



Life Sciences

USD 2793b

Allegro™ Bioprocessing Workstations



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 single stack and modular multi-stack bioprocessing workstations. Pall's bioprocessing workstations enable easy implementation of a wide range of single-use system designs around each unit operation.

The workstation 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



Product Overview

The Allegro bioprocessing workstations have been designed to assist in applications where fluid containment, ease of use and flexibility are paramount. Workstations 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 bioprocessing workstation 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 <i>in situ</i> 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 modular bioprocessing workstations 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 bioprocessing workstations are manufactured to high standards ensuring excellent build quality. The workstations 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.

Figure 1

Allegro workstation and workstation extension containing 20 L Allegro trays



Figure 2

Allegro bioprocessing workstation configured with Pall Stax™ depth filtration unit, 100 L Allegro tote, 20 L Allegro trays and Allegro tabletop



Figure 3

Allegro workstation 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 5	x 2

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

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


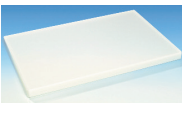



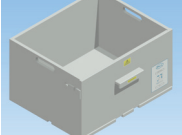
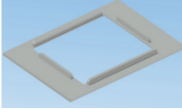


Allegro 20 L trays and workstation used in a typical filtration application

Table 3
Allegro Workstation Bases, Extensions and Stack

	Description	Part Number	Weight	Maximum Load	Nominal Dimensions (LxWxH)	For Use With
	Allegro Workstation Base (Double Column)	LGRTBDC	27.0 Kg	600 Kg	1420 x 920 x 1017 mm	Allegro 20 L Tray Allegro 50 L Tray Allegro 100 L Tote Allegro Tabletop Allegro Double Column Extension Allegro Double Column Stack
	Allegro Extension (Double Column)	LGRTEDC	17.0 Kg	265 Kg	1230 x 880 x 666 mm	Allegro Double Column Workstation Base Allegro 20 L Tray Allegro 50 L Tray Allegro Tabletop
	Allegro Stack (Double Column)	LGRTSDC	8.0 Kg	125 Kg	846 x 620 x 700 mm	Allegro Double Column Workstation Base Allegro 20 L Tray Allegro Tabletop
	Allegro Workstation Base (Single Column)	LGRTBSC	22.0 Kg	285 Kg	1050 x 677 x 963 mm	Allegro 20 L Tray Allegro Tabletop Allegro Single Column Extension
	Allegro Extension (Single Column)	LGRTESC	14.0 Kg	130 Kg	870 x 650 x 730 mm	Allegro Single Column Workstation Base Allegro 20 L Tray Allegro Tabletop
	Allegro Bioprocessing Workstation	LGRTTBSC	23.5 Kg	450 Kg	1078 x 677 x 1253 mm	Can accommodate: 6 x 50 L (LGRPTTE50L); 3 x 100 L (LGRPTTE100L); 6 x 20 L (LGRPTTE20L, 2 stacked on each level), or combinations thereof

Table 4
Allegro Trays, Lids and Totes

	Description	Part Number	Weight	Maximum Load	Nominal Dimensions (LxWxH)	For Use With
	Allegro 20 L Tray	LGRTPPE20L	8.0 Kg	20 Kg	820 x 540 x 130 mm	Allegro 10/20 L Single-use Systems Allegro Single and Double Column Workstation Base Allegro Single and Double Column Extension Allegro Double Column Stack
	Allegro 20 L Tray Lid	LGRTPLE20L	2.0 Kg	–	820 x 540 x 40 mm	Allegro 20 L Trays
	Allegro 50 L Tray	LGRTPPE50L	14.0 Kg	50 Kg	1120 x 820 x 130 mm	Allegro 50 L Single-use Systems Allegro Double Column Workstation Base Allegro Double Column Extension
	Allegro 50 L Tray Lid	LGRTPLE50L	13.2 Kg	–	1120 x 820 x 130 mm	Allegro 50 L Trays
	Allegro 100 L Tote	LGRTPPE100L	19.3 Kg	100 Kg	785 x 575 x 330 mm	Allegro 100 L Single-use Systems Allegro Double Column Workstation Base
	50 L Plastic Tote	LGRPTTE50L	11.86 Kg	55 Kg	440 x 560 x 325 mm	Allegro 50 L Single-use Systems Allegro Double Column Workstation Base 50 L Adapter tray
	50 L Adapter Tray**	LGR50LAWST	3.8 Kg	110 Kg	830 x 540 x 15 mm	Allegro Workstation Base (Double Column) Allegro Workstation Base (Single Column)

**The 50 L adapter tray (LGR50LAWST) allows the 50 L tote (LGRPTTE50L) to be used in conjunction with existing Bioprocessing Workstations (LGRTBDC; LGRTBSC) to accommodate additional existing workstation designs

Table 5
Allegro Filter Capsule Supports

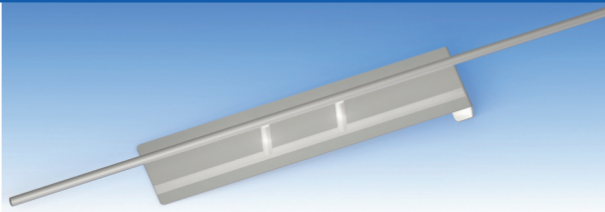
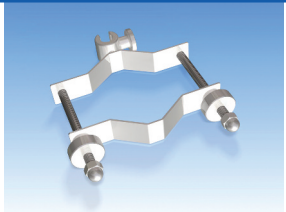

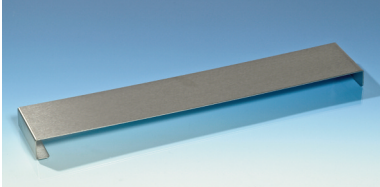



			
Description	Allegro Filter Capsule Bracket Support	Allegro Universal Large Filter Capsule Bracket *	Allegro Universal Small Filter Capsule Bracket
Part Number	LGRKPCBKHD	LGRUFBK	LGRUSFBK
Weight	1.6 Kg	0.78 Kg	0.45 Kg
Nominal Dimensions (LxWxH)	100 x 68 x 800 mm	–	–
For Use With	Allegro Single and Double Column Workstation Base Allegro Single and Double Column Extension Allegro Double Column Stack Allegro Universal Large Filter Capsule Bracket Allegro Universal Small Filter Capsule Bracket	Filter capsules with diameters of 75 – 110 mm Allegro filter capsule bracket support * 2 brackets required for 20 in. and 30 in. Kleenpak™ Nova style capsules	Filter capsules with diameters of 50 – 80 mm Allegro filter capsule bracket support

Table 6*Allegro Bioprocessing Workstation Accessories*

				
Description	Allegro 20L Tray Support/Retainer	Allegro Tray Outlet Closure	Allegro Tabletop	Allegro Document Holder
Part Number	LGRTRDC	LGRTOPPE	LGRTDCE	LGRTDH
Weight	1.1 Kg	0.15 Kg	7.0 Kg	1.4 Kg
Working Load	–	–	115 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 Workstation Base	Allegro 20 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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