

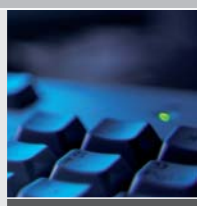

PSI Technics

2 000500 999000

# INDUSTRIAL POSITIONING SYSTEMS

## The FLP6000ASC Skew Control Software Enhances the Performance of Cranes

**Optional add-on for Positioning Solution System**

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# INDUSTRIAL POSITIONING SYSTEMS

## The FLP6000ASC Skew Control Software Extends the Lifespan of Industrial Facilities

**PSI Technics' FLP6000ASC (ASC = Advanced Skew Control)**

**The FLP6000ASC add-on software for the Positioning Solution System is an extremely accurate positioning solution that eliminates skew.**

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The FLP6000ASC controls logistics vehicles by using two independent drives for bridge cranes and, in part, for stacker cranes (lifting table). It comprises skew control as well as an optional trolley and hoist control. The linear control features lessen wear and dampen load vibrations, preventing or reducing undesired oscillations to a minimum. Skew caused by friction or the slipping of a single axis, uneven loads, load changes or wear of drive wheel rails increases the machine's rate of wear.

The FLP6000ASC add-on for the Positioning Solution System ensures accurate positioning in the shortest possible time, simultaneously reducing facility wear, because it not only guarantees a synchronized motor operation but also a straight, consistent movement of the bridge.

**Improved Positioning:**

>> Travel distances up to 800 m (e.g., using SICK sensors)
>> Maximum velocity up to 8 m/s
>> Maximum acceleration up to 10 m/s²

**Sample Application**

*Long-span bridge cranes used in the aluminum and steel industries.*

**FLP6000ASC Advantages**

>> Compensates for and eliminates skew by adapting motion path planning while the machine is moving
>> Fast, integrated closed-loop positioning
>> Additional trolley or hoist positioning
>> Reduced facility wear
>> Extremely fail-safe system
>> Replaces Trimble ASC systems without the need for additional adjustments
>> Communication protocols: ASCII, Modbus, DF 1
>> Industry-standard components

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# INDUSTRIAL POSITIONING SYSTEMS

## The FLP6000ASC Skew Control Software Increases Flexibility

Aside from the FLP6000ASC, the complete **system configuration** includes two distance meters that are used as absolute measuring systems and are installed on each crane axis. The FLP6000ASC controls the independent motor and gear components of each axis. The FLP6000ASC thus enables the synchronized operation of both absolute encoders, eliminating accidental sampling-related skewing.

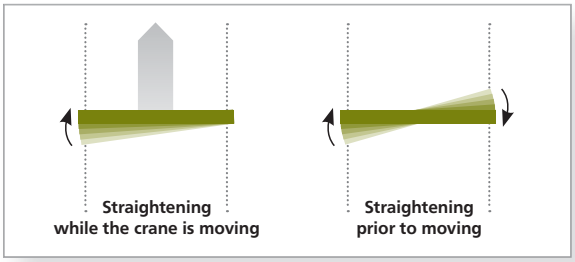
The axis retains the proper adjustment during all stages of movement. The FLP6000ASC can even eliminate manually introduced skewing by straightening the bridge.

### Improved solution for new and existing installations

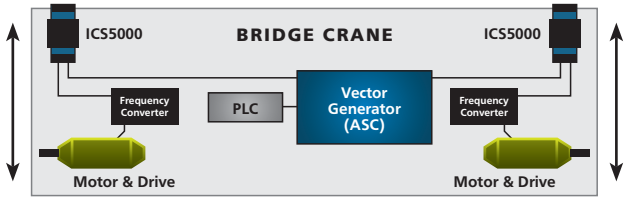
*The Positioning Solution System is an ideal replacement for Trimble applications and fine-tunes skew control in industrial facilities*

### Bridge Crane Alignment

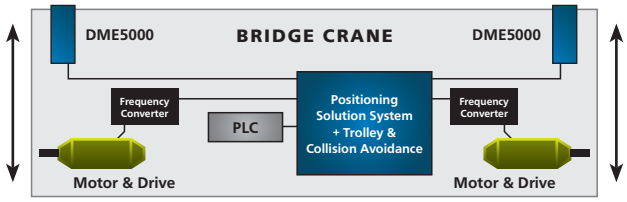
*The FLP6000ASC can adjust the skewing of bridge cranes prior to crane operation and while the crane is en route to its destination. For particular applications, deliberate skewing can be introduced.*
*Example: A bridge crane lowers steel plates onto a production line that is positioned diagonally to the crane path. In this case, skewing can be introduced to ensure that the crane is moving parallel to the production line and lowers the plates at the correct angle. This can be defined in the vehicle's motion path profile.*




***BEFORE***
***(Discontinued Trimble ICS5000 and ASC product lines)***




***AFTER***
***(Using the Positioning Solution System)***




**Required system components:**

- >> Control unit
- >> FLP6000ASC software
- >> Two distance meters
- >> MA6000MC Motion Analyzer available as an option
- >> FLP6000EOS Energy Optimizing Software available as an option

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# INDUSTRIAL POSITIONING SYSTEMS

## The FLP6000ASC Skew Control Software Increases Motion Path Efficiency in Industrial Facilities

**Precision**
The FLP6000ASC uses a fail-safe control-loop positioning approximation algorithm to precisely control the acceleration, deceleration and the velocity required to synchronize the movements of both sides of the bridge crane with millimeter accuracy.

**Flexibility**
Once the FLP6000ASC receives a target command from the PLC or host computer, the system positions the crane. Values for acceleration, velocity and positioning tolerances can be changed at any time while vehicle is en route to its destination. These values take immediate effect and have no impact on final positioning.

**Reliability**
The supplied distance meters exceed the most stringent industrial standards for environmental specifications. The water resistant, dust-proof housing protects against shock, vibrations and electro-magnetic interference.

**Productivity**
Compared to other positioning systems, the Positioning Solution System creates an optimized travel profile that dramatically reduces travel times, in most cases by up to 30%. The self-learning Positioning Solution System software automatically determines the vehicle parameters, reducing machine commissioning time.

**Progress**
The FLP6000ASC is currently the most advanced skew control system for industrial machines. Since it does not require mechanical skew control components, the FLP6000ASC reduces investment costs and extends the operational life cycle of your machines.

**Sustainable Profitability – Your Advantage:**

Customers benefit from these key Positioning Solution System differentiators through a significant increase in efficiency.

The Positioning Solution System's inherent time-optimization functionality substantially enhances productivity and throughput. In addition, the system extends the facility's lifespan, expands product life cycles and cuts production costs.

**THE RESULT: Reduced costs and increased performance**

**Optional Positioning Solution System software add-ons:**
>> FLP6000MC and/or FLP6000ASC
>> FLP6000MA
>> FLP6000EOS


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