



Certificate no.:
TAS00004E2

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Lifting Gear

with type designation(s)

SE.720.5030.XX*, *Designation XX is depending on the sheave variations within the limits listed in this document

issued to

Ropeblock B.V.

Oldenzaal, Overijssel, Netherlands

is found to comply with

DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

Application:

See next page

Issued at **Høvik** on **2024-09-18**

This Certificate is valid until **2029-09-17**.

for **DNV**

DNV local unit: **Netherlands CMC**

Approval Engineer: **Fredrik Per Olof Höglund**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2023-09

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Page 1 of 3

Product description

The sheaves covered by this Type Approval certificate are to be installed permanently on a lifting appliance. They shall not be used as sub-components for loose gear.

The Type Approval covers sheave:

SHEAVE RANGE $\varnothing 720/\varnothing 150$, according to the limits as stated on generic drawing E190067 rev. 00

Casting drawings:

SHEAVE 720/150 – CASTING

with drawing number: 04GR.720.5030 rev. 00-A

SHEAVE 720/150 - CASTING

with drawing number: 04GR.720.5030.B rev. 00

Reference standards

F.E.M., Rules for the Design of Hoisting Appliances, 3rd Ed. 1998

Application/Limitation

Sheave variations are approved according to table below:

Sheave	E190067 rev.00			
Min design temperature [°C]	-20			
Outer diameter [mm]	830			
Wire rope diameter [mm]	Min	Max		
	24	34		
Groove radius [mm]	Min	Max		
	0.52 x Wire rope diameter		0.56 x Wire rope diameter	
Hub width [mm]	Alternative 1		Alternative 2	
	81		113	
Lubrication channel	Optional, according to detail D on E190067 rev. 00			
Threaded holes in rim	Optional, according to detail E on E190067 rev. 00			
Load condition				
Wrap angle [deg]	180	100	48	180
Fleet angle, in/out [deg]	1.5	1.5	1.5	4
Maximum dynamic line pull* [kN]	632	672	522	324
Design safety factor	1.5			

*) The maximum dynamic load shall include effects such as the weight of the hook/block, the weight of the wire rope and the lifting appliance's design dynamic factor.

The applied design dynamic factor is 1.3. For dynamic factors exceeding 1.3, the static line pull multiplied by the dynamic factor shall not be greater than the maximum dynamic line pull values given above.

Maximum dynamic line pull for component groups.

F.E.M. 1.001 component group	E1-E3	E4	E5	E6	E7	E8
Load Case 1: Wrap angle 180deg Fleet angle, in/out, 0.75deg* Maximum dynamic line pull [kN]	632	566	471	392	327	272**
Load Case 2: Wrap angle 100deg Fleet angle, in/out, 0.75deg* Maximum dynamic line pull [kN]	672	609	507	422	351	292**
Load Case 3: Wrap angle 48deg Fleet angle, in/out, 0.75deg* Maximum dynamic line pull [kN]	522	522	471	392	327	272**
Load Case 4: Wrap angle 180deg Fleet angle, in/out, 2deg* Maximum dynamic line pull [kN]	324	324	324	296	244	201**

* Mean fleet angle values are considered

** E8 is based on P1/B10, P2/B9, P3/B8, P4/B7

1. All materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the Type Approval documentation.
2. The sheave bearings are not covered by this Type Approval.
3. Sheave bearings are to be delivered with manufacturer's CoC, confirming sufficient strength and capacity. Proper lubrication of the bearings is to be guaranteed during operation and use of the sheaves.

Type Approval documentation

Tests to be carried out

1. If a DNV Product Certificate is required, each sheave shall be subjected to overload testing as per DNV-ST-0378 Table 14-1 and 14.2.3.4.
2. NDT as specified in the Type Approval Documentation are to be carried out by certified personnel.
3. Testing shall be witnessed by DNV representative.

Note: sheaves are exempt from impact testing.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>.

END OF CERTIFICATE