



HIGH QUALITY COVERING OF ROLLS, TUBES, SLEEVES AND RODS

Roll covering machinery, strip winding,
Covermatic and crosshead systems

PARTNER FOR INDUSTRY

KraussMaffei is a worldwide premium partner for the plastics and rubber processing industries



Automotive



White goods



Construction



Medical/pharmaceutical



Electrical/electronics

Whatever you aim to achieve in plastics or rubber processing, KraussMaffei is your partner. We are the only company with intensive expertise across the three main engineering fields. And we have a strong track record in integrating this expertise to develop new processes and systems.

Ready for any challenge

Our **Injection Moulding Technology Division** supplies machines and systems for standard and special applications, very large machines and fully automated solutions. Our main markets are in the automotive, packaging, electrical, electronics, medical technology and consumer goods industries.

Our **Reaction Process Machinery Division** supplies machines and complete systems for processing polyurethanes and other reactive materials. Completing our product portfolio, Automotive Component Systems supplies foam moulds, cutters and routers. Our customer base is wide, with a focus on the automotive, construction and white appliances industries.

Our **Extrusion Technology Division** supplies machinery and systems for compounding, for pipe, profile and sheet extrusion, physical foaming, and the production of technical rubbers and intermediates for tire production. Machinery from the company's range – from single extruders to

complete extrusion lines – is used in many industries, including chemicals, pharmaceuticals, automotive, construction, furniture and packaging.

People for Plastics

We are the “people for plastics”. We are your partners from the first exploratory discussion, through development to commissioning, servicing and operating your system, and final disposal. At all times, you are assured of outstanding competence in planning and engineering, as well as reliable and fast spare parts, service and support.

Adding value for customers

We put our expertise to work for your success. With machine ranges engineered for modularity, we can deliver application-specific solutions based on our wide range of standard modules and specially engineered solutions. This strategy offers customers technical and cost advantages.

Close to customers around the world

As an international company, KraussMaffei has a presence in all the major markets for the plastics and rubber processing industries and employs over 3,000 people worldwide. Our sales and service network keeps us close to all our customers around the world.

Constantly high product quality thanks to perfect interaction of all components involved



Packaging

All components of KraussMaffei Berstorff roll covering lines are precisely coordinated to provide safe and reliable operation.

Equipped with extruders of different sizes and designs, these roll covering lines ensure perfect processing of a wide variety of rubber compounds. The extruders used for this application stand out for high output rates and low stock temperatures combined with a long service life.

The fully automatic lines are designed for rapid and precise coating of roll cores, tubes or rods with different rubber coverings for the metal, paper, textile, printing, electrical and wood industries.



Strip winding unit with GE 90 KS x 12D extruder

STRIP WINDING

Optimal process technology for high-quality products

Strip winding is ideal for all diameters of rollers, from very small to very large and for longer-length rollers. The machine consists of a travelling base-frame, a winding and application unit, the electrical controls and an extruder, which is matched to the processing requirements of the rubber and to the required output.

Extruder type	Barrel	Max throughput Kg/h	Applications
GE 90 K x 12D	Smooth	315 – 420	For standard applications GE
GE 90 KS x 12D	Pin barrel	400 – 600	For high outputs
GE 90 SC x 10D	PinConvert	500 – 750	For high outputs and quality with wide variety of rubber types
GE 120 KS x 14D	Pin barrel	800 – 1,300	For high outputs at low temperatures
GE 120 SC x 14D	PinConvert	1,000 – 1,600	For high outputs and quality with wide variety of rubber types and low temperatures



Central operator panel

Strip winding machines with straight-through

Roller core	Ø75 – 2,500 mm
Roller length	200 – customer requirement
Covering thickness	1 – 50 mm
Strip thickness	1– 6 mm
Strip width	30 – 70 mm
Strip speed	5 – 35 m/min
Output (max)	150 – 900 kg/h

Strip winding units with Mini-Roller Head

Roller core	75 – 2,500 mm
Roller length	200 – customer requirement
Covering thickness	0.5 – 50 mm
Strip thickness	0.5 – 6 mm
Strip width	30 – 70 mm
Strip speed	5 – 60 m/min
Output (max)	150 – 1,200 kg/h

Dependent on extruder type and size,
rubber compound and strip section.

Standard benefits

- Flexible use of different KraussMaffei Berstorff high-performance extruders
- Straight-through head with optimised flow channels and exchangeable final dies
Optional: Mini-roller head for the manufacture of high-quality rubber strips and higher covering speeds
- In-line straining of the compound
- Smooth and precise baseframe drive
- Fully automatically controlled travel for straight or inclined application
- Simple operation from a central panel
- Low manning requirement
- Short production times
- Highly accurate covering thickness
- Effective avoidance of air inclusions when covering
- State-of-the-art controls with PLC and operator panel
- Storage possibility for production and process data (recipes)
- Direct or graphic display of all relevant data in set/actual form



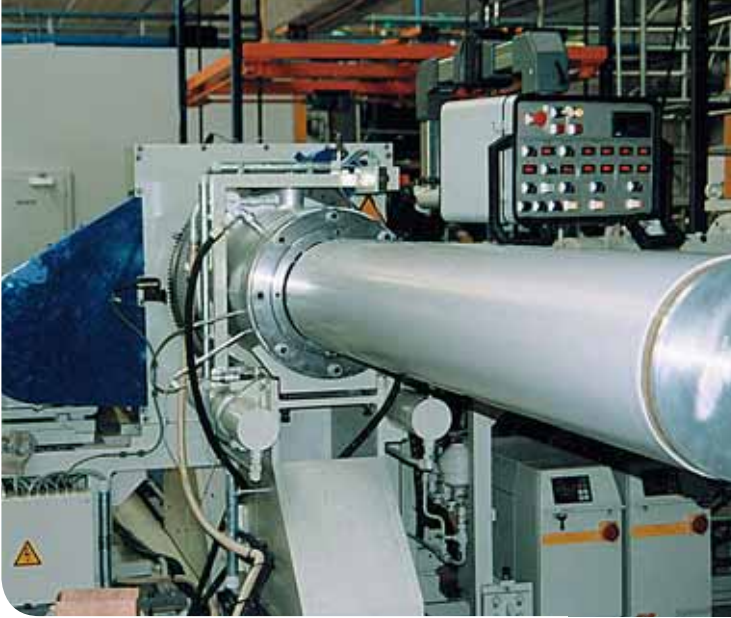
Straight application



Mini-calender



Inclined application



Covermatic KH 300N

COVERMATIC

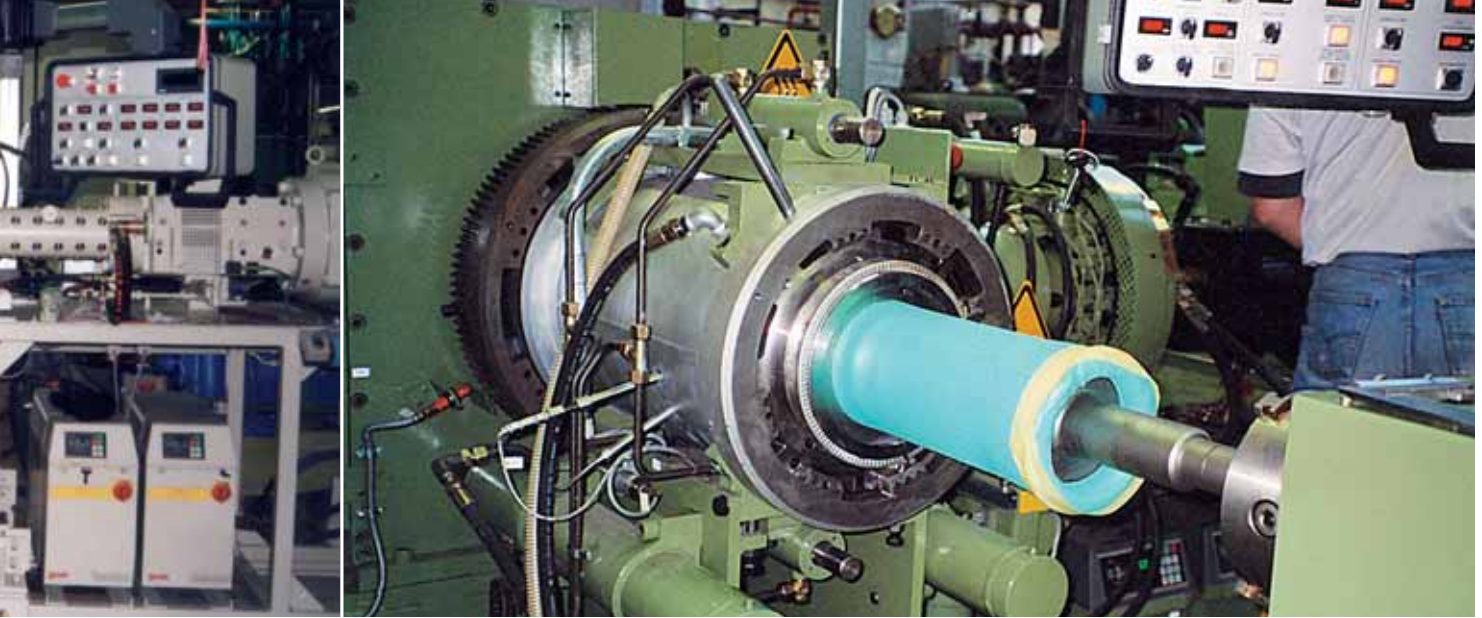
Precision roller covering

The Covermatic enables the extrudate to be applied directly onto the roll core or other round stock. Covermatic is particularly suited to the production of totally homogeneous, blister-free coverings with a minimum of grinding allowance and with excellent concentricity and straightness. Rubber compounds with mooney viscosities of 20 – 110 can be processed. Rollers covered with the covermatic satisfy all the high quality demands of printing and painting applications. We offer this system in 3 sizes to cater for the covering of roller cores, sleeves, tubes, etc with diameters from 5 – 310 mm, whatever the length, to thicknesses of 3 – 40 mm.

Complete Covermatic systems:

- Extruder (screw diameter 60 – 120 mm)
- Covermatic cross extrusion head
- Electrical controls with PLC
- Roll take-off roller train (KH 100 & und KH 200)
- WAE roll handling unit KH 200 and larger
- For rolls up to 5 m long and 1500 kg in weight
- Different sets of tooling for different diameters and covering thicknesses complete the system and make for universal application

Covermatic type	KH 100N	KH 200N	KH 300N
Core Ø range	5 – 100 mm	80 – 225 mm	120 – 310 mm
Covering thickness	3 – 40 mm	3 – 40 mm	3 – 40 mm
Max finished Ø	180 mm	300 mm	380 mm
Max covering	220 kg/h	400 kg/h	550 kg/h
Drive power	12.5 kW	25 kW	35 kW
Feeding extruder (K, KS, or SC types)	GE 60 or GE 90	GE 90 or GE 120	GE 90 or GE 120



Covermatic 200 N
Core \varnothing 160 mm,
covering thickness 20 mm
40 shore A

Standard benefits

- Excellent quality of covering
- High precision covering needs minimum grinding allowance
- Careful processing of the compound
- Degassing ensures no air inclusions or inconsistencies
- Little or no post-extrusion work
- Simple and rapid changes of size or compound type
- Optimal material utilisation
- Easy to operate via central panel
- Low manning requirements
- Rapid turn-round times
- Automated covering process
- State-of-the-art electrical controls with PLC and operator panel
- Recipe storage facility
- Direct or graphic display of all relevant data in digital or graphic

Design features

- Continuous monitoring of covering application
- Freely programmable controls. Operation from a central panel with colour display showing process data continuously in digitalgraphic form
- Storage of up to 225 recipes standard
- For size changes, only the mouthpiece (outer dia) and the guide tube lips (in steps) need changing.
- For compound changing, the covermatic head is detached from the extruder and the Covermatic barrel is then driven off the screw (hydraulic or electric), exposing all the relevant parts for easy cleaning.

COVERMATIC

Process descriptions

The rubber, which has been plastified and homogenised in the feeding extruder, is fed directly to the hollow driven screw of the Covermatic extrusion head.

In the crossover zone, there is a facility for straining and/or degassing of the rubber. A vacuum unit, supplied with the machine, prevents any air inclusions occurring during the covering process. The multi-flight hollow screw conveys the compound via the guide tube and mouthpiece to the exit of the Covermatic, where the core is simultaneously covered and drawn through the head by the extrudate. For the KH 200 and above, the transport of the rolls is assisted by an adjustable and automatically controlled conveying pressure provided by the WAE roll take-off device. The rolls can be wrapped during or after the covering process.



Covermatic KH 200N

Core \varnothing 150 mm; covering thickness 15 mm, 95 shore A



Covermatic KH 200N



Covermatic KH 200N

Core \varnothing 130 mm, covering thickness 18 mm

Core length 4.200 mm, 65 shore A



KraussMaffei Berstorff GE 120 K x 16D

Crosshead for core \varnothing 10 – 65 mm



With hydraulic clamping
and hydraulic transfer guide ejector

CROSSHEAD EXTRUSION

Economic system for simple uses

Crosshead extrusion units round off our roller covering range. They are well suited to applications where several rollers of the same size have to be covered using the same rubber type. The use of different sized units allows cores diameters from 5 – 200 mm to be covered to thicknesses from 2 – 20 mm.

Our experienced engineers work with the customer to select the correct size and type of crosshead for their requirements (with or without hydraulic guiding and ejection, hydraulic damping, etc).

The roller core or other round stock is covered directly by the extruder. This means that rubbers of 20 – 100 mooney are processed.

Dependent on the size of the crosshead, the required output and the compound quality, vacuum extruders in the range GE 60 - GE 120 are employed.

KraussMaffei Berstorff's scope of supply can be an individual crosshead for an existing extruder or can extend to a complete crosshead covering line, with core handling, thickness measurement, in-line wrapping and roller take-off unit.



SERVICE WORLDWIDE

Unlimited customer service – and global customer proximity

Rely on us for a fast and competent response to all your service needs anywhere in the world. Whatever you need – from troubleshooting or training to spares or repairs – we're on the job.

We're dedicated to supplying service quality on a par with the outstanding quality of our machines and systems. We offer far more than spare parts and hotlines. We'll work with you to choose the best and most cost-effective solution for your production. We'll help you test new applications and we'll plan customized service packages.

All-round service

Our service offering is broad. We'll configure your system, install and commission it, train your staff, plan measures to minimize your downtime risk and maximize productivity, and carry out maintenance, repairs and upgrades. You'll find us fast, reliable and competent. Our hotline is manned by highly-trained and experienced service technicians. If necessary, we'll get a technician to you quickly. Remote diagnosis, interfacing directly with your machine's control system, can be a practical alternative. Spares for all important wear parts are available at short notice. We're continuously expanding our service network to speed up spare parts shipment. Talk to us about the right service solution for your business.

Customer trials and prototyping in our test lab

The Extrusion Division operates a test lab in Germany and USA fitted with the latest machinery and equipment. We can run trials and fine-tune processes on your behalf. We can work with you to test and evaluate processes, machines and equipment in order to identify the best approach for a particular project. Our highly-qualified application engineers are there to help you.

Training with high hands-on content

Courses are held in our lab and training centre, or, optionally, on your premises. We offer clearly-structured basic and advanced training in operation, process control and maintenance for KraussMaffei Berstorff extrusion systems. On request, we'll plan and hold special courses on topics of your choice. All participants spend a high proportion of their training working hands-on with original KraussMaffei Berstorff machines. A well-structured training program produces skilled operators and technicians, which will positively impact your up-time and productivity.



Worldwide hotline numbers

Krauss Maffei Corporation
Florence, USA
Phone: ++1 859 2834376
Fax: +1 859 2830290
Email: service-ext.us@kraussmaffei.com

Krauss Maffei Mexico
Mexico City, Mexico
Phone: +52 81 15211604
Fax: +52 55 53081727
Email: service-ext.mx@kraussmaffei.com

Krauss Maffei do Brasil Ltda
São Paulo, Brazil
Phone: +55 11 4612971
Fax: +55 11 46128366
Email: service-ext.br@kraussmaffei.com

KraussMaffei Co., Ltd.
Shanghai, China
Phone: +86 21 58682662
Fax: +86 21 58681173
Email: service-ext.sha.cn@kraussmaffei.com

Krauss Maffei Asia Pacific Pte. Ltd.
Singapore
Phone: +65 65 535828
Fax: +65 64 550419
Email: service-ext.sg@kraussmaffei.com

KraussMaffei Berstorff GmbH
Hannover, Germany
Customer Service
Phone: +49 511 5702-533
Email: service-ext.ha.de@kraussmaffei.com
Phone rubber technology: +49 172 511 9620
Phone plastics technology: +49 172 511 9621
Phone service hotline: +49 172 511 9623

Krauss Maffei Italiana S.r.l.
Rezzato, Italy
Phone: +39 030 2590707
Fax: +39 030 2592369
Email: service-ext.it@kraussmaffei.com

BKM Servicegesellschaft 000
KraussMaffei Berstorff
Moscow, Russia
Phone: +7 495 9377554
Fax: +7 495 6265745
Email: service-ext.ru@kraussmaffei.com

Contacting us by post

If you need to contact any of our international service or spare parts teams by post, use this address:

Customer Service
KraussMaffei Berstorff GmbH
An der Breiten Wiese 3-5
30625 Hannover
Germany

KraussMaffei is a premium partner for the plastics and rubber processing industries worldwide. KraussMaffei machines and systems are used wherever plastics and rubber are converted into products. As a knowledge-driven technology company, we build on many decades of experience and a strong commitment to research and development.

All components of KraussMaffei Berstorff **roll covering lines** are precisely coordinated to provide safe and reliable operation.

Equipped with extruders of different sizes and designs, these roll covering lines ensure perfect processing of a wide variety of rubber compounds. The extruders used for this application stand out for high output rates and low stock temperatures combined with a long service life.

The fully automatic lines are designed for rapid and precise coating of roll cores, tubes or rods with different rubber coverings for the metal, paper, textile, printing, electrical and wood industries.

KraussMaffei Berstorff GmbH

An der Breiten Wiese 3-5 ··· 30625 Hannover
Phone +49 511 5702-0 ··· Fax +49 511 5619-16
www.kraussmaffei.com