

ER	ER name	Documentation	Standard
A.1	Design Category	<p><b>General description of the type</b></p> <p>General product description:</p> <ul style="list-style-type: none"> <li>- type of product</li> <li>- main particulars, (e.g. Length, Beam, Draft)</li> <li>- boat design category</li> </ul>	EN ISO 8666:2002
A.2.1	Craft identification	<p><b>General description of the type</b></p> <p>CIN – code</p>	EN ISO 10087:2006
A.2.2	Builder's plate	<p><b>General description of the type</b></p> <p>Builders plate, including Builders plate information</p>	EN ISO 14945:2004/AC:2005
A.2.3	Protection from falling overboard and means of reboarding	<p><b>Design and manufacturing drawings</b></p> <p>Deck plan</p> <p>Detail drawings</p> <ul style="list-style-type: none"> <li>- hand grips, railing, toe rails etc...</li> </ul> <p>Reboarding means</p> <p><i>e.g: Protection: Choice of option and solutions specs of fittings required in prevention of falling overboard.</i></p>	EN ISO 15085:2003
A.2.4	Visibility from the main steering position	<p>Motor driven craft only</p> <p>Drawing with compliance to 11591</p>	EN ISO 11591:2000
A.2.5	Owner's manual	<p>Description of the craft and its operation.</p> <p>Manual should draw special attention to risk of fire and flooding and shall contain the information listed in 2.2, 3.6 and 4 as well as the unladen weight of the craft.</p> <p>List of applied standards or documented solution followed</p>	EN ISO 10240:2004
A.3.1	Structure	<p><b>Design and manufacturing drawings</b></p> <p>General arrangement</p> <p>Lines plan, if used for assessment</p> <p>Deck plan</p> <p>Construction plan (with cross sections over bulkheads and several frames)</p> <p>Detail drawings</p> <ul style="list-style-type: none"> <li>- engine mounts and other strength critical items</li> </ul>	<p>EN ISO 12215-1:2000</p> <p>EN ISO 12215-2:2002</p> <p>EN ISO 12215-3:2002</p> <p>EN ISO 12215-4:2002</p> <p>EN ISO 12215-5:2008</p>

ER	ER name	Documentation	Standard
		<ul style="list-style-type: none"> <li>- keel - hull connection</li> <li>- deck - hull connection</li> <li>- mast support</li> <li>- chainplates</li> <li>- strong points</li> <li>- cockpit drainage</li> <li style="padding-left: 20px;">Laminate details</li>   <li><b>Manufacturing details</b></li> <li style="padding-left: 20px;">List of fitted materials</li> <li style="padding-left: 20px;">GRP schedule / Sandwich schedule</li> <li style="padding-left: 20px;">Details of welding procedure</li> <li style="padding-left: 20px;">Details of laminate construction / laminate procedure (e.g. resin / core)</li> <li style="padding-left: 20px;">Details of wood construction</li>   <li><b>Calculations / Tests</b></li> <li style="padding-left: 20px;">Scantlings calculations (if available)</li>   <li><i>e.g: Material specification for structural members, glues, hull, deck superstructures: Structural members in side view, plan view, cross section; laminate plans for FRP construction; structural details, transitions, connections; engine foundation, thrust bearing, propeller bracket; built-in tanks (dimensions, pressure head, fastening); Mast step/mast pillar, Ballast keel : Geometry, weight, centre of gravity; Keel root (configuration) and bolts (number, location, anchoring in keel, material), transition of forces into hull; welding specification Rudder: Geometry, rudder stock dimensions, incorporation of stock in rudder blade; bearings (material, dimensions, working loads, seats); shaft tube, Chain plates: Related to rig dimensions; material, dimensions, bolt diameters, transition of forces into hull structure, details of fitting attachments.</i></li> </ul>	<p>EN ISO 12215-6:2008</p> <p>prEN ISO 12215-7</p> <p>prEN ISO 12215-8</p> <p>prEN ISO 12215-9</p>
A.3.2	Stability and freeboard	<ul style="list-style-type: none"> <li><b>Design and manufacturing drawings</b></li> <li style="padding-left: 20px;">Sail plan, if used for assessment</li> <li style="padding-left: 20px;">Lines plan, if used for assessment</li> <li style="padding-left: 20px;">General arrangement</li>   <li><b>Calculations / Tests</b></li> <li style="padding-left: 20px;">Stability calculations, test reports</li>   <li><i>e.g: CG position (calculation, inclining test);</i></li> </ul>	<p>EN ISO 12217-1:2002</p> <p>EN ISO 12217-2:2002</p> <p>EN ISO 12217-3:2002</p>

ER	ER name	Documentation	Standard
		<i>hydrostatic data; proof of stability for relevant load cases; closing appliances</i>	
A.3.2	Buoyancy and flotation	<b>Design and manufacturing drawings</b> <b>Calculations / Tests</b> Buoyancy calculations <i>e.g. :(where applicable) Buoyancy tanks and devices (material, positioning) Calculation, test (documentation)</i>	EN ISO 12217-1:2002 EN ISO 12217-2:2002 EN ISO 12217-3:2002
A.3.4	Openings in hull deck and structure	<b>Design and manufacturing drawings</b> Deck plan - windows, hatches <i>e.g: Hatches, doors, portlights (see Annex II, clause 5 for prefabricated) degree of watertightness of closing appliances</i>	EN ISO 12216:2002
A.3.5	Flooding	<b>Design and manufacturing drawings</b> Detail drawings - cockpit drainage <b>Schemes of components, system drawings and circuits</b> Drainage (e.g. bilge and toilet, including list of bilge-pumps and capacity) <i>e.g.: Sill heights; cockpit drainage; Bilge pumping arrangement (pumps, lines, discharge, back-flow prevention), position of through-hull fittings; Electrically operated bilge pumps</i>	EN ISO 11812:2001 EN ISO 15083:2003 EN ISO 9093-1:1997 EN ISO 9093-2:2002 EN 28849:1993/A1:2000 (ISO 8849:1990)
A.3.6	Manufacturer's max. recommended load	Break down to be mentioned in owner's manual	EN ISO 14946:2001/AC:2005
A.3.7	Liferaft stowage	<b>Design and manufacturing drawings</b> - liferaft stowage area - strong points <i>e.g: Feasible position in relation to size (number of persons)</i>	
A.3.8	Escape hatch	Size, position when boat upright and inverted (multihulls only)	
A.3.9	Anchoring, mooring, towing	Designated strong points; transfer of forces into hull structure	EN ISO 15084:2003
A.4	Handling	Prevention of overpowering (motorboats only)	EN ISO

ER	ER name	Documentation	Standard
	characteristics	Rudder size, profile and position suitable for the craft. Assessment only by sea trial. Maximum rated power to be stated in the owner's manual.	11592:2001
A.5.1.1	Inboard engine	<b>Schemes of components, system drawings and circuits</b> Engine installation, including possible exposed parts Exhaust system <i>e.g.: Separation from living quarters; risk and spread of fire; hazard from fumes, heat, noise, vibration; easy access to engine parts needing servicing; insulation material; exhaust system;</i>	
A.5.1.2	Ventilation	<i>Design and manufacturing drawings - engine room ventilation e.g.: Details of ventilation for engine and fuel spaces; Ventilation of petrol engine and tank spaces</i>	EN ISO 11105:1997
A.5.1.3	Exposed parts	<b>Schemes of components, system drawings and circuits</b> Engine installation, including possible exposed parts <i>e.g.: Shielding of exposed parts, unless engine is covered.</i>	
A.5.1.5	Personal Watercraft running without driver	<b>(to be defined)</b>	EN ISO 13590:2003/AC:2004
A.5.2.1	Fuel system – general	<b>Schemes of components, system drawings and circuits</b> Fuel system <i>e.g.: Minimising risk of fire and explosion; Fuel lines, fittings (material, support, routing) Detailed checklist for ISO 10088 advisable.</i>	EN ISO 10088:2001
A.5.2.2	Fuel tanks	<b>Design and manufacturing drawings</b> Tanks <i>e.g.: Material, fittings, support, positioning, CE marking, test results.</i>	EN ISO 21487:2006
A.5.3	Electrical system	<b>Schemes of components, system drawings and circuits</b> Electrical system, AC/DC <i>E.g.: Cables (routing, chafe protection, connections, board; power generators and batteries (location,</i>	EN ISO 10133:2000 EN ISO 13297:2000

ER	ER name	Documentation	Standard
		<i>type, protection, ventilation), battery disconnect switch (max amps), wiring (colour code or traceability, conduits, type, temp. class); wiring diagram; fuses, switch shielding); grounding / bounding; GFCI devices; panels design; power source system</i>	
A.5.4	Steering system	<p><b>Design and manufacturing drawings</b> Detail drawings</p> <ul style="list-style-type: none"> <li>- rudderstock</li> <li>- rudder construction</li> <li>- shaft</li> </ul> <p><b>Schemes of components, system drawings and circuits</b> Steering system, including emergency arrangements (= steering system only)</p> <p><i>e.g.: General layout, accessibility of components; Compliance with Annex II, clause 3; emergency steering</i></p>	<p>EN ISO 8847: 2004/AC:2005</p> <p>EN 28848: 1993/A1:2000</p> <p>EN ISO 10592: 1995/A1:2000</p> <p>EN 29775: 1993/A1:2000</p> <p>EN ISO 13929: 2001</p>
A.5.5	Gas system	<p><b>Schemes of components, system drawings and circuits</b> LPG system</p> <p><i>e.g.: Pipes, flexible lines (routing, chafe prevention, expansion); CE marked consuming devices. Test results.</i></p>	<p>EN ISO 10239:2000</p>
A.5.6	Fire protection	<p><b>Schemes of components, system drawings and circuits</b> Fire extinguisher system (permanent- and/or portable, including volume and capacities)</p> <p><i>e.g.: Escape route, alternative escape route, escape hatch sizes, fixed extinguishing system Portable extinguishers: number, location, capacity protection of engine and fuel space Liquid fuelled galley stoves</i></p>	<p>EN ISO 9094-1:2003</p> <p>EN ISO 9094-2:2002</p> <p>EN ISO 14895:2003</p>
A.5.7	Navigation lights	<p><b>Schemes of components, system drawings and circuits</b> Navigation lights</p> <p><i>e.g.: Certificates, position on craft.</i></p>	<p>Colreg / Cevni</p>
A.5.8	Discharge prevention	<p><b>Schemes of components, system drawings and circuits</b> Drainage (e.g. bilge and toilet, including list of bilge-pumps and capacity)</p>	<p>EN ISO 8099:2000</p>

ER	ER name	Documentation	Standard
		Through hull fittings <i>e.g.: Fuel, oil, oily water: prevention from overboard discharge? Seacock (Y-valve?) able to be sealed shut; holding tank, deck fitting. Height of anti-siphon</i>	
B.	Exhaust emissions	Exhaust emission test report (including Declaration of Conformity)	EN ISO 8178-1:1996
C.	Noise emissions	Noise emission test report (including Declaration of Conformity)	EN ISO 14509
	<b>Annex II: Components</b>	<b>Manufacturing details</b> List of fitted installations and components (including Declaration of Conformity)	EN 28846:1993/A1:2000 (ISO 8846:1990) EN ISO 11547:1995/A1:2000 EN 28848:1993/A1:2000 (ISO 8848:1990) EN 29775:1993/A1:2000 (ISO 9775:1990) EN ISO 10592:1995/A1:2000 EN ISO 10088:2001 EN ISO 7840:2004 EN ISO 12216:2002

**d) Recommendations for use**

Relevant Approved Recommendations for Use (ARFU):

#36