

ROLLER COVERING FOR THE METAL INDUSTRY

MANAGEMENT OF MECHANICAL FORCES

The production and coating of steel, stainless steel and non-ferrous strip requires a perfect management of traction, tension and steering in every step of the process. Covered rollers are often used to improve the friction coefficient on the strip whilst protecting it against damage.

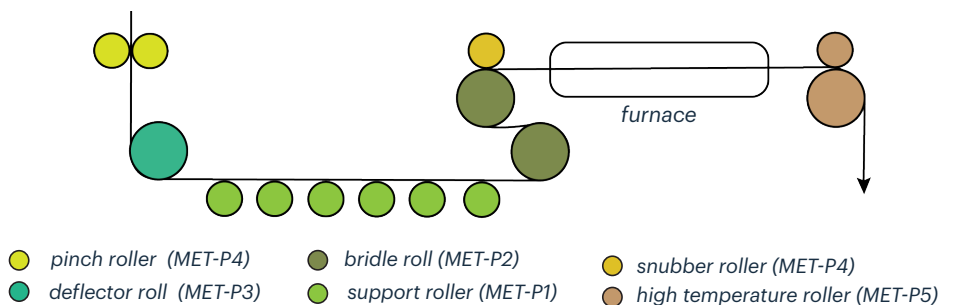
THE REQUIREMENTS

- Grip improvement
- Resistance to abrasion and edge cutting
- Resistance to mineral oils and other lubricants (*rolling, skin-passing, tension-leveling, stretching...*)
- Long lifetime

A perfect transport of strip as well as other mechanical functions, usually require roller coverings of very different nature, sometimes combined with particular finishes like crowning and grooving. Hannecard has developed a complete range based on

rubber, polyurethane, composite and carbide materials.

All proposed solutions share a very good resistance against mineral oils and against the most common lubricants.



OUR POLYURETHANE SOLUTIONS

Application	Solution	Max t°	Characteristics
Bridle, detour, strip support, pinch rollers All process lines	Hannethane-S Hannethane-D Brown - PU 70-95 shore A	100 °C	<ul style="list-style-type: none"> • Excellent cut-in, tear and abrasion resistance • Excellent oil resistance • unique double-colour coating for strip support rollers
Bridle, pinch, press, stretch rollers - high traction and pressure forces All process lines	Hannethane-XP PureDrive Brown - PU 70-95 Shore A 55 and 67 Shore D	110 °C	<ul style="list-style-type: none"> • Excellent cut-in, tear and abrasion resistance • High load resistance • Excellent oil resistance
Bridle, pinch, stretch, brake rollers, very high traction and pressure Aluminium, stainless steel and carbon steel strip processing	Kaltryl Brown - PU 70-90 Shore A	90 °C	<ul style="list-style-type: none"> • Outstanding cut-in, tear and abrasion resistance • High load resistance • Low dynamic heat build-up • Excellent fuel and oil resistance
Bridle, pinch, press rollers - for grip enhancing Coil coating, tin plate, annealing and galvanizing lines	Hannethane-CR Brown - PU 70-90 Shore A	100 °C	<ul style="list-style-type: none"> • Excellent abrasion resistance • High and long lasting roughness and surface grip
Bridle, detour, pinch, press rollers Ironing rollers Rollers at oven exit Aluminium, stainless steel and carbon steel strip processing	Hannetherm Hannetherm-XP Hannedyn-XP Brown/White - PU 70-98 Shore A	up to 150 °C	<ul style="list-style-type: none"> • Outstanding cut-in, tear and abrasion resistance • High load resistance • Low dynamic heat build-up

THE HANNECARD TOUCH

- Very **smooth grinding**
- Rough grinding up to Ra = 25 µ, even with high precision
- **Razor blade surface grooving**
- **Spreader and diamond grooves** or other groove types
- **Crowning** (*parabolic, flat + tapered, special geometries*)
- **Nip measurement and crown calculation**
- **Multi-layer and hybrid coatings**
- **Light-weight roller design** (*especially for horizontal looper rollers*)
- **Concept improvements**
- **Tungstene and chromium carbide coatings** by HP-HVAF thermal spray



SPECIAL SOLUTIONS FOR HORIZONTAL LOOPER AND STRIP SUPPORT ROLLERS :

Hannecard is world leader in the manufacturing of light-weight strip support rollers. We make and provide complete concepts to improve the reliability, the ergonomy and the lifetime of these rollers, that are often submitted to constant and extreme speed changes :

- Concepts using glass fibre, carbon fibre and other light-weight materials
- Weight reduction or even elimination of the central shaft
- Reduced weight for easy mounting in the process line
- Improved ergonomy and safety
- Designs with reduced inertia to improve the lifetime of the bearings and the cover

Furthermore, our unique double-colour cover Hannethane-D allows the easy monitoring of the often uneven abrasion of these rollers. This creates multiple advantages :

- Bright yellow base layer, very easy to see from a distance, even in a dusty environment
- No need to go into the installation to inspect or measure the rollers, improved safety
- Critical abrasion is spotted before the roller can fail or break
- Easy planning of roller changes

THE FUNCTION OF COATED ROLLERS IN THE MANAGEMENT OF MECHANICS :

- Management of pressure and traction
- Strip centring and guiding
- Strip stretching (*aluminium*)
- Strip detour and deflection
- Strip accumulation (*horizontally or vertically*)
- Noise reduction

OUR RUBBER SOLUTIONS

Application	Solution	Max t°	Characteristics
Various rollers All process lines	RollMet-S Black - Rubber 65-90 Shore A	110 °C	<ul style="list-style-type: none"> • Very good overall physical properties • Excellent oil and fuel resistance
Bridle, pinch, press rollers – for grip enhancing Improved traction control Coil coating, tin plate, annealing and galvanizing lines	RollMet-CR Black - Rubber 70-90 Shore A	110 °C	<ul style="list-style-type: none"> • Good overall properties • Excellent oil resistance • High and long lasting surface gripe • Improved friction coefficient
Various rollers at high temperature All process lines Ironing rollers for aluminium cold rolling	RollMet-HT Black - Rubber 80, 85 and 90 Shore A	160 °C	<ul style="list-style-type: none"> • Very good physical properties • Temperature resistant up to 160 °C • Excellent oil and kerosene resistance • Low dynamic heat build-up

OUR CARBIDE SOLUTIONS

Application	Solution	Max t°	Characteristics
bridle rolls, deflector rolls, tensioning rolls	HanneSpray-W HanneSpray-W Plus	500 °C	<ul style="list-style-type: none"> • Tungsten carbide coating in HP-HVAF spray • Thickness 50-1000 µm • Hardness up to 1300 HV • Porosity < 0,5% possible • Ra 0,05-6 on demand • Maximum abrasion resistance and lifetime
Furnace rolls, mechanical rolls in corrosive environments	HanneSpray-Cr HanneSpray-Cr Plus	950 °C	<ul style="list-style-type: none"> • Chromium carbide coating • Thickness 50-1000 µm • Hardness up to 1100 HV • Porosity < 0,1% possible • Special NiCr base layer possible • Ra 0,05-5 on demand

MORE INFORMATION?

For more information, please contact your local Hannecard partner or visit our website at:

www.hannecard.com