

RAPID TRANSFER PORT

Remote Handling | About DESTACO



THE BEST PRODUCTS. UNMATCHED SERVICE. WORLDWIDE.

With a support network spanning the globe, DESTACO offers consistent, comprehensive service to any location in the world. Whether your operations are localized or span multiple continents, you will always have access to the highest levels of customer service and technical support.

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Since its founding in 1915, DESTACO has focused on outstanding customer service. The company grew steadily over the next four decades and in 1958 started to expand internationally. In 1983, DESTACO opened its first overseas manufacturing facility in Thailand. With the acquisition of Robohand in 1996, DESTACO started to get involved in automation and since then has expanded by acquiring and integrating other well-known brands like Camco and Ferguson. In 2008, we strengthened our presence in life sciences when Central Research Laboratories (CRL) joined team DESTACO.

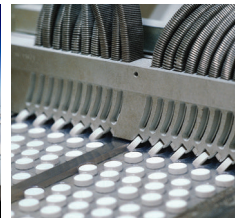
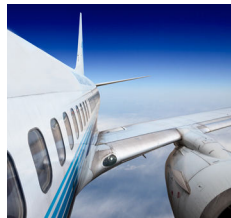
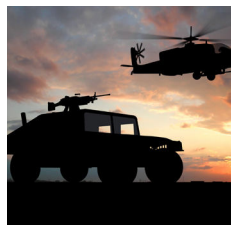
Today DESTACO is a world leader in the innovation, design, manufacture and support of clamping, gripping, transferring, indexing and robotic tooling solutions for workplace and automation needs.

Our growth is a direct result of our commitment to serve customers of all sizes on a local, one-to-one basis.

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DESTACO provides productivity solutions to a diverse range of market segments

Life sciences
Bio containment
Consumer products
Food and packaging
Automotive/transportation
Aerospace
Alternative energy
Nuclear
Defense



RAPID TRANSFER PORT

Remote Handling | Product Overview

DESTACO provides automation and containment solutions to the radio-pharma and nuclear medicine industries.

DESTACO
Stainless Steel Manual Clamps

CAMCO
Direct Drive Index Table

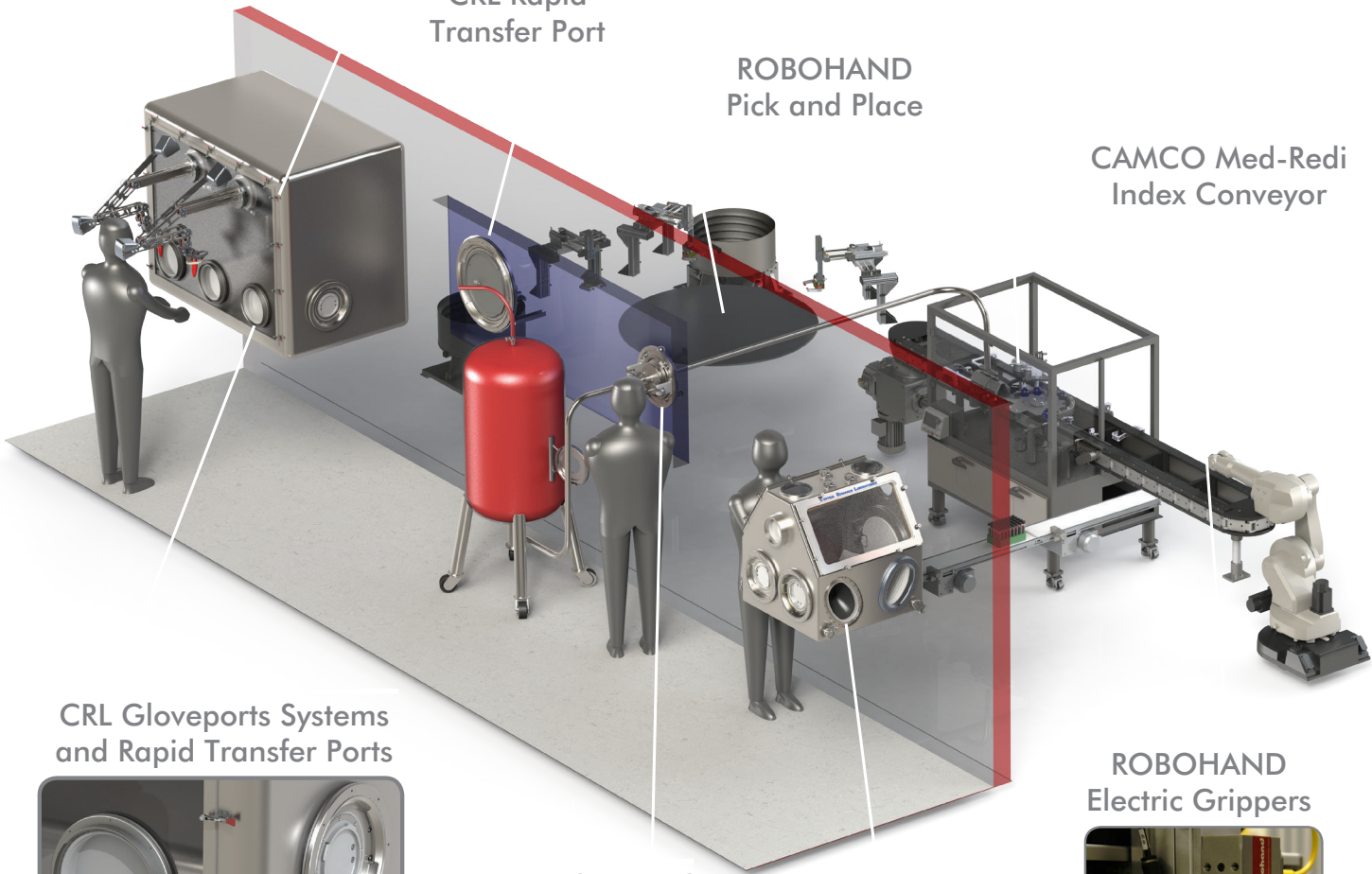
CRL
Tele-Manipulators

DESTACO Vacuum Products
DX Drive Actuators and Robohand Slides

CRL Rapid
Transfer Port

ROBOHAND
Pick and Place

CAMCO Med-Redi
Index Conveyor

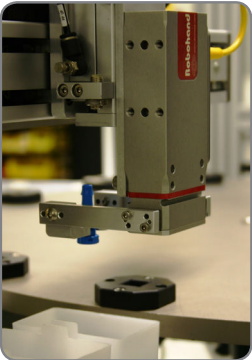


CRL Gloveports Systems
and Rapid Transfer Ports



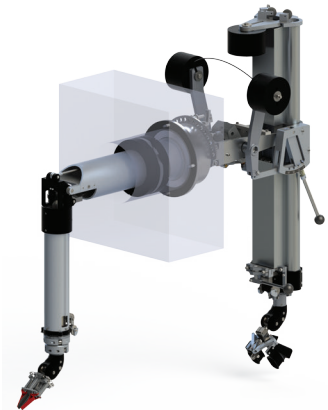
CRL Sterile Liquid
Transfer Port

ROBOHAND
Electric Grippers



Courtesy of DEMCO Automation

CRL Gloveport Systems and
Rapid Transfer Ports



Telemanipulators are typically used for remotely performing tasks in a high-radiation or isolated environment by extending the dexterous manipulative capabilities of a human operator.

RAPID TRANSFER PORT

Remote Handling | Dimensions and Technical Specifications

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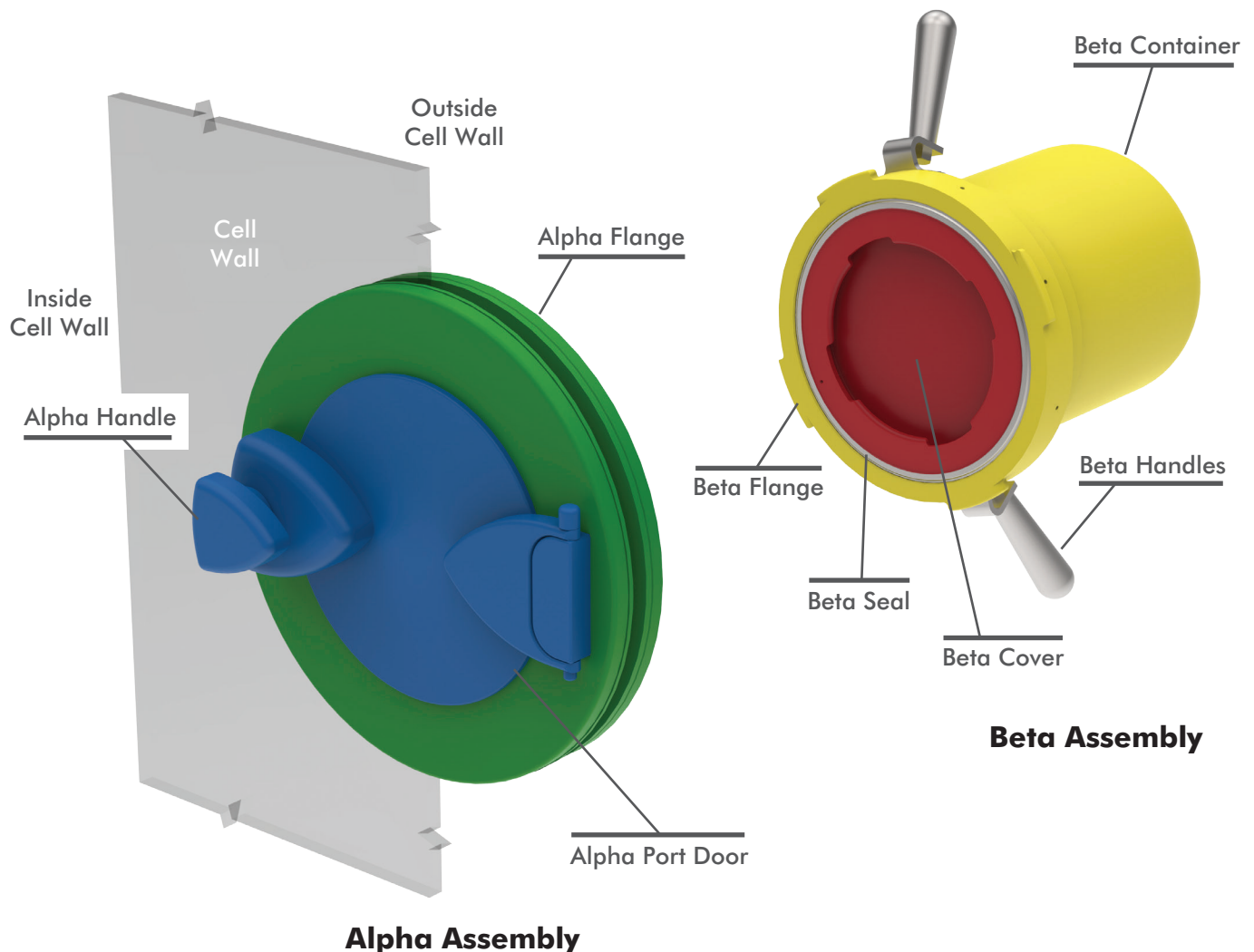
RAPID TRANSFER PORT

Remote Handling | Basic Components

The CRL Rapid Transfer Port (RTP) is a double door transfer system that consists of two main components, the alpha assembly and the beta assembly. The alpha assembly is normally mounted to the cell wall of a contained environment and the beta assembly is mobile. When the two assemblies are mated, materials can be rapidly transferred into and out of the environment without breaking containment.

RTP Design Features

- Precision machined components for exact tolerances
- 316 stainless steel alpha flange with polypropylene or stainless steel port door
- Easy to clean silicone alpha and beta seals
- Seals installed and removed without the need for special tooling
- Mechanical interlocks to prevent improper port operation
- Contact us with any special design requirements for your application



RAPID TRANSFER PORT

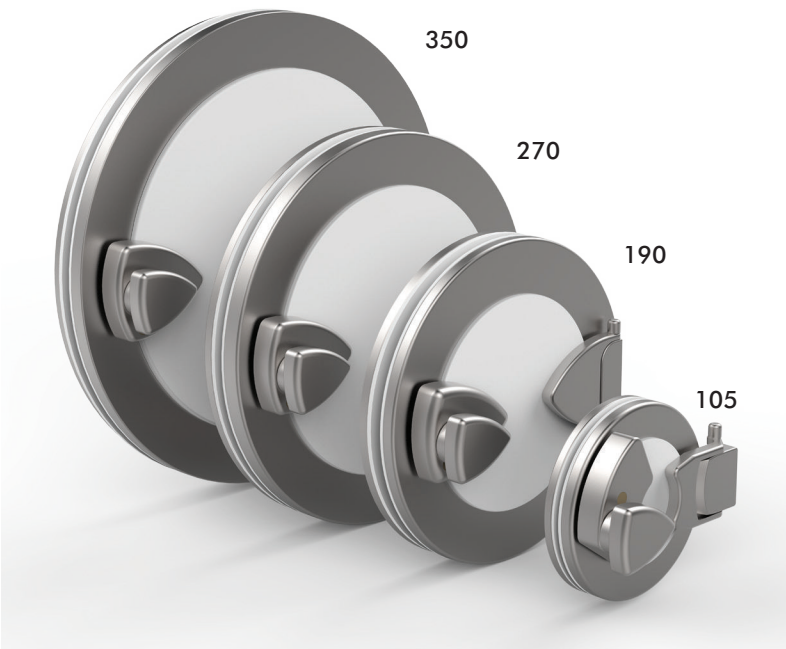
Remote Handling | Available CRTP Configurations



Handle
in closed
position



Handle
in open
position



Size		Description
CRL-CRTP-105-SS	105	Alpha Flange Assembly - Stainless Steel Flange & Port Door with Interlocks
CRL-CRTP-105-PP		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks
CRL-CRTP-105-LT		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks, Liquid Transfer
CRL-CRTP-190-SS	190	Alpha Flange Assembly - Stainless Steel Flange & Port Door with Interlocks
CRL-CRTP-190-PP		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks
CRL-CRTP-190-LT		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks, Liquid Transfer
CRL-CRTP-270-SS	270	Alpha Flange Assembly - Stainless Steel Flange & Port Door with Interlocks
CRL-CRTP-270-PP		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks
CRL-CRTP-350-SS	350	Alpha Flange Assembly - Stainless Steel Flange & Port Door with Interlocks
CRL-CRTP-350-PP		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks



Stainless Steel Door (SS)
(Typically used in nuclear
medicine applications)



Polypropylene Door (PP)
(Typically used in pharma and
powder transfer applications)



Liquid Transfer Door (LT)
(Typically used in filling line
and fluid transfer applications)

RAPID TRANSFER PORT

Remote Handling | Interlock System

The CRL Rapid Transfer Port (RTP) features mechanical interlocks that prevent the improper operation of the transfer port. The interlocks are incorporated into the alpha flange and prevent the following:

- The alpha port door from being opened when a beta flange has not been docked.
- The beta flange from being removed from the alpha flange when the alpha port door is open.

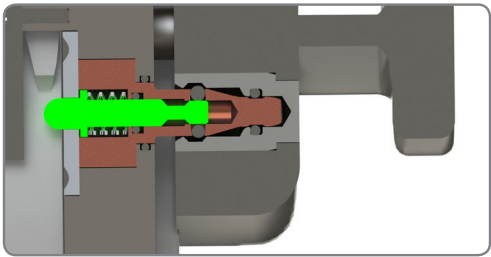
Use of interlocks prevent actions that could compromise the containment and sterility of the barrier/isolator.



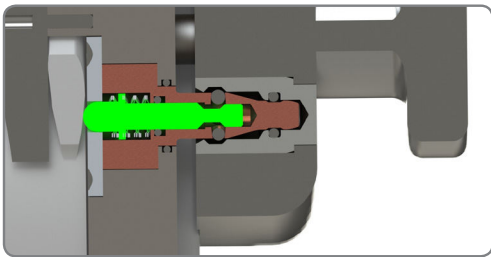
Canister Interlock

Beta Cover Interlock

Port Door Interlock

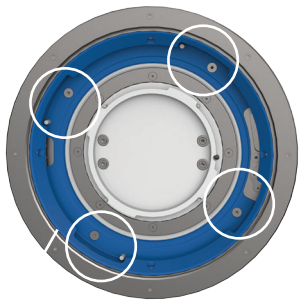


Port door interlock (shown in locked position), beta assembly not docked.

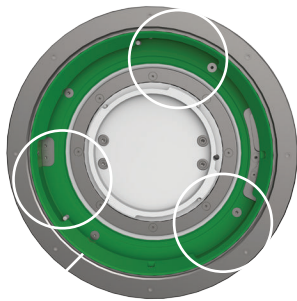
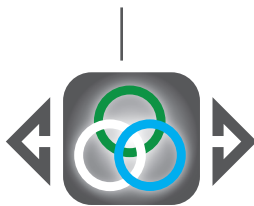


Port door interlock (shown in unlocked position), beta assembly docked.

The CleanRTP's interchangeable beta mount inserts can be replaced without breaking containment. This allows never before seen versatility.



4-Bayonet Insert



3-Bayonet Insert



RAPID TRANSFER PORT

Remote Handling | Sterile Liquid Transfer Port

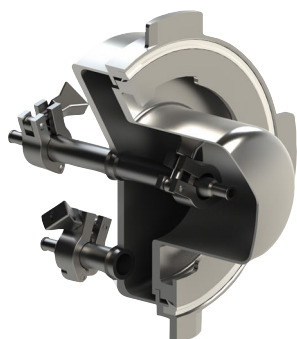
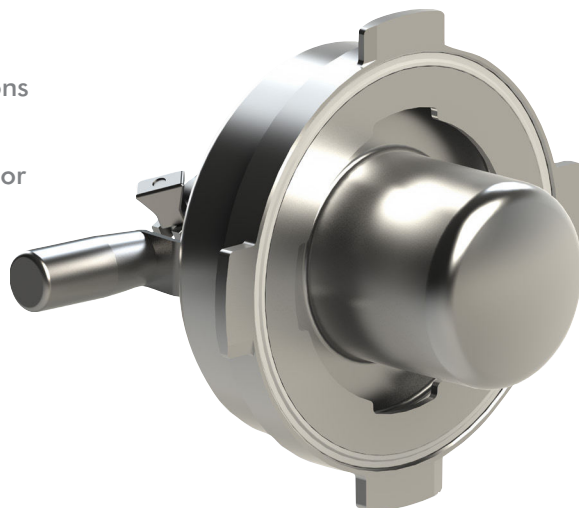
The CRL **SLTP** has been engineered to utilize standard steam in place processes, enabling efficient transfer of liquids from sterile product devices into a clean room or isolator.

Stainless steel beta flange with standard sanitary fitting connections

Product contact surfaces with 15 microinch electropolish finish

316L stainless steel alpha flange with extended polypropylene door

Easy to clean alpha and beta seals



**SLTP Beta Flange with
Steam Connections**



**Steam-In-Place
Docking Plate**



**Modified
Alpha Flange**

SLTP beta flange available with single or dual product connections and single condensate drain connection.

Product connection tube inner surfaces polished to 15 micro inch finish and sloped to maximize drainage.

SLTP beta flange easily attached and removed from steam-in-place docking plate with out any special tools or accessories.

SLTP beta and alpha flange constructed from 316L stainless steel material.

Extended polypropylene alpha port door to accommodate product connection tubes.

Tri-clover fittings used on product tubes for rapid hose connect/disconnect.

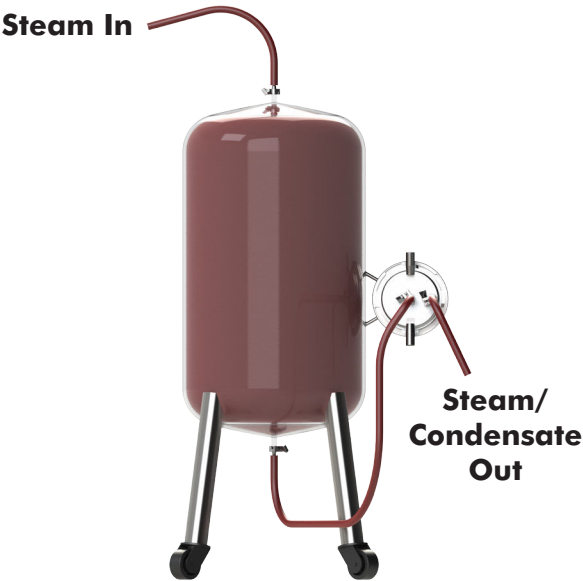
Alpha flange equipped with mechanical interlocks to prevent improper port operation.

SLTP available in 190mm size.

RAPID TRANSFER PORT

Remote Handling | Sterile Liquid Transfer Port Application Examples

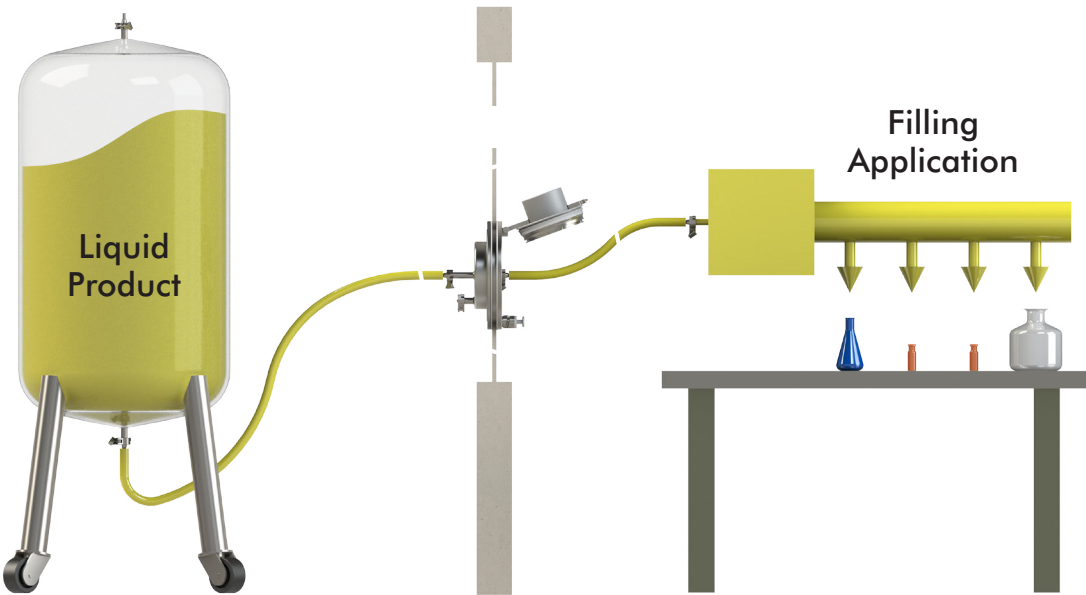
Tank and SLTP Steamed In Place



Product Tank Filled and Ready To Transfer

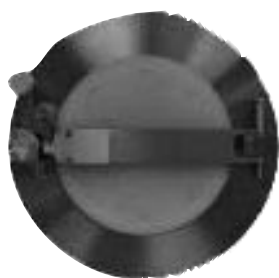


SLTP Docked Enabling Aseptic Liquid Transfer



RAPID TRANSFER PORT

Remote Handling | Sterilizable Rapid Transfer Port Introduction



**Alpha Flange
with Heater**

The CRL Sterilizable Rapid Transfer Port (SRTP) is a reduced cost manual double-door system that consists of an alpha flange assembly featuring CRL's patented dry-heat technology and mating beta canister assembly.

This system allows for the transfer of materials (stoppers, vials, caps, etc.) into a sterile isolator or aseptic barrier system requiring a high sterility assurance level. Independent tests have shown that a 6-log microbial reduction can be achieved at the sealing surfaces of the SRTP.

Unlike UV sterilization techniques, our dry heat sterilization method eliminates concerns often associated with contaminated seals resulting from inconsistent aseptic wiping or shadowing and stacking.

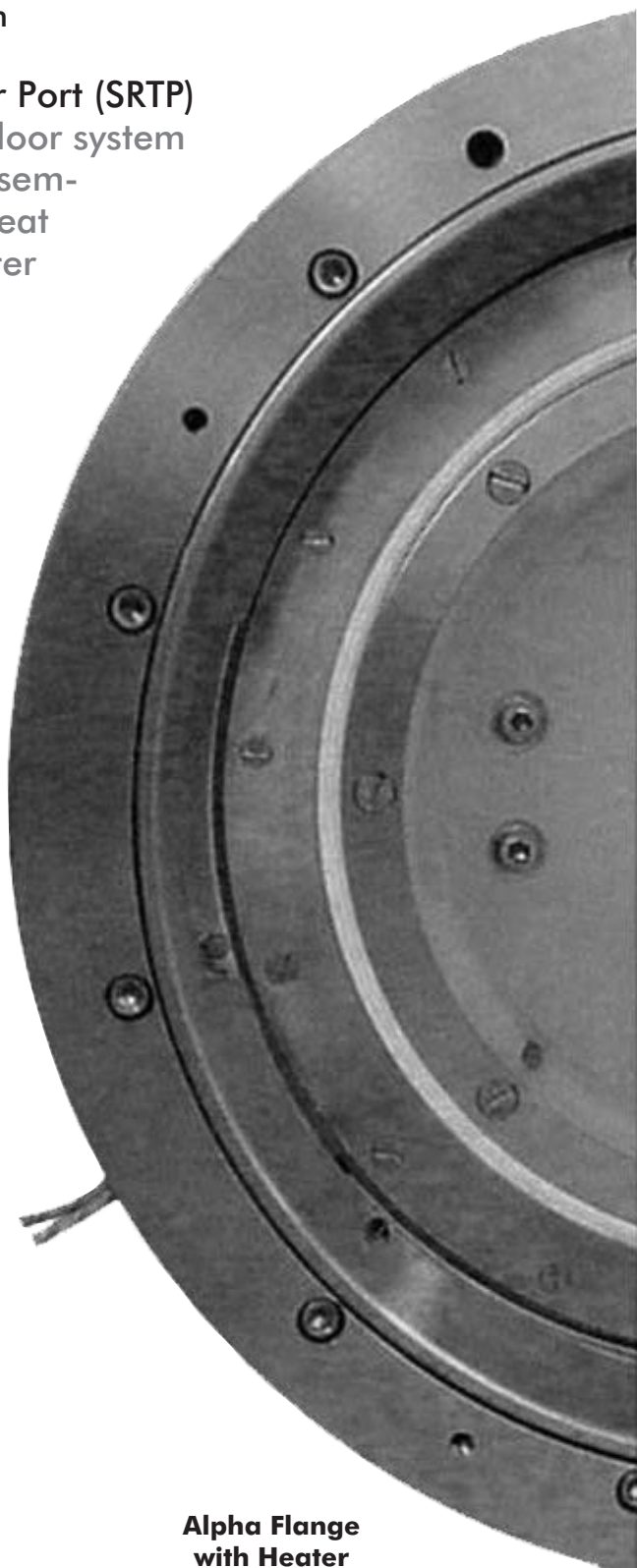
When you need fast sterile cycle times and reliable operation, consider the transfer port used in FDA approved systems by the top North American pharmaceutical manufacturers... the CRL Sterilizable Rapid Transfer Port (SRTP).



Beta Flange



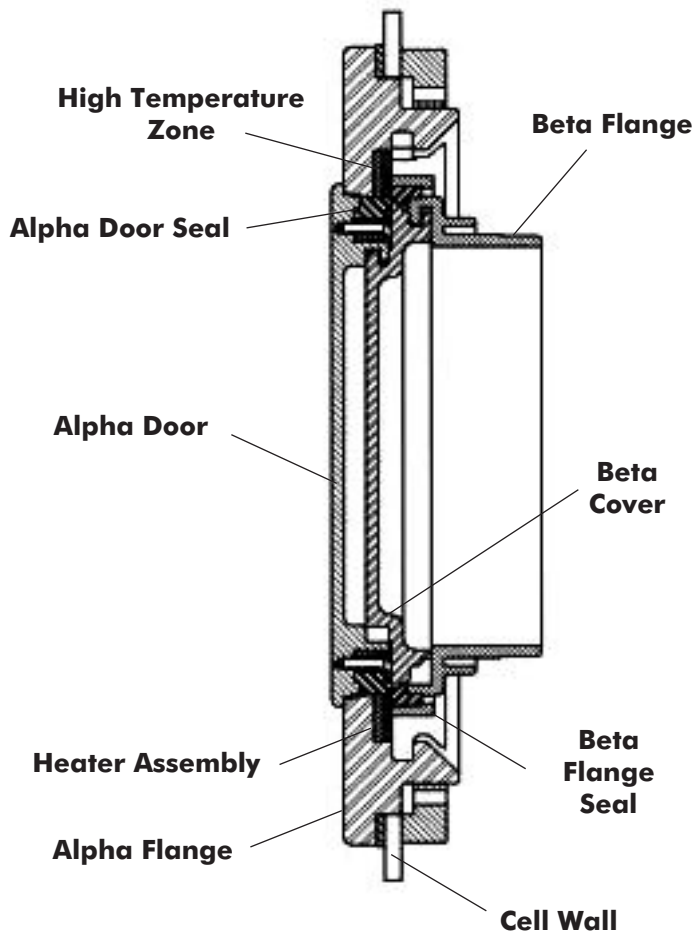
SRTP



**Alpha Flange
with Heater**

RAPID TRANSFER PORT

Remote Handling | Sterilizable Rapid Transfer Port Features



System Features

Electric heater installed in alpha port flange at intersection of seals (high temperature zone).

Critical zone is heated to 190° C and held for predetermined time after alpha & beta are docked.

6-log microbial reduction is achieved in under three minutes.

Depending on application, typical dock-to-dump cycle time is five minutes.

Design Features (190mm diameter)

16L stainless steel alpha flange with polypropylene or stainless steel door.

Silicone gasket seals.

Molded medical grade polymer beta flange with polypropylene container.

Polypropylene or stainless steel protective collar to cover Ring-of-Concern.

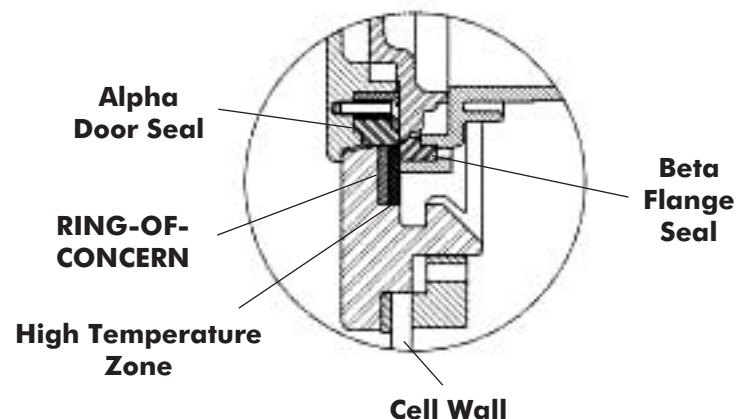
Optional Features Available

Automated port door functions.

Automated protective collar.

Molded medical grade polymer beta flange with various bag material.

Automated loader system for alpha/beta docking.



RAPID TRANSFER PORT

Remote Handling | Transfer Port and Beta Assemblies

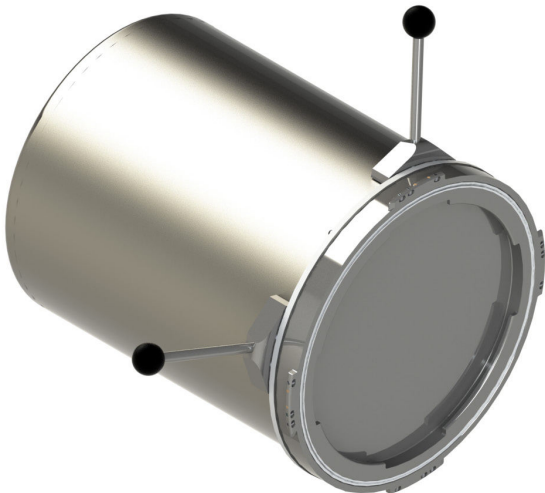
The CRL 460 RTP features mechanical interlocks that prevent the improper operations of the transfer port. The interlocks are incorporated into the alpha flange and interface with the alpha port door handle.

	Size	Description
CRL-47919	460	Alpha Flange Assembly - Stainless Steel Flange & Port Door with Interlocks
CRL-43787		Alpha Flange Assembly - Stainless Steel Flange & Polypropylene Port Door with Interlocks



The table below lists a few common beta assemblies that can be mated to the 460 size RTP.

	Size	Description
Beta Canister Assembly		
CRL-47864-24.00	460	Beta Canister Assembly (Stainless Steel)
Beta Bagging Flange		
CRL-43790	460	Beta Bagging Flange Assembly (Polypropylene)
Beta Coupler Assembly		
CRL-43788	460	Beta Coupler Assembly (Stainless Steel Flange/PVC Cover)



RAPID TRANSFER PORT

Remote Handling | Accessories

The CRL Beta Containers are designed to be gas tight and are available with machined stainless steel and polypropylene flanges in the sizes shown below.



Stainless steel container bolted to stainless steel flange.



Polypropylene container welded to a polypropylene flange.

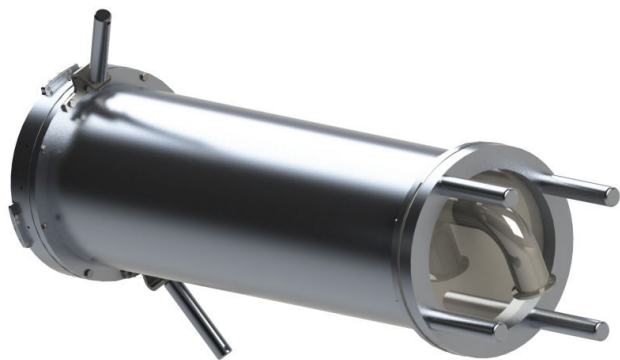
	Size	Length ([in.] mm)
Beta Canister Assembly (Polypropylene)		
CRL-41204-4.00	105	[4.00] 101.6
CRL-41204-8.00		[8.00] 203.2
CRL-41204-12.00		[12.00] 304.8
CRL-41204-18.00		[18.00] 457.2
CRL-41204-24.00		[24.00] 609.6
CRL-41278-8.00	190	[8.00] 203.2
CRL-41278-16.00		[16.00] 406.4
CRL-41278-24.00		[24.00] 609.6
CRL-41180-16.00	27	[16.00] 304.8
CRL-41180-24.00		[24.00] 609.6
CRL-41181-12.00	350	[12.00] 304.8
CRL-41181-24.00		[24.00] 609.6
Beta Canister Assembly (Stainless Steel)		
CRL-41599-11.81	105	[11.81] 300
CRL-41599-16.00		[16.00] 406.4
CRL-41249-23.62	190	[23.62] 600
CRL-41598-24.00	270	[24.00] 609.6
CRL-41228-15.75	350	[15.75] 400

Note: Please contact CRL for custom container lengths and specific overall dimensions.

RAPID TRANSFER PORT

Remote Handling | Accessories

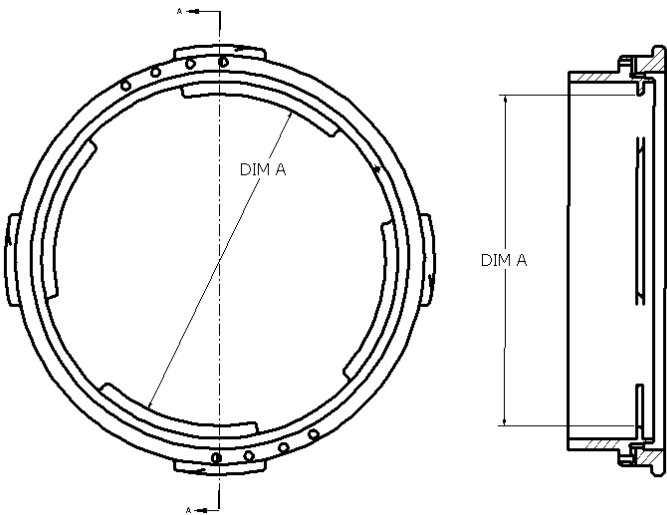
The CRL Autoclavable Containers are available in materials resistant to autoclave conditions and can be provided with bottom or side mounted tri-clover fittings for attaching hydrophobic membrane filters.



	Size	Length ([in.] mm)
Aluminum		
CRL-44356-8.00	105	[8.00] 203.2
CRL-44359-15.75	190	[15.75] 400
CRL-41201-16.00	270	[16.00] 406.4
CRL-41580-16.00	350	[16.00] 406.4
CRL-41580-24.00		[24.00] 609.6
Stainless Steel		
CRL-41253-8.00	105	[8.00] 203.2
CRL-42070-16.00	190	[16.00] 406.4
CRL-41582-15.75	270	[15.75] 400
CRL-41581-16.00	350	[16.00] 406.4

Note: The lengths shown are only for the container and do not include the additional length added by the bottom container support legs. Please contact CRL for custom container lengths and specific overall dimensions.

The following table provides the largest diameter of an object that can be passed through the alpha and beta container for the different size containers.



	Material	Dimension A ([in.] mm)
105 mm	Polypropylene	[3.68] 93.47
	Stainless Steel	
190 mm	Polypropylene	[6.70] 170.18
	Stainless Steel	
270 mm	Polypropylene	[9.84] 249.93
	Stainless Steel	
	Ultem®	[9.00] 228.60
350 mm	Polypropylene	[12.97] 329.13
	Stainless Steel	
	Ultem®	[12.18] 309.37
460 mm	Polypropylene	[17.29] 439.16
	Stainless Steel	

Ultem® is a Registered Trademark of GE.

RAPID TRANSFER PORT

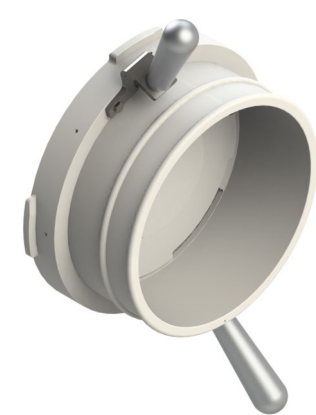
Remote Handling | Accessories

The CRL Sterilizing Cover has been designed to mount into the alpha port, maintain containment when the port door is opened and allow the entire alpha port door and flange surface to be sterilized (by a VHP process, for example).



	Size	Description
Clean RPT (CRTP)		
CRL-CRTP-105-SC	105	CRTP Sterilization Cover Assembly (Polypropylene)
CRL-CRTP-190-SC	190	
CRL-CRTP-270-SC	270	
CRL-CRTP-350-SC	350	
Legacy RTP		
CRL-44357	105	RTP Sterilization Cover Assembly (Polypropylene)
CRL-44360	190	
CRL-43402	270	
CRL-43401	350	
CRL-43789	460	

The CRL Beta Bagging Flange Assembly has been designed to mount to the alpha port and typically has a bag attached to it to allow for the transfer of powder, waste, tools, or other products. Also available in stainless steel or aluminum materials.



		Size	Description
CRL-41032	105	Beta Bagging Flange Assembly - One Rib (Polypropylene)	
CRL-42657		Beta Bagging Flange Assembly - Two Rib (Polypropylene)	
CRL-41021	190	Beta Bagging Flange Assembly - One Rib (Polypropylene)	
CRL-41022		Beta Bagging Flange Assembly - Two Rib (Polypropylene)	
CRL-41000	270	Beta Bagging Flange Assembly - One Rib (Polypropylene)	
CRL-41001		Beta Bagging Flange Assembly - Two Rib (Polypropylene)	
CRL-44198		Beta Bagging Flange Assembly (Ultem®)	
CRL-41038	350	Beta Bagging Flange Assembly - Two Rib (Polypropylene)	
CRL-41037		Beta Bagging Flange Assembly - One Rib (Polypropylene)	
CRL-44311		Beta Bagging Flange Assembly (Ultem®)	
CRL-43790	460	Beta Bagging Flange Assembly (Polypropylene)	

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RAPID TRANSFER PORT

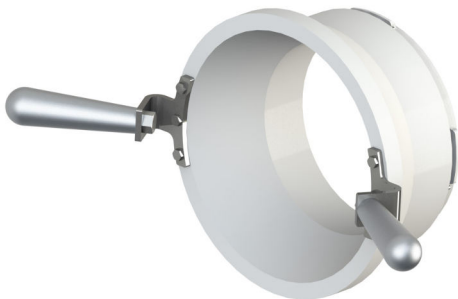
Remote Handling | Accessories

The CRL Beta Flange with Tri-Clover Fitting has been designed to mount to the alpha flange and allow a tri-clover valve or rigid container to be attached and typically used for the transfer of powder into the isolator.



	Size	Description
CRL-45086	105	Beta Flange Assembly - 3 inch Triclover (Stainless Steel)
CRL-41030		Beta Flange Assembly - 4 inch Tri-clover (Stainless Steel)
CRL-47296		Beta Flange Assembly - 4 inch Triclover (Polypropylene)
CRL-46135	190	Beta Flange Assembly - 4 inch Tri-clover (Stainless Steel)
CRL-41019		Beta Flange Assembly - 6 inch Tri-clover (Polypropylene)
CRL-43526		Beta Flange Assembly - 8 inch Triclover (Polypropylene)
CRL-44197		Beta Flange Assembly - 8 inch Triclover (Stainless Steel)
CRL-41911	270	Beta Flange Assembly - 8 inch Tri-clover (Stainless Steel)
CRL-43971		Beta Flange Assembly - 10 inch Triclover (Stainless Steel)
CRL-46765		Beta Flange Assembly - 10 inch Triclover (Polypropylene)

The CRL Inside Funnel assembly has been designed to mount into the alpha port from inside the isolator. The funnel assembly covers the seal surface so that materials or tools being transferred over the seal area do not damage it.



	Size	Description
CRL-43169	105	Inside Funnel Assembly (Stainless Steel)
CRL-41261	190	Inside Funnel Assembly (Polypropylene)
CRL-41212	270	Inside Funnel Assembly (Polypropylene)

The CRL Inside Bagging Ring Assembly has been designed to mount to the alpha port inside the isolator and typically has a flexible chute attached to it to allow for the transfer of powder into containers.



	Size	Description
CRL-41259	190	Bagging Ring Assembly - Inside Mount (Polypropylene)

RAPID TRANSFER PORT

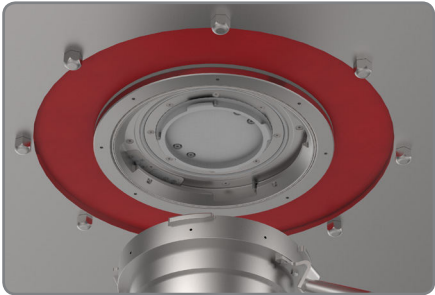
Remote Handling | Accessories

The CRL Beta Flange Wrench is used to install or remove the beta cover from the beta flange when the container is not mated to the alpha flange. The beta wrench is available for use with all standard beta containers.



	Size	Description
CRL-41114	105	Beta Cover Wrench
CRL-41115	190	
CRL-41116	270	
CRL-41117	350	
CRL-45095	460	

CRL Rapid Transfer Ports can be used with flexible membrane mounts and rotating alpha or beta flanges to enable the connection of large containers or process vessels.



CRL's Push-Through Gloveports are used in isolators or gloveboxes where activities bring together dangerous or sterile products with human operators.

CRL Transfer products are used to:

Transfer hazardous toxic or sterile material from one sealed enclosure to another sealed enclosure.

Perform transfer without contaminating the sealed enclosures or the environment surrounding the sealed enclosures.

