SPOTLIGHT ON: BALL MACHINES

Does a ball machine belong on your pitch?

by Jeff Alger, founder and president, Seattle Sport Sciences, Inc., makers of the SideKick® ball machine

Coaches have always designed training to focus on specific objectives. Rules are adapted, and so are the tools: cones, dribbling hurdles, flags, kicking against a wall, and all manner of goals and balls, to name a few. The question really isn't "Does training technology belong on a soccer pitch?" That's been settled. The real questions are: "What technology, for what purposes, and how best to use it?"

A unique option is a ball-serving machine, commonly called a "ball machine" or "cannon." It has capabilities, costs, and limitations unlike any other tool. Used properly, it can directly target the most important skill: skill with the ball. It can also help with training efficiency and program-wide objectives.

Ball machines are widely used in almost every other major ball sport, because decades of experience have shown that they work. "Muscle memory" skills are acquired the same way in all sports, soccer included: through quality repetitions in concentrated periods of time. For complex skills, it might take weeks or months of conventional, player-to-player training to achieve the same number of repetitions as in five to ten minutes with a ball machine.

The benefits of a ball machine depend on the objectives and needs of the coach, player or program. Let's look at some examples:

Individual skills and small-group tactics

The most obvious uses of a machine are to develop player skills, individually or in small groups.

First touch. No skill differentiates "the best from the rest" like first touch. Ball machines can be particularly valuable for training:

- finishing using all body surfaces
- defensive clearance
- distribution on the first or second touch, and
- positive first touch.

Goalkeepers. A machine does not take the place of shots from the foot; it complements them by providing a different kind of training. In addition to refining technique, a ball machine can help develop:

- balance, explosiveness, and body control
- range of coverage of the goal mouth and the penalty area
- judgment and "read" on the flight of the ball, especially crosses and long-range diving, swerving or knuckling shots; and
- tactical judgment: collect, parry, or prepare to react to a shot?

Small group tactics in the penalty box. A good ball machine provides consistent, accurate service where and when it is needed. When teaching small group tactics in the penalty area, "coachable moments" are more frequent, so less time is needed to make coaching points, freeing up time for other priorities—like having players work on serving the ball!

Organization-wide programs

The potential benefits of a ball machine to an overall program are not quite as obvious, but by themselves they can sometimes justify the investment.

Skills assessment. There is an old saying in quality management theory: "If we can measure it, we can improve it." If you have statistically valid data, you can make decisions about what (and who) is working, where there are opportunities to improve, and where each player fits in an overall progression of skills. To have useful data on how a player plays the ball, you have to have repeatable, consistent service. This is where a high-quality ball machine shines.

Predictability and flexibility. Many youth programs, especially high schools, are limited by an uneven level of skill from player to player and a high ratio of players to trainers. With a ball machine, the quality of training is no longer limited by the skills of a coach or other players to serve the ball, and the same drill can be repeated as many times as needed.

More efficient coaching. Youth coaches typically have to serve the ball to get the right service for the training objective. By putting a player (injured or "rotated out") or volunteer in charge of serving the ball with a machine, the coach can stand next to the players being trained. This results in more instruction in less time. Coaches using ball machines often comment on being able to see more of what is actually happening because they don't have to look down to serve. A ball machine can also act as a "coach multiplier" by permitting those who cannot serve the ball well—due to injury, age, or skill level—to nonetheless help players improve.

Player motivation and creativity

Players love ball machines. They get more quality opportunities in less time, and there are fewer interruptions due to errant serves, meaning more time spent in the flow of training. The player's touch or shot-stopping is not limited by who is providing the service; if

SERVICE

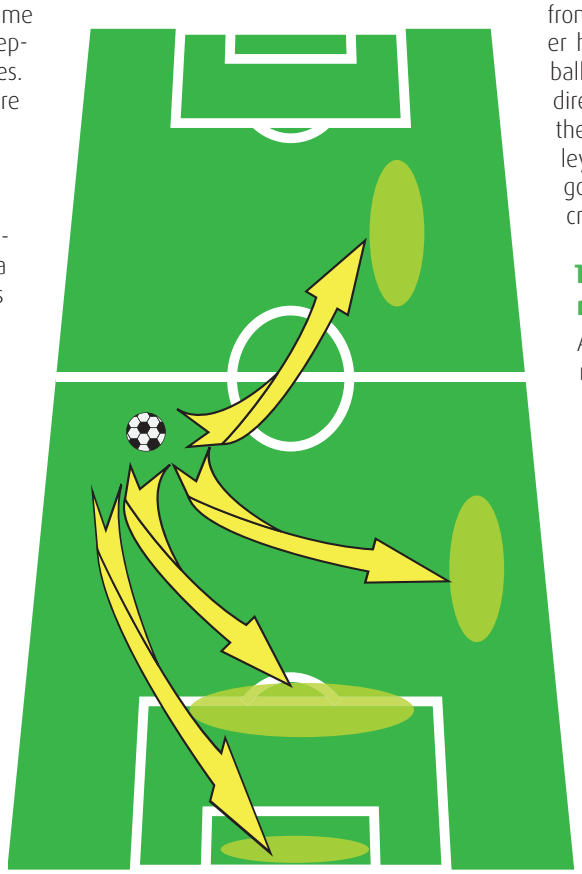
Jeff Alger holds a USSF B license and a Masters in Sports Management degree. The SideKick® ball machine from Seattle Sport Sciences (seattlesportsciences.com) is used by professional clubs, colleges, high schools and youth programs around the world.

a goalkeeper wants to face an EPL-worthy knuckling shot, the machine can provide it, as many times as desired.

Consistent service also encourages creativity. If a player expects to get only a few of a particular serve, the player tends to develop only one option for dealing with it. A player who gets, 10, 20, or 50 repetitions quickly starts experimenting with alternative ways to play the same serve, knowing there will be enough repetitions to master even intricate touches. The result: a higher work rate and more dangerous, creative players.

Examples

Let me bring this into focus with a series of examples, all starting from a single placement of a ball machine, as shown in the figure at right. The ball machine's role can be to develop individual skills in isolation, or as a way to start off play with a particular difficult serve. The value of each scenario depends not on the machine, but the needs of the team, coach, or player.



Driven ball behind defense. From this one ball, you can train

- finishing
- first-touch distribution
- timing and pace of runs
- defensive clearance
- goalkeeper range in coming off the line
- defensive organization of the back line, or
- coordination of back line and goalkeeper.

Switching the point of attack. Play the same ball to the opposite side of the pitch to train another set of skills:

- positive first touch by the player receiving the ball
- offensive tactics that start with switching the field, and
- defensive shifting and cover.

Other skills. The only limit is your creativity. Challenge a goalkeeper to retreat toward his or her line for a long-range shot diving under the crossbar. Drive the ball to the 18-yard-line for strikers with backs to the goal. Point the machine toward the opposite goal to work on long through balls.

Skills assessment. Assessment examples from this position could include a defender having to retreat and head a through ball out to a specific target, an attacker directing the ball to goal or to a cone on the first touch from a run, chest-and-volley from a player whose back is to the goal, or a wing player redirecting a long cross on first touch to a specific location.

Training requirements dictate machine requirements

As with any technological product, the more you have thought through your intended use of the machine, the easier it will be to compare options and evaluate when a more expensive unit is worth the cost. This is especially true when comparing the kinds of trajectories supported by the machine.

Most do not support a driven (backspin) ball, which is by far the most common flight used for passing. If you want to train first-touch skills, you will need a driven trajectory. On the other hand, the most common balls faced by goalkeepers are swerving (inswinging and outswinging) crosses and either swerving or knuckling shots, often at higher speeds. If you want to do both kinds of training, you need a machine that can support both types of trajectories.

To summarize, ball machines are powerful tools with a wide variety of uses. They are best used by coaches and organizations that carefully think through the role the machine will play in training and then buy the machine that supports those objectives.