



## Suction Diffuser Flex (SDF) Flow Conditioning Pump Connector

### OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

**General:** Metraflex Suction Diffuser Flex pump connectors feature flexible metal hose and braid with flow conditioning vanes. They are designed to condition turbulent flow into a pump while minimizing vibration and make up for pipe misalignment. SDF pump connectors are available in standard sizes and custom lengths. Please consult the factory submittals for specific performance specifications.

#### Application:

1. The rifling vanes in the SDF condition turbulent flow to eliminate cavitation in pumps.
2. SDF connectors are designed to absorb vibration and lateral movement only. They are NOT designed for axial movement or torque.
3. Pump connectors are available in a wide range of lengths and diameters. Each has its own performance characteristics. Confirm that the braided connector ratings for temperature, pressure, vacuum, and movements match the system requirements and that the material selected is chemically compatible with the process fluid or gas.
4. SDF pump connectors are flow directional, they need to be installed with the painted arrow on the connector pointing in the direction of the system's flow

#### Installation:

1. Inspect pump connector for shipping damage and ensure that the shipping bars are intact. Damaged connectors should not be used.
2. Piping should be aligned as closely as possible, and within the allowed connector limit.
3. Unit lengths must not be altered during installation. Install at dimensions indicated on submittal drawings.
4. Piping must be properly supported so pump connectors do not carry any pipe loads.
5. The connector and adjacent pipe should be aligned properly. Do not try to compensate for pipe misalignment by putting any torsional, compressive, extension, or offset loads on pump connector.

#### Testing:

1. Connector may be one-time pressure tested to 1-1/2 times the product's maximum operating pressure. Do not exceed maximum pressure or temperature during operation.
2. Metraflex recommends hydrostatic test with all air in the system removed. If an air test is performed, appropriate safety precautions must be made.

#### Precautions:

1. Connectors should not be installed in inaccessible areas where inspection is impossible.
2. Make sure proper drainage is available in the event of leakage when operating personnel are not available.
3. If welding near a braided connector, cover the unit with a weld blanket to keep weld splatter from damaging the braid cover.
4. For applications with flow over 10 ft/sec. consult Metraflex.

#### Maintenance:

Flexible hose and braid connectors have no serviceable parts and do not require maintenance. Metraflex recommends periodic inspection for leakage or damage such as dents or broken braid. If damaged, replace and do not use.

