



Braided Type Pump Connector Installation Instructions

STORAGE:

1. Store braided type pump connectors in a dry/cool location such as a warehouse.
2. Store flange face down on a pallet or wooden platform.
3. Do not store other heavy items on top of braided type pump connector.
4. Ten-year shelf life can be expected with ideal conditions.

HANDLING:

Do not lift with ropes or bars through the bolt holes. If lifting through the bore, use padding or a saddle to distribute the weight. Do not let braided type pump connectors sit vertically on the edges of the flanges for any period of time. Do not lift on the shipping restraints.

SERVICE CONDITIONS:

Braided type pump connectors are designed for vibration absorption only. They are not intended to compensate for thermal expansion or contraction in piping. Make sure the braided type pump connector rating for temperature, pressure, and selection of materials match the system requirements. Contact the manufacturer if the system requirements exceed those of the braided type pump connector selected.

ALIGNMENT:

Braided type pump connectors are not designed to make up for piping misalignment errors. Check with the manufacturer if piping misalignment is present.

ANCHORING:

The main function of braided type pump connectors is to absorb vibration caused by mechanical equipment in the piping system. Keflex™ metal braided type pump connectors must have the protection of adequate anchoring against the internal and thrust pressures of the media to prevent damage. Anchoring must be installed as close to the down stream end of the braided type pump connector as possible, with the originating equipment serving as the opposite anchor. Anchors must prevent pipe movement in any direction. Hangers or pipe pedestals cannot be considered to be anchors as they offer no restriction against side or end motion.

When designing an anchor for a Keflex™ metal braided type pump connector piping system, consult the internal thrust force table from the appropriate braided type pump connector catalog. The weight of piping, valves, and media, as well as the resistance of the piping to deflection, must be included as part of the design weight and strength of an anchor.

Anchors are required whenever a piping system changes direction. Braided type pump connectors should be located as close as possible to the pump. For additional braided type pump connector protection, it is recommended that expansion joints and guides be installed in the piping system to prevent excessive movements from occurring due to pressure thrust or thermal expansion of the line.

GUIDES:

Braided type pump connectors must be properly guided and anchored in accordance with EJMA standards. Refer to 'Pipe Guides Spacing Diagram' on following page.

PIPE SUPPORT:

Piping must be supported so braided type pump connectors do not carry any pipe weight.

MATING FLANGES:

Install the braided type pump connector flange against the mating pipe flanges and install bolts so that the bolt head is against the braided type pump connector flange. Bolts should be installed from the braid side (so that the bolt heads are adjacent to the braid) to insure that the bolts do not interfere with the bellows during operation. Flange-to-flange dimensions of the braided type pump connector must match the required opening.

Make sure mating flanges are clean and are matched to the type supplied with the braided type pump connector. Gaskets of appropriate material, size, and temperature ratings must be used in all flange-to-flange type installations.

BOLT TORQUE:

Tighten bolts in stages by alternating around the flange.



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ADDITIONAL TIPS:

1. Insulation or thermal blankets over a braided type pump connector should be supplied by the pump connector manufacturer to preclude the use of corrosive chloride bearing insulation materials. Insulation should be made removable to permit easy access to the flange area, to check bolting.
2. Do not weld in the near vicinity of a non-shrouded braided type pump connector without protecting the pump connector from damaging weld splatter.
3. Consider ordering a spare braided type pump connector. The cost of downtime of a critical pump connector far exceeds the cost of a spare unit placed and protected in reserve on-site.

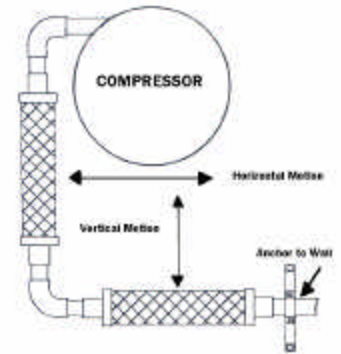
WARNING: Failure to install according to instructions, or any evidence of exceeding ratings will automatically void warranty.

GENERAL INFORMATION:

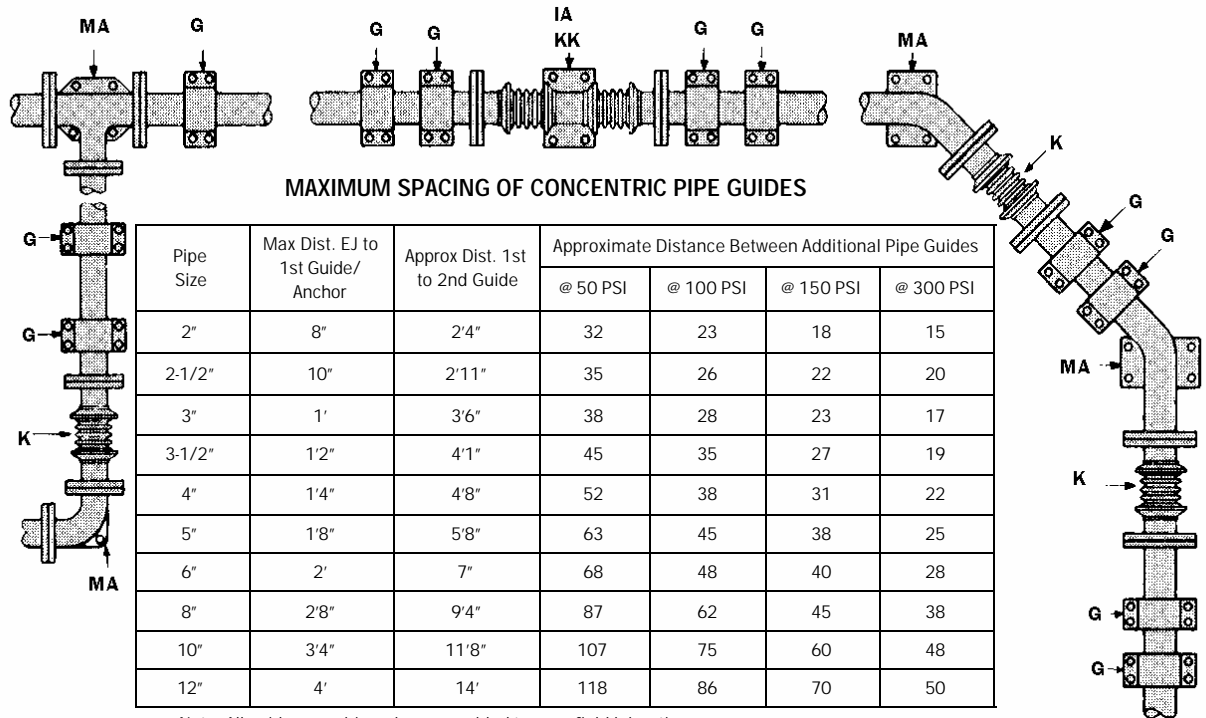
Annular hose type braided flexible connectors have shallow and generally closer corrugations than the laminated stainless steel bellows type and are not designed to absorb axial movement. KSSPCs absorb lateral motion only and must be sufficiently long so that the minimum bend radius will not be exceeded, and their capacity to absorb vibration is not overly reduced. If the connectors are installed in an offset position, the allowable vibration amplitude is reduced by 50%.

When installed on mechanical equipment, the units should be placed as close to the source of vibration as possible and anchored immediately at the downstream end. They must be in a relaxed condition, with no stress on the braiding, so as to contain vibration within the connector, and prevent mechanical stresses from being transmitted into the piping system. Torsional stresses must be prevented, either during installation or from the effects of pipe movement. Piping must be supported so as to keep weight off the flexible section.

When used as a flexible connector between a header and a lateral to absorb intermittent movement, the end fittings should remain parallel to each other throughout the cyclic movement. Angularity should be avoided except for static bends. For two plane vibration, use two flexible connectors installed at right angles so that one absorbs horizontal vibration and the other one absorbs vertical vibration.



PIPE GUIDES—SPACING DIAGRAM



Note: All guides are shipped unassembled to save field labor time.

MA = Main Anchor. Install at every change of direction, and at the start and finish of the piping system.

IA = Intermediate Anchor.

G = Concentric Pipe Guides.

K = Keflex Single Expansion Joint / Pump Connector

KK = Keflex Dual Expansion Joint with integral intermediate anchor base (IA)