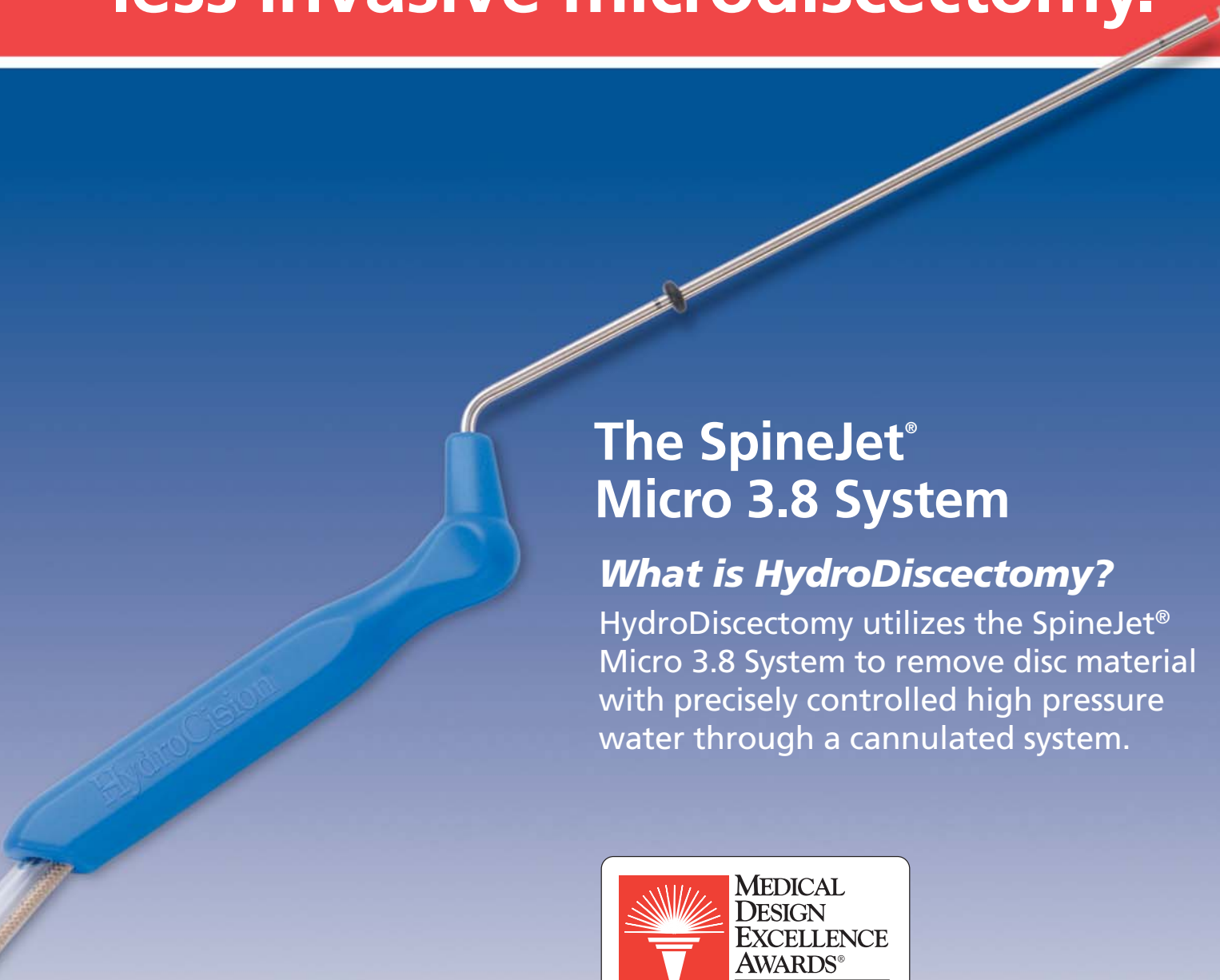


Your solution to a more effective,
less invasive microdiscectomy.

The SpineJet Micro 3.8 System is a surgical instrument with a blue ergonomic handle and a long, thin, curved metal shaft. The handle has the 'HydroCision' logo embossed on it. The shaft is made of polished metal and has a small black ring near the handle. The tip of the shaft is curved and appears to be a cannulated system.

The SpineJet[®] Micro 3.8 System

What is HydroDiscectomy?

HydroDiscectomy utilizes the SpineJet[®] Micro 3.8 System to remove disc material with precisely controlled high pressure water through a cannulated system.



Your solution to recurrent radicular pain

The SpineJet Micro 3.8 System

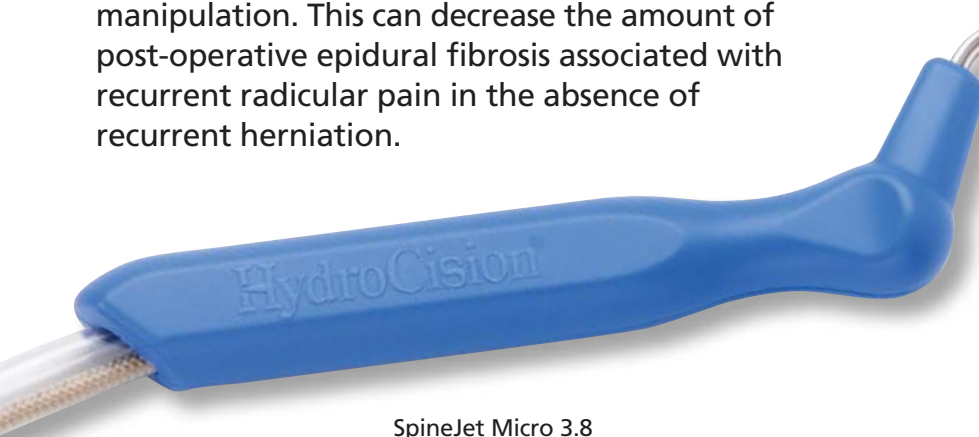
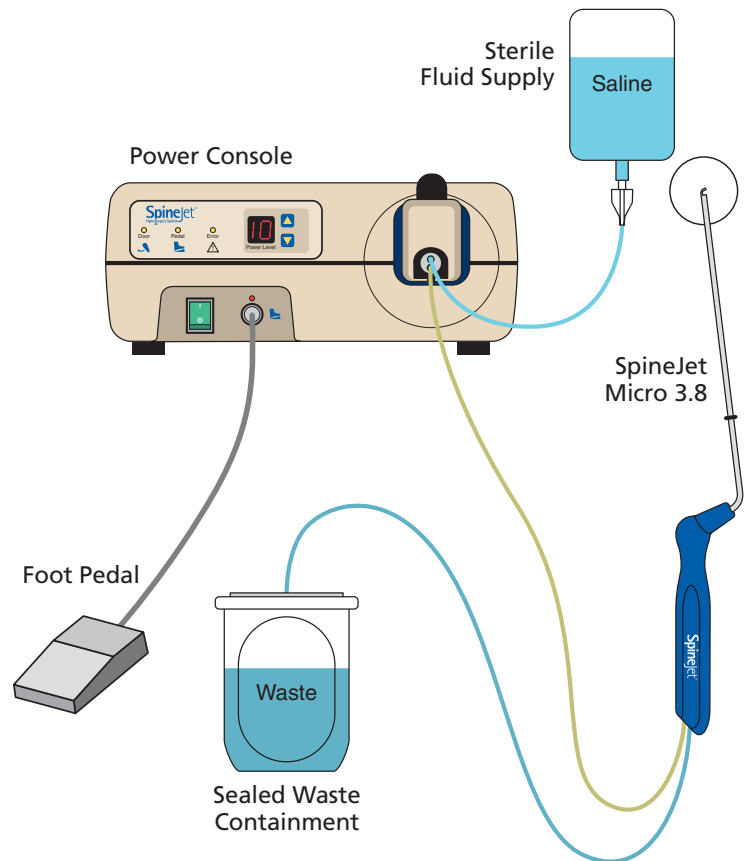
The SpineJet Micro 3.8 System uses high velocity water to pulverize the disc material and remove tissue through an evacuation tube in a controlled and safe manner.

The SpineJet Micro 3.8 System allows the surgeon to remove disc material precisely. The surgeon has complete control over how much or how little disc material is removed. This allows the decompression to be performed efficiently.

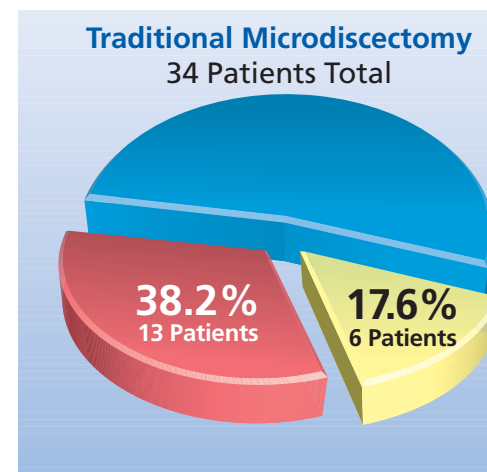
The cannulated system has been designed to protect the nerve root and minimize the residual annular defect after decompression. The working cannula diameter is only 4.0mm and it is inserted into the disc space over a dilator rather than cutting the annular fibers. After decompression, when the cannula is removed, the elasticity of the annular fibers shrinks the annulotomy. These factors contribute to minimizing the annulotomy thereby potentially decreasing the rate of recurrent herniations.

Performing the HydroDiscectomy through a cannula minimizes intraoperative nerve root manipulation. This can decrease the amount of post-operative epidural fibrosis associated with recurrent radicular pain in the absence of recurrent herniation.

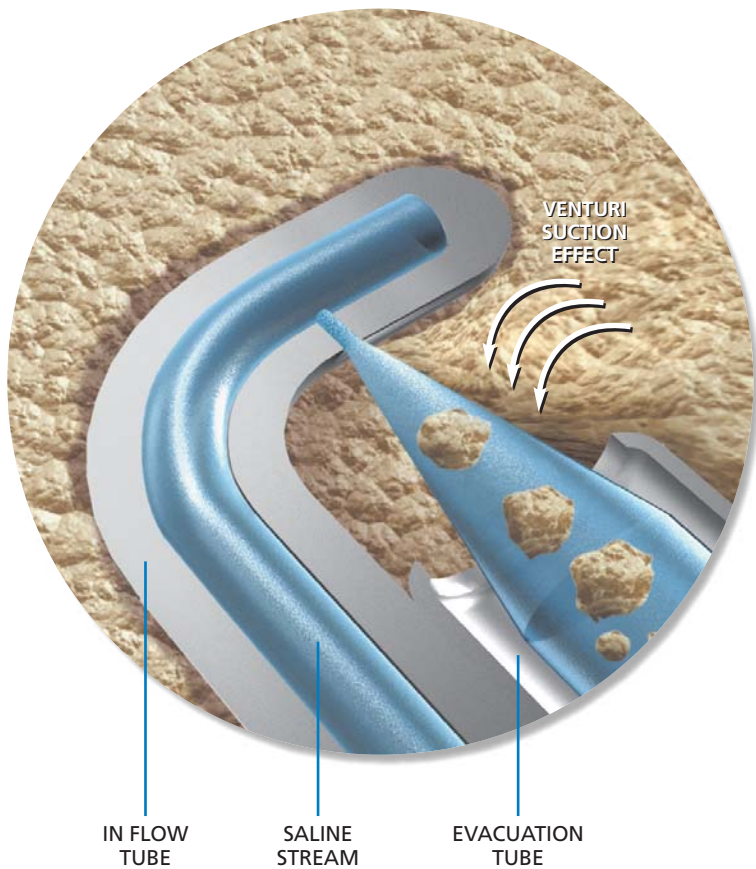
The SpineJet Hydrosurgery System



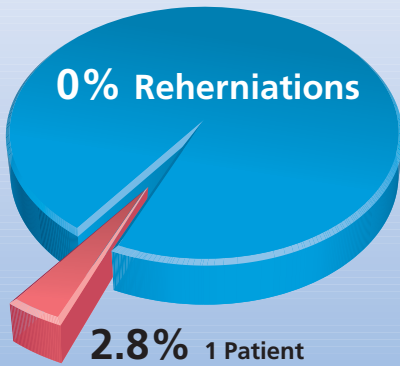
SpineJet Micro 3.8
Handpiece



Microdiscectomy Preparation



HydroDiscectomy 27 Patients Total



■ Post-op recurrent radicular pain
■ Reherniations

The difference in the rate of persistent leg pain and recurrent herniation was statistically significant ($p < 0.025$)**

**Hardenbrook et al. AANS/CNS, 2007

Feature	Advantage	Benefit
Fluid-Jet	• Removes precise amount of nucleus to decompress the nerve root	Effective
	• Power driven device allows the surgeon to control the quantity of disc material removed	Efficient
	• Simultaneously cuts and aspirates nucleus reducing procedural time	Efficient
	• Compatible with most retractor systems	Efficient
	• Significantly reduces instrument passes by nerve root	Safe Efficient
	• Instrument insertion depth measured by 1cm laser markings	Safe
	• Excellent visualization of vital structures achieved by bayonet design	Safe
Cannula	• Beveled tip protects nerve root without retraction	Safe
	• Minimizes nerve root manipulation decreasing risk of post-operative radicular pain secondary to neurofibrosis	Safe Effective
	• Smaller dilated annulotomy reduces risk of reherniation	Safe Effective
	• Tactile depth indicator controls the precise depth of insertion	Safe
Dilator	• Produces minimal residual annular defect reducing risk of reherniation	Effective

"The SpineJet Micro 3.8 System reduced my reherniation rate and recurrent radicular pain in my high demand, active patient population."

Mitchell A. Hardenbrook, M.D.*
 Orthopedic Spine Surgeon
 Boston Spine Group - Boston, MA

"HydroDiscectomy allows me to perform a more precise and less invasive microdiscectomy procedure with minimal nerve root retraction. I believe the small size of the annulotomy will lead to quicker patient recovery and better outcomes with minimal chance of reherniation."

Richard E. Nussbaum, M.D.
Orthopedic Surgeon
Los Angeles Orthopedic Institute, Los Angeles, CA

Ordering Information

SpineJet Micro 3.8 Handpiece

Description	Catalog No.
SpineJet Micro 3.8 Handpiece <i>(disposable, supplied sterile)</i>	52320

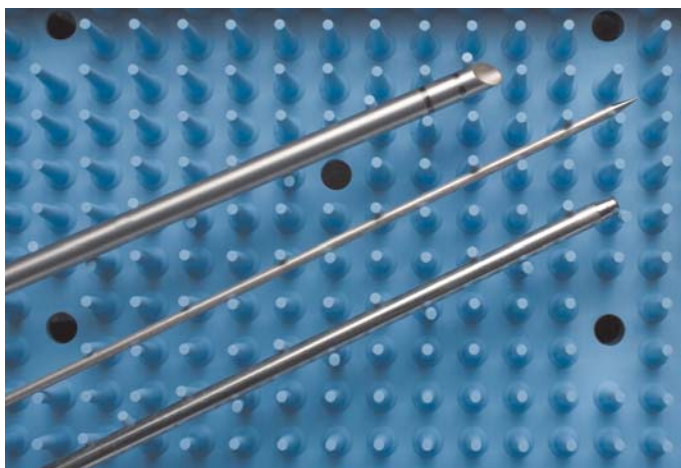
HydroDiscectomy Access Sets

(reusable, supplied non-sterile)

Description	Catalog No.
4.0 HydroDiscectomy Access Cannula Set <i>(Includes tray, needle, dilator, dilator knob and cannula)</i>	56971
Individual Kit Components <i>(reusable, supplied non-sterile)</i>	
Needle, 20.5 cm (8 inch)	51739
Dilator	51740
Dilator Knob	52012
Cannula	52005
Tray	51786
HydroDrive Console <i>(Console includes Foot Pedal and Power Cord)</i>	52700

HydroCision Microdiscectomy New SpineJet Micro 3.8	VS.	Conventional Microdiscectomy
Safe, 2 passes[†] Cannula provides nerve root protection without retraction		Many passes Requires nerve root retractor
Fast, 2 minute discectomy Saves approximately 17 minutes when compared to conventional microdiscectomy ^{††}		~19 minute discectomy
4.0mm dilated annulotomy Smaller residual defect is associated with a decreased reherniation rate ^{†††}		~6+mm annulotomy
New Technology 2006 Medical Design Excellence Award Winner		Old Technology

HydroDiscectomy Access Cannula Set



*Former Director of Spine Surgery, Bone & Joint Institute, Naval Medical Center, Portsmouth, VA

The opinions expressed represent the personal views of the author and do not necessarily represent the views of the Department of the Navy and Department of Defense.

^{††}"Pass" refers to a single insertion of an instrument through the surgical site. ^{†††}Data on file. ^{††††}Carragee et al. *JBJS*, 2003

HydroCision, SpineJet, and The Leader in Hydrosurgery are registered trademarks of HydroCision, Inc. ©2004-2006. All rights reserved. Patent Nos. 6,216,573, 5,944,686, 6,375,635, 6,960,182, 7,122,017, 6,923,792 other foreign and domestic patents are pending.

1000-2462 Rev A 5-08 05/08 TG-9713

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