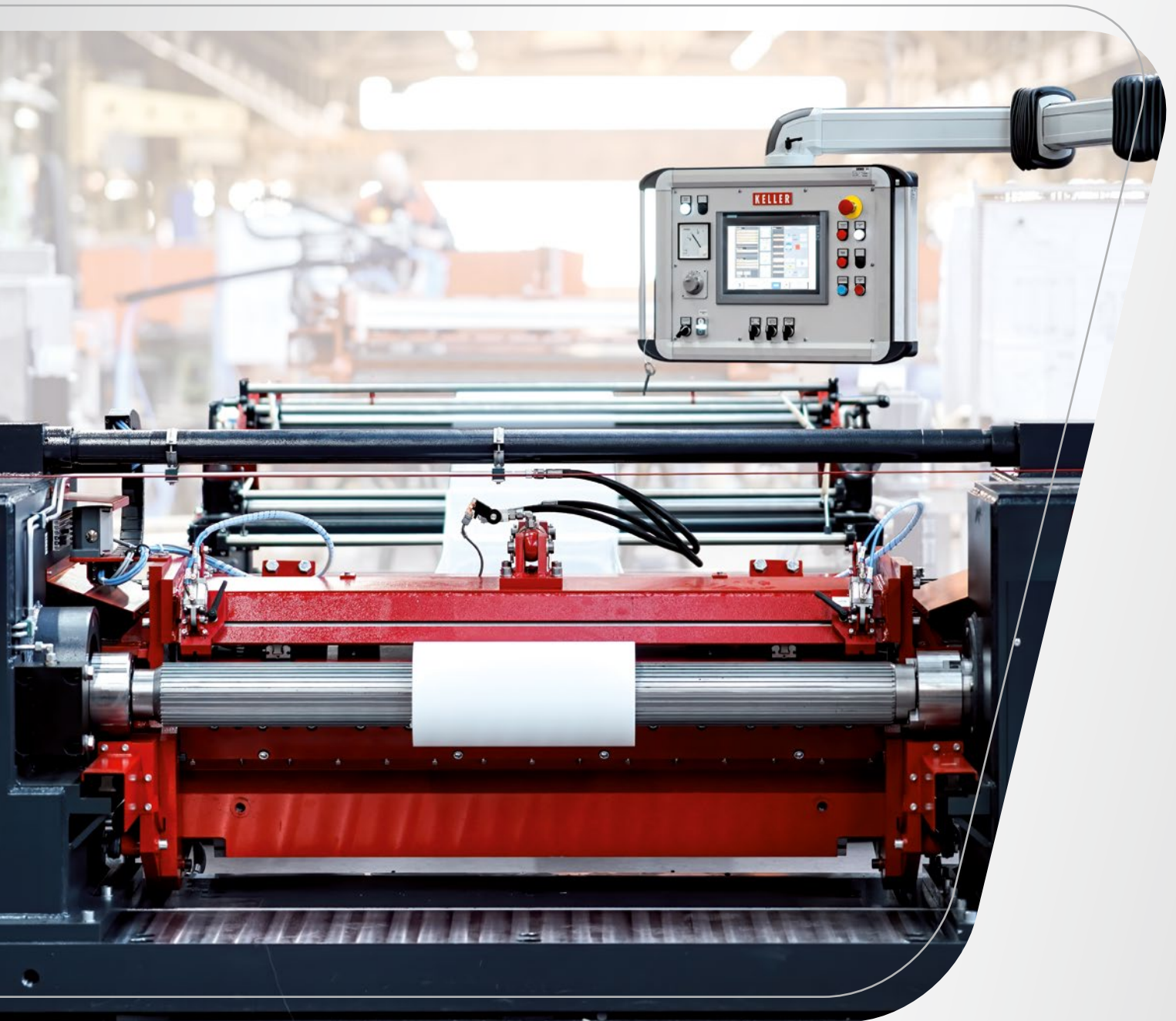


KELLER

intelligent
machinery
solutions

IMS



PTFE Film skiving machines

0.02 mm to 5 mm of highest quality

Highest precision

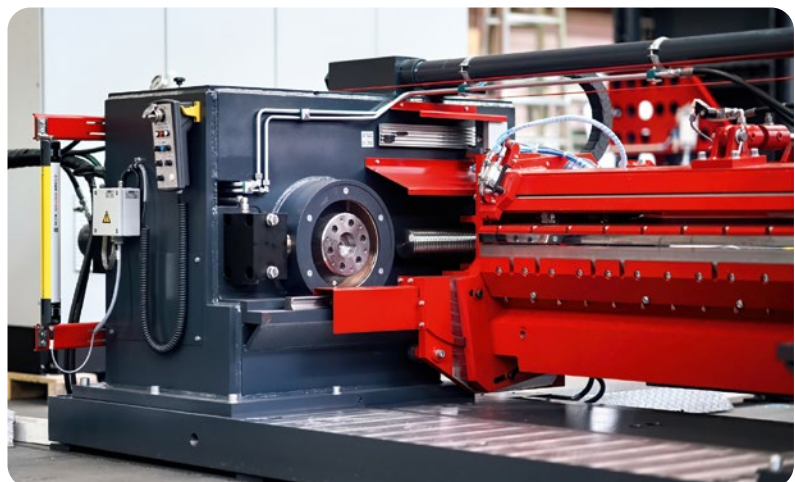


You will always score well with us

KELLER film skiving machines skive PTFE and other plastic materials with similar properties from blocks of up to 1,600 mm length up to a thickness of 0.02 mm.

The two welded supporting units of the machine are mounted on a stable base plate and are connected through a tension rod, forming a frame-like and torsion-resistant structure. The main drive spindle, with flanged gear motor, is located in one of the supporting units. The other supporting unit contains the hydraulically operated clamping spindle. A servo feed drive system moves the knife bar on high-precision guiding rails between the two supporting units.

The servo motor feed system moves the knife bar, supported by the side supporting units by means of two ball screw bearings. The bearing play is removed by a special hydraulic system. In the machine supporting units, special bearings ensure exact guidance totally free from play.



Modern control system

Perfect handling

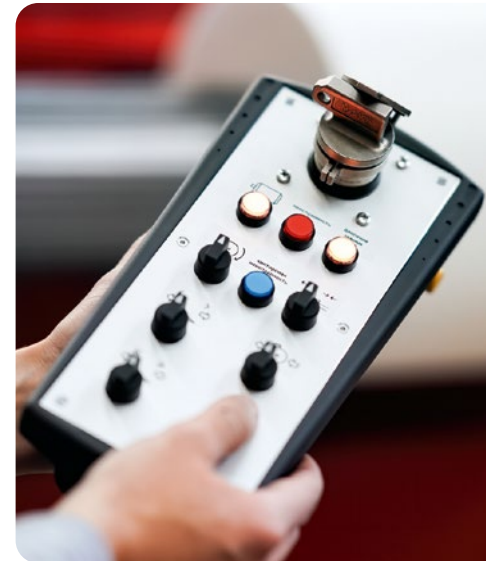
The KELLER film skiving machine is equipped with two operating elements. A manual operating unit for the set-up is provided in the area of the machine supporting unit. This manual operating unit allows for the control of all functions that are necessary for the insertion and tensioning of the skiving mandrel.

The second operating unit, with integrated touch panel, is located on a pivoting arm on the supporting unit containing the drive spindle. Together with the control system, this operating unit allows for a maximum variety of adjustment options for the machine. With this, film thicknesses from 0.02 mm to 5 mm can be produced almost continuously. The minimum adjusting variable is 0.001 mm.

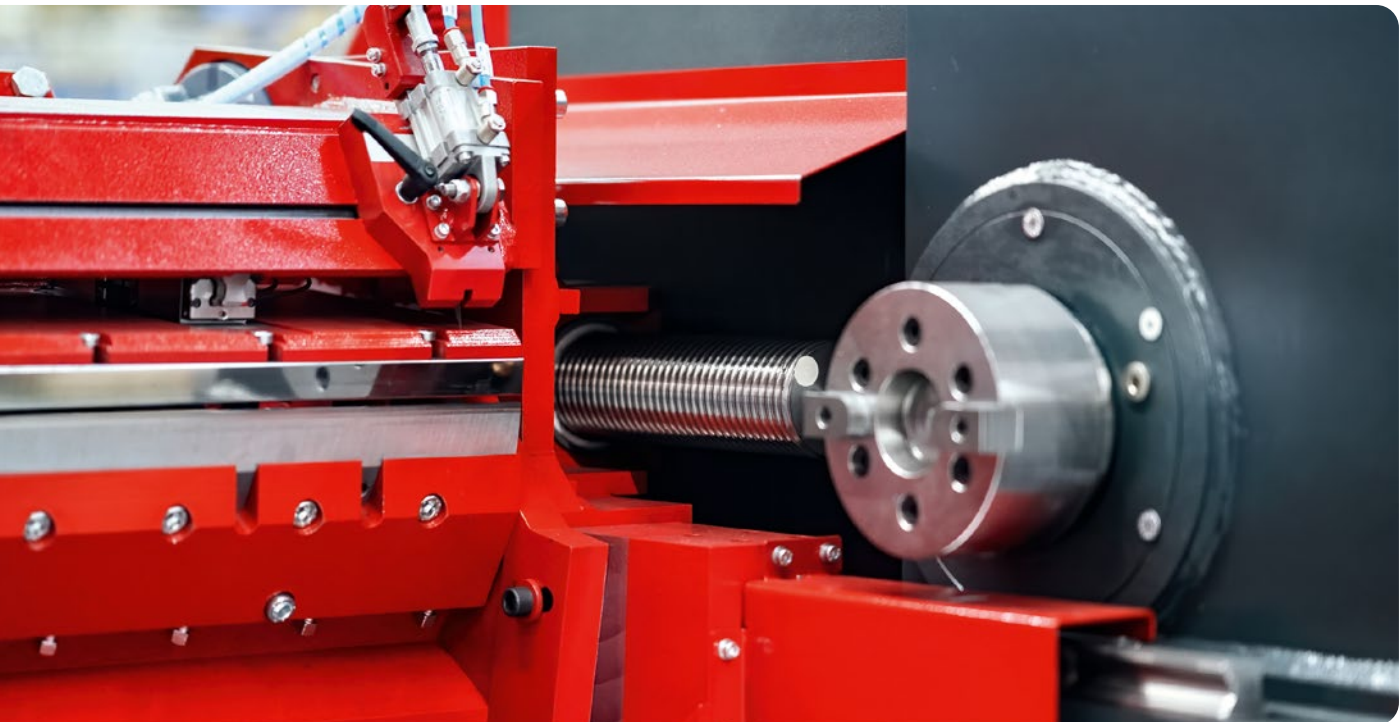
A steplessly operated hand-wheel is installed on the operating surface. This hand-wheel is used to preset the set value of the skiving speed.

The control system offers the option to skive according to preset parameters. This means that, for example, a film thickness and a film length are preset and the machine then independently processes this order.

The two operating units allow for the optimum handling of the machine both for set-up, e.g. inserting the skiving block, and during operation, e.g. when changing the skiving speed or the film thickness. An extension of the control system, giving better repeatability of the film by product-related skiving and reeling programmes, is also possible.



Setting standards worldwide



You can count on this

The knife bar which holds the high-precision cutting knife, consists of a heavy, almost vibration-free steel structure. Knife bars and knife bar holders are adjustable to each other. An adjustment results in a change of the setting angle between knives and skiving round blank. The scribing knives, which are attached to the knife bars, can be pneumatically controlled. A hydraulically operated pressure bar is attached to the knife bar. This pressure bar is positioned on linear steel guiding rails and helps to provide constant conditions during the skiving process. The knife bar with the knife itself is advanced by ball bearing spindles with pre-tensioned and play free nuts. The spindles are driven by two high-precision worm gears that are connected to a servo motor through a coupling shaft. The speed of the drives for the skiving block and the drive of the knife advance are determined by the manually preset skiving speed on the touch panel.

Programs are stored in the control system which, at the preset skiving speed and film thickness, calculate the required speeds of the two servo drives, depending on the diameter of the skiving block which is getting thinner, and transmit these to the drives.

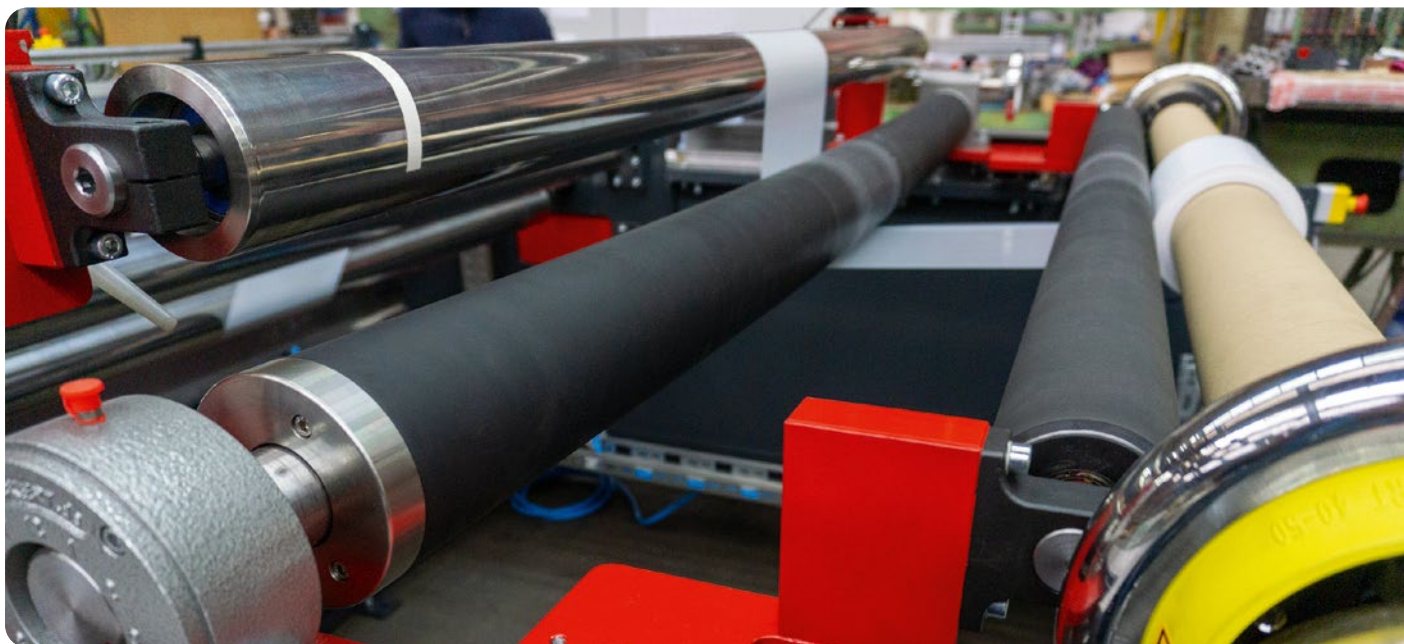
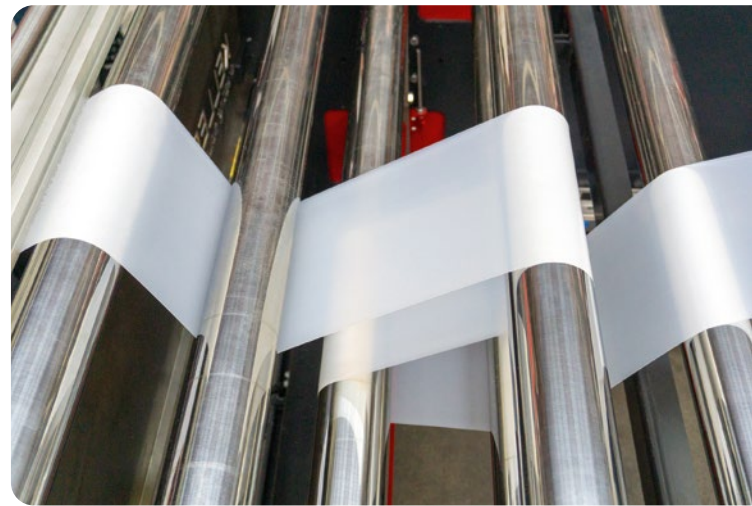
KELLER has been designing film skiving machines for more than 50 years. These machines are working reliably in Europe, North America Japan and China. Therefore, KELLER HCW can look back at long and most extensive experiences with film skiving machines worldwide. The high precision of the KELLER film skiving machines can be largely attributed to their special bearings, which guarantee an absolute vibration-free skiving process even with the thinnest films down to 0.02 mm.

The proven machine type 8 PT 16 is designed for a maximum skiving billet diameter of 800 mm and a maximum skiving billet length of 1,600 mm.

Perfect film reeling

Together with its film skiving machine, KELLER also supplies film reeling equipment which perfectly matches the skived film. The film reeling equipment contains a dancer unit whose pre-tensioning force can be continuously preset on the operating panel. The speed of the reeling drive is ideally regulated in relation to the position of the dancer roll.

With thicker films, the film is tensioned and reeled using a torque control system of the drive. The film tensioning unit is followed by guide rolls, a semi-automatic stretch roll and a reeling unit. In the reeling unit the skived film is reeled onto winding sleeves. The winding sleeves are clamped into a holding device. Bearing caps hold the tensioning device in position and allow the film reel to be easily removed from the machine. An operating panel is installed in the reeling unit containing all relevant components necessary for the operation of the film reeling equipment. The film reeling equipment is equipped with a winding centring device.

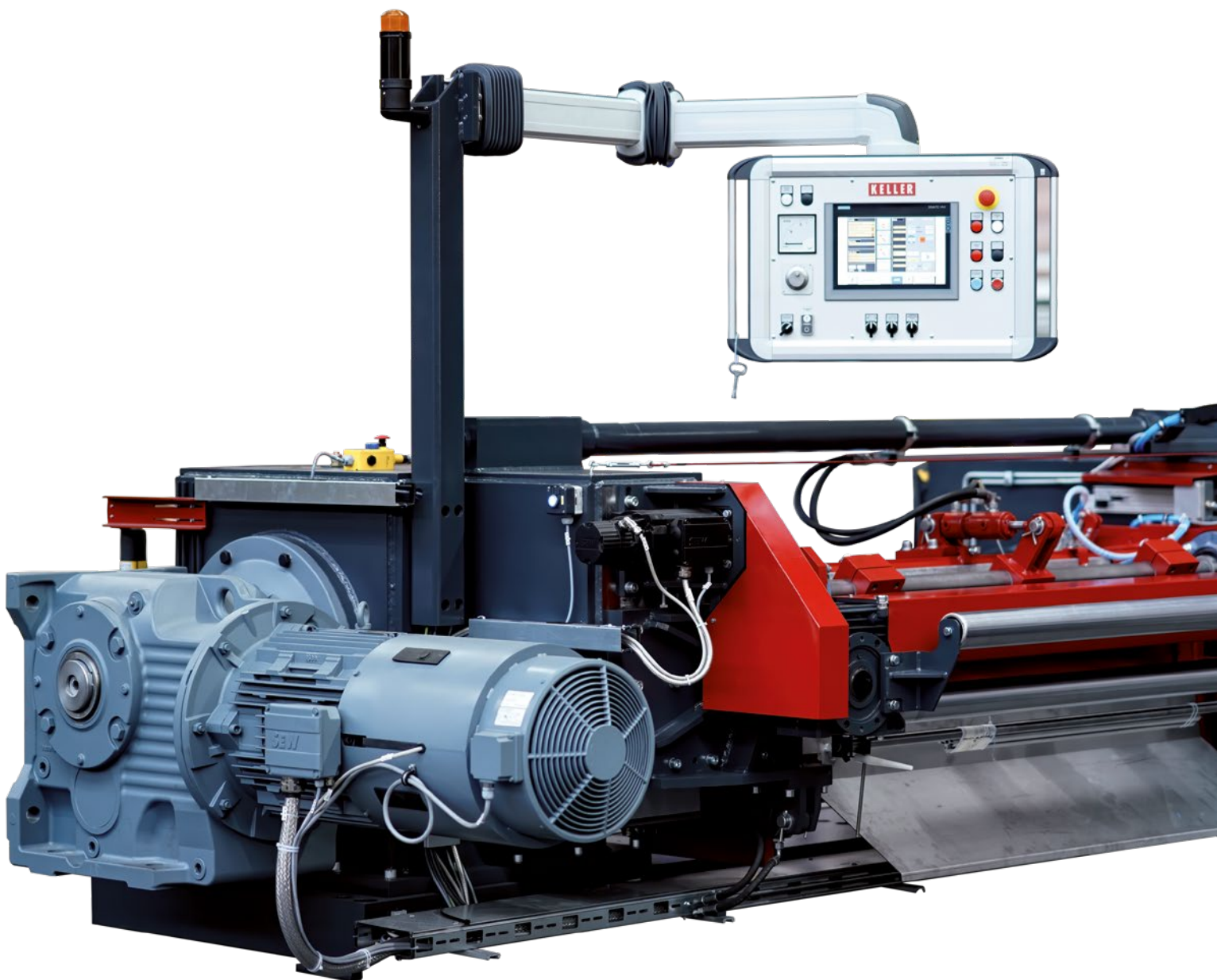


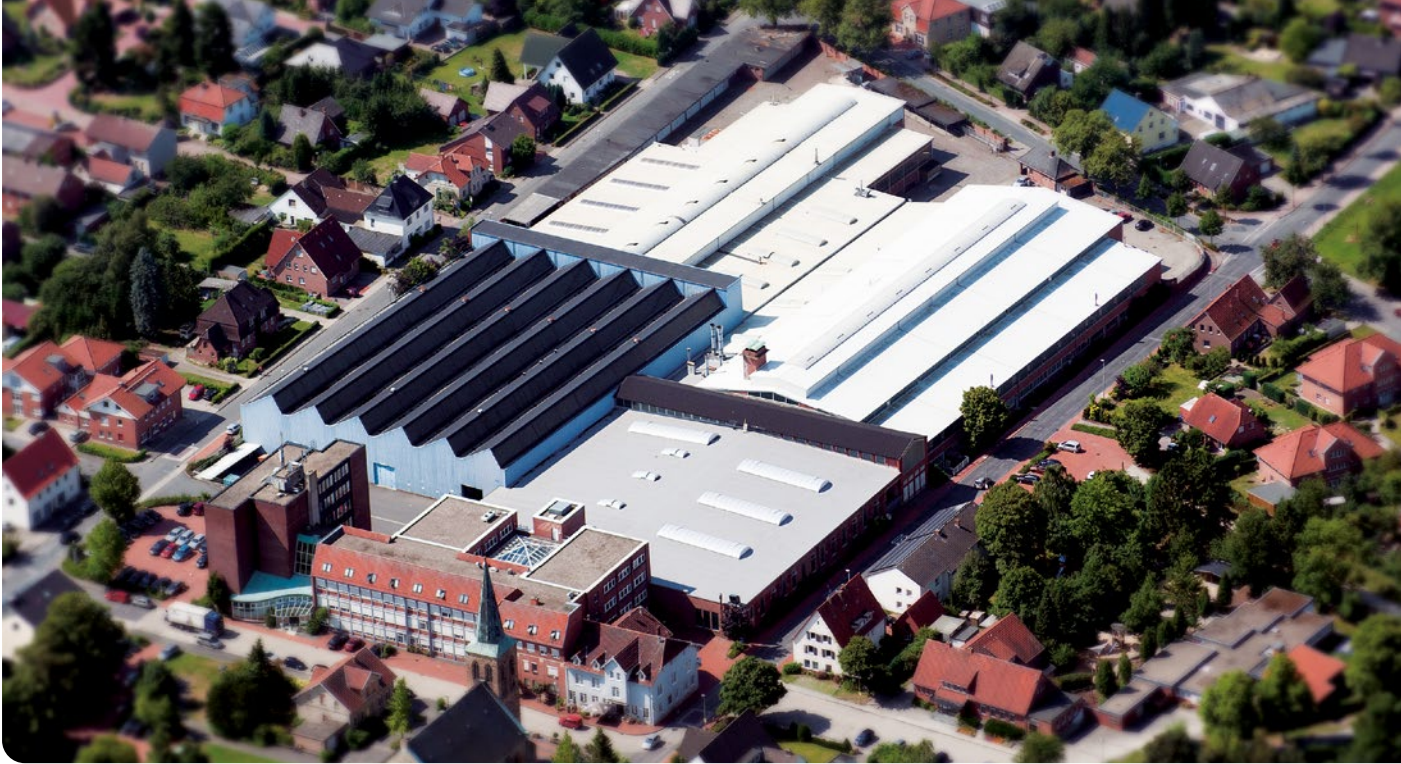
State-of-the-art and economical

Safety and accessories

Accident prevention equipment, such as photoelectric cells, pull cords and emergency OFF switches as well as an accident protection system with safety key are an integral part of this machine to protect the operators from the skiving knife and rotation devices.

The comprehensive accessories also comprise a knife grinding machine to grind the film skiving knives. This machine allows grinding the skiving knives to individually preset angles.





KELLER

Creating Solutions

intelligent
clay
solutions **ICS**

intelligent
machinery
solutions **IMS**

intelligent
automation
solutions **IAS**

infrared
temperature
solutions **ITS**

360° Service

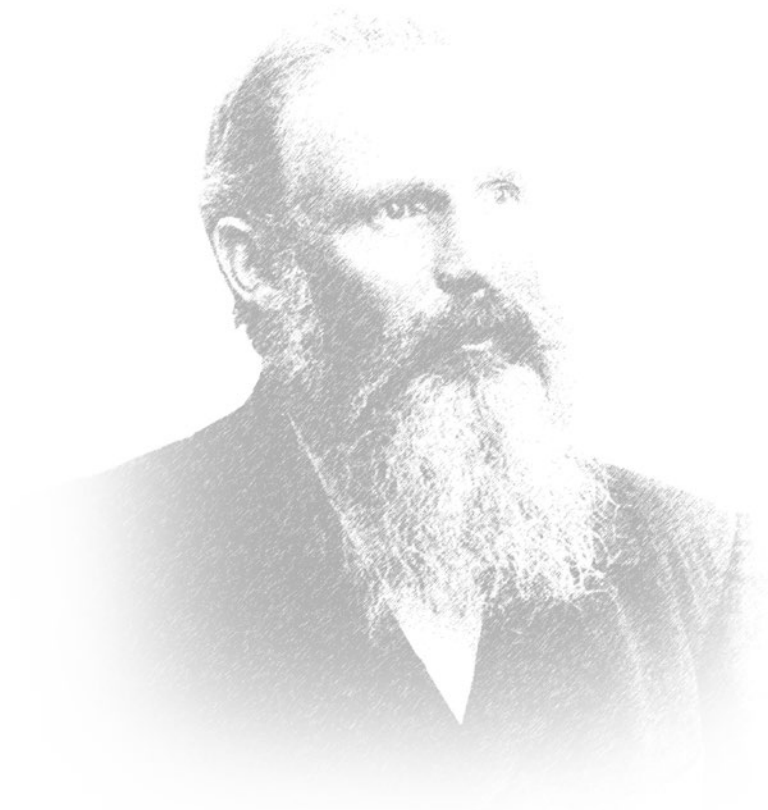
KELLER has become an integral part of the heavy clay industry. In the **ICS division** (Intelligent Clay Solutions) we produce machines and complete plants, highly complex industrial robot and handling solutions, integrated automation solutions and technologies for environmental protection that can be found in the brick industry worldwide. But also in other industrial sectors KELLER has been offering machines, products and solutions of the highest standard for many years.

The experts of the **IMS division** (Intelligent Machinery Solutions) create cross-industry high-tech solutions. Building on our leading expertise in the heavy clay industry, our engineers develop machines and plants that contribute to significant process optimisations in all branches of industry on a worldwide scale.

The **IAS division** (Intelligent Automation Solutions) designs and implements complete plants and control systems for the bulk materials industry. KELLER IAS has gained a reputation especially in the automation of mills and compound feed plants.

The **ITS division** (Infrared Temperature Solutions), which has been developing, producing and selling high-precision measuring instruments and system solutions for non-contact temperature measuring systems for more than half a century. These are used worldwide in various industrial branches.

The divisions are supported by the **SERVICE**, which is very close and sustainable to our customers thanks to modern equipment and perfect organisation.



High-tech solutions from tradition



KELLER HCW GmbH · Intelligent Machinery Solutions (IMS) · Carl-Keller-Str. 2-10 · D-49479 Ibbenbüren · Germany
☎ +49 (0) 5451 85-0 · ✉ ims@keller.de · 🏠 www.keller.de/ims

KELLER A DIVISION OF GROUPE LEGRIS INDUSTRIES