

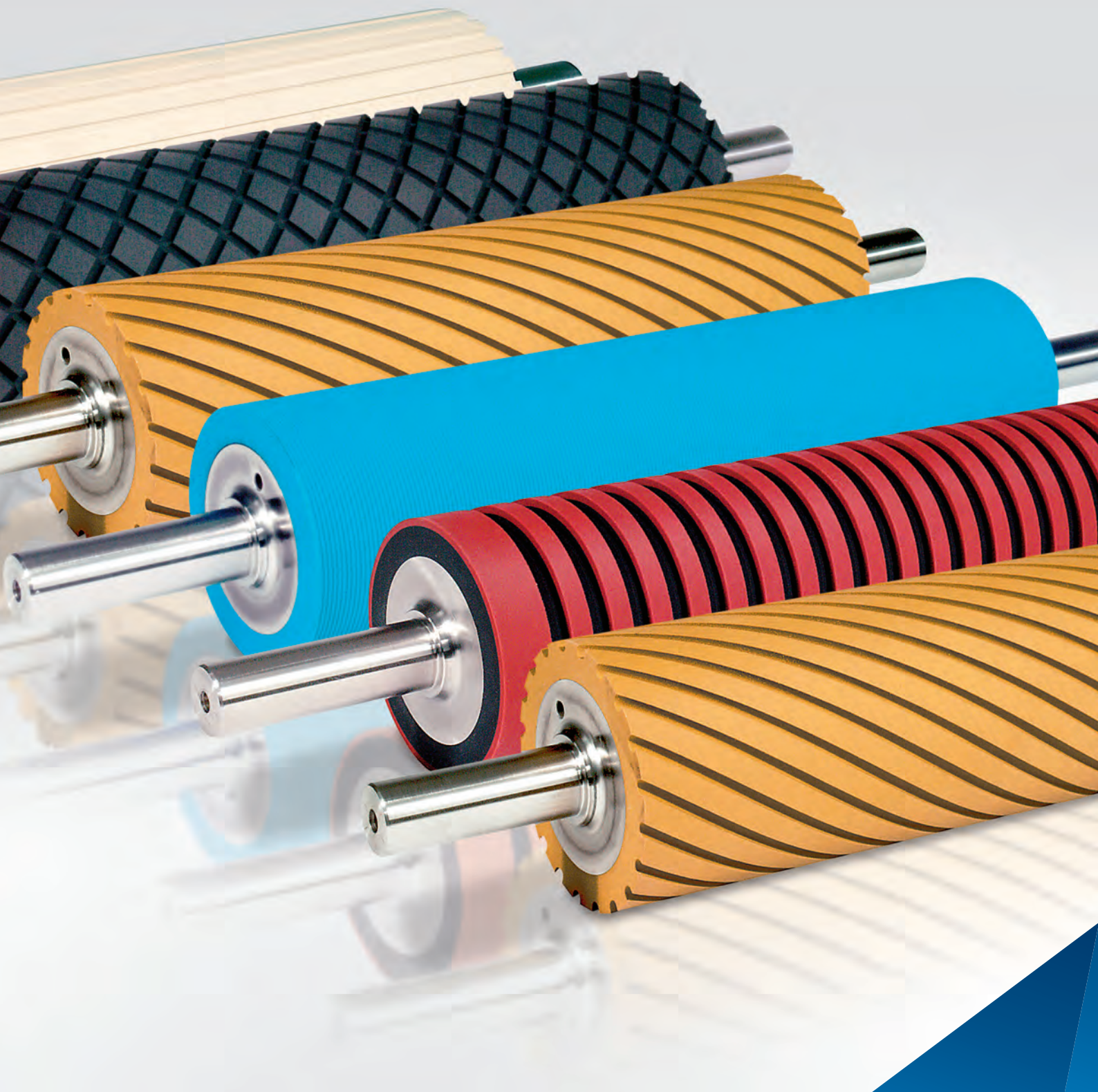
HIGH QUALITY COVERING OF ROLLS, TUBES, SLEEVES AND RODS

ROLL COVERING MACHINERY,
STRIP WINDING, COVERMATIC AND
CROSSHEAD SYSTEMS



Krauss Maffei
Pioneering Plastics

PRACTICAL EXAMPLES
HIGH-QUALITY PRODUCTS
FOR VARIOUS PROCESSING
TECHNOLOGIES



ROLL COVERING MACHINERY CONSTANTLY HIGH PRODUCT QUALITY THANKS TO PERFECT INTERACTION OF ALL COMPONENTS INVOLVED

The roll coating lines can be equipped with extruders of various extruders of various types and sizes, thus enabling the safe processing of any rubber compound. The extruders convince with high throughput rates and low melt temperatures also with a long service life. The fully automatic systems coat quickly and precise coating of roll cores, tubes and rods used in the metal, paper, textile, printing, and woodworking with different rubber coatings.

Your benefits at a glance:

- Roller coating lines can be equipped with extruders of different different types and sizes
- Safe processing of any rubber compound
- Convincingly high throughput rates
- Low melt temperatures combined with long service life
- Fast and precise coating of roll cores, tubes or rods with different rubber coatings for use in the coatings for use in the metal, paper, textile, printing, electrical printing, electrical or woodworking industries

STRIP WINDING

OPTIMAL PROCESS TECHNOLOGY FOR HIGH-QUALITY PRODUCTS



*Strip winding unit
with GE 90 KS x 12D extruder*

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 baseframe, 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.

Standard benefits

- Flexible use of different KraussMaffei 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 electrical engineering and SPS
- Recipe management and connection to an existing MES
- Control for the display of all relevant data and visualization of trend progressions



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)	-450 kg/h

Strip winding units with Mini-Roller Head

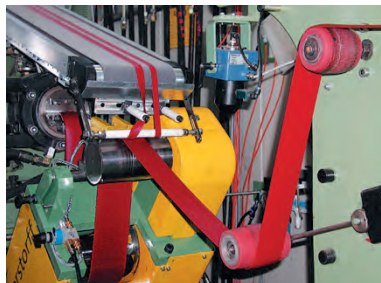
Roller core	Ø75 – 2,500 mm
Roller length	200 – customer requirement
Covering thickness	0.5 – 50 mm
Strip thickness	0.5 – 6 mm
Strip width	30 – 70 mm
Strip speed	5 – 60 m/min
Output (max)	150 – 800 kg/h

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

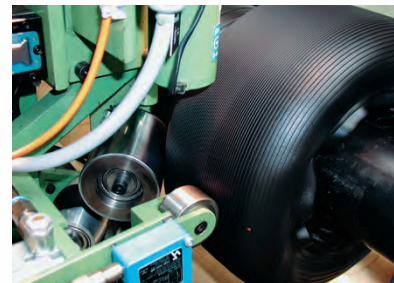
Extruder type	Barrel	Max throughput Kg/h	Applications
GE 90 K x 12D	Smooth	315 – 420	For standard applications GE
GE 90 KS x 12D	Pin barrel	400 – 600	For high outputs
GE 90 SC x 10D	PinConvert	500 – 750	For high outputs and quality with wide variety of rubber types
GE 120 KS x 14D	Pin barrel	600 – 900	For high outputs at low temperatures
GE 120 SC x 14D	PinConvert	600 – 1,200	For high outputs and quality with wide variety of rubber types and low temperatures



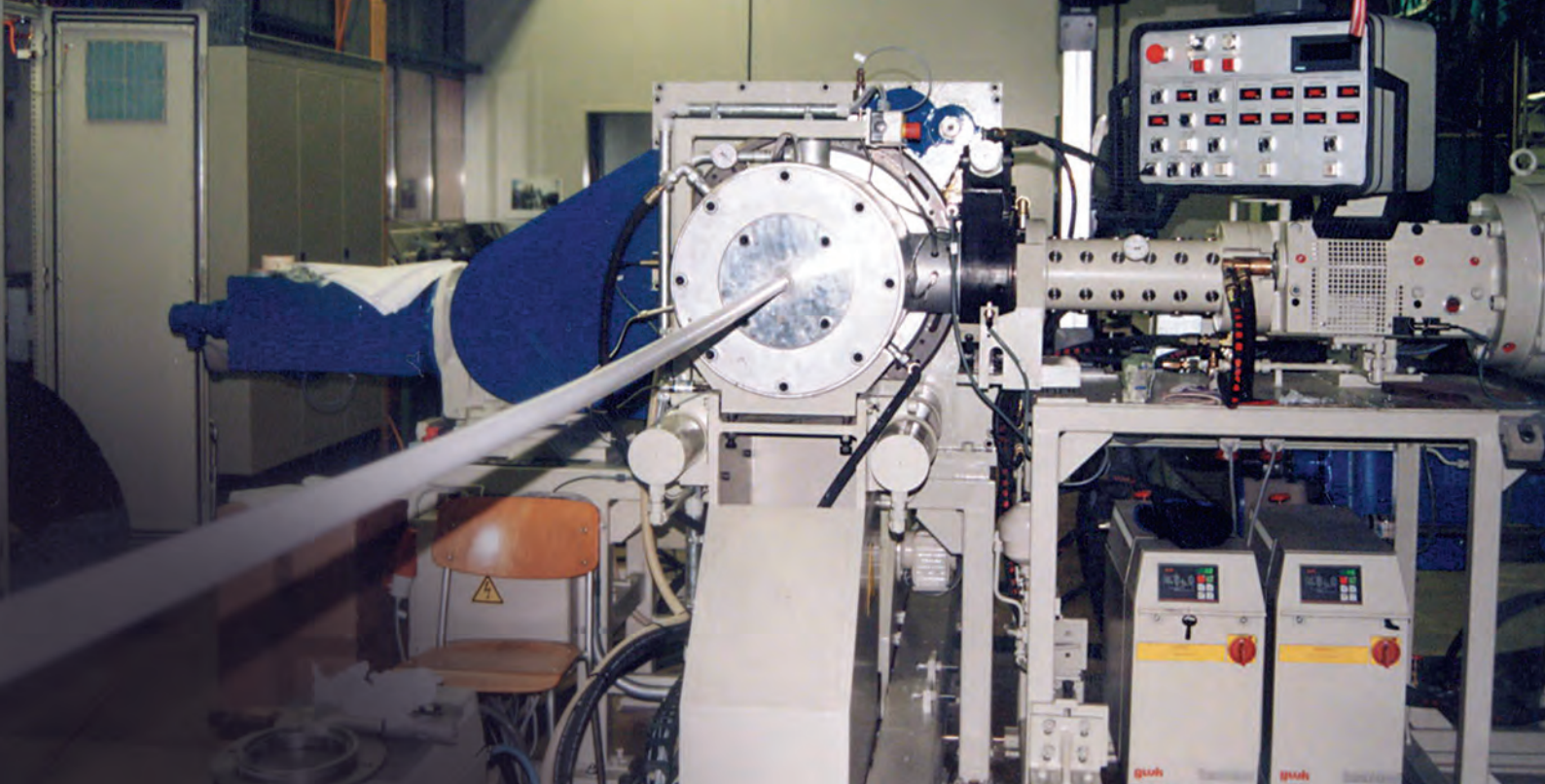
Straight application



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.

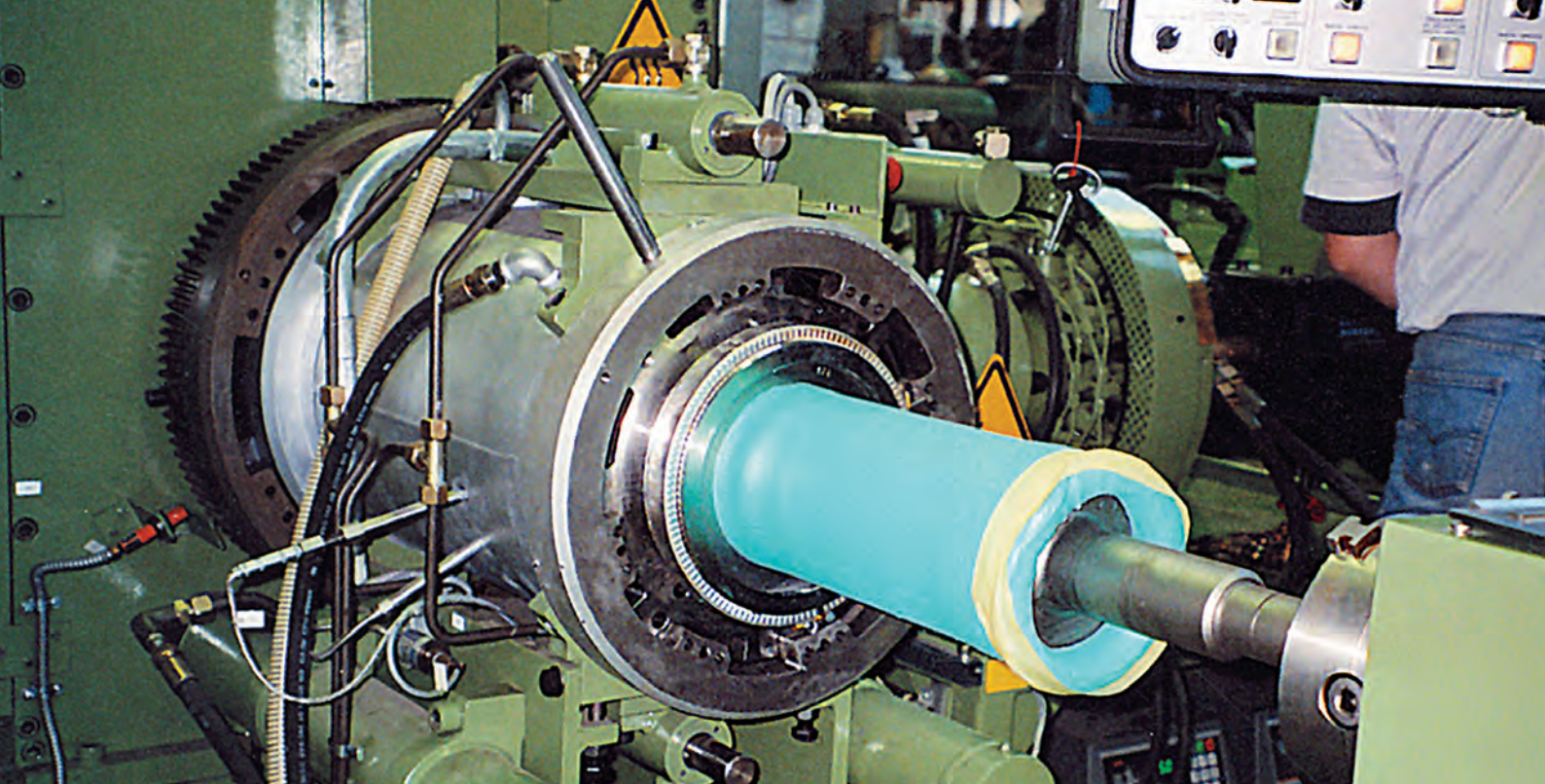
Covermatic is particularly suited to the production of homogeneous, blister-free coverings with a minimum of grinding allowance and with excellent concentricity and straightness.

Rubber compounds with mooney viscosities of 20 – 110 MU can be processed. Rollers covered with the covermatic satisfy all the high quality demands of printing and painting applications.

We offer this system in 4 sizes to cater for the covering of roller cores, sleeves, tubes, etc with diameters from 3 – 310 mm, whatever the length, to thicknesses of 1 – 40 mm.

Complete Covermatic systems

- Extruder (screw diameter 45 – 120 mm)
- Covermatic cross extrusion head
- Electrical controls with PLC
- Roll take-off roller train (KH 50 up to 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 200 N Core d 160 mm, covering thickness 20 mm 40 shore A

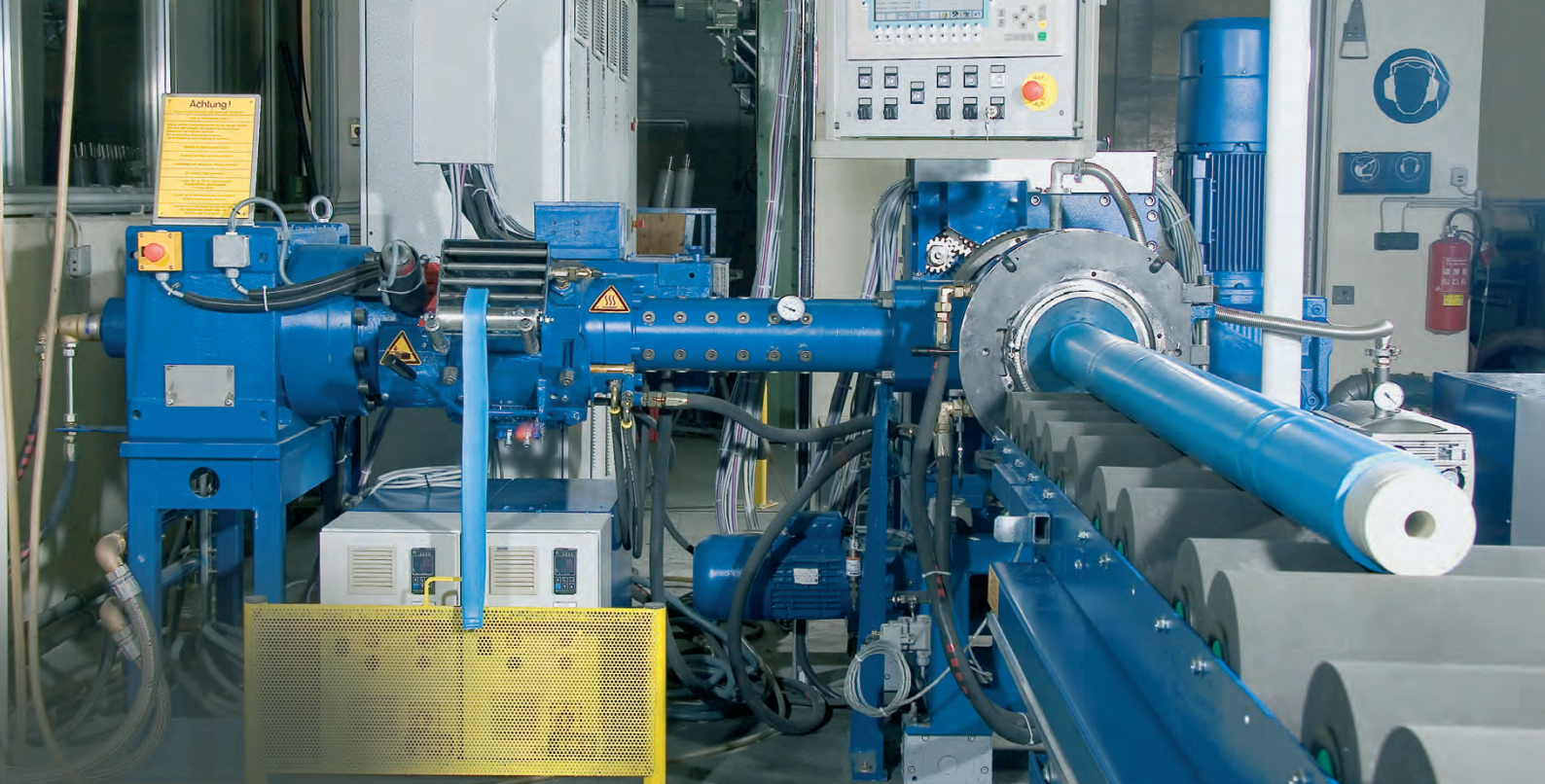
Standard benefits

- 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 type	KH 50N	KH 100N	KH 200N	KH 300N
Core Ø range	3 - 50 mm	5 - 110 mm	80 - 225 mm	120 - 310 mm
Covering thickness	1 - 30 mm	3 - 40 mm	3 - 40 mm	3 - 40 mm
Max finished Ø	110 mm	180 mm	300 mm	380 mm
Max covering	100 kg/h	200 kg/h	400 kg/h	550 kg/h
Drive power	7.5 kW	12.5 kW	25 kW	35 kW
Feeding extruder (K, KS, or SC types)	GE 45 or GE 60	GE 60 or GE 90	GE 90 or GE 120	GE 90 or GE 120



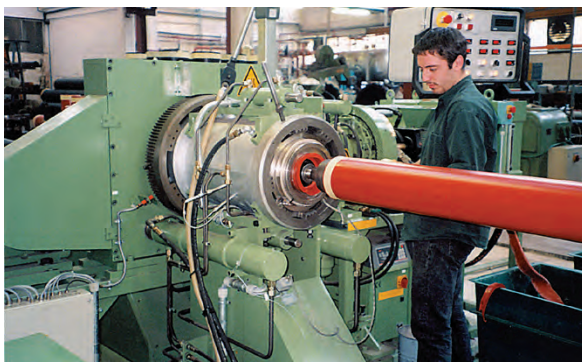
*Covermatic KH 200N
Core Ø 130 mm; covering thickness 18 mm, Core Length 4,200 mm; 65 Shore A*

COVERMATIC PROCESS DESCRIPTIONS

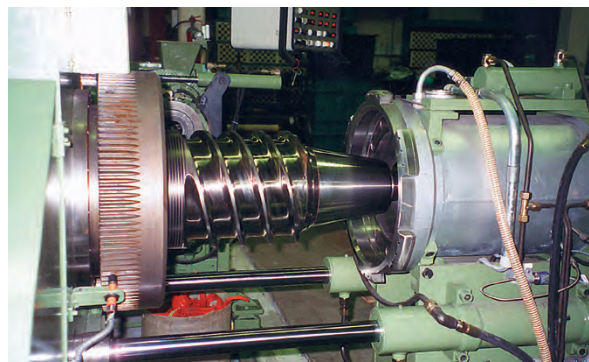
The rubber, which has been plastified and homogenised in the feeding extruder, is fed directly to the hollow driven screw of the Covermatic extrusion head.

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.

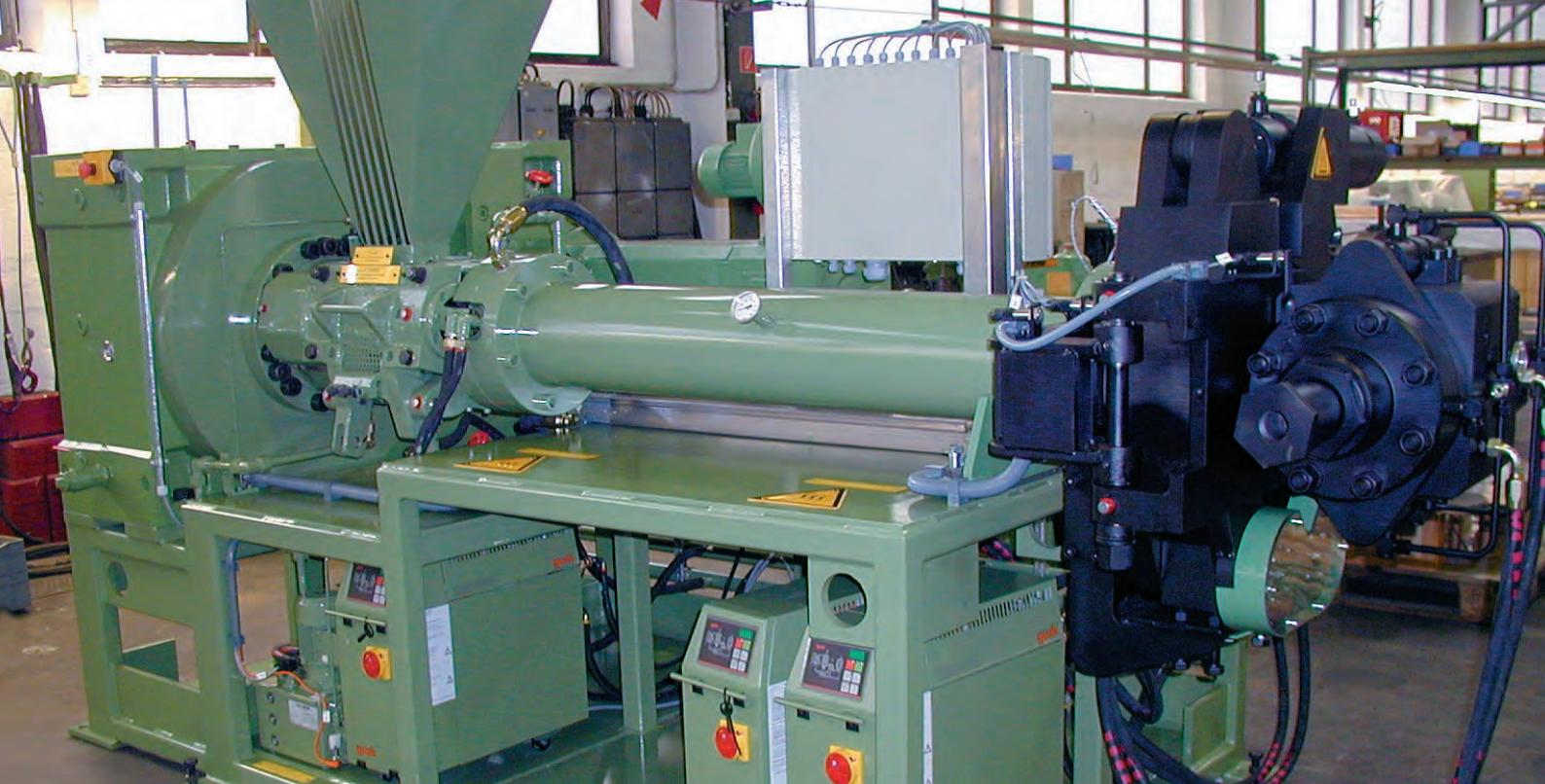
For the KH 200 and above, the transport of the rolls is assisted by an adjustable and automatically controlled conveying pressure provided by the WAE roll takeoff device. The rolls can be wrapped during or after the covering process.



*Covermatic KH 200N
Core Ø 150 mm; covering thickness 15 mm*



*Covermatic KH 200N
in the cleaning position*



*KraussMaffei GE 120 K x 16D
Crosshead for core \varnothing 10 – 65*

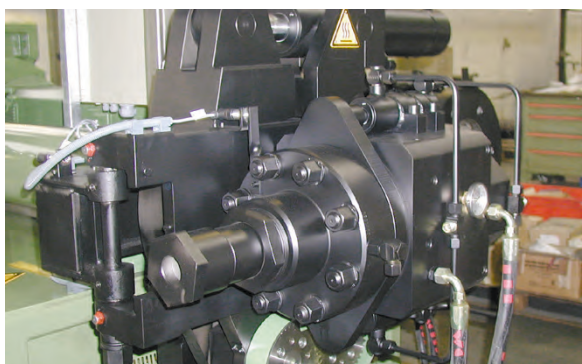
CROSSHEAD EXTRUSION ECONOMIC SYSTEM FOR SIMPLE USES

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'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.



*With hydraulic clamping and
hydraulic transfer guide ejector*



OUR WORLDWIDE EXPERTISE IS YOUR ADVANTAGE DIGITAL & SERVICE SOLUTIONS

With your KraussMaffei machine, you have chosen a product that delivers the highest levels of productivity and reliability. In addition to our range of machinery, KraussMaffei focuses on comprehensive and future-oriented solutions, innovative business models and a selected portfolio of digital products.

Customer service at the touch of a button

The process of digital transformation is becoming faster and easier than ever for the customer. Our Digital & Service Solutions unit make your production chain even more flexible and efficient with future-oriented solutions. KraussMaffei thus globally provides an all-inclusive customer service package and networks machines and processes with each other. Our global support offers a sound basis for your local long-term success.

Individual challenges in mechanical engineering call for intelligent solutions

With our services portfolio, we support you throughout your machine's lifecycle with a strong focus on your specific needs. In order to satisfy your wishes, we offer you a wide range of solutions in order to ensure maximum availability and optimum productivity of your machines.

Technology³ as a unique selling proposition

KraussMaffei is the only supplier in the world with a product range comprising the most important machine technologies for plastic and rubber processing: injection molding machinery, automation, reaction process machinery and extrusion technology. KraussMaffei is represented worldwide with more than 30 subsidiaries and over 10 production plants as well as about 570 commercial and service partners. Working together with our customers and partners, we are thus in a position to offer vast and unique expertise in the industry.

You can find further information at:
www.kraussmaffei.com



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