

Synthesis Columns
Asahi SCS Column™ and Asahi ACS Column™

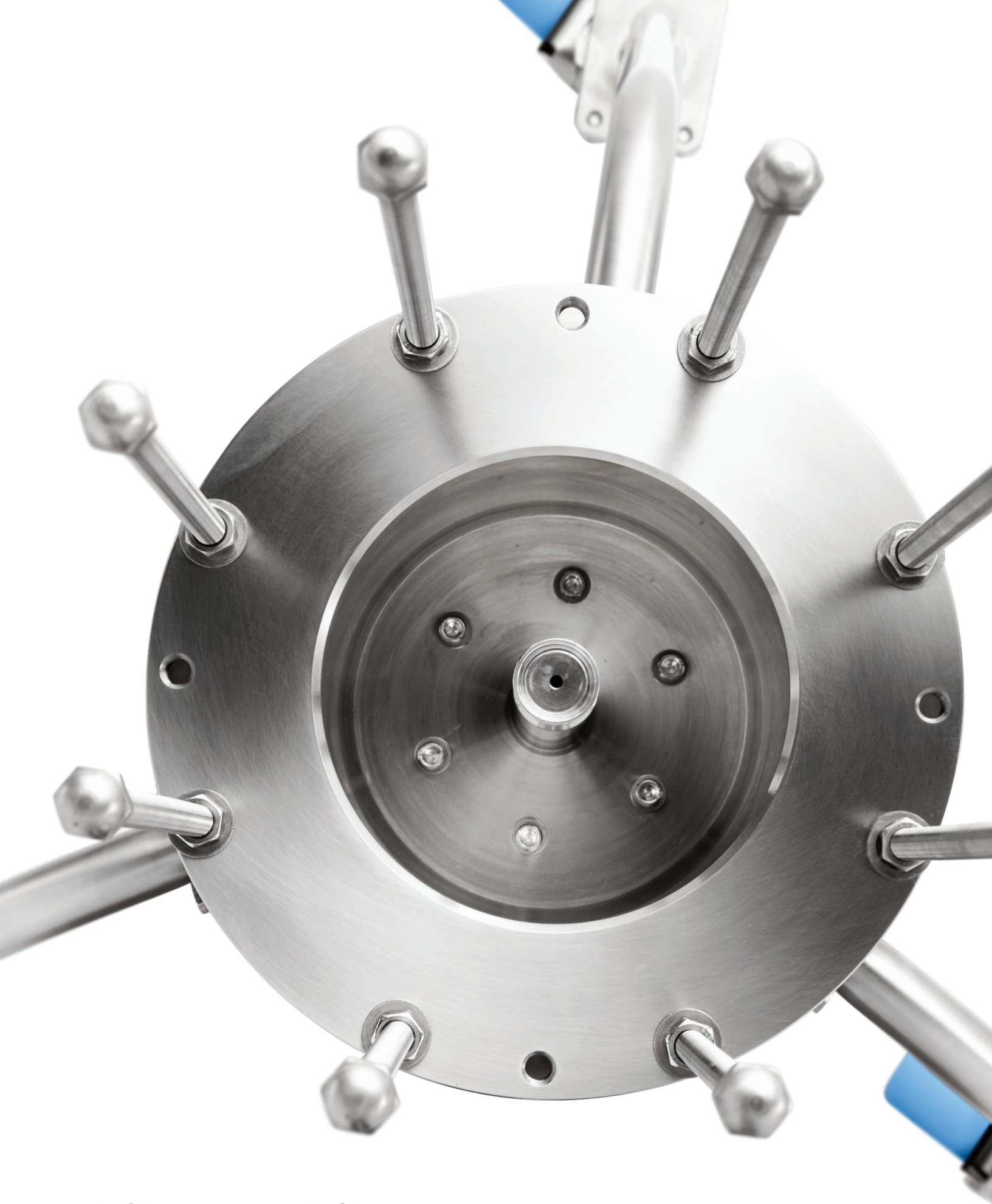
THESYS™

Built For You™

At Asahi Kasei Bioprocess, we bring decades of experience to every synthesis column that we deliver, continually improving our platform as we gain valuable feedback from sponsors and contract manufacturers alike.

This knowledgebase allows us to understand that oligosynthesis is a very different process than chromatography, which our engineers contemplate when designing your mid-scale and large-scale synthesis columns. You may use a polystyrene or CPG. Your bed height may only be a few centimeters or ten centimeters. You may run your synthesis once a month or once a day. No matter how you have developed your synthesis process, rest assured that Asahi Kasei Bioprocess engineers will design a synthesis column that is ideal for your mid- or large-scale oligonucleotide production needs.





Proven for Mid-Scale and Large-Scale Oligosynthesis

Demand for cGMP oligonucleotides continues to increase as RNA and DNA therapeutics advance through clinical trials. Driven by a desire to reduce manufacturing costs and increase product yields, Asahi Kasei Bioprocess offers a suite of proven solid-phase flow-through synthesis columns ranging from 10 to 100 cm i.d. Our synthesis columns have produced multiple compounds at various scales, including validation batches, and can be used with various synthesizers. Ask your local representative about pairing our synthesis columns with an Asahi Oligosynthesizer.™

Asahi SCS Column™



SCS Ergo: a portable column stand which allows the column to be rotated 180° for ergonomic handling. Both end plates of the column are easily accessible.

Our industry-leading Asahi SCS Column™ is the ideal choice for fixed bed height applications using swellable supports. CAD-modeled “active” flow distribution generates uniform dispersal of amidites and reagents across the entire column surface, even for columns packed with short bed heights, resulting in maximum coupling efficiency. Column frits can be easily exchanged using a novel scraper seal arrangement. The Asahi SCS Column also offers versatility to perform manual bed height adjustments between 2 and 15 cm while leaving a user-defined gap between the support surface and the top plate frit to accommodate support swelling and prevent pressure spikes during the synthesis process.

Unlike chromatography columns, synthesis columns must be unpacked after each cycle. To assist with these regular tasks, the mid-scale Asahi SCS Column is available with the SCS Ergo.

These options greatly reduce the time required for column packing and unpacking by allowing easy access to the column end plates and assisting their removal and insertion. They are recommended for users who intend to pack and unpack the Asahi SCS Column more than once per week.

Asahi SCS Column: Standard & Optional Feature Enhancements

- » Electropolishing
- » SCS Ergo package
- » IQ/OQ documentation and execution
- » ASME Code stamp
- » CE marking with compliance to Pressure Equipment Directive 2014/68/EU
- » ATEX



THESYS™ SCS

Asahi ACS Column™

The flow-through Asahi ACS Column™ offers “hoist-free” operation for easy frit removal and simplified column packing and unpacking via axial compression of an integrated piston. The same “active” flow distribution technology from the Asahi SCS Column is used in the Asahi ACS Column to provide optimum dispersion of amidites and reagents across your solid support.

Asahi ACS Column features

- » Slurry inlet port for easy loading of solid supports
- » Slurry outlet port for unpacking soft supports or support sampling

Documentation for Synthesis Columns

To support your clinical and commercial manufacturing of oligonucleotides, all Asahi SCS and Asahi ACS columns are provided with a GMP documentation package. The package includes the following:

- » User manual
- » Pressure test certificate
- » Spare parts list
- » Material certificates for product contact surfaces
- » USP Class VI certificates for product contact seals
- » BSE/TSE-free certificates for product contact seals



Choose our industry-leading, solid-phase flow-through synthesis columns available from 10 to 100 cm i.d.

Ordering Information

Asahi SCS Column

Catalog No.	Column Dimensions	Pressure Rating	Adjustable Bed Height	Theoretical DNA Capacity*	Theoretical RNA Capacity**
SCS-10-15-20	10 cm ID x 15 cm L	20 barg	2 – 15 cm	8 – 30 mmol	4 – 18 mmol
SCS-15-15-20	15 cm ID x 15 cm L	20 barg	2 – 15 cm	40 – 70 mmol	18 – 40 mmol
SCS-20-15-20	20 cm ID x 15 cm L	20 barg	2 – 15 cm	70 – 130 mmol	40 – 75 mmol
SCS-30-15-20	30 cm ID x 15 cm L	20 barg	2 – 15 cm	130 – 280 mmol	75 – 160 mmol
SCS-35-15-20	35 cm ID x 15 cm L	20 barg	2 – 15 cm	200 – 380 mmol	100 – 230 mmol
SCS-40-15-20	40 cm ID x 15 cm L	20 barg	2 – 15 cm	280 – 500 mmol	160- 300 mmol
SCS-45-15-20	45 cm ID x 15 cm L	20 barg	2 – 15 cm	300 – 630 mmol	190 – 380 mmol
SCS-50-15-20	50 cm ID x 15 cm L	20 barg	2 – 15 cm	500 – 750 mmol	300 – 470 mmol
SCS-60-15-20	60 cm ID x 15 cm L	20 barg	2 – 15 cm	0.75 – 1 mol	460 – 670 mmol
SCS-70-15-20	70 cm ID x 15 cm L	20 barg	2 – 15 cm	0.80 – 1.5 mol	500 – 920 mmol
SCS-80-15-20	80 cm ID x 15 cm L	20 barg	2 – 15 cm	1 – 2 mol	0.67 – 1.2 mol

Asahi ACS Column

Catalog No.	Column Dimensions	Pressure Rating	Adjustable Bed Height	Theoretical DNA Capacity*	Theoretical RNA Capacity**
ACS-10-15-20	10 cm ID x 30 cm L	10 barg	4 – 15 cm	8 – 30 mmol	4 – 18 mmol
ACS-15-15-20	15 cm ID x 30 cm L	10 barg	4 – 15 cm	40 – 70 mmol	18 – 40 mmol
ACS-20-15-20	20 cm ID x 30 cm L	10 barg	4 – 15 cm	70 – 130 mmol	40 – 75 mmol
ACS-30-15-20	30 cm ID x 30 cm L	10 barg	4 – 15 cm	130 – 280 mmol	75 – 160 mmol
ACS-35-15-20	35 cm ID x 30 cm L	10 barg	4 – 15 cm	200 – 380 mmol	100 – 230 mmol
ACS-40-15-20	40 cm ID x 30 cm L	10 barg	4 – 15 cm	280 – 500 mmol	160- 300 mmol
ACS-45-15-20	45 cm ID x 30 cm L	10 barg	4 – 15 cm	300 – 630 mmol	190 – 380 mmol
ACS-50-15-20	50 cm ID x 30 cm L	10 barg	4 – 15 cm	500 – 750 mmol	300 – 470 mmol
ACS-60-15-20	60 cm ID x 30 cm L	10 barg	4 – 15 cm	0.75 – 1 mol	460 – 670 mmol
ACS-70-15-20	70 cm ID x 30 cm L	10 barg	4 – 15 cm	0.80 – 1.5 mol	500 – 920 mmol
ACS-80-15-20	80 cm ID x 30 cm L	10 barg	4 – 15 cm	1 – 2 mol	0.67 – 1.2 mol

Note: Customized Asahi SCS and Asahi ACS columns are available upon request.

*Based on 200 µmol/g loading for DNA synthesis and maximum bed height of 10 cm.

**Based on 120 µmol/g loading for RNA synthesis and maximum bed height of 10 cm.

Capacity is approximate and depends on your process, bed height and solid support loading.

Standard and Optional Upgrades

Catalog No.	Description
OPT-012	Electropolished wetted parts for 10 cm ID columns
OPT-212	Electropolished wetted parts for 15 – 20 cm ID columns
OPT-412	Electropolished wetted parts for 30 – 45 cm ID columns
OPT-612	Electropolished wetted parts for 50 – 60 cm ID columns
OPT-712	Electropolished wetted parts for 70 – 85 cm ID columns
OPT-812	Electropolished wetted parts for 100 – 120 cm ID columns
OPT-014	ASME Code Stamp for columns up to 15 cm ID
OPT-214	ASME Code Stamp for 20- 50 cm ID columns
OPT-414	ASME Code Stamp for 60 cm ID columns and larger
OPT-614	ASME Code Stamp for 100 cm ID columns or larger
SRV-112	IQ/OQ documentation and execution service for one (1) column
SRV-304	GMP column documentation package
SRV-307	GMP column documentation package (PED Cat I)
SRV-308	GMP column documentation package (PED Cat II)
SCSE1	SCS Ergo: rotating stand for SCS-10-15-20 to SCS-25-15-20 synthesis columns
SCSE2	SCS Ergo: rotating stand for SCS-30-15-20 to SCS-35-15-20 synthesis columns

Equipment designed to respect your individual needs.





Our Expertise, Your Confidence

The Fluid Management Business Unit of Asahi Kasei Bioprocess is devoted to solving therapeutic product safety, efficiency and purity challenges within the pharmaceutical and bioprocessing industries.

With technology platforms for virus filtration, inline buffer formulation, chromatography, and oligonucleotide synthesis, our bioprocessing systems, columns, and automation solutions advance GMP manufacturing of critical drug substances around the world. Built with pride, built with quality, built to exceed your high expectations. "Built for You."



Technical Support Network

A reliable technical support network is available throughout North and South America, Europe and Asia.

Warranty

We offer an extendable 1-year warranty, service contracts and a personalized level of service for peace of mind and timely support when you need it.



[REQUEST A QUOTE](#)

Technical Client Services

Technical Client Services (TCS), is a customer-centric interface to our product and science experts. Our TCS team will guide your process and engineering needs as your personal liaison for inquiries.

Contact us to learn more about how TCS can support your virus filtration and downstream processing equipment needs.



Asahi Kasei Bioprocess America, Inc.
Technical Client Services
+1 833-HLP-AKBA (457-2522)
TCS.support@ak-bio.com
www.ak-bio.com

Global Offices

North and South America

Glenview, IL, USA
Tel: +1-833-457-2522
Fax: +1-847-556-9701

Email: info.us@ak-bio.com

Europe

Cologne, Germany
Tel: +49-221-995007-59
Fax: +49-221-9950077-59

Email: info.eu@ak-bio.com

India and Southeast Asia

Mumbai, India
Tel: +91-22-6710-3962
Fax: +91-22-6710-3979

Email: info.jp@ak-bio.com

East Asia and Oceania

Glenview, IL, USA
Tel: +1-833-457-2522
Fax: +1-847-556-9701

Email: info.jp@ak-bio.com

China

Shanghai, China
Tel: +86-(0)21-6391-6111
Fax: +86-(0)21-6391-6686

Email: info.jp@ak-bio.com