Modular transporter series 2400
– the professional solution for heavy-duty transport
Modular transporter – the 2400 series

Series 2400 – in operation worldwide

KAMAG modular transporters have been designed for transporting large and heavy loads. Whether the load concerned is extremely large or has a high centre of gravity, modular transporters from KAMAG will move it safely to its destination.

Modular transporters from KAMAG are in use around the world: in the off-shore industry, chemical and petrochemical industries, dockyards, and for the transport of bridge elements. Using state-of-the-art control technology that has been specially developed by KAMAG, the vehicles always carry out their tasks with exceptional reliability. They function in tight working spaces, over long transportation distances and while negotiating difficult road conditions. KAMAG modular transporters play a key role in the international heavy transport sector.

KAMAG – your benefits

- simple and maintenance-free hydraulic steering system proven for nearly 40 years (1 hydraulic cylinder and double linkage)
- high quality main brand proprietary components
- choice of standard or heavy-duty type construction for extra payload capacity
- electronic processors in each modular unit and Power Pack for a wider choice of combinations, including the most complex variations
- sized for container shipment around the world on flat rack containers
- possibility of setting and locating the transporter units using a XY cartesian plan in any possible location, at any given angle and in any required direction, along with a choice of steering points for turning operations
Flexible configurations
- hydrostatically driven and computer synchronized

KAMAG modular transporters are hydrostatically driven and electronically steered heavy load vehicles. As 2, 4 or 6-axle units, the most suitable transportation combination can be configured according to the type and weight of the load. KAMAG modular transporters can be rigidly coupled together or positioned in loose combination. In the process, high-performance computers synchronize all movements, ranging from the completely jerk-free drive to the correct steering angle for all wheels. The specially designed vehicle construction also makes it possible to accommodate high point loads.

The hydraulic support for each of the individual pendulum axles provides the KAMAG modular transporters with the best-possible stability; critical with extremely high load centers.
### Technical data

- **Type 2402/2402S, 2404/2404S, 2406/2406S**

<table>
<thead>
<tr>
<th>Type</th>
<th>2402</th>
<th>2402 S</th>
<th>2404</th>
<th>2404 S</th>
<th>2406</th>
<th>2406 S</th>
<th>2406 S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheel bogie load</td>
<td>17 t</td>
<td>18 t</td>
<td>20 t</td>
<td>17 t</td>
<td>18 t</td>
<td>20 t</td>
<td>18 t</td>
</tr>
<tr>
<td>Load capacity</td>
<td>58 t</td>
<td>61,9 t</td>
<td>69,9 t</td>
<td>119 t</td>
<td>126,8 t</td>
<td>142,8 t</td>
<td>180 t</td>
</tr>
<tr>
<td>Dead weight</td>
<td>10 t</td>
<td>10,1 t</td>
<td>10,1 t</td>
<td>17 t</td>
<td>17,2 t</td>
<td>17,2 t</td>
<td>24 t</td>
</tr>
<tr>
<td>Total weight</td>
<td>68 t</td>
<td>72 t</td>
<td>80 t</td>
<td>136 t</td>
<td>144 t</td>
<td>160 t</td>
<td>204 t</td>
</tr>
</tbody>
</table>

* * max. wheel bogie load at max. 1 km/h
** ** max. wheel bogie load at max. 0,5 km/h

#### Axles Combinations (Examples for type S)

<table>
<thead>
<tr>
<th>Axles</th>
<th>Combinations (Examples for type S)</th>
<th>Total weight</th>
<th>Payload max*</th>
<th>Traction force</th>
<th>Gradient by total weight</th>
<th>Braking power</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>160 t</td>
<td>142,8 t</td>
<td>240 kN</td>
<td>12 %</td>
<td>200 kN</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>240 t</td>
<td>215,7 t</td>
<td>240 kN</td>
<td>7,0 %</td>
<td>300 kN</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>560 t</td>
<td>501,3 t</td>
<td>720 kN</td>
<td>9,8 %</td>
<td>800 kN</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>800 t</td>
<td>717 t</td>
<td>960 kN</td>
<td>9,0 %</td>
<td>1,000 kN</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>1,200 t</td>
<td>1,075,5 t</td>
<td>1,440 kN</td>
<td>9,0 %</td>
<td>1,500 kN</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>1,600 t</td>
<td>1,434 t</td>
<td>1,920 kN</td>
<td>9,0 %</td>
<td>2,000 kN</td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>1,920 t</td>
<td>1,722,6 t</td>
<td>2,160 kN</td>
<td>8,2 %</td>
<td>2,400 kN</td>
</tr>
</tbody>
</table>

Data are based on the following:

- Speed 0.5 km/h · Rolling resistance 0.025
- 4-axle module Typ 2404 S Dead weight ≤ 17,2 t
- 6-axle module Typ 2406 S Dead weight ≤ 24,3 t*

* The respective payload must be reduced by the weight of the particular Power Pack that is used. The tare weight of the Power Pack is 3.5 t.
**Versatile with electronic multiway steering**

*Easily programmable coordinates system*

Each module has its own on-board electronics which is used to program the position of the unit.

*Various vehicle combinations*

4-vehicle unit  T-combination  Y-combination  V-combination  Circular combination

*Numerous steering modes*

Diagonal steering (along)  Diagonal steering (cross)  Independent steering  Circle steering (fixed program)  All-wheel steering (along)  All-wheel steering (cross)  +/- 100° steering angle
Quality in detail
Safe handling and reliability in daily operations

- Power Pack
- Connecting the modular unit and Power Pack
- Easily accessible couplings
- Protective covering for the on-board computer
- On-board electronic in the vehicle frame
- Hydraulic vehicle coupling system
- Cable-operated remote control (compact version)
- Cable-operated remote control with pressure gauge
- Radio remote control with control box on the Power Pack
- Driving axle
- Braking axle
- Running axle
- Tyres – Type IC 12 for 17 t axle load
- Tyres – Type IC 40 for 18 t and 20 t axle load
- Driver’s cabin
Special vehicles from KAMAG stand for state-of-the-art technology and special product quality around the world. Reliability in daily operations, high load-bearing capacity and a long service life make the vehicles an important element of modern logistical processes. In a wide range of areas such as smelting works and steel mills, shipyards and off-shore technology, transport vehicles and systems from KAMAG are in daily use. In the space industry and at logistical terminals of large haulage companies, vehicles from KAMAG efficiently deal with demanding transport assignments.

The company was founded in 1969 and is based in the southern German town of Ulm. The history of vehicle technology for heavy transport vehicles is closely connected with the name KAMAG. KAMAG belongs to a unique group of companies owned by the Heilbronn industrialist, Otto Rettenmaier. Within the group, the "Tii – Transporter Industry International" heavy load division is the global market player.

Examples from our product program

Steel industry

Shipyard

Shipyard

Off-shore

Airport

Terminal logistics

Terminal logistics

Space industry