Allegro™ Multi-Purpose Processing Trolleys

To support a wide range of fluid management applications with Allegro single-use systems

Biotech or pharmaceutical manufacturing processes are comprised of a series of unit operations. In order to facilitate and optimize these operations Pall has introduced the Allegro multi-purpose single stack and modular multi-stack processing trolleys. Pall's multipurpose trolleys enable easy implementation of a wide range of single-use system designs around each unit operation.

The processing trolley has been specifically engineered in order to provide maximum flexibility in most single-use operations used in the processing environment.

The system's support trays are made of a high-molecular-weight polyethylene (PE). Due to their outstanding processing capabilities and superior wear resistance, these trays are suited to a wide range of applications – from onsite transport, materials handling, storage, and production within the facility.

Pall has designed hardware to ensure safe and reliable handling of our Allegro systems as well as provide maximum flexibility to the end user.

*Filtration. Separation. Solution.*SM

AllegroSystems
The Single-Use Solution

Product Overview

The Allegro multi-purpose processing trolleys have been designed to assist in applications where fluid containment, ease of use and flexibility are paramount. Trolleys are based around a mobile stainless steel frame, where trays and other accessories can be fitted. The base frame can be expanded depending on operation and volume requirements. The trays are very easy to install and remain fully accessible, therefore operator intervention is kept to a minimum.

Single column multipurpose processing trolley with 20 L Allegro trays and systems

Features and Benefits

Table 1

Features	Benefits
Modular design	Allows for various combinations of tray configurations depending on volumes to be processed. Can be used in different applications such as depth filtration, sterile filtration with *in situ* integrity testing, fraction collection, media, and buffer preparation
Trays manufactured in HDPE	Trays are very robust and can be cleaned with a wide variety of solutions due to excellent chemical resistance
Operating temperature* range from -40 °C to 60 °C	Can be used for storage at low and high temperature
Stackable	Minimizes storage footprints
Different sizes	Designed to handle 10 L, 20 L, 50 L and 100 L systems
Excellent drainage capability	Allegro 2D systems trays can be put at a slight angle to maximize product recovery

* Operating temperature is dependant on the biocontainer operating range. The biocontainers up to 10 L are validated between -80 to 60 °C The biocontainers 20 L and above are validated between 4 to 60 °C

Applications

The multi-purpose modular processing trolleys can be used in multiple applications in conjunction with Pall's full range of separation and single use technology including:

▶ Clarification and product storage

▶ Buffer filtration and storage

▶ Chromatography fraction collection

▶ Sterile filtration with *in situ* testing and product storage

Quality Standards

Allegro multi-purpose modular processing trolleys are manufactured to high standards ensuring excellent build quality. The trolleys are manufactured under a Quality Management System Certified to ISO 9001 and are designed to be handled in a Class C GMP clean-room environment.

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Figure 1

Allegro trolley and trolley extension containing 20 L Allegro trays

Figure 2

Allegro multi-purpose trolley configured with Pall Stax™ depth filtration unit, 100 L Allegro tote, 20 L Allegro trays and Allegro tabletop

Figure 3

Allegro trolley configured for inline integrity testing of a sterile filter prior to buffer filtration

Figure 4

Allegro trays can be stacked to minimize floor space and reduce manufacturing footprint

Technical Specifications

Table 2

Specifications	20/50 L Trays, Lids, Tabletop, 100 L Tote and Outlet Closure	
Material of construction	HDPE – PE500	
Operating temperature range	-80 °C to 60 ° C	
Stacking ability	Empty	Full
20 L trays	x 10	x 5
50 L trays	x 10	x 5

Specifications	Trolley Base, Stack, Extension , Tray Feet and Documentation Holder
Material of construction	304 Stainless Steel (SS304)
Operating temperature range	Single Column: -40 °C to 60 ºC Multi-column: -40 °C to 60 ºC

Specifications	Castors
Material of construction	Nylon and Stainless Steel
Operating temperature range	-40 °C to 60 ºC

Allegro 20 L trays and trolley used in a typical filtration application

Table 3
Allegro Trolley Bases, Extensions and Stack

Description	Allegro Trolley Base (Double Column)	Allegro Extension (Double Column)	Allegro Stack (Double Column)	Allegro Trolley Base (Single Column)	Allegro Extension (Single Column)
Part Number	LGRTBDC	LGRTEDC	LGRTSDC	LGRTBSC	LGRTESC
Weight	30.0 Kg	16.2 Kg	8.7 Kg	265 Kg	15.2 Kg
Maximum Load	600 Kg	265 Kg	125 Kg	285 Kg	130 Kg
Nominal Dimensions (LxWxH)	1420 x 920 x 1017 mm	1230 x 880 x 666 mm	846 x 620 x 700 mm	--1050 x 677 x 963 mm	870 x 650 x 730 mm
For Use With	Allegro 20 L Tray Allegro 50 L Tray Allegro 100 L Tote Allegro Tabletop Allegro Double Column Extension Allegro Double Column Stack	Allegro Double Column Trolley Base Allegro 20 L Tray Allegro 50 L Tray Allegro Tabletop	Allegro Double Column Trolley Base Allegro 20 L Tray Allegro Tabletop	Allegro 20 L Tray Allegro Tabletop Allegro Single Column Extension	Allegro Single Column Trolley Base Allegro 20 L Tray Allegro Tabletop

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Table 4

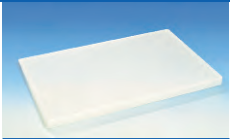*Allegro Trays, Lids and Totes*

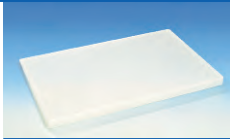|					
Description	Allegro 20 L Tray	Allegro 20 L Tray Lid	Allegro 50 L Tray	Allegro 50 L Tray Lid	Allegro 100 L Tote
Part Number	LGRTPE20L	LGRTLPE20L	LGRTPE50L	LGRTLPE50L	LGRTTPE100L
Weight	11.3 Kg	4.4 Kg	26.0 Kg	19.0 Kg	25.0 Kg
Maximum Load	20 Kg	–	50 Kg	–	100 Kg
Nominal Dimensions (LxWxH)	820 x 540 x 130 mm	820 x 540 x 40 mm	1120 x 820 x 130 mm	1120 x 820 x 130 mm	785 x 575 x 330 mm
For Use With	Allegro 10/20 L Single-use Systems Allegro Single and Double Column Trolley Base Allegro Single and Double Column Extension Allegro Double Column Stack	Allegro 20 L Trays	Allegro 50 L Single-use Systems Allegro Double Column Trolley Base Allegro Double Column Extension	Allegro 50 L Trays	Allegro 100 L Single-use Systems Allegro Double Column Trolley Base

Table 5

Allegro Capsule Filter Supports
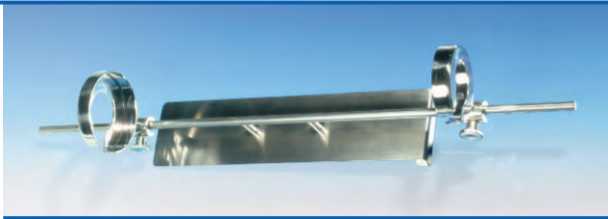
Description	Allegro In-Line Capsule Filter Support *(Photo shows support with top and bottom capsule support brackets attached)*	Allegro In-Line Capsule Filter Support – Top 'C' Bracket	Allegro In-Line Capsule Filter Support – Bottom 'C' Bracket
Part Number	LGRKPCBKHD	LGRKPCBKTP	LGRKPCBKBT
Weight	1.6 Kg	0.36 Kg	0.44 Kg
Nominal Dimensions (LxWxH)	100 x 68 x 800 mm	–	–
For Use With	Allegro Single and Double Column Trolley Base Allegro Single and Double Column Extension Allegro Double Column Stack Allegro In-line Capsule Filter Support - Top 'C' Bracket Allegro In-line Capsule Filter Support - Bottom 'C' Bracket	Allegro Single and Double Column Trolley Base Allegro Single and Double Column Extension Allegro Double Column Stack Allegro In-line Capsule Filter Support Allegro In-line Capsule Filter Support – Bottom 'C' Bracket	Allegro Single and Double Column Trolley Base Allegro Single and Double Column Extension Allegro Double Column Stack Allegro In-line Capsule Filter Support Allegro In-line Capsule Filter Support – Top 'C' Bracket

Table 6

Allegro Multi-Purpose Processing Trolley Accessories

Description	Allegro 20L Tray Support/Retainer	Allegro Tray Outlet Closure	Allegro Tabletop	Allegro Document Holder
Part Number	LGRTRDC	LGRTOPPE	LGRTDCPE	LGRTDH
Weight	1.1 Kg	0.15 Kg	9.9 Kg	1.4 Kg
Working Load	–	–	100 Kg	
Nominal Dimensions (LxWxH)	546 x 100 x 36 mm	160 x 16 x 60 mm	560 x 830 x 35 mm	240 x 80 x 330 mm
For Use With	Allegro 20 L Tray Allegro Double Column Trolley Base	Allegro 20 L Tray Allegro 50 L Tray	Allegro Single and Double Column Base Allegro Single and Double Column Extension Allegro Double Column Stack	Allegro Single and Double Column Base Allegro Single and Double Column Extension Allegro Double Column Stack

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