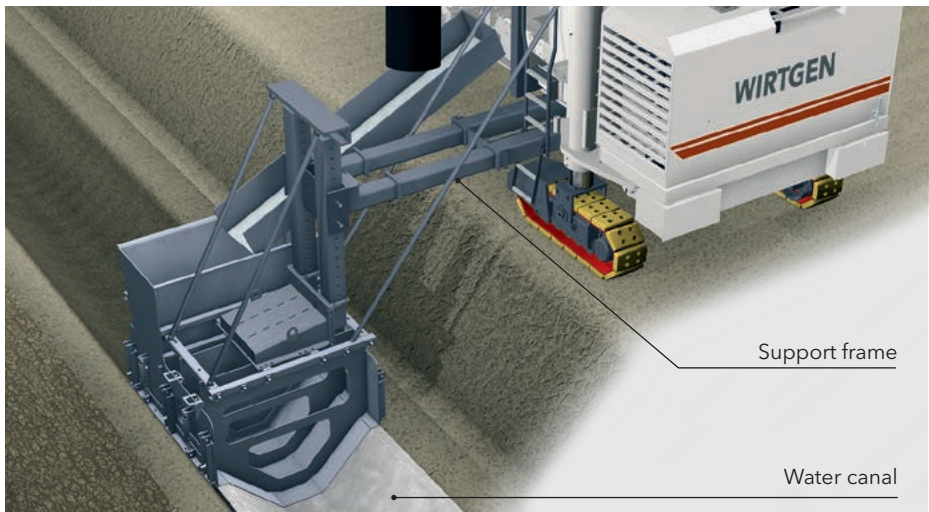
The hydraulically height-adjustable sideplates permit easy adjustment to different depths. The sideplates always precisely adjust to the contour of the trench.







The surroundings of the construction site – like the hillside shown on the left – sometimes prevent the paver from driving right up to the paving site. This special design with modified support frame and chute enables paving of a water canal at a significant offset from the machine. A counterweight should additionally be fitted on the opposite side of the paver.



## 7 Concrete compaction

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### 7.5 POSITIONING THE VIBRATORS

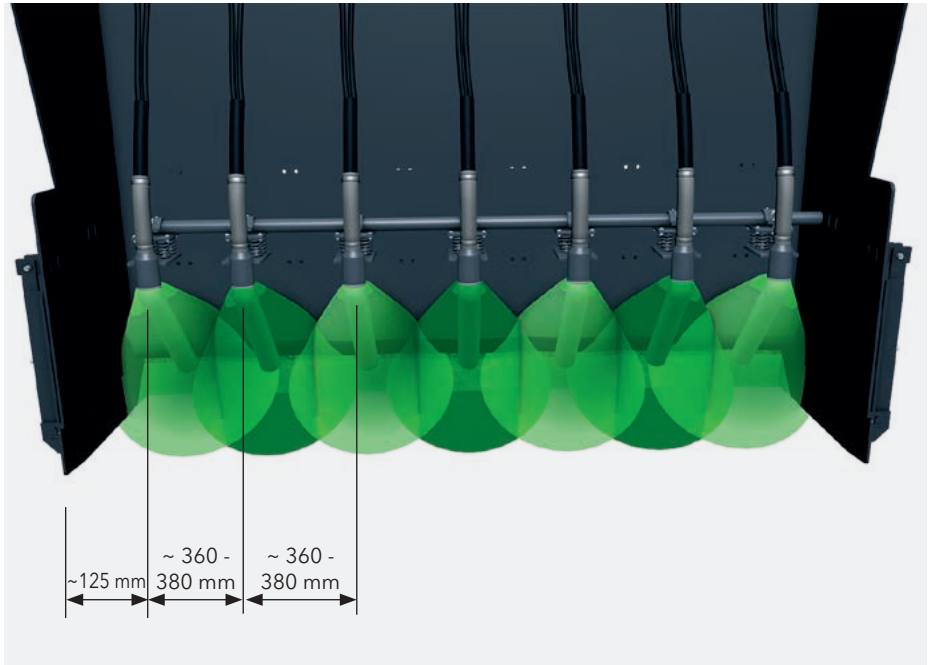
#### 7.5.2 Slab paving

**The following applies for slab paving applications:**

- > Position the vibrators in front of the mould.
- > The first vibrators on the left and right are usually installed at a distance of around 125 mm (5") from the side of the mould. The remaining vibrators should then be installed at intervals ranging from 360 mm to 380 mm (14" to 15").
- > It is vital to maintain a consistently high filling level of concrete in the compaction zone in order to ensure high quality of compaction and evenness.
- > The concrete mix needs to be compacted uniformly and fully across the entire cross-section of the slab. To ensure adequate compaction, adjust the internal vibrators at the same height and to the same direction across the entire paving width.
- > Install the vibrators at regular intervals in order to prevent non-compacted areas remaining in the concrete.



The vibrators are arranged at regular intervals



Overlapping effective vibrator radii