

**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 1/00207](#) .. { characterised by the position of the HVAC devices with respect to the passenger compartment ([B60H 1/00021](#) takes precedence) }
- [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 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 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 1/00642	.	{Control systems or circuits, control members or indication devices for heating, cooling or ventilating devices ( <a href="#">B60H 1/3201</a> - <a href="#">B60H 1/3208</a> , <a href="#">B60H 1/3225</a> take precedence; dashboards <a href="#">B60K 37/00</a> ; systems for controlling or regulating non-electric variables in general <a href="#">G05D</a> ) }
B60H 1/0065	..	{Control members, e.g. levers or knobs ( <a href="#">B60H 1/00985</a> takes precedence) }
B60H 1/00657	...	{ Remote control devices }
B60H 1/00664	..	{Construction or arrangement of damper doors (control systems or circuits for damper doors <a href="#">B60H 1/00835</a> ) }
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 ( <a href="#">B60H 1/00678</a> takes precedence) }
B60H 1/00692	...	{Damper doors moved by translation, e.g. curtain 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 ( <a href="#">B60H 1/00828</a> , <a href="#">B60H 1/00864</a> 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 ( <a href="#">B60H 1/00742</a> , <a href="#">B60H 1/0075</a> , <a href="#">B60H 1/00785</a> 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 ( <a href="#">1/00Y6A4</a> takes precedence) }
B60H 1/00835	....	{Damper doors, e.g. position control (construction or arrangement of damper doors <a href="#">B60H 1/00664</a> ; <a href="#">B60H 1/00864</a> 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 ( <a href="#">1/00Y6A3A</a> 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 <a href="#">B60H 1/34</a> ) }
B60H 1/00878	...	{the components being temperature regulating devices ( <a href="#">B60H 1/00899</a> takes precedence; constructions of valves <a href="#">B60H 1/00485</a> ) }
B60H 1/00885	....	{Controlling the flow of heating or cooling liquid, e.g. valves or pumps ( <a href="#">B60H 1/00899</a> takes precedence; constructions of valves <a href="#">B60H 1/00485</a> ) }
B60H 1/00892	....	{Devices specially adapted for avoiding uncomfortable feeling, e.g. sudden temperature changes ( <a href="#">B60H 1/00885</a> 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, <a href="#">B60H 1/3204</a> ) }
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 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 <a href="#">B60H 1/00757</a> ; <a href="#">B60H 1/00978</a> takes precedence) }
B60H 1/02	.	the heat being derived from the propulsion plant { ( <a href="#">B60H 1/00492</a> 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 { ( <a href="#">B60H 1/025</a> , <a href="#">B60H 1/03</a> 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 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 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 ( { <a href="#">B60H 1/00478</a> , <a href="#">B60H 1/005</a> take precedence; } vehicles adapted to transport refrigerated goods <a href="#">B60P 3/20</a> )
B60H 1/3201	..	{using absorption or adsorption (in general <a href="#">F25B 15/00</a> , <a href="#">F25B 17/00</a> ) }
B60H 1/3202	..	{using evaporation, i.e. not including a compressor, e.g. involving fuel or water evaporation ( <a href="#">B60H 1/3235</a> takes precedence; in general <a href="#">F25B 19/00</a> , <a href="#">F25D 7/00</a> ) }
B60H 1/3204	..	{using compression ( <a href="#">B60H 1/3233</a> takes precedence; in general <a href="#">F25B</a> , <a href="#">F25D</a> ) }
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 ( <a href="#">B60H 1/3208</a> , <a href="#">B60H 1/3226</a> take precedence) }
B60H 1/3223	...	{characterised by the arrangement or type of the compressor ( <a href="#">B60H 1/3222</a> 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 <a href="#">B60H 1/3233</a> ) }
B60H 1/3229	...	{characterised by constructional features, e.g. housings, mountings, conversion systems ( <a href="#">B60H 1/3227</a> , <a href="#">B60H 1/3233</a> 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 ( <a href="#">B60H 1/3226</a> 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 1/34	.	Nozzles ; { Air-diffusers } (dispositions of air diffusers in a vehicle <a href="#">B60H 1/247</a> )
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 ( <a href="#">B60H 1/345</a> 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 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 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 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 3/0658 . . { Filter elements specially adapted for their arrangement in vehicles ([B60H 3/0608](#)  
takes precedence) }

**B60H 2001/00**

**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**

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- B60H 2001/00007 . { Combined heating, ventilating, or cooling devices (control systems or mechanisms [B60H 1/00642](#)) }
- B60H 2001/00021 . . { Air flow details of the heating, ventilating and cooling [HVAC ] devices }
- 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 2001/00207	..	{ characterised by the position of the HVAC devices with respect to the passenger compartment ( <a href="#">B60H 1/00021</a> 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 2001/00271	.	{ Heating, cooling or ventilating devices specially adapted for particular vehicle parts or components and being connected to the vehicle HVAC unit }
B60H 2001/003	..	Component temperature regulation using an air flow
B60H 2001/00307	..	Component temperature regulation using a liquid flow
B60H 2001/00321	.	{Heat exchangers for air-conditioning devices ( <a href="#">B60H 1/3227</a> takes precedence) }
B60H 2001/0035	..	movable in and out of the air stream
B60H 2001/00507	.	{Details, e.g. mounting arrangements, desaeration devices ( <a href="#">B60H 1/32</a> takes precedence) }
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 2001/00642	.	{Control systems or circuits, control members or indication devices for heating, cooling or ventilating devices ( <a href="#">B60H 1/3201</a> - <a href="#">B60H 1/3208</a> , <a href="#">B60H 1/3225</a> take precedence; dashboards <a href="#">B60K 37/00</a> ; systems for controlling or regulating non-electric variables in



- general [G05D](#) ) }
- B60H 2001/00664    ..    {Construction or arrangement of damper doors (control systems or circuits for damper doors [B60H 1/00835](#)) }
- [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 2001/00814    ..    {Control systems or circuits characterised by their output, for controlling particular components of the heating, cooling or ventilating installation }
- B60H 2001/00878    ...       {the components being temperature regulating devices ([B60H 1/00899](#) takes precedence; constructions of valves [B60H 1/00485](#)) }
- [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 2001/00992](#)    ..       Calculations modifying a user set value
- B60H 2001/02        .       the heat being derived from the propulsion plant { ([B60H 1/00492](#) takes precedence) }
- B60H 2001/14        ..       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 2001/146](#)        ...       from a viscous fluid heater
- B60H 2001/22        .       the heat being derived otherwise than from the propulsion plant { ([B60H 1/0025](#), [B60H 1/00492](#) and [B60H 1/03](#) take precedence) }
- [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 ( <a href="#">B60H 2001/00128</a> 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 2001/32	.	Cooling devices ( { <a href="#">B60H 1/00478</a> , <a href="#">B60H 1/005</a> take precedence; } vehicles adapted to transport refrigerated goods <a href="#">B60P 3/20</a> )
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 2001/34 . . Nozzles ; { [Air-diffusers](#) } ([dispositions of air diffusers in a vehicle B60H 1/247](#))
- 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 2003/00 Other air-treating devices**

- B60H 2003/0007 . { [Adding substances other than water to the air, e.g. perfume, oxygen](#) }
- 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 2003/02 . Moistening; { [Devices influencing humidity levels, i.e. humidity control \(B60H 1/3202, B60H 1/3207 take precedence\)](#) }
- B60H 2003/026 . . the devices being located in the passenger compartment
- B60H 2003/028 . . the devices comprising regeneration means
- B60H 2003/06 . Filtering { [\(B60H 3/0078 takes precedence\)](#) }
- B60H 2003/0608 . . { [Filter arrangements in the air stream](#) }
- B60H 2003/065 . . . Details for holding filter elements in position
- B60H 2003/0658 . . { [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