

NOWPak[®] Canister Replacement Liner

Pre-cleaned, replacement polyethylene barrier liner and dip tube options for NOWPak liner-based canister systems

The NS60 conformal replacement liner is designed for use with the NOWPak[®] liner-based canister system. The liner conforms to the interior of the canister, minimizing stress, improving liner strength and durability, and maximizing chemical fill volume. Liners are available in 19-, 40-, and 200-liter sizes.

APPLICATIONS

- NOWPak systems are designed for applications that require containment and safe transport of high-purity liquids and liquids that are sensitive to outer environments



NS60 conformal replacement 200-liter liner, inflated

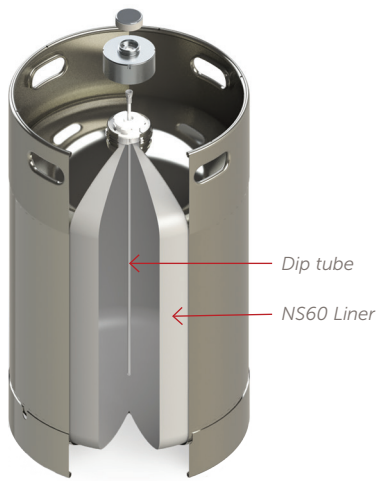
FEATURES & BENEFITS

Unique conformal design	Improves strength and durability
Liners are particle tested and certified	Ensures product reliability and performance
Liner-based system	Minimizes risk of microbubbles
Collapsible liner system	Helps maximize chemical utilization
Liner plus dip tube combination	Adds convenience and simplifies ordering

SPECIFICATIONS

Materials of construction	Liner	Film	PE with barrier film, translucent color
		Fitment	Injection molded, natural virgin HDPE
		Fitment adapter	Injection molded, natural virgin HDPE with choice of EPDM, TFE/P, or semi-perfluoroelastomer O-ring
		Retainer	Injection molded, natural virgin HDPE
		Temporary cap	Injection molded, red pigmented LDPE
		Liner sleeve	PE
	NDT-PX polyethylene dip tube	Coupler	Injection molded PE
		Downtube	Extruded PE
		O-ring	EPDM, Chemraz®, or semi-perfluoroelastomer
	NDTV-PXXX and NDTV-TXX high-viscosity dip tube	PE dip tube	Extruded, natural PE
	FEP dip tube	Extruded, FEP	
	Shipping plug	Natural PE	
	Cleanroom bag	PE	
Fill opening	19- and 40-liter sizes	¾" fitment: 22.2 mm (0.88")	
	200-liter size	2" fitment: 50.7 mm (2.00")	
Manufacturing standards	Fabricated and tested in a Class 5 Cleanroom as per International Standard ISO 14644-1:1999 cleanrooms and associated controlled environments – Part 1: Classification of air cleanliness		
	Film and seal defect detection	Visual inspection using room light	
	Liner leak detection	Pressure decay tested	
	Liner integrity verification	Weld tensile strength tested	
	Particle count verification	Particle tested with ultrapure DI water	
Cleanliness	Particle certified liners include a Certificate of Analysis stating lot-specific particle count data; particle certified liners are not to exceed 10 counts per ml at ≥300 nm in ultrapure DI water.		
	Dip tube assembly to be free from lubricants and other extraneous foreign materials consistent with Entegris' processes and procedures.		

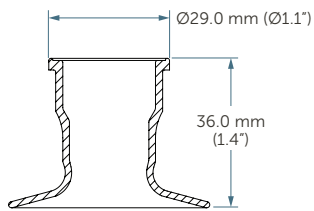
*Note: Refer to Single-Use PE dip tube and High-Viscosity FEP or PE dip tube datasheets for dip tube specification information.



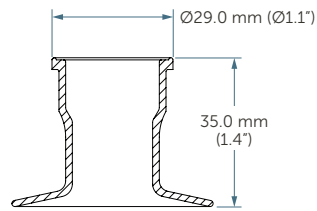
PART NUMBER			Weight of 1 liner without temporary cap
Canister	Liner	Size	
NO-08 NO-08-63 NO-08A-63	NL-019-NS60X-1	19 L	70 g
NO-40 NO-40-63 NO-40A-63	NL-040-NS60X-1	40 L	90 g
NO-200 NO-200-2 NO-200A NO-200A-2	NL-200-NS60X-1	200 L	0.30 kg

DIMENSIONS

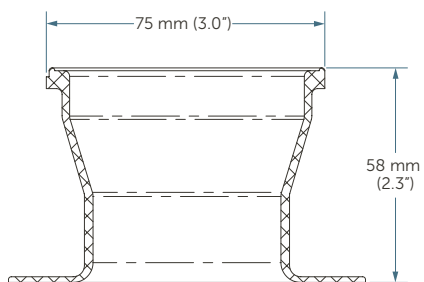
3/4" Fitment, Hardstop



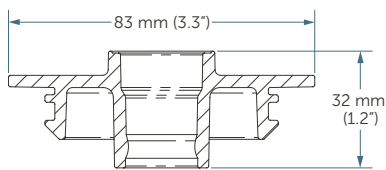
3/4" Fitment, Non-Hardstop



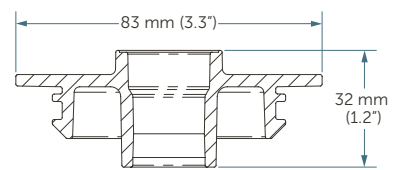
2" Fitment



2" Fitment Adapter, Hardstop



2" Fitment Adapter, Non-Hardstop



SHIPPING INFORMATION

Labeling

Liners only:

Each liner is labeled with the part number and batch number. Each carton box and cleanroom bag is labeled with the part number, batch number, and liner quantity.

Liner plus single-use PE dip tube and liner plus high-viscosity PE or FEP dip tube:

Each liner is labeled with the part number and batch number. Each carton box and cleanroom bag is labeled with the part number, batch number, and liner quantity.

Each dip tube bag and box is labeled with the part number, batch number, and dip tube quantity.

For part number NLVT-200-NS60G-1 only:

Each liner is labeled with the part number and batch number. Each carton box and cleanroom bag is labeled with the part number, batch number, and liner quantity.

Each dip tube is individually packaged and labeled with the manufacturing date, batch number, sequence number, part number, and bar code. Five individually packaged dip tubes are placed into a bag and labeled with the batch number, part number, manufacturing date, sequence numbers, and QR code. The corrugated box containing 10 dip tubes is labeled with each dip tube batch number/sequence number and a QR code. The shipping box containing 10 liners and the box of 10 dip tubes is labeled on the exterior of the box with the liner batch number and quantity, and with the dip tube batch/sequence numbers and QR code.

Packaging

Liners only – 19- and 40-liter sizes:

For NL-XXX-NS60X-1, each liner is capped, folded, and inserted into a cleanroom sleeve (heat sealed) then bulk packaged in a corrugated carton lined with a PE cleanroom bag, 50 liners per box. Retainers are packaged in cleanroom conditions and shipped in the same quantity as the liner.

Liners only – 200-liter size:

For NL-200-NS60X-1, each liner is capped, folded, and inserted into a cleanroom sleeve (heat sealed), then bulk packaged in a corrugated carton lined with a PE bag, 10 liners per box. Retainers and fitment adapters are packaged in cleanroom conditions. Adapters are packaged separately, 10 to a bag. Retainers are packaged separately, two sleeves of five per box. Adapters and retainer packages are placed into the shipping carton along with the liners.

Liner plus PE dip tube – 19- and 40-liter sizes:

For NLP-XXX-NS60X-1 and NLPK-019-NS60X-1, dip tubes are double-bagged in cleanroom conditions, 10 dip tubes per inner bag, inner bag sealed in an outer bag. Five bags of 10 dip tubes are packaged in a box and then placed along with the liners and retainers into a single box for shipment.

Liner plus PE dip tube – 200-liter size:

For NLP-200-NS60X-1 and NLPK-200-NS60X-1, dip tubes are double-bagged in cleanroom conditions, five dip tubes per inner bag, then sealed in an outer bag. Two bags of five dip tubes (10 total) are packaged in a dip tube box. The dip tube box is placed along with the liners, retainers, and fitment adapters into a single box for shipment.

Liner plus high-viscosity PE or FEP dip tube – 19- and 40-liter sizes:

For NLVX-XXX-NS60X-1, dip tubes are double-bagged in cleanroom conditions, five dip tubes per inner bag, two bags of five dip tubes placed in an outer bag and sealed. Five bags of 10 dip tubes are packaged in a box and then placed along with the liners and retainers into a single box for shipment.

Liner plus high-viscosity PE or FEP dip tube – 200-liter size:

For NLVX-200-NS60X-1*, dip tubes are double-bagged in cleanroom conditions, five dip tubes per inner bag, then sealed in an outer bag. Two bags of five dip tubes (10 total) are packaged in a dip tube box. The dip tube box is placed along with the liners, retainers, and fitment adapters into a single box for shipment.

For NLVT-200-NS60G-1 only, dip tubes are double-bagged in cleanroom conditions, each dip tube is individually sleeved, then five individually sleeved dip tubes are sealed in an outer bag. Two outer bags of five dip tubes (10 total) are packaged in a dip tube box. The dip tube box is placed along with the liners, retainers, and fitment adapters into a single box for shipment.

**Please note the exception for the NLVT-200-NS60G-1 liner plus dip tube packaging.*

SHIPPING INFORMATION (CONTINUED)

Part number	Size	Box quantity (MOQ)*	Box content	Skid quantity (EOQ)**	Box dimensions (L x W x H)
REPLACEMENT LINERS ONLY					
NL-019-NS60X-1	19 L	50	50 liners, individually sleeved, 50 retainers	750 (15 boxes of 50)	667 mm x 413 mm x 425 mm (26.3" x 16.3" x 16.7")
NL-040-NS60X-1	40 L	50	50 liners, individually sleeved, 50 retainers	300 (six boxes of 50)	838 mm x 660 mm x 405 mm (33.0" x 26.0" x 15.9")
NL-200-NS60X-1	200 L	10	10 liners, individually sleeved, 10 retainers, 10 adapters	130 (13 boxes of 10)	1003 mm x 508 mm x 273 mm (39.5" x 20.0" x 10.7")
REPLACEMENT LINERS PLUS PE DIP TUBE					
NLP-019-NS60X-1	19 L	50	50 liners, individually sleeved, 50 retainers, box of 50 PE dip tubes (five bags of 10)	600 (12 boxes of 50)	686 mm x 560 mm x 425 mm (27.0" x 22.0" x 16.7")
NLPK-019-NS60X-1	19 L	50	50 liners, individually sleeved, 50 retainers, box of 50 PE dip tubes with semi-perfluoroelastomer O-rings (five bags of 10)	600 (12 boxes of 50)	686 mm x 560 mm x 425 mm (27.0" x 22.0" x 16.7")
NLP-040-NS60X-1	40 L	50	50 liners, individually sleeved, 50 retainers, box of 50 PE dip tubes (five bags of 10)	300 (six boxes of 50)	838 mm x 660 mm x 405 mm (33.0" x 26.0" x 15.9")
NLP-200-NS60X-1	200 L	10	10 liners, individually sleeved, 10 retainers, 10 adapters, box of 10 PE dip tubes (two bags of five)	100 (10 boxes of 10)	1054 mm x 508 mm x 273 mm (41.5" x 20.0" x 10.7")
NLPK-200-NS60K-1	200 L	10	10 liners, individually sleeved, 10 retainers, 10 adapters, box of 10 PE dip tubes with semi-perfluoroelastomer O-rings (two bags of five)	100 (10 boxes of 10)	1054 mm x 508 mm x 273 mm (41.5" x 20.0" x 10.7")
REPLACEMENT LINERS PLUS HIGH-VISCOSITY PE AND FEP DIP TUBES					
NLVP-019-NS60A-1 NLVT-019-NS60X-1	19 L	50	50 liners, individually sleeved, 50 retainers, box of 50 high-viscosity PE or FEP dip tubes (five bags of 10)	600 (12 boxes of 50)	686 mm x 560 mm x 425 mm (27.0" x 22.0" x 16.7")
NLVP-040-NS60A-1 NLVT-040-NS60A-1	40 L	50	50 liners, individually sleeved, 50 retainers, box of 50 high-viscosity PE or FEP dip tubes (five bags of 10)	300 (six boxes of 50)	838 mm x 660 mm x 405 mm (33.0" x 26.0" x 15.9")
NLVP-200-NS60F-1 NLVT-200-NS60F-1	200 L	10	10 liners, individually sleeved, 10 retainers, 10 adapters, box of 10 high-viscosity PE or FEP dip tubes (two bags of five)	100 (10 boxes of 10)	1054 mm x 508 mm x 273 mm (41.5" x 20.0" x 10.7")
NLVT-200-NS60G-1 only	200 L	10	10 liners, individually sleeved, 10 retainers, 10 adapters, box of 10 individually sleeved high-viscosity FEP dip tubes	100 (10 boxes of 10)	1054 mm x 508 mm x 273 mm (41.5" x 20.0" x 10.7")

*MOQ = minimum order quantity

**EOQ = economic order quantity

ORDERING INFORMATION

NOWPak Liner-based Canister System Conformal Replacement Liner: part number

____ - ____ - NS60 - 1

..... Particle certified

..... **O-ring/fitment type**

FOR 19- AND 40-LITER SIZES: FITMENT TYPE

A = 3/4" non-hardstop fitment, 19- and 40-liter sizes

C = 3/4" hardstop fitment, 19-liter size

D = 3/4" hardstop fitment, 40-liter size

FOR 200-LITER SIZE: O-RING/FITMENT TYPE

F = EPDM, hardstop fitment adapter

G = TFE/P, hardstop fitment adapter

K = Semi-perfluoroelastomer, hardstop fitment adapter

..... **Film**

NS60 = Polyethylene barrier film

..... **Liner size**

019 = 19-liter

040 = 40-liter

200 = 200-liter

..... **NOWPak liner system**

NL = liner only

NLP = liner plus single-use dip tube

NLPK = liner plus single-use dip tube with semi-perfluoroelastomer O-ring

NLVT = liner plus high-viscosity FEP dip tube

NLVP = liner plus high-viscosity PE dip tube

ACCESSORIES

Part number	Description
DA-04	Liner removal tool for 200-liter liners
NA-06	Liner removal tool for 4- to 40-liter liners
NA-07	Liner disposal plug, bag of 100
NA-13	Dip tube removal tool
NA-132	Alternative locator plate for the NF-01-FR bag inflation fixture (Required if using the NO-08A-63 canister with the NF-01-FR bag inflation fixture)
NA-17	Liner removal and drain tool
NA-27	O-ring maintenance tool kit; General purpose O-ring handling tools to facilitate O-ring removal and replacement
NA-41	Manual bag inflation connector for 4- to 20-liter liners, 63 mm buttress thread
NA-41-200	Manual bag inflation connector for 200-liter liners
NA-41-200-2	Manual bag inflation connector for 200-liter liners, 2" fitment
NA-41-8990	Manual bag inflation connector for 4- to 20-liter liners, 2.5 – 12 UN thread
NA-60	Liner insertion tool for 4- to 40-liter liners
NA-60-200	Liner insertion tool for 200-liter liners
NF-01-FR	Automatic bag inflation fixture for 4- to 20-liter liners
NF-40-FR	Automatic bag inflation fixture for 40-liter liners
NF-180/200-FR	Automatic bag inflation fixture for 200-liter liners

FOR MORE INFORMATION

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Corporate Headquarters

129 Concord Road
Billerica, MA 01821
USA

Customer Service

Tel +1 952 556 4181
Fax +1 952 556 8022
Toll Free 800 394 4083

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