



Hartmann & König
STROMZUFÜHRUNGS AG



**Cable and rope reels
for on-board applications**



Highly durable cable reels for maritime demands

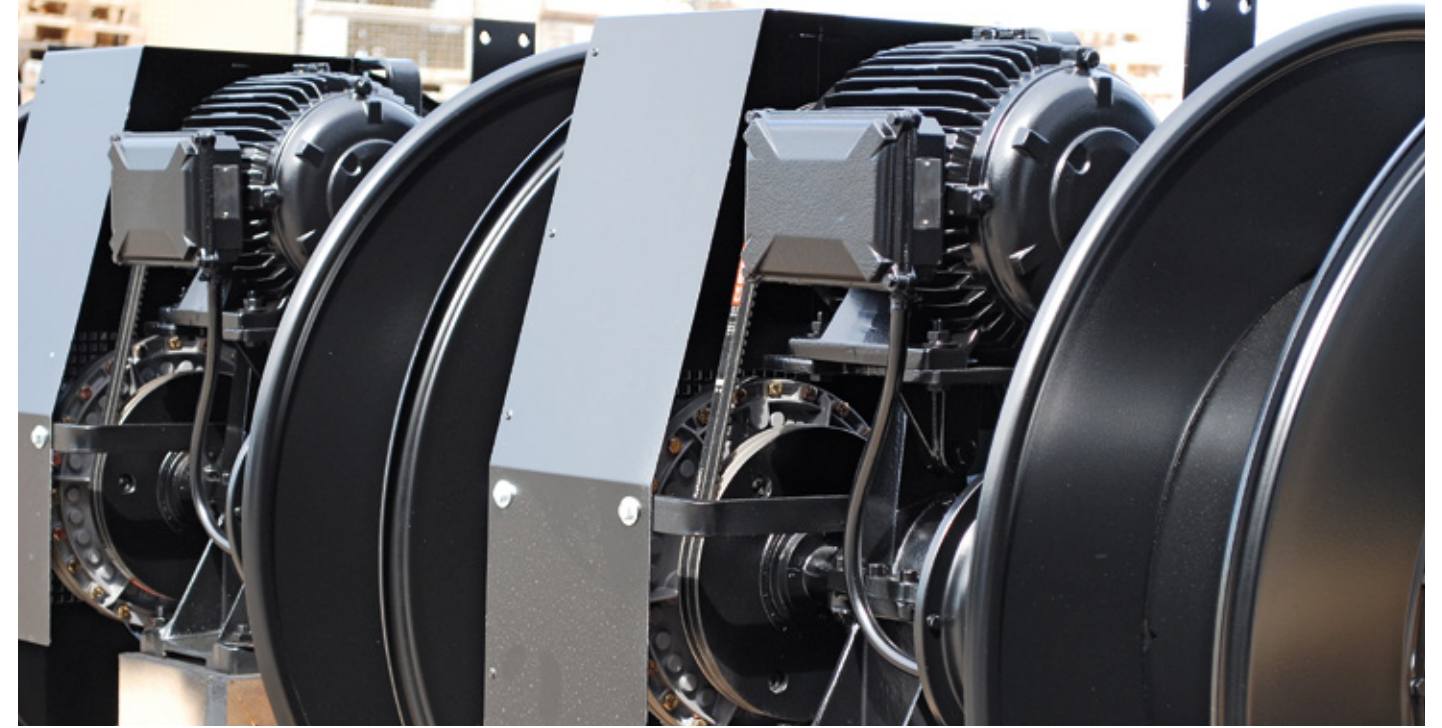
As a specialist in the development of powerful and robust cable reels and slip ring assemblies, Hartmann & König has been supplying Deck Cranes, Mobile Harbour Cranes, RMGs and RTGs as well as Ship-to-Shore and Intermodal Cranes with environmentally friendly energy for decades. For ports and container terminals, we manufacture motorised cable reels with high safety classes and optimum corrosion protection to withstand even the most extreme environmental conditions across the globe.

The ability to move containers, general and bulk cargo as well as heavy loads on board of freight vessels and offshore platforms requires energy to operate cranes and claws of different sizes and functionalities. All technical equipment used at sea must meet the strictest requirements in terms of ruggedness and salt-water resistance to ensure that it can operate reliably for many years even under extremely harsh environmental conditions.

Special surfaces and robust features

For this reason, we manufacture reel assemblies and flanges from stainless steel or hot-galvanised sheet steel with special coatings according to protection class IP65, or higher if required. Our rugged motorised cable reels with cylindrical

gears and turbo couplings guarantee a reliable energy supply to deck cranes of all types. Last but not least, rope drums by Hartmann and König are used to stabilise the rotary and slewing movements of claws and spreaders.



Customised electrification solutions

For every installation set-up and supply requirement, we configure the optimum cable reel with suitable drive units and accessories in order to meet the demands of mobile consumers. The configuration of cable reels and gears is tailored to the required travel speeds and distances.

Hartmann & König cable reels can be equipped with virtually all drive types, from proven spring drive up to latest frequency controlled drives, and can be perfectly matched by our specialists to the respective installation set-up.

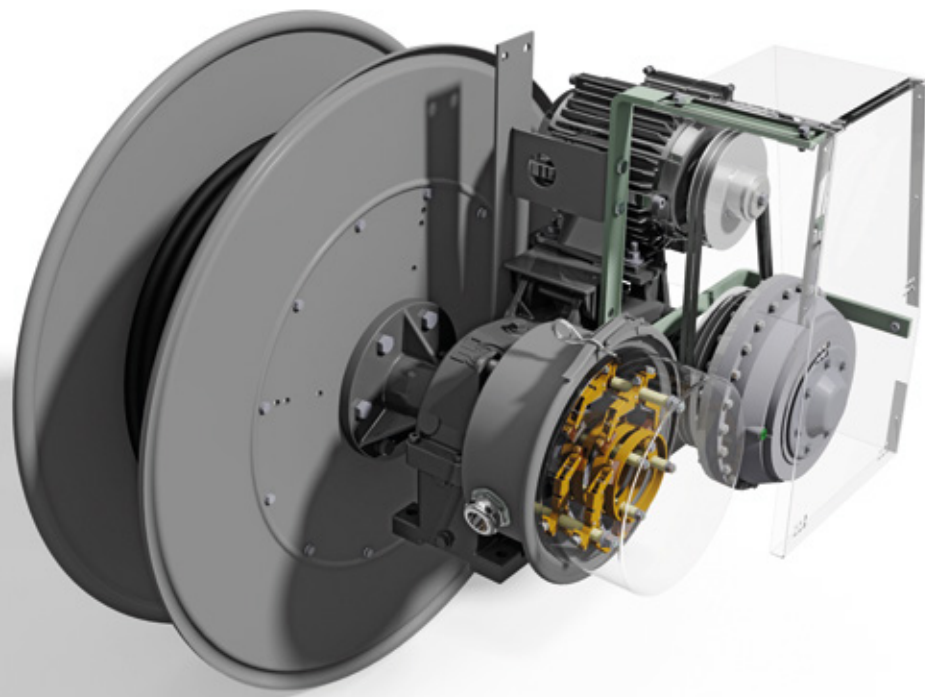
Drive units at a glance:

- Three-phased standard motors with brake; 100% ED
- Frequency inverter drives
- Turbo coupling size 274 + 366
- Magnetic coupling size 1.8 – 88
- Hydraulic drives
- Torque motor
- Bevel or flat gearboxes

Performance and advantages of turbo couplings

- Ideally for cable and wire reels with vertical payout
- Reels with a turbo coupling are especially suited for high travelling speeds which cannot be achieved with other, commonly available drive types
- Suitable for port and on-board operation (e.g. on-deck version) acc. to the regulations of the ship classification societies
- Used together with a commonly available, standard rotary current cage motor (IEC) or a direct current motor
- Drive and turbo coupling are designed for continuous operation S1 (100% operating time)
- The cable pull is almost constant across the entire winding length and only changes very slightly during unwinding, which means that the deposited cable is treated very gently
- Cable unwinding is possible to both sides
- An installed electrical spring-actuated brake prevents the line from unwinding itself when the system is switched off
- If the device is blocked for whatever reason, the 100% slip of the coupling ensures that the cable is not subjected to any greater strain than in its regular operating state





Cable reels type KFM Bo

Cable reels for on-board operation by Hartmann & König are used for upper deck applications according to the regulations of ship classification societies Det Norske Veritas, German Lloyd, Lloyds Register etc.

Our standard of cable and hose reels for on-board operation is protection class IP56. Special reeling cables ensure a smooth operation of grabs and spreader applications on deck and harbour cranes placing higher demands on ruggedness and reliability. Since cable reels on deck cranes are usually

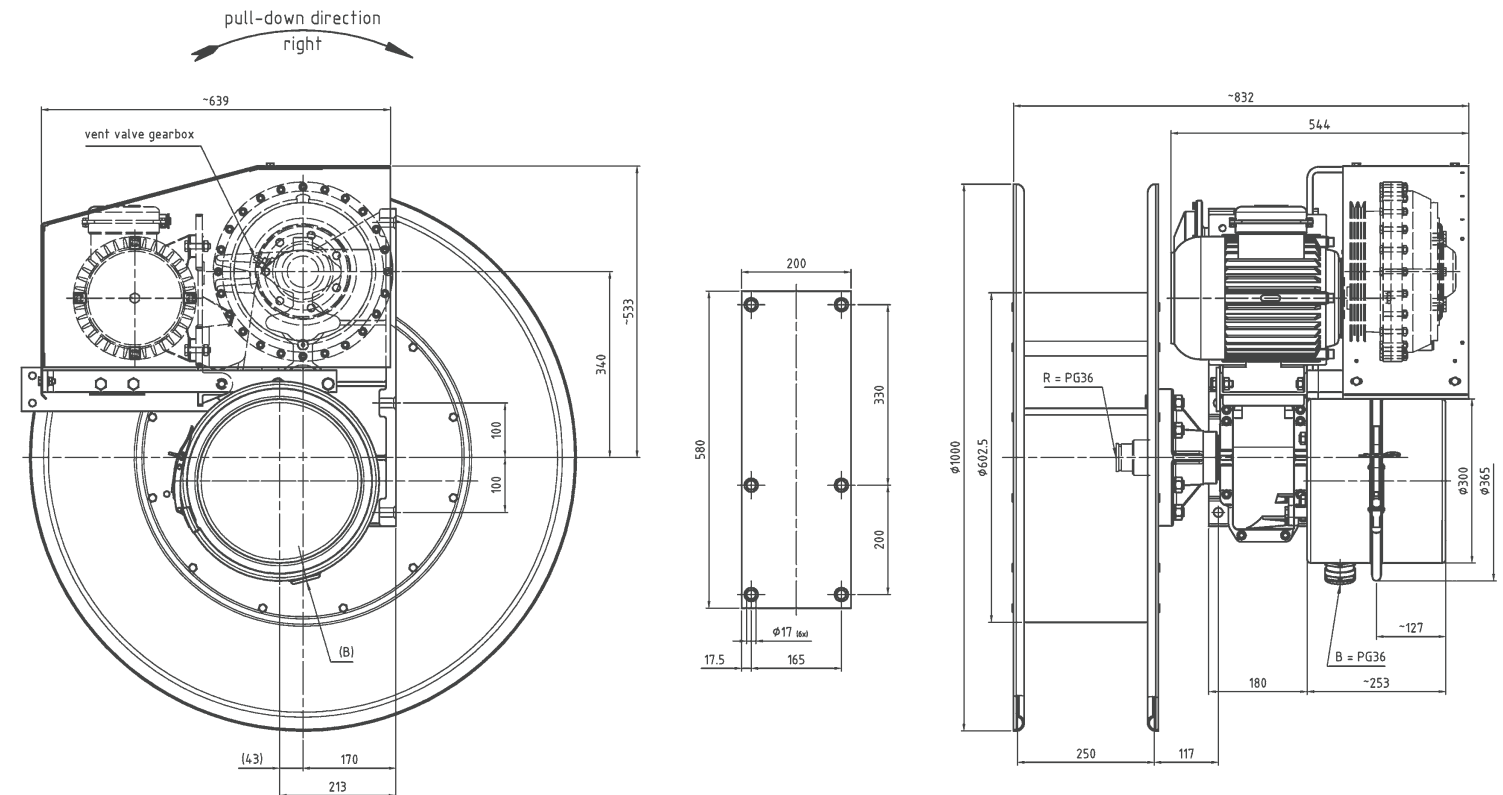
mounted on the lower part of crane booms, corresponding accessories as e.g. deflection and guide pulleys will be necessary for a save cable routing.

Due to the higher lifting speeds and start-up times of hydraulic driven board cranes our cable reels are configured as follows:

- Lifting speed V_{max} : 100 m/min
- Acceleration b_{max} : 1 m/s²

Specifications at a glance

Application:	<ul style="list-style-type: none"> • Port and on-board operation • Waste incineration • Other vertical operations
Protection class for usage on board:	<ul style="list-style-type: none"> • IP56
Drive unit:	<ul style="list-style-type: none"> • Gearbox with turbo coupling
Motor:	<ul style="list-style-type: none"> • Three-phase motor
Brake:	<ul style="list-style-type: none"> • Separate brake
Winding:	<ul style="list-style-type: none"> • Cylindrical • Mono-spiral
Lifting speed:	<ul style="list-style-type: none"> • V_{max} = 100 m/min
Acceleration:	<ul style="list-style-type: none"> • b_{max} = 1 m/s²
Cable types:	<ul style="list-style-type: none"> • Low voltage cables NSHTÖU-J up to 1 kV • PUR-H cables • Special cables
Cable payout:	<ul style="list-style-type: none"> • Vertically downwards, directly or with deflection or guide pulleys (accessories)
Regulations:	<ul style="list-style-type: none"> • According to the regulations of Det Norske Veritas, German Lloyd, Lloyds Register etc. • Without approval (in-house approval possible at extra cost)



Cable options for cable reels with turbo couplings, type KFM

4 x 16 mm² Cordaflex SM-K, Ø 26.7 mm, 1.24 kg/m weight, tensile force max. 1920 N

l (m)	A	Speed in m/min	Cable reel type	Weight (kg)	Dimension sheet
38	150	100	KFM8/600B0	270	06-20-00-000
50	150	100	KFM8/600/11B0	290	06-20-01-000

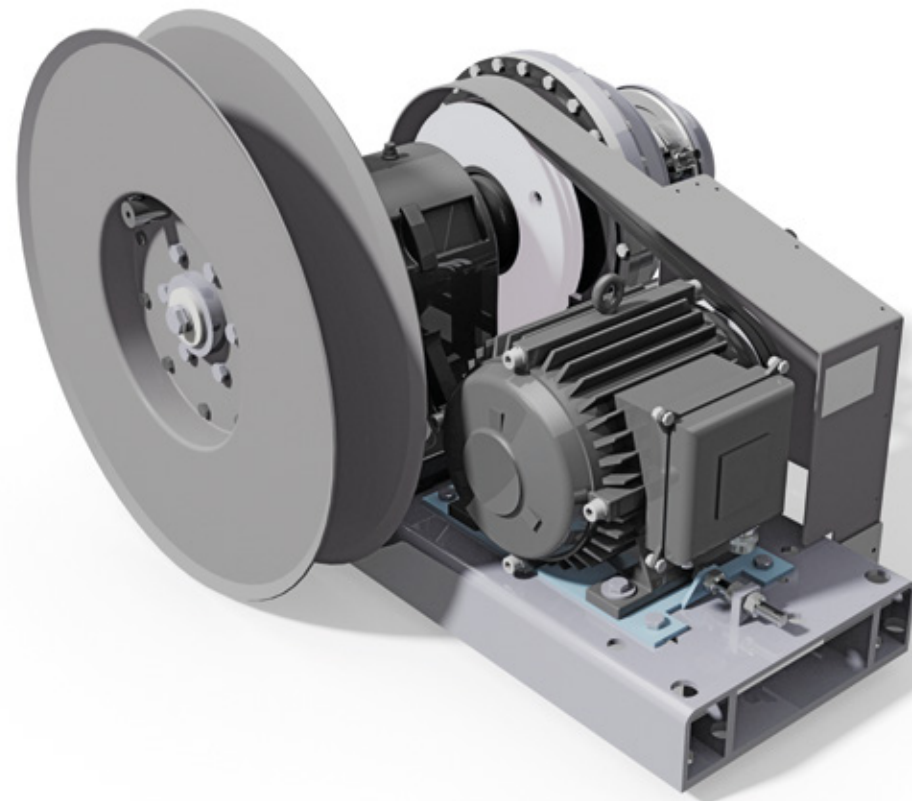
4 x 25 mm² Cordaflex SM-K, Ø 31.5 mm, 1.85 kg/m weight, tensile force max. 3000 N

l (m)	A	Speed in m/min	Cable reel type	Weight (kg)	Dimension sheet
25	150	100	KFM8/600B0	270	06-20-00-000
30	150	100	KFM8/600B0	290	06-20-01-000

3 x 35 + 3 x 16/3 mm² Cordaflex SM-K, Ø 31.5 mm, 2.16 kg/m weight, tensile force max. 3150 N

l (m)	A	Speed in m/min	Cable reel type	Weight (kg)	Dimension sheet
25	150	100	KFM8/600B0	270	06-20-00-000
30	150	100	KFM8/600B0	290	06-20-01-000

Cable reels with other cross sections, cable lengths and multi-pole cables on request. Attention: Please, consider maximum tensile load of the reeling cable!



Rope reels, type KSM

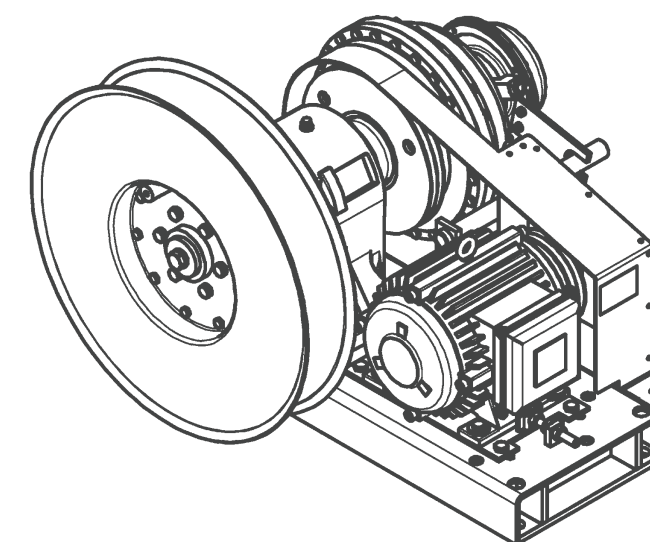
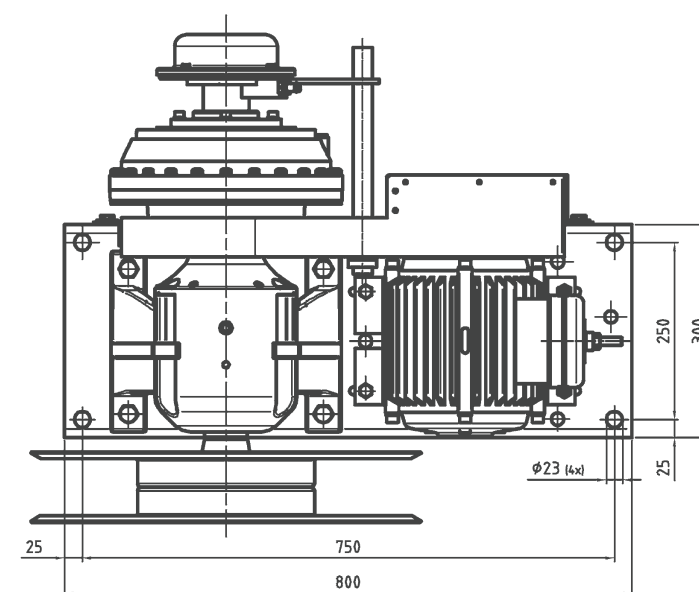
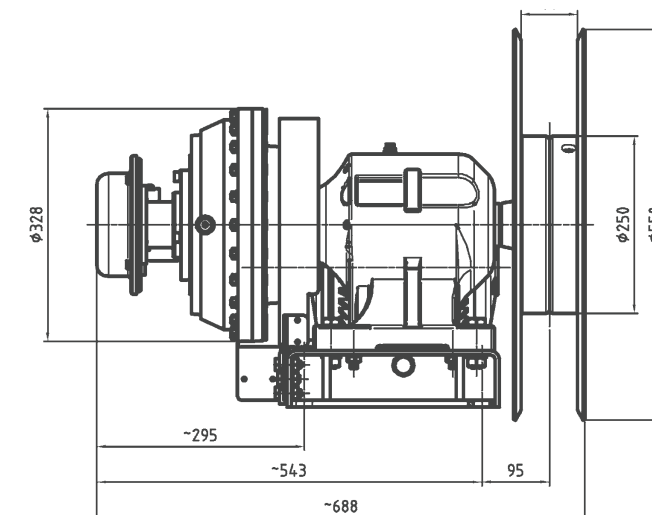
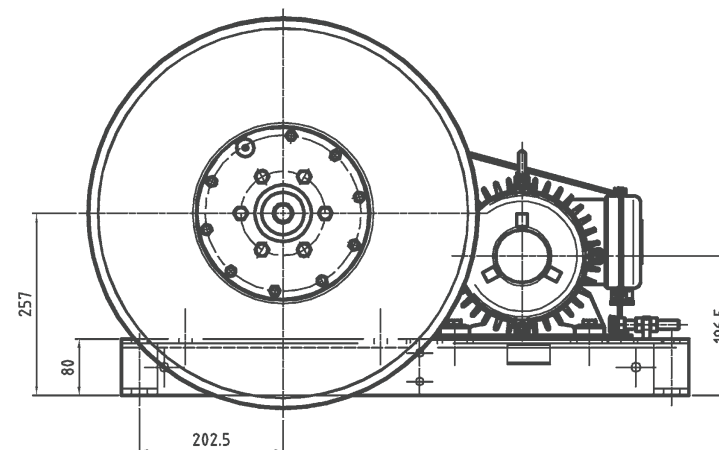
Rope reels are used for a wide range of different applications. Depending on the deployment requirements, we configure rope reels with a spring drive or a suitable motor drive. Gripper or spreader steadying reels, for example, are used in on-board cranes and port cranes to make sure that the gripper or spreader cannot twist during the operation and that the cable is not damaged. For that purpose, the rope reels are preferably mounted on the opposite side of the cable reel. The flexible steel rope (not included in scope of delivery) can also be guided with deflector and guide pulleys to the mobile consumer. The rope should feed the rope reel centrally.

Cable reel and guide pulley configurations on jib cranes can be realised above, below or sideward to the crane booms. Lifting speeds for rope reels correlate with those of cable reels. For such applications at sea or in the port area, we design rope reels according to the respective protective classes and according to the regulations of the ship classification societies.

Rope options for rope reels with turbo coupling, Type KSM

Flexible steel rope, Ø 8 mm, 0,3 kg/m weight

l (m)	Fz in N	Speed (m/min)	Cable reel type	Weight (kg)	Dimension sheet
50	900	100	KSM2B0	180	11-06-00-000



Accessories for maritime cable and rope reels

Hartmann & König offers a comprehensive range of accessories for its products such as roller payout guides with or without control function, deflector and guide pulleys, cable grip, end limit switches, spooling devices or heating units for slip ring housings. Our range of accessories is just as powerful and robust as our cable reels and slip ring assemblies.

Cable deflection and guide pulleys, type series URN, LRN

Cable deflection and guide pulleys are used on crane booms e.g., when the reeling cable is not directly unwound from the cable reel, but must be deflected via cable deflections. The core diameter of the pulley is at least 15 times that of the cable diameter. We manufacture our deflection and guide pulleys in an on-board version and a normal version, both of which are differentiated by their paint coat and seals. They are approved for cable guidance for on-board operation as an IP65 on-board version as well as acc. to ship classifications DNV, GL and LRS and for port cranes.





We energize mobility. Worldwide.



Motorised cable reels



Spring cable reels



Slip ring assemblies



Hartmann & König
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