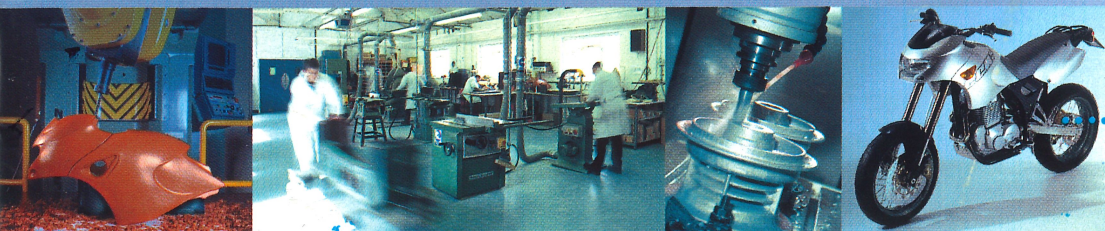
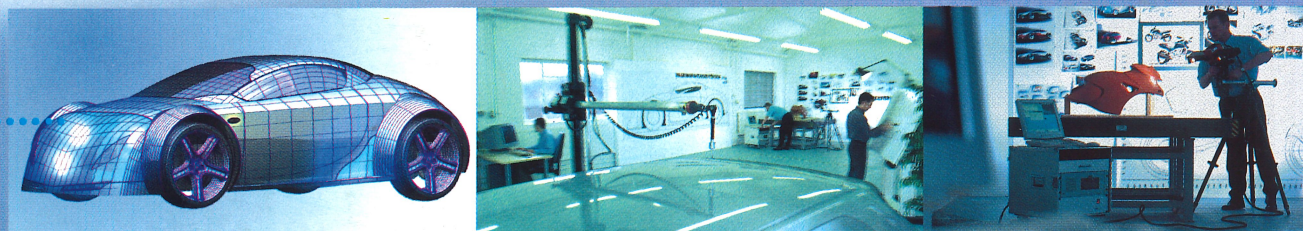
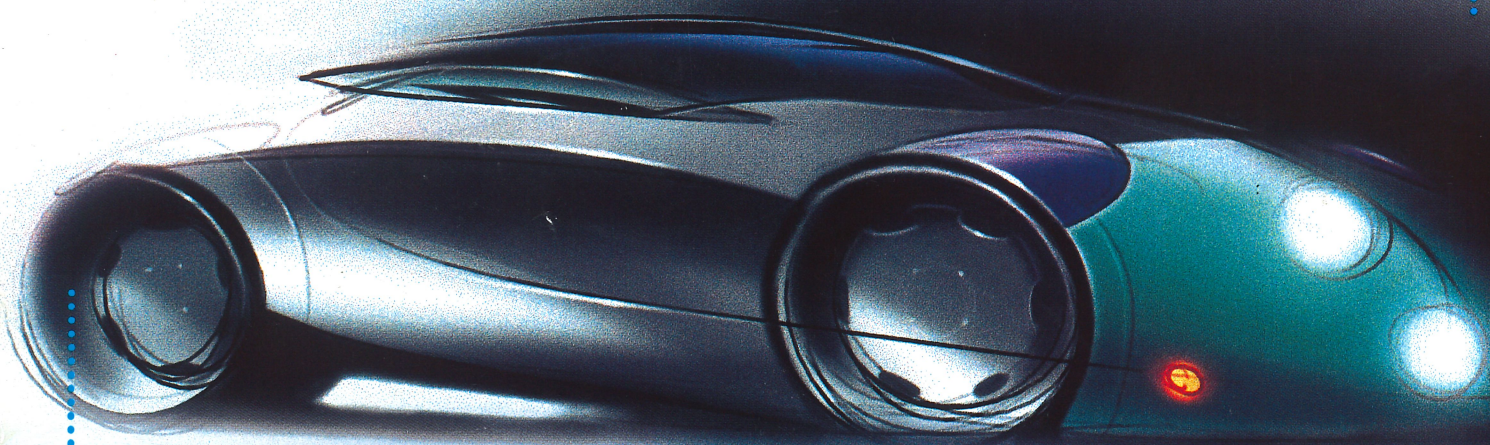


AUTOMOTIVE engineer

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STYLEENGINEERING

AUTOMOTIVE DESIGN

Easy loading with swing and slide door

ZIV-AV ENGINEERING HAS developed a new vehicle door that operates in hinged or sliding mode, combining the advantages of both without any extra production cost. It is particularly aimed at vans.

"The sliding door is generally a requirement for minivans," says **Amir Ziv-Av**, president of the company. The side door is a large object, and it is generally more convenient to have it slide when loading and unloading in tight spaces. "But from our experience, it is far more difficult to operate the sliding door than the conven-

tional hinged door," says **Ziv-Av**.

"Opening a pivotal car door is a natural act," he says. "You take the handle in one hand, open the door and with one finger you can lock it. When you operate a sliding door you have to push it by force. Additionally, if you do not close it strongly enough, you have to repeat the process."

You have to take the pivoting door out when unloading, which is an obvious disadvantage, he says. "But in most cases, the pivotal door is sufficient, and as it is easier to operate and safer, why not have a door that operates in

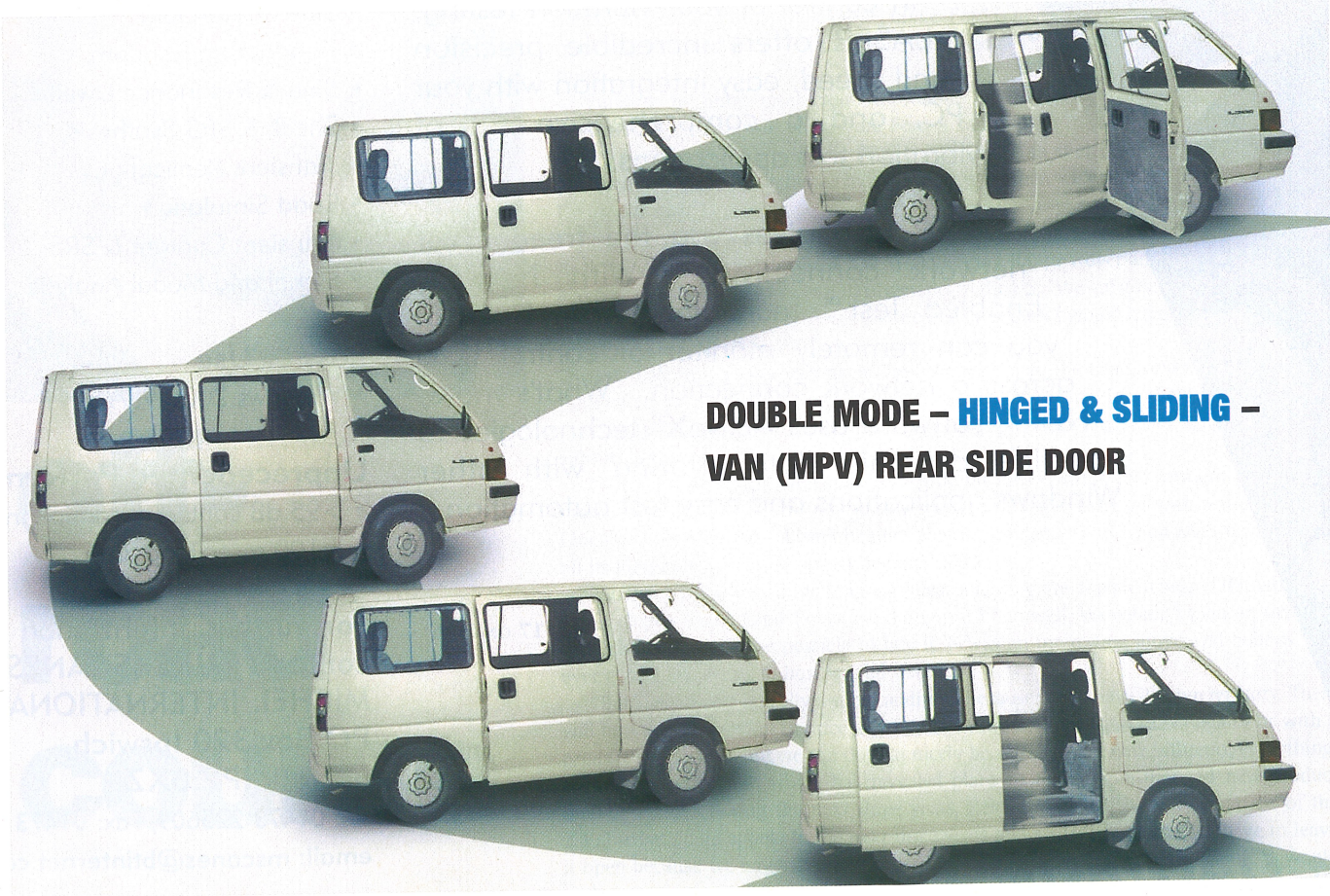
both modes, from pivotal to sliding?"

In spite of the two operational modes, the production cost of the door assembly will be no higher than a conventional sliding door, because of two simplifications. First, there is only one locking mechanism instead of two and second there is no need to use a third sliding rail on the outside of the rear side panel, usually under the third window.

"In our solution we use only one locker instead of two, which is a regular feature in the sliding door," says **Ziv-Av**. "On the rear

wheel of the van there is a rail that supports the sliding door which is seen from the outside. We eliminated the need for the outside rail. So what we added to allow the door to slide and rotate has been balanced by removing other features.

"When you first open the door, it operates as a regular pivoting door. Then you can decide in what mode to complete the operation – by sliding or completely rotating it. The final closing of the door is exactly the same as for a regular pivoting door," he adds.



**DOUBLE MODE – HINGED & SLIDING –
VAN (MPV) REAR SIDE DOOR**