

TUBULAR LIQUID COOLER

DETAILED OVERVIEW FOR TYPE 'TLC'
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.

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Introduction

This overview is for Tubular Liquid Coolers manufactured by Wila A/S under the category "TLC" 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).

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.

TLC-xx-xxx-40

TLC **T**ubular **L**iquid **C**oolers.

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

TLC-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

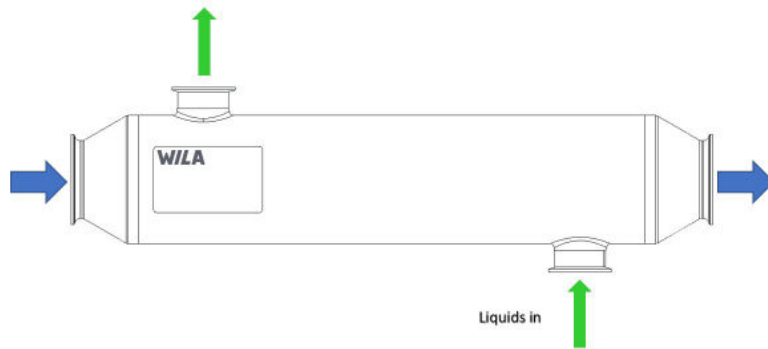
Shell side (S1 and S2) connections, both Ø129 and Ø209 are:

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.



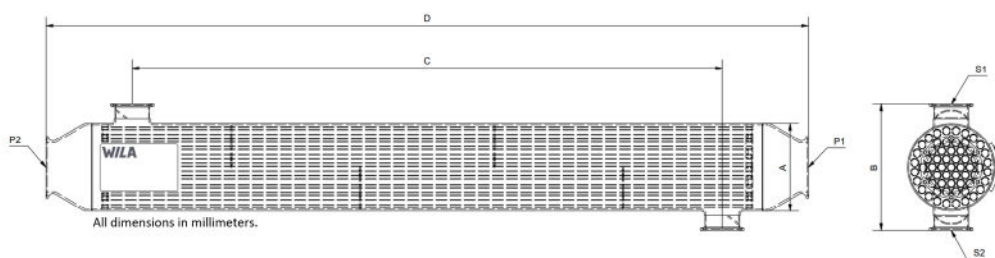
Shell side workflow

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:

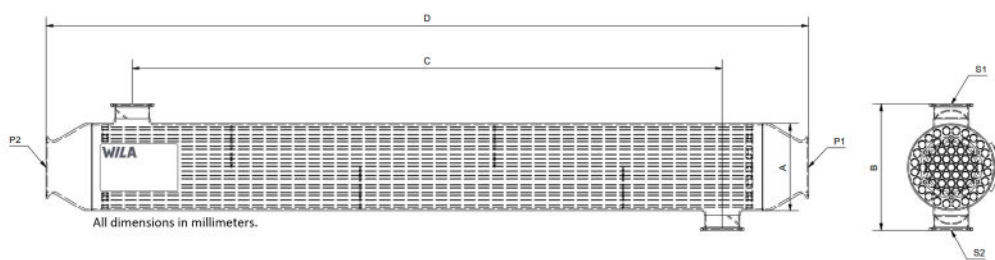
- For liquid cooler size 0.5m² the recommended maximum shell side workflow is 3 m³/h
- For liquid cooler size 1 m² the recommended maximum shell side workflow is 3 m³/h
- For liquid cooler size 2 m² the recommended maximum shell side workflow is 7 m³/h
- For liquid cooler size 3 m² the recommended maximum 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:

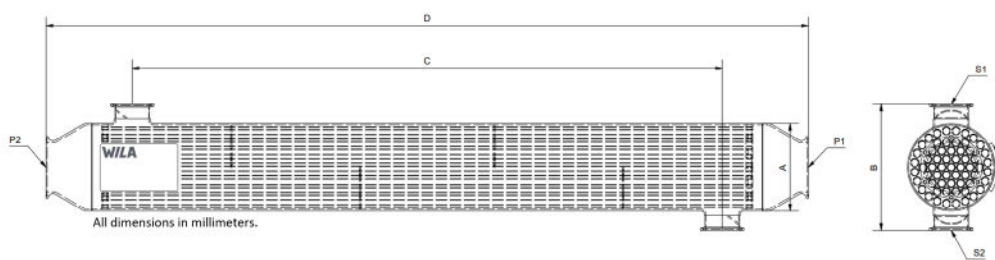
In the following group tables 'Tube bank' is data on the product tubes running paralell inside the shell.



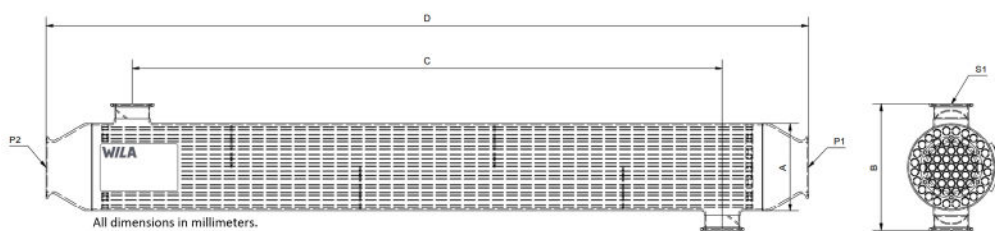
TLC-.5-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 3 liters		Volume 1 liters		316L Concentric		Dry weight 8 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-.5-129-125-25	W-035842	DN125	Ø129	Ø25	186	160	316	61 pc Ø12x1mm
TLC-.5-129-100-25	W-035843	DN100	Ø129	Ø25	186	160	354	61 pc Ø12x1mm
TLC-.5-129-101-25	W-035844	Ø101.6	Ø129	Ø25	186	160	350	61 pc Ø12x1mm
TLC-.5-129-080-25	W-035845	DN80	Ø129	Ø25	186	160	372	61 pc Ø12x1mm
TLC-.5-129-076-25	W-035846	Ø76.1	Ø129	Ø25	186	160	396	61 pc Ø12x1mm
TLC-.5-129-065-25	W-035847	DN65	Ø129	Ø25	186	160	400	61 pc Ø12x1mm
TLC-.5-129-063-25	W-015548	Ø63.5	Ø129	Ø25	186	160	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-.5-129-125-21	W-035849	DN125	Ø129	Ø21.3	179	160	316	61 pc Ø12x1mm
TLC-.5-129-100-21	W-035850	DN100	Ø129	Ø21.3	179	160	354	61 pc Ø12x1mm
TLC-.5-129-101-21	W-035851	Ø101.6	Ø129	Ø21.3	179	160	350	61 pc Ø12x1mm
TLC-.5-129-080-21	W-035852	DN80	Ø129	Ø21.3	179	160	372	61 pc Ø12x1mm
TLC-.5-129-076-21	W-035853	Ø76.1	Ø129	Ø21.3	179	160	396	61 pc Ø12x1mm
TLC-.5-129-065-21	W-035854	DN65	Ø129	Ø21.3	179	160	400	61 pc Ø12x1mm
TLC-.5-129-063-21	W-035855	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
TLC-.5-129-125-26	W-035856	DN125	Ø129	DN25	186	160	316	61 pc Ø12x1mm
TLC-.5-129-100-26	W-035857	DN100	Ø129	DN25	186	160	354	61 pc Ø12x1mm
TLC-.5-129-101-26	W-035858	Ø101.6	Ø129	DN25	186	160	350	61 pc Ø12x1mm
TLC-.5-129-080-26	W-035859	DN80	Ø129	DN25	186	160	372	61 pc Ø12x1mm
TLC-.5-129-076-26	W-035860	Ø76.1	Ø129	DN25	186	160	396	61 pc Ø12x1mm
TLC-.5-129-065-26	W-035861	DN65	Ø129	DN25	186	160	400	61 pc Ø12x1mm
TLC-.5-129-063-26	W-035862	Ø63.5	Ø129	DN25	186	160	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-.5-129-125-20	W-035863	DN125	Ø129	DN20	179	160	316	61 pc Ø12x1mm
TLC-.5-129-100-20	W-035864	DN100	Ø129	DN20	179	160	354	61 pc Ø12x1mm
TLC-.5-129-101-20	W-035865	Ø101.6	Ø129	DN20	179	160	350	61 pc Ø12x1mm
TLC-.5-129-080-20	W-035866	DN80	Ø129	DN20	179	160	372	61 pc Ø12x1mm
TLC-.5-129-076-20	W-035867	Ø76.1	Ø129	DN20	179	160	396	61 pc Ø12x1mm
TLC-.5-129-065-20	W-015560	DN65	Ø129	DN20	179	160	400	61 pc Ø12x1mm
TLC-.5-129-063-20	W-035869	Ø63.5	Ø129	DN20	179	160	418	61 pc Ø12x1mm



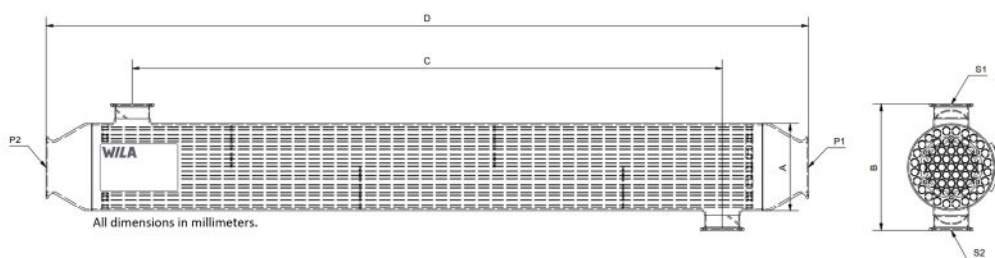
TLC-01-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 4.5 liters		Volume 2.5 liters		316L Concentric	Dry weight 14 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-129-125-25	W-035870	DN125	Ø129	Ø25	186	408	566	61 pc Ø12x1mm
TLC-01-129-100-25	W-015564	DN100	Ø129	Ø25	186	408	604	61 pc Ø12x1mm
TLC-01-129-101-25	W-015552	Ø101.6	Ø129	Ø25	186	408	600	61 pc Ø12x1mm
TLC-01-129-080-25	W-015563	DN80	Ø129	Ø25	186	408	622	61 pc Ø12x1mm
TLC-01-129-076-25	W-015551	Ø76.1	Ø129	Ø25	186	408	646	61 pc Ø12x1mm
TLC-01-129-065-25	W-015562	DN65	Ø129	Ø25	186	408	650	61 pc Ø12x1mm
TLC-01-129-063-25	W-015550	Ø63.5	Ø129	Ø25	186	408	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-129-125-21	W-035877	DN125	Ø129	Ø21.3	179	408	566	61 pc Ø12x1mm
TLC-01-129-100-21	W-035878	DN100	Ø129	Ø21.3	179	408	604	61 pc Ø12x1mm
TLC-01-129-101-21	W-035879	Ø101.6	Ø129	Ø21.3	179	408	600	61 pc Ø12x1mm
TLC-01-129-080-21	W-035880	DN80	Ø129	Ø21.3	179	408	622	61 pc Ø12x1mm
TLC-01-129-076-21	W-035881	Ø76.1	Ø129	Ø21.3	179	408	646	61 pc Ø12x1mm
TLC-01-129-065-21	W-035882	DN65	Ø129	Ø21.3	179	408	650	61 pc Ø12x1mm
TLC-10-129-063-21	W-035883	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
TLC-01-129-125-26	W-035884	DN125	Ø129	DN25	186	408	566	61 pc Ø12x1mm
TLC-01-129-100-26	W-035885	DN100	Ø129	DN25	186	408	604	61 pc Ø12x1mm
TLC-01-129-101-26	W-035886	Ø101.6	Ø129	DN25	186	408	600	61 pc Ø12x1mm
TLC-01-129-080-26	W-035887	DN80	Ø129	DN25	186	408	622	61 pc Ø12x1mm
TLC-01-129-076-26	W-035888	Ø76.1	Ø129	DN25	186	408	646	61 pc Ø12x1mm
TLC-01-129-065-26	W-035889	DN65	Ø129	DN25	186	408	650	61 pc Ø12x1mm
TLC-01-129-063-26	W-035890	Ø63.5	Ø129	DN25	186	408	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-129-125-20	W-035891	DN125	Ø129	DN20	179	408	566	61 pc Ø12x1mm
TLC-01-129-100-20	W-035892	DN100	Ø129	DN20	179	408	604	61 pc Ø12x1mm
TLC-01-129-101-20	W-035893	Ø101.6	Ø129	DN20	179	408	600	61 pc Ø12x1mm
TLC-01-129-080-20	W-035894	DN80	Ø129	DN20	179	408	622	61 pc Ø12x1mm
TLC-01-129-076-20	W-035895	Ø76.1	Ø129	DN20	179	408	646	61 pc Ø12x1mm
TLC-01-129-065-20	W-035896	DN65	Ø129	DN20	179	408	650	61 pc Ø12x1mm
TLC-01-129-063-20	W-035897	Ø63.5	Ø129	DN20	179	408	668	61 pc Ø12x1mm



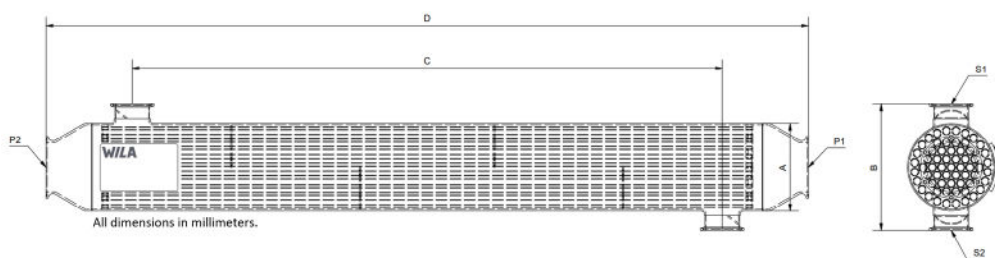
TLC-02-129-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 6.5 liters		Volume 5 liters		316L Concentric	Dry weight 26 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-129-125-51	W-035898	DN125	Ø129	Ø51	186	886	1046	61 pc Ø12x1mm
TLC-02-129-100-51	W-035899	DN100	Ø129	Ø51	186	886	1084	61 pc Ø12x1mm
TLC-02-129-101-51	W-029232	Ø101.6	Ø129	Ø51	186	886	1080	61 pc Ø12x1mm
TLC-02-129-080-51	W-035901	DN80	Ø129	Ø51	186	886	1102	61 pc Ø12x1mm
TLC-02-129-076-51	W-035902	Ø76.1	Ø129	Ø51	186	886	1126	61 pc Ø12x1mm
TLC-02-129-065-51	W-035903	DN65	Ø129	Ø51	186	886	1130	61 pc Ø12x1mm
TLC-02-129-063-51	W-035904	Ø63.5	Ø129	Ø51	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-129-125-38	W-015556	DN125	Ø129	Ø38	186	886	1046	61 pc Ø12x1mm
TLC-02-129-100-38	W-035906	DN100	Ø129	Ø38	186	886	1084	61 pc Ø12x1mm
TLC-02-129-101-38	W-015555	Ø101.6	Ø129	Ø38	186	886	1080	61 pc Ø12x1mm
TLC-02-129-080-38	W-035908	DN80	Ø129	Ø38	186	886	1102	61 pc Ø12x1mm
TLC-02-129-076-38	W-015554	Ø76.1	Ø129	Ø38	186	886	1126	61 pc Ø12x1mm
TLC-02-129-065-38	W-035910	DN65	Ø129	Ø38	186	886	1130	61 pc Ø12x1mm
TLC-02-129-063-38	W-015553	Ø63.5	Ø129	Ø38	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-129-125-50	W-035912	DN125	Ø129	DN50	186	886	1046	61 pc Ø12x1mm
TLC-02-129-100-50	W-032421	DN100	Ø129	DN50	186	886	1084	61 pc Ø12x1mm
TLC-02-129-101-50	W-035914	Ø101.6	Ø129	DN50	186	886	1080	61 pc Ø12x1mm
TLC-02-129-080-50	W-035915	DN80	Ø129	DN50	186	886	1102	61 pc Ø12x1mm
TLC-02-129-076-50	W-035916	Ø76.1	Ø129	DN50	186	886	1126	61 pc Ø12x1mm
TLC-02-129-065-50	W-035917	DN65	Ø129	DN50	186	886	1130	61 pc Ø12x1mm
TLC-02-129-063-50	W-035918	Ø63.5	Ø129	DN50	186	886	1145	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-129-125-40	W-015567	DN125	Ø129	DN40	186	886	1046	61 pc Ø12x1mm
TLC-02-129-100-40	W-015566	DN100	Ø129	DN40	186	886	1084	61 pc Ø12x1mm
TLC-02-129-101-40	W-035921	Ø101.6	Ø129	DN40	186	886	1080	61 pc Ø12x1mm
TLC-02-129-080-40	W-015565	DN80	Ø129	DN40	186	886	1102	61 pc Ø12x1mm
TLC-02-129-076-40	W-035923	Ø76.1	Ø129	DN40	186	886	1126	61 pc Ø12x1mm
TLC-02-129-065-40	W-035924	DN65	Ø129	DN40	186	886	1130	61 pc Ø12x1mm
TLC-02-129-063-40	W-035925	Ø63.5	Ø129	DN40	186	886	1145	61 pc Ø12x1mm



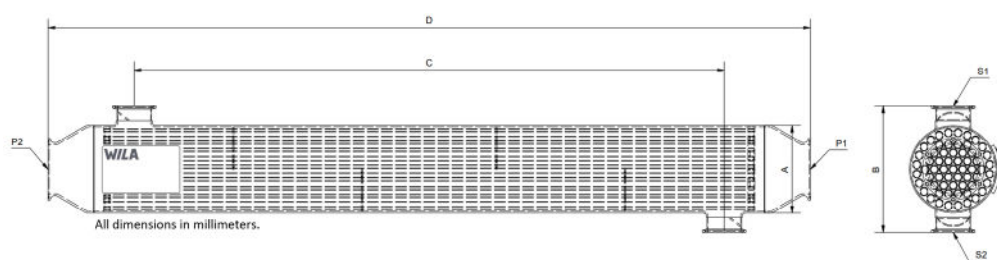
TLC-03-129-40 (Section 1 af 2)		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 9 liters		Volume 7.5 liters		316L Concentric		Dry weight 37 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-129-125-63	W-036087	DN125	Ø129	Ø63.5	186	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-63	W-036088	DN100	Ø129	Ø63.5	186	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-63	W-036089	Ø101.6	Ø129	Ø63.5	186	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-63	W-036090	DN80	Ø129	Ø63.5	186	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-63	W-036091	Ø76.1	Ø129	Ø63.5	186	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-63	W-036092	DN65	Ø129	Ø63.5	186	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-63	W-036093	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
TLC-03-129-125-51	W-015559	DN125	Ø129	Ø51	186	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-51	W-035927	DN100	Ø129	Ø51	186	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-51	W-015558	Ø101.6	Ø129	Ø51	186	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-51	W-035929	DN80	Ø129	Ø51	186	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-51	W-015557	Ø76.1	Ø129	Ø51	186	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-51	W-035931	DN65	Ø129	Ø51	186	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-51	W-035932	Ø63.5	Ø129	Ø51	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-129-125-38	W-035933	DN125	Ø129	Ø38	186	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-38	W-035934	DN100	Ø129	Ø38	186	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-38	W-035935	Ø101.6	Ø129	Ø38	186	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-38	W-035936	DN80	Ø129	Ø38	186	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-38	W-035937	Ø76.1	Ø129	Ø38	186	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-38	W-035938	DN65	Ø129	Ø38	186	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-38	W-035939	Ø63.5	Ø129	Ø38	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-129-125-65	W-035940	DN125	Ø129	DN65	199	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-65	W-035941	DN100	Ø129	DN65	199	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-65	W-035942	Ø101.6	Ø129	DN65	199	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-65	W-035943	DN80	Ø129	DN65	199	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-65	W-035944	Ø76.1	Ø129	DN65	199	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-65	W-035945	DN65	Ø129	DN65	199	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-65	W-035946	Ø63.5	Ø129	DN65	199	1360	1648	61 pc Ø12x1mm



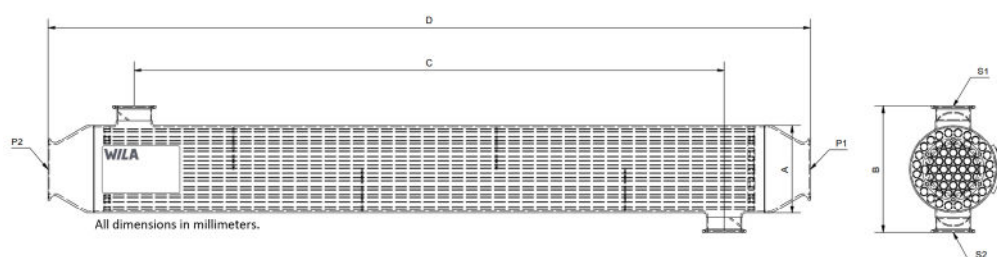
TLC-03-129-40 (Section 2 af 2)		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 9 liters		Volume 7.5 liters		316L Concentric		Dry weight 37 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-129-125-50	W-015570	DN125	Ø129	DN50	186	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-50	W-015569	DN100	Ø129	DN50	186	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-50	W-035949	Ø101.6	Ø129	DN50	186	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-50	W-015568	DN80	Ø129	DN50	186	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-50	W-035951	Ø76.1	Ø129	DN50	186	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-50	W-032427	DN65	Ø129	DN50	186	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-50	W-035953	Ø63.5	Ø129	DN50	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-129-125-40	W-035954	DN125	Ø129	DN40	186	1360	1546	61 pc Ø12x1mm
TLC-03-129-100-40	W-035955	DN100	Ø129	DN40	186	1360	1584	61 pc Ø12x1mm
TLC-03-129-101-40	W-035956	Ø101.6	Ø129	DN40	186	1360	1580	61 pc Ø12x1mm
TLC-03-129-080-40	W-035957	DN80	Ø129	DN40	186	1360	1602	61 pc Ø12x1mm
TLC-03-129-076-40	W-035958	Ø76.1	Ø129	DN40	186	1360	1626	61 pc Ø12x1mm
TLC-03-129-065-40	W-035959	DN65	Ø129	DN40	186	1360	1630	61 pc Ø12x1mm
TLC-03-129-063-40	W-035960	Ø63.5	Ø129	DN40	186	1360	1648	61 pc Ø12x1mm



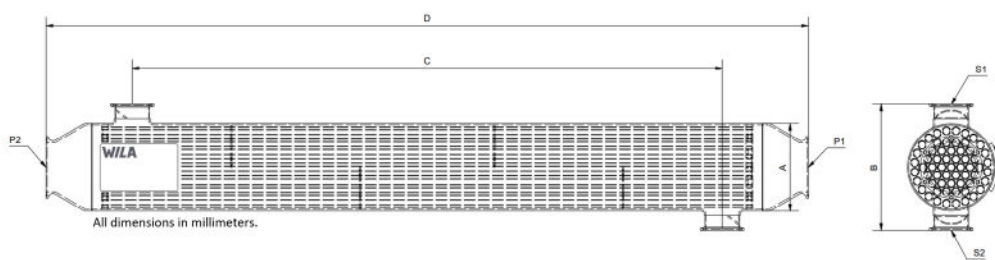
TLC-01-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 8.5 liters		Volume 2.5 liters		316L Concentric		Dry weight 19 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-209-150-38	W-035961	DN150	Ø209	Ø38	266	122	383	163 pc Ø12x1mm
TLC-01-209-125-38	W-035962	DN125	Ø209	Ø38	266	122	424	163 pc Ø12x1mm
TLC-01-209-100-38	W-035963	DN100	Ø209	Ø38	266	122	467	163 pc Ø12x1mm
TLC-01-209-101-38	W-035964	Ø101.6	Ø209	Ø38	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-209-150-25	W-035965	DN150	Ø209	Ø25	266	122	383	163 pc Ø12x1mm
TLC-01-209-125-25	W-035966	DN125	Ø209	Ø25	266	122	424	163 pc Ø12x1mm
TLC-01-209-100-25	W-035967	DN100	Ø209	Ø25	266	122	467	163 pc Ø12x1mm
TLC-01-209-101-25	W-035968	Ø101.6	Ø209	Ø25	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-209-150-40	W-035969	DN150	Ø209	DN40	266	122	383	163 pc Ø12x1mm
TLC-01-209-125-40	W-035970	DN125	Ø209	DN40	266	122	424	163 pc Ø12x1mm
TLC-01-209-100-40	W-035971	DN100	Ø209	DN40	266	122	467	163 pc Ø12x1mm
TLC-01-209-101-40	W-035972	Ø101.6	Ø209	DN40	266	122	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-01-209-150-26	W-035973	DN150	Ø209	DN25	266	122	383	163 pc Ø12x1mm
TLC-01-209-125-26	W-035974	DN125	Ø209	DN25	266	122	424	163 pc Ø12x1mm
TLC-01-209-100-26	W-035975	DN100	Ø209	DN25	266	122	467	163 pc Ø12x1mm
TLC-01-209-101-26	W-035976	Ø101.6	Ø209	DN25	266	122	467	163 pc Ø12x1mm



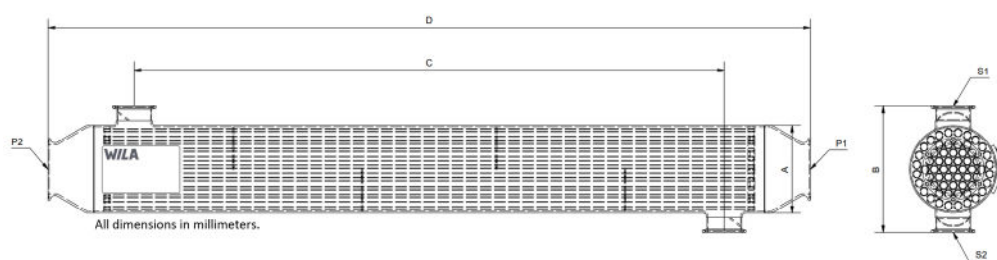
TLC-02-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 11 liters		Volume 5 liters		316L Concentric		Dry weight 31 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-209-150-51	W-035977	DN150	Ø209	Ø51	266	302	568	163 pc Ø12x1mm
TLC-02-209-125-51	W-035978	DN125	Ø209	Ø51	266	302	612	163 pc Ø12x1mm
TLC-02-209-100-51	W-035979	DN100	Ø209	Ø51	266	302	652	163 pc Ø12x1mm
TLC-02-209-101-51	W-035980	Ø101.6	Ø209	Ø51	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-209-150-38	W-035981	DN150	Ø209	Ø38	266	302	568	163 pc Ø12x1mm
TLC-02-209-125-38	W-015594	DN125	Ø209	Ø38	266	302	612	163 pc Ø12x1mm
TLC-02-209-100-38	W-035983	DN100	Ø209	Ø38	266	302	652	163 pc Ø12x1mm
TLC-02-209-101-38	W-015593	Ø101.6	Ø209	Ø38	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-209-150-50	W-035985	DN150	Ø209	DN50	266	302	568	163 pc Ø12x1mm
TLC-02-209-125-50	W-035986	DN125	Ø209	DN50	266	302	612	163 pc Ø12x1mm
TLC-02-209-100-50	W-035987	DN100	Ø209	DN50	266	302	652	163 pc Ø12x1mm
TLC-02-209-101-50	W-035988	Ø101.6	Ø209	DN50	266	302	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-02-209-150-40	W-035989	DN150	Ø209	DN40	266	302	568	163 pc Ø12x1mm
TLC-02-209-125-40	W-015603	DN125	Ø209	DN40	266	302	612	163 pc Ø12x1mm
TLC-02-209-100-40	W-015602	DN100	Ø209	DN40	266	302	652	163 pc Ø12x1mm
TLC-02-209-101-40	W-035992	Ø101.6	Ø209	DN40	266	302	652	163 pc Ø12x1mm



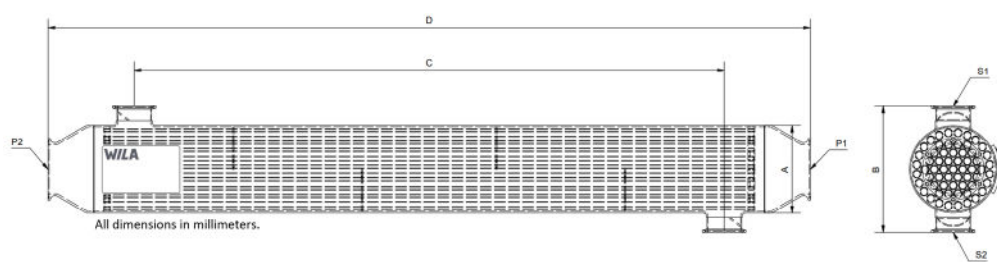
TLC-03-209-40		40 barg / 85°C		16 bar[g] / 95°C		Maximum pressure / temperature		
		Volume 14 liters		Volume 8.5 liters		316L Concentric	Dry weight 44 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-209-150-51	W-035993	DN150	Ø209	Ø51	266	514	788	163 pc Ø12x1mm
TLC-03-209-125-51	W-035994	DN125	Ø209	Ø51	266	514	832	163 pc Ø12x1mm
TLC-03-209-100-51	W-035995	DN100	Ø209	Ø51	266	514	872	163 pc Ø12x1mm
TLC-03-209-101-51	W-035996	Ø101.6	Ø209	Ø51	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-209-150-38	W-035997	DN150	Ø209	Ø38	266	514	788	163 pc Ø12x1mm
TLC-03-209-125-38	W-035998	DN125	Ø209	Ø38	266	514	832	163 pc Ø12x1mm
TLC-03-209-100-38	W-035999	DN100	Ø209	Ø38	266	514	872	163 pc Ø12x1mm
TLC-03-209-101-38	W-036000	Ø101.6	Ø209	Ø38	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-209-150-50	W-036001	DN150	Ø209	DN50	266	514	788	163 pc Ø12x1mm
TLC-03-209-125-50	W-036002	DN125	Ø209	DN50	266	514	832	163 pc Ø12x1mm
TLC-03-209-100-50	W-036003	DN100	Ø209	DN50	266	514	872	163 pc Ø12x1mm
TLC-02-209-101-50	W-036004	Ø101.6	Ø209	DN50	266	514	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-03-209-150-40	W-036005	DN150	Ø209	DN40	266	514	788	163 pc Ø12x1mm
TLC-03-209-125-40	W-036006	DN125	Ø209	DN40	266	514	832	163 pc Ø12x1mm
TLC-03-209-100-40	W-036007	DN100	Ø209	DN40	266	514	872	163 pc Ø12x1mm
TLC-03-209-101-40	W-036008	Ø101.6	Ø209	DN40	266	514	872	163 pc Ø12x1mm



TLC-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
TLC-04-209-150-63	W-036009	DN150	Ø209	Ø63.5	266	656	935	163 pc Ø12x1mm
TLC-04-209-125-63	W-036010	DN125	Ø209	Ø63.5	266	656	979	163 pc Ø12x1mm
TLC-04-209-100-63	W-036011	DN100	Ø209	Ø63.5	266	656	1019	163 pc Ø12x1mm
TLC-04-209-101-63	W-036012	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
TLC-04-209-150-51	W-015597	DN150	Ø209	Ø51	266	656	935	163 pc Ø12x1mm
TLC-04-209-125-51	W-015596	DN125	Ø209	Ø51	266	656	979	163 pc Ø12x1mm
TLC-04-209-100-51	W-036015	DN100	Ø209	Ø51	266	656	1019	163 pc Ø12x1mm
TLC-04-209-101-51	W-015595	Ø101.6	Ø209	Ø51	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-04-209-150-38	W-036017	DN150	Ø209	Ø38	266	656	935	163 pc Ø12x1mm
TLC-04-209-125-38	W-036018	DN125	Ø209	Ø38	266	656	979	163 pc Ø12x1mm
TLC-04-209-100-38	W-036019	DN100	Ø209	Ø38	266	656	1019	163 pc Ø12x1mm
TLC-04-209-101-38	W-036020	Ø101.6	Ø209	Ø38	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-04-209-150-65	W-036021	DN150	Ø209	DN65	279	656	935	163 pc Ø12x1mm
TLC-04-209-125-65	W-036022	DN125	Ø209	DN65	279	656	979	163 pc Ø12x1mm
TLC-04-209-100-65	W-036023	DN100	Ø209	DN65	279	656	1019	163 pc Ø12x1mm
TLC-04-209-101-65	W-036024	Ø101.6	Ø209	DN65	279	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-04-209-150-50	W-015606	DN150	Ø209	DN50	266	656	935	163 pc Ø12x1mm
TLC-04-209-125-50	W-015605	DN125	Ø209	DN50	266	656	979	163 pc Ø12x1mm
TLC-04-209-100-50	W-015604	DN100	Ø209	DN50	266	656	1019	163 pc Ø12x1mm
TLC-04-209-101-50	W-036028	Ø101.6	Ø209	DN50	266	656	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-04-209-150-40	W-036029	DN150	Ø209	DN40	266	656	935	163 pc Ø12x1mm
TLC-04-209-125-40	W-036030	DN125	Ø209	DN40	266	656	979	163 pc Ø12x1mm
TLC-04-209-100-40	W-036031	DN100	Ø209	DN40	266	656	1019	163 pc Ø12x1mm
TLC-04-209-101-40	W-036032	Ø101.6	Ø209	DN40	266	656	1019	163 pc Ø12x1mm



TLC-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
TLC-06-209-150-63	W-015600	DN150	Ø209	Ø63.5	266	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-63	W-015599	DN125	Ø209	Ø63.5	266	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-63	W-036035	DN100	Ø209	Ø63.5	266	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-63	W-015598	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
TLC-06-209-150-51	W-036037	DN150	Ø209	Ø51	266	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-51	W-036038	DN125	Ø209	Ø51	266	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-51	W-036039	DN100	Ø209	Ø51	266	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-51	W-036040	Ø101.6	Ø209	Ø51	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-06-209-150-38	W-036041	DN150	Ø209	Ø38	266	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-38	W-036042	DN125	Ø209	Ø38	266	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-38	W-036043	DN100	Ø209	Ø38	266	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-38	W-036044	Ø101.6	Ø209	Ø38	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-06-209-150-65	W-015609	DN150	Ø209	DN65	279	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-65	W-015608	DN125	Ø209	DN65	279	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-65	W-015607	DN100	Ø209	DN65	279	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-65	W-036048	Ø101.6	Ø209	DN65	279	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-06-209-150-50	W-036049	DN150	Ø209	DN50	266	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-50	W-036050	DN125	Ø209	DN50	266	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-50	W-036051	DN100	Ø209	DN50	266	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-50	W-036052	Ø101.6	Ø209	DN50	266	1020	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-06-209-150-40	W-036053	DN150	Ø209	DN40	266	1020	1315	163 pc Ø12x1mm
TLC-06-209-125-40	W-036054	DN125	Ø209	DN40	266	1020	1359	163 pc Ø12x1mm
TLC-06-209-100-40	W-036055	DN100	Ø209	DN40	266	1020	1399	163 pc Ø12x1mm
TLC-06-209-101-40	W-036056	Ø101.6	Ø209	DN40	266	1020	1399	163 pc Ø12x1mm



TLC-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
TLC-08-209-150-63	W-036057	DN150	Ø209	Ø63.5	266	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-63	W-036058	DN125	Ø209	Ø63.5	266	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-63	W-036059	DN100	Ø209	Ø63.5	266	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-63	W-036060	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
TLC-08-209-150-51	W-036061	DN150	Ø209	Ø51	266	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-51	W-036062	DN125	Ø209	Ø51	266	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-51	W-036063	DN100	Ø209	Ø51	266	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-51	W-036064	Ø101.6	Ø209	Ø51	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-08-209-150-38	W-036065	DN150	Ø209	Ø38	266	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-38	W-036066	DN125	Ø209	Ø38	266	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-38	W-036067	DN100	Ø209	Ø38	266	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-38	W-036068	Ø101.6	Ø209	Ø38	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-08-209-150-65	W-036069	DN150	Ø209	DN65	279	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-65	W-036070	DN125	Ø209	DN65	279	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-65	W-036071	DN100	Ø209	DN65	279	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-65	W-036072	Ø101.6	Ø209	DN65	279	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-08-209-150-50	W-036073	DN150	Ø209	DN50	266	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-50	W-036074	DN125	Ø209	DN50	266	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-50	W-036075	DN100	Ø209	DN50	266	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-50	W-036076	Ø101.6	Ø209	DN50	266	1426	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
TLC-08-209-150-40	W-036077	DN150	Ø209	DN40	266	1426	1730	163 pc Ø12x1mm
TLC-08-209-125-40	W-036078	DN125	Ø209	DN40	266	1426	1774	163 pc Ø12x1mm
TLC-08-209-100-40	W-036079	DN100	Ø209	DN40	266	1426	1814	163 pc Ø12x1mm
TLC-08-209-101-40	W-036080	Ø101.6	Ø209	DN40	266	1426	1814	163 pc Ø12x1mm