



**SPIERINGS**  
MOBILE CRANES

**SK 599-AT5**

# TECHNICAL SPECIFICATIONS

## SPIERINGS HYDRAULIC FOLDING CRANE

### Crane

Mobile crane constructed according to the trolley-tower crane principle, whereby all mounting and dismantling steps are pre-programmed in a Siemens PLC according to the proven Spierings concept.

The three-section telescope mast is a solid wall construction. Construction and steel grade together ensure the highest possible rigidity and stability. The four-section folding jib has a lattice construction mainly of high-tensile fine-grain steel. Hydraulic cylinders ensure the interlocking of mast and jib, the erecting and telescoping of the mast and the positioning of ballast, counter jib and fourth jib section. The mounting and dismantling process is fully automated. The jib is designed to unfold only above 16 metres. The construction is designed to allow 10,000 mounting and dismantling cycles.

A Detroit VM diesel engine mounted in the superstructure drives three hydraulic pumps so that the various simultaneous crane movements do not affect each other. By building in this diesel engine, it is not necessary to keep the carrier engine running to operate the crane functions. The use of the second engine considerably improves the noise level and fuel consumption. The upper frame includes an in-built 15 kW electrical generator set for the cranelighting, heating, the lift and a built-in central lubrication system for the superstructure.

#### Crane cabin:

- There is a comfortable crane cabin fitted with, among others, a user-friendly control panel and a display showing load and outreach data.  
A hatch behind the seat gives access to the cabin. The crane cabin can be mounted to the outer mast (cabin height 15,1 m) or to the inner mast (on 2 masts at 25.4 m, on 3 masts at 34.15 m). The height can be adjusted by merely switching one nut. The cabin operator accesses the cabin by means of a lift.  
The mounted operator's seat can be adjusted according to weight, has various positions and can be moved both lengthways and transversely to facilitate access.  
Standard accessories in the cabin also include a radio/CD player, an intercom, an electric heater (3000 W), a fire extinguisher and five sunblinds.
- A radio remote control (HBC) to operate the crane.
- The possibility to raise the jib by 30°.
- The jib is fitted with four 1000 Watt gas discharge lamps.

## TYPE SK 599-AT5

Lifting capacity	: 117 tm
Max. load	: 9000 kg (at 13,0 m)
Max. outreach	: 50 m (1900 kg)
Max. lifting height	: 56,3 m (raised 30°)

### Truck

Specially designed truck chassis for optimum torsion rigidity. As a result of the special construction, the maximum lifting capacity can be reached with minimum ballast, thus making extra ballast unnecessary. The truck has hydro-pneumatic suspension with level control to correctly adjust the truck height when travelling on the road and on the building site (12 cm more ground clearance). The truck has three storage boxes. The two-circuit braking system is fitted with drum brakes and a built-in central lubrication system for the truck.

The truck carrier has independent rear axle steering; the two rear axles can be steered independently from the two front axles. The third (rigid) axle is then retracted automatically.

The automatic ZF gearbox has built-in retarder to relieve mechanical brakes. Cruise control is also provided.

Eight special fiberglass plates (31 kilos each) with eight steel underlay frames (28 kg each) are transported on the back of the truck.

The crane can be moved once it has been totally erected.

#### Truck cabin:

Modern steelplate cabin with futuristic design provided with effective, rust-resistant primer and finished in high-quality Autocolor Turbo top coat. The cabin has plastic cladding and is mounted vibration-free to the chassis. It includes heated outside mirrors, side-view mirror, electrically-controlled windows, interval switch, heating, air suspension driver's seat, operator-friendly and functional semicircular operating/instrument panel, a radio/CD player, spacious storage compartments and a 220 Volt socket. Crane and truck have undergone anti-corrosion treatment using a three-layer, two component paint system. First layer: Epoxy primer; second layer: Chrome-free Epoxy primer-white; final layer: Autocolor Turbo-plus top coat.

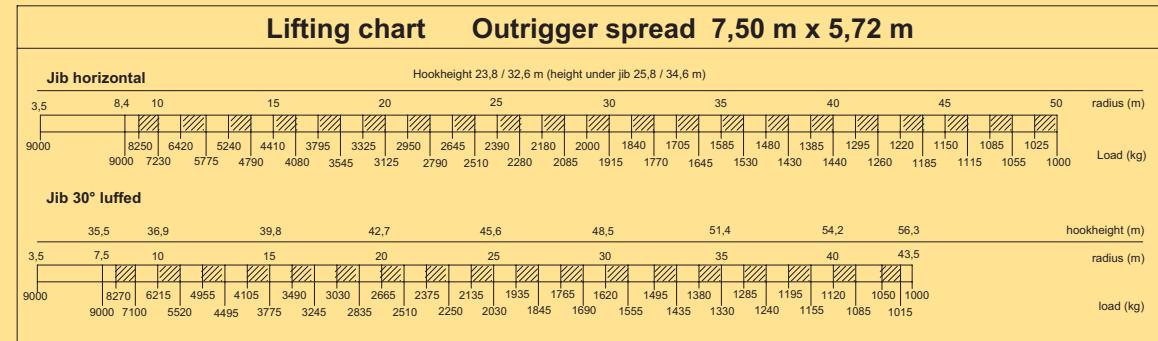
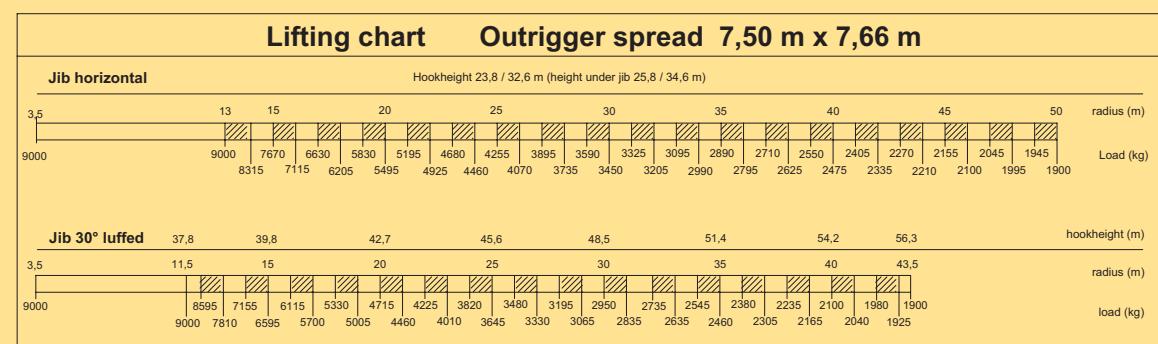
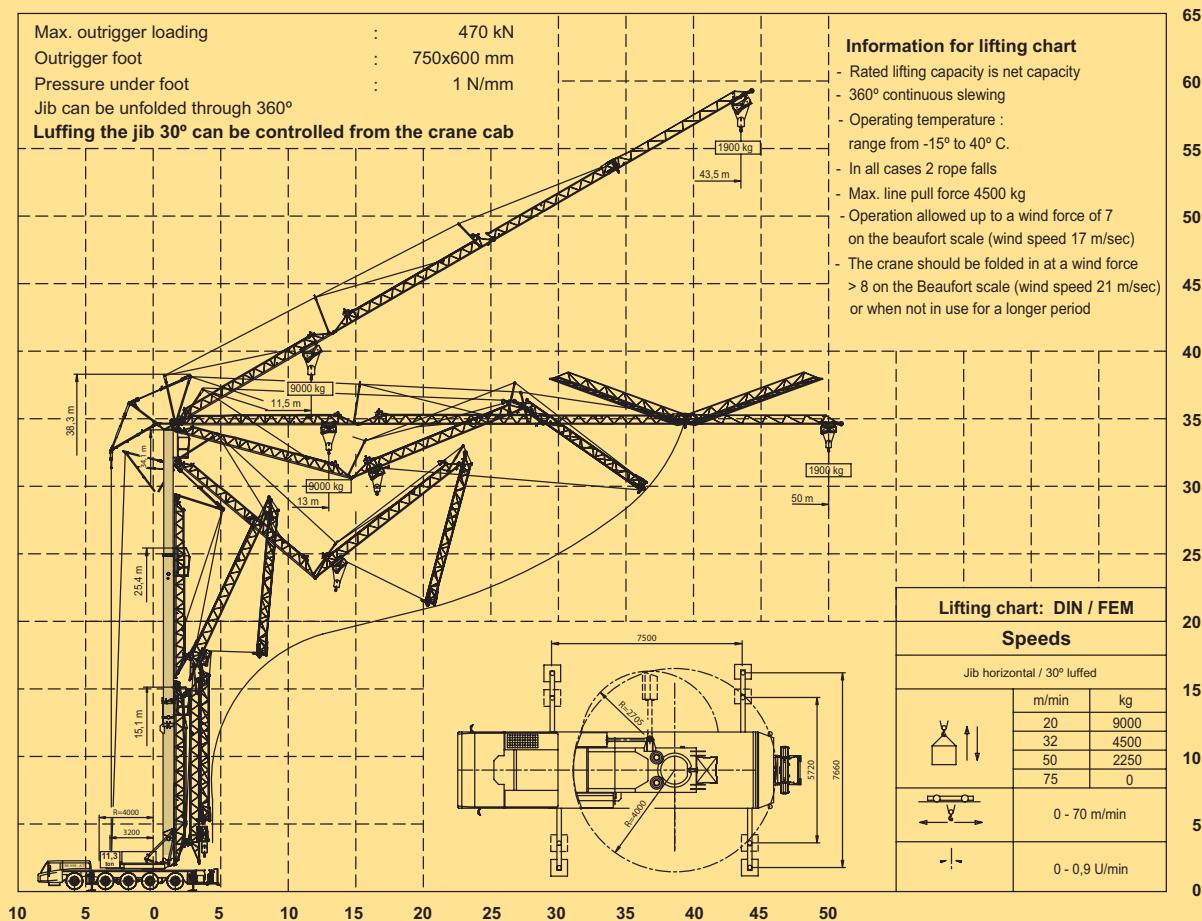
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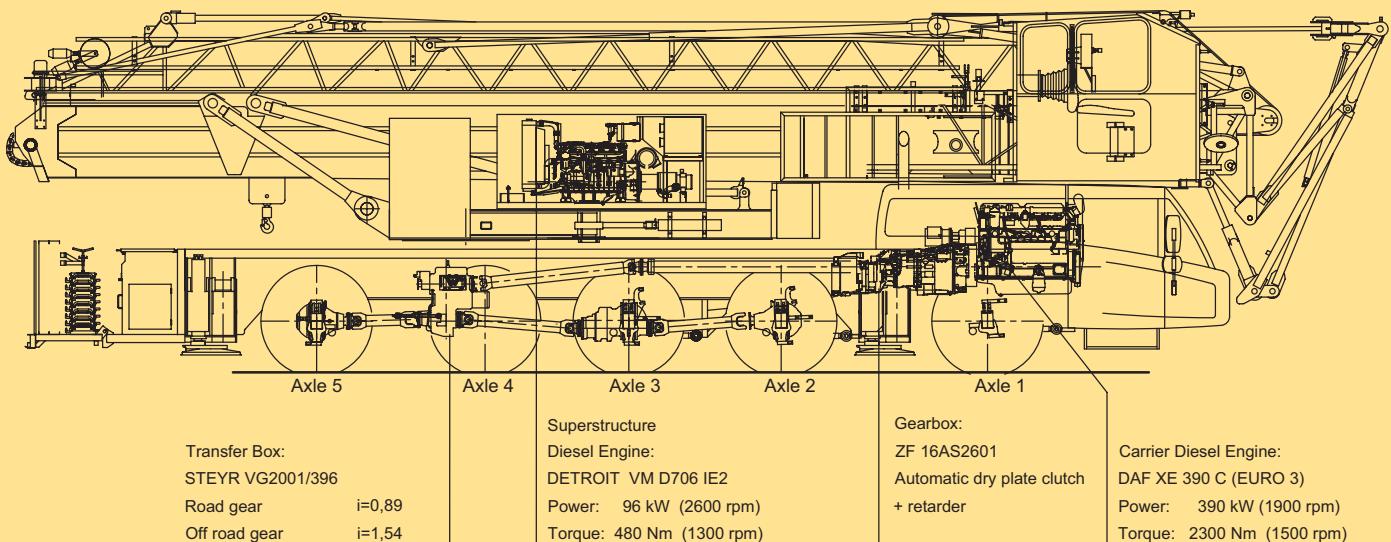
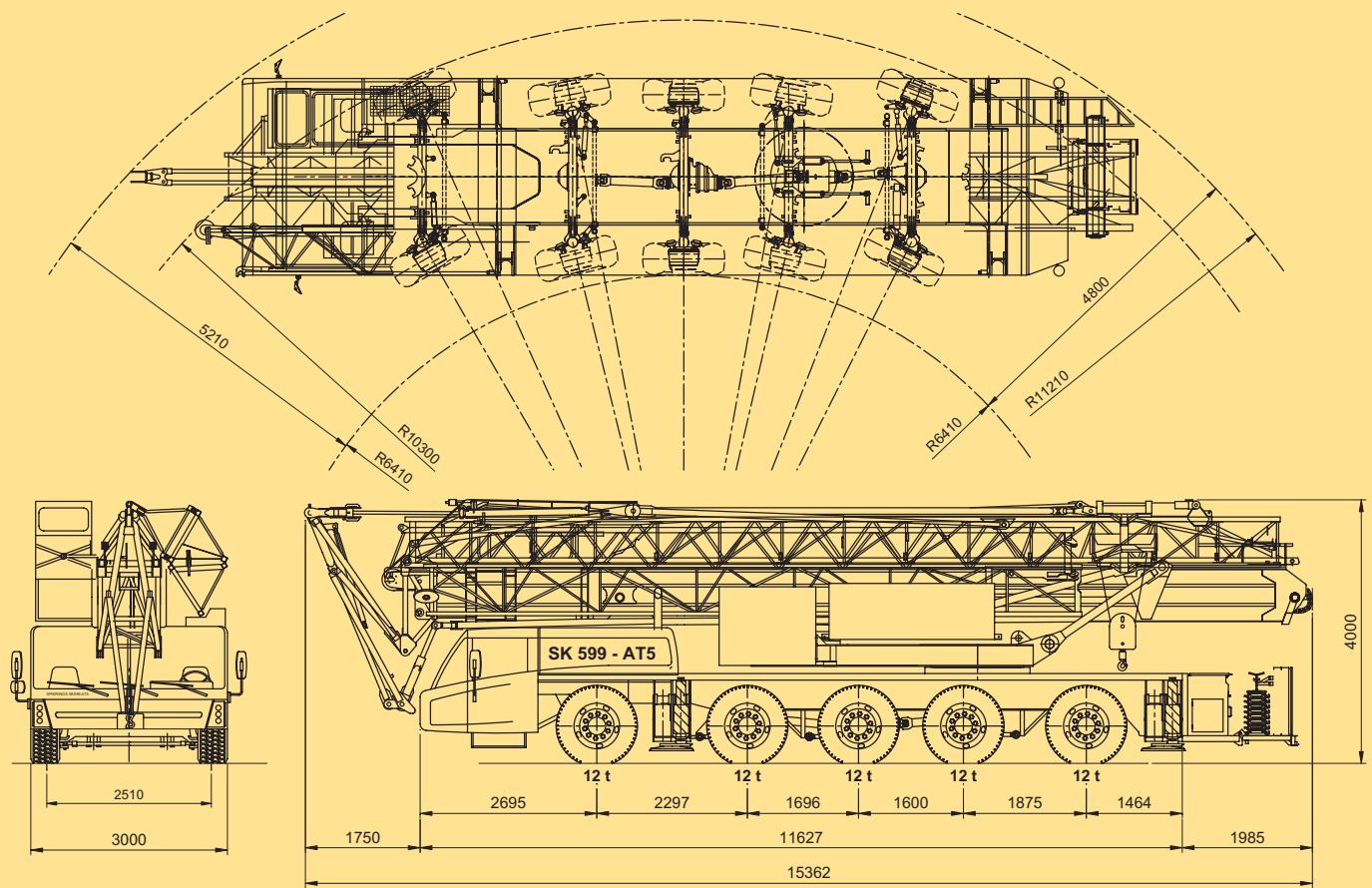
### Crane

- A camera on the trolley. The trolley camera is fitted with a zoom option. The image is displayed on a colour monitor in the crane cabin.
- Airconditioning for the crane cabin.

### Truck

- A rear-view camera system on the truck.
- A side-view camera system for extra safety.
- A DAF engine exhaust silencer with integrated spark arrestor.
- Airconditioning for the truck cabin.
- Four steel plates instead of fiberglass. A supplementary auxiliary-crane is also mounted to lay out the plates.





Axle 1 : Steer axle  
 Axle 2 : Steer drive axle (i=6,35)  
 Axle 3 : Drive axle, not steering (i=6,35)  
 Axle 4 : Steer axle  
 Axle 5 : Steer drive axle (i=6,35)

Superstructure  
 Diesel Engine:  
 DETROIT VIM D706 IE2  
 Power: 96 kW (2600 rpm)  
 Torque: 480 Nm (1300 rpm)

Gearbox:  
 ZF 16AS2601  
 Automatic dry plate clutch  
 + retarder

Carrier Diesel Engine:  
 DAF XE 390 C (EURO 3)  
 Power: 390 kW (1900 rpm)  
 Torque: 2300 Nm (1500 rpm)

Tyres : 445/75 R22,5  
 Suspension: hydro-pneumatic on all axles; stroke cyl. : 247 mm  
 Max. speed carrier : 83 km/h  
 Min. speed carrier (engine at 1000 rpm) : 1,6 km/h  
 Overall weight : 60000 kg

Changes subject to modifications

**SPIERINGS**  
*a new generation mobile cranes*