TECHNICAL SAFETY BULLETIN

TSB No. 2101	**STATUS:** INITIAL RELEASE
SUBJECT: HOSE SAFETY RESTRAINTS - INSTALLATION	
PRIORITY: 1-CRITICAL SAFETY	**RELEASE DATE:** 08/17/21

KEYSTONE TECHNICAL BULLETIN INFORMATION

To provide notification of proper hose safety restraint installation guidelines.

BULLETIN DETAILS

Hose safety restraints are designed to decrease potential hazards of hose whip, risk to operator and bystanders, and decrease potential damage to equipment. Different types of restraints are whip checks, nylon hose restraints, whip chokers, whip stop (sock) systems and hobble clamps. Follow the below guidelines when selecting and installing your hose restraint:

- Select the restraint type that is best for your application, whether hose-to-hose or hose-to-tool.
- Review pressures and equipment being used to properly size the restraint device. Ensure that the device is rated for the appropriate potential force that your hose system can cause during a failure.
- Hose restraints should be installed in the fully extended position (no slack) for proper safety assurance. As you add slack into your restraint system, it magnifies the kinetic energy during a hose failure, translating to additional force.
    - To calculate your thrust force, divide the hose inside diameter by 2. Multiply that by itself. Multiply that by PI (3.1415). Multiply that by the operating pressure. The answer is your static load rating, or safe working load.
        - Example: 6” hose operating at 150psi = 4,241lb force
    - Add a safety factor of 5 to the static load rating, or safe working load, to ensure a proper minimum breaking load.
- Follow all guidelines and instructions provided by the hose restraint manufacturer.

RELATED EQUIPMENT

Keystone Cluster Drills (all sizes), Keystone Air Compressors (all makes and sizes), Keystone Support Modules (all configurations).