Symbol	Typ	Titel
B	**Sektion**	**SECTION B — PERFORMING OPERATIONS; TRANSPORTING**
B04	**Klasse**	**CENTRIFUGAL APPARATUS OR MACHINES FOR CARRYING-OUT PHYSICAL OR CHEMICAL PROCESSES**
B04C	**Unterklasse**	**APPARATUS USING FREE VORTEX FLOW, e.g. CYCLONES (jet mills B02C 19/06; 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)**
B04C 1/00	**Hauptgruppe**	**Apparatus in which the main direction of flow follows a flat spiral**
B04C 3/00	**Hauptgruppe**	**Apparatus in which the axial direction of the vortex remains unchanged**
B04C 3/02	1-Punkt Untergruppe	. with heating or cooling, e.g. quenching, means
B04C 3/04	1-Punkt Untergruppe	. Multiple arrangement thereof
B04C 3/06	1-Punkt Untergruppe	. Construction of inlets or outlets to the vortex chamber
B04C 5/00	**Hauptgruppe**	**Apparatus in which the axial direction of the vortex is reversed**
B04C 5/02	1-Punkt Untergruppe	. Construction of inlets by which the vortex flow is generated (fluid dynamics in general F15D)
B04C 5/04	2-Punkt Untergruppe	. . Tangential inlets
B04C 5/06	2-Punkt Untergruppe	. . Axial inlets
B04C 5/08	1-Punkt Untergruppe	. Vortex chamber constructions
B04C 5/081	2-Punkt Untergruppe	. . Shapes or dimensions
B04C 5/085	2-Punkt Untergruppe	. . with wear-resisting arrangements
B04C 5/087	2-Punkt Untergruppe	. . with flexible gas-tight walls
B04C 5/10	2-Punkt Untergruppe	. . with perforated walls
B04C 5/103	2-Punkt Untergruppe	. . Bodies or members, e.g. bulkheads, guides, in the vortex chamber (cores B04C 5/107)
B04C 5/107	2-Punkt Untergruppe	. . Cores; Devices for inducing an air-core in hydrocyclones (forming part of the outlet pipe B04C 5/13)
B04C 5/12	1-Punkt Untergruppe	. Construction of the overflow ducting, e.g. diffusing or spiral exits
B04C 5/13	2-Punkt Untergruppe	. . 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
B04C 5/14	1-Punkt Untergruppe	. Construction of the underflow ducting; Apex constructions; Discharge arrangements
B04C 5/15	2-Punkt Untergruppe	. . with swinging flaps or revolving sluices; Sluices; Check-valves
B04C 5/16	2-Punkt Untergruppe	. . with variable-size outlets from the underflow ducting
B04C 5/18	2-Punkt Untergruppe	. . with auxiliary fluid assisting discharge
B04C 5/181	2-Punkt Untergruppe	. . Bulkheads or central bodies in the discharge opening
B04C 5/185	2-Punkt Untergruppe	. . Dust collectors
B04C 5/187	3-Punkt Untergruppe	. . . forming an integral part of the vortex chamber
B04C 5/20	1-Punkt Untergruppe	. with heating or cooling, e.g. quenching, means
B04C 5/22	1-Punkt Untergruppe	. with cleaning means

Symbol	Typ	Titel
B04C 5/23	2-Punkt Untergruppe	. . using liquids
B04C 5/24	1-Punkt Untergruppe	. Multiple arrangement thereof
B04C 5/26	2-Punkt Untergruppe	. . for series flow
B04C 5/28	2-Punkt Untergruppe	. . for parallel flow
B04C 5/30	2-Punkt Untergruppe	. . Recirculation constructions in or with cyclones which accomplish a partial recirculation of the medium, e.g. by means of conduits
B04C 7/00	**Hauptgruppe**	**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**
B04C 9/00	**Hauptgruppe**	**Combinations with other devices, e.g. fans (with filters B01D 50/00)**
B04C 11/00	**Hauptgruppe**	**Accessories, e.g. safety or control devices, not otherwise provided for (with electrostatic precipitating arrangements B03C 3/14)**