

Process technology

PIONEERING EXPERTISE

for hygienically safe processes



4.000
employees
Status 2020

822 MIO. €
total turnover
Status 2020

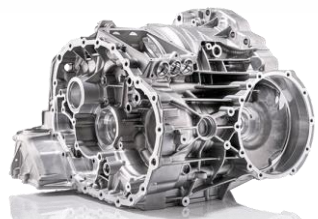
Headquarters
in **Biberach**
Germany

Family-owned
company since
1873

Representa-
tives
worldwide for
Process
Technology

THE HANDTMANN
GROUP OF
COMPANIES

MOBILITY



Light metal casting



Systems engineering



Plastics engineering

FOOD

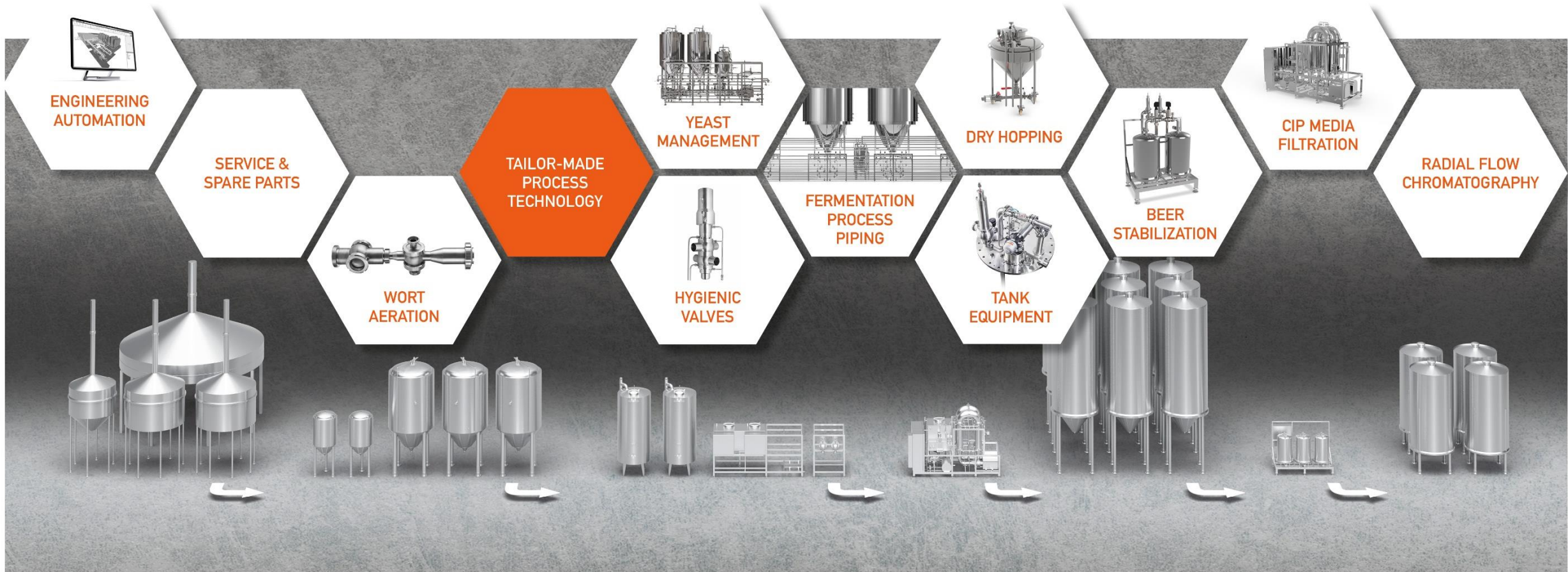


Filling and portioning systems



Process technology

OUR COMPETENCES



OUR BRANCHES



PROCESS TECHNOLOGY



AUTOMATION / ENGINEERING

- Individual planning and design of tailor-made automation systems
- Everything from one supplier
- Expandable solutions

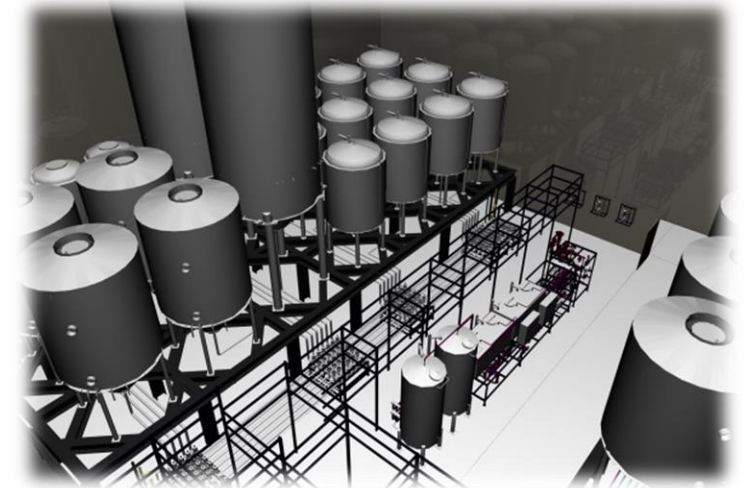
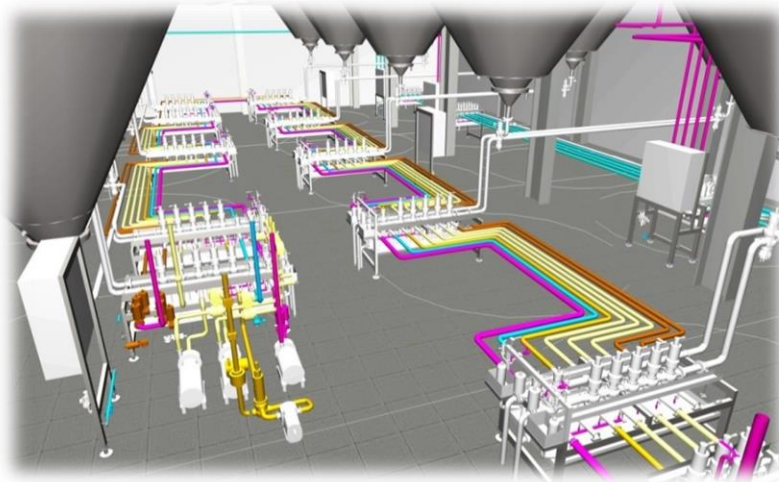
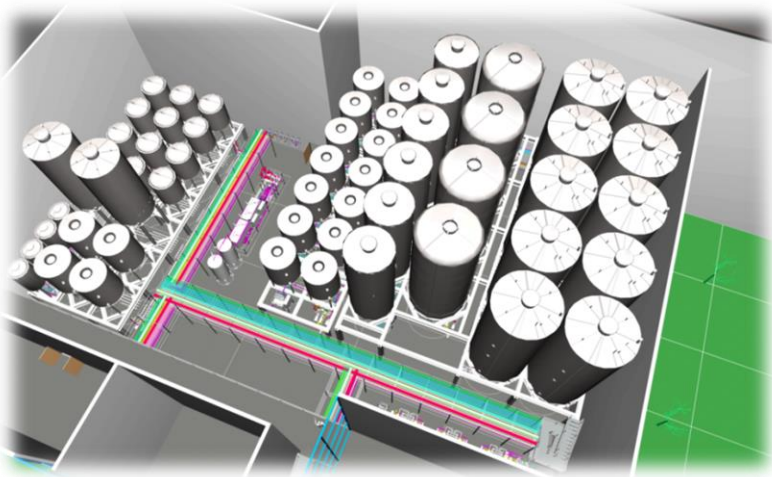


PIPING SYSTEMS

- Individual solutions
- Hygienic Design
- High level of prefabrication

PLANT ENGINEERING

- Preparation and planning
 - Consulting and design
 - Tailor-made for your specific system
 - Project management
 - Overall project planning in 3D
- Complete cold block solutions
 - Layout development–taking care of product flow
 - 3D - model configuration from the very beginning
 - In-house Hard- and Software engineering



CIP SYSTEMS

- Process-oriented
- Environment-friendly technology
- Compact design



CF CIP Media Filtration

Nonfiltrate

Bottle washer caustic



Nonfiltrate

Dairy caustic



Filtrate

Ultra filtration



Filtrate

Ultra filtration

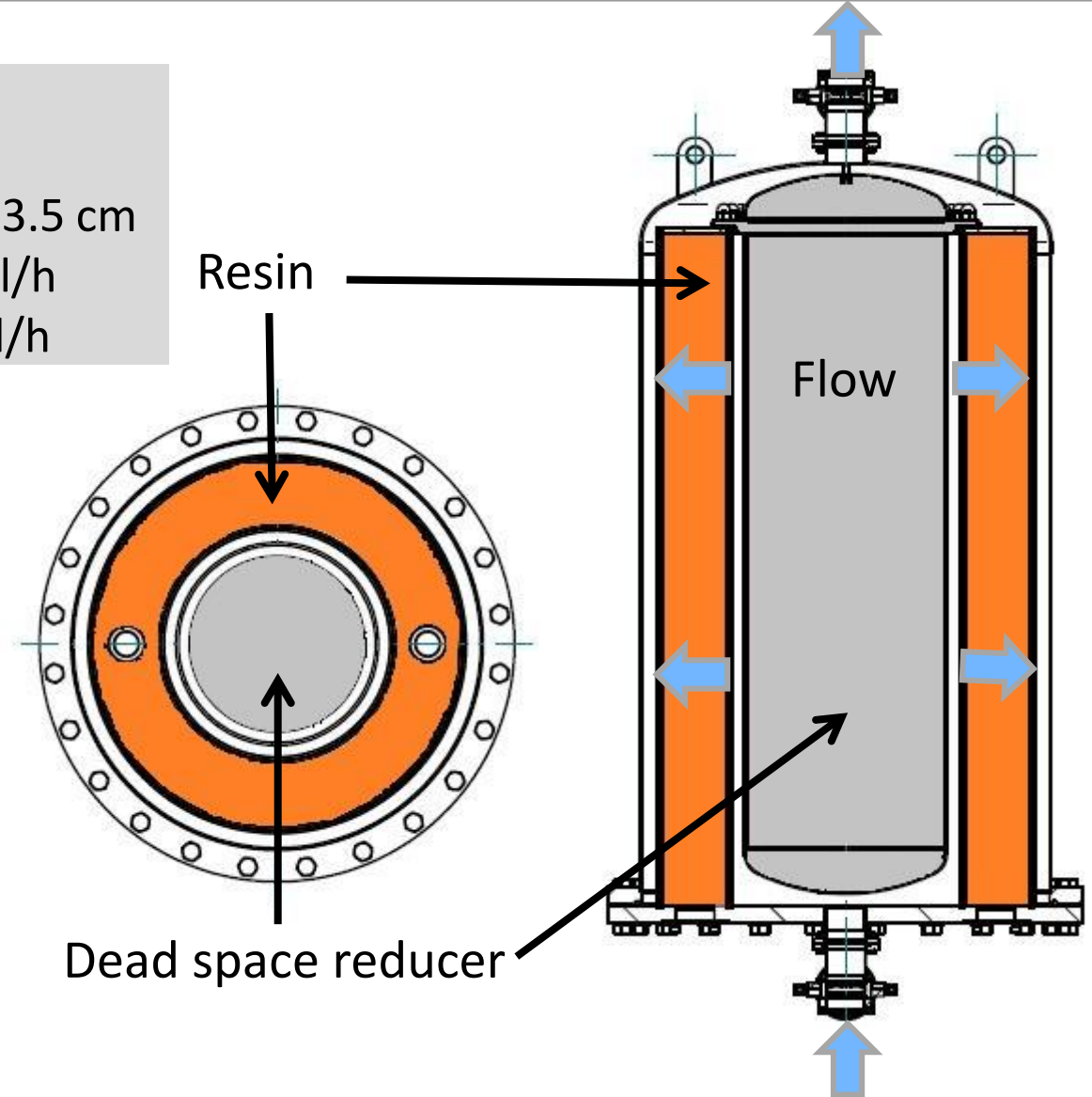
HANDTMANN RFC RADIAL FLOW COLUMNS



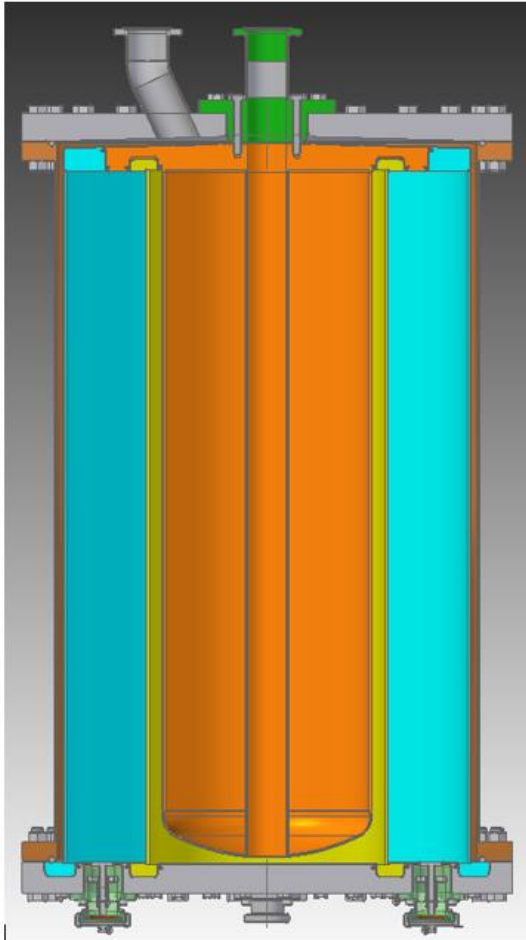
RADIALE FLOW

Flow rate:

260 liter Column / bed 13.5 cm
→ Beer approx. 22,000 l/h
→ Milk approx. 15,000 l/h



RFC-COLUMN



- Material: Stainless steel
- Mesh for keeping the resin: 20 to 150 μm
- Standard bed height 13.5 cm, can be higher depends on resin and Δp .
- Max Δp over bed 2 bar.
- Typical contact time 60 to 90 seconds.
- Packed and fixed bed – no strong swelling resin.
- High flow rate up to 25,000 l/h
- Sterilisable

CAPTURE PROZESS 6 X 260 L COLUMNS



RADIAL Flow Column Features

- ✓ 20 – 50 % reduced pressure drop
- ✓ High flow rate (810 cm/h)
- ✓ Bidirectional flow
- ✓ Lower elution volume & high concentration
- ✓ Improved loading efficiency
- ✓ Compatible with all resins
- ✓ Higher process robustness
- ✓ Higher purity due to uniform flow

Column Packing Station



- Fast installation and operational readiness
- Packing and unpacking of the RFC module in a short time
- No process material losses
- Easy operation
- High cleanability
- Maintenance-free



Lactoferrin Purification

SCOPE OF DELIVERY:

MICROFILTRATION

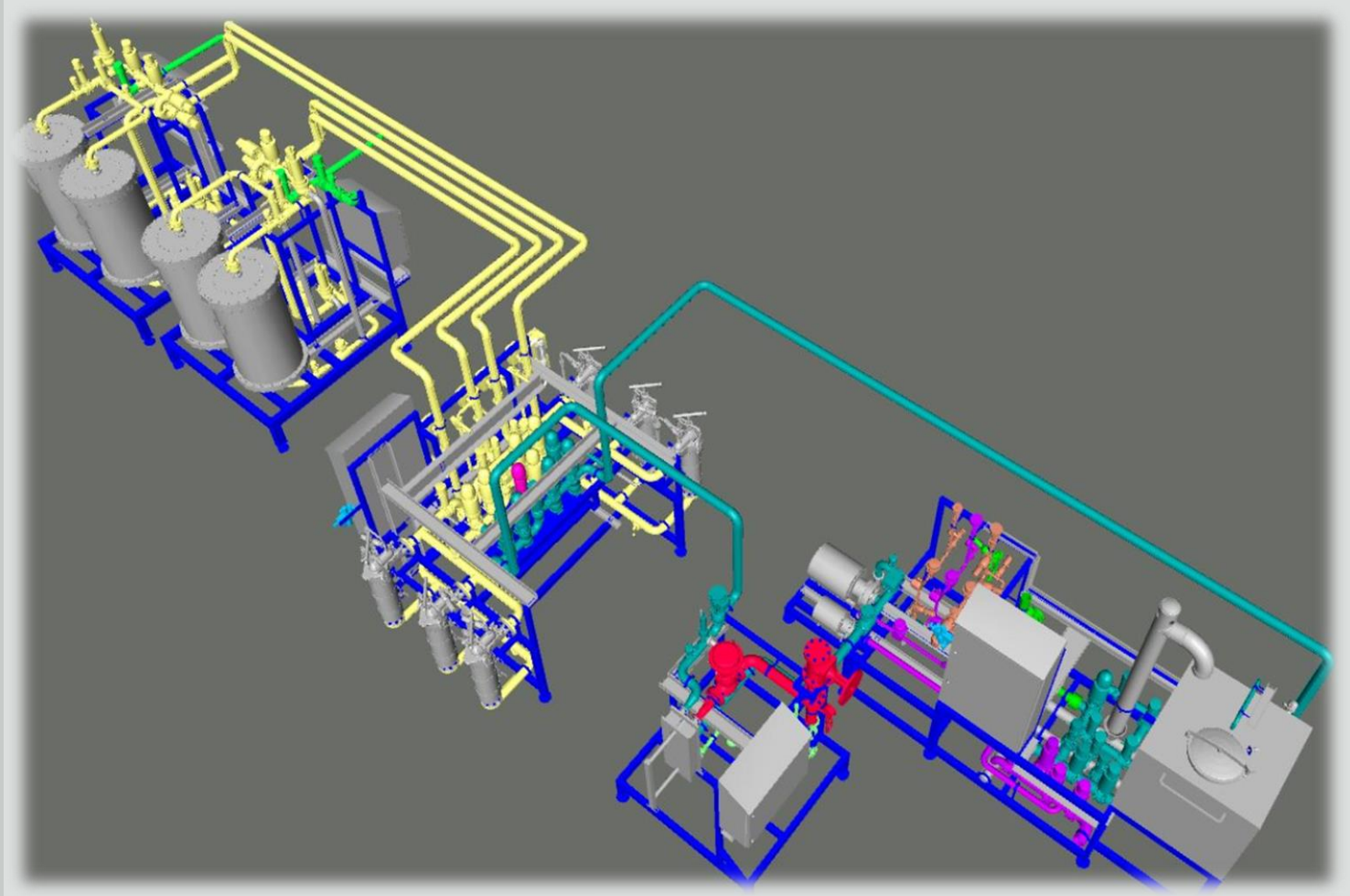
VALVE BLOCK

2X2 CHROMATOGRAPHIC

COLUMNS

CIP & ELUTION UNIT

AUTOMATION



SCOPE OF DELIVERY:

MICROFILTRATION

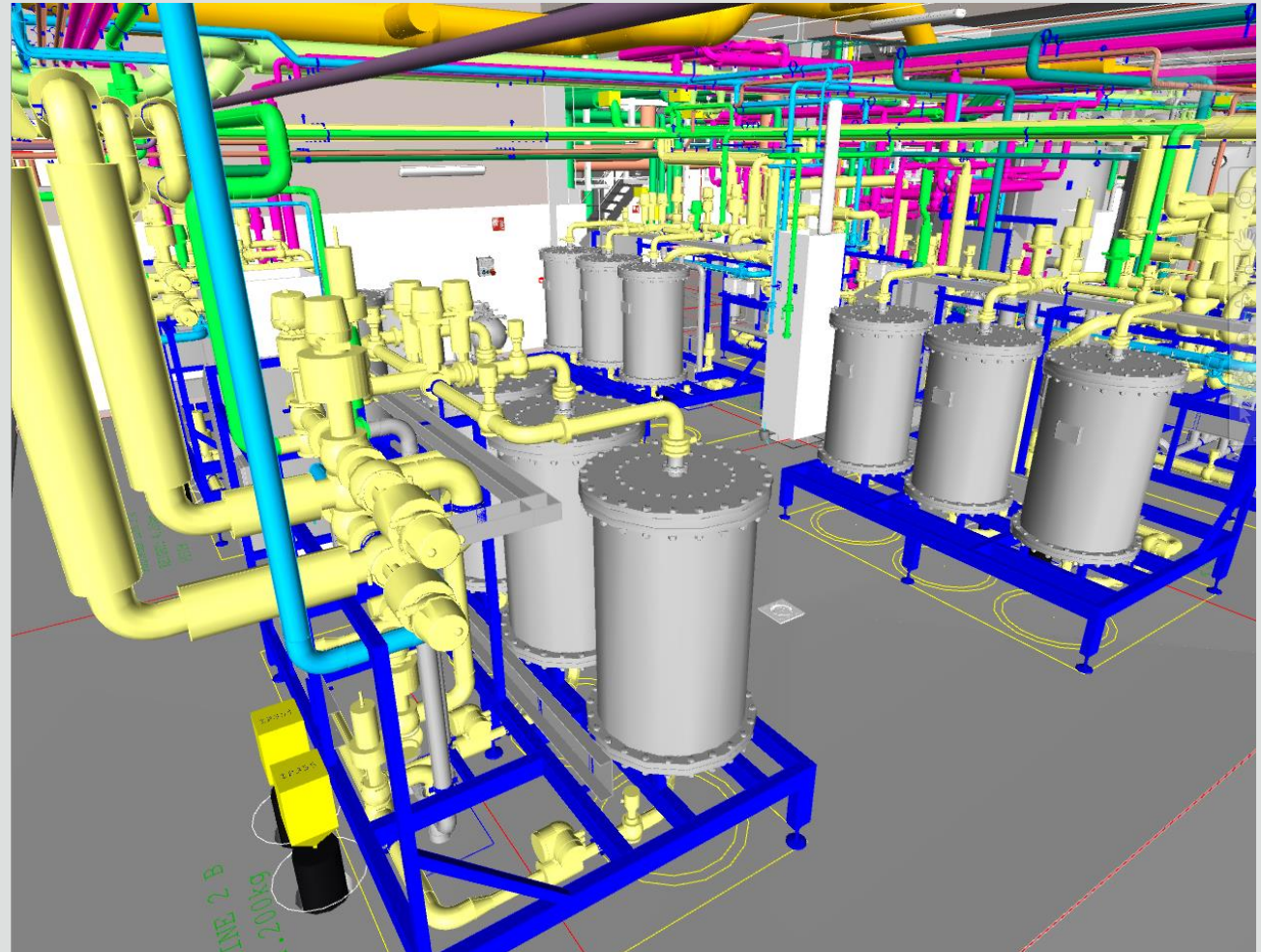
VALVE BLOCK

4X3 CHROMATOGRAPHIC

COLUMNS

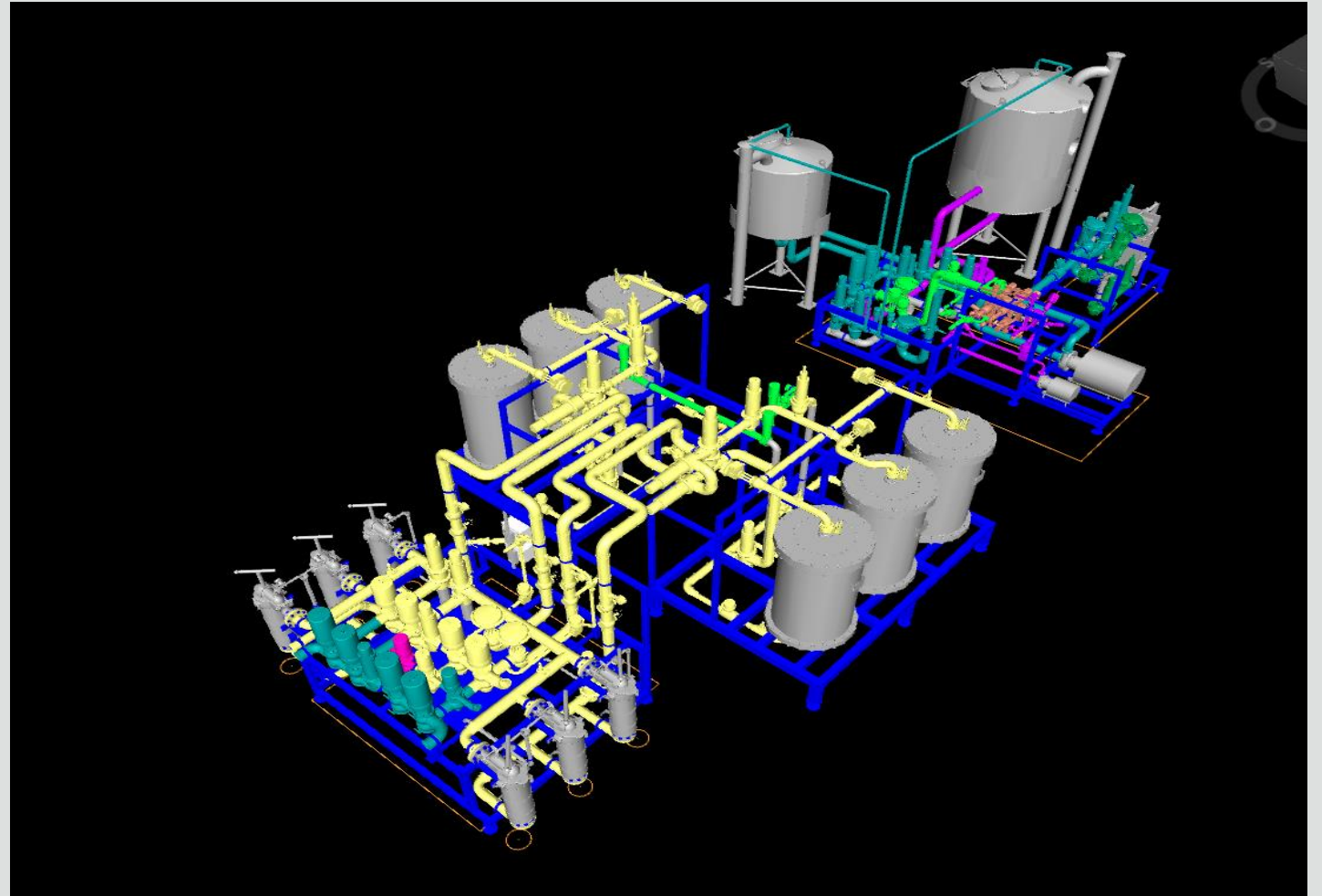
CIP & ELUTION UNIT

AUTOMATION



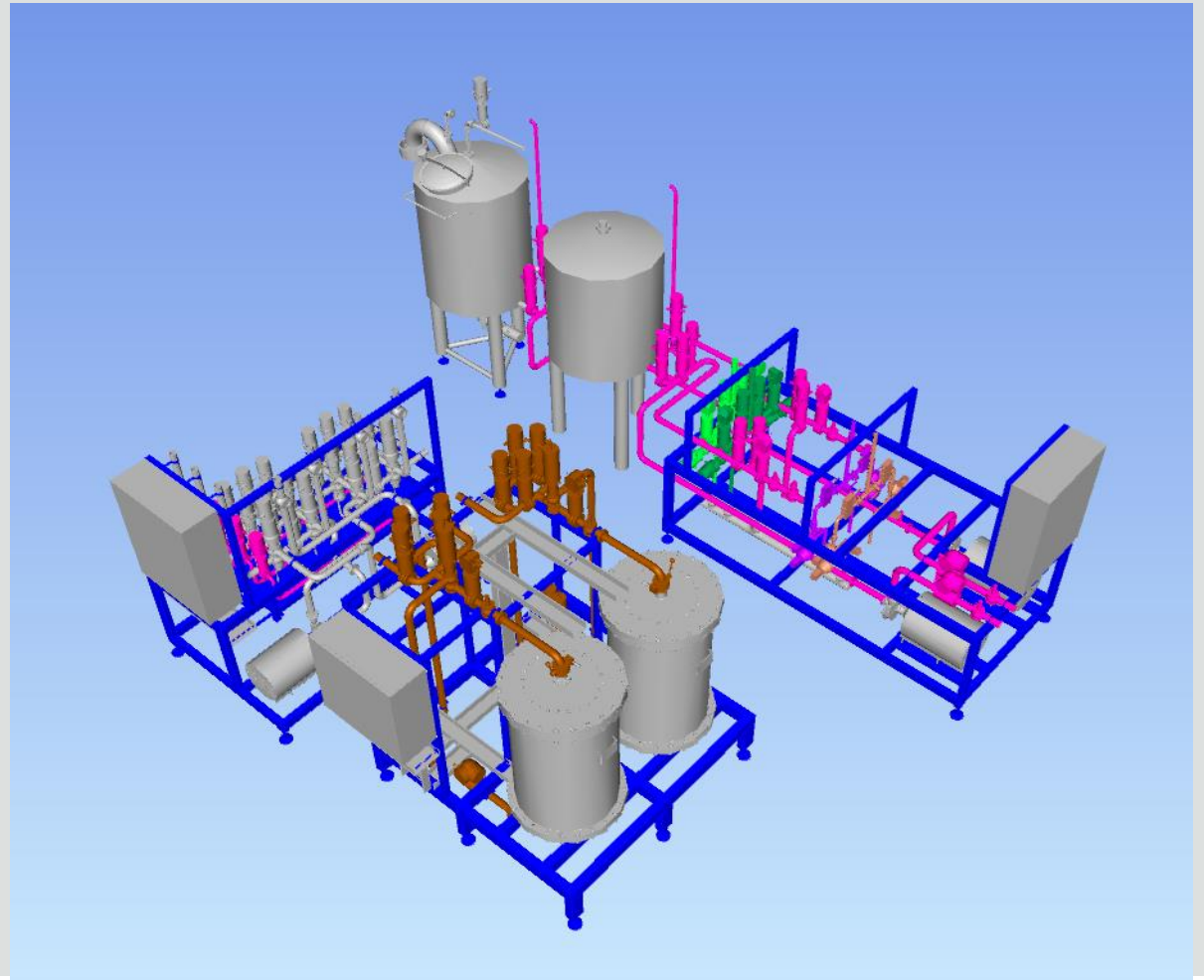
SCOPE OF DELIVERY:

MICROFILTRATION
VALVE BLOCK
2X3 CHROMATOGRAPHIC
COLUMNS
CIP & ELUTION UNIT
AUTOMATION



Collagen Treatment

SCOPE OF DELIVERY:
VALVE BLOCK
2 CHROMATOGRAPHIC COLUMNS
CIP UNIT
AUTOMATION



Pilot Plant

RFC Data sheet	
RF-Column / Pump / IDM / Converter / Fine filter	
Product side	
Material/gasket	1.4404 (316L)/EPDM
RFC-Column volume	21 liter
Screen cloth	20 µm
Voltage/power	230/400 V, 50Hz, 3KW
Process side	
Design pressure	6 bar
Inlet	DN 25
Outlet	DN 25



- Piloting for plant design
- Designlayout for easy upscaling
- Checking the process parameters

RFC Column Sizes

STANDARD COLUMNS AVAILABLE
FROM

2 LITER

21 LITER

100 LITER

260 LITER



RFC REFERENCES

RFC plants and columns in:

- Australia / New Zealand
- France
- Denmark
- Norway
- Netherlands
- etc.

