

ROPEBLOCK EQUALS SMART ENGINEERING

Established in 1994, Ropeblock is a globally renowned developer and manufacturer of lifting and rigging hardware. We supply safe and high quality components to crane OEMs and end users worldwide. Our products are used in critical equipment such as mobile cranes, port cranes, ship cranes, offshore cranes and platforms, dredging equipment, pendant structures, mooring systems, and heavy industry applications. By providing a reliable interface between the wire rope and its load and efficiently guiding the rope through the crane system, Ropeblock products maximize operational safety as well as wire rope durability.

ENGINEERED FOR EFFICIENCY

Ropeblock products stand out by being engineered for efficiency, which is a matter of matching superior product design and (cost) efficient production. Mind you, our Smart Engineering philosophy goes way beyond actual engineering. It involves the entire process, including quality and safety, certification, and research & development. The fruits of Smart Engineering are often introduced in custom designed solutions. In turn, our standard components benefit as well, as any major innovations and improvements achieved are subsequently incorporated into the entire portfolio of Ropeblock products.

WE KNOW YOUR MARKET

Besides Smart Engineered products and solutions, Ropeblock's excellent reputation is due to thorough knowledge of the markets in which we operate. From construction to cargo handling, offshore to industry, our dedicated specialists know all about industry specific issues, requirements, trends and developments. This very knowledge helps them in putting customers and customer needs first - which is

another Ropeblock trademark. Besides direct sales to customers in our various target markets, Ropeblock products are available from numerous rigging and sling shops worldwide. These vendors are proud to carry Ropeblock catalog products, most of which are instantly available from large stocks.

**IN THIS CATALOG WE WILL TELL YOU ABOUT ROPEBLOCK,
AND INTRODUCE YOU TO OUR PORTFOLIO.**

**IF YOU HAVE ANY QUESTIONS, OUR STAFF WILL BE
GLAD TO BE OF SERVICE**



WHY CHOOSE ROPEBLOCK? MARKET LEADING DESIGNS

Ropeblock's design philosophy is primarily aimed at supplying low maintenance products that protect the wire rope and extend its lifetime. The implementation of this philosophy is restricted by the rules and regulations of different third parties and governmental institutions.

Our extensive knowledge in this domain has allowed us to come up with truly market leading designs appreciated by OEMs and end-users alike.

THE BENEFITS OF STANDARDIZATION

Wherever possible Ropeblock seeks to standardize its products. As a result, many of them can be used across applications. As an added benefit, lead times are relatively short.

CONSISTENT QUALITY

Consistent product quality is assured by Ropeblock's ISO 9001 QMS and a dedicated team of QA/QC professionals. Our efforts in this regard include elaborate in-house testing, especially where blocks and overhaul balls are concerned. Moreover, our manufacturing process has been approved by DNV GL, RMRS, BV, RINA and API Q1, with whom we are now in a Manufacturing Survey Arrangement.

FULL COMPLIANCE

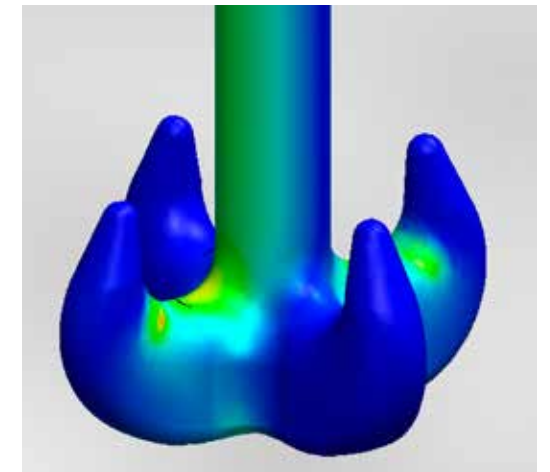
Ropeblock products are state of the art designed following European machine directive 2006/42/EC and using relevant guidelines in EN, ISO, DIN or FEM standards, ASME B30.5, B30.10, B30.26 safety standards and e.g. federal specifications RR-S550D, RR-C-271. Ropeblock products adhere to standards and design rules (such as API 2C, API 8C, ABS, DNV, LRS, BV, GL, RINA, RS, etc.) as mentioned in the contract and/or drawings. With Ropeblock Design For Assembly (DFA) engineering principles they are the perfect choice for local regulations, stipulating hook and hook-nut should be dismantled, inspected and re-tested (proof loaded) every 4 or 5 years.

CERTIFICATES AND DOCUMENTATION

Ropeblock products can be supplied with any certification/ documentation you desire or require, such as declarations of compliance, manufacturer test certificates, material certificates, inspection reports and third party documents.

THE FINISHING TOUCH

An important requirement in the total scope of manufacturing is the finishing, or corrosion protection, of the products. Ropeblock has developed comprehensive finishing methods in accordance with ISO standards, which allows for flexible adaptation to segment specific requirements.



QUALITY & CERTIFICATES

The Ropeblock Quality Management System is certified in accordance with ISO 9001: 2015. Our manufacturing processes have been approved by DNV-GL, RMRS, BV, RINA and API Q1, resulting in a Manufacturing Survey Arrangement with these third parties. This, together with a dedicated team of QA/QC professionals, ensures a consistent quality of products and services.



and many more...

STANDARDS AND DESIGN RULES

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CERTIFICATES AND DOCUMENTS

Upon request, all blocks and swivels can be supplied with any of the following documents:

- Declaration of compliance according to EN 10204 2.1
- Test report according to EN 10204 2.2 (batch proof load test according to ILO 152)
- Inspection certificate finished product according to EN 10204 3.1 (individual product proof load test according to ILO 152)
- Inspection certificate finished product according to EN 10204 3.2, confirmed by a third party (Individual product proof load test according to ILO 152)
- Material certificate according to EN 10204 3.1 for main load bearing part (hook certificate)
- Material certificates according to EN 10204 3.1 for all load bearing parts
- Material certificates confirmed by a third party according to EN 10304 3.2, for main loading part or all load bearing parts
- EC Declaration according to Machine Directive 2006/42/EG where applicable
- NDE inspection reports (e.g. visual, dimensional, magnetic and ultrasonic)
- Witness or survey certificate issued by official classification or inspection agencies, all IACS agencies accepted (e.g. ABS, DNV GL, LRS)
- Third party design or type approval
- Full manufacturing record book including material certificates, test certificates, welding log, paint log, etcetera.

NOTE THAT THE ABOVE IS AN ABSTRACT OF WHAT IS COMMONLY REQUESTED, BUT NOT CONSIDERED STANDARD. PLEASE ASK YOUR SALES CONTACT FOR DETAILS.



QUALITY & CERTIFICATES

ROPEBLOCK R&D

THE HANDS-ON APPROACH

At Ropeblock, research & development is not an isolated department. Rather, it's an ongoing process that is integral to our Smart Engineering philosophy. Our constant aim is to fulfil customer needs by providing efficient, safe, durable, low-maintenance products and solutions, well thought-out from manufacturing through application. To achieve this, our engineers are always looking for ways to optimize current designs or come up with new ones that do an even better job. Our hands-on approach of R&D has led to success for both our customers and end users, while also yielding patented market leading designs. On these pages we present two examples of highly appreciated product optimizations that couldn't have been achieved without Ropeblock's signature R&D approach.



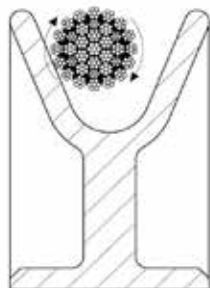
ROPEBLOCK CAST SHEAVES ENGINEERED FOR DURABILITY

In any type of crane system, a wire rope being bent over a sheave will lead to rope fatigue. Recent studies show that this particular type of fatigue is even more severe when the wire rope is in a twisted state. In such cases, the most commonly used rotation resistant ropes may see their longevity reduced by up to 70 percent. At Ropeblock, we took it upon ourselves to address this issue by developing a unique type of sheave.

FLEET ANGLES

One of the major causes of wire rope twist in crane applications is friction between the wire rope and the sheave.

This friction, in turn, is primarily caused by the angle of attack of the wire rope on the sheave groove (a phenomenon also known as fleet angles). Under tension, the end of a wire rope will rotate when free (e.g. with a swivel). However, such rotation



is not possible when the wire rope is fixed directly to the crane. The additional twist resulting from fleet angles then generates extra torsion. When the accumulated twist in the crane system is released between the tip of the crane and the lower block, block rotation may eventually ensue.

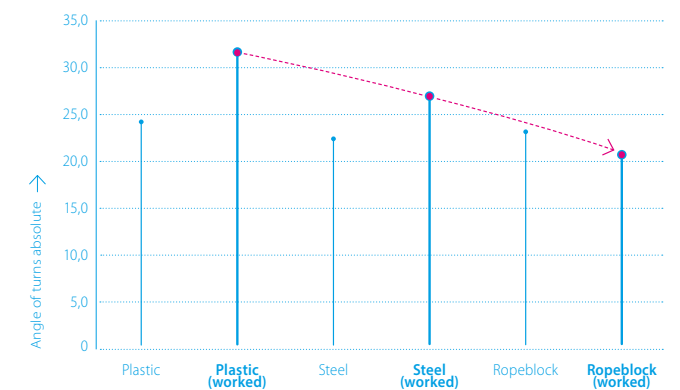
CHOOSING THE OPTIMUM MATERIAL

The degree of friction in crane systems largely depends on the type of sheave used. Plastic sheaves, especially, are known to cause above-average friction, hence, more twist. Consequently, after meticulous R&D, Ropeblock introduced a unique type of cast sheave. It ensures optimum interaction with the wire rope, resulting in significant friction reduction and record amounts of Cycle Bends Over Sheave (CBOS) in any application.

GRAPHITE LUBRICATION

The secret of the Ropeblock cast sheave is dry graphite lubrication, which works in a way similar to bronze bearings with graphite nodes. By making the wire rope slide rather than twisting it, Ropeblock sheaves substantially lower the friction coefficient. Once the rope and groove are properly run in, wear is reduced

to practically zero. What's more, improved sheave ductility provides better resistance against impact or unintended blows against objects, while the material grain makes sheaves more crack-resistant. As an added benefit when operating in extreme circumstances, Ropeblock graphite sheaves have a better than average low temperature performance, allowing service down to even -40°C/-40°F.



LONGER LASTING

Research in a lab environment proved that by minimizing wire rope twist Ropeblock sheaves make wire rope last up to 40 percent longer when compared to the same size and geometry plastic sheaves. When compared to regular steel sheaves of the same size and geometry, Ropeblock sheaves perform better by 25 percent. All in all, Ropeblock sheaves make crane systems safer, improve uptime and optimize cost effectiveness. They come in hundreds of different bearing and D/d sizes, ranging from wire rope 10 mm to 76 mm and beyond, and are accepted by all major classification societies.

ROPEBLOCK OPTIMIZED RAMSHORN HOOKS ENGINEERED FOR EFFICIENCY

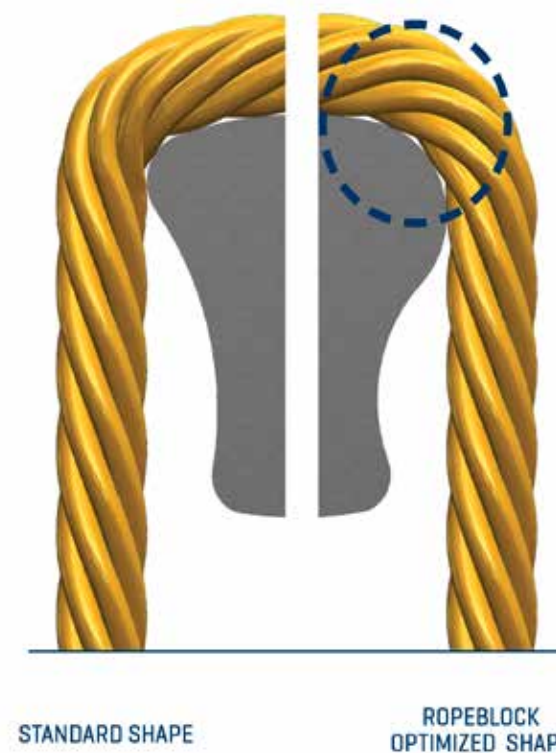
Crane blocks and lifting hooks are often used in applications that include soft eye and steel wire rope slings and grommets.

The capacity of these slings and grommets largely depends on the bending radius on the hook saddle. The sharper the edge, the lower the capacity. Oversized slings/grommets need to be selected to meet the required load and wear will arise on the bending spots.

INCREASED BENDING RADIUS

To remedy this, Ropeblock developed a new generation of ramshorn hooks featuring a significantly larger bending radius in the sling zone. The increased bending radius improves the working efficiency of slings and grommets. The resulting wear reduction translates into improved endurance, while capacity is less compromised.

WIRE ROPE BENDING RADIUS



EN AND DIN COMPLIANT

Whereas the new geometry makes the hook body exceed EN and DIN standards (including EN13001-3-5), the shape still allows the hooks to work with traditional hardware. All in all this is the safe choice for any application. The new improved ramshorn hooks are available in the medium and larger capacity range (sizes 16 and up) where grommets and soft-eye slings are used along with traditional hardware.

