

## B64U

### UNMANNED AERIAL VEHICLES [UAV]; EQUIPMENT THEREFOR

#### Definition statement

*This place covers:*

Aerial vehicles that do not carry a human operator and which are guided autonomously or are remotely operated or both, using various levels of automated functions. The aerial vehicles can be expendable or recoverable and may carry lethal or non-lethal payloads.

#### References

##### Informative references

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

Toy aircraft; Other flying toys	<a href="#">A63H 27/00</a>
Guided missiles	<a href="#">F42B 15/00</a>

#### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

VTOL	Vertical Take-Off and Landing
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## B64U 10/10

### Rotorcrafts

#### References

##### Informative references

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

Arrangements permitting vertical take-off or landing [VTOL] of aircraft, e.g. using rockets	<a href="#">B64U 70/80</a>
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## B64U 10/13

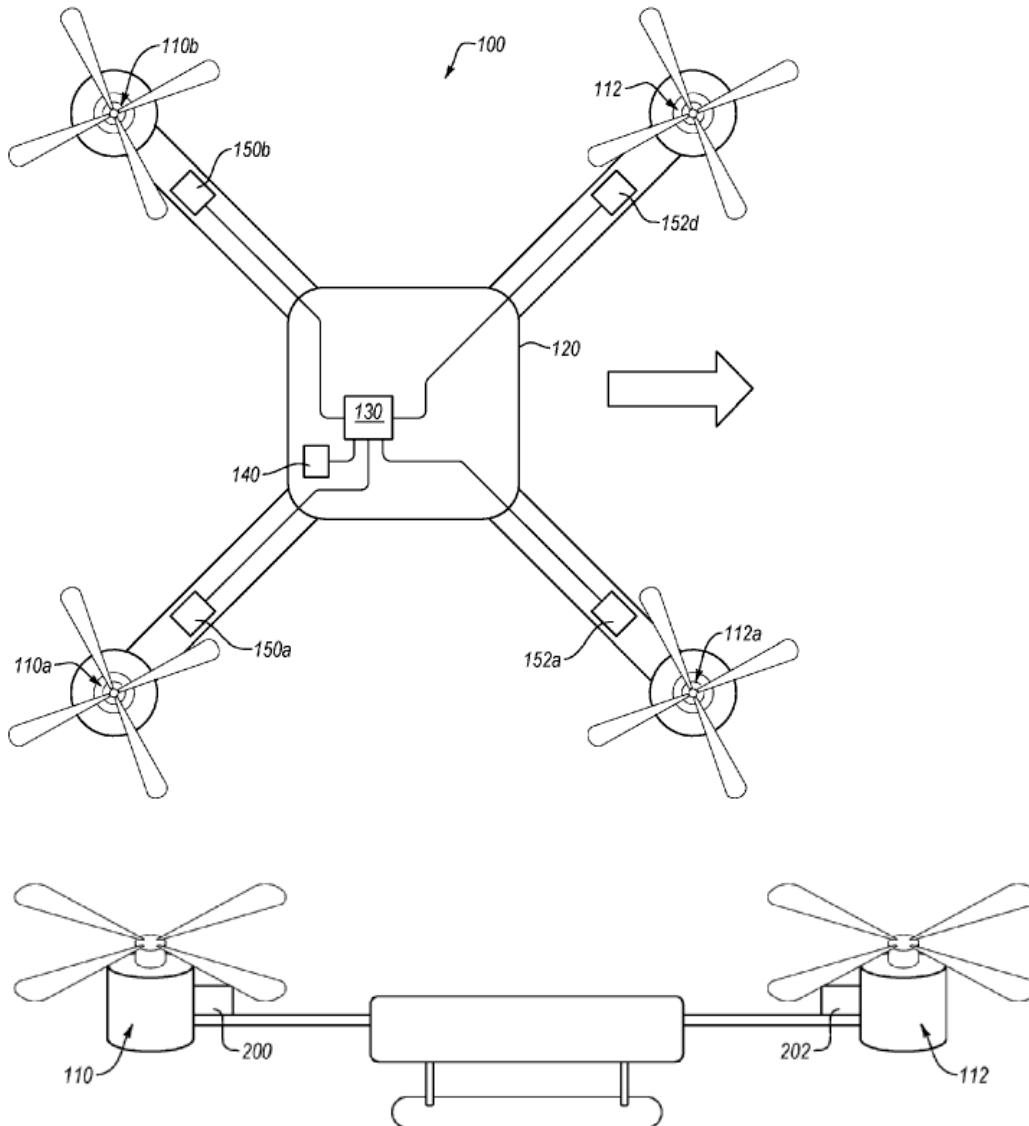
### Flying platforms

#### Definition statement

*This place covers:*

Aircraft generally without a preferential longitudinal axis, having one or more rotors generating a lifting thrust, wherein the lifting thrust is generally vertical, wherein pitch and roll control is normally provided by differential thrust control or a separate force generated outside the propulsors.

Illustrative example of subject matter classified in this place:



## References

### Informative references

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

Rotorcraft characterised by having shrouded rotors, e.g. flying platforms	<a href="#">B64C 27/20</a>
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## B64U 10/20

**Vertical take-off and landing [VTOL] aircraft (flying platforms [B64U 10/13](#); helicopters [B64U 10/17](#))**

### Definition statement

*This place covers:*

Vertical take-off and landing (VTOL) aerial vehicles, whereby the vehicles can hover, take-off and land vertically.

## References

### Limiting references

*This place does not cover:*

Flying platforms	<a href="#">B64U 10/13</a>
Helicopters	<a href="#">B64U 10/17</a>

## B64U 10/60

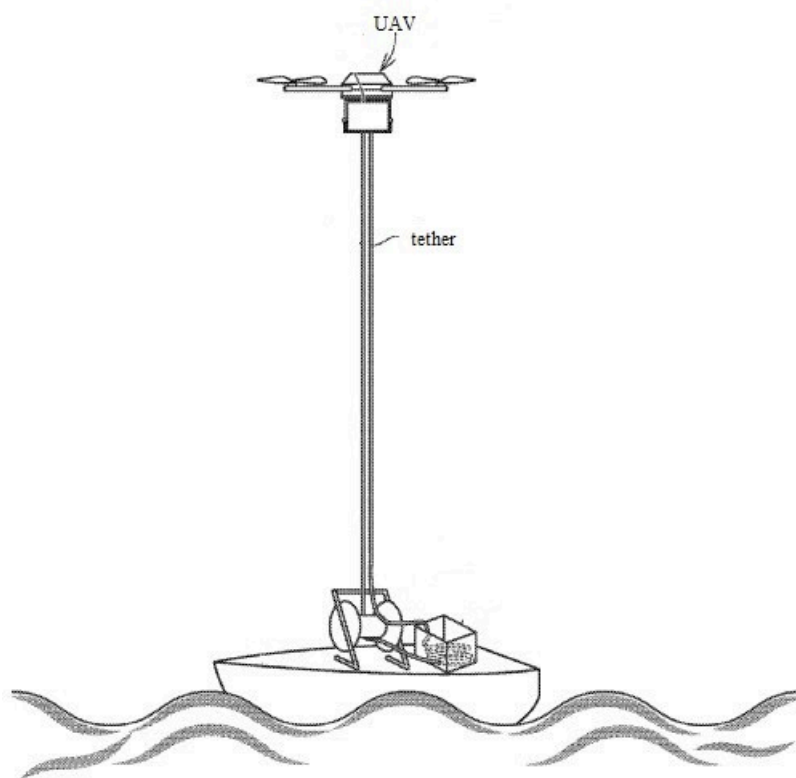
### Tethered aircraft

#### Definition statement

*This place covers:*

Unmanned aircraft which are physically linked to a person, the ground or an object at all times while it is flying.

Illustrative example of subject matter classified in this place:



## B64U 10/80

**UAVs characterised by their small size, e.g. micro air vehicles [MAV]**

#### Definition statement

*This place covers:*

UAVs whose size does not exceed 15 cm.

## Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

MAV	Micro-Air Vehicle
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## B64U 20/73

### Monocoque body

#### Definition statement

*This place covers:*

UAV bodies formed substantially of unitary or single-piece construction.

## B64U 20/80

### Arrangement of on-board electronics, e.g. avionics systems or wiring

#### References

##### Informative references

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

Supply or distribution of electrical power	<a href="#">B64U 50/30</a>
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## B64U 30/16

### movable along the UAV body

#### Definition statement

*This place covers:*

UAVs wherein the wings are moved to different positions along the body, e.g. by sliding or by detaching and reattaching.

#### References

##### Informative references

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

In-flight adjustment of the base configuration	<a href="#">B64U 40/20</a>
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## B64U 30/21

### Rotary wings

#### References

##### Informative references

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

Compound rotorcraft with rotor blades fixed in flight to act as lifting surfaces	<a href="#">B64C 27/24</a>
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## B64U 30/296

**Rotors with variable spatial positions relative to the UAV body (foldable or collapsible rotors [B64U 30/293](#))**

### References

#### Limiting references

*This place does not cover:*

Foldable or collapsible rotors	<a href="#">B64U 30/293</a>
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#### Informative references

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

In-flight adjustment of the base configuration	<a href="#">B64U 40/20</a>
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## B64U 30/298

### Helicopter flybars

#### Definition statement

*This place covers:*

Devices usually in the form of a bar with a weight or paddle at each end, mounted to the rotor to aid stability.

## B64U 30/299

**Rotor guards (ducted or shrouded rotors [B64U 30/26](#); guards used as ground propulsion [B64U 60/60](#))**

#### Definition statement

*This place covers:*

Devices arranged around the rotors for protecting the rotors from contacting obstacles during flight. The devices may surround the UAV as well.

### References

#### Limiting references

*This place does not cover:*

Ducted or shrouded rotors	<a href="#">B64U 30/26</a>
Guards used as ground propulsion	<a href="#">B64U 60/60</a>

#### Informative references

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

Rotorcrafts; Rotors peculiar thereto	<a href="#">B64C 27/00</a>
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## B64U 40/10

### for adjusting control surfaces or rotors

#### Definition statement

*This place covers:*

Mechanisms for actuating adjustable control surfaces or for changing the orientation of rotors, or for changing the pitch of rotor blades, while in flight to control the attitude of the aircraft or control position of the aircraft.

#### References

##### Informative references

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

Controlling flying-control surfaces of aeroplanes and helicopters	<a href="#">B64C 13/00</a>
Controlling rotors of aeroplanes and helicopters	<a href="#">B64C 27/54</a>

## B64U 40/20

### for in-flight adjustment of the base configuration

#### Definition statement

*This place covers:*

Mechanisms for adjusting the position of wings or rotors, or otherwise moving the centre of gravity relative to the body, while in flight.

## B64U 50/34

### In-flight charging (photovoltaics [B64U 50/31](#))

#### Definition statement

*This place covers:*

Arrangements for receiving electrical power from an external source while in flight.

#### References

##### Limiting references

*This place does not cover:*

Supply or distribution of electrical power generated by photovoltaics	<a href="#">B64U 50/31</a>
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## B64U 60/60

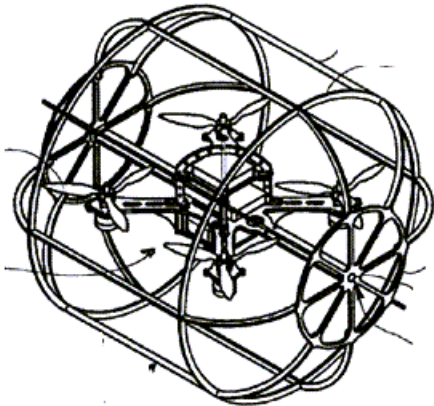
### with rolling cages

#### Definition statement

*This place covers:*

Rolling cages, i.e. free-rolling frames, that at least partially surround the UAV and are connected thereto by at least one rotary joint. UAVs with rolling cages may be capable of movement in flight and on the ground.

Illustrative example of subject matter classified in this place:



## **B64U 60/70**

**Movable wings, rotor supports or shrouds acting as ground-engaging elements**

### **Definition statement**

*This place covers:*

Wings, rotor supports or shrouds which may be adjusted in position or orientation to also act as landing gear for the UAV.

## **B64U 70/50**

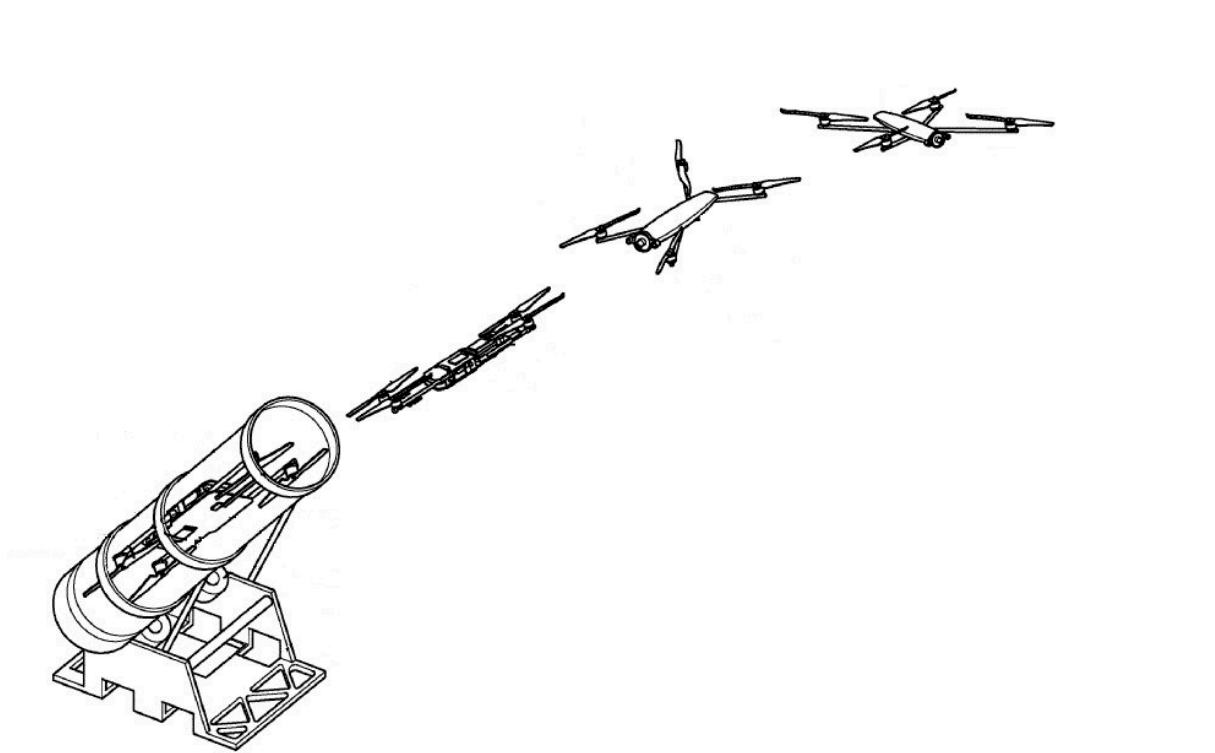
**Launching from storage containers, e.g. from submarine missile tubes**

### **Definition statement**

*This place covers:*

UAVs which are launched or take flight from a storage position within a storage container.

Illustrative example of subject matter classified in this place:



## **B64U 70/80**

**Vertical take-off or landing, e.g. using rockets (rotorcrafts [B64U 10/10](#); VTOL aircraft [B64U 10/20](#))**

### **Definition statement**

*This place covers:*

Arrangements to permit VTOL capability for aircraft not otherwise having the capability, e.g. using rockets or parachutes.

### **References**

#### **Limiting references**

*This place does not cover:*

Rotorcrafts	<a href="#">B64U 10/10</a>
VTOL aircraft	<a href="#">B64U 10/20</a>

## **B64U 70/83**

**using parachutes, balloons or the like**

### **References**

#### **Informative references**

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

Balloons per se	<a href="#">B64B 1/40</a>
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Parachutes per se	<a href="#">B64D 17/00</a>
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## B64U 70/87

using inflatable cushions

### References

#### Informative references

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

Emergency apparatus or devices, not otherwise provided for	<a href="#">B64D 25/00</a>
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## B64U 70/95

Means for guiding the landing UAV towards the platform, e.g. lighting means

### References

#### Informative references

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

Visual or acoustic landing aids	<a href="#">B64F 1/18</a>
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## B64U 70/97

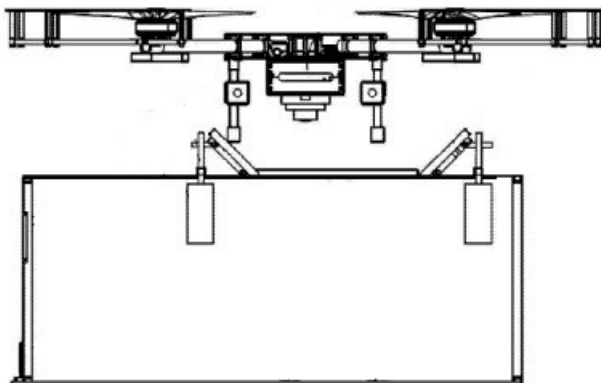
Means for guiding the UAV to a specific location on the platform, e.g. platform structures preventing landing off-centre

### Definition statement

*This place covers:*

Means for physically positioning or orienting the UAV on the platform during landing, e.g. using mechanical means.

Illustrative example of subject matter classified in this place:



## References

### Informative references

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

Visual or acoustic landing aids	<a href="#">B64F 1/18</a>
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## B64U 80/50

the UAVs being disassembled

## References

### Informative references

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

Foldable or collapsible UAVs	<a href="#">B64U 20/50</a>
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## B64U 80/60

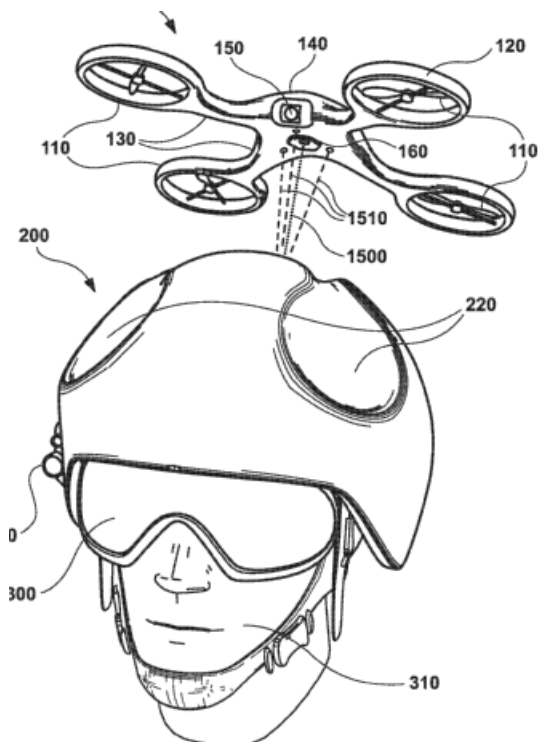
by wearable objects, e.g. garments or helmets

## Definition statement

*This place covers:*

UAVs stored on a person by attaching to apparel, e.g. clothing, or the body itself, e.g. on the wrist.

Illustrative example 1 of subject matter classified in this place:



Illustrative example 2 of subject matter classified in this place:

