KIEFEL
TECHNOLOGIES

A Member of Brückner Group



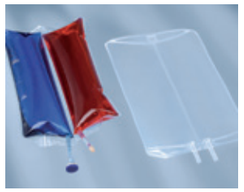
MACHINERY AND DEVICES FOR USE IN THE **MEDICAL INDUSTRY**

Experts in Medical Technology



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Kiefel machinery and devices for the medical sector

We move in a highly sensitive area with our production equipment for the medical industry. Kiefel is fully aware of this responsibility. This is why our teams operate with precision, reliability and efficiency – just like our customers.

The medical sector demands absolutely top performance, in terms of both people and technology. The machines and accessories supplied by Kiefel for the manufacture of speciality bags for medical use are the guarantee of high-quality products.

Whether for PVC or polyolefin – our customers appreciate the innovative design, tailor made solutions as well as standard machinery and extraordinary finishing precision of our production equipment. We can also provide the qualification of our medical machines with documents and services as per customers requirements, from e.g. simple inspection certificates to complete IQ/QQ realization.

The Kiefel approach

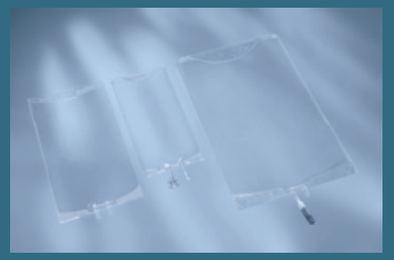
A large store of know-how accumulated over 50 years and with billions of medical speciality bags produced on our machines every year, let us develop innovative solutions. This is what allows us to support our customers in their efforts to meet the current and future needs of the market in an optimum way.

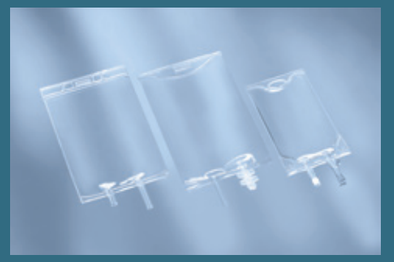
Our customers all benefit from the Kiefel high quality standards, the extraordinary operating reliability and long life-time of our systems. This can also include a full record of all quality relevant parameters and 100% traceability for all relevant technical production data.

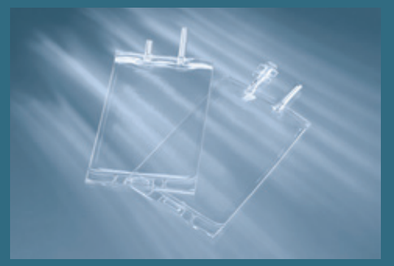
As a supplier of both, advanced technology and proven machine concepts, as well as having the competence and experience in Radio Frequency (RF) and Thermo-Contact (TC) welding technology, Kiefel provides the perfect solutions for the cost-effective manufacturing of high-quality products for the medical sector.

The high level of efficiency and extraordinary reliability of our systems, as well as our innovative approach and flexibility create further added value for our customers – driving their performance.









Infusion- and CAPD-Bag Machines - RF Welding

Kiefel machines are successfully used worldwide in the manufacture and filling of infusion bags for standard solutions, nutrition, oncology, as well as for CAPD products, whether mono- or multichamber bags.

Our success is based on the use of proven concepts and customer-sprcific designs. Monitoring and testing equipment is deployed accordingly in order to fulfill our customers' demands for highest quality.

Options

- Film cleaning and film-edge adjustment
- Automatic or manual component feed
- Servomotor technology
- Barcode-based tool detection
- Splice detection
- Quality-assurance monitoring system
- Process monitoring
- Diagnosis system
- Crossfield-welding technology
- Various printing techniques (hot stamp, laser, thermo transfer, flexo printing)
- Headspace control
- Control of rest oxygen

Infusion- and CAPD-Bag Machines - TC Welding



Cost, physical requirements, ecological aspects – many are the factors that play an important role where selection of the right material is concerned. Whatever your final decision in this respect might be,

Kiefel is the high-tech supplier to choose to manufacture infusion and CAPD products. Accordingly, we have the right welding technology suiting the material requirements.

Options

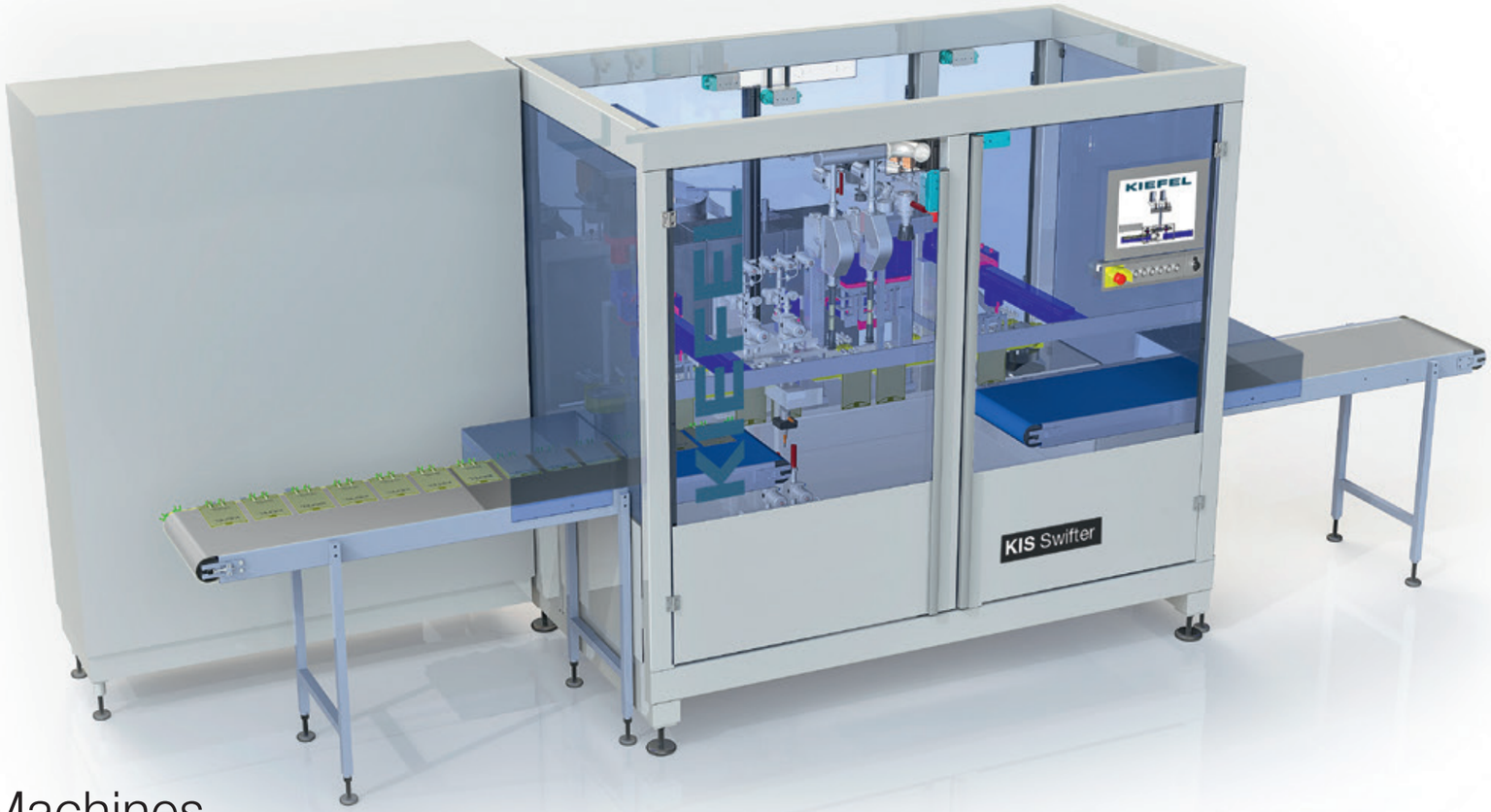
- Film cleaning and film edge adjustment
- Automatic or manual component feed
- Servomotor technology
- Barcode-based tool detection
- Splice detection
- Quality-assurance monitoring system
- Process monitoring
- Diagnosis system
- Various printing techniques (hot stamp, laser, thermo transfer, flexo printing)
- Film preforming process
- Tube preheating process
- Headspace control
- Control of rest oxygen













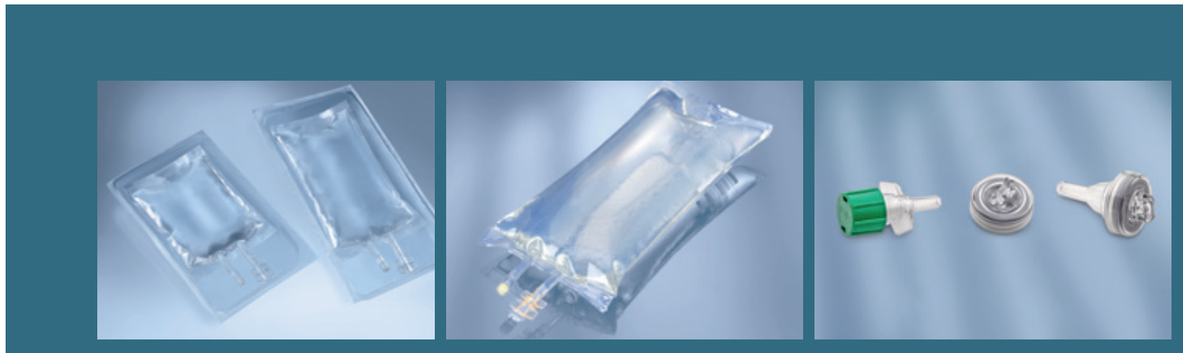
Filling Machines

Kiefel filling and sealing units can be fully integrated into TC- or RF-welding machines to create a Form Fill Seal solution, or can be operated as stand-alone devices. They stand out due to their compact design, high reliability and efficiency, and high-precision filling technology.

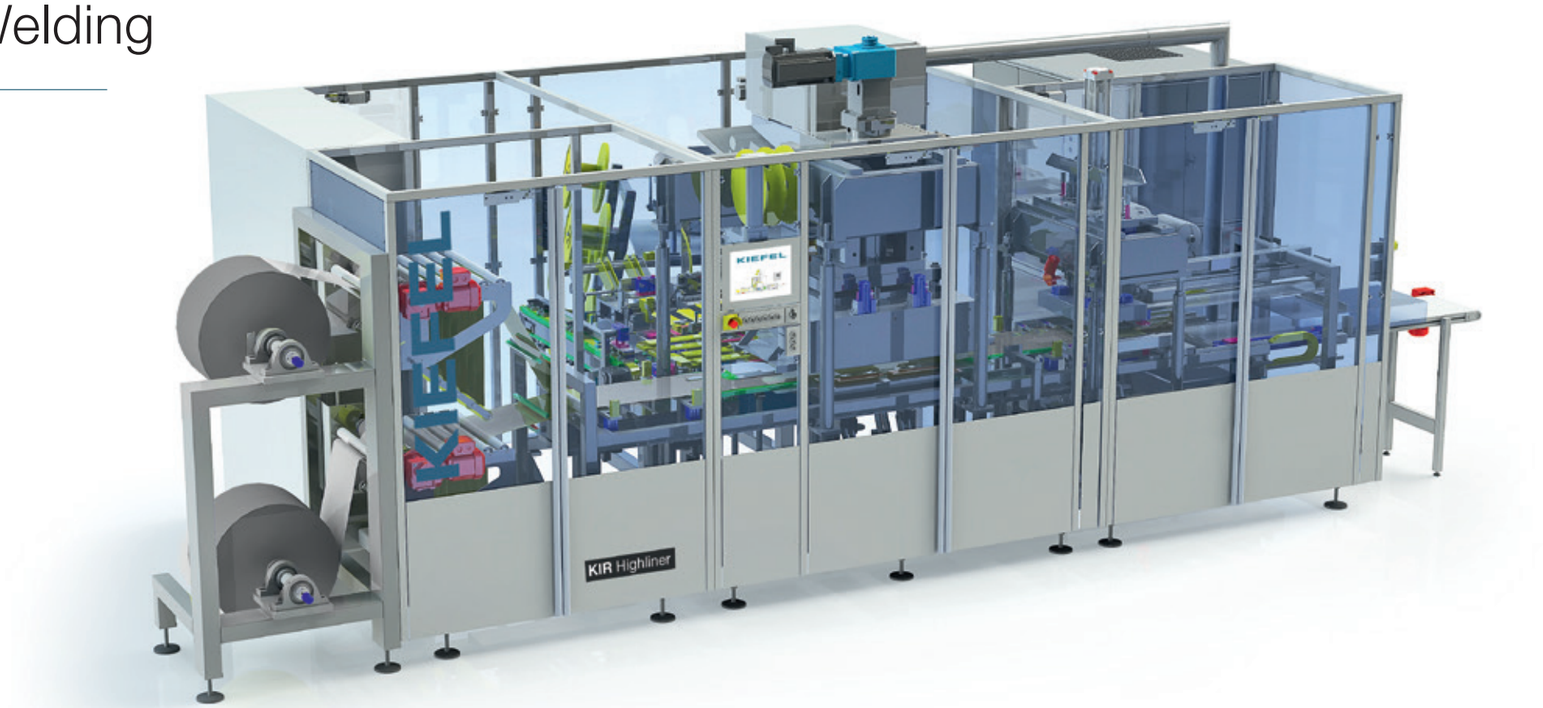
The compact table top filling module is based on a high degree of standardization, which leads to short delivery times and low investment costs. Accordingly, the table top filling unit is also ideal for short production runs.

Options

- Semi or fully automatic filling
- Automatic or manual component feed
- Headspace control
- Drop control
- Control of rest oxygen
- Automatic cap sealing
- CIP/SIP
- Audit trail
- Further options available



Blood-Bag Machines
RF-Welding





Special attention is paid to fulfilling and monitoring the highest quality criteria when manufacturing blood bags. Kiefel is the market leader in the design and construction of machines used to manufacture blood bags. Our machines are in use worldwide in the production of these sensitive articles.

Decades of experience and expertise leaves us well-placed to tackle any challenges that our customers in the sector might set us. Kiefel's innovative solutions provide customers the right level of automation to meet their needs, and thus optimize their efficiency.



Options

- Film cleaning and film-edge adjustment
- Process-monitoring
- Automatic or manual component feed
- Servomotor technology
- Barcode based tool detecion
- Quality-assurance monitoring system
- Diagnosis system
- Various printing techniques (hot stamp, laser, thermo transfer, flexo printing)
- Splice detection
- Crossfield-welding technology





Blood-Filter Machines



Options

- Product labelling
- Station for measurement of weld thickness
- Visual inspection system
- Separation device
- Automatic or manual component feed

Kiefel offers, with this innovative machine concept, an optimized way to meet the needs of the global market. In close cooperation with our customers we develop state-of-the-art inline machines, designed for the manufacture of blood filters.

Thanks to our long years of experience in the medical industry and the area of welding technology, as well as by applying the latest techniques and developments in this field, blood filters can be tightly weld-sealed and in an integrated process.



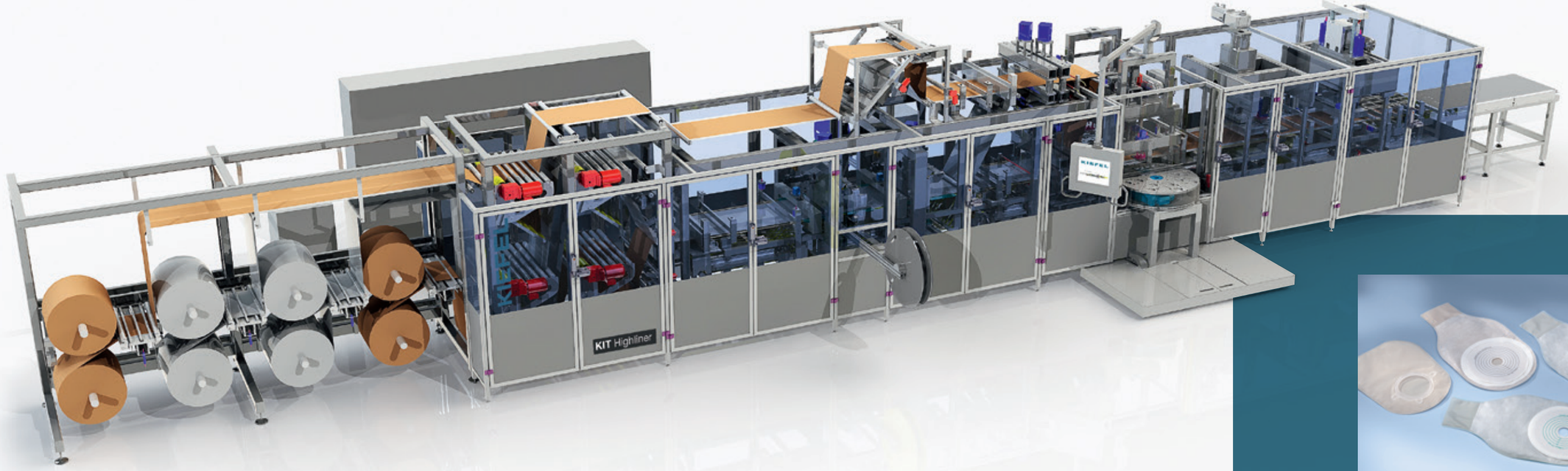
Ostomy-Bag Machines

Colostomy- and urostomy-bags are nowadays made of extremely thin materials. In order to ensure maximum reliability and product quality, their manufacture requires constant monitoring of the welding parameters.

Kiefel's entire range of machines, which runs from semi-automatic lines with manual feeding of components to fully automatic variants, are designed to provide customers an optimized solution for their particular needs. The modular design of these units allows systems upgrading in later stages.

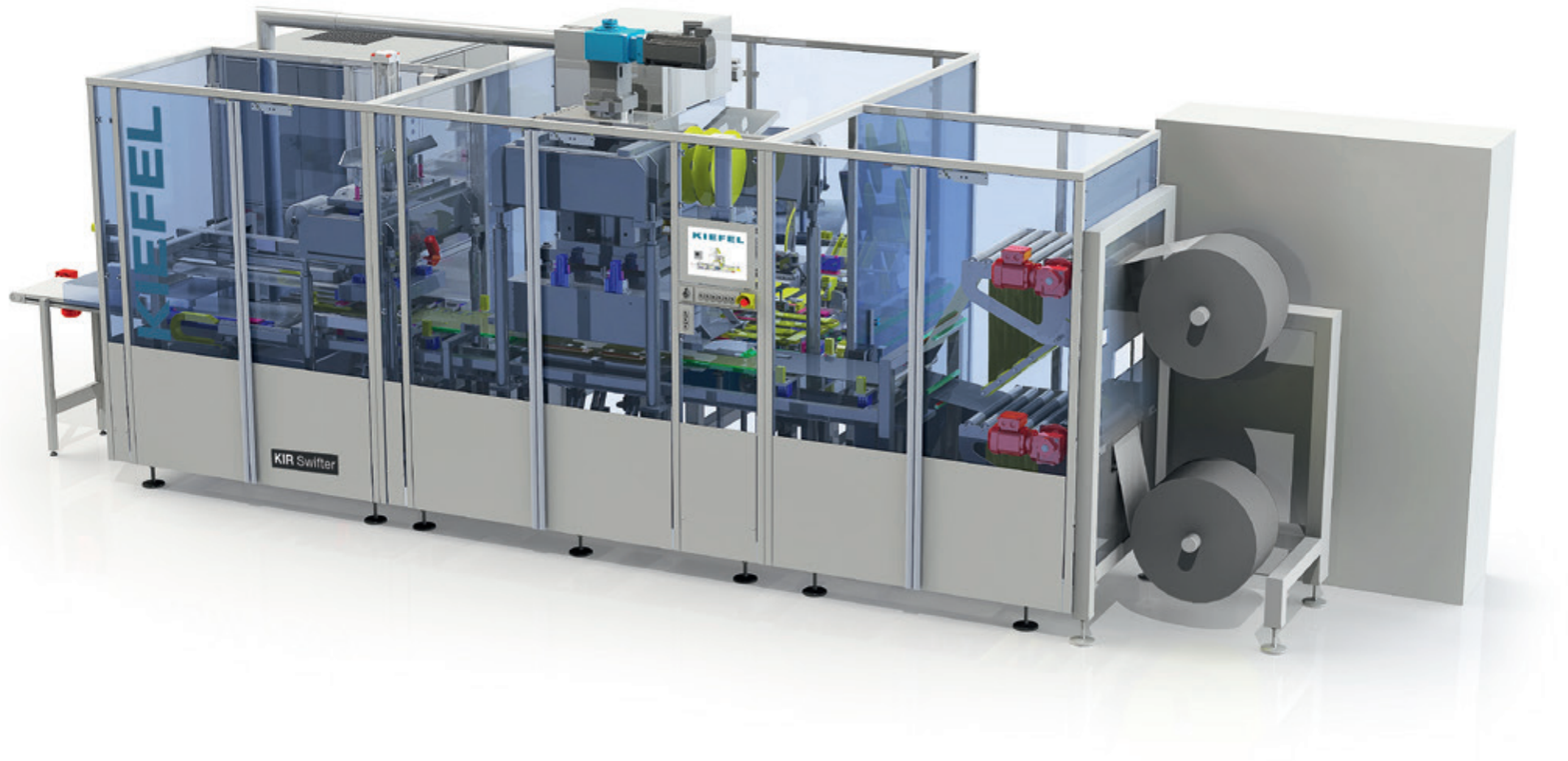
Highlights

- Wide product-range (e.g. open/closed pouches))
- Maximum efficiency based on automatic product changeover
- Minimal tool changeover times, on-screen-controlled
- User-friendly machine control system and display
- Diagnosis system
- Vision system for auto-correct technology
- 2 – 4 layer materials



Urine-Bag Machines









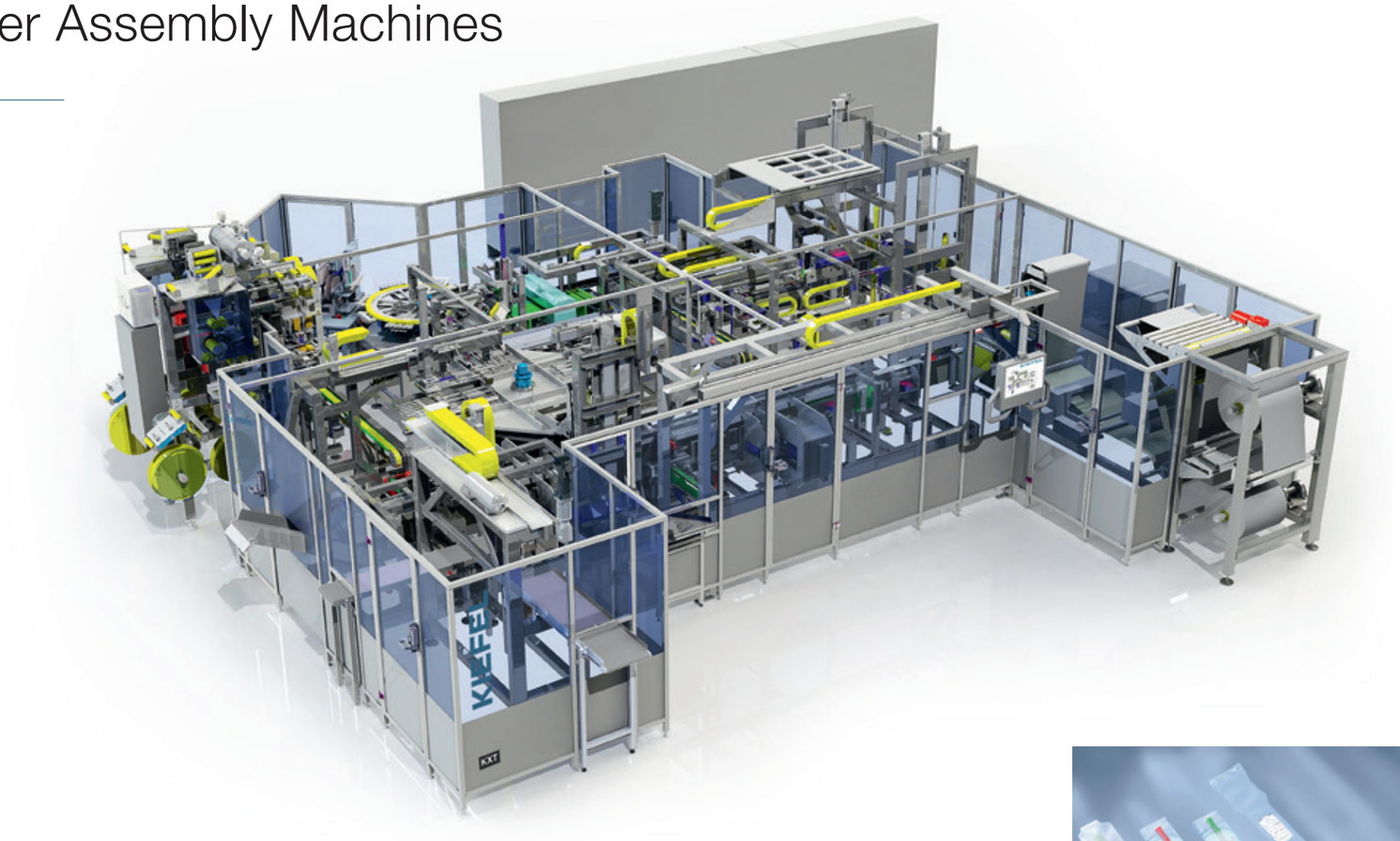


Paying attention to the material in use, Kiefel specialists will either recommend TC- or RF technology for the manufacture of urine-bags. Depending on the needs of the customer, different types of parts can be welded in between the material layers. The finished bags are either stacked or put into a box.

Options

- Film edge adjustment
- Automatic or manual component feed
- Servomotor technology
- Barcode-based tool detection
- Splice detection
- Various printing techniques (hot stamp, laser, thermo transfer, flexo printing)

Catheter Assembly Machines



Kiefel‘s technology allows simultaneous packaging of catheters and in sachets. All functions of the machine are controlled and monitored, which ensures a high production rate and the highest possible product quality.

Options

- Film cleaning and film-edge adjustment
- Automatic or manual component feed
- Servomotor technology
- Barcode-based tool detection
- Splice detection
- Quality-assurance monitoring system
- Diagnosis system
- Various printing techniques (hot stamp, laser, thermo transfer, flexo printing)









Shuttle & Rotary Table

Kiefel's Shuttle and Rotary Tables are flexible versatile welding machines for semi-automatic production of e.g. medical articles. The machines are used for smaller outputs, complex article designs, or for laboratory purposes. Typical products are blood bags, urine bags, IV bags made of PVC, EVA and of other films weldable by RF technology. However, the machine can also be equipped for TC welding.

Highlights

- Small space requirements with high output/m2
- Low investment costs, making them ideal for e.g. short production runs
- Short delivery times due to a high degree of standardization
- Maximum flexibility thanks to short changeover times
- Servomotor drive system for consistent product quality



Customized Machinery

Kiefel's goal is to consistently create even more added value and advantages for our customers. Therefore, we continuously develop breakthrough technologies and sustainable solutions and integrate them into bespoke machinery for our customers.



Kiefel RF Generators

World market leader – thanks to the outstanding reliability of our generators



New generator development Solid-State technology

Kiefel is market leader in the radiofrequency welding technology (RF) and once again product pioneer. As an alternative to tube generators, we have developed a state of the art device using the advantages of semi-conductor technology. The new welding generator works virtually maintenance-free, has no signs of wear and no efficiency losses over the entire lifetime.

The range of applications of RF technlogogy

- **Medical sector**
  Blood bags, urine bags, infusion bags, colostomy bags, drainage bags, special applications
- **Automotive industry**
  Car interior-trim components, headrests,vehicle carpets, roof liners, sun visors, seat covers, dashboards
- **Packaging industry**
  Blister packs, drill-bit bags, passport wallets



Highlights

- No loss of power
- Metering of the power output
- Allows a 1:1 replacement of existing tube generators
- No specific RF knowledge required
- Ideal usability in clean rooms through closed cooling system
- Adjustable power from 0% - 100%

Kiefel After Sales Service

Our aim at Kiefel customer service is to ensure that the very best practices apply throughout the service life of your Kiefel equipment. Our full commitment in this respect makes itself plain in the maximum availability and low depreciation of your machines.

You can always count on us

- A global network of 50 qualified service techs
- 24h online portal for parts and manuals
- 24/7 on-call duty of a service expert

To ensure maximum performance

- Smooth initial startup of your system
- Production- and process support
- Training to the very latest technical standards
- Retrofits and upgrades

Our expert employees are at your disposal. The Kiefel team at your service.



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The KIEFELGmbH is a world leader when it comes to the design and manufacture of machines used to process plastic film materials.
The company offers core expertise in the fields of forming and joining technologies. As a supplier to reputable manufacturers in various sectors, KIEFEL GmbH services customers in the automotive, medical technology, refrigerator and packaging industries. The headquarters of KIEFEL GmbH is in Freilassing/Germany. The company also runs its own network of sales and service centers in the United States, France, the Netherlands, Russia, China, Brazil, Indonesia and India, and is represented by sales partners in more than 60 countries worldwide. Kiefel also owns the automotive specialist SWA based in the Czech Republic, the Dutch thermoforming toolmaker Bosch Sprang, and the Austrian Mould & Matic Solutions, supplier of tools and automation solutions. KIEFEL GmbH is a member of the Brückner Group, a worldwide leading supplier of plastics machinery.

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