

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 conditioned 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 5/0042](#); [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}