

Certificate of Compliance

Pen



Type ID:	141-2	Manufacturer:	Scale Aquaculture AS, Beddingen 16, N-7042 Trondheim
Serial ID:	5474-24	Phone.:	73 80 99 30
Project ID:	13460		
Dato of production:	06.05.2024		post@scaleaq.com / www.scaleaq.no

ScaleAQ FrøyaRingen FR560-200 – Pen made of PE plastic material

ScaleAQ FrøyaRingen Pen is designed in accordance with NS9415:2021 - NYTEK23 – Reliability Class 2

Circumference [m]:	200	Dim. Floating pipes [mm]:	560
SDR floating pipes, [Outer / Inner]:	13,6/17	Wall thickness, Outer / Inner [mm]:	41,2/32,9
No. of floating pipes [Pcs.]:	2	Max. bending radius of diameter [%]:	15
Total No. of brackets [Pcs.]:	72	No. of mooring brackets* [Pcs.]:	12H
No. of brackets, steel [Pcs.]:	72	Distance between mooring brackets [m]:	2x14,5
No. of brackets, plastic [Pcs.]:	NA	Working angle outer moorings [°]:	35-50
Max. mooring load, Ultimate Limit State [T]:	35	Max. depth bottom rope cylindrical net [m]:	15
Max. mooring load, Accident Limit State [T]:	40	Max. total depth cylindrical net [m]:	30
Max. relative towing velocity [knots]:	3	Max. total depth conical-/spaghetti net [m]:	55
Sinker ring supplied:	Yes	Design Working Life [Years]:	20
Dry weight supplied [kg/m]: Approx.	70	Total dry weight sinker ring [T]: Approx.	14,6
Dim. sinker ring [mm]:	400	SDR sinker ring:	11
Circumference sinker ring [m]:	208,2	Length sinker ring suspension [m]:	25,2
Type of sinker ring suspension:	18 mm fiber rope	Net buoyancy pen [T]:	59,6
Max. moment handrail post [Nm]:	5530	Max. load from net [T]:	7,7
No. of fixing points net [PCs.]:	72	Solidity net, incl. fouling [%]	32,1

The Pen is designed and documented to satisfy following environmental data:

Depth bottom rope / net / Center conical-/ spaghetti net:	Max. significant wave height [m]:	Max. current velocity [m/s]:	Notes
15/30/-	4,99	0,75	Sinker ring: 450 mm, 70 kg/m

Alternative Calculated and documented environmental data:

Depth bottom rope / net / Center conical-/ spaghetti net:	Max. significant wave height [m]:	Max. current velocity [m/s]:	Notes
20/40/-	4,99	1,30	Sinker ring: 400 mm, 80 kg/m
-/-55	4,50	1,40	Weight in tip of conical net: 5 tonnes
-/-55	4,99	0,75	Weight in tip of conical net: 5 tonnes
/ /			

Designed in accordance with:
 - NS9415:2021
 - NYTEK23

Trondheim, 06.08.2024

Anders Sletten
 Product Manager Pens

Validity:

The certificate is only valid as long as the Pen is treated in accordance with the owner's manual, and as long as the inspection and maintenance are documented and complied.

Notes:

- Description of installation, operation, inspection and maintenance are in the owner's manual for Pens.
- Mounting of auxiliary equipment that will affect the stability of the Pen, must be agreed with ScaleAQ in each case.
- Validity of the Certificate of Compliance is also valid for use with ScaleAQ repair brackets.
- When using conical net or spaghetti net, the sinker ring has to be removed.

*Mooring bracket **H** = Mooring bracket with Hoop, **P** = Mooring bracket with Pipe, **HWS** = Mooring bracket with hoop without stanchion.

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Product Manager Pens