Drivers and their passengers expect a comfortable cabin on every journey, in all weathers. Which is why car makers rely on DENSO – the world’s number one manufacturer of original Thermal products – for advanced, efficient, reliable Heating, Ventilation and Air Conditioning Components. DENSO is also the world leader in A/C compressors, selected by top vehicle manufacturers such as Audi, BMW, Fiat, Mercedes, Porsche, Toyota and VW.

DENSO invests more than 9% of net sales in research and development each year. Just one of its pioneering innovations is the development of small, efficient compressors that enable air conditioning systems to be provided as standard for cars in the compact class.

DENSO A/C Compressors
Original quality for the Aftermarket

- DENSO is the world leader in compressors (over 40% OE market share)
- All DENSO Compressors are new (no re-man parts)
- No core charge or deposit
- Compressor range is 100% OE
- Highest product quality, extremely low warranty ratio
- Compressors delivered as complete assemblies and filled with the right amount of oil
- 100% fit: Perfect match to vehicle specification

www.denso-am.eu
Purpose of the compressor
In general all car air-conditioners use the same ‘vapour compression refrigeration system’ with some small variations. These systems use a refrigerant which, when changing state from a liquid to a gas, absorbs high quantities of heat from the air blown into the car and in turn cools and dehumidifies the car’s interior. To change the state of the refrigerant from a liquid to a gas it is necessary to change the boiling point. A compressor is used to achieve this, increasing the pressure of the refrigerant to the level required to change it from a gas to a liquid.

The DENSO A/C Compressor range exist of 2 groups, reciprocal type and rotary type compressor.
1) Reciprocating type (or piston type)
- Reciprocating type compressors are Dual Swash Plate, Single Swash Plate and Wobble Plate types.
  - The Single Swash Plate and Wobble Plate are variable type compressors. Compressor identification codes are: Dual Swash Plate, fixed displacement type: 10PA and 10S
  - Single Swash Plate, variable displacement type: 5SE, 5TB, 5SL, 6SBU, 5SE, 7SB and 7SE
  - Wobble Plate, variable displacement type: 6CA
2) Rotary type
- Sliding and Through vane are fixed displacement type.
- Compressor identification codes are: SV and TV
- Scroll type compressors are fixed or variable type compressor
  - Scroll, fixed displacement type: SC
  - Electrical Scroll, variable type for hybrid vehicles: ES

VARIABLE CAPACITY TYPE COMPRESSOR

<table>
<thead>
<tr>
<th>Compressor Type</th>
<th>Refrigerant Type</th>
<th>Oil Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type ranges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PA, PL, PSB, PSB, SC, 6CA)</td>
<td>HFC134a (R-134a)</td>
<td>DENSO Oil 8</td>
</tr>
<tr>
<td></td>
<td>HFO 1234yf</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>DENSO Oil 12 or equivalent</td>
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<tr>
<td>Vane-type blower (TV)</td>
<td>HFC134a (R-134a)</td>
<td>DENSO Oil 9</td>
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<tr>
<td>Electrical Type (ES)</td>
<td>HFC134a (R-134a)</td>
<td>DENSO Oil 11 or equivalent</td>
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<tr>
<td></td>
<td>HFO 1234yf</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>DENSO Oil 11 or equivalent</td>
</tr>
</tbody>
</table>

All warranty is void when using the wrong type of oils or oil mixtures. This will inevitably reduce the lifetime or possibly damage the compressor.