Safety Instructions for Kadant Jet Products
(Jet Heaters, Direct Steam Injection Heaters, Desuperheaters, and Thermocompressors)

CAUTION. Please read these instructions before installing, maintaining, or operating the Kadant Johnson jet products.

GENERAL PRECAUTIONS
Kadant Johnson manufactures jet products for steam and/or water applications. Please confirm with Kadant Johnson the suitability of the jet products for your specific application. Kadant Johnson jet products should not be used to transfer fluids or vapors that contact food or are toxic, biohazardous, flammable, or explosive. Jet products contain fluids and vapors that can be at high-pressure and high-temperature. Installation, maintenance, or operation can cause injuries if the instructions provided in this manual are not followed.

When installing, maintaining, or operating jet products, approved safety glasses with side shields and safety shoes should be worn to prevent injuries to eyes and feet.

When handling jet products that have been in service, gloves should be worn for protection against touching hot surfaces. Gloves also protect against cuts from machined or worn surfaces.

Fluids (including lubricants) and vapors leaking from or contained in the jet products may be hot and harmful to the health of personnel. Do not touch or breathe any escaping fluid or vapor. Follow the available Material Safety Data Sheet recommendations for safe handling and disposal.

Jet products should not be operated until the appropriate pressure and temperature interlocks, guards, and other safety devices have been installed to protect the equipment, personnel, and the associated pressure equipment.

Before removing, disassembling, or loosening a jet product, check to be sure that the pressure has been properly vented from the pressure equipment to which it is attached.

Jet products may contain mechanical spring forces when they are assembled. When disassembling a jet product that may contain spring force for installation or maintenance, be sure that these forces are properly contained, following the instructions provided in this manual.

EQUIPMENT HANDLING
Jet products can be very heavy. Be sure that the jet product is properly and securely supported before loosening any mounting fittings.

Jet products should be handled with care and stored where they will not be subjected to impact forces or exposed to weather.

Jet products that have undergone questionable impacts should not be placed into service without the inspection by a qualified factory technician.

EQUIPMENT INSTALLATION
Jet products should be installed and maintained according to the installation and maintenance instructions provided in this manual.

The assembly and disassembly instructions provide step by step installation and maintenance instructions. If there are any questions, consult the manufacturer.

Expansion joints may be used to connect jet products to the steam and or water system piping to prevent excessive pipe stresses from being transmitted to the jet product flanges. Alternatively, properly designed expansion loops may be incorporated in the piping.

The weight of the external piping (hoses, headers, brackets, and braces) should not be applied to the jet products. This weight should be relieved by appropriate supports extending from external framing to these components.

Jet products may have flanged connections. These flanges will correspond to industry standards. Connecting piping should use flanges of equal or higher ratings.

SAFETY DEVICES
Appropriate temperature and pressure safety devices should protect the jet products that are installed in vapor and fluid systems.

These devices should be set to prevent the vapor or fluid from exceeding the temperature and pressure limitations of all components in the system, with the limitations being the lowest of any individual component.

When the jet product is installed on an operating machine, the installation of the appropriate interlocks, guards, and other safety devices is the responsibility of the user, the equipment installer, or the supplier of the machinery, as determined by the user.

In particular, the user or contracted system provider should incorporate safety devices into the system to prevent the pressure from exceeding the maximum allowable pressure indicated on the equipment.

Users are advised to use temperature sensors and associated safety interlocks for those cases in which the foreseen operating temperature will be close to the maximum allowable temperature of the equipment.

ADDITIONAL SAFETY INFORMATION
For information relating to Compliance with PUWER 98, see Kadant Johnson Supplementary Safety Information sheet IS-Supplementary Safety Info. This is available at www.kadant.com/literature.

To view installation and repair instructions in a different language, visit www.kadant.com.

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