



Certificate No. 01-015502/0111896

TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TYPE AND DESCRIPTION OF PRODUCT:

FLOATING PONTOON BREAKWATER TYPE F/CA/20-4, FOR BERTHS IN MARINAS

MANUFACTURER:

INGEMAR srl
Via Martin Luther King 50
31032 Casale Sul Sile (TV)
ITALY

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

Rules for the classification of ships; CRS Technical Circular QC-T-191.

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: **2026-06-18**

Place and date: Split, 2022-07-20 Seal

Marinko Popović, dipl.ing.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

DETAILED PRODUCT DESCRIPTION:

Floating pontoon type F/CA/20-4 is made of steel reinforced concrete. Pontoon core is expanded polystyrene.

Pontoon dimensions:

length	20 m	breadth (concrete)	4 m
height	2 m	freeboard	0.8 m

- **Significant wave height up to 1.1 m**
- **Mooring of crafts length up to 30 m**

TYPE APPROVAL DOCUMENTATION:

Drawing “STRUTTURA IN CALCESTRUZZO ASSIEME COSTRUTTIVO“ No.1-0-S000-Y-5668 Rev.0.

Drawing “ARMATURE IN ACCIAIO ASSIEME COSTRUTTIVO” No. 1-0-S000-Y-5669 Rev.0.

Floating pontoon-breakwater F/CA/20-4, Calculation Report No. 047-ENG-0 Rev.0.

Floating pontoon-breakwater F/CA/20-4, Calculation Report No. 044-E-0 Rev.0.

Drawing „DISEGNO DI ASSIEME“ No. 1-3-D000-Z-7072 Rev.0.

Floating pontoon-breakwater F/CA/20-4, Calculation Report No. 045-E-0 Rev.0.

EXPERIMENTAL STUDY OF THE BEHAVIOR OF A FLOATING BREAKWATER BY A 2-D. PHYSICAL MODEL, Padova, September 2005.

MARKING OF PRODUCT:

The product shall be marked with name of manufacturer, type of pontoon and serial number.

CONDITIONS FOR CERTIFICATION:

None