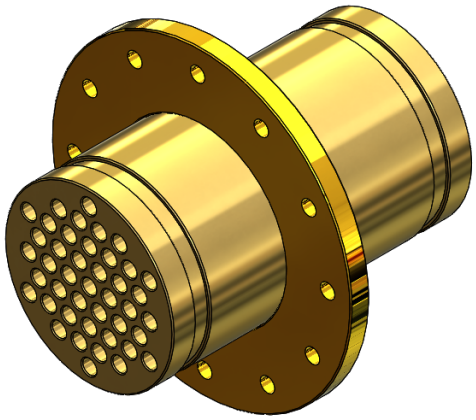
HYDRONIC WAVEGUIDE

Rev. May 2026

A typical hydronic penetration in shielded enclosures is permanent, difficult to install or maintain, and require large tools for installation, often involving various types of threaded connections. The Hydronic Waveguide provides a solution for radio frequency (RF) and electromagnetic interference (EMI) mitigation for shielded enclosures that require fluid pass-through without compromising the shielded envelope. The product features a grooved-end pipe connection that can be securely attached to a shielded enclosure wall, enabling quick installation of a hydronic system and simplifying maintenance while maintaining optimal flow rates.



Applications

- Hydronic systems that include but not limited to chilled water, fire protection, and plumbing systems
- Shielded enclosures
- High-security and ICD-705 compliant areas
- Medical imaging and MRI rooms
- RF/EMI testing facilities

Features and Benefits

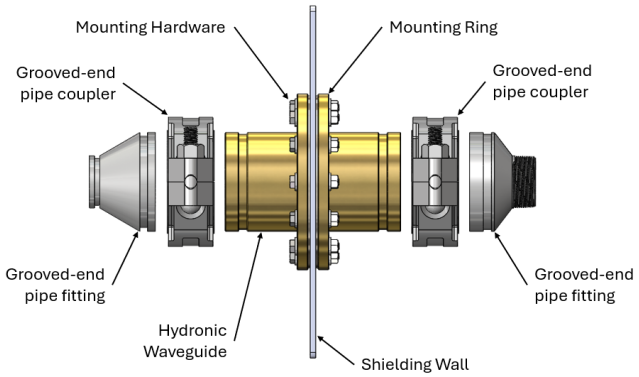
- Compatible with propylene and ethylene glycol water solutions
- Grooved connection for easy pipe attachment
- Bolted connections for removable, flame-free installation
- Tested shielding effectiveness of 105dB up to 18Ghz
- Complies with NSA 94-106 testing standard

Specifications

MODEL:	HWG238375H7	HWG350375H19	HWG450375H43
Grooved Pipe Connection	2” nominal	3” nominal	4” nominal
Connection Type	Grooved-End Pipe	Grooved-End Pipe	Grooved-End Pipe
Flow Coefficient (C_v)	24	49	110
Nominal Equivalent Pipe Size	1”	1.5”	2.5”
Dimensions (OD x L)	2.375" x 8"	3.5" x 8"	4.5" x 8"
Weight (lb)	9	26	37
Material	Brass	Brass	Brass

Agency Approvals

- U.S. Patent No.: 12,449,073
- Complies with AWWA C606 grooved joint dimensions

Installation Guidelines

- Installation must be carried out by the qualified installer.
- Installation of the Hydronic Waveguide shall be accomplished using mechanical fasteners (such as bolts, lock washers, nuts, etc.)
- During installation, distribute pressure evenly across the mounting ring by tightening bolts in a star or crisscross pattern
- Apply RF gasket at the joining surfaces to maintain shielding effectiveness and RF attenuation.
- Use grooved-end pipe fittings and couplings to join piping to the Hydronic Waveguide.