

TUBULAR LIQUID COOLER

DETAILED OVERVIEW FOR TYPE 'TLCA'
MEDIUM PRESSURE - 40 BAR



Dimensions overview for type Ø129 & ø209 - 40 bar[g]

Tubular Liquid coolers are highly used in the food and beverage industry and in connection with many applications such as CIP units. In the food and beverage industry tubular heat exchangers are often used in systems to reduce or eliminate microbials to make products safe for consumption and to extend their shelf life. A tubular heat exchanger may also be used to heat or cool products prior to filling, drying, concentration or other processes.



Content

Introduction	3
Regulations and Directives	3
Documentation	3
Group specifications	4
Connections	5
Shell side workflow	5
TLCA-.5-129-40	6
TLCA-01-129-40	7
TLCA-02-129-40	8
TLCA-03-129-40 (section 1 of 2)	9
TLCA-03-129-40 (section 2 of 2)	10
TLCA-01-209-40	11
TLCA-02-209-40	12
TLCA-03-209-40	13
TLCA-04-209-40	14
TLCA-06-209-40	15
TLCA-08-209-40	16

Introduction

This overview is for Tubular Liquid Coolers manufactured by Wila A/S under the category "TLCA" hereinafter referred to as "Heat Exchanger". A Tubular Heat Exchanger is by design, two Pressure chambers in a combined housing.

The inner chamber consists of both ends and the insides of all tubes in the tube bundle, hereinafter referred to as "Tube side" or "Product side".

The outer pressure chamber consists of the outside of the tube bundle, and the inside of the exchangers outer shell, hereinafter referred to as "Shell side" or "Service side".

The Heat Exchanger is intended for a fluid to fluid heat transfer, **either** cooling or heating and is made from EN.1.4404 (AISI 316L) stainless steel with a sanitary surface finish. The tube side is suitable for food stuff fluids, such as dairy products and juices. The entire inside surface roughness is $\leq 0.8 \mu\text{m}$ and the outside surface roughness is $\leq 1.6 \mu\text{m}$. **All fluid media in use with the Heat exchanger, must be compatible with EN.1.4404 (AISI 316L) Stainless Steel.**

The 40 BAR (580 PSI), maximum product side pressure, heat exchanger design is based on either a $\varnothing 129 \times 2\text{mm}$ shell or a $\varnothing 209 \times 3\text{mm}$ shell. Other sizes and pressure ratings are also available.

Regulations and Directives

The heat exchanger is designed and manufactured in accordance with

- the European Commission regulation No. 2023/2006 (Good Manufacturing Practices)
- the European Parliament directive No. EN 1935/2004 (Food Contact Materials).
- the European Parliament directive No. EN 1907/2006 (Chemical Restrictions (REACH)).
- PED - Article 4.3 (SEP) in the European Parliament directive No. 2014/68/EU (Pressure Equipment Directive). The Heat Exchanger is only designed for fluid group 2 (non-dangerous fluids).
- 3-A Sanitary Standards 00-01 / 12-08

Documentation

1. Customer drawing with description and design data table
2. Declaration of conformity
3. Pressure test certificate
4. User Manual

As Supplement the following can be provided:

5. 3.1 material certificates according to EN 10204
6. Weld-logs with associated welding certificates according to DS/EN ISO 9601-1.

Group specifications

Group ordering codes and specifications are as listed below. A more detailed group tables with unit codes and main dimensions can be found on the following pages.

TLCA-xx-xxx-40

TLCA **T**ubular **L**iquid **C**oolers with **3A** certificate.
 xx .5, 01, 02, 03, 04, 06, 08 * Indicates the heat transfer surface area in m².
 xxx Either 129 or 209 * Indicates the heat exchanger shell diameter in mm.
 40 The heat exchanger is designed for pressures up to 40 bar

* Other versions are available

TLCA-xx-xxx-yyy-zz

xx See above
 xxx See above
 yyy See below Indicates tube side clamp ferrule connection.
 zz See below Indicates shell side clamp ferrule connection.

Tube side (P1 and P2) connections are:

Shell size's	Tube side connection size's	
Ø129mm	DN125 – DN100 – DN80 – DN65	in accordance with DIN 32676-A
Ø129mm	4" (Ø101.6) – 3" (Ø76.1) – 2.5" (Ø63.5)	In accordance with ISO 2852-2
Ø209mm	DN150 – DN125 – DN100	in accordance with DIN 32676-A
Ø209mm	4" (Ø101.6)	in accordance with ISO 2852-2

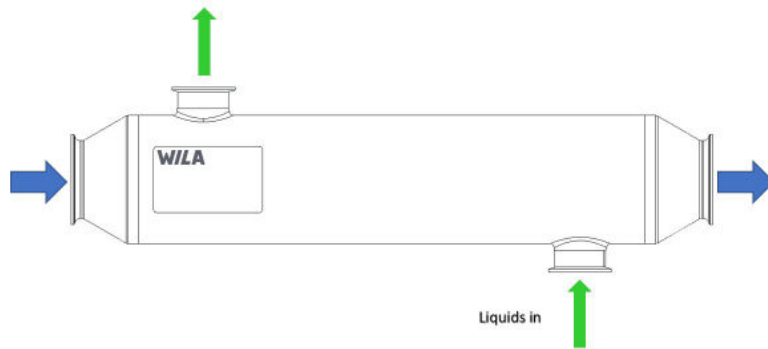
Shell side (S1 and S2) connections, both Ø129 and Ø209 are:

DN20 - DN25 - DN40 - DN50 - DN65 in accordance with DIN 32676-A
 3/4" (Ø20) - 1" (Ø25) - 1.5" (Ø38) - 2" (Ø51) - 2.5" (Ø63.5) in accordance with ISO 2852-2

For both tube and shell sides other connection types and sizes are available.

Connections

Always follow your fitting supplier guidelines and local legislations. Depending on the connection size either SH or SSH clamping rings (or similar) are recommended. For liquids, the outlet should be at the highest point to ensure complete removal of air in the chamber.



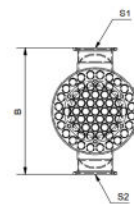
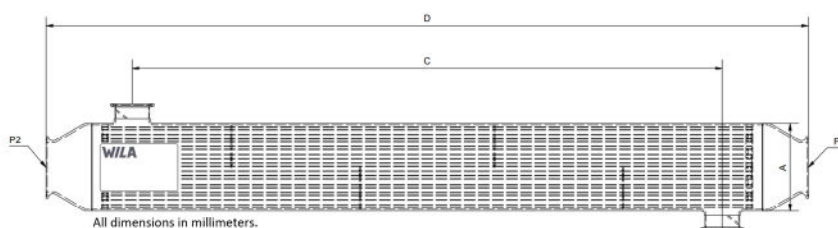
Shell side workflow

The liquid cooler shell side recommended workflow limits are based on the most optimal placement of our baffle plates in the tube bundle, which varies with the size of the liquid cooler:

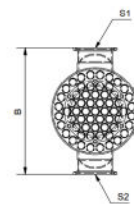
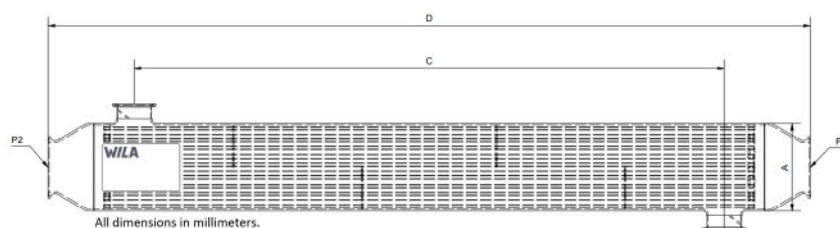
- For liquid cooler size 0.5m² the recommended maximum shell side workflow is 3 m³/h
- For liquid cooler size 1 m² the recommended maximum shell side workflow is 3 m³/h
- For liquid cooler size 2 m² the recommended maximum shell side workflow is 7 m³/h
- For liquid cooler size 3 m² the recommended maximum shell side workflow is 12 m³/h
- For liquid cooler size 4 m² the recommended maximum shell side workflow is 14 m³/h
- For liquid cooler size 6 m² the recommended maximum shell side workflow is 21 m³/h
- For liquid cooler size 8 m² the recommended maximum shell side workflow is 28 m³/h

Note:

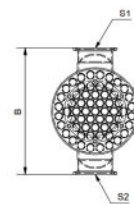
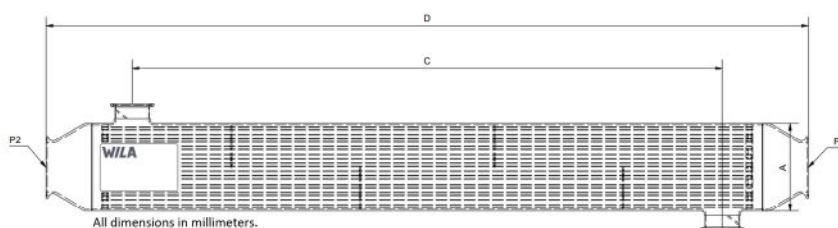
In the following group tables 'Tube bank' is data on the product tubes running paralell inside the shell.



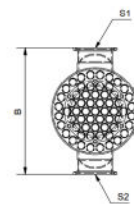
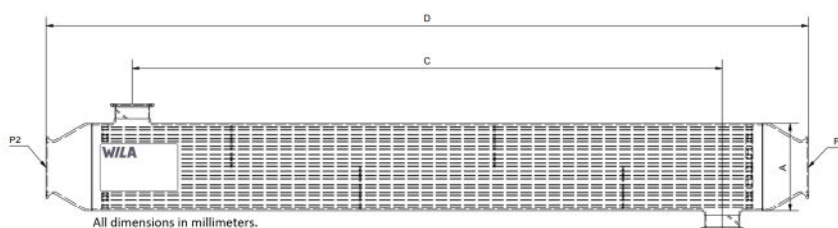
TLCA-.5-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 3 liters		Volume 1 liters		316L Concentric		Dry weight 8 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-.5-129-125-25	W-036388	DN125	Ø129	Ø25	186	160	316	61 pc Ø12x1mm
TLCA-.5-129-100-25	W-036389	DN100	Ø129	Ø25	186	160	354	61 pc Ø12x1mm
TLCA-.5-129-101-25	W-036390	Ø101.6	Ø129	Ø25	186	160	350	61 pc Ø12x1mm
TLCA-.5-129-080-25	W-036391	DN80	Ø129	Ø25	186	160	372	61 pc Ø12x1mm
TLCA-.5-129-076-25	W-036392	Ø76.1	Ø129	Ø25	186	160	396	61 pc Ø12x1mm
TLCA-.5-129-065-25	W-036393	DN65	Ø129	Ø25	186	160	400	61 pc Ø12x1mm
TLCA-.5-129-063-25	W-036394	Ø63.5	Ø129	Ø25	186	160	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-.5-129-125-21	W-036395	DN125	Ø129	Ø21.3	179	160	316	61 pc Ø12x1mm
TLCA-.5-129-100-21	W-036396	DN100	Ø129	Ø21.3	179	160	354	61 pc Ø12x1mm
TLCA-.5-129-101-21	W-036397	Ø101.6	Ø129	Ø21.3	179	160	350	61 pc Ø12x1mm
TLCA-.5-129-080-21	W-036398	DN80	Ø129	Ø21.3	179	160	372	61 pc Ø12x1mm
TLCA-.5-129-076-21	W-036399	Ø76.1	Ø129	Ø21.3	179	160	396	61 pc Ø12x1mm
TLCA-.5-129-065-21	W-036400	DN65	Ø129	Ø21.3	179	160	400	61 pc Ø12x1mm
TLCA-.5-129-063-21	W-036401	Ø63.5	Ø129	Ø21.3	179	160	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-.5-129-125-26	W-036402	DN125	Ø129	DN25	186	160	316	61 pc Ø12x1mm
TLCA-.5-129-100-26	W-036403	DN100	Ø129	DN25	186	160	354	61 pc Ø12x1mm
TLCA-.5-129-101-26	W-036404	Ø101.6	Ø129	DN25	186	160	350	61 pc Ø12x1mm
TLCA-.5-129-080-26	W-036405	DN80	Ø129	DN25	186	160	372	61 pc Ø12x1mm
TLCA-.5-129-076-26	W-036406	Ø76.1	Ø129	DN25	186	160	396	61 pc Ø12x1mm
TLCA-.5-129-065-26	W-036407	DN65	Ø129	DN25	186	160	400	61 pc Ø12x1mm
TLCA-.5-129-063-26	W-036408	Ø63.5	Ø129	DN25	186	160	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-.5-129-125-20	W-036409	DN125	Ø129	DN20	179	160	316	61 pc Ø12x1mm
TLCA-.5-129-100-20	W-036410	DN100	Ø129	DN20	179	160	354	61 pc Ø12x1mm
TLCA-.5-129-101-20	W-036411	Ø101.6	Ø129	DN20	179	160	350	61 pc Ø12x1mm
TLCA-.5-129-080-20	W-036412	DN80	Ø129	DN20	179	160	372	61 pc Ø12x1mm
TLCA-.5-129-076-20	W-036413	Ø76.1	Ø129	DN20	179	160	396	61 pc Ø12x1mm
TLCA-.5-129-065-20	W-036414	DN65	Ø129	DN20	179	160	400	61 pc Ø12x1mm
TLCA-.5-129-063-20	W-036415	Ø63.5	Ø129	DN20	179	160	418	61 pc Ø12x1mm



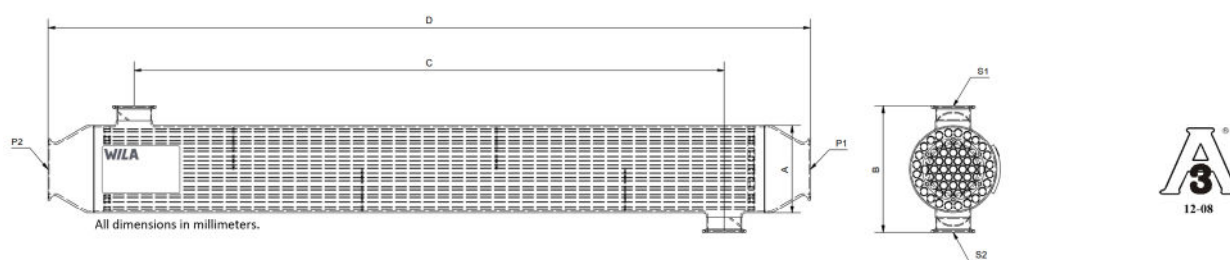
TLCA-01-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 4.5 liters		Volume 2.5 liters		316L Concentric		Dry weight 14 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-129-125-25	W-036420	DN125	Ø129	Ø25	186	408	566	61 pc Ø12x1mm
TLCA-01-129-100-25	W-036421	DN100	Ø129	Ø25	186	408	604	61 pc Ø12x1mm
TLCA-01-129-101-25	W-036422	Ø101.6	Ø129	Ø25	186	408	600	61 pc Ø12x1mm
TLCA-01-129-080-25	W-036423	DN80	Ø129	Ø25	186	408	622	61 pc Ø12x1mm
TLCA-01-129-076-25	W-036424	Ø76.1	Ø129	Ø25	186	408	646	61 pc Ø12x1mm
TLCA-01-129-065-25	W-036425	DN65	Ø129	Ø25	186	408	650	61 pc Ø12x1mm
TLCA-01-129-063-25	W-036426	Ø63.5	Ø129	Ø25	186	408	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-129-125-21	W-036427	DN125	Ø129	Ø21.3	179	408	566	61 pc Ø12x1mm
TLCA-01-129-100-21	W-036428	DN100	Ø129	Ø21.3	179	408	604	61 pc Ø12x1mm
TLCA-01-129-101-21	W-036429	Ø101.6	Ø129	Ø21.3	179	408	600	61 pc Ø12x1mm
TLCA-01-129-080-21	W-036430	DN80	Ø129	Ø21.3	179	408	622	61 pc Ø12x1mm
TLCA-01-129-076-21	W-036431	Ø76.1	Ø129	Ø21.3	179	408	646	61 pc Ø12x1mm
TLCA-01-129-065-21	W-036432	DN65	Ø129	Ø21.3	179	408	650	61 pc Ø12x1mm
TLCA-01-129-063-21	W-036433	Ø63.5	Ø129	Ø21.3	179	408	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-129-125-26	W-036434	DN125	Ø129	DN25	186	408	566	61 pc Ø12x1mm
TLCA-01-129-100-26	W-036435	DN100	Ø129	DN25	186	408	604	61 pc Ø12x1mm
TLCA-01-129-101-26	W-036436	Ø101.6	Ø129	DN25	186	408	600	61 pc Ø12x1mm
TLCA-01-129-080-26	W-036437	DN80	Ø129	DN25	186	408	622	61 pc Ø12x1mm
TLCA-01-129-076-26	W-036438	Ø76.1	Ø129	DN25	186	408	646	61 pc Ø12x1mm
TLCA-01-129-065-26	W-036439	DN65	Ø129	DN25	186	408	650	61 pc Ø12x1mm
TLCA-01-129-063-26	W-036440	Ø63.5	Ø129	DN25	186	408	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-129-125-20	W-036441	DN125	Ø129	DN20	179	408	566	61 pc Ø12x1mm
TLCA-01-129-100-20	W-036442	DN100	Ø129	DN20	179	408	604	61 pc Ø12x1mm
TLCA-01-129-101-20	W-036443	Ø101.6	Ø129	DN20	179	408	600	61 pc Ø12x1mm
TLCA-01-129-080-20	W-036444	DN80	Ø129	DN20	179	408	622	61 pc Ø12x1mm
TLCA-01-129-076-20	W-036445	Ø76.1	Ø129	DN20	179	408	646	61 pc Ø12x1mm
TLCA-01-129-065-20	W-036446	DN65	Ø129	DN20	179	408	650	61 pc Ø12x1mm
TLCA-01-129-063-20	W-036447	Ø63.5	Ø129	DN20	179	408	668	61 pc Ø12x1mm



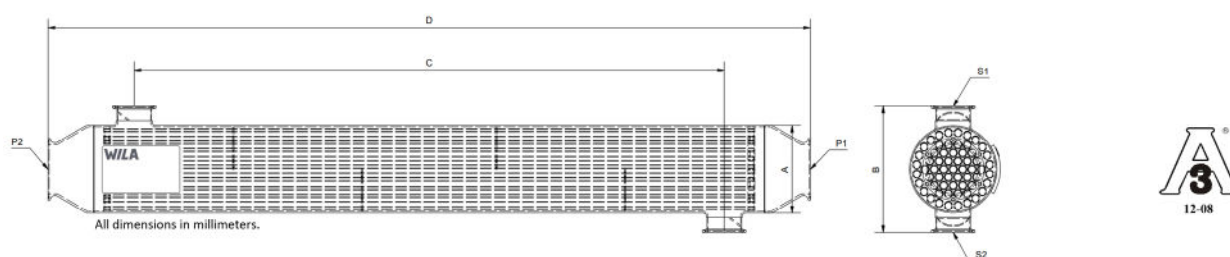
TLCA-02-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 6.5 liters		Volume 5 liters		316L Concentric		Dry weight 26 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-129-125-51	W-036452	DN125	Ø129	Ø51	186	886	1046	61 pc Ø12x1mm
TLCA-02-129-100-51	W-036453	DN100	Ø129	Ø51	186	886	1084	61 pc Ø12x1mm
TLCA-02-129-101-51	W-036454	Ø101.6	Ø129	Ø51	186	886	1080	61 pc Ø12x1mm
TLCA-02-129-080-51	W-036455	DN80	Ø129	Ø51	186	886	1102	61 pc Ø12x1mm
TLCA-02-129-076-51	W-036456	Ø76.1	Ø129	Ø51	186	886	1126	61 pc Ø12x1mm
TLCA-02-129-065-51	W-036457	DN65	Ø129	Ø51	186	886	1130	61 pc Ø12x1mm
TLCA-02-129-063-51	W-036458	Ø63.5	Ø129	Ø51	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-129-125-38	W-036459	DN125	Ø129	Ø38	186	886	1046	61 pc Ø12x1mm
TLCA-02-129-100-38	W-036460	DN100	Ø129	Ø38	186	886	1084	61 pc Ø12x1mm
TLCA-02-129-101-38	W-036461	Ø101.6	Ø129	Ø38	186	886	1080	61 pc Ø12x1mm
TLCA-02-129-080-38	W-036462	DN80	Ø129	Ø38	186	886	1102	61 pc Ø12x1mm
TLCA-02-129-076-38	W-036463	Ø76.1	Ø129	Ø38	186	886	1126	61 pc Ø12x1mm
TLCA-02-129-065-38	W-036464	DN65	Ø129	Ø38	186	886	1130	61 pc Ø12x1mm
TLCA-02-129-063-38	W-036465	Ø63.5	Ø129	Ø38	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-129-125-50	W-036466	DN125	Ø129	DN50	186	886	1046	61 pc Ø12x1mm
TLCA-02-129-100-50	W-036467	DN100	Ø129	DN50	186	886	1084	61 pc Ø12x1mm
TLCA-02-129-101-50	W-036468	Ø101.6	Ø129	DN50	186	886	1080	61 pc Ø12x1mm
TLCA-02-129-080-50	W-036469	DN80	Ø129	DN50	186	886	1102	61 pc Ø12x1mm
TLCA-02-129-076-50	W-036470	Ø76.1	Ø129	DN50	186	886	1126	61 pc Ø12x1mm
TLCA-02-129-065-50	W-036471	DN65	Ø129	DN50	186	886	1130	61 pc Ø12x1mm
TLCA-02-129-063-50	W-036472	Ø63.5	Ø129	DN50	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-129-125-40	W-036473	DN125	Ø129	DN40	186	886	1046	61 pc Ø12x1mm
TLCA-02-129-100-40	W-036474	DN100	Ø129	DN40	186	886	1084	61 pc Ø12x1mm
TLCA-02-129-101-40	W-036475	Ø101.6	Ø129	DN40	186	886	1080	61 pc Ø12x1mm
TLCA-02-129-080-40	W-036476	DN80	Ø129	DN40	186	886	1102	61 pc Ø12x1mm
TLCA-02-129-076-40	W-036477	Ø76.1	Ø129	DN40	186	886	1126	61 pc Ø12x1mm
TLCA-02-129-065-40	W-036478	DN65	Ø129	DN40	186	886	1130	61 pc Ø12x1mm
TLCA-02-129-063-40	W-036479	Ø63.5	Ø129	DN40	186	886	1145	61 pc Ø12x1mm



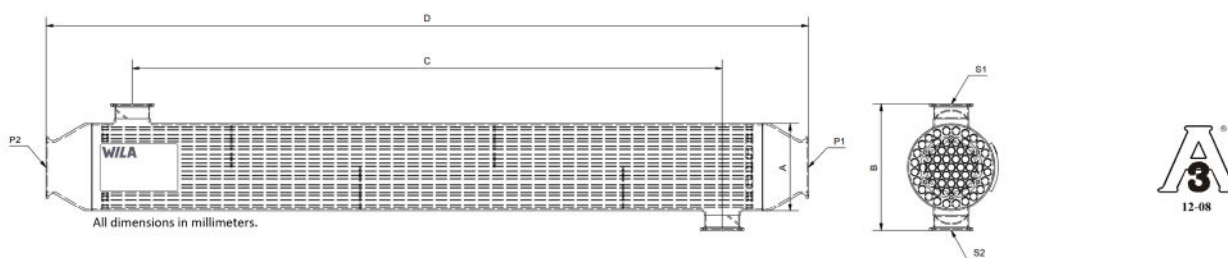
TLC-03-129-40 (Section 1 of 2)		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 9 liters		Volume 7.5 liters		316L Concentric	Dry weight 37 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-63	W-036488	DN125	Ø129	Ø63.5	186	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-63	W-036489	DN100	Ø129	Ø63.5	186	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-63	W-036490	Ø101.6	Ø129	Ø63.5	186	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-63	W-036491	DN80	Ø129	Ø63.5	186	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-63	W-036492	Ø76.1	Ø129	Ø63.5	186	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-63	W-036493	DN65	Ø129	Ø63.5	186	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-63	W-036494	Ø63.5	Ø129	Ø63.5	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-51	W-036495	DN125	Ø129	Ø51	186	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-51	W-036496	DN100	Ø129	Ø51	186	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-51	W-036497	Ø101.6	Ø129	Ø51	186	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-51	W-036498	DN80	Ø129	Ø51	186	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-51	W-036499	Ø76.1	Ø129	Ø51	186	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-51	W-036500	DN65	Ø129	Ø51	186	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-51	W-036501	Ø63.5	Ø129	Ø51	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-38	W-036502	DN125	Ø129	Ø38	186	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-38	W-036503	DN100	Ø129	Ø38	186	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-38	W-036504	Ø101.6	Ø129	Ø38	186	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-38	W-036505	DN80	Ø129	Ø38	186	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-38	W-036506	Ø76.1	Ø129	Ø38	186	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-38	W-036507	DN65	Ø129	Ø38	186	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-38	W-036508	Ø63.5	Ø129	Ø38	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-65	W-036509	DN125	Ø129	DN65	199	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-65	W-036510	DN100	Ø129	DN65	199	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-65	W-036511	Ø101.6	Ø129	DN65	199	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-65	W-036512	DN80	Ø129	DN65	199	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-65	W-036513	Ø76.1	Ø129	DN65	199	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-65	W-036514	DN65	Ø129	DN65	199	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-65	W-036515	Ø63.5	Ø129	DN65	199	1360	1648	61 pc Ø12x1mm



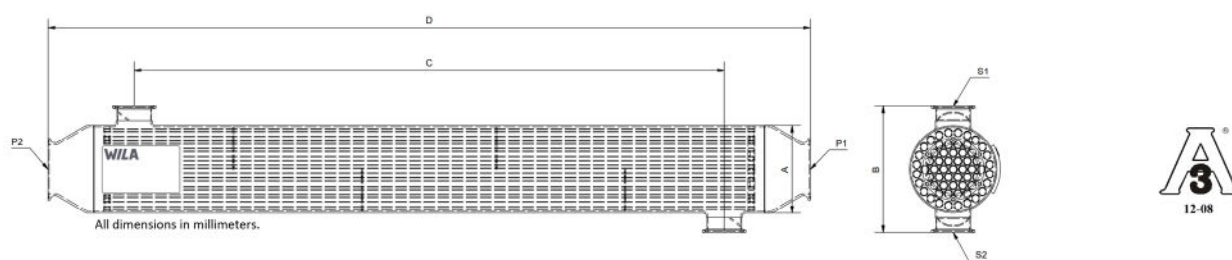
TLC-03-129-40 (Section 2 of 2)		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 9 liters		Volume 7.5 liters		316L Concentric		Dry weight 37 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-50	W-036516	DN125	Ø129	DN50	186	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-50	W-036517	DN100	Ø129	DN50	186	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-50	W-036518	Ø101.6	Ø129	DN50	186	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-50	W-036519	DN80	Ø129	DN50	186	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-50	W-036520	Ø76.1	Ø129	DN50	186	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-50	W-036521	DN65	Ø129	DN50	186	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-50	W-036522	Ø63.5	Ø129	DN50	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-129-125-40	W-036523	DN125	Ø129	DN40	186	1360	1546	61 pc Ø12x1mm
TLCA-03-129-100-40	W-036524	DN100	Ø129	DN40	186	1360	1584	61 pc Ø12x1mm
TLCA-03-129-101-40	W-036525	Ø101.6	Ø129	DN40	186	1360	1580	61 pc Ø12x1mm
TLCA-03-129-080-40	W-036526	DN80	Ø129	DN40	186	1360	1602	61 pc Ø12x1mm
TLCA-03-129-076-40	W-036527	Ø76.1	Ø129	DN40	186	1360	1626	61 pc Ø12x1mm
TLCA-03-129-065-40	W-036528	DN65	Ø129	DN40	186	1360	1630	61 pc Ø12x1mm
TLCA-03-129-063-40	W-036529	Ø63.5	Ø129	DN40	186	1360	1648	61 pc Ø12x1mm



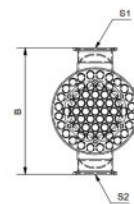
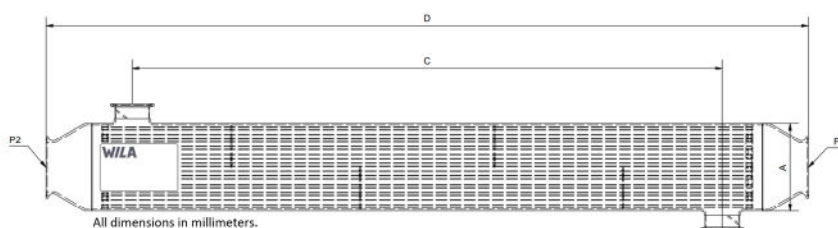
TLCA-01-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 8.5 liters		Volume 2.5 liters		316L Concentric		Dry weight 19 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-209-150-38	W-036542	DN150	Ø209	Ø38	266	122	383	163 pc Ø12x1mm
TLCA-01-209-125-38	W-036543	DN125	Ø209	Ø38	266	122	424	163 pc Ø12x1mm
TLCA-01-209-100-38	W-036544	DN100	Ø209	Ø38	266	122	467	163 pc Ø12x1mm
TLCA-01-209-101-38	W-036545	Ø101.6	Ø209	Ø38	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-209-150-25	W-036546	DN150	Ø209	Ø25	266	122	383	163 pc Ø12x1mm
TLCA-01-209-125-25	W-036547	DN125	Ø209	Ø25	266	122	424	163 pc Ø12x1mm
TLCA-01-209-100-25	W-036548	DN100	Ø209	Ø25	266	122	467	163 pc Ø12x1mm
TLCA-01-209-101-25	W-036549	Ø101.6	Ø209	Ø25	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-209-150-40	W-036550	DN150	Ø209	DN40	266	122	383	163 pc Ø12x1mm
TLCA-01-209-125-40	W-036551	DN125	Ø209	DN40	266	122	424	163 pc Ø12x1mm
TLCA-01-209-100-40	W-036552	DN100	Ø209	DN40	266	122	467	163 pc Ø12x1mm
TLCA-01-209-101-40	W-036553	Ø101.6	Ø209	DN40	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-01-209-150-26	W-036554	DN150	Ø209	DN25	266	122	383	163 pc Ø12x1mm
TLCA-01-209-125-26	W-036555	DN125	Ø209	DN25	266	122	424	163 pc Ø12x1mm
TLCA-01-209-100-26	W-036556	DN100	Ø209	DN25	266	122	467	163 pc Ø12x1mm
TLCA-01-209-101-26	W-036557	Ø101.6	Ø209	DN25	266	122	467	163 pc Ø12x1mm



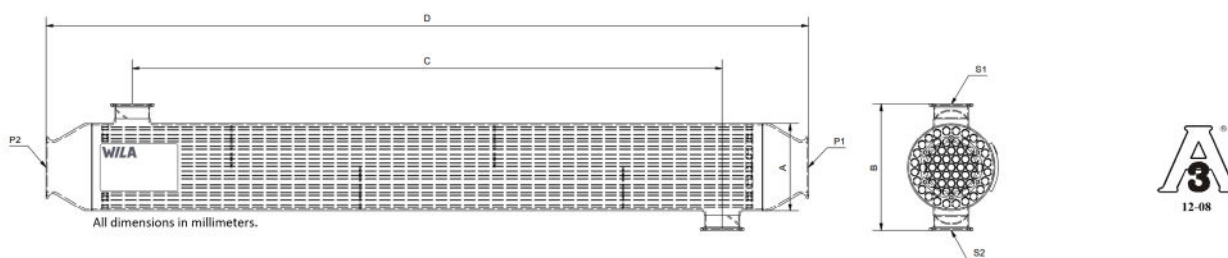
TLCA-02-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 11 liters		Volume 5 liters		316L Concentric	Dry weight 31 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-209-150-51	W-036564	DN150	Ø209	Ø51	266	302	568	163 pc Ø12x1mm
TLCA-02-209-125-51	W-036565	DN125	Ø209	Ø51	266	302	612	163 pc Ø12x1mm
TLCA-02-209-100-51	W-036566	DN100	Ø209	Ø51	266	302	652	163 pc Ø12x1mm
TLCA-02-209-101-51	W-036567	Ø101.6	Ø209	Ø51	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-209-150-38	W-036568	DN150	Ø209	Ø38	266	302	568	163 pc Ø12x1mm
TLCA-02-209-125-38	W-036569	DN125	Ø209	Ø38	266	302	612	163 pc Ø12x1mm
TLCA-02-209-100-38	W-036570	DN100	Ø209	Ø38	266	302	652	163 pc Ø12x1mm
TLCA-02-209-101-38	W-036571	Ø101.6	Ø209	Ø38	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-209-150-50	W-036572	DN150	Ø209	DN50	266	302	568	163 pc Ø12x1mm
TLCA-02-209-125-50	W-036573	DN125	Ø209	DN50	266	302	612	163 pc Ø12x1mm
TLCA-02-209-100-50	W-036574	DN100	Ø209	DN50	266	302	652	163 pc Ø12x1mm
TLCA-02-209-101-50	W-036575	Ø101.6	Ø209	DN50	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-02-209-150-40	W-036576	DN150	Ø209	DN40	266	302	568	163 pc Ø12x1mm
TLCA-02-209-125-40	W-036577	DN125	Ø209	DN40	266	302	612	163 pc Ø12x1mm
TLCA-02-209-100-40	W-036578	DN100	Ø209	DN40	266	302	652	163 pc Ø12x1mm
TLCA-02-209-101-40	W-036579	Ø101.6	Ø209	DN40	266	302	652	163 pc Ø12x1mm



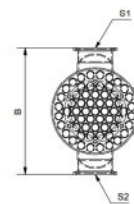
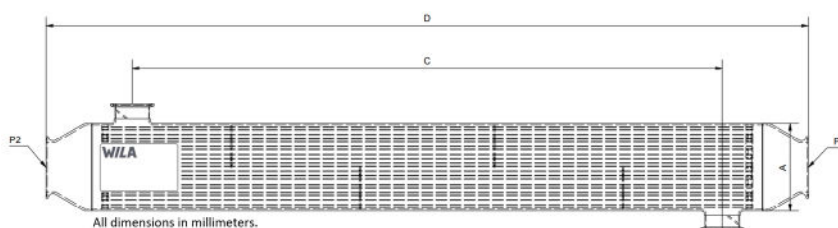
TLCA-03-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 14 liters		Volume 8.5 liters		316L Concentric		Dry weight 44 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-209-150-51	W-036586	DN150	Ø209	Ø51	266	514	788	163 pc Ø12x1mm
TLCA-03-209-125-51	W-036587	DN125	Ø209	Ø51	266	514	832	163 pc Ø12x1mm
TLCA-03-209-100-51	W-036588	DN100	Ø209	Ø51	266	514	872	163 pc Ø12x1mm
TLCA-03-209-101-51	W-036589	Ø101.6	Ø209	Ø51	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-209-150-38	W-036590	DN150	Ø209	Ø38	266	514	788	163 pc Ø12x1mm
TLCA-03-209-125-38	W-036591	DN125	Ø209	Ø38	266	514	832	163 pc Ø12x1mm
TLCA-03-209-100-38	W-036592	DN100	Ø209	Ø38	266	514	872	163 pc Ø12x1mm
TLCA-03-209-101-38	W-036593	Ø101.6	Ø209	Ø38	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-209-150-50	W-036594	DN150	Ø209	DN50	266	514	788	163 pc Ø12x1mm
TLCA-03-209-125-50	W-036595	DN125	Ø209	DN50	266	514	832	163 pc Ø12x1mm
TLCA-03-209-100-50	W-036596	DN100	Ø209	DN50	266	514	872	163 pc Ø12x1mm
TLCA-02-209-101-50	W-036597	Ø101.6	Ø209	DN50	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-03-209-150-40	W-036598	DN150	Ø209	DN40	266	514	788	163 pc Ø12x1mm
TLCA-03-209-125-40	W-036599	DN125	Ø209	DN40	266	514	832	163 pc Ø12x1mm
TLCA-03-209-100-40	W-036600	DN100	Ø209	DN40	266	514	872	163 pc Ø12x1mm
TLCA-03-209-101-40	W-036601	Ø101.6	Ø209	DN40	266	514	872	163 pc Ø12x1mm



TLCA-04-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 15.5 liters		Volume 10.5 liters		316L Concentric		Dry weight 53 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-63	W-036608	DN150	Ø209	Ø63.5	266	656	935	163 pc Ø12x1mm
TLCA-04-209-125-63	W-036609	DN125	Ø209	Ø63.5	266	656	979	163 pc Ø12x1mm
TLCA-04-209-100-63	W-036610	DN100	Ø209	Ø63.5	266	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-63	W-036611	Ø101.6	Ø209	Ø63.5	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-51	W-036612	DN150	Ø209	Ø51	266	656	935	163 pc Ø12x1mm
TLCA-04-209-125-51	W-036613	DN125	Ø209	Ø51	266	656	979	163 pc Ø12x1mm
TLCA-04-209-100-51	W-036614	DN100	Ø209	Ø51	266	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-51	W-036615	Ø101.6	Ø209	Ø51	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-38	W-036616	DN150	Ø209	Ø38	266	656	935	163 pc Ø12x1mm
TLCA-04-209-125-38	W-036617	DN125	Ø209	Ø38	266	656	979	163 pc Ø12x1mm
TLCA-04-209-100-38	W-036618	DN100	Ø209	Ø38	266	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-38	W-036619	Ø101.6	Ø209	Ø38	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-65	W-036620	DN150	Ø209	DN65	279	656	935	163 pc Ø12x1mm
TLCA-04-209-125-65	W-036621	DN125	Ø209	DN65	279	656	979	163 pc Ø12x1mm
TLCA-04-209-100-65	W-036622	DN100	Ø209	DN65	279	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-65	W-036623	Ø101.6	Ø209	DN65	279	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-50	W-036624	DN150	Ø209	DN50	266	656	935	163 pc Ø12x1mm
TLCA-04-209-125-50	W-036625	DN125	Ø209	DN50	266	656	979	163 pc Ø12x1mm
TLCA-04-209-100-50	W-036626	DN100	Ø209	DN50	266	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-50	W-036627	Ø101.6	Ø209	DN50	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-04-209-150-40	W-036628	DN150	Ø209	DN40	266	656	935	163 pc Ø12x1mm
TLCA-04-209-125-40	W-036629	DN125	Ø209	DN40	266	656	979	163 pc Ø12x1mm
TLCA-04-209-100-40	W-036630	DN100	Ø209	DN40	266	656	1019	163 pc Ø12x1mm
TLCA-04-209-101-40	W-036631	Ø101.6	Ø209	DN40	266	656	1019	163 pc Ø12x1mm



TLCA-06-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 20 liters		Volume 15.5 liters		316L Concentric		Dry weight 76 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-63	W-036641	DN150	Ø209	Ø63.5	266	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-63	W-036642	DN125	Ø209	Ø63.5	266	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-63	W-036643	DN100	Ø209	Ø63.5	266	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-63	W-036644	Ø101.6	Ø209	Ø63.5	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-51	W-036645	DN150	Ø209	Ø51	266	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-51	W-036646	DN125	Ø209	Ø51	266	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-51	W-036647	DN100	Ø209	Ø51	266	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-51	W-036648	Ø101.6	Ø209	Ø51	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-38	W-036649	DN150	Ø209	Ø38	266	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-38	W-036650	DN125	Ø209	Ø38	266	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-38	W-036651	DN100	Ø209	Ø38	266	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-38	W-036652	Ø101.6	Ø209	Ø38	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-65	W-036653	DN150	Ø209	DN65	279	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-65	W-036654	DN125	Ø209	DN65	279	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-65	W-036655	DN100	Ø209	DN65	279	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-65	W-036656	Ø101.6	Ø209	DN65	279	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-50	W-036657	DN150	Ø209	DN50	266	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-50	W-036658	DN125	Ø209	DN50	266	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-50	W-036659	DN100	Ø209	DN50	266	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-50	W-036660	Ø101.6	Ø209	DN50	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-06-209-150-40	W-036661	DN150	Ø209	DN40	266	1020	1315	163 pc Ø12x1mm
TLCA-06-209-125-40	W-036662	DN125	Ø209	DN40	266	1020	1359	163 pc Ø12x1mm
TLCA-06-209-100-40	W-036663	DN100	Ø209	DN40	266	1020	1399	163 pc Ø12x1mm
TLCA-06-209-101-40	W-036664	Ø101.6	Ø209	DN40	266	1020	1399	163 pc Ø12x1mm



TLCA-08-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 26 liters		Volume 21.5 liters		316L Concentric	Dry weight 101 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-63	W-036674	DN150	Ø209	Ø63.5	266	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-63	W-036675	DN125	Ø209	Ø63.5	266	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-63	W-036676	DN100	Ø209	Ø63.5	266	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-63	W-036677	Ø101.6	Ø209	Ø63.5	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-51	W-036678	DN150	Ø209	Ø51	266	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-51	W-036679	DN125	Ø209	Ø51	266	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-51	W-036680	DN100	Ø209	Ø51	266	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-51	W-036681	Ø101.6	Ø209	Ø51	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-38	W-036682	DN150	Ø209	Ø38	266	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-38	W-036683	DN125	Ø209	Ø38	266	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-38	W-036684	DN100	Ø209	Ø38	266	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-38	W-036685	Ø101.6	Ø209	Ø38	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-65	W-036686	DN150	Ø209	DN65	279	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-65	W-036687	DN125	Ø209	DN65	279	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-65	W-036688	DN100	Ø209	DN65	279	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-65	W-036689	Ø101.6	Ø209	DN65	279	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-50	W-036690	DN150	Ø209	DN50	266	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-50	W-036691	DN125	Ø209	DN50	266	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-50	W-036692	DN100	Ø209	DN50	266	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-50	W-036693	Ø101.6	Ø209	DN50	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLCA-08-209-150-40	W-036694	DN150	Ø209	DN40	266	1426	1730	163 pc Ø12x1mm
TLCA-08-209-125-40	W-036695	DN125	Ø209	DN40	266	1426	1774	163 pc Ø12x1mm
TLCA-08-209-100-40	W-036696	DN100	Ø209	DN40	266	1426	1814	163 pc Ø12x1mm
TLCA-08-209-101-40	W-036697	Ø101.6	Ø209	DN40	266	1426	1814	163 pc Ø12x1mm