

SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B04 CENTRIFUGAL APPARATUS OR MACHINES FOR CARRYING-OUT PHYSICAL OR CHEMICAL PROCESSES

B04C **APPARATUS USING FREE VORTEX FLOW, e.g. CYCLONES** (exhaust or silencing apparatus for machines or engines having means for removing solid constituents of exhaust, using inertial or centrifugal separators F01N 3/037; cyclonic type combustion apparatus F23)

Note(s)

This subclass covers apparatus for separating, mixing or like treating in which centrifugal effects are generated by free vortex flow, otherwise than by rotary bowls, rotors or curved passages.

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| <p>1/00 Apparatus in which the main direction of flow follows a flat spiral</p> | 5/15 | <ul style="list-style-type: none"> • • with swinging flaps or revolving sluices; Sluices; Check-valves |
| <p>3/00 Apparatus in which the axial direction of the vortex remains unchanged</p> | 5/16 | <ul style="list-style-type: none"> • • with variable-size outlets from the underflow ducting |
| <p>3/02 • with heating or cooling, e.g. quenching, means</p> | 5/18 | <ul style="list-style-type: none"> • • with auxiliary fluid assisting discharge |
| <p>3/04 • Multiple arrangement thereof</p> | 5/181 | <ul style="list-style-type: none"> • • Bulkheads or central bodies in the discharge opening |
| <p>3/06 • Construction of inlets or outlets to the vortex chamber</p> | 5/185 | <ul style="list-style-type: none"> • • Dust collectors |
| <p>5/00 Apparatus in which the axial direction of the vortex is reversed</p> | 5/187 | <ul style="list-style-type: none"> • • • forming an integral part of the vortex chamber |
| <p>5/02 • Construction of inlets by which the vortex flow is generated</p> | 5/20 | <ul style="list-style-type: none"> • with heating or cooling, e.g. quenching, means |
| <p>5/04 • • Tangential inlets</p> | 5/22 | <ul style="list-style-type: none"> • with cleaning means |
| <p>5/06 • • Axial inlets</p> | 5/23 | <ul style="list-style-type: none"> • • using liquids |
| <p>5/08 • Vortex chamber constructions</p> | 5/24 | <ul style="list-style-type: none"> • Multiple arrangement thereof |
| <p>5/081 • • Shapes or dimensions</p> | 5/26 | <ul style="list-style-type: none"> • • for series flow |
| <p>5/085 • • with wear-resisting arrangements</p> | 5/28 | <ul style="list-style-type: none"> • • for parallel flow |
| <p>5/087 • • with flexible gas-tight walls</p> | 5/30 | <ul style="list-style-type: none"> • • Recirculation constructions in or with cyclones which accomplish a partial recirculation of the medium, e.g. by means of conduits |
| <p>5/10 • • with perforated walls</p> | 7/00 | <p>Apparatus not provided for in group B04C 1/00, B04C 3/00 or B04C 5/00; Multiple arrangements not provided for in one of the groups B04C 1/00, B04C 3/00, or B04C 5/00; Combinations of apparatus covered by two or more of the groups B04C 1/00, B04C 3/00, or B04C 5/00</p> |
| <p>5/103 • • Bodies or members, e.g. bulkheads, guides, in the vortex chamber (cores B04C 5/107)</p> | 9/00 | <p>Combinations with other devices, e.g. fans (with filters for separating particles from gases or vapour B01D 50/00; with dry electrostatic precipitation for separating particles from gases or vapour B03C 3/15)</p> |
| <p>5/107 • • Cores; Devices for inducing an air-core in hydrocyclones (forming part of the outlet pipe B04C 5/13)</p> | 11/00 | <p>Accessories, e.g. safety or control devices, not otherwise provided for</p> |
| <p>5/12 • Construction of the overflow ducting, e.g. diffusing or spiral exits</p> | | |
| <p>5/13 • • formed as a vortex finder and extending into the vortex chamber; Discharge from vortex finder otherwise than at the top of the cyclone; Devices for controlling the overflow</p> | | |
| <p>5/14 • Construction of the underflow ducting; Apex constructions; Discharge arrangements</p> | | |