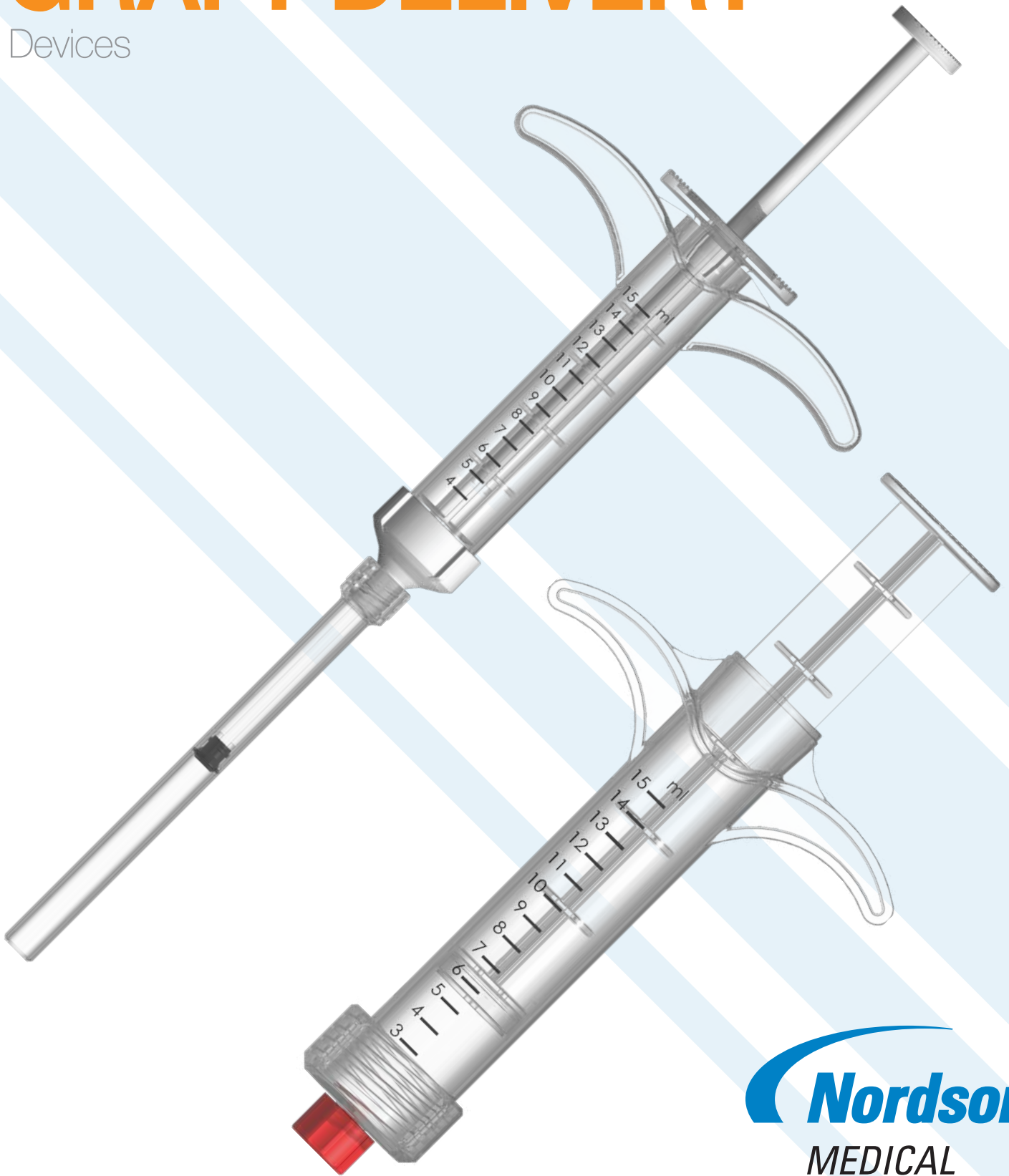


# GRAFT DELIVERY

Devices



**Nordson**  
MEDICAL

# About Graft Delivery Devices

## Nordson MEDICAL

Nordson MEDICAL is your partner in the global life sciences market providing innovative components, devices and custom OEM solutions for the precision management and delivery of fluids and biomaterials. The company has expanded through an aggressive strategy of product development and acquisition and has become a leader in developing products for the application of biomaterials and sterile fluids. Nordson MEDICAL products are sold across a wide variety of clinical specialties.

In 2010 Micromedics, Inc. was acquired by Nordson Corporation (NASDAQ: NDSN), one of the world's leading producers of precision dispensing equipment that applies adhesives, sealants, coatings and other materials to a broad range of consumer, industrial and medical products. The company also manufactures equipment used in the testing and inspection of electronic components as well as technology-based systems for curing and surface treatment processes. Headquartered in Westlake, Ohio, Nordson has direct operations and sales support offices in more than 30 countries.

## Global Regulatory & Registration Support

Nordson MEDICAL's global registration expertise improves speed to market in new geographies. We can assist you with the stringent demands of marketing/distributing in many countries around the world, including the Americas, Europe, Australia, Russia, India, and Asia Pacific.

## Assembly and Finishing Capabilities

Nordson MEDICAL offers unique solutions that exceed clinician needs. Utilizing hypo tube bending, ultrasonic welding and polymer solution casting, Nordson MEDICAL's quality products are sophisticated and reliable. We have a solid reputation in today's medical device and biotech markets with pressure and leak testing. We also offer manual, semi-automatic, and fully automatic finished good assembly.

## Manufacturing Capacity and Quality

With access to over 250,000 square feet of design, manufacturing, assembly and distribution services, Nordson MEDICAL can meet your global demand for products.

We are an FDA registered manufacturing facility with clean room manufacturing and assembly. Nordson MEDICAL is equipped with multiple injection molding machines including plastic injection molding and over molding including 2-shot and insert molding. Products intended for sterilization are assembled and packaged in an ISO 14644-1 Class 8 clean room. We utilize both manual and automated medical device assembly processes tailored to manufacture the highest quality biomaterial delivery systems.

Nordson MEDICAL's Quality Management System is designed as a system of interrelated processes meeting the requirements of ISO 13485. Quality is tracked with key metrics to ensure continuous improvement.

## OsteoPrecision™ and OsteoXpress™ Graft Delivery Devices

Nordson MEDICAL's graft delivery devices are designed to deliver hydrated allograft, autograft or synthetic bone graft materials to an orthopedic surgical site.

In addition, they are designed to facilitate the premixing of bone graft materials with fluids such as IV fluids, blood, plasma concentrate, platelet rich plasma, bone marrow or other specified blood components as deemed necessary by the clinical use requirements.

Nordson MEDICAL products are manufactured in a ISO 13485 certified facility and are marketed to a wide variety of customers including distributors, surgeons, OEMs, hospitals, and outpatient clinics. All products can be private labeled or customized to meet your specific user requirements.

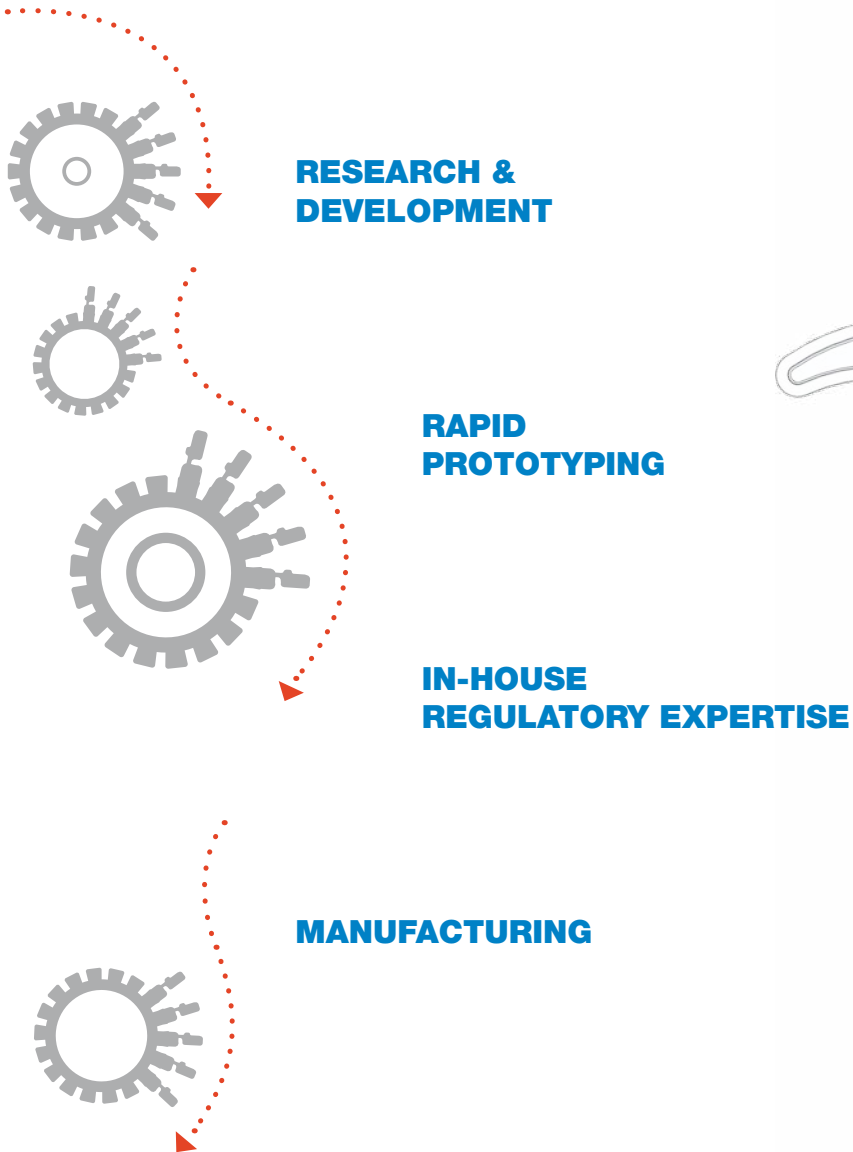
Contact us to learn more about our proprietary products and how we can customize a delivery solution for your biomaterial. [www.nordsonmedical.com](http://www.nordsonmedical.com)

All Micromedics products are developed, manufactured and tested in accordance with applicable standards of the Food and Drug Administration (FDA) 21 CFR 820 and International Organization for Standardization, the Canadian Medical Device Conformity Assessment System, and the European Medical Device Directive 93/42/EEC. The Micromedics line of biomaterial delivery devices is certified to ISO 13485 and a recognized CMDCAS Registrar and CE marks products accordingly.

We will partner with you to deliver your next breakthrough idea.

With more than 30 years experience in providing OEM solutions to biomaterial manufacturers, we can provide the detailed support you need from idea to market.

## CONCEPT DEVELOPMENT



## COMMERCIALIZATION

### Private Label and Customization

OsteoPrecision™ and OsteoXpress™ Graft Delivery Devices can be private labeled or customized to meet your needs. Contact us to learn how we can partner with you to develop a delivery system that meets your unique user requirements.

TEL: +1 (651) 452-1977

TOLL FREE in USA: (800) 624-5662

# OsteoPrecision™ Graft Delivery Devices

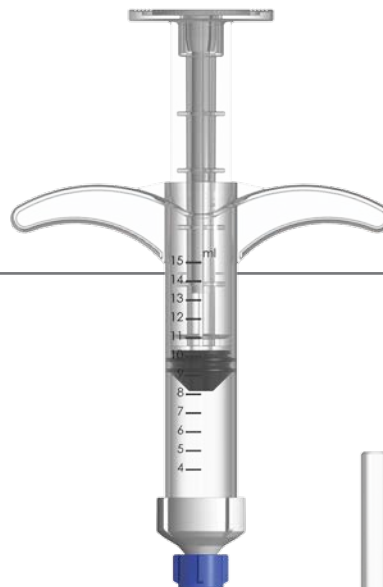
The OsteoPrecision™ Graft Delivery Device is designed for targeted delivery of hydrated allograft, autograft, or synthetic bone graft materials to an orthopedic surgical site, while maximizing material utilization. Available in vented and non-vented configurations, all devices are 15cc. *Graft materials not included.*

## MAXIMIZE MATERIAL UTILIZATION

### INTEGRATED STYLET

Maximizes material utilization and simplifies delivery with an all-in-one configuration

Minimizes packaging size for easier storage



### VENTED & NON-VENTED OPTIONS

#### Vented Configuration

Vents air for better saturation and hydration of materials

#### Non-Vented Configuration

Allows for pre-filling of materials when hydration is not required



### TAPERED CAP & WIDE BORE CANNULA

Allows for the extrusion of high viscosity bone materials

### EASY OPERATION

Multiple cannula options (5cm, 10cm, 15cm) allow for delivery of graft materials to targeted surgical sites

Available female luer adapter connects directly with a standard syringe for easy hydration (*OP vented versions only*)

Optional hydration tube evenly distributes liquids into material for consistent hydration

Large finger flanges allow for a better grip and is designed for one-handed ease-of-use

# OsteoPrecision™ Graft Delivery Devices

The OsteoPrecision™ Graft Delivery Device is designed for targeted delivery of hydrated allograft, autograft, or synthetic bone graft materials to an orthopedic surgical site, while maximizing material utilization. Available in vented and non-vented configurations, all devices are 15cc. *Graft materials not included.*

## Vented

### Sterile

5cm Cannula  
GD-1115-050

10cm Cannula  
GD-1115-100

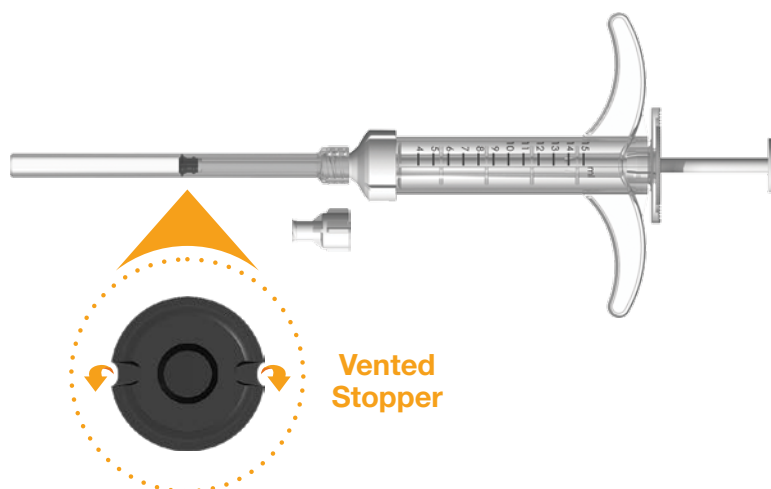
15cm Cannula  
GD-1115-150

### Non-Sterile

5cm Cannula  
GDNS-1115-050

10cm Cannula  
GDNS-1115-100

15cm Cannula  
GDNS-1115-150



## Non-Vented

### Sterile

5cm Cannula  
GD-1015-050

10cm Cannula  
GD-1015-100

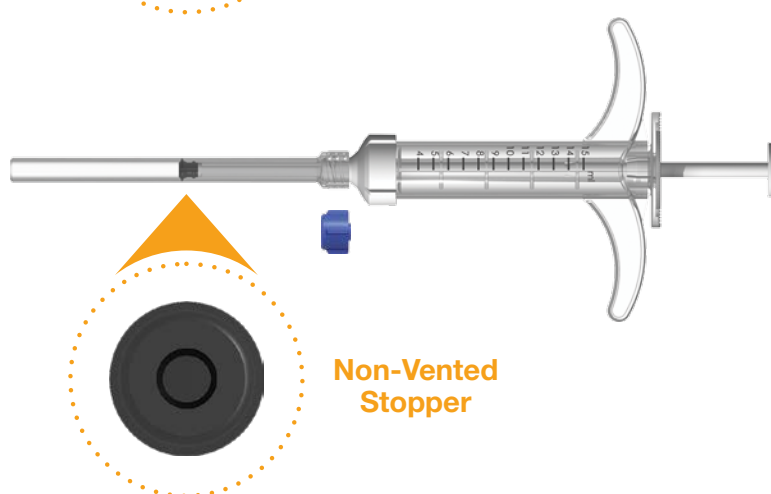
15cm Cannula  
GD-1015-150

### Non-Sterile

5cm Cannula  
GDNS-1015-050

10cm Cannula  
GDNS-1015-100

15cm Cannula  
GDNS-1015-150



## Vented with Hydration Tube

### Sterile

5cm Cannula  
GD-1215-050

10cm Cannula  
GD-1215-100

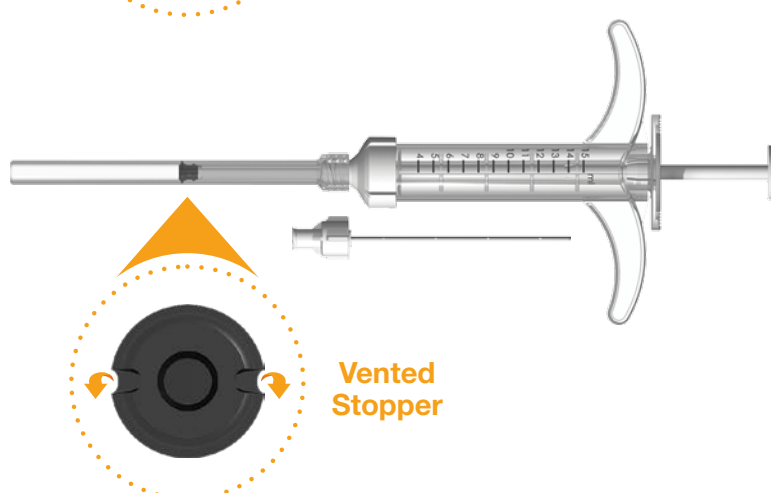
15cm Cannula  
GD-1215-150

### Non-Sterile

5cm Cannula  
GDNS-1215-050

10cm Cannula  
GDNS-1215-100

15cm Cannula  
GDNS-1215-150



Sterile OsteoPrecision™ Graft Delivery Devices are FDA cleared, CE marked (Europe), registered in Canada and Australia.

# OsteoXpress™ Graft Delivery Devices

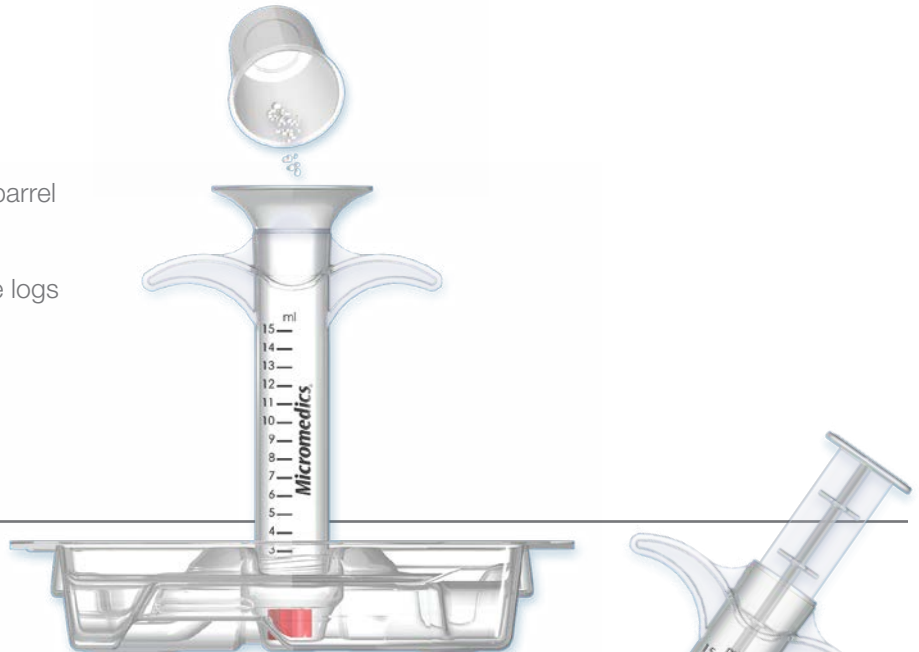
The OsteoXpress™ Graft Delivery Device is designed to hydrate allograft, autograft or synthetic bone graft materials and deliver to an orthopedic surgical site. This system is easy to assemble and facilitates the premixing of bone graft materials with intravenous fluids, blood, plasma concentrate, platelet rich plasma, bone marrow, and others.

## FILL

Allows simple integration of graft material and hydration fluid

Unique tray with funnel for conveniently filling barrel with graft material

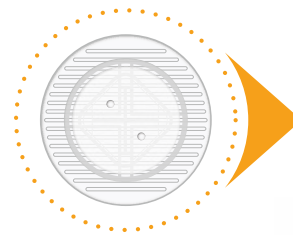
15cc barrel allows for creation of small or large logs based on procedure



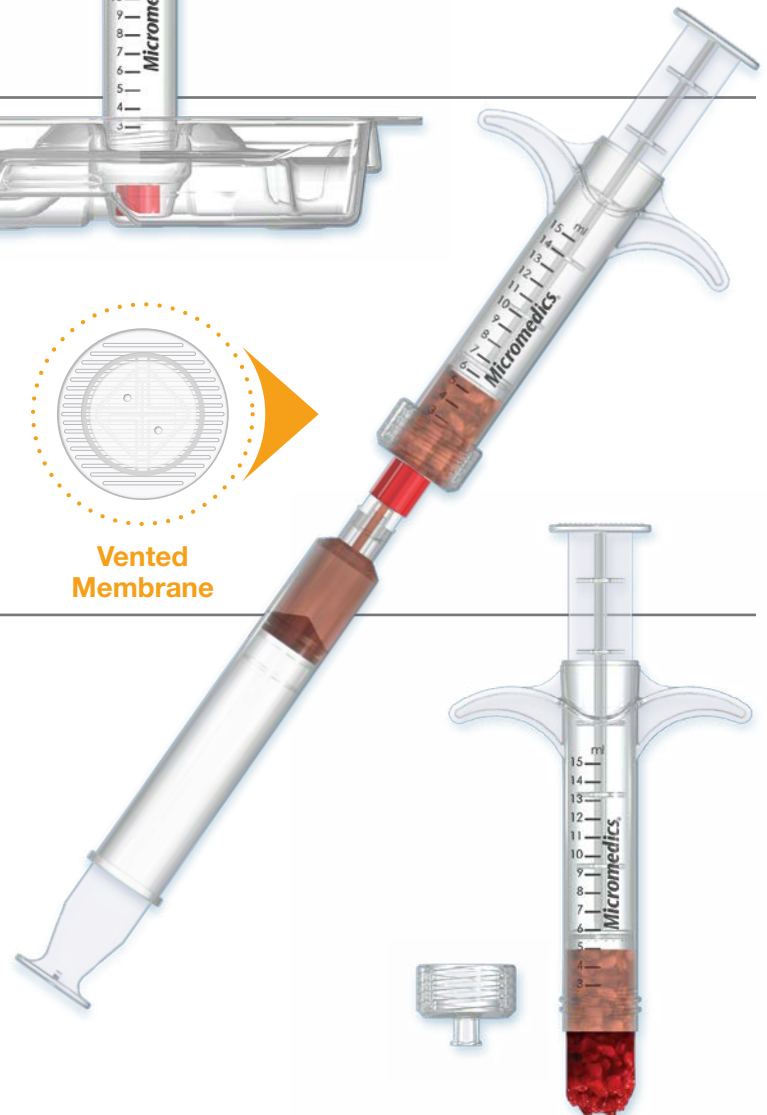
## HYDRATE

Patented, vented membrane releases air during hydration, eliminating air pockets and improving saturation of material

Female luer on distal end for simple connection to hydration syringe



Vented Membrane



## DELIVER

Removable threaded cap maximizes graft utilization and allows for easy delivery of graft log

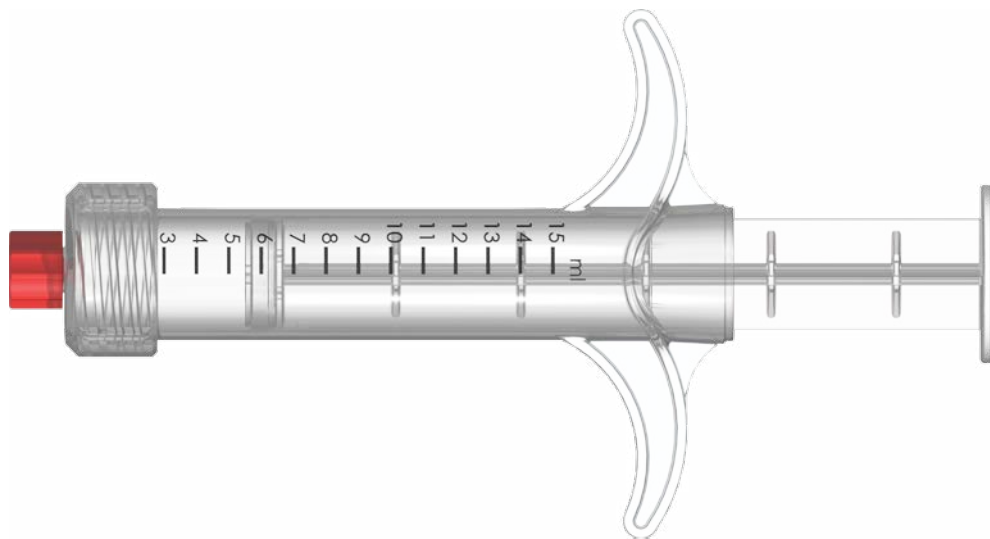
Large finger flanges for better grip when expressing graft

# OsteoXpress™ Graft Delivery Devices

The OsteoXpress™ Graft Delivery Device is designed to hydrate allograft, autograft or synthetic bone graft materials and deliver to an orthopedic surgical site. This system is easy to assemble and facilitates the premixing of bone graft materials with intravenous fluids, blood, plasma concentrate, platelet rich plasma, bone marrow, and others.

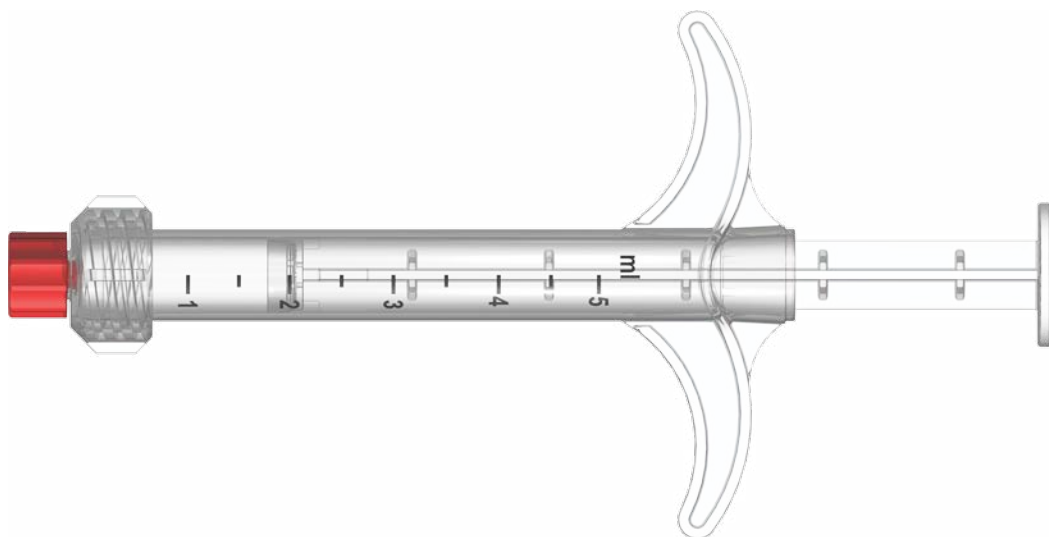
## GD-5515

Graft Delivery Device, 15cc  
Graft materials not included.



## GDNS-5505

Non-Sterile  
Graft Delivery Device, 5cc  
Graft materials not included.



GD-5515 OsteoXpress™ Graft Delivery Device is FDA cleared, CE marked, registered in Canada and Australia.  
We can support you where you need it.



## ORDERING INFORMATION

OsteoPrecision™ and OsteoXpress™ Graft Delivery Devices. *Graft materials not included.*  
For more information or samples, call 800-624-5662 or visit us online at [nordsonmedical.com](http://nordsonmedical.com).

Nordson MEDICAL is the partner of choice for graft delivery devices with innovative development and design expertise, comprehensive global regulatory support, and broad manufacturing and packaging capabilities. For over 30 years, Nordson MEDICAL has been a global provider of innovative products and has earned a solid reputation for quality, service and reliability. All of our products and services are backed by Nordson Corporation, a global leader in precision dispensing equipment serving many consumers and industrial manufacturing industries, helping customers succeed.

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Rx Only. Federal (USA) law restricts these devices for sale by or on the order of a physician. Indications, warnings and instructions for use can be found in the product labeling supplied with each sterile device. ©Nordson MICROMEDICS. OsteoPrecision™ and OsteoXpress™ Graft Delivery Devices are registered trademarks of Micromedics, Inc. All rights reserved. **80015 Rev. D** 2015-08



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