



# LIQUID SINGLE-USE BAGS

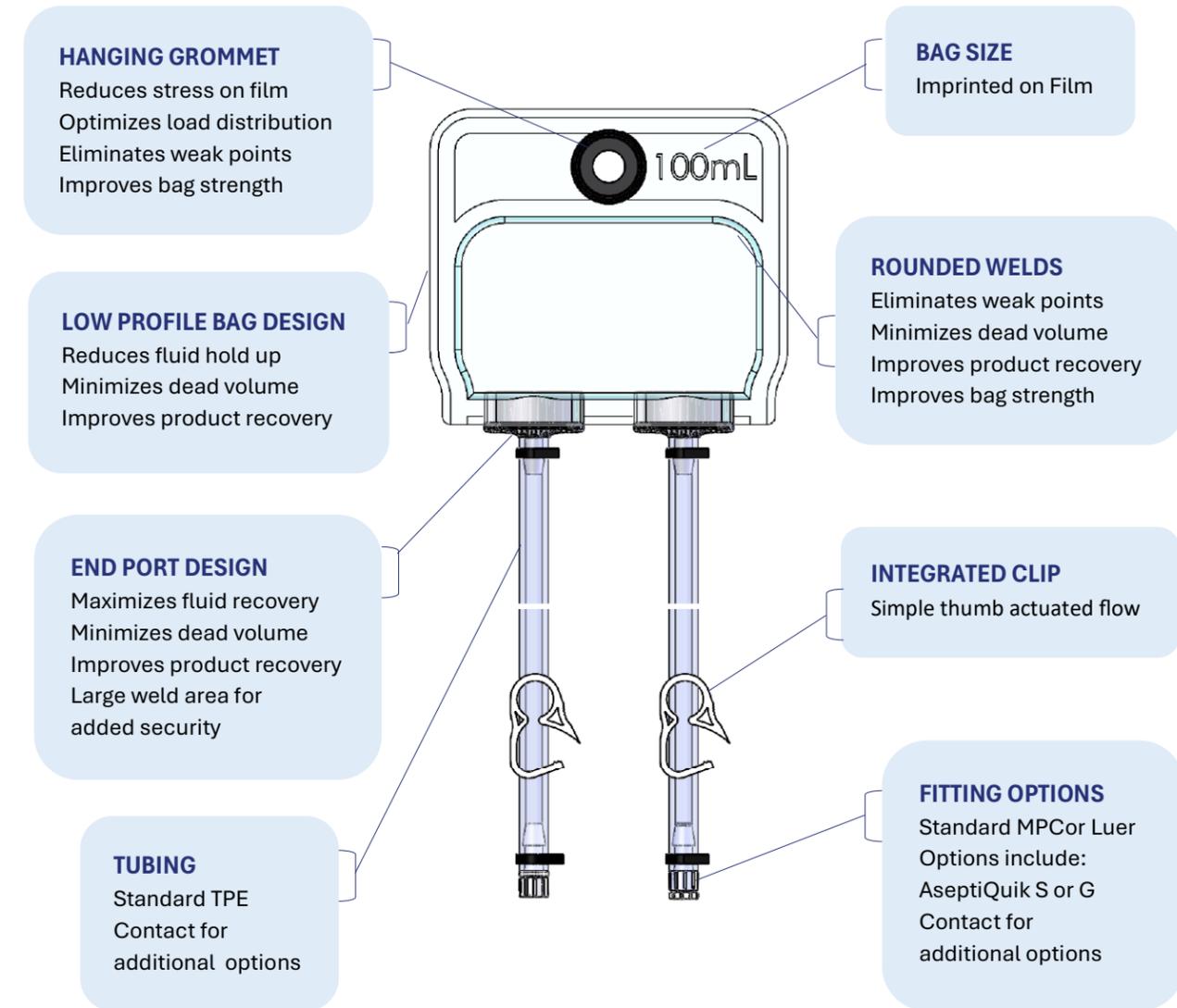
## Single-Use, Multi-Level Performance



Manufactured in  
Vineland, NJ  
since 1936

**MADE IN** ★ ★   
**USA** ★ ★ 

## Small Bags (50mL, 100mL, 250mL, 500mL, 1L & 2L)



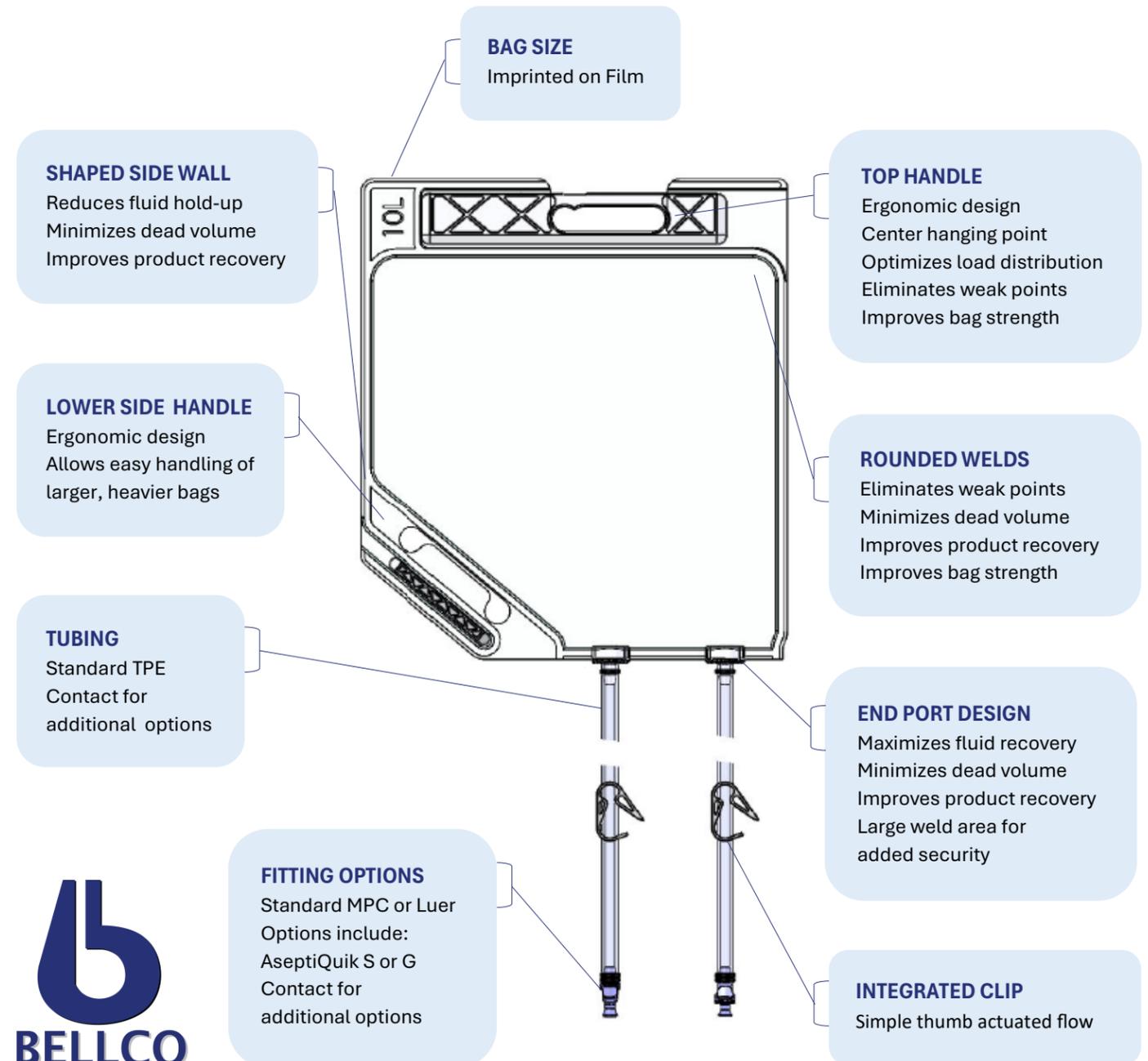
## YOUR SINGLE-USE SOLUTION FOR CRITICAL FLUIDS.

Liquid single-use bags are available in standard sizes from 50 mL to 20 L in 2 and 3-port options, and can be customized up to 50 L with up to 4-ports in larger chamber sizes (2 L to 50 L). Custom face-ported 2D bags are also available in 20 L, 50 L, 100 L and 200 L.

### Applications:

- Buffer and cell culture media
- Bulk product collections and storage
- Chromatography and filtration buffer
- Fraction collection
- Product sampling and transport
- In Vitro Cell Culture
- Cell-based vaccine production
- Immunotherapy products
- Bulk Aliquoting
- Scale-up
- ULT Storage down to -40°C

## Large Bags (5L, 10L, 20L & 50L)



Bag Volume	# of Ports	Tubing	Port Sizes			Connectors			Internal Surface Area	
			Port 1	Port 2	Port 3	Line 1	Line 2	Line 3	In <sup>2</sup>	cm <sup>2</sup>
50mL	2	TPE	1/4"	1/4"	N/A	Luer	Luer	N/A	25	161.3
100mL	2	TPE	1/4"	1/4"	N/A	Luer	Luer	N/A	30	193.5
250mL	2	TPE	1/4"	1/4"	N/A	Luer	Luer	N/A	46	296.8
500mL	2	TPE	1/4"	1/4"	N/A	Luer	Luer	N/A	66	425.8
500mL	2	TPE	1/4"	1/4"	N/A	MPC	MPC	N/A	66	425.8
500mL	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	66	425.8
1L	2	TPE	1/4"	1/4"	N/A	Luer	Luer	N/A	105	677.4
1L	2	TPE	3/8"	3/8"	N/A	MPC	MPC	N/A	105	677.4
1L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	105	677.4
2L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	174	1,122.6
5L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	280	1,806.4
10L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	441	2,845.2
20L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	772	4,980.6
50L	3	TPE	3/8"	3/8"	1/4"	MPC	MPC	Injection Cap	1930	12,451.6



# Medical-Grade Renolit 9101 PE Film

All liquid single-use bags are manufactured with industry-proven, medical-grade Renolit 9101 film, a multilayer film composed of a high-purity biocompatible polyethylene (PE) contact layer with internal ethylene vinyl alcohol (EVOH) oxygen-barrier.

## Physical Properties

Property	Typical Value*
Film Thickness	0.325mm
Clarity	97% (ASTM D-1003)
Tensile Strength at Break	13MPa (ASTM D-882)
Elongation at Break	350% (ASTM D-882)
Break at Cold Temperature	< -45°C (ISO 8570)
Water Vapor Transmission†	0.32 g/m <sup>2</sup> /day (ASTM F-1249)
O <sub>2</sub> Permeability‡	<0.05 cm <sup>3</sup> /m <sup>2</sup> /day/bar
CO <sub>2</sub> Permeability‡	<0.2 cm <sup>3</sup> /m <sup>2</sup> /day/bar

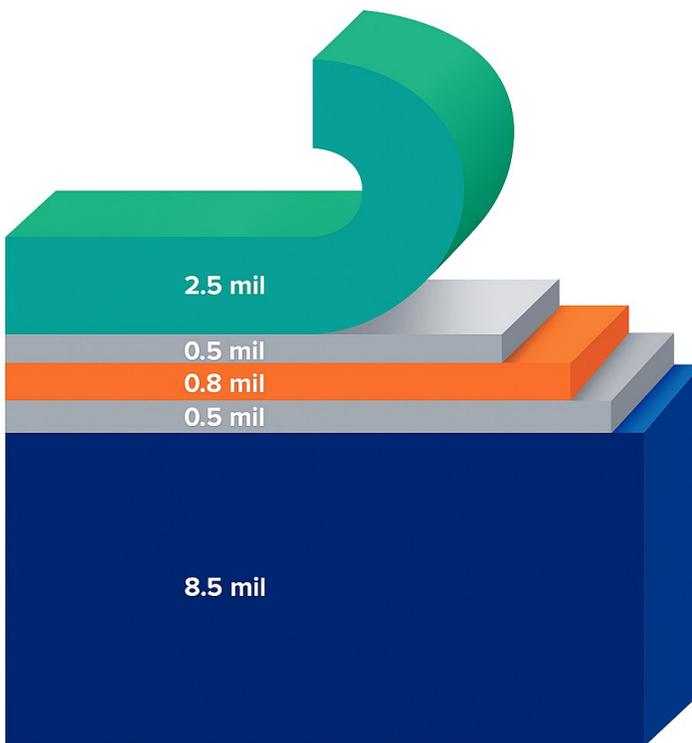
\*Transmission values for film gamma-irradiated with 50 KGy.

Other are for film gamma-irradiated with 25 KGy.

† @ 23 °C, 100% RH.

‡ @ 23 °C, 0% RH.

## Renolit 9101 PE Film Layers



### Renolit 9101

■ ULDPPE   ■ Tie   ■ EVOH   ■ LDPE

## Quality, Regulatory, and Biocompatibility Properties

Category	Property/Test*
Composition	<ul style="list-style-type: none"> <li>High-purity polyethylene (PE) and ethylene vinyl alcohol (EVOH)</li> <li>Animal-Derived Component Free (ADCF) and TSE/BSE</li> </ul>
Biocompatibility	<ul style="list-style-type: none"> <li>ISO 10993-4, Hemolysis</li> <li>ISO 10993-5, Toxicity</li> <li>ISO 10993-6, Implantation</li> <li>ISO 10993-10, Irritation and Sensitization</li> <li>ISO 10993-11, Acute System Toxicity</li> <li>USP &lt;85&gt;, Bacterial Endotoxins - LAL test</li> <li>USP &lt;87&gt;, Biological Reactivity in vitro</li> <li>USP &lt;88&gt;, Biological Reactivity in vivo, Class VI</li> </ul>
Extractables/Leachables	<ul style="list-style-type: none"> <li>USP &lt;661.1&gt;, Polyethylene Physiochemical Tests, Extractable Metals, Plastic Additives</li> <li>Ph. Eur.3.1.5, Polyethylene with additives for containers for parenteral preparations and for ophthalmic Preparations</li> </ul>
Recommended Sterilization Method	Gamma

\*Pharmacopoeia and Biocompatibility compliance test reports available upon request



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