



Latest Products and Solutions



Sica's dedicated area for research and development

In the field of downstream equipment for plastic pipes, **the Italian company Sica SpA** consolidates its technological leadership in offering advanced solutions that satisfy all the most important needs of the market: **energy savings, high productivity, high level of automation, simple use and maintenance, safe operation and control, and green environment sustainability.**

Sica's 50 years experience and leadership in pipe extrusion is known internationally and is strengthened by **22 patents**. Innovation and customer care have always been the key to success for this medium-sized family run company.

Combo 110K 2x2 Haul-off and Saw

The **Combo 110K** combination machines for **pulling** and **swarfless cutting** of plastic pipes, including PVC-U in the special version presented, have a single frame and a single electric drive unit. The machine can be supplied in **two versions**: with one haul-off and one saw (2x1 model) for **single extrusion lines**, or with two haul-offs and two saws operating in parallel (2x2 model) for **double extrusion lines**. Each haul-off has 2 caterpillars: an upper tilting unit positionable pneumatically, and a mechanically height-adjustable lower unit. The caterpillars have **chains with high-friction, low-wear neutral vulcanized**

rubber pads, and there is also the option for belt haul-off configuration, suitable for handling material particularly subject to the risk of deformation and marking.



Constant pulling power at different extrusion speeds is guaranteed by vector drive systems controlled via a closed-loop control system with a speed transducer. **The cutting units are synchronized electrically with the haul-off.** With the 2x2 version, the two cutting units are driven and controlled independently, enabling the machine to compensate for any difference in speeds of the double-extrusion lines, while their electric drive system ensures **high production rates for short pipes even at fast extrusion speeds.** The Combo 110K will handle pipes of OD 12 to OD 110 mm and has rotary cutting units equipped with knife type tools. The model in the photo also incorporates other special accessories (**Patent Pending**).

The **Combo** range comprises a variety of models differing in terms of the type of obtainable cut and the maximum diameter of workable pipe. In particular, the **Combo 75** processes pipes from OD 12 to OD 75

mm at high extrusion speeds and utilizes a cut-off type circular saw with a swing blade. The **Combo 110D**, on the other hand, handles pipes from OD 12 to OD 110 mm and has a planetary saw equipped with a feeler arm capable of following any ovalization of the pipe, **guaranteeing perfectly formed and regular chamfers around the entire circumference.**

Duet 200 Cutting Machine (Sica Patented)

The **Duet 200** is an innovative automatic inline planetary cutting machine in the Duet series. It cuts and chamfers PP, HDPE and PVC-U pipes up to diameter DN 200, **performing automatically double-cycles of simultaneous cutting at high extrusion speeds.** In addition to the standard model equipped with disc and chamfer, there are also the **Duet/K** (for swarfless knife cut) and **Duet/C** (for chamfering and knife cut without producing chips and dust inside the pipe) versions.

The latter versions are particularly ideal for high productivity PP lines and those producing double-socketed pipes.



The accurate testing performed directly in extrusion lines and continued product development have allowed the Duet models to attain a new standard of performance efficiency and reliability. **The machines are equipped with innovative low-wearing cutting tools that maintain an extremely high quality and consistent cut over time and that reduce drastically maintenance operations.**

The machine's innovative design and **cutting method** are **Sica-patented** and allow the Duet to achieve **elevated hourly production rates**. For example, the Duet 125 version can produce 2000 cut pieces 150 mm long + socket per hour and can achieve an hourly production rate of **over 2300 pipes/hour of length 500 mm long + socket**). The Duet 200 can produce 1650 cut pieces/hour of length 150 mm + socket, and 1250 pieces/hour of length 1000 mm + socket.

Multibell 75 Belling Machine

The **Multibell 75** is an automatic in-line belling machine that sockets by means of an oven with recirculated and thermoregulated hot air; it is designed for double-extrusion lines for **PVC-U** pipe with 16-75 mm in diameter and 1-6 m in length. It can form **solvent cement sockets in a multisocketing process** with external cooling by pre-cooled compressed air and internal cooling by water in the mandrel. **Ring seat sockets** are formed by air-blowing against external molds, external cooling of the socket with water circulation

in the molds, and internal cooling of the socket with water circulation in the mandrel.



In the **Plus** version, the Multibell 75 has a **new pipe handling system for pipes for double-extrusion lines** with productivity that is independent of the extrusion and pipe-feed speed, which makes possible the handling of extrusion speeds of up to 25 m/min **with no waste**, achieving **maximum productivity of 1100 sockets/hour with solvent cement sockets in the 4 pipe version** that processes an external diameter of 32x18 mm. The pipe is heated in a high-capacity thermoregulated hot air oven with a built-in device for the final **positioning** and **alignment** of the pipes; that **guarantees the uniformity of the socket dimensions in multisocketing processes**, thanks to the setting of the pipe portion length to be heated for socket forming, and the **perfect lengthwise alignment** of the pipes after heating and before the forming stage.

Unibell 200JW Plus Belling Machine (Sica Patented)

The exhibited Unibell2 200 JW Plus belling machine represents our new range

of Sica "Unibell J" belling machines for PVC-U pipes (version with Rieber cycle also available). These belling machines **feature new processing technology for socket moulding in pipes, significantly increasing production capacity, taking up less space and reducing running costs**, while offering **operational simplicity** and **reliability**. The exhibited machine processes pipes with a diameter



of 32 mm to 200 mm and a length of 0.5 m to 6 m, achieving productivity for SN4 110 x 3.2 PVC-U sunken waste pipes of 300 sockets/hour with a mechanical mandrel cycle. The side, measuring 1900 mm, has two heating stations and a moulding station. Heating takes place by means of ovens equipped with **short-wave infrared emitters, which only run while the pipe is actually in the heating station and until the heating end temperature has been reached.**

These devices, with their shorter heating times, help to **reduce energy consumption**. The moulding process uses a **Sica patented system** which forms the inside of the socket against the

mandrel while cooling is taking place, using compressed air previously treated with a special thermodynamic cycle as the processing fluid so as to achieve optimal temperature, pressure and hydrometric degree conditions in terms of productivity, socket quality and energy consumption. **Productivity is further increased through the injection of pressurised water mist into the processing fluid.** The mechanical and system devices aimed at quicker and safer pipe format changes are also important; of these, **the Sica patented rapid securing system for the socket moulding unit is particularly noteworthy.**



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