

## **B63G**

### **OFFENSIVE OR DEFENSIVE ARRANGEMENTS ON VESSELS; MINE-LAYING; MINE-SWEEPING; SUBMARINES; AIRCRAFT CARRIERS (means of attack or defence in general e.g. turrets F41H)**

#### **Definition statement**

*This subclass/group covers:*

Arrangements of offensive or defensive equipment on vessels and vessels characterized thereby:

- Arrangements of guns or missile launchers on vessels
- Arrangements of ammunition stores or handlers on vessels
- Vessels adapted to torpedo-launching
- Offensive or defensive arrangements on vessels against submarines, torpedoes, or mines
- Other offensive or defensive arrangements on vessels

Marine mine-laying and mine-sweeping

- Mine-laying and vessels therefor
- Mine-sweeping and vessels therefor

Naval water craft for particular purposes

- Underwater vessels (naval and civilian)
- Aircraft carriers

#### **Relationship between large subject matter areas**

[B63G](#) is the general home for defensive and offensive arrangements on warships and the like, for methods and devices for laying and sweeping of marine mines, for civilian and naval underwater vessels, such as submarines, and for military aircraft carriers.

Whilst [B63G 1/00](#) provides for arrangements of guns or missile launchers on vessels and vessels characterised thereby, [B63B 3/70](#) provides for reinforcements in the hull construction for carrying localised loads from guns, and [F41A](#) provides for functional features and details of, as well as mountings for ordnance, e.g. cannons, and [F41F](#) provides for missile or torpedo launchers.

Whilst [B63G 3/00](#) provides for arrangements on vessels of ammunition stores and handlers, and vessels characterised thereby, [B63B](#) provides for general cargo aspects of ammunition stores and handlers, and [F41A 9/00](#) provides for feeding or loading of ammunition to guns, as well as ammunition magazines and handling dollies in general.

Whilst [B63G 5/00](#) provides for patrol and motor torpedoboats, or the like, [F42F 3/00](#) provides for torpedo launchers per se.

Whilst [B63G 6/00](#) provides for laying of marine mines or depth charges, as well as for mine-laying vessels, [F41F 5/00](#) provides for launching-apparatus for mines and depth charges, and [F42B 22/00](#) provides for marine mines as such.

Whilst [B63G 7/00](#) provides for means and methods for sweeping marine mines, and for minesweeping vessels, [F41H 11/00](#) provides for means for clearing land minefields.

Whilst [B63G 8/00](#) provides for naval and civilian underwater vessels such as submarines, their propulsion and control of attitude, for arrangements of artillery or missile- or torpedo-launching, of mine-laying means, of visual, electronic or sonic watch equipment on submarines, for camouflage of submarines, and for adaptations of air-conditioning for submarines and of rescue equipment for personnel of submarines, as well as for towed underwater vessels, [B63B 1/00](#) provides for hydrodynamic features of underwater vessels, [B63B 3/13](#) provides for construction aspects of submarine hulls, [B63B 21/00](#) provides for towing of underwater objects, [B63B 22/00](#) provides for buoys, including submersible buoys, [B63C 9/00](#) provides for life-saving in water in general, [B63C 11/00](#) provides for diving chambers or diving bells, and for divers' sleds, i.e. for craft on which a diver rides, [B63H 21/00](#) provides for nuclear ship propulsion, including the propulsion of nuclear submarines, [B63H 25/00](#) provides for steering of vessels in general, [F41F 3/00](#) provides for torpedo launchers per se, [F41G 7/32](#) provides for direction control for wire-guided torpedoes, [F42B 19/00](#) provides for torpedoes and their control of attitude (except for wire-guided control), and [G05D 1/00](#) provides for control of course, attitude or depth of underwater vehicles, e.g. automatic pilot.

Whilst [B63G 9/00](#) provides for offensive or defensive arrangements on vessels against submarines, torpedoes or mines, [B63B 3/10](#) provides for armoured hulls, [F41H 11/00](#) provides for net barriers for harbour defence, and [H01F 13/00](#) provides for demagnetizing in general.

Whilst [B63G 11/00](#) provides for naval aircraft carriers, i.e. warships providing a propelled floating base for military aircraft, [B63B 35/00](#) provides for other vessels or floating structures for aircraft, e.g. for floating landing strips, and [B64F 1/00](#) provides for aircraft-carrier-deck installations.

Whilst [B63G 13/00](#) provides for other offensive or defensive arrangements on vessels, e.g. for camouflage of surface vessels, [F41H 13/00](#) provides for camouflage in general.

## References relevant to classification in this subclass

*This subclass/group does not cover:*

Hydrodynamic features of hulls of underwater vessels, construction of armoured hulls and of hulls for vessels built to withstand hydrostatic pressure when fully submerged, e.g. of submarines, general cargo aspects of ammunition stores and handlers, stabilization of vessels using ballast tanks, civilian surface vessels and floating structures for particular purposes, among which vessels or other floating structures for aircraft other than military aircraft carriers, e.g. floating landing strips.	<a href="#">B63B</a>
Equipment for life-saving in water in general, for dwelling or working under water, diving chambers or diving bells, and divers' sleds	<a href="#">B63C</a>
Nuclear propulsion of submarines, propulsive elements e.g. propellers or jets per se, transmitting power from propulsion power plant to propulsive element in general; steering of vessels in general	<a href="#">B63H</a>
Rocket torpedoes; torpedoes; control of torpedo attitude	<a href="#">F42B 17/00</a> - <a href="#">F42B 19/00</a>
Mountings of acoustic transducers on underwater equipment	<a href="#">G10K 11/004</a>

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Reconditioning air in sealed chambers	<a href="#">A62B 11/00</a>
Driving of auxiliaries; air-conditioning on vessels in general	<a href="#">B63J</a>

Aircraft-carrier-deck installation, such as launching and arresting gear for aircraft	<a href="#">B64F 1/00</a>
Submerged exhausting apparatus	<a href="#">F01N 7/12</a>
Air-conditioning in general	<a href="#">F24F</a>
Ordnance, e.g. cannons, as such, mountings therefor; feeding ammunition to guns in general	<a href="#">F41A</a>
Missile launchers or torpedo launchers as such	<a href="#">F41F</a>
Sighting and aiming for weapons in general; direction control systems for self propelled missiles, e.g. command link guidance systems for wire guided torpedoes	<a href="#">F41G</a>
Means of attack or defence in general, e.g. armour, turrets or camouflage; net barriers for harbour defense	<a href="#">F41H</a>
Ammunition, projectiles, missiles, depth charges, marine mines, or the like, as such	<a href="#">F42B</a>
Periscopes or optical aiming or sighting devices per se, underwater equipment therefor	<a href="#">G02B 23/00</a>
Control of course, attitude or depth of surface or underwater vehicles, e.g. automatic pilot	<a href="#">G05D 1/00</a>
Demagnetizing	<a href="#">H01F 13/00</a>
Mountings of hydrophones	<a href="#">H04R 1/08</a>
Hydrophones	<a href="#">H04R 1/44</a>

## Special rules of classification within this subclass

In this subclass, two different Indexing Schemes are used:

The first Indexing Scheme represents a further sub-division of the CPC scheme (breakdown codes). The symbols of this first Indexing Scheme are hierarchically arranged under CPC groups. They are in their scope limited by the scope of the respective symbols of the CPC scheme under which they are indented. This first Indexing Scheme is used for invention information and additional information.

The second Indexing Scheme is arranged under the subclass [B63B](#), and covers the range [B63B 2201/00](#) to [B63B 2241/00](#). This second Indexing Scheme is used in all subclasses under the class B63 "Ships or other waterborne vessels; Related equipment". This second Indexing Scheme is used for indexing non-trivial information related to the invention information, as far as for this information no place is provided for in a particular group in the class B63.

The use of both Indexing Schemes is obligatory for documents published after July 2011. The contents of these groups is not complete before this date.

## Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

Air-conditioning	The process of controlling the humidity, ventilation, and air temperature in a vehicle. An installation which performs this process.
Aircraft carrier	A warship equipped with a flight deck and hangars which carries aircraft and serves as a floating and propelled air base, and from which aircraft are able to take off and land on.
Ammunition	Articles used in charging guns and ordnance, as powder, shot, shell; offensive missiles in general.
Ammunition handler	An installation for transporting ammunition from an ammunition store to a gun or launcher.
Artillery	Machinery used for explosive

	discharge of projectiles in war, including ordnance such as mounted guns, cannon, mortars, and anti-aircraft weaponry; large-calibre firearms used both offensively and defensively in military operations.
Attitude	The position of a vessel in relation to its line of travel. The orientation in space of a floating or submerged body.
Camouflage	The disguising of objects, e.g. ships, used in war in such a way as to conceal it from the enemy. The disguise used in this way.
Conning-tower	A superstructure on a submarine in which the periscope is mounted and from which steering, firing, etc., are directed when the submarine is on or near the surface; A low observation tower of a submarine, constituting the main entrance to the interior.
Degaussing	The process of decreasing or eliminating an unwanted magnetic field (named after Carl Friedrich Gauss).
Depth charge	An anti-submarine weapon, dropped by either surface ships or from aircraft, intended to destroy or cripple a target submarine by the shock of exploding near it.
Diving chamber	A simpler form of a submersible vessel to take divers underwater and to provide a temporary base and retrieval system in the depths.
Divers' sled	A self-propelled or towed watercraft on which a diver rides.
Gun	A weapon, mounted on a substructure, consisting essentially from a metal tube from which heavy projectiles are ejected by explosive force; a piece of ordnance or cannon.

Hydrofoil	A wing-like structure which creates hydrodynamic lift when moved through the water at speed.
Mine	A bomb placed underwater which detonates when activated by a marine vehicle passing over or near it; a marine mine (opposite to land mines).
Mine-sweeping	The operation of removing explosive mines which are tethered underwater or floating.
Missile	A long-distance weapon that is self-propelled, and directed either by remote control or automatically, during part or all of its course.
Periscope	A tubular apparatus containing a system of prisms or mirrors so as to give a viewpoint displaced from the observer's eye by the length of the tube.
Projectile	An object fired from a gun with an explosive propelling charge, such as a bullet, shell, rocket, or grenade; a body projected or impelled forward, as through the air.
Schnorkel	A retractable or foldable device comprising an air passage and an exhaust passage providing air supply and exhaust discharge to a submarine operating near the surface.
Submarine	A warship or civilian vessel adapted for autonomous long term operation underwater.
Superstructure	Those parts of a ship, other than masts and rigging, which protrude above the main deck.
Torpedo	A self-propelled submarine missile, usually cigar-shaped, carrying an explosive.

Torpedo handler	An installation for transporting a torpedo from a storage place into a launching position.
Trimming	Adjustment or division of ballast and/or payload to alter an underwater vessel's trim.
Turret	Traversable or swivel mounted gun
Umbilical	A cable or conduit providing a diver or an underwater vehicle with essential electric and similar supplies.
Underwater vessel	A water craft adapted for temporary or continuous operation under water, e.g. submarines or submersible boats.

## Synonyms and Keywords

In patent documents the following abbreviations are often used:

AOV	Autonomously Operated Vehicle
AUV	Autonomous Underwater Vehicle
RADAR	RAdio Detection And Ranging
ROV	Remotely Operated Vehicle
RUV or ROUV	Remotely Operated Underwater Vehicle
SONAR	SOund Navigation And Ranging

In patent documents the following expressions/words "conning-tower" and "sail" or "fin" are often used as synonyms.

In patent documents the expressions/words "(underwater) wing" or "rudder" are often used instead of "hydrofoil" which is used in the classification scheme of this subclass.

In patent documents the expression/word "ordnance" is often used instead of

"gun" or "artillery" which are used in the classification scheme of this subclass.

In patent documents the expressions/words " water craft", "water-borne vehicle", and "ship" are often used instead of "(waterborne) vessel" which is used in the classification scheme of this subclass.

In patent documents the expressions/words "Uboat" and "U-boat" are often used instead of "submarine" which is used in the classification scheme of this subclass.

In patent documents the expression/word "snorkel" is often used instead of "schnorkel" which is used in the classification scheme of this subclass.

In patent documents the expression/word "conning-tower" is often used with the meaning "the (armoured) pilot house of a surface warship".

In patent documents the expression/word " hydrofoil " is often used with the meaning " a wing-like structure positioned below a hull which creates hydrodynamic lift when a vessel is moved through the water at speed. The term is also used to describe vessels which use hydrofoil features to lift the hull out of the water at speed, thereby reducing drag".

In patent documents the expression/word "schnorkel" and - more precisely - the expression/word "snorkel" are often used with the meaning "a short breathing-tube used by underwater swimmers or skin divers".

In patent documents the expression/word "turret" is often used with the meaning "a heavy cylindrical body rotatably supported in a vessel's hull, predominantly connected to underwater mooring lines for allowing the moored vessel to weathervane".

## **B63G 1/00**

### **Arrangements of guns or missile launchers; Vessels characterised thereby (submarines B63G8/00; guns, missile launchers F41)**

#### **Definition statement**

*This subclass/group covers:*

This main group covers:

Assemblages or relative dispositions of ordnance or cannons, or of missile launchers on surface warships, or the like vessels, vessels characterised by such arrangements, as well as modifications of such ordnance, cannons or launchers, as far as of interest for the onboard arrangement. In particular, this main group covers:

- Surface warships, combat watercraft, or the like vessels exhibiting onboard arrangements of particular marine artillery or missile launchers, e.g. battleships carrying particular arrangements of

ordnance, or guided missile cruisers.

Arrangements of guns or missile launchers onboard of marine surface vessels, e.g.:

- modular arrangements of gun or launcher carrying units permitting rapid adaptation to different task profiles
- turrets or the like mountings for artillery specially adapted for onboard installation, e.g. mountings for shipborne anti-aircraft guns
- arrangements of rocket launchers, e.g. with particular exhaust gas ducts, deflectors or attenuators.

### References relevant to classification in this main group

*This subclass/group does not cover:*

Arrangements of offensive or defensive equipment on submarines	<a href="#">B63G 8/28</a>
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Hull reinforcements for carrying localised loads, e.g. guns	<a href="#">B63B 3/70</a>
Functional features or details common to both smallarms and ordnance, e.g. cannons, in general; Mountings for smallarms or ordnance, in general	<a href="#">F41A</a>
Gun mountings, e.g. on vehicles, in general; Disposition of guns on vehicles, in general	<a href="#">F41A 23/00</a>
Rocket launchers, as such	<a href="#">F41F 3/04</a>
Armoured or armed vehicles, in general	<a href="#">F41H 7/00</a>
Self-propelled projectiles or missiles, e.g. rockets, as such; Guided missiles, as such	<a href="#">F42B 15/00</a>

## B63G 3/00

**Arrangements of ammunition stores or handlers (specially for submarines B63G8/00; feeding ammunition missiles or projectiles to guns in general F41A9/00 ); Vessels characterised thereby (general cargo aspects B63B)**

### Definition statement

*This subclass/group covers:*

This main group covers:

Assemblages or relative dispositions of stores or handlers for ammunition on surface warships or the like vessels, vessels characterised by such arrangements, as well as modifications of such stores or handlers, as far as of interest for the onboard arrangement. In particular, this main group covers:

- Surface warships, combat watercraft, or the like vessels exhibiting particular onboard arrangements of stores for ammunition like shells or missiles, or of conveyors or other devices for transporting and loading such ammunition to the respective gun or launcher.

### Relationship between large subject matter areas

Whilst [B63G 3/00](#) provides for arrangements on naval surface vessels of ammunition stores and handlers, and vessels characterised thereby, [B63B](#) provides for general cargo aspects of ammunition stores or handlers, [B63G 8/00](#) provides for corresponding arrangements on submarines, and [F41A 9/00](#) provides for feeding or loading of projectiles of missiles to guns or launchers, as well as for ammunition magazines and ammunition handling dollies in general.

### References relevant to classification in this main group

*This subclass/group does not cover:*

Arrangements of ammunition stores or handlers on submarines	<a href="#">B63G 8/28</a>
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Load-accomodating arrangements on marine vessels, in general	<a href="#">B63B 25/00</a>
Arrangements of ship-based loading	<a href="#">B63B 27/00</a>

or unloading equipment for cargo, in general	
Feeding or loading of ammunition, in general	<a href="#">F41A 9/00</a>
Packaging or storage of ammunition or explosive charges, in general, e.g. ammunition racks in vehicles	<a href="#">F42B 39/00</a>

## **B63G 5/00**

**Vessels characterised by adaptation to torpedo launching (submarines B63G8/00 ; torpedo launching per se F41F)**

### **Definition statement**

*This subclass/group covers:*

This main group covers:

Surface warships or the like vessels specially adapted for launching torpedoes, or carrying torpedoes as predominant armament, e.g. patrol or motor torpedoboats.

### **References relevant to classification in this main group**

*This subclass/group does not cover:*

Arrangements of torpedo launching means, or of torpedo stores or handlers on submarines	<a href="#">B63G 8/32</a>
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### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Dropping, ejecting or releasing explosive articles from aircraft in flight, e.g. of torpedoes	<a href="#">B64D 1/04</a>
Feeding or loading of ammunition in general	<a href="#">F41A 9/00</a>
Launchers for marine torpedoes a such, e.g. from below the water	<a href="#">F41F 3/08</a>

surface	
Marine torpedoes, e.g. launched by surface vessels or submarines, as such	<a href="#">F42B 19/00</a>

## **B63G 6/00**

### **Laying of mines or depth charges; Vessels characterised thereby (arrangements on submarines for mine laying B63G8/33 )**

#### **Definition statement**

*This subclass/group covers:*

This main group covers:

Methods, apparatus, installations, or other means adapted for laying marine mines or depth charges from surface vessels, as well as surface warships or the like vessels specially adapted therefor, e.g. minelayers or submarine chasers.

#### **References relevant to classification in this main group**

*This subclass/group does not cover:*

Arrangements of mine-laying means on submarines	<a href="#">B63G 8/33</a>
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#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Dropping, ejecting or releasing explosive articles from aircraft in flight, e.g. of marine mines or depth charges	<a href="#">B64D 1/04</a>
Feeding or loading of ammunition in general	<a href="#">F41A 9/00</a>
Launching-apparatus for gravity-propelled missiles or projectiles from ships, e.g. for mines or for depth charges	<a href="#">F41F 5/04</a>

Depth charges, as such	<a href="#">F42B 21/00</a>
Marine mines, e.g. launched by surface vessels or submarines, as such	<a href="#">F42B 22/00</a>

## **B63G 7/00**

### **Mine-sweeping; Vessels characterised thereby**

#### **Definition statement**

*This subclass/group covers:*

This main group covers:

Methods, apparatus, installation or means for sweeping of marine mine, as well as vessels specially adapted therefor, e.g. minesweepers. In particular, this main group covers:

Means for sweeping, or for destroying marine mines, e.g.:

- means making use of cables
- means making use of electromagnetism
- acoustic means.
- Unmanned autonomously operating mine-sweeping vessels.

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Vessels or the like adapted for special purposes, in general, e.g. autonomously operating unmanned vessels	<a href="#">B63B 35/00</a>
Underwater vessels for special purposes, e.g. unmanned underwater vessels	<a href="#">B63G 8/001</a>
Means for clearing land minefields	<a href="#">F41H 11/00</a>

## Special rules of classification within this main group

Unmanned underwater vessels specially adapted for sweeping or for destroying marine mines are also classified in [B63G 8/001](#).

### B63G 8/00

**Underwater vessels, e.g. submarines; [N: Equipment specially adapted therefor] (submarine hulls B63B3/13; diving chambers with mechanical link, e.g. cable, to a base B63C11/34; divers` sleds B63C11/46; torpedoes F42B19/00 )**

#### Definition statement

*This subclass/group covers:*

This main group covers:

Naval or civilian vessels adapted for operation in a submerged state, e.g. submarines, or submersible boats, as well as equipments specially adapted for such underwater vessels. In particular, this main group covers:

- Superstructures of underwater vessels, e.g. conning towers
- Methods or means specially adapted for propelling underwater vessels, other than by using nuclear power, e.g. using internal-combustion engines or electric power plants.
- Control of underwater vessels' depth or of their orientation relative to their line of travel, or in view of their orientation in space, e.g.:
- using control actuators, e.g. using propellers, jets or hydrofoils
- Equipment for steering
- using water ballast for adjusting buoyancy, as well as equipment therefor
- using automatic means for controlling depth
- Equipment for generating surplus buoyant lift in emergency situations
- Equipment for adjusting the trim.

Assemblages or relative dispositions of offensive or defensive equipment on submarines, e.g. of:

- ordnance, artillery, or the like, missile-launchers, or torpedo-launchers
- means for laying marine mines
- means for disguise or camouflage.

Methods or means specially adapted for ventilating, cooling, heating, or air-conditioning of underwater vessels.

Assemblages or relative dispositions of watch equipment on submarines, e.g. of:

- visual watch equipment, like periskopes
- electronic watch equipment, like RADAR
- sonic watch equipment, like infrasonic devices or SONAR.

Rescue equipment for the crew or underwater vessels, e.g. of:

- manned or unmanned underwater rescue units adapted for docking to a submarine's escape hatch
- personal suits specially adapted for escape of personnel from underwater vessels
- small underwater vessels or capsules adapted for receiving personnel, and adapted for being released from the submarine

Underwater vessels adapted for being towed, e.g. underwater barges.

## References relevant to classification in this main group

*This subclass/group does not cover:*

Hydrodynamic features of hulls of underwater vessels, construction of armoured hulls and of hulls for vessels built to withstand hydrostatic pressure when fully submerged, e.g. of submarines, general cargo aspects of ammunition stores and handlers.	<a href="#">B63B</a>
Equipment for life-saving in water in general; Equipment for dwelling or working under water, e.g. diving chambers or diving bells, and divers' sleds	<a href="#">B63C</a>
Nuclear propulsion of submarines, propulsive elements e.g. propellers or jets per se, transmitting power from propulsion power plant to propulsive element in general; steering of vessels in general	<a href="#">B63H</a>
Rocket torpedoes; torpedoes; control	<a href="#">F42B 17/00</a> - <a href="#">F42B 19/00</a>

of torpedo attitude	
Mountings of acoustic transducers on underwater equipment	<a href="#">G10K 11/004</a>

## Informative references

Attention is drawn to the following places, which may be of interest for search:

Reconditioning air in sealed chambers	<a href="#">A62B 11/00</a>
Driving of auxiliaries; air-conditioning on vessels in general	<a href="#">B63J</a>
Submerged exhausting apparatus	<a href="#">F01N 7/12</a>
Air-conditioning in general	<a href="#">F24F</a>
Ordnance, e.g. cannons, as such, mountings therefor; feeding ammunition to guns in general	<a href="#">F41A</a>
Missile launchers or torpedo launchers, as such	<a href="#">F41F</a>
Sighting and aiming for weapons in general; direction control systems for self propelled missiles, e.g. command link guidance systems for wire guided torpedoes	<a href="#">F41G</a>
Means of attack or defence in general, e.g. armour, turrets or camouflage; net barriers for harbour defense	<a href="#">F41H</a>
Ammunition, projectiles, missiles, depth charges, marine mines, or the like as such	<a href="#">F42B</a>
Periscopes or optical aiming or sighting devices per se, underwater equipment therefor	<a href="#">G02B 23/00</a>
Control of course, attitude or depth of	<a href="#">G05D 1/00</a>

surface or underwater vehicles, e.g. automatic pilot	
Demagnetizing	<a href="#">H01F 13/00</a>
Mountings of hydrophones	<a href="#">H04R 1/08</a>
Hydrophones	<a href="#">H04R 1/44</a>

### Special rules of classification within this main group

Underwater vessels specially adapted for sweeping or for destroying marine mines are also classified in [B63G 7/00](#).

Arrangements of particular means for camouflage on submarines are to be indexed by breakdown codes provided for and indented under the subgroup [B63G 13/02](#).

In this main group, subject-matter specially adapted to waterborne or underwater vehicles and concerning the control of position or course in two dimensions, the control of altitude or depth, the control of attitude, i.e. the control of roll, pitch or yaw, or the simultaneous control of position or course in three dimensions is also classified in the respective subgroups of [G05D 1/00](#) (reference is made to the Special rules of classification within main group [G01D 1/00](#)).

### Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

In this main group, the following terms (or expressions) are used with the meaning indicated:

Air-conditioning	The process of controlling the humidity, ventilation, and air temperature in a vehicle. An installation which performs this process.
Ammunition	Articles used in charging guns and ordnance, as powder, shot, shell; offensive missiles in general.
Ammunition handler	An installation for transporting ammunition from an ammunition store to a gun or launcher.

Artillery	Machinery used for explosive discharge of projectiles in war, including ordnance such as mounted guns, cannon, mortars, and anti-aircraft weaponry; large-calibre firearms used both offensively and defensively in military operations.
Attitude	The position of a vessel in relation to its line of travel. The orientation in space of a floating or submerged body.
Camouflage	The disguising of objects, e.g. ships, used in war in such a way as to conceal it from the enemy. The disguise used in this way.
Conning-tower	A superstructure on a submarine in which the periscope is mounted and from which steering, firing, etc., are directed when the submarine is on or near the surface; A low observation tower of a submarine, constituting the main entrance to the interior.
Hydrofoil	A wing-like structure which creates hydrodynamic lift when moved through the water at speed.
Mine	A bomb placed underwater which detonates when activated by a marine vehicle passing over or near it; a marine mine (opposite to land mines).
Missile	A long-distance weapon that is self-propelled, and directed either by remote control or automatically, during part or all of its course.
Periscope	A tubular apparatus containing a system of prisms or mirrors so as to give a viewpoint displaced from the observer's eye by the length of the tube.
Schnorkel	A retractable or foldable device comprising an air passage and an

	exhaust passage providing air supply and exhaust discharge to a submarine operating near the surface.
Submarine	A warship or civilian vessel adapted for autonomous long term operation underwater.
Superstructure	Those parts of a ship, other than masts and rigging, which protrude above the main deck.
Torpedo	A self-propelled submarine missile, usually cigar-shaped, carrying an explosive.
Torpedo handler	An installation for transporting a torpedo from a storage place into a launching position.
Trimming	Adjustment or division of ballast and/or payload to alter an underwater vessel's trim.
Umbilical	A cable or conduit providing a diver or an underwater vehicle with essential electric and similar supplies.
Underwater vessel	A water craft adapted for temporary or continuous operation under water, e.g. submarines or submersible boats.

## Synonyms and Keywords

In patent documents the following abbreviations are often used:

AUV	Autonomous Underwater Vehicle
RADAR	RAdio Detection And Ranging
RUV or ROUV	Remotely Operated Underwater Vehicle
SONAR	SOund Navigation And Ranging

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In patent documents the following expressions/words "conning-tower" and "sail" or "fin" are often used as synonyms.

In patent documents the expressions/words "(underwater) wing" or "rudder" are often used instead of "hydrofoil" which is used in the classification scheme of this main group.

In patent documents the expressions/words "Uboat" and "U-boat" are often used instead of "submarine" which is used in the classification scheme of this main group.

In patent documents the expression/word "snorkel" is often used instead of "schnorkel" which is used in the classification scheme of this main group.

In patent documents the expression/word "conning-tower" is often used with the meaning "the (armoured) pilot house of a surface warship".

In patent documents the expression/word "hydrofoil" is often used with the meaning "a wing-like structure positioned below a hull which creates hydrodynamic lift when a vessel is moved through the water at speed. The term is also used to describe vessels which use hydrofoil features to lift the hull out of the water at speed, thereby reducing drag".

In patent documents the expression/word "schnorkel" and - more precisely - the expression/word "snorkel" are often used with the meaning "a short breathing-tube used by underwater swimmers or skin divers".

In patent documents the expression "Walter plant" is used for a submarine propulsion power plant, which uses an oxidant, such as hydrogen peroxide, and a fuel, both carried by the submarine, and reacting in a reactor vessel for generating steam, e.g. for driving a steam turbine.

## **B63G 9/00**

### **Other offensive or defensive arrangements on vessels against submarines, torpedoes, or mines**

#### **Definition statement**

*This subclass/group covers:*

This main group covers:

Assemblages or relative dispositions on vessels of devices or installations for attacking or repelling submarines, torpedoes or mines. In particular, this main group covers:

Arrangements of sonic watch equipment on surface vessels.

Torpedo nets, or the like suspended external to the ship's hull, or other means

for protecting vessels against torpedo attacks.

Arrangements specially adapted for degaussing ships or other marine vessels.

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Construction of armoured hulls	<a href="#">B63B 3/10</a>
Net barriers for harbour defense	<a href="#">F41H 11/00</a>
Demagnetizing	<a href="#">H01F 13/00</a>

### Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

In this main group, the following terms (or expressions) are used with the meaning indicated:

Degaussing	The process of decreasing or eliminating an unwanted magnetic field (named after Carl Friedrich Gauss).
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## B63G 11/00

**Aircraft carriers (other vessels or floating structures for aircraft B63B35/50; launching or arresting gear for aircraft B64F)**

### Definition statement

*This subclass/group covers:*

This main group covers:

Naval ships equipped with a flight deck and with hangars for aircraft, which are specially adapted for serving as a floating and propelled air base, in particular for combat or other military aircraft, which ships are adapted for allowing aircraft to take off and land on, and which ships usually provide for service and maintenance facilities for aircraft.

Hydrodynamic features of hulls,	<a href="#">B63B</a>
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construction of armoured hulls	
Civilian surface vessels, or other floating structures for aircraft, other than military aircraft carriers, e.g. floating landing strips	<a href="#">B63B 35/50</a>

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Ground or aircraft-carrier-deck installations, e.g. launching or arresting gear	<a href="#">B64F 1/00</a>
Buildings for storing aircraft	<a href="#">E04H 6/44</a>

## B63G 13/00

### Other offensive or defensive arrangements on vessels; Vessels characterised thereby

#### Definition statement

*This subclass/group covers:*

This main group covers:

Assemblages or relative dispositions on vessels, in particular on surface vessels, of devices or installations for attacking or repelling enemies or terrorists, as well as vessels specially adapted for this purpose. In particular, this main group covers:

Camouflage of surface vessels e.g. by:

- using means for reducing noise emission into air or water
- using means for reducing radiation emission of electromagnetic waves
- using stealth design.

#### Relationship between large subject matter areas

- [B63G 13/00](#) is the residual place for arrangements of offensive or defensive equipment or installations on ships or other waterborne vessels not otherwise provided for in this subclass, as well as for ships

or other waterborne vessels characterised by such arrangements.

### References relevant to classification in this main group

*This subclass/group does not cover:*

Arrangements of offensive or defensive equipment on submarines (except for particular means for camouflage indexed under subgroup <a href="#">B63G 13/02</a> ).	<a href="#">B63G 8/28</a>
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Means for varying the inherent hydrodynamic characteristics of hulls, e.g. by reducing surface friction	<a href="#">B63B 1/32</a>
Camouflage, in general	<a href="#">F41H 3/00</a>
Means of attack or defense not otherwise provided for	<a href="#">F41H 13/00</a>

### Special rules of classification within this main group

The breakdown codes concerning particular means for camouflage indented under the subgroup [B63G 13/02](#) are used for both, surface and underwater vessels.