

CPC**COOPERATIVE PATENT CLASSIFICATION****B60H****ARRANGEMENTS OR ADAPTATIONS OF HEATING, COOLING, VENTILATING, OR OTHER AIR-TREATING DEVICES SPECIALLY FOR PASSENGER OR GOODS SPACES OF VEHICLES****NOTE**

Attention is drawn to the Note following the title of class [B60](#)

B60H 1/00

Heating, cooling or ventilating devices (heating, cooling or ventilating devices providing other air treatment, the other treatment being relevant, [B60H 3/00](#); ventilating solely by opening windows, doors, roof parts, or the like [B60J](#); heating or ventilating devices for vehicle seats [B60N 2/56](#); vehicle window or windscreen cleaners using air, e.g. defrosters, [B60S 1/54](#))

NOTE

In this group and its subgroups, as well as in patent documents, the following abbreviation is used: - HVAC Heating, Ventilating and Air Conditioning

- B60H 1/00007 . { Combined heating, ventilating, or cooling devices (control systems or mechanisms [B60H 1/00642](#)) }
- B60H 1/00014 .. { for load cargos on load transporting vehicles }
- B60H 1/00021 .. { Air flow details of the heating, ventilating and cooling [HVAC] devices }
- B60H 1/00028 ... { Constructional lay-out of the devices in the vehicle }
- B60H 1/00035 ... { for sending an air stream of uniform temperature into the passenger compartment }
- B60H 1/00042 { the air passing only one heat exchanger }
- B60H 1/0005 { the air being firstly cooled and subsequently heated or vice-versa }
- B60H 1/00057 { the air being heated and cooled simultaneously, e.g. using parallel heat exchangers }
- B60H 1/00064 ... { for sending air streams of different temperatures into the passenger compartment }
- B60H 1/00071 { the air passing only one heat exchanger }
- B60H 2001/00078 ... { Assembling, manufacturing or layout details }
- B60H 2001/00085 { of air intake }
- B60H 2001/00092 { of air deflecting or air directing means inside the device }
- B60H 2001/00099 { comprising additional ventilating means }
- B60H 2001/00107 { characterised by the relative position of the heat exchangers, e.g. arrangements leading to a curved airflow }
- B60H 2001/00114 ... { Heating or cooling details }
- B60H 2001/00121 { More than one heat exchanger in parallel }
- B60H 2001/00128 { Electric heaters }

B60H 2001/00135	....	{ Deviding walls for separate air flows }
B60H 2001/00142	....	{ first heating and then cooling }
B60H 2001/0015	...	{ Temperature regulation }
B60H 2001/00157	....	{ without by-pass }
B60H 2001/00164	....	{ with more than one by-pass }
B60H 2001/00171	....	{ Valves on heaters for modulated liquid flow }
B60H 2001/00178	....	{ comprising an air passage from the HVAC box to the exterior of the cabin }
B60H 2001/00185	...	{ Distribution of conditionned air }
B60H 2001/00192	....	{ to left and right part of passenger compartment }
B60H 2001/002	....	{ to front and rear part of passenger compartment }
B60H 1/00207	..	{ characterised by the position of the HVAC devices with respect to the passenger compartment (B60H 1/00021 takes precedence)}
B60H 2001/00214	...	{ Devices in front of the passenger compartment }
B60H 2001/00221	...	{ Devices in the floor or side wall area of the passenger compartment }
B60H 2001/00228	...	{ Devices in the interior of the passenger compartment }
B60H 2001/00235	...	{ Devices in the roof area of the passenger compartment }
B60H 2001/00242	...	{ Devices in the rear area of the passenger compartment }
B60H 1/0025	.	{ the devices being independent of the vehicle }
B60H 1/00257	..	{ Non-transportable devices, disposed outside the vehicle, e.g. on a parking }
B60H 1/00264	..	{ Transportable devices }
B60H 1/00271	.	{ Heating, cooling or ventilating devices specially adapted for particular vehicle parts or components and being connected to the vehicle HVAC unit }
B60H 1/00278	..	{ for the battery (arrangement of batteries B60R 16/04)}
B60H 1/00285	..	{ for vehicle seats (vehicle seats with heating or ventilation means independent from the HVAC system of the vehicle B60N 2/56)}
B60H 1/00292	..	{ for steering wheels (steering wheels with heating or ventilation means independent from the HVAC system of the vehicle B62D 1/065)}
B60H 2001/003	..	{ Component temperature regulation using an air flow }
B60H 2001/00307	..	{ Component temperature regulation using a liquid flow }
B60H 1/00314	.	{ Arrangements permitting a rapid heating of the heating liquid (B60H 1/00492 , B60H 1/03 take precedence; aiding engine start by heating of engine coolants F02N 19/10)}
B60H 1/00321	.	{ Heat exchangers for air-conditioning devices (B60H 1/3227 takes precedence)}
B60H 1/00328	..	{ of the liquid-air type }
B60H 1/00335	..	{ of the gas-air type (B60H 1/18 takes precedence)}
B60H 1/00342	..	{ of the liquid-liquid type }
B60H 2001/0035	..	{ movable in and out of the air stream }
B60H 1/00357	.	{ Air-conditioning arrangements specially adapted for particular vehicles }
B60H 1/00364	..	{ for caravans or trailers }

- B60H 1/00371 .. { for vehicles carrying large numbers of passengers e.g. buses }
- B60H 1/00378 .. { for tractor or load vehicle cabins }
- B60H 1/00385 .. { for vehicles having an electrical drive, e.g. hybrid or fuel cell }
- B60H 1/00392 ... { for electric vehicles having only electric drive means }
- B60H 1/004 ... { for vehicles having a combustion engine and electric drive means, e.g. hybrid electric vehicles }
- B60H 1/00407 .. { for open or convertible vehicles }
- B60H 1/00414 .. { for military, emergency, safety or security vehicles }

- B60H 1/00421 . { Driving arrangements for parts of a vehicle air-conditioning ([B60H 1/3222](#) takes precedence; auxiliary drives per se for vehicles [B60K 25/00](#)) }
- B60H 1/00428 .. { electric }
- B60H 1/00435 .. { fluid or pneumatic }
- B60H 1/00442 ... { using a vacuum }
- B60H 1/0045 .. { mechanical power take-offs from the vehicle propulsion unit }

- B60H 1/00457 . { Ventilation unit, e.g. combined with a radiator ([control systems for ventilators B60H 1/00828](#)) }
- B60H 1/00464 .. { The ventilator being of the axial type }
- B60H 1/00471 .. { The ventilator being of the radial type, i.e. with radial expulsion of the air }

- B60H 1/00478 . { Air-conditioning devices using the Peltier effect ([for air-conditioning in general F24F 5/00D](#); [for refrigeration F25B 21/02](#); [electric devices exhibiting the Peltier effect H01L 35/00](#)) }

- B60H 1/00485 . { Valves for air-conditioning devices, e.g. thermostatic valves ([valves per se F16K](#); [thermostatic valves per se G05D 23/02](#)) }

- B60H 1/00492 . { characterised by comprising regenerative heating or cooling means, e.g. heat accumulators }
- B60H 1/005 .. { Regenerative cooling means, e.g. cold accumulators }

- B60H 1/00507 . { Details, e.g. mounting arrangements, desaeration devices ([B60H 1/32](#) takes precedence) }
- B60H 1/00514 .. { Details of air conditioning housings }
- B60H 1/00521 ... { Mounting or fastening of components in housings, e.g. heat exchangers, fans, electronic regulators }
- B60H 1/00528 ... { Connections between housing parts }
- B60H 1/00535 ... { Mounting or fastening of the housing to the vehicle }
- B60H 1/00542 ... { Modular assemblies }
- B60H 1/0055 ... { the housing or parts thereof being integrated in other devices, e.g. dashboard }
- B60H 1/00557 .. { Details of ducts or cables }
- B60H 1/00564 ... { of air ducts }
- B60H 1/00571 ... { of liquid ducts, e.g. for coolant liquids or refrigerants }
- B60H 1/00578 ... { of bowden wires }

B60H 1/00585	..	{ Means for monitoring, testing or servicing the air-conditioning }
B60H 1/00592	..	{ Add-on devices, e.g. heat/cooling boxes, compartment dividers, upgrade sets }
B60H 2001/006	..	{ Noise reduction }
B60H 2001/00607	..	{ Recycling }
B60H 2001/00614	..	{ Cooling of electronic units in air stream }
B60H 2001/00621	..	{ Fastening lids on air-conditioning housings }
B60H 2001/00628	..	{ Adaption for left or right hand drive }
B60H 2001/00635	..	{ Air-tight sealing devices }
B60H 1/00642	.	{ Control systems or circuits, control members or indication devices for heating, cooling or ventilating devices (B60H 1/3201 - B60H 1/3208 , B60H 1/3225 take precedence; dashboards B60K 37/00 ; systems for controlling or regulating non-electric variables in general G05D)}
B60H 1/0065	..	{ Control members, e.g. levers or knobs (B60H 1/00985 takes precedence)}
B60H 1/00657	...	{ Remote control devices }
B60H 1/00664	..	{ Construction or arrangement of damper doors (control systems or circuits for damper doors B60H 1/00835)}
B60H 1/00671	...	{ Damper doors moved by rotation ; Grilles }
B60H 1/00678	....	{ the axis of rotation being in the door plane, e.g. butterfly doors }
B60H 1/00685	....	{ the door being a rotating disc or cylinder or part thereof (B60H 1/00678 takes precedence)}
B60H 1/00692	...	{ Damper doors moved by translation, e.g. curtain doors }
B60H 2001/007	...	{ Manufacturing or assembling }
B60H 2001/00707	...	{ Details of pivots of damper doors }
B60H 2001/00714	...	{ Details of seals of damper doors }
B60H 2001/00721	...	{ Air deflecting or air directing means }
B60H 2001/00728	...	{ Film doors }
B60H 1/00735	..	{ Control systems or circuits characterised by their input, i.e. by the detection, measurement or calculation of particular conditions, e.g. signal treatment, dynamic models }
B60H 1/00742	...	{ by detection of the vehicle occupants` presence; by detection of conditions relating to the body of occupants, e.g. using radiant heat detectors }
B60H 1/0075	...	{ the input being solar radiation }
B60H 1/00757	...	{ by the input of sound, e.g. by using a voice synthesizer }
B60H 1/00764	...	{ the input being a vehicle driving condition, e.g. speed (B60H 1/00828 , B60H 1/00864 take precedence)}
B60H 1/00771	....	{ the input being a vehicle position or surrounding, e.g. GPS-based position or tunnel }
B60H 1/00778	....	{ the input being a stationary vehicle position, e.g. parking or stopping }
B60H 1/00785	...	{ by the detection of humidity or frost }
B60H 1/00792	...	{ Arrangement of detectors (B60H 1/00742 , B60H 1/0075 , B60H 1/00785 take precedence)}
B60H 1/008	...	{ the input being air quality }

B60H 1/00807	...	{ the input being a specific way of measuring or calculating an air or coolant temperature }
B60H 1/00814	..	{ Control systems or circuits characterised by their output, for controlling particular components of the heating, cooling or ventilating installation }
B60H 1/00821	...	{ the components being ventilating, air admitting or air distributing devices }
B60H 1/00828	....	{ Ventilators, e.g. speed control (B60H 1/00864 takes precedence)}
B60H 1/00835	....	{ Damper doors, e.g. position control (construction or arrangement of damper doors B60H 1/00664 ; B60H 1/00864 takes precedence)}
B60H 1/00842	.....	{ the system comprising a plurality of damper doors; Air distribution between several outlets }
B60H 1/00849	.....	{ for selectively commanding the induction of outside or inside air (B60H 1/00842 takes precedence)}
B60H 1/00857	.....	{ characterised by the means connecting the initiating means, e.g. control lever, to the damper door }
B60H 1/00864	....	{ Ventilators and damper doors }
B60H 1/00871	....	{ Air directing means, e.g. blades in an air outlet (construction of nozzles or air diffusers B60H 1/34)}
B60H 1/00878	...	{ the components being temperature regulating devices (B60H 1/00899 takes precedence; constructions of valves B60H 1/00485)}
B60H 1/00885	....	{ Controlling the flow of heating or cooling liquid, e.g. valves or pumps (B60H 1/00899 takes precedence; constructions of valves B60H 1/00485)}
B60H 1/00892	....	{ Devices specially adapted for avoiding uncomfortable feeling, e.g. sudden temperature changes (B60H 1/00885 takes precedence)}
B60H 1/00899	....	{ Controlling the flow of liquid in a heat pump system (controlling the properties of the refrigerant liquid, e.g. pressure or temperature, B60H 1/3204)}
B60H 1/00907	.....	{ where the flow direction of the refrigerant changes and an evaporator becomes condenser }
B60H 1/00914	.....	{ where the flow direction of the refrigerant does not change and there is a bypass of the condenser }
B60H 1/00921	.....	{ where the flow direction of the refrigerant does not change and there is an extra subcondenser, e.g. in an air duct }
B60H 2001/00928	....	{ comprising a secondary circuit }
B60H 2001/00935	....	{ comprising four way valves for controlling the fluid direction }
B60H 2001/00942	....	{ comprising a plurality of heat exchangers, e.g. for multi zone heating or cooling }
B60H 2001/00949	....	{ comprising additional heating/cooling sources, e.g. second evaporator }
B60H 2001/00957	....	{ comprising locations with heat exchange within the refrigerant circuit itself, e.g. cross-, counter-, or parallel heat exchange }
B60H 1/00964	..	{ Control systems or circuits characterised by including features for automatic and non-automatic control, e.g. for changing from automatic to manual control }
B60H 1/00971	..	{ Control systems or circuits characterised by including features for locking or memorising of control modes }
B60H 1/00978	..	{ Control systems or circuits characterised by failure of detection or safety means; Diagnostic methods }

- B60H 1/00985 .. { Control systems or circuits characterised by display or indicating devices, e.g. voice simulators (characterised by the input of sound using a voice synthesizer [B60H 1/00757](#); [B60H 1/00978](#) takes precedence)}
- B60H 2001/00992 .. { Calculations modifying a user set value }
- B60H 1/02 . the heat being derived from the propulsion plant {([B60H 1/00492](#) takes precedence)}
- B60H 1/025 .. { from both the cooling liquid and the exhaust gases of the propulsion plant }
- B60H 1/03 .. and from a source other than the propulsion plant
- B60H 1/032 ... { from the cooling liquid of the propulsion plant and from a burner }
- B60H 1/034 ... { from the cooling liquid of the propulsion plant and from an electric heating device }
- B60H 1/036 ... { from the plant exhaust gases and from a burner }
- B60H 1/038 ... { from the cooling liquid of the propulsion plant and from a viscous fluid heater }
- B60H 1/04 .. from cooling liquid of the plant {([B60H 1/025](#), [B60H 1/03](#) take precedence)}
- B60H 1/06 ... directly from main radiator
- B60H 1/08 ... from other radiator than main radiator
- B60H 1/10 the other radiator being situated in a duct capable of being connected to atmosphere outside vehicle
- B60H 1/12 using an air blower
- B60H 1/14 .. otherwise than from cooling liquid of the plant { e.g. heat from the grease oil, the brakes, the transmission unit ([B60H 1/03](#) takes precedence)}
- B60H 1/143 ... { the heat being derived from cooling an electric component, e.g. electric motors, electric circuits, fuel cells or batteries }
- B60H 2001/146 ... { from a viscous fluid heater }
- B60H 1/16 ... the air being heated by direct contact with the plant, e.g. air-cooled motor
- B60H 1/18 ... the air being heated from the plant exhaust gases {([B60H 1/025](#) takes precedence; exhaust or silencing apparatus associated with devices profiting by exhaust energy [F01N 5/00](#))}
- B60H 1/20 using an intermediate heat-transferring medium
- B60H 1/22 . the heat being derived otherwise than from the propulsion plant {([B60H 1/0025](#), [B60H 1/00492](#) and [B60H 1/03](#) take precedence)}
- B60H 1/2203 .. { the heat being derived from burners (burners in general [F23C](#), [F23D](#), [F24H 9/18](#))}
- B60H 1/2206 ... { controlling the operation of burners (control of burners in general [F23N 5/00](#))}
- B60H 1/2209 ... { arrangements of burners for heating an intermediate liquid ([B60H 1/032](#) takes precedence)}
- B60H 1/2212 ... { arrangements of burners for heating air }
- B60H 1/2215 .. { the heat being derived from electric heaters (in general [H05B](#); for electric traction vehicles [B60L 1/02](#))}
- B60H 1/2218 ... { controlling the operation of electric heaters }
- B60H 1/2221 ... { arrangements of electric heaters for heating an intermediate liquid ([B60H 1/034](#) takes precedence)}
- B60H 1/2225 ... { arrangements of electric heaters for heating air }

- B60H 2001/2228 .. { controlling the operation of heaters }
- B60H 2001/2231 ... { for proper or safe operation of the heater }
- B60H 2001/2234 ... { when vehicle is parked, preheating }
- B60H 2001/2237 ... { supplementary heating, e.g. during stop and go of a vehicle }
- B60H 2001/224 ... { automatic operation, e.g. control circuits or methods }
- B60H 2001/2243 ... { manual operation, e.g. remote control or timer }
- B60H 2001/2246 .. { obtaining information from a variable, e.g. by means of a sensor }
- B60H 2001/225 ... { related to an operational state of another HVAC device }
- B60H 2001/2253 ... { related to an operational state of the vehicle or a vehicle component }
- B60H 2001/2256 ... { related to the operation of the heater itself, e.g. flame detection or overheating }
- B60H 2001/2259 .. { output of a control signal }
- B60H 2001/2262 ... { related to the period of on/off time of the heater }
- B60H 2001/2265 ... { related to the quantity of heat produced by the heater }
- B60H 2001/2268 .. { Constructional features }
- B60H 2001/2271 ... { Heat exchangers, burners, ignition devices }
- B60H 2001/2275 ... { Thermoelectric converters for generating electrical energy }
- B60H 2001/2278 ... { Connectors, water supply, housing, mounting brackets }
- B60H 2001/2281 ... { Air supply, exhaust systems }
- B60H 2001/2284 ... { Fuel supply }
- B60H 2001/2287 ... { Integration into a vehicle HVAC system or vehicle dashboard
([B60H 2001/00128](#) takes precedence)}
- B60H 2001/229 ... { Integration into an air outlet }
- B60H 2001/2293 ... { Integration into other parts of a vehicle }
- B60H 2001/2296 ... { integration into fluid/air heat exchangers }
- B60H 1/24 . Devices purely for ventilating or where the heating or cooling is irrelevant ([nozzles, air-diffusers B60H 1/34](#))
- B60H 1/241 .. { characterised by the location of ventilation devices in the vehicle }
- B60H 1/242 ... { located in the front area }
- B60H 1/243 ... { located in the lateral area ([e.g. doors, pillars](#))}
- B60H 1/244 ... { located in the rear area }
- B60H 1/245 ... { located in the roof }
- B60H 1/246 ... { located in the interior of the vehicle or in or below the floor }
- B60H 1/247 .. { Disposition of several air-diffusers in a vehicle for ventilation-air circulation in a vehicle cabin }
- B60H 1/248 .. { Air-extractors, air-evacuation from the vehicle interior }
- B60H 1/249 ... { using one-way valves }
- B60H 1/26 .. Ventilating openings in vehicle exterior; Ducts for conveying ventilating air
- B60H 1/262 ... { Openings in or on the vehicle roof }
- B60H 1/265 ... { Openings in window or door past or pillars ([door pasts per se B62D 25/14; B60H 1/248](#) takes precedence)}

B60H 1/267	...	{ Openings in or near to vehicle windows (pivoting side windows B60J 1/14 ; wind deflectors associated with windows for ventilating B60J 1/20)}
B60H 1/28	...	the openings being situated directly in front of vehicle front window
B60H 1/30	...	Air scoops
B60H 1/32	.	Cooling devices ({ B60H 1/00478 , B60H 1/005 take precedence; } vehicles adapted to transport refrigerated goods B60P 3/20)
B60H 1/3201	..	{ using absorption or adsorption (in general F25B 15/00 , F25B 17/00)}
B60H 1/3202	..	{ using evaporation, i.e. not including a compressor, e.g. involving fuel or water evaporation (B60H 1/3235 takes precedence; in general F25B 19/00 , F25D 7/00)}
B60H 1/3204	..	{ using compression (B60H 1/3233 takes precedence; in general F25B , F25D)}
B60H 1/3205	...	{ Control means therefor }
B60H 1/3207	....	{ for minimizing the humidity of the air }
B60H 1/3208	....	{ Vehicle drive related control of the compressor drive means, e.g. for fuel saving purposes }
B60H 1/321	....	{ for preventing the freezing of a heat exchanger }
B60H 1/3211	....	{ for increasing the efficiency of a vehicle refrigeration cycle }
B60H 1/3213	....	{ for increasing the efficiency in a vehicle heat pump }
B60H 1/3214	....	{ for improving the lubrication of a refrigerant compressor in a vehicle }
B60H 1/3216	....	{ for improving a change in operation duty of a compressor in a vehicle }
B60H 1/3217	....	{ for high pressure, inflammable or poisonous refrigerants causing danger in case of accidents }
B60H 1/3219	....	{ for improving the response time of a vehicle refrigeration cycle }
B60H 1/322	....	{ for improving the stop or idling operation of the engine }
B60H 1/3222	...	{ characterised by the compressor driving arrangements, e.g. clutches, transmissions or multiple drives (B60H 1/3208 , B60H 1/3226 take precedence)}
B60H 1/3223	...	{ characterised by the arrangement or type of the compressor (B60H 1/3222 takes precedence)}
B60H 1/3225	...	{ characterised by safety arrangements, e.g. compressor anti-seizure means or by signalling devices }
B60H 1/3226	...	{ Self-contained devices, i.e. including own drive motor }
B60H 1/3227	...	{ characterised by the arrangement or the type of heat exchanger, e.g. condenser, evaporator (condensed liquid drainage means B60H 1/3233)}
B60H 1/3229	...	{ characterised by constructional features, e.g. housings, mountings, conversion systems (B60H 1/3227 , B60H 1/3233 take precedence)}
B60H 1/323	...	{ characterised by comprising auxiliary or multiple systems, e.g. plurality of evaporators, or by involving auxiliary cooling devices }
B60H 1/3232	...	{ particularly adapted for load transporting vehicles (B60H 1/3226 takes precedence)}
B60H 1/3233	..	{ characterised by condensed liquid drainage means }
B60H 1/3235	..	{ using sublimation, e.g. dry ice cooling or melting ice }
B60H 2001/3236	..	{ information from a variable is obtained }
B60H 2001/3238	...	{ related to the operation of the compressor }
B60H 2001/3239	...	{ related to flow }

B60H 2001/3241	....	{ of air }
B60H 2001/3242	....	{ of a refrigerant }
B60H 2001/3244	...	{ related to humidity }
B60H 2001/3245	....	{ of air }
B60H 2001/3247	....	{ of a refrigerant }
B60H 2001/3248	...	{ related to pressure }
B60H 2001/325	....	{ of the refrigerant at a compressing unit }
B60H 2001/3251	....	{ of the refrigerant at a condensing unit }
B60H 2001/3252	....	{ of the refrigerant at an evaporating unit }
B60H 2001/3254	....	{ of the refrigerant at an expansion unit }
B60H 2001/3255	...	{ related to temperature }
B60H 2001/3257	....	{ of the refrigerant at a compressing unit }
B60H 2001/3258	....	{ of the air at a condensing unit }
B60H 2001/326	....	{ of the refrigerant at a condensing unit }
B60H 2001/3261	....	{ of the air at an evaporating unit }
B60H 2001/3263	....	{ of the refrigerant at an evaporating unit }
B60H 2001/3264	....	{ of the refrigerant at an expansion unit }
B60H 2001/3266	...	{ related to the operation of the vehicle }
B60H 2001/3267	...	{ related to the operation of an expansion valve }
B60H 2001/3269	..	{ output of a control signal }
B60H 2001/327	...	{ related to a compressing unit }
B60H 2001/3272	....	{ to control the revolving speed of a compressor }
B60H 2001/3273	....	{ related to the operation of the vehicle , e.g. the compressor driving torque }
B60H 2001/3275	....	{ to control the volume of a compressor }
B60H 2001/3276	...	{ related to a condensing unit }
B60H 2001/3277	....	{ to control the air flow }
B60H 2001/3279	....	{ to control the refrigerant flow }
B60H 2001/328	...	{ related to an evaporating unit }
B60H 2001/3282	....	{ to control the air flow }
B60H 2001/3283	....	{ to control the refrigerant flow }
B60H 2001/3285	...	{ related to an expansion unit }
B60H 2001/3286	..	{ Constructional features }
B60H 2001/3288	...	{ Additional heat source }
B60H 2001/3289	...	{ Additional cooling source }
B60H 2001/3291	...	{ Locations with heat exchange within the refrigerant circuit itself }
B60H 2001/3292	...	{ Compressor drive is electric only }
B60H 2001/3294	...	{ Compressor drive is hybrid }
B60H 2001/3295	...	{ Compressing means other than compressor }
B60H 2001/3297	...	{ Expansion means other than expansion valve }
B60H 2001/3298	...	{ Ejector-type refrigerant circuits }

- B60H 1/34 . Nozzles; { Air-diffusers } (dispositions of air diffusers in a vehicle [B60H 1/247](#))
- B60H 1/3407 .. { providing an air stream in a fixed direction, e.g. using a grid or porous panel }
- B60H 1/3414 .. { with means for adjusting the air stream direction ([B60H 1/345](#) takes precedence)}
- B60H 1/3421 ... { using only pivoting shutters }
- B60H 1/3428 ... { using a set of pivoting shutters and a pivoting frame }
- B60H 1/3435 ... { using only a pivoting frame }
- B60H 1/3442 { the frame being spherical }
- B60H 1/345 .. { with means for adjusting divergence, convergence or oscillation of air stream }
- B60H 1/3457 .. { Outlets providing a vortex, i.e. a spirally wound air flow }
- B60H 2001/3464 .. { Details of hinges }
- B60H 2001/3471 .. { Details of actuators }
- B60H 2001/3478 ... { acting on additional damper doors }
- B60H 2001/3485 .. { Air temperature regulation }
- B60H 2001/3492 .. { Manufacturing; Assembling }

B60H 3/00**Other air-treating devices**

- B60H 3/0007 . { Adding substances other than water to the air, e.g. perfume, oxygen }
- B60H 3/0014 .. { characterised by the location of the substance adding device }
- B60H 3/0021 ... { in the air-conditioning housing }
- B60H 3/0028 ... { on or near an air outlet }
- B60H 3/0035 .. { characterised by the control methods for adding the substance }
- B60H 2003/0042 .. { with ventilating means for adding the substances }
- B60H 2003/005 .. { with heating means for adding the substances }
- B60H 2003/0057 .. { Servicing means therefor, e.g. for renewal of substances }
- B60H 2003/0064 .. { adding more than one substance }

- B60H 3/0071 . { Electrically conditioning the air, e.g. by ionizing }
- B60H 3/0078 .. { comprising electric purifying means }

- B60H 3/0085 . { Smell or pollution preventing arrangements } ([B60H 3/0007](#), [B60H 3/0071](#), [B60H 3/02](#), [B60H 3/06](#) take precedence)
- B60H 3/0092 .. { in the interior of the HVAC unit, e.g. by spraying substances inside the unit }

- B60H 3/02 . Moistening; { Devices influencing humidity levels, i.e. humidity control ([B60H 1/3202](#), [B60H 1/3207](#) take precedence)}
- B60H 3/022 .. { for only humidifying the air }
- B60H 3/024 .. { for only dehumidifying the air }
- B60H 2003/026 .. { the devices being located in the passenger compartment }
- B60H 2003/028 .. { the devices comprising regeneration means }

- B60H 3/06 . Filtering {([B60H 3/0078](#) takes precedence)}

B60H 3/0608	..	{ Filter arrangements in the air stream }
B60H 3/0616	...	{ with provisions for replacing the filter element }
B60H 3/0625	...	{ with provisions for by-passing the filter element }
B60H 3/0633	...	{ with provisions for regenerating or cleaning the filter element }
B60H 3/0641	...	{ near ventilating openings in the vehicle exterior }
B60H 2003/065	...	{ Details for holding filter elements in position }
B60H 3/0658	..	{ Filter elements specially adapted for their arrangement in vehicles (B60H 3/0608 takes precedence)}
B60H 2003/0666	...	{ the filter element having non-rectangular shape }
B60H 2003/0675	..	{ Photocatalytic filters }
B60H 2003/0683	..	{ the quality of the filter or the air being checked }
B60H 2003/0691	..	{ Adsorption filters, e.g. activated carbon }