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# Sewing Machines

## Glossary of Terms

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**BALANCE WHEEL** - Also known as a hand or fly wheel. Located on the right side of the sewing machine and helps regulate the rate of movement of the sewing machine parts.

- › **Power Plus Wheel** - Large diameter balance wheel that increases slow speed power and control. Comes standard with Ultrafeed™ and Big-N-Tall machines.

**BOBBIN** - A spool that sits in the lower part of the machine holding the thread that makes the underside of a stitch.

**CARRYING CASE** - Sailrite's Ultrafeed™ Sewing Machine comes in an instrument quality wooden cabinet covered in high quality black vinyl and reinforced with durable plastic corner caps. Carrying handle and latches are strong enough to easily handle the weight of the machine.

**CLUTCH MOTOR** - The tried and true standard for the production sewing industry. Motor runs continuously, and sewing machine is started with a treadle activated clutch and stopped by a heel operated brake. Sailrite modifies the motor by adding a smaller motor pulley to slow top end speed and increase low speed power and machine responsiveness.

**COMPOUND FEED** - A walking foot and needle feed system that provides optimal control of fabric. The needle penetrates the fabric and then moves back with the material and walking foot.

**EUROPEAN POWER** - Powered for use outside the United States. These sewing machines come with a 220 -240 VAC motor and power cord with a standard continental Europe plug end.

**FEED DOG** - Metal teeth that travel in an oval pattern within the needle plate opening to grip, feed, and release the fabric being sewn. Each rotation provides incremental fabric movement while stitches are being created.

**FOOT CONTROL** - Allows for consistent variable speed control of the sewing machine's motor.

**GIB HOOK** - A hook that rotates around the cage that holds the bobbin thread under the machine. The hook catches the loop of thread formed during needle retraction and further carries the thread to create the loop or knot - ultimately forming a stitch. Sailrite's patented "scarfed" hook reduces the likelihood of the needle striking the hook if the fabric should be shifted in such a manner to bend the needle.

**JACK DRIVE (IDLER PULLEY)** - A steel machined pulley with oil-less bronze shaft bushing (double pulley drive) within a two belt drive assembly designed to increase power and belt life as well as improve belt tracking.

**KNEE LIFT** - A linkage often found on industrial sewing machines that makes it possible to lift the presser foot of a sewing machine with your knee.

**MC-SCR MOTOR** - A motor control, silicon-controlled rectifier that is compact, powerful, and offers greater slow speed power and control than a clutch motor. Power is consistent up to a top speed and is controlled with a high quality potentiometer foot pedal.

**MECHANICAL WALKING FOOT** - A foot that moves forward and back in time with the feed dog to ensure that layers of fabric are consistently moving together through the machine.

**NEEDLE BAR STROKE** - The range of movement of the needle up and down. In general, a longer stroke makes a sewing machine more capable in thick fabric assemblies.

**NEEDLE (THROAT) PLATE** - The flat surface below the presser foot that provides an opening for the needle to go up and down and allows the feed dog to reach the fabric.

**NEEDLE POSITIONING LEVER** - Allows for left, right, and center movement of the needle. Zippers are easier to install and often do not require separate zipper feet on Ultrafeed™ machines.

**NEEDLE SYSTEM** - Although there are hundreds of different needle systems, every sewing machine has a compatible needle system that is specific to that machine. It is important to know your sewing machine's needle system when you purchase needles.

**PORTABASE** - Allows a commercial sewing machine, like the Sailrite 111 and Sailrite Professional, to be portable.

**POSI-PIN CLUTCHING SYSTEM** - Sailrite's patented direct-drive mechanism that transfers 100% power from the balance wheel to the machine's needle. This unique system keeps the needle from stalling on heavy fabrics.

**POWER STAND** - Table designed for industrial sewing machines. A motor is typically mounted beneath the table.

**PRESSER FOOT** - A foot or feet that hold(s) the fabric down as it is being stitched.

**PRESSER FOOT TENSION** - Adjustable spring tension on the presser foot to hold material captive.

**SERVO MOTOR** - Acts similar to a clutch motor except the motor only runs when engaged resulting in a quieter, lighter, more energy efficient motor with variable speed control. However, slow speed power in heavy fabric assemblies is poor. Sailrite does not offer Servo motors. See the MC-SCR Power System for a much better power solution.

**SHUTTLE** - Generically known as the hook region of a sewing machine.

**STITCH LENGTH** - Adjusts to determine the length of a single stitch from front to back.

**STRAIGHT STITCH** - A line of stitching that appears to be straight and upon close inspection is a series of line (stitch) segments that follow one after the other.

**TAKE-UP LEVER** - Sewing machine part that pulls the thread up, leveraging the tension assembly that applies tension to each stitch knot. Visibly moves up and down.

**TENSION ASSEMBLY** - Dial adjusted spring pressure device that applies friction to the upper sewing thread creating the proper stitch quality (tightness).

**WELTING TUNNEL** - A feature built into the presser foot on Sailrite Ultrafeed™ machines that simplifies piping installation. The tunnel holds captive the beading edge of the piping to ensure proper stitch placement.

**ZIGZAG 2-POINT (1 STEP) STITCH** - Lateral movement of the needle bar with entry and exit at each extreme left and right of each movement. As the name implies the stitch formation looks like a zigzagging line of thread.

**ZIGZAG 4-POINT (3 STEP) STITCH** - Lateral movement of the needle bar with entry and exit at two points along the movement and at the extreme left and right end of each movement. The resulting stitch is of the zigzagging pattern but upon close inspection each zig or zag is three distinct line (stitch) segments.