

Synthesis

# Columns



SYNTHESIS • PURIFICATION

[www.ak-bio.com](http://www.ak-bio.com)

**AsahiKASEI**  
ASAHI KASEI BIOPROCESS

Adapting to variations and improving flow distribution of your solid-phase flow-through synthesis process.

# Fit Matters.

Your solid support is the heart of your flow-through synthesis process. That's why we're always working to bring new innovations to your oligonucleotide and peptide synthesis. Innovations such as a synthesis column design that intuitively adapts to the conditions of your support.

The dynamic axial compression technology in our flow-through synthesis columns enables simple packing of rigid solid supports while also accommodating the variations in swellable polystyrene supports. And for applications that require a fixed bed height, we offer a complete line of static compression synthesis columns.

Better reagent delivery leads to more consistent results. All of our synthesis column designs are equipped with our superior flow distribution system, permitting the uniform distribution of reagents, amidites or amino acids—critical for short-bed-height synthesis.

So whether you require a 3.5cm i.d. column for your lab scale synthesizer, or a 1m i.d. column for mol scale production, the Asahi Kasei Bioprocess synthesis column lineup has you covered.

## DYNAMIC AXIAL COMPRESSION SYNTHESIS COLUMNS

### Latest technology in flow-through synthesis

- True dynamic axial compression synthesis column with a piston that accommodates shrinking and swelling of solid support during synthesis
- Eliminate voids and gaps in the packed bed
- CAD-modeled “active” flow distribution provides uniform flow distribution across the entire

column surface area, promoting highest coupling efficiency—critically important for synthesis columns that are typically packed with short bed heights

### Easy to use

- “Hoist-free” operation—replace both frits without the use of an overhead hoist or lift—designed for use in clean rooms or synthesis suites with low overhead height
- Portability—columns are mounted on legs with casters
- Scalability—columns are fully scalable from 3.5cm to 100cm or higher
- Flexibility—varying bed heights can be packed in any column
- Unique frit design is less susceptible to clogging and can be replaced in minutes without liquid nitrogen chilling
- Slurry inlet port for loading of solid support without removing column top or piston
- Sanitary slurry outlet port permits unpacking of soft supports and complete CIP without any column disassembly (port can also be used for support sampling)
- Compatible with Asahi Kasei Bioprocess as well as other flow-through synthesizers

### Compliant with our industry's demanding standards

- FDA-compliant, highly fluorinated PTFE and FFKM seals are compatible with ACN, toluene and other synthesis solvents and reagents
- Multipurpose design—suitable for CPG or polymeric-based solid supports
- Electropolishing standard
- Jacketed options available for column temperature control
- Internal leak detection option for seal quality assurance
- Full material traceability for all stainless steel product contact parts
- Fast delivery
- ASME code stamp option available
- CE Pressure Equipment Directive compliance available
- USP Class VI and non-animal-derived seal certification available

### STATIC COMPRESSION SYNTHESIS COLUMNS

- For use in fixed-bed-height applications
- Same uniform flow distribution and frit design as the dynamic column, without the dynamic axial compression piston
- Available with manual bed height adjustment between 2cm and 15cm

### Warranty and technical support

- One-year extendable warranty, service contracts and 24-hour response time for peace of mind and fast support when you need it
- Partner companies throughout Europe and Asia for reliable worldwide tech support

### Other Asahi Kasei Bioprocess products and services for the TIDES industry

- Oligo and peptide synthesizers
- Chromatography skids with Adaptive PAT™
- Dynamic axial compression purification columns
- Knauer preparative HPLC and SMB systems
- TechniPur™ chromatography packing materials
- Process development, scale-up and tech transfer support
- IBD™ in-line buffer dilution skids with Adaptive PAT™
- Equipment validation services (IQ/OQ & GAMP-5)



*3.5cm dynamic axial compression synthesis column with hydraulics*

### Dynamic Axial Compression Synthesis Columns

| Catalog # | Product Specification | Pressure Rating | Assembly Type               |
|-----------|-----------------------|-----------------|-----------------------------|
| DSV3.5    | 3.5cm i.d. x 15cm L   | 20bar           | Pneumatic/Hydraulic unit    |
| DSV10     | 10cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV15     | 15cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV20     | 20cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV30     | 30cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV40     | 40cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV50     | 50cm i.d. x 30cm L    | 10bar           | Pneumatic; portable on legs |
| DSV60     | 60cm i.d. x 30cm L    | 10bar           | Legs plus hydraulic cart    |
| DSV80     | 80cm i.d. x 30cm L    | 10bar           | Legs plus hydraulic cart    |
| DSV100    | 100cm i.d. x 30cm L   | 10bar           | Legs plus hydraulic cart    |

### Static Compression Synthesis Columns

| Catalog # | Product Specification | Pressure Rating | Bed Height Adjustment |
|-----------|-----------------------|-----------------|-----------------------|
| SV10      | 10cm i.d. x 15cm L    | 20bar           | 2-15cm                |
| SV15      | 15cm i.d. x 15cm L    | 20bar           | 2-15cm                |
| SV20      | 20cm i.d. x 15cm L    | 10bar           | 2-15cm                |
| SV30      | 30cm i.d. x 15cm L    | 10bar           | 2-15cm                |
| SV60      | 60cm i.d. x 15cm L    | 10bar           | 2-15cm                |

- Hydraulic cart assists with hoist-free maintenance
- Custom diameters and lengths are available
- Custom-designed columns at higher pressures are available
- Worldwide install base throughout US, Europe and Asia

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