



## Our low friction concept

Our low friction concept comprises five separate innovations and solutions, each carefully designed to maximize production, optimize fuel and energy consumption, and drastically reduce maintenance costs. Together, these five solutions provide an unbeatable combination that allows SP to offer heads with totally unique properties and advantages that maximize your profitability.

Our low friction concept provides you with a highly productive and easily operated head, whether used for thinning, heavy final felling, or harvesting hard wood. The unique feed roller mounts ensure an agile, narrow head that makes light work of harvesting even in dense stands without unnecessary wear on the head or damage to standing trees. Parallel to this, when harvesting large-diameter trees, the rollers provide maximum carrying capacity, able to handle even the heaviest of stems effortlessly, ensuring efficient harvesting and maximum profitability.

Moreover, SP heads can be mounted on all carriers, regardless of brand, and without the need to replace or modify the machine's existing control and measuring system.

## Five innovations for maximum efficiency:

**The delimiting knives** boast long, especially designed cutting edges, ensuring delimiting by cutting rather than snapping. This minimizes friction during delimiting, thereby increasing speed and productivity. The delimiting knives are cast in high-strength steel for maximum durability and service life.

**Proportional pressure** ensures that the head automatically always applies the optimal delimiting knife and feed roller clamping pressure on the stem, regardless of diameter. This minimizes friction between stem and head, ensuring the fastest and smoothest feed possible. Individual settings for different tree species further maximize production.

**LogHold** is a patented system and a further development of the proportional pressure solution that further minimizes friction. LogHold enables the delimiting knife clamping pressure to be lowered even further without any risk of dropping the stem. Should the stem start to slip, LogHold reacts instantaneously, raising the clamping pressure sufficiently to hold the stem in the optimum position. The increase in diameter before Log Hold reacts is set individually for each tree species in the control system.

**Proportionally angled feed rollers** ensure that the angle and carrying capacity of the feed rollers change in proportion to the stem diameter. When the feed rollers are fully open for processing an extremely large diameter stem, the feed rollers are set at their widest angle and, as a result, provide



maximum carrying capacity for the stem. This means that the clamping pressure to the delimiting knives can be minimized, which in turn reduces friction and enables the head to feed the stem quickly and easily. When the feed rollers are closed, this unique solution provides an incredibly narrow and agile head with compact dimensions.

**Optimal hydraulics** mean that pressure drops are minimized by means of the size and design of each hydraulic component, such as the motors, valve blocks, couplings, and hoses. This generates high energy efficiency and the lowest possible fuel consumption per cubic meter timber harvested, with power, force, and productivity maximized during feeding, delimiting, and cutting. Due to the fact that the heads in SP's low friction concept only have two feed roller motors, the number of hoses, couplings, and bends can be significantly reduced, which also results in minimal hydraulic losses. The low pressure drops also reduce heat generation in the hydraulic system, which increases the service life of many machine components due to less wear and lower maintenance needs.

The advantages  
of our low friction  
concept



ALWAYS AHEAD

## Maximizes

- Feed speed
- Performance
- Productivity
- Profitability
- Uptime

## Minimizes

- Friction between head and stem
- Head wear
- Stem damage
- Carrier fuel consumption
- Maintenance and repair costs

