

H01T

SPARK GAPS; OVERVOLTAGE ARRESTERS USING SPARK GAPS; SPARKING PLUGS; CORONA DEVICES; GENERATING IONS TO BE INTRODUCED IN NON-ENCLOSED GASES (working of metal by the action of a high concentration of electric current B23H; welding, e.g. arc welding, electron beam welding or electrolytic welding B23K; gas-filled discharge tubes with solid cathode H01J17/00; electric arc lamps H05B31/00)

Definition statement

This subclass/group covers:

- Spark gaps, which is used with the following meaning: enclosed or nonenclosed;
- Discharge device having cold electrodes and used exclusively to, discharge a quantity of electrical energy in a small time duration.

Relationship between large subject matter areas

Ignition: [F02P](#)

Voltage dependent resistors: [H01C](#)

References relevant to classification in this subclass

This subclass/group does not cover:

Electrotherapy	A61N
Air purifiers	B03C
Surface shaping	B29C
Air purifiers	B03C
Devices for generating ozone	C01B
Fuses	H01H
Overvoltage protection circuits	H02H
Voltage dependent resistors	H01C
Ignition circuits	F02P

Glow plugs	F23Q
Fuel Injection	F02M
Charging electrographic elements	G03G
Pressure sensors	G01L
Ignition coils	H01F
Electrostatic discharge in general	H05F
Discharge tubes	H01J
Generating plasma	H05H

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

Spark gaps for ElectroStatic Discharge (ESD) components	H05F
Overtoltage protection circuits using a spark gap	H02H

Informative references

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

Working of metal by the action of a high concentration of electric current	B23H
Welding, e.g. arc welding, electron beam welding or electrolytic welding	B23K
Gas-filled discharge tubes with solid cathode	H01J 17/00
Electric arc lamps	H05B 31/00

Glossary of terms

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

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

Spark gap	Enclosed or non-enclosed discharge device having cold electrodes and used exclusively to discharge a quantity of electrical energy in a small time duration
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H01T 1/00

Details of spark gaps

Definition statement

This subclass/group covers:

Constructional details of the spark gap or of means structurally associated therewith.

The intended use of the spark gap (e.g. overvoltage arrester) is not considered.

References relevant to classification in this group

This subclass/group does not cover:

Fuses as means associated with spark gap for disconnecting it in case of failure	H01H 37/76
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H01T 1/14

Means structurally associated with spark gap for protecting it against overload or for disconnecting it in case of failure (H01T1/15, H01T1/16, H01T1/18 take precedence)

References relevant to classification in this group

This subclass/group does not cover:

Protection against excessive pressure	H01T 1/15
Series resistor structurally associated with spark gap	H01T 1/16
Electrolytic device structurally associated with spark gap	H01T 1/18

H01T 1/24

Selection of materials for electrodes (H01T1/22 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Means for starting arc or facilitating ignition of spark gap by the shape or the composition of the electrodes	H01T 1/22
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H01T 2/00

Spark gaps comprising auxiliary triggering means (triggering circuits H01T15/00)

Definition statement

This subclass/group covers:

Devices comprising additional electrodes for discharge activation

References relevant to classification in this group

This subclass/group does not cover:

Triggering circuits	H01T 15/00
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H01T 4/00

Overvoltage arresters using spark gaps (H01T2/00TAKES precedence; overvoltage protection circuits using spark gaps H02H9/06)

Definition statement

This subclass/group covers:

Spark gaps used as voltage limiting means.

References relevant to classification in this group

This subclass/group does not cover:

Overvoltage arresters comprising auxiliary triggering means	H01T 2/00
Overvoltage protection circuits using spark gaps	H02H 9/06

Informative references

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

Voltage dependent resistors used as overvoltage arresters	H01C 7/12
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H01T 4/02

Details (of spark gaps H01T1/00)

Informative references

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

Details of spark gaps	H01T 1/00
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H01T 4/04

Housings (H01T4/06 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Mounting arrangements for a plurality of overvoltage arresters	H01T 4/06
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H01T 4/08

structurally associated with protected apparatus (with switches H01H9/14; with fuses H01H85/44)

Informative references

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

Switches	H01H 9/14
Fuses	H01H 85/44

H01T 4/14

Arcing horns (associated with insulators H01B17/46)

References relevant to classification in this group

This subclass/group does not cover:

Arcing horns associated with insulators	H01B 17/46
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H01T 7/00

Rotary spark gaps, i.e. devices having one or more rotating electrodes

References relevant to classification in this group

This subclass/group does not cover:

Ignition distributors	F02P 7/02
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H01T 9/00

Spark gaps specially adapted for generating oscillations

Informative references

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

Gas-filled discharge tubes with solid	H01J 17/00
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cathode	
Generation of oscillations using a shock-excited tuned circuit excited by spark	H03B 11/02

H01T 11/00

Spark gaps specially adapted as rectifiers

H01T 13/00

Sparking plugs

Definition statement

This subclass/group covers:

Sparking plugs for internal combustion engines.

References relevant to classification in this group

This subclass/group does not cover:

Structurally associated with fuel injector	F02M 57/06
Connected with ignition coil	F02P 3/02
Laser ignition devices	F02P 23/04

Informative references

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

Glow plugs	F23Q 7/00
Pressure sensors for internal combustion engines	G01L 23/22
Ignition coils	H01F 38/12

H01T 13/22

having two or more electrodes embedded in insulation (for two or more sparks H01T13/46)

References relevant to classification in this group

This subclass/group does not cover:

Electrodes embedded in insulation for two or more sparks	H01T 13/46
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H01T 13/24

having movable electrodes (H01T13/28 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Spherically shaped electrodes, e.g. ball-shaped	H01T 13/28
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H01T 13/38

Selection of materials for insulation (in general H01B3/00)

Informative references

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

Insulating materials in general	H01B 3/00
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H01T 13/40

structurally combined with other devices (combined or associated with fuel injectors F02M57/06; structurally combined with other parts of internal-combustion engines F02P13/00)

References relevant to classification in this group

This subclass/group does not cover:

Sparking plugs combined or	F02M 57/06
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associated with fuel injectors	
Sparking plugs structurally combined with other parts of internal-combustion engines	F02P 13/00

H01T 13/50

having means for ionisation of gap (H01T13/52 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Characterised by a discharge along a surface	H01T 13/52
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H01T 13/58

Testing (testing characteristics of the spark in internal-combustion engine ignition F02P17/12)

References relevant to classification in this group

This subclass/group does not cover:

Testing characteristics of the spark in internal-combustion engine ignition	F02P 17/12
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H01T 14/00

Spark gaps not provided for in groups H01T2/00 to H01T13/00 (devices providing for corona discharge H01T19/00)

References relevant to classification in this group

This subclass/group does not cover:

Devices providing for corona discharge	H01T 19/00
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H01T 15/00

Circuits specially adapted for spark gaps, e.g. ignition circuits (ignition circuits for internal-combustion engines F02P; electric spark ignition for combustion apparatus F23Q; protection circuits using spark gaps H02H9/06)

References relevant to classification in this group

This subclass/group does not cover:

Ignition circuits for internal combustion engines	F02P
Electric spark ignition for combustion apparatus	F23Q
Protection circuits using spark gaps	H02H 9/06

H01T 19/00

Devices providing for corona discharge (for charging electrographic elements G03G15/02)

References relevant to classification in this group

This subclass/group does not cover:

Devices for charging electrographic elements	G03G 15/02
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Informative references

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

Surface shaping by electric discharge	B29C 59/10
Devices for generating ozone	C01B 13/11
Carrying-off electrostatic charges	H05F 3/04

H01T 21/00

Apparatus or processes specially adapted for the manufacture or maintenance of spark gaps or sparking plugs

H01T 21/04

Cleaning (abrasive blasting devices for cleaning sparking-plugs B24C3/34)

References relevant to classification in this group

This subclass/group does not cover:

Abrasive blasting devices for cleaning sparking-plugs	B24C 3/34
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H01T 21/06

Adjustment of spark gaps (sparking-plugs having movable electrodes for adjusting the gap H01T13/26)

References relevant to classification in this group

This subclass/group does not cover:

Sparking-plugs having movable electrodes for adjusting the gap	H01T 13/26
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H01T 23/00

Apparatus for generating ions to be introduced into nonenclosed gases, e.g. into the atmosphere (discharge tubes with provision for emergence of ions from the vessel H01J33/00; generating plasma H05H)

References relevant to classification in this group

This subclass/group does not cover:

Discharge tubes with provision for emergence of ions from the vessel	H01J 35/00
Generating plasma	H05H

Informative references

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

Electrotherapy applying ionised fluids	A61N 1/44
Air purifiers	B03C 3/68