

## F16P

### SAFETY DEVICES IN GENERAL; {SAFETY DEVICES FOR PRESSES}

#### Definition statement

*This place covers:*

Safety systems allowing protection of the operator from a machine, a machine tool, a press. Safety systems designed specifically for certain machine/tool/application should be classified in the group related to this specific machine/tool/application if a group related to this safety system exists.

#### References

##### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Safety devices in or for harvesters or mowers	<a href="#">A01D 75/00</a>
Protection in threshing machines or balling presses	<a href="#">A01F 21/00</a>
Garments affording protection	<a href="#">A41D 13/00</a> , <a href="#">A42B 1/06</a> , <a href="#">A42B 3/00</a> , <a href="#">A61F 11/14</a> , <a href="#">A62B 17/00</a>
Headwear affording protection	<a href="#">A42B</a>
Masks for protection of eyes of workers	<a href="#">A61F 9/04</a>
Safety belts or harnesses in general	<a href="#">A62B 35/00</a>
Safety devices for machines for crushing	<a href="#">B02C 23/04</a>
Safety devices for machines rolling metal	<a href="#">B21B 33/00</a>
Safety devices for machines cutting or perforating of sheet metal	<a href="#">B21D 55/00</a>
Safety guard for turning machines	<a href="#">B23B 25/04</a>
Safety devices for machine tools	<a href="#">B23Q 11/00</a>
Protective coverings for machine tools	<a href="#">B23Q 11/08</a>
Safety devices for grinding or polishing machines	<a href="#">B24B 55/00</a>
Safety devices for portable percussive tools	<a href="#">B25D 17/00</a>
Safety devices for manipulators	<a href="#">B25J 19/00</a>
Safety devices for cutting machines	<a href="#">B26D 7/22</a>
Safety guards or devices for saws	<a href="#">B27G 19/00</a>
Details of presses	<a href="#">B30B 15/00</a>
Control systems for packing	<a href="#">B65B 57/00</a>
Control during transport of goods (by conveying, loading, storing)	<a href="#">B65G 43/00</a>
Safety devices in spinning or twisting apparatus	<a href="#">D01G 31/00</a> , <a href="#">D01H 13/14</a>
Safety devices in paper making apparatus	<a href="#">D21G 5/00</a>

#### Special rules of classification

[F16P](#) is only related to general use and general configuration of safety systems. More detailed systems, or specific features of these systems should be classified in the corresponding subclasses. For example a general description of a light grid used to avoid a person to enter a dangerous area has

to be classified in [F16P](#), however if the invention is related to a specific feature of the light grid (e.g. detailing the electrical circuits or the light grid) and not linked directly to the safety, [F16P](#) should not be given but rather [G01V](#).

## F16P 1/00

**Safety devices independent of the control and operation of any machine (protective devices for the eyes or ears, worn on the body or carried in the hand, [A61F 9/00](#), [A61F 11/00](#))**

### Definition statement

*This place covers:*

Safety systems which are independent from the machine, and which are meant to protect the operator by creating a physical barrier between the operator and a dangerous area. No interaction exist between the safety system and the machine.

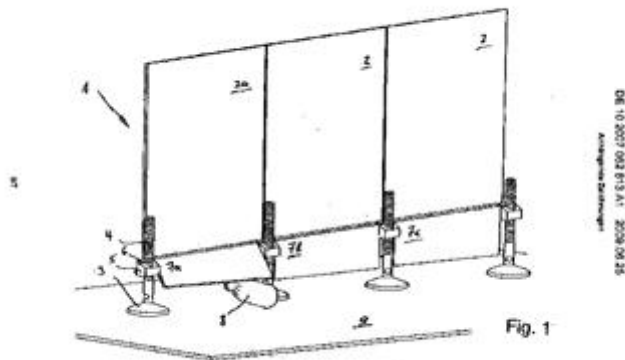
## F16P 1/02

**Fixed screens or hoods**

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: The document DE102007062813 discloses a screen (4) which provides a barrier in order to avoid an operator to enter a dangerous area. In use the barrier does not move, except that the panels (2) can be adjusted in height. Once these panels are adjusted, the screen generally does not move with respect to the machine.



### References

#### Informative references

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

Safety enclosures for children	<a href="#">A47D 13/06</a>
Safety guards for machine tools	<a href="#">B23Q 11/08</a>

## F16P 1/06

specifically designed for welding

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: EP1908546

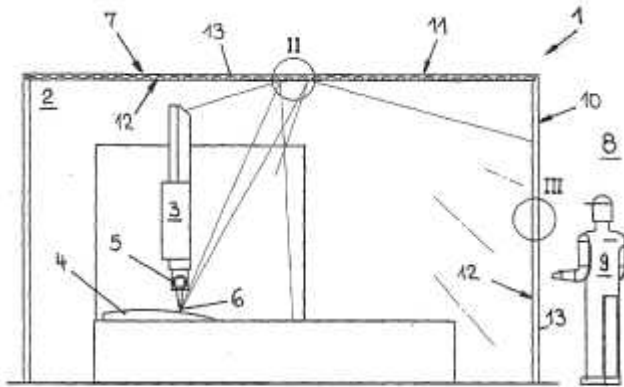


Fig. 1

### References

#### Informative references

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

Welding	<a href="#">B23K</a>
Protective screens for laser working	<a href="#">B23K 26/706</a>

## F16P 3/00

Safety devices acting in conjunction with the control or operation of a machine; Control arrangements requiring the simultaneous use of two or more parts of the body ([F16P 5/00](#) takes precedence)

### Definition statement

*This place covers:*

Safety systems which depend on the machine by way of any possible interactions and which are meant to protect the operator from being injured by the machine.

### F16P 3/001

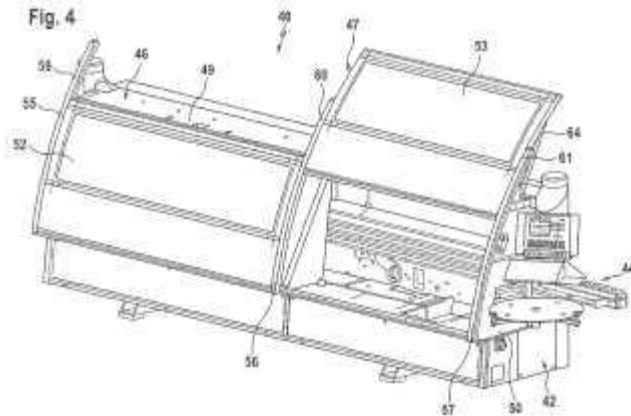
{Safety devices for guarding the human operator of punch presses or like machine tools performing an opening and closing travel}

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: The document EP1990130 discloses a screen which depends on the functioning of the machine, in the sense that there is an interaction

between the screen and the machine. Here the safety device performs an opening and closing travel in order to restrict access to the machine.



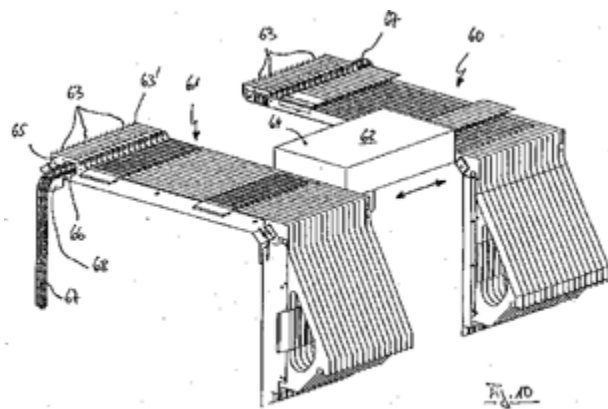
## F16P 3/02

Screens or other safety members moving in synchronism with members which move to and fro

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: EP2039960



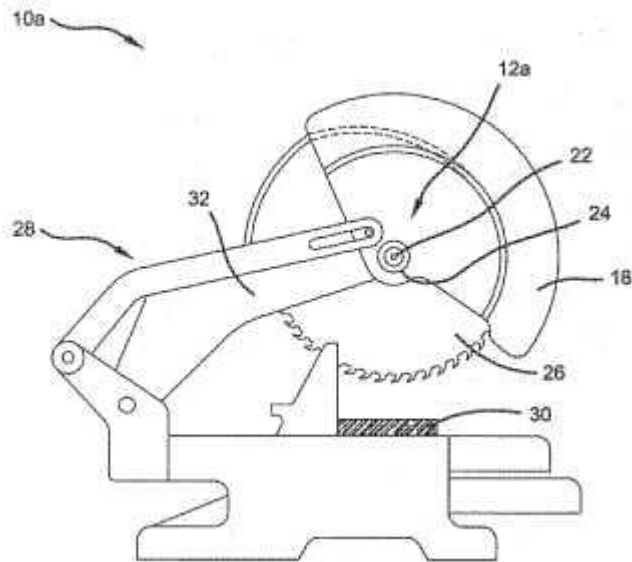
## F16P 3/06

in which body parts of the operator are removed from the danger zone on approach of the machine parts

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: US2004226424



## F16P 3/08

in connection with the locking of doors, covers, guards, or like members giving access to moving machine parts

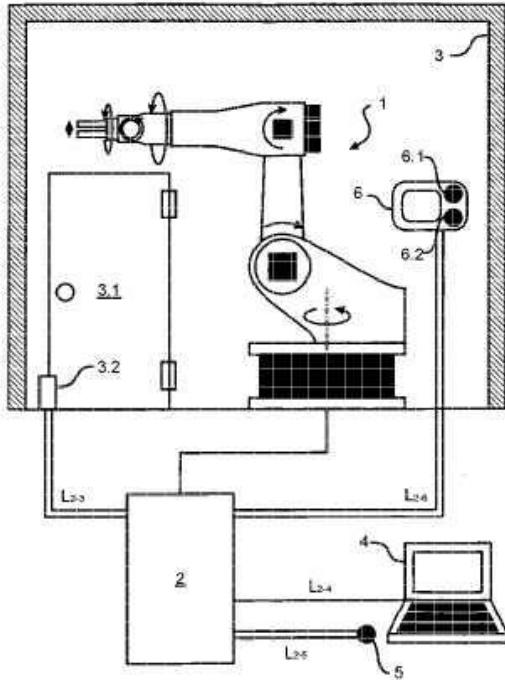
### Definition statement

*This place covers:*

The activation or deactivation of the machine is linked to the state of the lock which is provided on the doors, covers guards or like members which give access to moving machine parts or by extension to the machine in general.

Illustrative example of subject matter classified in this group: EP2289672 if the door 3.1 is closed the machine 1 can be active. If the door 3.1 is opened the machine can not be active.

Fig. 1



**References**

**Limiting references**

*This place does not cover:*

Safety locks for washing machines	<a href="#">D06F 37/42</a>
Locks in general	<a href="#">E05B</a>

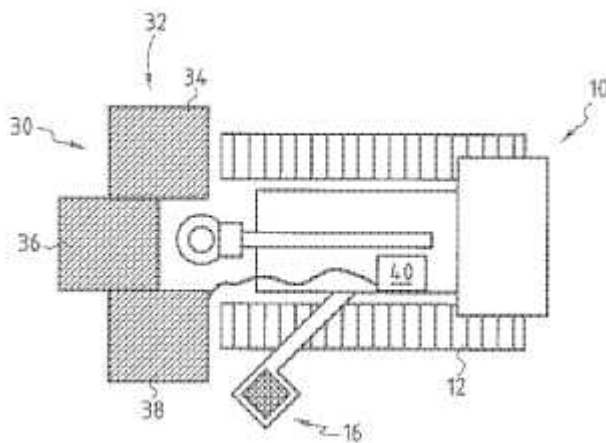
## F16P 3/12

with means, e.g. feelers, which in case of the presence of a body part of a person in or near the danger zone influence the control or operation of the machine ([F16P 3/08](#) takes precedence)

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: FR2885401



(carpet 34, 36, 38 analysing the pressure exerted by an operator)

## F16P 3/14

the means being photocells or other devices sensitive without mechanical contact

### References

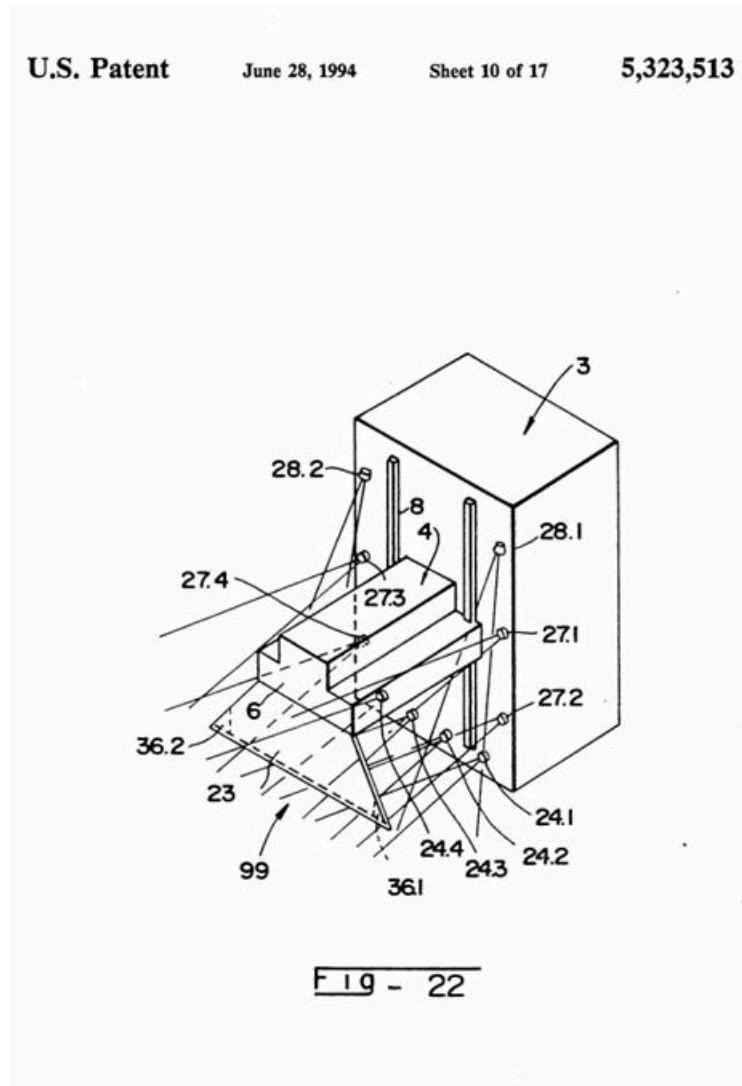
#### Informative references

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

Safety devices for manipulators	<a href="#">B25J 19/06</a>
Program controlled system monitoring safety	<a href="#">G05B 19/406</a>

**F16P 3/141****{using sound propagation, e.g. sonar}****Definition statement***This place covers:*

Safety device using e.g. ultrasound. Illustrative example of subject matter classified in this group:  
US5323513





## F16P 3/142

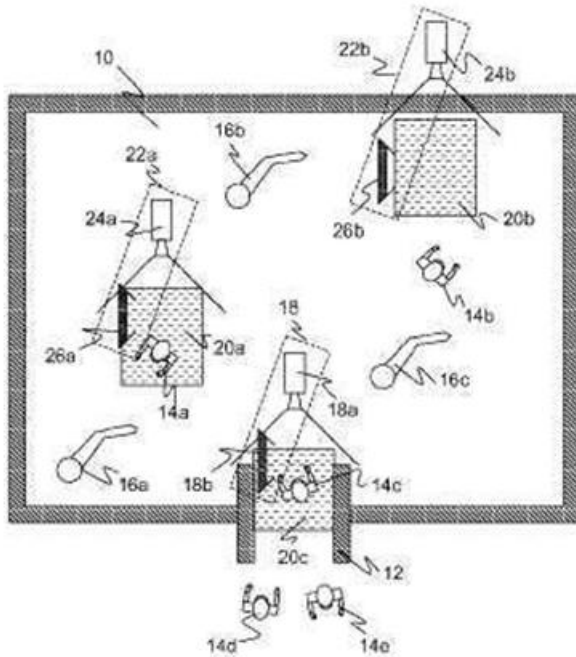
{using image capturing devices}

### Definition statement

*This place covers:*

Using cameras: e.g. EP2282106

Figur 1



See also [F16P 3/14](#)

## F16P 3/144

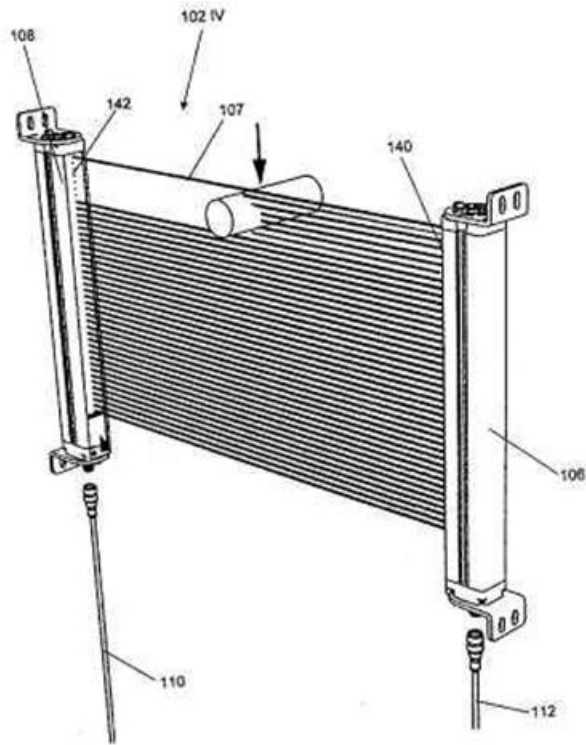
{using light grids}

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group

Using a light grid: US2007069114



## References

### Informative references

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

Light barriers	<a href="#">G01V 8/20</a>
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## F16P 3/145

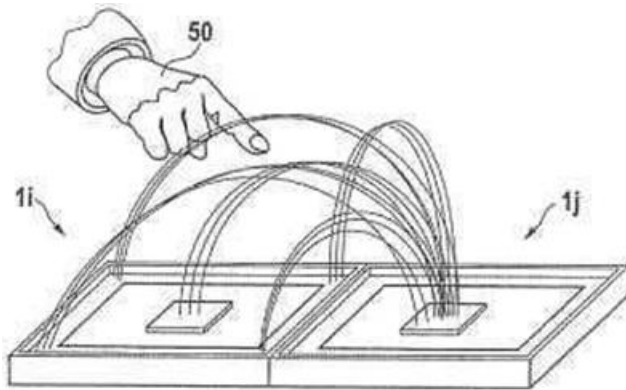
{using magnetic technology}

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group

e.g. US2011050256



### F16P 3/147

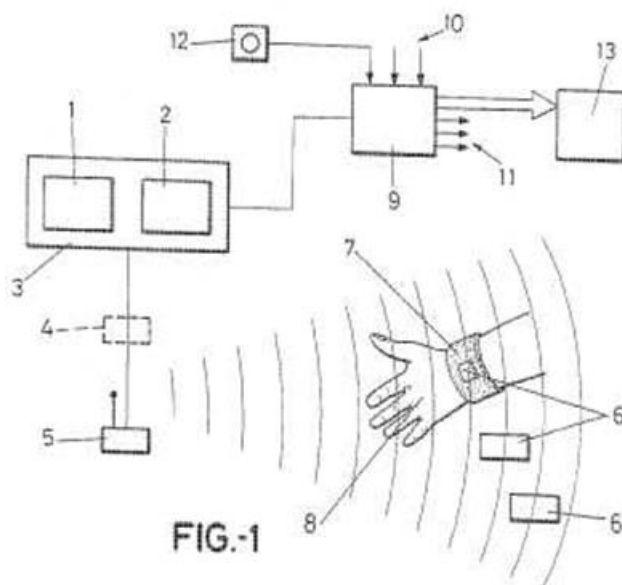
{using electro-magnetic technology, e.g. tags or radar}

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group

e.g. WO2009050316



### F16P 3/148

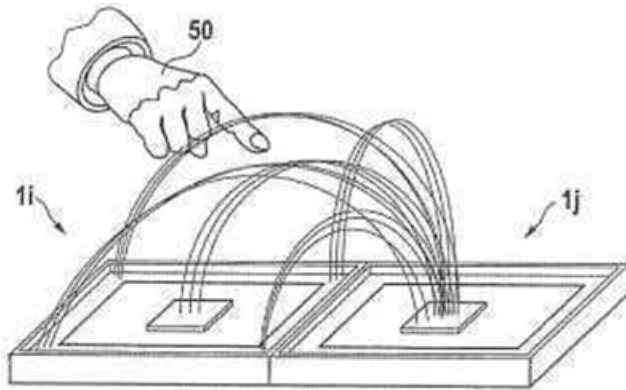
{using capacitive technology}

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group

Using magnetic or capacitive sensors: e.g.US2011050256



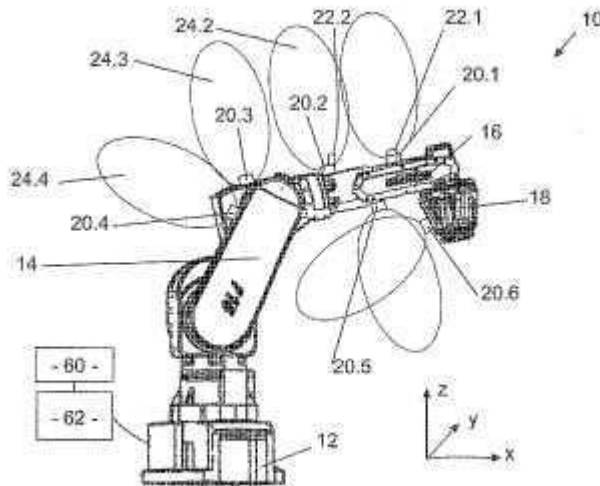
### F16P 3/16

with feeling members moved by the machine

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: WO2010072193, the document shows feelers (20) which are provided on the moving arm parts (14, 16, 18).



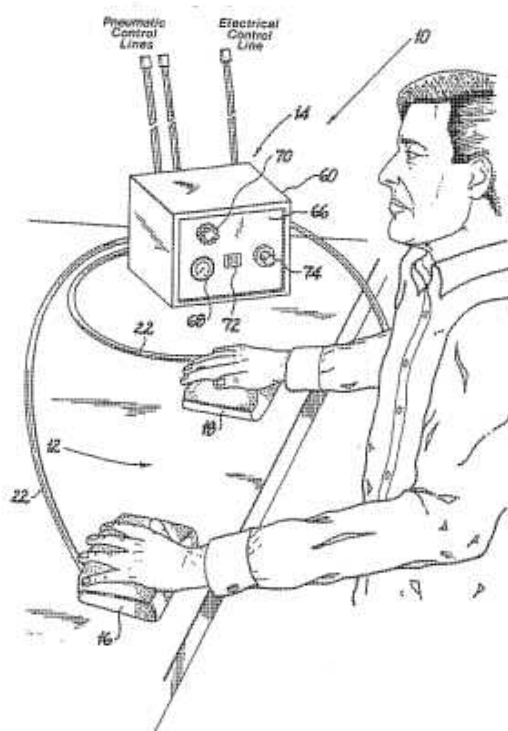
## F16P 3/18

### Control arrangements requiring the use of both hands

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group: US5396222



## F16P 5/00

### Emergency means for rendering ineffective a coupling conveying reciprocating movement if the motion of the driven part is prematurely resisted

#### Definition statement

*This place covers:*

Safety systems which render ineffective a coupling conveying reciprocating movement if the motion of the driven part is prematurely resisted. The safety system is preventing the machine from being damaged.

#### References

##### Limiting references

*This place does not cover:*

Safety means disconnecting couplings	<a href="#">F16D 9/00</a>
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## **F16P 7/00**

**Emergency devices preventing damage to a machine or apparatus ([F16P 1/00](#), [F16P 3/00](#), [F16P 5/00](#) take precedence)**

### **Definition statement**

*This place covers:*

Safety systems preventing damages of the machine itself.