

Symbol	Typ	Titel
F	Sektion	MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING
F02	Klasse	COMBUSTION ENGINES; HOT-GAS OR COMBUSTION-PRODUCT ENGINE PLANTS
F02B	Unterklasse	INTERNAL-COMBUSTION PISTON ENGINES; COMBUSTION ENGINES IN GENERAL (cyclically operating valves therefor F01L; lubricating internal-combustion engines F01M; gas-flow silencers or exhaust apparatus therefor F01N; cooling of internal-combustion engines F01P; internal-combustion turbines F02C; plants in which engines use combustion products F02C, F02G) <u>Engines characterised by the working fluid to be compressed or characterised by the type of ignition</u>
F02B 1/00	Hauptgruppe	Engines characterised by fuel-air mixture compression (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition F02B 11/00; characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00; characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 1/02	1-Punkt Untergruppe	. with positive ignition (with non-timed positive ignition F02B 9/06) [1, 2006.01]
F02B 1/04	2-Punkt Untergruppe	. . with fuel-air mixture admission into cylinder [1, 2006.01]
F02B 1/06	3-Punkt Untergruppe	. . . Methods of operating [1, 2006.01]
F02B 1/08	2-Punkt Untergruppe	. . with separate admission of air and fuel into cylinder [1, 2006.01]
F02B 1/10	3-Punkt Untergruppe	. . . Methods of operating [1, 2006.01]
F02B 1/12	1-Punkt Untergruppe	. with compression ignition (with fuel-air charge ignited by compression ignition of an additional fuel F02B 7/00) [1, 2006.01]
F02B 1/14	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 3/00	Hauptgruppe	Engines characterised by air compression and subsequent fuel addition (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition F02B 11/00; characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00; characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 3/02	1-Punkt Untergruppe	. with positive ignition (with non-timed positive ignition F02B 9/06) [1, 2006.01]
F02B 3/04	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 3/06	1-Punkt Untergruppe	. with compression ignition (F02B 13/02 takes precedence; with fuel-air charge ignited by compression ignition of an additional fuel F02B 7/00) [1, 2006.01]
F02B 3/08	2-Punkt Untergruppe	. . Methods of operating (F02B 3/12 takes precedence) [1, 2006.01]
F02B 3/10	2-Punkt Untergruppe	. . with intermittent fuel introduction [1, 2006.01]
F02B 3/12	3-Punkt Untergruppe	. . . Methods of operating [1, 2006.01]
F02B 5/00	Hauptgruppe	Engines characterised by positive ignition (F02B 1/02, F02B 3/02 take precedence; with non-timed positive ignition F02B 9/06; characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition F02B 11/00; characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00; characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 5/02	1-Punkt Untergruppe	. Methods of operating [1, 2006.01]
F02B 7/00	Hauptgruppe	Engines characterised by the fuel-air charge being ignited by compression ignition of an additional fuel (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition F02B 11/00; characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00;

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		characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 7/02	1-Punkt Untergruppe	. the fuel in the charge being liquid [1, 2006.01]
F02B 7/04	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 7/06	1-Punkt Untergruppe	. the fuel in the charge being gaseous [1, 2006.01]
F02B 7/08	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 9/00	Hauptgruppe	Engines characterised by other types of ignition (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition F02B 11/00; characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00; characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 9/02	1-Punkt Untergruppe	. with compression ignition (F02B 1/12, F02B 3/06 take precedence) [1, 2006.01]
F02B 9/04	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 9/06	1-Punkt Untergruppe	. with non-timed positive ignition, e.g. with hot-spots [1, 2006.01]
F02B 9/08	2-Punkt Untergruppe	. . with incandescent chambers [1, 2006.01]
F02B 9/10	3-Punkt Untergruppe	. . . Chamber shapes or constructions [1, 2006.01]
F02B 11/00	Hauptgruppe	Engines characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition, e.g. in different cylinders (characterised by precombustion chambers F02B 19/00; characterised by air-storage chambers F02B 21/00; characterised by special shape or construction of combustion chambers F02B 23/00) [1, 2006.01]
F02B 11/02	1-Punkt Untergruppe	. convertible from fuel-air mixture compression to air compression or <u>vice versa</u> [1, 2006.01]
		<u>Engines characterised by the method of introducing liquid fuel into cylinders</u>
F02B 13/00	Hauptgruppe	Engines characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid [1, 2006.01]
F02B 13/02	1-Punkt Untergruppe	. Compression ignition engines using air or gas for blowing fuel into compressed air in cylinder [1, 2006.01]
F02B 13/04	2-Punkt Untergruppe	. . Arrangements or adaptations of pumps [1, 2006.01]
F02B 13/06	1-Punkt Untergruppe	. Engines having secondary air mixed with fuel in pump, compressed therein without ignition, and fuel-air mixture being injected into air in cylinder [1, 2006.01]
F02B 13/08	2-Punkt Untergruppe	. . Arrangements or adaptations of pumps [1, 2006.01]
F02B 13/10	1-Punkt Untergruppe	. Use of specific auxiliary fluids, e.g. steam, combustion gas [1, 2006.01]
F02B 15/00	Hauptgruppe	Engines characterised by the method of introducing liquid fuel into cylinders and not otherwise provided for [1, 2006.01]
F02B 15/02	1-Punkt Untergruppe	. having means for sucking fuel directly into cylinder [1, 2006.01]
F02B 17/00	Hauptgruppe	Engines characterised by means for effecting stratification of charge in cylinders [1, 2006.01] <u>Engines characterised by precombustion chambers or air-storage chambers, or characterised by special shape or construction of combustion chambers to improve operation</u>
F02B 19/00	Hauptgruppe	Engines characterised by precombustion chambers (engines with incandescent chambers F02B 9/08) [1, 2006.01]
F02B 19/02	1-Punkt Untergruppe	. the chamber being periodically isolated from its cylinder [1, 2006.01]
F02B 19/04	2-Punkt Untergruppe	. . the isolation being effected by a protuberance on piston or cylinder head [1, 2006.01]
F02B 19/06	1-Punkt Untergruppe	. with auxiliary piston in chamber for transferring ignited charge to cylinder space [1, 2006.01]
F02B 19/08	1-Punkt Untergruppe	. the chamber being of air-swirl type [1, 2006.01]

Symbol	Typ	Titel
F02B 19/10	1-Punkt Untergruppe	. with fuel introduced partly into pre-combustion chamber, and partly into cylinder (F02B 19/02-F02B 19/08 take precedence) [1, 2006.01]
F02B 19/12	1-Punkt Untergruppe	. with positive ignition (F02B 19/02-F02B 19/10 take precedence) [1, 2006.01]
F02B 19/14	1-Punkt Untergruppe	. with compression ignition (F02B 19/02-F02B 19/10 take precedence) [1, 2006.01]
F02B 19/16	1-Punkt Untergruppe	. Chamber shapes or constructions not specific to groups F02B 19/02-F02B 19/10 [1, 2006.01]
F02B 19/18	2-Punkt Untergruppe	. . Transfer passages between chamber and cylinder [1, 2006.01]
F02B 21/00	Hauptgruppe	Engines characterised by air-storage chambers [1, 2006.01]
F02B 21/02	1-Punkt Untergruppe	. Chamber shapes or constructions [1, 2006.01]
F02B 23/00	Hauptgruppe	Other engines characterised by special shape or construction of combustion chambers to improve operation (engines with incandescent chambers F02B 9/08) [1, 2006.01]
F02B 23/02	1-Punkt Untergruppe	. with compression ignition [1, 2006.01]
F02B 23/04	2-Punkt Untergruppe	. . the combustion space being subdivided into two or more chambers (with pre-combustion chambers F02B 19/00) [1, 2006.01]
F02B 23/06	2-Punkt Untergruppe	. . the combustion space being arranged in working piston (F02B 23/04 takes precedence) [1, 2006.01]
F02B 23/08	1-Punkt Untergruppe	. with positive ignition [1, 2006.01]
F02B 23/10	2-Punkt Untergruppe	. . with separate admission of air and fuel into cylinder [1, 2006.01]
		<u>Engines characterised by provision for charging or scavenging</u>
F02B 25/00	Hauptgruppe	Engines characterised by using fresh charge for scavenging cylinders (aspects characterised by provision of driven charging or scavenging pumps F02B 33/00-F02B 39/00) [1, 2006.01]
F02B 25/02	1-Punkt Untergruppe	. using unidirectional scavenging [1, 2006.01]
F02B 25/04	2-Punkt Untergruppe	. . Engines having ports both in cylinder head and in cylinder wall near bottom of piston stroke [1, 2006.01]
F02B 25/06	3-Punkt Untergruppe	. . . the cylinder-head ports being controlled by working pistons, e.g. by sleeve-shaped extensions thereof [1, 2006.01]
F02B 25/08	2-Punkt Untergruppe	. . Engines with oppositely-moving reciprocating working pistons [1, 2006.01]
F02B 25/10	3-Punkt Untergruppe	. . . with one piston having a smaller diameter or shorter stroke than the other [1, 2006.01]
F02B 25/12	2-Punkt Untergruppe	. . Engines with U-shaped cylinders, having ports in each arm [1, 2006.01]
F02B 25/14	1-Punkt Untergruppe	. using reverse-flow scavenging, e.g. with both inlet and outlet ports arranged near bottom of piston stroke [1, 2006.01]
F02B 25/16	2-Punkt Untergruppe	. . the charge flowing upward essentially along cylinder wall opposite the inlet ports [1, 2006.01]
F02B 25/18	2-Punkt Untergruppe	. . the charge flowing upward essentially along cylinder wall adjacent the inlet ports, e.g. by means of deflection rib on piston [1, 2006.01]
F02B 25/20	1-Punkt Untergruppe	. Means for reducing the mixing of charge and combustion residues or for preventing escape of fresh charge through outlet ports, not provided for in, or of interest apart from, groups F02B 25/02-F02B 25/18 [1, 2006.01]
F02B 25/22	2-Punkt Untergruppe	. . by forming air cushion between charge and combustion residues [1, 2006.01]
F02B 25/24	2-Punkt Untergruppe	. . Inlet or outlet openings being timed asymmetrically relative to bottom dead-centre [1, 2006.01]
F02B 25/26	1-Punkt Untergruppe	. Multi-cylinder engines other than those provided for in, or of interest apart from, groups F02B 25/02-F02B 25/24 (internal-combustion aspects of rotary engines with movable cylinders F02B 57/00) [1, 2006.01]

Symbol	Typ	Titel
F02B 25/28	2-Punkt Untergruppe	. . with V-, fan-, or star-arrangement of cylinders [1, 2006.01]
F02B 27/00	Hauptgruppe	Use of kinetic or wave energy of charge in induction systems, or of combustion residues in exhaust systems, for improving quantity of charge or for increasing removal of combustion residues (aspects characterised by provision of driven charging or scavenging pumps F02B 33/00-F02B 39/00, e.g. use of driven apparatus for immediate conversion of combustion gas pressure into pressure of fresh charge F02B 33/42) [1, 2006.01]
F02B 27/02	1-Punkt Untergruppe	. the systems having variable, i.e. adjustable, cross-sectional areas, chambers of variable volume, or like variable means (in exhaust systems only F02B 27/06) [1, 2006.01]
F02B 27/04	1-Punkt Untergruppe	. in exhaust systems only, e.g. for sucking-off combustion gases [1, 2006.01]
F02B 27/06	2-Punkt Untergruppe	. . the systems having variable, i.e. adjustable, cross-sectional areas, chambers of variable volume, or like variable means [1, 2006.01]
F02B 29/00	Hauptgruppe	Engines characterised by provision for charging or scavenging not provided for in groups F02B 25/00, F02B 27/00 or F02B 33/00-F02B 39/00; Details thereof [1, 2006.01]
F02B 29/02	1-Punkt Untergruppe	. Other fluid-dynamic features of induction systems for improving quantity of charge (for also imparting a rotation to the charge in the cylinder F02B 31/00; structural features of induction systems F02M) [1, 2006.01]
F02B 29/04	1-Punkt Untergruppe	. Cooling of air intake supply [1, 2006.01]
F02B 29/06	1-Punkt Untergruppe	. After-charging, i.e. supplementary charging after scavenging [1, 2006.01]
F02B 29/08	1-Punkt Untergruppe	. Modifying distribution valve timing for charging purposes (F02B 29/06 takes precedence; valve-gear therefor F01L) [1, 2006.01]
F02B 31/00	Hauptgruppe	Modifying induction systems for imparting a rotation to the charge in the cylinder (structural features of induction systems F02M) [1, 2006.01]
F02B 31/02	1-Punkt Untergruppe	. in engines having inlet valves arranged eccentrically to cylinder axis (F02B 31/08 takes precedence) [1, 6, 2006.01]
F02B 31/04	1-Punkt Untergruppe	. by means within the induction channel, e.g. deflectors [6, 2006.01]
F02B 31/06	2-Punkt Untergruppe	. . Movable means, e.g. butterfly valves [6, 2006.01]
F02B 31/08	1-Punkt Untergruppe	. having multiple air inlets [6, 2006.01]
F02B 33/00	Hauptgruppe	<u>Engines characterised by provision of driven charging or scavenging pumps</u> Engines characterised by provision of pumps for charging or scavenging (characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid F02B 13/00; characterised by after-charging F02B 29/06; characterised by provision of pumps for sucking combustion residues from cylinders F02B 35/00; characterised by provision of exhaust-driven pumps F02B 37/00) [1, 2006.01]
F02B 33/02	1-Punkt Untergruppe	. Engines with reciprocating-piston pumps; Engines with crankcase pumps [1, 2006.01]
F02B 33/04	2-Punkt Untergruppe	. . with simple crankcase pumps, i.e. with the rear face of a non-stepped working piston acting as sole pumping member in co-operation with the crankcase [1, 2006.01]
F02B 33/06	2-Punkt Untergruppe	. . with reciprocating-piston pumps other than simple crankcase pumps [1, 2006.01]
F02B 33/08	3-Punkt Untergruppe	. . . with the working-cylinder head arranged between working and pumping cylinders [1, 2006.01]
F02B 33/10	3-Punkt Untergruppe	. . . with the pumping cylinder situated between working cylinder and crankcase, or with the pumping cylinder surrounding working cylinder [1, 2006.01]
F02B 33/12	4-Punkt Untergruppe the rear face of working piston acting as pumping member and co-operating with a pumping chamber isolated from crankcase, the connecting-rod passing through the chamber and co-operating with movable isolating member [1, 2006.01]
F02B 33/14	4-Punkt Untergruppe working and pumping pistons forming stepped piston [1, 2006.01]

Symbol	Typ	Titel
F02B 33/16	4-Punkt Untergruppe working and pumping pistons having differing movements [1, 2006.01]
F02B 33/18	3-Punkt Untergruppe	. . . with crankshaft being arranged between working and pumping cylinders [1, 2006.01]
F02B 33/20	3-Punkt Untergruppe	. . . with pumping-cylinder axis arranged at an angle to working-cylinder axis, e.g. at an angle of 90° [1, 2006.01]
F02B 33/22	3-Punkt Untergruppe	. . . with pumping cylinder situated at side of working cylinder, e.g. the cylinders being parallel [1, 2006.01]
F02B 33/24	2-Punkt Untergruppe	. . with crankcase pumps other than with reciprocating pistons only [1, 2006.01]
F02B 33/26	2-Punkt Untergruppe	. . Four-stroke engines characterised by having crankcase pumps [1, 2006.01]
F02B 33/28	2-Punkt Untergruppe	. . Component parts, details, or accessories of crankcase pumps not provided for in, or of interest apart from, groups F02B 33/02-F02B 33/26 [1, 2006.01]
F02B 33/30	3-Punkt Untergruppe	. . . Control of inlet or outlet ports (controlling only working-cylinder inlets F01L) [1, 2006.01]
F02B 33/32	1-Punkt Untergruppe	. Engines with pumps other than of reciprocating-piston type (with crankcase pumps F02B 33/02) [1, 2006.01]
F02B 33/34	2-Punkt Untergruppe	. . with rotary pumps (with cell-type pressure exchangers or the like F02B 33/42) [1, 2006.01]
F02B 33/36	3-Punkt Untergruppe	. . . of positive-displacement type [1, 2006.01]
F02B 33/38	4-Punkt Untergruppe of Roots type [1, 2006.01]
F02B 33/40	3-Punkt Untergruppe	. . . of non-positive-displacement type [1, 2006.01]
F02B 33/42	2-Punkt Untergruppe	. . with driven apparatus for immediate conversion of combustion gas pressure into pressure of fresh charge, e.g. with cell-type pressure exchangers (pressure exchangers <u>per se</u> F04F 13/00) [1, 2006.01]
F02B 33/44	1-Punkt Untergruppe	. Passages conducting the charge from the pump to the engine inlet, e.g. reservoirs (cooling of charge after leaving pump F02B 29/04) [1, 2006.01]
F02B 35/00	Hauptgruppe	Engines characterised by provision of pumps for sucking combustion residues from cylinders [1, 2006.01]
F02B 35/02	1-Punkt Untergruppe	. using rotary pumps [1, 2006.01]
F02B 37/00	Hauptgruppe	Engines characterised by provision of pumps driven at least for part of the time by exhaust (characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid F02B 13/00; characterised by after-charging F02B 29/06; characterised by passages conducting the charge from the pump to the engine inlet F02B 33/44) [1, 2006.01]
F02B 37/007	1-Punkt Untergruppe	. with exhaust-driven pumps arranged in parallel [6, 2006.01]
F02B 37/013	1-Punkt Untergruppe	. with exhaust-driven pumps arranged in series [6, 2006.01]
F02B 37/02	1-Punkt Untergruppe	. Gas passages between engine outlet and pump drive, e.g. reservoirs [1, 2006.01]
F02B 37/04	1-Punkt Untergruppe	. Engines with exhaust drive and other drive of pumps, e.g. with exhaust-driven pump and mechanically-driven second pump [1, 2006.01]
F02B 37/10	2-Punkt Untergruppe	. . at least one pump being alternately driven by exhaust and other drive [3, 2006.01]
F02B 37/11	3-Punkt Untergruppe	. . . driven by other drive at starting only [6, 2006.01]
F02B 37/12	1-Punkt Untergruppe	. Control of the pumps [3, 2006.01]
F02B 37/14	2-Punkt Untergruppe	. . of the alternation between exhaust drive and other drive of a pump, e.g. dependent on speed [3, 2006.01]
F02B 37/16	2-Punkt Untergruppe	. . by bypassing charging air [6, 2006.01]
F02B 37/18	2-Punkt Untergruppe	. . by bypassing exhaust [6, 2006.01]

Symbol	Typ	Titel
F02B 37/20	2-Punkt Untergruppe	. . by increasing exhaust energy, e.g. using combustion chambers [6, 2006.01]
F02B 37/22	2-Punkt Untergruppe	. . by varying the cross-section of exhaust passages or air passages [6, 2006.01]
F02B 37/24	2-Punkt Untergruppe	. . by using pumps or turbines with adjustable guide vanes [6, 2006.01]
F02B 39/00	Hauptgruppe	Component parts, details, or accessories relating to driven charging or scavenging pumps, not provided for in groups F02B 33/00-F02B 37/00 [1, 2006.01]
F02B 39/02	1-Punkt Untergruppe	. Drives of pumps (exhaust drives or combined exhaust and other drives F02B 37/00); Varying pump drive gear ratio (control acting both on engine and on pump drive gear ratio F02D) [1, 2006.01]
F02B 39/04	2-Punkt Untergruppe	. . Mechanical drives; Variable-gear-ratio drives (non-mechanical pump drives having variable gear ratio F02B 39/08) [1, 2006.01]
F02B 39/06	3-Punkt Untergruppe	. . . the engine torque being divided by a differential gear for driving a pump and the engine output shaft [1, 2006.01]
F02B 39/08	2-Punkt Untergruppe	. . Non-mechanical drives, e.g. fluid drives having variable gear ratio [1, 2006.01]
F02B 39/10	3-Punkt Untergruppe	. . . electric [1, 2006.01]
F02B 39/12	2-Punkt Untergruppe	. . Drives characterised by use of couplings or clutches therein (using fluid slip couplings for varying gear ratio F02B 39/08) [1, 2006.01]
F02B 39/14	1-Punkt Untergruppe	. Lubrication of pumps; Safety measures therefor [1, 2006.01]
F02B 39/16	1-Punkt Untergruppe	. Other safety measures for, or other control of, pumps [1, 2006.01]
F02B 41/00	Hauptgruppe	Engines characterised by special means for improving conversion of heat or pressure energy into mechanical power [1, 2006.01]
F02B 41/02	1-Punkt Untergruppe	. Engines with prolonged expansion [1, 2006.01]
F02B 41/04	2-Punkt Untergruppe	. . in main cylinders [1, 2006.01]
F02B 41/06	2-Punkt Untergruppe	. . in compound cylinders [1, 2006.01]
F02B 41/08	3-Punkt Untergruppe	. . . Two-stroke compound engines [1, 2006.01]
F02B 41/10	2-Punkt Untergruppe	. . using exhaust turbines (use of exhaust turbines for charging F02B 37/00; turbine constructions F01D; gas-turbine plants F02C) [1, 2006.01]
F02B 43/00	Hauptgruppe	<u>Engines operating on non-liquid fuels; Plants including such engines, i.e. combinations of the engine with fuel-generating apparatus</u> Engines characterised by operating on gaseous fuels; Plants including such engines (engines characterised by the gas-air charge being ignited by compression ignition of an additional fuel F02B 7/06; engines convertible from gas to other fuel consumption F02B 69/04) [1, 2006.01]
F02B 43/02	1-Punkt Untergruppe	. Engines characterised by means for increasing operating efficiency [1, 2006.01]
F02B 43/04	2-Punkt Untergruppe	. . for improving efficiency of combustion [1, 2006.01]
F02B 43/06	2-Punkt Untergruppe	. . for enlarging charge [1, 2006.01]
F02B 43/08	1-Punkt Untergruppe	. Plants characterised by the engines using gaseous fuel generated in the plant from solid fuel, e.g. wood [1, 2006.01]
F02B 43/10	1-Punkt Untergruppe	. Engines or plants characterised by use of other specific gases, e.g. acetylene, oxyhydrogen [1, 2006.01]
F02B 43/12	2-Punkt Untergruppe	. . Methods of operating [1, 2006.01]
F02B 45/00	Hauptgruppe	Engines characterised by operating on non-liquid fuels other than gas; Plants including such engines (plants involving generation of gaseous fuel from solid fuel F02B 43/08; engines convertible from gas to other fuel consumption F02B 69/04) [1, 2006.01]

Symbol	Typ	Titel
F02B 45/02	1-Punkt Untergruppe	. operating on powdered fuel, e.g. powdered coal (operating on fuel containing oxidant F02B 45/06) [1, 2006.01]
F02B 45/04	2-Punkt Untergruppe	. . Plants, e.g. having coal-grinding apparatus [1, 2006.01]
F02B 45/06	1-Punkt Untergruppe	. operating on fuel containing oxidant [1, 2006.01]
F02B 45/08	1-Punkt Untergruppe	. operating on other solid fuels [1, 2006.01]
F02B 45/10	1-Punkt Untergruppe	. operating on mixtures of liquid and non-liquid fuels, e.g. in pasty or foamed state [1, 2006.01]
F02B 47/00	Hauptgruppe	<u>Methods of operating engines involving specific pre-treating of, or adding specific substances to, combustion air, fuel or fuel-air mixture of the engines, and not otherwise provided for</u> Methods of operating engines involving adding non-fuel substances or anti-knock agents to combustion air, fuel, or fuel-air mixtures of engines [1, 2006.01]
F02B 47/02	1-Punkt Untergruppe	. the substances being water or steam [1, 2006.01]
F02B 47/04	1-Punkt Untergruppe	. the substances being other than water or steam only [1, 2006.01]
F02B 47/06	2-Punkt Untergruppe	. . the substances including non-airborne oxygen (F02B 47/10 takes precedence) [1, 2006.01]
F02B 47/08	2-Punkt Untergruppe	. . the substances including exhaust gas [1, 2006.01]
F02B 47/10	3-Punkt Untergruppe	. . . Circulation of exhaust gas in closed or semi-closed circuits, e.g. with simultaneous addition of oxygen [1, 2006.01]
F02B 49/00	Hauptgruppe	Methods of operating air-compressing compression-ignition engines involving introduction of small quantities of fuel in the form of a fine mist into the air in the engine's intake [1, 2006.01]
F02B 51/00	Hauptgruppe	Other methods of operating engines involving pre-treating of, or adding substances to, combustion air, fuel, or fuel-air mixture of the engines [1, 2006.01]
F02B 51/02	1-Punkt Untergruppe	. involving catalysts [1, 2006.01]
F02B 51/04	1-Punkt Untergruppe	. involving electricity or magnetism [1, 2006.01]
F02B 51/06	1-Punkt Untergruppe	. involving rays or sound waves [1, 2006.01]
F02B 53/00	Hauptgruppe	<u>Internal-combustion aspects of rotary-piston or oscillating-piston engines</u> Internal-combustion aspects of rotary-piston or oscillating-piston engines (internal-combustion aspects of rotary pistons or outer members for co-operation therewith F02B 55/00) [1, 2006.01]
F02B 53/02	1-Punkt Untergruppe	. Methods of operating [1, 2006.01]
F02B 53/04	1-Punkt Untergruppe	. Charge admission or combustion-gas discharge [1, 2006.01]
F02B 53/06	2-Punkt Untergruppe	. . Valve control therefor [1, 2006.01]
F02B 53/08	2-Punkt Untergruppe	. . Charging, e.g. by means of rotary-piston pump [1, 2006.01]
F02B 53/10	1-Punkt Untergruppe	. Fuel supply; Introducing fuel to combustion space [1, 2006.01]
F02B 53/12	1-Punkt Untergruppe	. Ignition [1, 2006.01]
F02B 53/14	1-Punkt Untergruppe	. Adaptations of engines for driving, or engine combinations with, other devices (aspects predominantly concerning such devices, <u>see</u> the relevant classes for the devices) [1, 2006.01]
F02B 55/00	Hauptgruppe	Internal-combustion aspects of rotary pistons; Outer members for co-operation with rotary pistons [1, 2006.01]
F02B 55/02	1-Punkt Untergruppe	. Pistons [1, 2006.01]
F02B 55/04	2-Punkt Untergruppe	. . Cooling thereof [1, 2006.01]
F02B 55/06	3-Punkt Untergruppe	. . . by air or other gas [1, 2006.01]

Symbol	Typ	Titel
F02B 55/08	1-Punkt Untergruppe	. Outer members for co-operation with rotary pistons; Casings [1, 2006.01]
F02B 55/10	2-Punkt Untergruppe	. . Cooling thereof [1, 2006.01]
F02B 55/12	3-Punkt Untergruppe	. . . by air or other gas [1, 2006.01]
F02B 55/14	1-Punkt Untergruppe	. Shapes or constructions of combustion chambers [1, 2006.01]
F02B 55/16	1-Punkt Untergruppe	. Admission or exhaust passages in pistons or outer members [1, 2006.01]
F02B 57/00	Hauptgruppe	<u>Internal-combustion aspects of reciprocating-piston engines with movable cylinders</u> Internal-combustion aspects of rotary engines in which the combusted gases displace one or more reciprocating pistons [1, 2006.01]
F02B 57/02	1-Punkt Untergruppe	. Fuel or combustion-air supply (cylinder-charge admission or exhaust control F02B 57/04) [1, 2006.01]
F02B 57/04	1-Punkt Untergruppe	. Control of cylinder-charge admission or exhaust (peculiar to two-stroke engines or to other engines with working-piston-controlled charge admission or exhaust F02B 57/06) [1, 2006.01]
F02B 57/06	1-Punkt Untergruppe	. Two-stroke engines or other engines with working-piston-controlled cylinder-charge admission or exhaust (with combustion space in centre of star F02B 57/10) [1, 2006.01]
F02B 57/08	1-Punkt Untergruppe	. Engines with star-shaped cylinder arrangements [1, 2006.01]
F02B 57/10	2-Punkt Untergruppe	. . with combustion space in centre of star [1, 2006.01]
F02B 59/00	Hauptgruppe	Internal-combustion aspects of other reciprocating-piston engines with movable, e.g. oscillating, cylinders (with yieldable walls F02B 75/38) [1, 2006.01] <u>Adaptations of engines for special use; Combinations of engines with devices other than engine parts or auxiliaries</u>
F02B 61/00	Hauptgruppe	Adaptations of engines for driving vehicles or for driving propellers; Combinations of engines with gearing (the engine torque being divided by a differential gear for driving a scavenging or charging pump and the engine output shaft F02B 39/06; adaptations or combinations of rotary-piston or oscillating-piston engines F02B 53/14; arrangements in vehicles, <u>see the relevant classes for vehicles</u>) [1, 2006.01]
F02B 61/02	1-Punkt Untergruppe	. for driving cycles [1, 2006.01]
F02B 61/04	1-Punkt Untergruppe	. for driving propellers [1, 2006.01]
F02B 61/06	1-Punkt Untergruppe	. Combinations of engines with mechanical gearing (F02B 61/02, F02B 61/04 take precedence) [1, 2006.01]
F02B 63/00	Hauptgruppe	Adaptations of engines for driving pumps, hand-held tools or electric generators; Portable combinations of engines with engine-driven devices (of rotary-piston or oscillating-piston engines F02B 53/14) [1, 2006.01]
F02B 63/02	1-Punkt Untergruppe	. for hand-held tools [1, 2006.01]
F02B 63/04	1-Punkt Untergruppe	. for electric generators [1, 2006.01]
F02B 63/06	1-Punkt Untergruppe	. for pumps [1, 2006.01]
F02B 65/00	Hauptgruppe	Adaptations of engines for special uses not provided for in groups F02B 61/00 or F02B 63/00; Combinations of engines with other devices, e.g. with non-driven apparatus (of rotary-piston or oscillating-piston engines F02B 53/14; combinations of prime-movers consisting of electric motors and internal combustion engines for mutual or common propulsion B60K 6/20) [1, 2006.01] <u>Engines with pertinent characteristics other than those provided for in, or of interest apart from, preceding main groups</u>
F02B 67/00	Hauptgruppe	Engines characterised by the arrangement of auxiliary apparatus not being otherwise provided for, e.g. the apparatus having different functions; Driving auxiliary apparatus from engines, not otherwise provided for [1, 2006.01]
F02B 67/04	1-Punkt Untergruppe	. of mechanically-driven auxiliary apparatus [1, 2006.01]

Symbol	Typ	Titel
F02B 67/06	2-Punkt Untergruppe	. . driven by means of chains, belts, or like endless members [1, 2006.01]
F02B 67/08	1-Punkt Untergruppe	. of non-mechanically driven auxiliary apparatus [1, 2006.01]
F02B 67/10	1-Punkt Untergruppe	. of charging or scavenging apparatus [5, 2006.01]
F02B 69/00	Hauptgruppe	Internal-combustion engines convertible into other combustion-engine type, not provided for in group F02B 11/00; Internal-combustion engines of different types characterised by constructions facilitating use of same main engine-parts in different types [1, 2006.01]
F02B 69/02	1-Punkt Untergruppe	. for different fuel types, other than engines indifferent to fuel consumed, e.g. convertible from light to heavy fuel [1, 2006.01]
F02B 69/04	2-Punkt Untergruppe	. . for gaseous and non-gaseous fuels [1, 2006.01]
F02B 69/06	1-Punkt Untergruppe	. for different cycles, e.g. convertible from two-stroke to four-stroke [1, 2006.01]
F02B 71/00	Hauptgruppe	Free-piston engines; Engines without rotary main shaft [1, 2006.01]
F02B 71/02	1-Punkt Untergruppe	. Starting [1, 2006.01]
F02B 71/04	1-Punkt Untergruppe	. Adaptations of such engines for special use; Combinations of such engines with apparatus driven thereby (aspects predominantly concerning driven apparatus, <u>see</u> the relevant classes for such apparatus) [1, 2006.01]
F02B 71/06	2-Punkt Untergruppe	. . Free-piston combustion gas generators [1, 2006.01]
F02B 73/00	Hauptgruppe	Combinations of two or more engines, not otherwise provided for [1, 2006.01]
F02B 75/00	Hauptgruppe	Other engines, e.g. single-cylinder engines [1, 2006.01]
F02B 75/02	1-Punkt Untergruppe	. Engines characterised by their cycles, e.g. six-stroke [1, 2006.01]
F02B 75/04	1-Punkt Untergruppe	. Engines with variable distances between pistons at top dead-centre positions and cylinder heads [1, 2006.01]
F02B 75/06	1-Punkt Untergruppe	. Engines with means for equalising torque (compensations of inertial forces, suppression of vibration in systems F16F) [1, 2006.01]
F02B 75/08	1-Punkt Untergruppe	. Engines with means for preventing corrosion in gas-swept spaces [1, 2006.01]
F02B 75/10	1-Punkt Untergruppe	. Engines with means for rendering exhaust gases innocuous (apparatus for rendering exhaust gases innocuous <u>per se</u> F01N 3/08) [1, 2006.01]
F02B 75/12	1-Punkt Untergruppe	. Other methods of operation [1, 2006.01]
F02B 75/16	1-Punkt Untergruppe	. Engines characterised by number of cylinders, e.g. single-cylinder engines (F02B 75/26 takes precedence) [1, 2006.01]
F02B 75/18	2-Punkt Untergruppe	. . Multi-cylinder engines (scavenging aspects F02B 25/00) [1, 2006.01]
F02B 75/20	3-Punkt Untergruppe	. . . with cylinders all in one line [1, 2006.01]
F02B 75/22	3-Punkt Untergruppe	. . . with cylinders in V-, fan-, or star-arrangement [1, 2006.01]
F02B 75/24	3-Punkt Untergruppe	. . . with cylinders arranged oppositely relative to main shaft and of "flat" type [1, 2006.01]
F02B 75/26	1-Punkt Untergruppe	. Engines with cylinder axes coaxial with, or parallel or inclined to, main-shaft axis; Engines with cylinder axes arranged substantially tangentially to a circle centred on main-shaft axis [1, 2006.01]
F02B 75/28	1-Punkt Untergruppe	. Engines with two or more pistons reciprocating within same cylinder or within essentially coaxial cylinders (arranged oppositely relative to main shaft F02B 75/24) [1, 2006.01]
F02B 75/30	2-Punkt Untergruppe	. . with one working piston sliding inside another [1, 2006.01]

Symbol	Typ	Titel
F02B 75/32	1-Punkt Untergruppe	. Engines characterised by connections between pistons and main shafts and not specific to preceding main groups [1, 2006.01]
F02B 75/34	1-Punkt Untergruppe	. Ultra-small engines, e.g. for driving models [1, 2006.01]
F02B 75/36	1-Punkt Untergruppe	. Engines with parts of combustion- or working-chamber walls resiliently yielding under pressure [1, 2006.01]
F02B 75/38	2-Punkt Untergruppe	. . Reciprocating-piston engines (F02B 75/04 takes precedence; with resiliently-urged auxiliary piston in pre-combustion chamber F02B 19/06) [1, 2006.01]
F02B 75/40	1-Punkt Untergruppe	. Other reciprocating-piston engines [1, 2006.01]
F02B 77/00	Hauptgruppe	Component parts, details, or accessories, not otherwise provided for [1, 2006.01]
F02B 77/02	1-Punkt Untergruppe	. Surface coverings of combustion-gas-swept parts (of pistons or cylinders only F02F) [1, 2006.01]
F02B 77/04	1-Punkt Untergruppe	. Cleaning of, preventing corrosion or erosion in, or preventing unwanted deposits in, combustion engines [1, 2006.01]
F02B 77/08	1-Punkt Untergruppe	. Safety, indicating, or supervising devices (thermal insulation F02B 77/11; monitoring or diagnostic devices for exhaust-gas treatment apparatus F01N 11/00) [1, 2006.01]
F02B 77/10	2-Punkt Untergruppe	. . Safety means relating to crankcase explosions [1, 2006.01]
F02B 77/11	1-Punkt Untergruppe	. Thermal or acoustic insulation [3, 2006.01]
F02B 77/13	2-Punkt Untergruppe	. . Acoustic insulation [3, 2006.01]
F02B 77/14	1-Punkt Untergruppe	. Engine-driven auxiliary devices combined into units [1, 2006.01]
F02B 79/00	Hauptgruppe	Running-in of internal-combustion engines (lubrication thereof F01M) [1, 2006.01]