

**POTVRDA O TIPNOM ODOBRENJU**  
**TYPE APPROVAL CERTIFICATE**Br/No **01-012863/019435**

Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda, odobren za ugradnju na brodove i postrojenja pod nadzorom Hrvatskog registra brodova.

*This is to certify that this product, on the basis of the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products, is approved for use on board ships and installations under supervision of the Croatian Register of Shipping.*

**TIP I OPIS PROIZVODA:**

TYPE AND DESCRIPTION OF PRODUCT:

**PLUTAJUĆI PONTON – VALOBRAN TIP F/CA/20-4, ZA GATOVE U MARINAMA****FLOATING PONTOON BREAKWATER TYPE F/CA/20-4, FOR BERTHS IN MARINAS**PROIZVOĐAČ:  
MANUFACTURER:**INGEMAR s.r.l.**Via Martin Luther King 50  
31032 Casale Sul Sile (TV)  
ITALY**PROIZVOD UDOVOLJAVA SLIJEDEĆIM PRAVILIMA/PROPISIMA:**

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

**Pravila za klasifikaciju brodova; Tehnička okružnica HRB-a QC-T-191.***Rules for the classification of ships; CRS Technical Circular QC-T-191.***DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEĐINI.**

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

ODOBRENJE VRLJEDI DO: **2022-06-18**  
APPROVAL IS VALID UNTIL:Mjesto i datum: **Split, 2018-06-12**  
Place and date:M.P.  
(Seal)

Marinko Popović, dipl.ing.

**NAPOMENA:** Ova potvrda nije valjana ako se proizvod ili način njegove proizvodnje promijenio u odnosu na tipno ispitani proizvod. Proizvođač treba obavijestiti Hrvatski registar brodova o bilo kojoj izmjeni na proizvodu kako bi ishodio valjanu potvrdu.

*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.

**PODROBNJI OPIS PROIZVODA:**  
*DETAILED PRODUCT DESCRIPTION:*

**Plutajući ponton-valobaran tip F/CA/20-4 je izrađen od armiranog betona. Jezgra pontona je ekspanzirani polistiren.**

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

**Dimenzije pontona:**  
*Pontoon dimensions:*

**duljina/length 20 m**  
**visina/height 2 m**

**širina (beton)/breadth (concrete) 4 m**  
**nadvode/freeboard 0.8 m**

**PODRUČJE PRIMJENE / POSEBNI GRANIČNI UVJETI:**  
*APPLICATION / LIMITATIONS:*

- **Značajna visina vala do 1.1 m**
- **Vez plovila duljine do 30 m**
- *Significant wave height up to 1.1 m*
- *Mooring of crafts length up to 30 m*

**DOKUMENTACIJA ZA TIPNO ODOBRENJE:**  
*TYPE APPROVAL DOCUMENTATION:*

**Nacrt "STRUTTURA IN CALCESTRUZZO ASSIEME COSTRUTTIVO" br.1-0-S000-Y-5668 Rev.0**

**Nacrt "ARMATURE IN ACCIAIO ASSIEME COSTRUTTIVO" br. 1-0-S000-Y-5669 Rev.0.**

**Plutajući ponton – valobran F/CA/20-4, Proračun br. 047-ENG-0 Rev.0**

**Plutajući ponton – valobran F/CA/20-4, Proračun br. 044-E-0 Rev.0**

**Nacrt „DISEGNO DI ASSIEME“ br. 1-3-D000-Z-7072 Rev.0**

**Plutajući ponton - valobran F/CA/20-4, Proračun br. 045-E-0 Rev.0**

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

*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.*

**OZNAČAVANJE PROIZVODA:**  
*MARKING OF PRODUCT:*

**Proizvod se mora označiti imenom proizvođača, oznakom pontona, serijskim brojem i žigom HRB.**

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

**UVJETI ZA CERTIFIKACIJU:**  
*CONDITIONS FOR CERTIFICATION:*

**Hrvatski registar brodova izdaje posebnu potvrdu o nadzoru za svaku pojedinu proizvedenu količinu (HRB obrazac QF-PS-25).**

*Croatian Register of Shipping shall issue particular certificate on supervision for each manufactured quantity (CRS form QF-PS-25).*