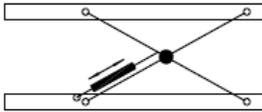
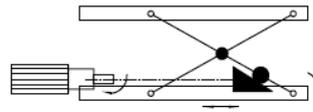
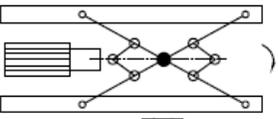
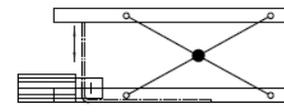
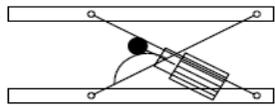
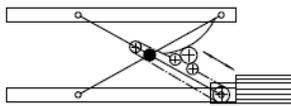
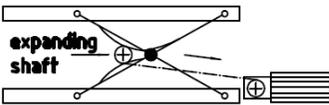
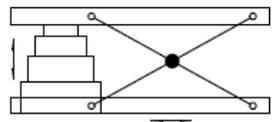
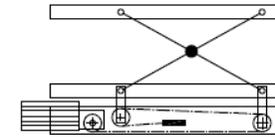


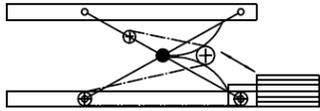
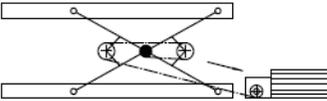
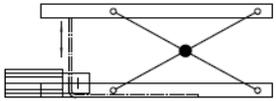
## A Brief History of Scissors Lifting Tables Used In Automotive Industries

Year	Description	Picture of Table	First Suppliers in Automotive Industries	Advantages	Disadvantages
1920	1st conveyors at Ford/USA <i>"begin of automation"</i>		Jervis B. Webb Corporation		
1930	1st scissor lifting tables in different designs <i>"search for the best solution"</i>		Various Suppliers		
1950	hydraulic scissor lifting tables became the most used design <i>"hydraulic system has won the race"</i>			simple design	<ul style="list-style-type: none"> <li>- needs oil</li> <li>-piston sealing needs maintenance</li> <li>- no constant level</li> </ul>
1980	1st ball screw tables appear to fulfill the new requirements <i>"keep the level"</i> <i>"no oil"</i>			<ul style="list-style-type: none"> <li>- constant level</li> <li>- no oil</li> </ul>	<ul style="list-style-type: none"> <li>- complicated design</li> <li>- high forces in the lifting system</li> </ul>
1985	new skilet systems as conveyor lines appear : <i>"development of ball screw tables"</i>			reduced forces in lifting system	<ul style="list-style-type: none"> <li>- speed is "not constant"</li> <li>- large amount of bearings</li> </ul>
1990	1st "push chain" appears, in France only <i>"search for a better solution than ball screw"</i> <i>"constant speed"</i>			constant speed	<ul style="list-style-type: none"> <li>- chain with much wear and tear</li> <li>- a high torque geared motor is necessary</li> </ul>

## A Brief History of Scissors Lifting Tables Used In Automotive Industries

Year	Description	Picture of Table	First Suppliers in Automotive Industries	Advantages	Disadvantages
1994	1st ball screw table with cam <i>"constant speed"</i>			<ul style="list-style-type: none"> <li>- constant speed</li> <li>- less power required</li> <li>- small geared motor</li> </ul>	<ul style="list-style-type: none"> <li>- ball screw needs maintenance</li> <li>- high inner forces because of cantilever situation</li> </ul>
1999	1st timing belt table <i>"low maintenance"</i>		 <p>HECKERT Engineering mbH THE SPECIALIST FOR CONVEYOR COMPONENTS</p>	<ul style="list-style-type: none"> <li>- constant speed</li> <li>- low maintenance</li> <li>- less power required</li> </ul>	<ul style="list-style-type: none"> <li>- high inner load because of cantilever situation</li> </ul>
2001	1st flat belt table	 <p>expanding shaft</p>	 <p>HECKERT Engineering mbH THE SPECIALIST FOR CONVEYOR COMPONENTS</p>	<ul style="list-style-type: none"> <li>- constant speed</li> <li>- low maintenance</li> <li>- less power required</li> </ul>	<ul style="list-style-type: none"> <li>- high inner load because of cantilever situation</li> </ul>
2002	1st spiral lifter <i>"mechanical driven cylinder"</i>			<ul style="list-style-type: none"> <li>- constant speed</li> <li>- direct carried load</li> </ul>	<ul style="list-style-type: none"> <li>- at least 2 cylinders necessary to stabilize the platform</li> </ul>
2002	different solutions in flat belt design			<ul style="list-style-type: none"> <li>none</li> </ul>	<ul style="list-style-type: none"> <li>- no constant speed</li> <li>- more power required</li> <li>- safety against breakage &lt; 6</li> </ul>

## A Brief History of Scissors Lifting Tables Used In Automotive Industries

Year	Description	Picture of Table	First Suppliers in Automotive Industries	Advantages	Disadvantages
2003	advanced flat belt table <i>additional deflection pulley "at scissor leg"</i>			<ul style="list-style-type: none"> <li>- constant speed</li> <li>- low maintenance</li> <li>- less power required</li> <li>- low inner forces</li> <li>- safety against breakage &gt; 8</li> </ul>	none
2003	different solutions in flat belt design			none	<ul style="list-style-type: none"> <li>- no constant speed</li> <li>- more power required</li> <li>- safety against breakage &lt; 6</li> </ul>
2004	advanced push chain table			<ul style="list-style-type: none"> <li>- advanced chain with reduced wear out</li> </ul>	<ul style="list-style-type: none"> <li>- at least 2 chains necessary to stabilize the platform</li> </ul>