

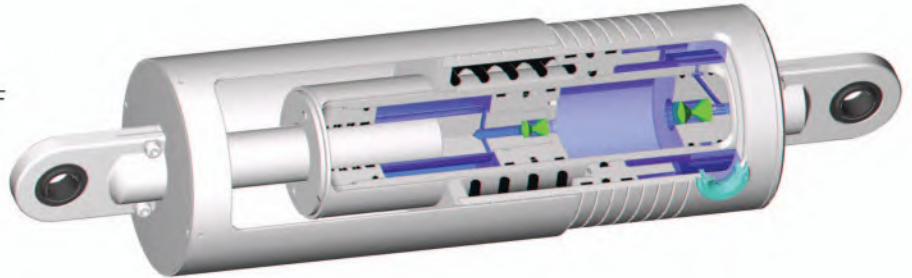
Snubbers / Shock Absorbers are safety devices that protect equipments and piping systems from unexpected shock loads or dangerous vibrations. The function of this device is similar to the car seat belt system. This means that the snubbers allow the system to move smoothly at a speed within the permitted range, but as soon as an impact force enters the system that causes it to move at an unauthorized speed, the valves inside the snubber are closed and prevent the system from moving. Here in KARAJET® we are using a proficient team which designs and manufactures two main type of Snubbers based on customer needs in various load ranges (1 ~ 50ton).

Standard and Certification

- ASME B31.1 , B31.3
- KTA 3205 1/2/3
- ASME SECTION VIII Pressure Vessel Div-I NF
- MSS SP-58,SP-69 And SP-89

Performance Test Laboratory

- 50 ton test setup
- Digital monitoring
- Automatic remote control
- Force-displacement control based on KTA 3205



Design and Manufacturing

Our snubbers categorized into two different configurations as the Parallel and Telescopic design and are available within a wide range of strokes, lockup velocities & bleed rates.

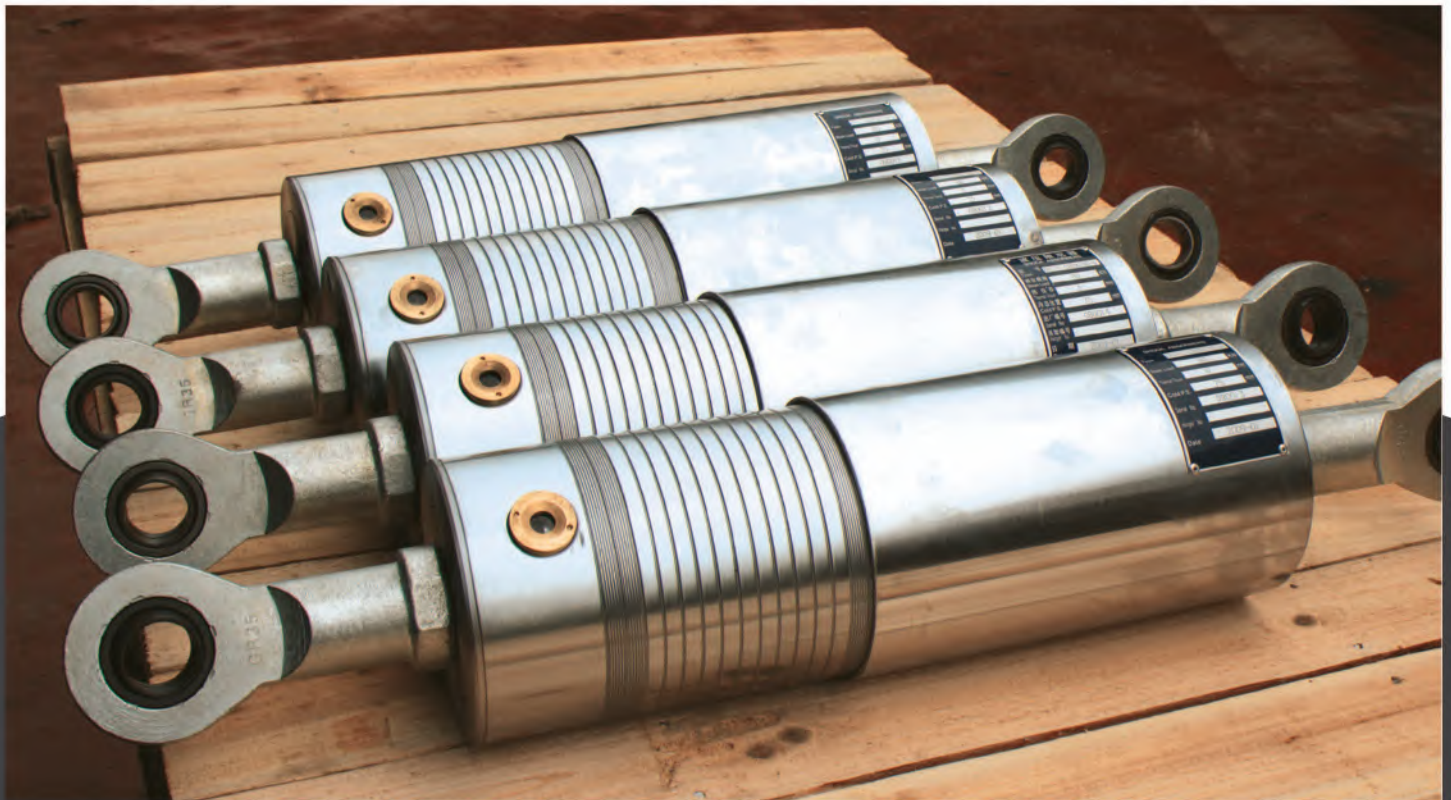
KARAJET has provided snubbers with load ratings up to 50 tons as well as strokes greater than 40 cm.

The **Telescopic design** is a second generation snubber that incorporates upgraded yet reliable T-seals, internal pressurized reservoirs, and temperature compensating valves. The design has been tested to the most exacting KTM 3205.3 standard for qualification for use in nuclear facilities, and offers reliability within a compact packages.

Standard settings

Locking (activation) velocity 3+/-3- mm/sec.

Bleed rate (post activation) at normal rated load 0.5+/-0.5- mm/sec. (Special settings are available)



When it comes to insuring the safe operation of your piping system and your facility, choose high quality Iranian product, choose the industry leader, choose KARAJET

Test Laboratory

KARAJET® Snubber/Support test laboratory is capable of performing any force-control and displacement-control tests in semi-static and vibrational approaches. All test of snubbers such as lock-up test, drag test and brake tests up to 50 ton are feasible. Our test setup is equipped with a digital load cell and displacement gauge, as well as range-of-motion limit detection sensors. The data of the measuring instruments are digitally transferred to the online control and monitoring system, and test control operations and test results display are performed simultaneously. All requirements of the KTA 3205 Performance Test Code are provided in this setup.



Services

For use on piping systems or equipment when unrestrained thermal movement must be allowed, but which must be restrained during impulsive or cyclic disturbance.

Use with standard settings to prevent destructive response to earthquakes, flow transients or wind load.

Special settings are available to absorb the continuous thrust resulting from safety valve blow-off or pipe rupture.

Constant Force Pipe Supports

Karajet is able to design and produce symmetrical type of constant force spring supports in two triple and double types according to KTA 3502 standard. In addition to being compact and occupying less space, the symmetrical type has the ability to provide a greater power range and stroke length. Karajet is able to produce this type of supports for 1-200kN forces and providing a travel of more than 50cm.

Features

Factory calibrated, tamper-proof, temperature compensating valves minimized the effects of temperatures on lock up and bleed and eliminate the need for a narrow range of functional test acceptance criteria.

- The bleed valve incorporates a multi-orifice design with proven resistance to clogging.
- The pressurized reservoir insures positive fluid pressure regardless of snubber orientation.
- Unlocked resisting force is less than 100 N for small sizes and less than 2% of rated load for larger sizes.
- Special design minimizes the "lost motion" which results from the shifting and seating of piston seals.
- Stable non-flammable, long life hydraulic fluid can be visually inspected and the exact fluid level can be measured.
- The dry lubricated, self-aligning bushings permit $\pm 5^\circ$ misalignment of angular motion.

