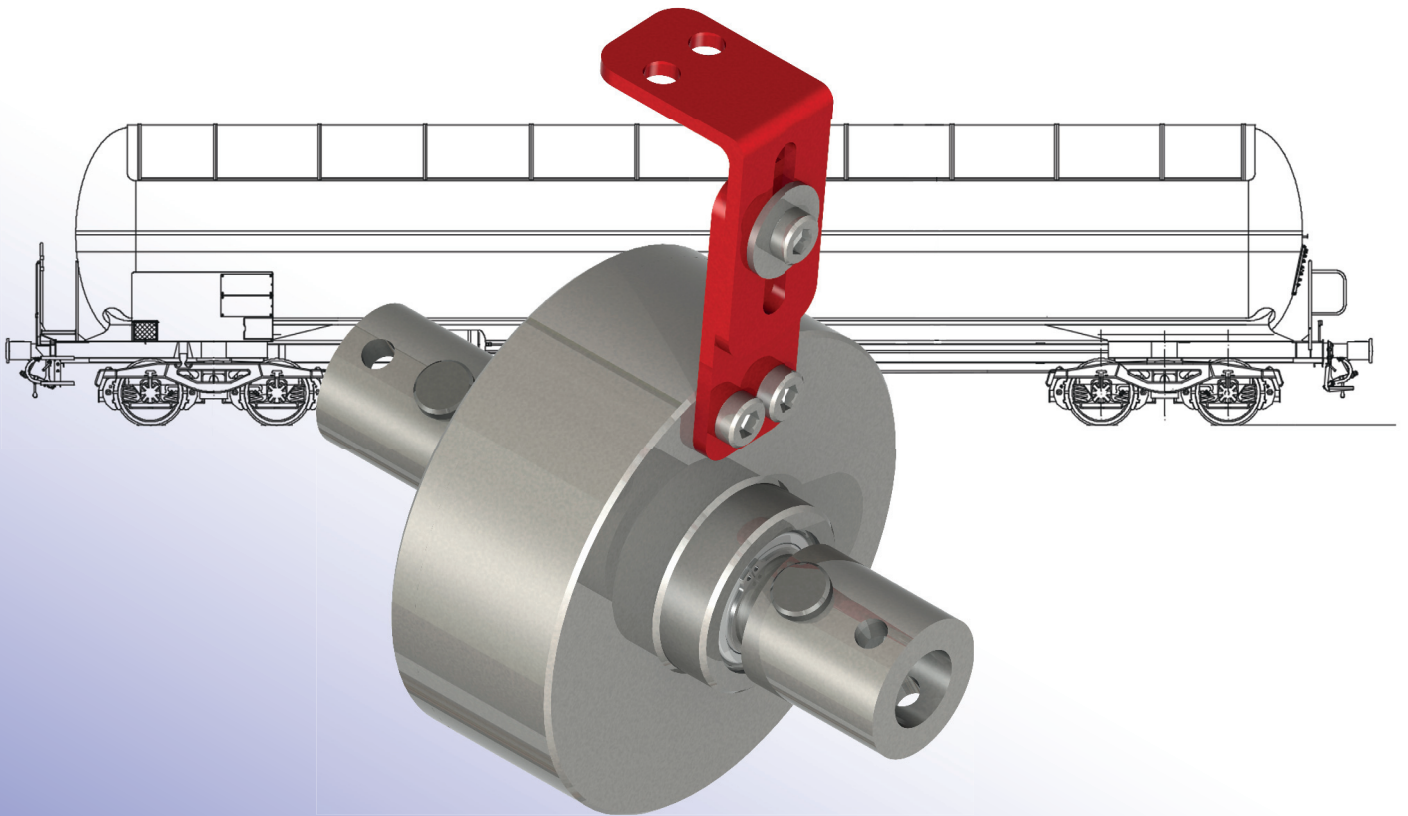




VENTAIX

ROTARY DAMPENER FD-30

**TANK CAR BOTTOM VALVES
CLOSING WITH NO RISK**



- **SAFE AND CONTROLLED CLOSING MOVEMENT**
- **NO KICKBACK OF THE HAND GEAR**
- **NO INJURIES OF OPERATORS**
- **NO WEAR OF THE VALVE SEAT**
- **NO WEAR OF LEVERAGE BEARINGS**
- **EASY MOUNTING**



ROTARY DAMPENER FD-30

Mechanical bottom valves of tank cars are usually opened by a leverage which is driven by a hand gear on either side of the tank. Mostly the hand gear is turned by 120°. The force of the spring acts in closing direction of the valve and an appropriate torque to move the hand gear is required. The hand gear is locked in the final position. After the loading or unloading process the bottom valve needs to be closed again. As soon as the lever is unlocked the full restoring torque acts on the hand gear immediately. Depending on the size of the valve and the power of the valve spring a strong kickback is created which has to be compensated manually by the operator. In this process operators could be hurt severely. Also damages to the valve seat and the bearings of the leverage could occur as a consequence of the fast closing valve.

In order to eliminate these special risks the rotary dampener FD-30 has been designed in cooperation by Franz Kaminski Waggonbau GmbH and VENTAIX GmbH. The rotary dampener allows the closing of the bottom valve smoothly and controlled. The special feature of the dampener is to open the valve without any additional force since the dampening acts in one direction only. Since the dampening is built up by a fluid inside the dampener, the dampening force is proportional to the restoring torque. This way the closing of the mechanical bottom valve loses its harmful impact on both the operator and the closing mechanism of the tank car, respectively.

The mounting of the rotary dampener FD-30 is very simple. The driving rod of the hand gear is cut in a suitable position and a piece of length of the rotary dampener is taken out. The dampener will then be mounted in this gap. The supplied mounting bracket has to be fixed at the tank car in a suitable position.

The rotary dampener FD-30 prevents potential injuries to operators at tank cars and closes a safety gap.

Please don't hesitate to contact us in case of further questions.

(This product is patent pending)

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