



## ViscoLine™ CIP unit

Tubular heat exchanger for low viscosity food and cleaning-in-place



ViscoLine CIP unit (VLC)

### Applications

The ViscoLine™ CIP unit is ideal for heating of water or cleaning-in-place (CIP) solutions by means of steam, less demanding applications to process low and average viscosity products. Products can contain fibres and small particulates. It is also suitable for general heating and cooling applications.

### Working principle

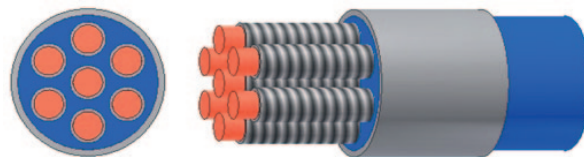
The heat exchanger is formed by a tube bundle (welded at both ends onto flat tube plates) inside a shell. Product medium flows inside the tubes of the bundle and the service medium between and around these tubes. This makes it compact and easy to install.

All tubes are connected in parallel and in counter-current flow to the service medium. The product tubes are corrugated. The service media shell is smooth.

**OBS!** Vertical installation is recommended for steam to water heating in order to drain the condensate

### Standard materials

Product side (tubes):	in AISI 316L
Service side (shell):	in AISI 304



Graphic representation of the flow pattern in the ViscoLine CIP unit.

### Standard design

ViscoLine CIP and water heater is available in 3 sizes.

### Technical data

#### Max. operating pressure

16 bar (232 PSI) on tube side. 11 bar (159 PSI) on shell side.

Complies with the European Pressure Equipment Directive (PED).

Design temperature -20/190°C (-4/374°F)

### Connections

Product side (tubes):	ISO 2037 SMS
Service side (shell):	Flange EN 1092-1

## Designation

VLC 20x16/104-2.0-316L/304-C

VLC: ViscoLine CIP  
 20: Number of product tubes  
 16: Outer diameter of product tubes (mm)  
 104: Outer diameter of service shell (mm)  
 2.0: Module length (m)  
 316L: Material tube side  
 304: Material shell side  
 C: Corrugated product tubes

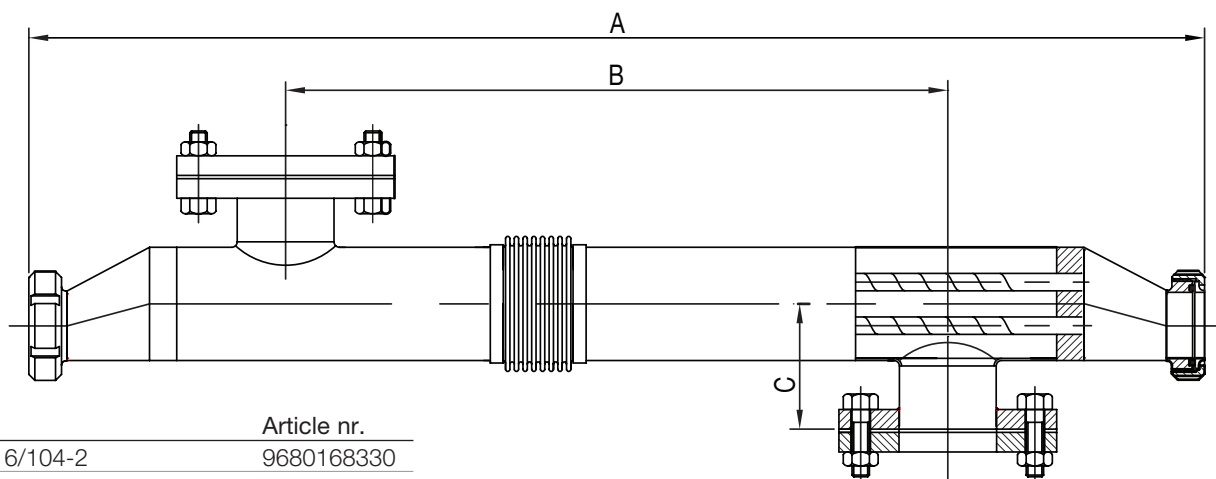


VLC		Dimensions (mm)			Connections		Volume in litre	
Type	Model	A	B	C	Shell Side	Tube Side	Shell Side	Tube Side
1	VLC 20x16/104-2	2,234	1,776	115	OD 76.1	SMS 63.5	7.33	6.03
2	VLC 31x16/129-2	2,239	1,760	138	OD 101.6	SMS 76.1	8.14	8.14
3	VLC 37x16/154-3	3,265	2,760	150	OD 101.6	SMS 101.6	19.77	16.85

## Dimensions (Inch)

VLC		Dimensions (inches)			Connections		Volume in US gallons	
Type	Model	A	B	C	Shell Side	Tube Side	Shell Side	Tube Side
1	VLC 20x16/104-2	88.0	69.9	4.6	OD 3"	SMS 2.5"	1.9	1.6
2	VLC 31x16/129-2	88.1	69.3	5.5	OD 4"	SMS 3"	2.2	2.2
3	VLC 37x16/154-3	128.5	108.7	5.9	OD 4"	SMS 4"	5.2	4.5

OD = outer diameter



Type	Article nr.
VLC20x16/104-2	9680168330
VLC31x16/129-2	9680168331
VLC37x16/154-3	9680168334

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Alfa Laval reserves the right to change specifications without prior notification.

## How to contact Alfa Laval

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