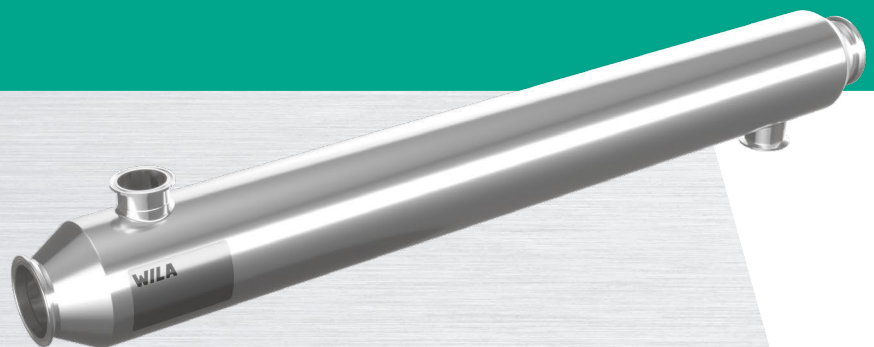


TUBULAR HEAT EXCHANGER

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



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

Tubular heat exchangers 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 Heat Exchangers manufactured by Wila A/S under the category "THEA" 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.

THEA-xx-xxx-40

THEA **T**ubular **H**eat **E**xchanger 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

THEA-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

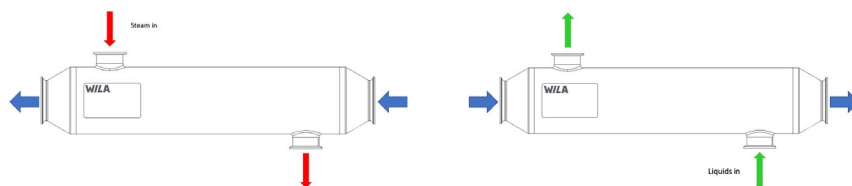
Shell side (S1 and S2) connections, both Ø129 and Ø209 are:

DN50 – DN40	in accordance with DIN 32676-A
2" (Ø51) – 1.5" (Ø38)	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 steam connections the outlet should always be at the lowest point. For liquids, the outlet should be at the highest point to ensure complete removal of air in the chamber.



Service side limits

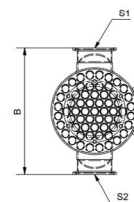
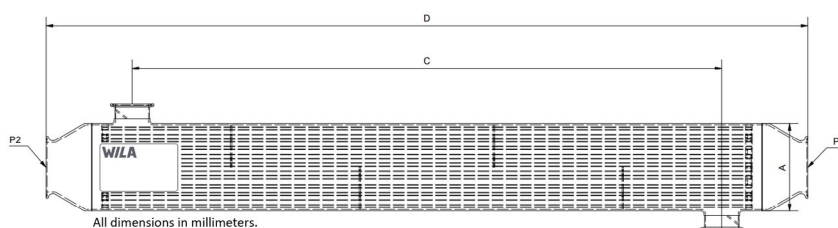
The heat exchanger's shell side maximum pressure and temperature limits are based on the maximum allowed steam pressure, which varies with the size of the heat exchanger:

1. For heat exchanger sizes 0.5m² and 1 m² these limits are respectively 10 bar[g] and 185°C
2. For heat exchanger size 2 m² these limits are respectively 8 bar[g] and 176°C
3. For heat exchanger size 3 m² these limits are respectively 6 bar[g] and 165°C
4. For heat exchanger sizes 4 m² and 6 m² these limits are respectively 3 bar[g] and 144°C
5. For heat exchanger size 8 m² these limits are respectively 2.3 bar[g] and 136°C

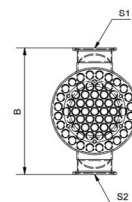
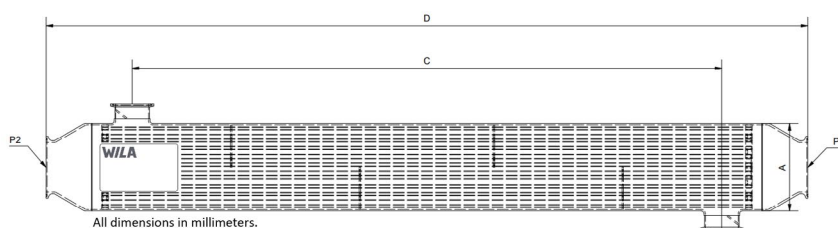
For pressure and temperature limits for other fluids than steam, see "Heat exchangers – pressure and temperature relations" document.

Note:

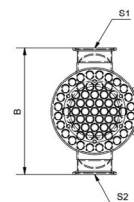
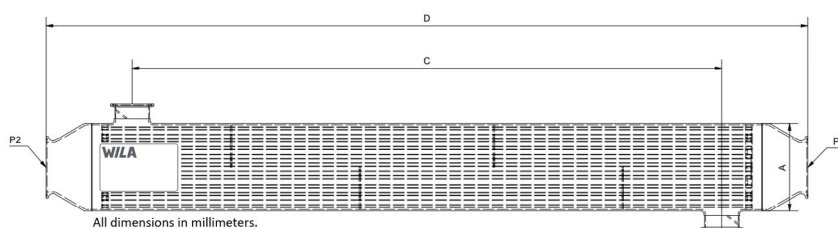
In the following group tables 'Tube bank' is data on the product tubes running parallel inside the shell.



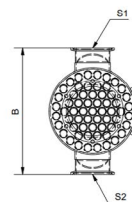
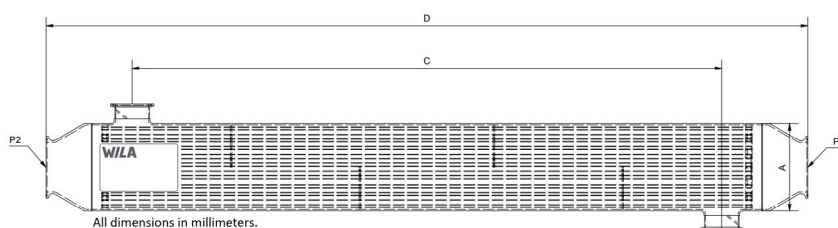
THEA-.5-129-40		40 barg / 85°C		10 bar[g] / 185°C		Maximum pressure / Maximum temperature		
		Volume 3 liters		Volume 1 liters		316L Concentric		Dry weight 8 kg
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-.5-129-125-51	W-034555	DN125	Ø129	Ø51	186	130	316	61 pc Ø12x1mm
THEA-.5-129-100-51	W-034556	DN100	Ø129	Ø51	186	130	354	61 pc Ø12x1mm
THEA-.5-129-101-51	W-034557	Ø101.6	Ø129	Ø51	186	130	350	61 pc Ø12x1mm
THEA-.5-129-080-51	W-034558	DN80	Ø129	Ø51	186	130	372	61 pc Ø12x1mm
THEA-.5-129-076-51	W-034559	Ø76.1	Ø129	Ø51	186	130	396	61 pc Ø12x1mm
THEA-.5-129-065-51	W-034560	DN65	Ø129	Ø51	186	130	400	61 pc Ø12x1mm
THEA-.5-129-063-51	W-034561	Ø63.5	Ø129	Ø51	186	130	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-.5-129-125-38	W-034562	DN125	Ø129	Ø38	186	130	316	61 pc Ø12x1mm
THEA-.5-129-100-38	W-034563	DN100	Ø129	Ø38	186	130	354	61 pc Ø12x1mm
THEA-.5-129-101-38	W-034564	Ø101.6	Ø129	Ø38	186	130	350	61 pc Ø12x1mm
THEA-.5-129-080-38	W-034565	DN80	Ø129	Ø38	186	130	372	61 pc Ø12x1mm
THEA-.5-129-076-38	W-034566	Ø76.1	Ø129	Ø38	186	130	396	61 pc Ø12x1mm
THEA-.5-129-065-38	W-034567	DN65	Ø129	Ø38	186	130	400	61 pc Ø12x1mm
THEA-.5-129-063-38	W-034568	Ø63.5	Ø129	Ø38	186	130	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-.5-129-125-50	W-034569	DN125	Ø129	DN50	186	130	316	61 pc Ø12x1mm
THEA-.5-129-100-50	W-034570	DN100	Ø129	DN50	186	130	354	61 pc Ø12x1mm
THEA-.5-129-101-50	W-034571	Ø101.6	Ø129	DN50	186	130	350	61 pc Ø12x1mm
THEA-.5-129-080-50	W-034572	DN80	Ø129	DN50	186	130	372	61 pc Ø12x1mm
THEA-.5-129-076-50	W-034573	Ø76.1	Ø129	DN50	186	130	396	61 pc Ø12x1mm
THEA-.5-129-065-50	W-034574	DN65	Ø129	DN50	186	130	400	61 pc Ø12x1mm
THEA-.5-129-063-50	W-034575	Ø63.5	Ø129	DN50	186	130	418	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-.5-129-125-40	W-034576	DN125	Ø129	DN40	186	130	316	61 pc Ø12x1mm
THEA-.5-129-100-40	W-034577	DN100	Ø129	DN40	186	130	354	61 pc Ø12x1mm
THEA-.5-129-101-40	W-034578	Ø101.6	Ø129	DN40	186	130	350	61 pc Ø12x1mm
THEA-.5-129-080-40	W-034579	DN80	Ø129	DN40	186	130	372	61 pc Ø12x1mm
THEA-.5-129-076-40	W-034580	Ø76.1	Ø129	DN40	186	130	396	61 pc Ø12x1mm
THEA-.5-129-065-40	W-034581	DN65	Ø129	DN40	186	130	400	61 pc Ø12x1mm
THEA-.5-129-063-40	W-034582	Ø63.5	Ø129	DN40	186	130	418	61 pc Ø12x1mm



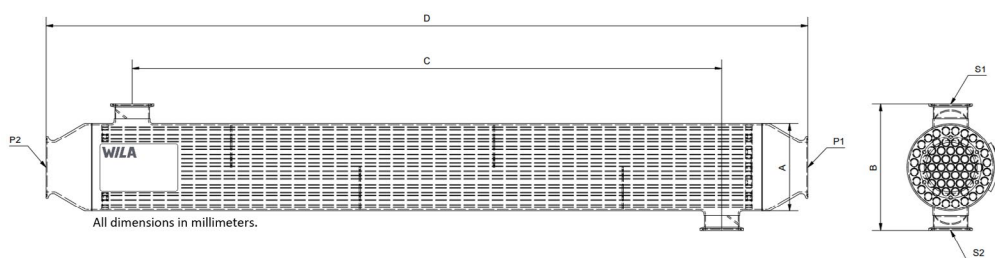
THEA-01-129-40		40 barg / 85°C		10 bar[g] / 185°C		Maximum pressure / Maximum temperature		
		Volume 4.5 liters		Volume 2.5 liters		316L Concentric	Dry weight 14 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-129-125-51	W-034591	DN125	Ø129	Ø51	186	380	566	61 pc Ø12x1mm
THEA-01-129-100-51	W-034592	DN100	Ø129	Ø51	186	380	604	61 pc Ø12x1mm
THEA-01-129-101-51	W-034593	Ø101.6	Ø129	Ø51	186	380	600	61 pc Ø12x1mm
THEA-01-129-080-51	W-034594	DN80	Ø129	Ø51	186	380	622	61 pc Ø12x1mm
THEA-01-129-076-51	W-034595	Ø76.1	Ø129	Ø51	186	380	646	61 pc Ø12x1mm
THEA-01-129-065-51	W-034596	DN65	Ø129	Ø51	186	380	650	61 pc Ø12x1mm
THEA-01-129-063-51	W-034597	Ø63.5	Ø129	Ø51	186	380	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-129-125-38	W-034598	DN125	Ø129	Ø38	186	380	566	61 pc Ø12x1mm
THEA-01-129-100-38	W-034599	DN100	Ø129	Ø38	186	380	604	61 pc Ø12x1mm
THEA-01-129-101-38	W-034600	Ø101.6	Ø129	Ø38	186	380	600	61 pc Ø12x1mm
THEA-01-129-080-38	W-034601	DN80	Ø129	Ø38	186	380	622	61 pc Ø12x1mm
THEA-01-129-076-38	W-034602	Ø76.1	Ø129	Ø38	186	380	646	61 pc Ø12x1mm
THEA-01-129-065-38	W-034603	DN65	Ø129	Ø38	186	380	650	61 pc Ø12x1mm
THEA-01-129-063-38	W-034604	Ø63.5	Ø129	Ø38	186	380	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-129-125-50	W-034605	DN125	Ø129	DN50	186	380	566	61 pc Ø12x1mm
THEA-01-129-100-50	W-034606	DN100	Ø129	DN50	186	380	604	61 pc Ø12x1mm
THEA-01-129-101-50	W-034607	Ø101.6	Ø129	DN50	186	380	600	61 pc Ø12x1mm
THEA-01-129-080-50	W-034608	DN80	Ø129	DN50	186	380	622	61 pc Ø12x1mm
THEA-01-129-076-50	W-034609	Ø76.1	Ø129	DN50	186	380	646	61 pc Ø12x1mm
THEA-01-129-065-50	W-034610	DN65	Ø129	DN50	186	380	650	61 pc Ø12x1mm
THEA-01-129-063-50	W-034611	Ø63.5	Ø129	DN50	186	380	668	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-129-125-40	W-034612	DN125	Ø129	DN40	186	380	566	61 pc Ø12x1mm
THEA-01-129-100-40	W-034613	DN100	Ø129	DN40	186	380	604	61 pc Ø12x1mm
THEA-01-129-101-40	W-034614	Ø101.6	Ø129	DN40	186	380	600	61 pc Ø12x1mm
THEA-01-129-080-40	W-034615	DN80	Ø129	DN40	186	380	622	61 pc Ø12x1mm
THEA-01-129-076-40	W-034616	Ø76.1	Ø129	DN40	186	380	646	61 pc Ø12x1mm
THEA-01-129-065-40	W-034617	DN65	Ø129	DN40	186	380	650	61 pc Ø12x1mm
THEA-01-129-063-40	W-034618	Ø63.5	Ø129	DN40	186	380	668	61 pc Ø12x1mm



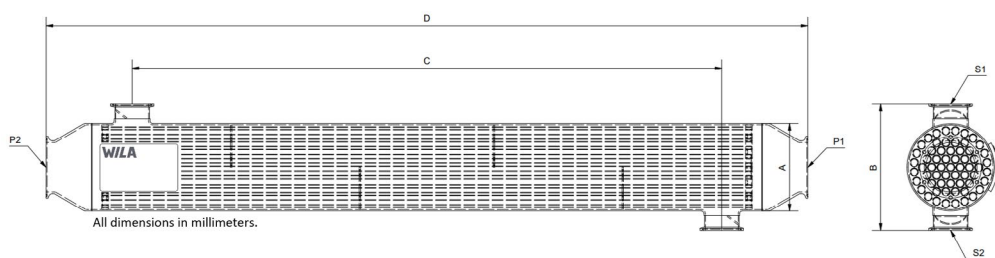
THEA-02-129-40		40 barg / 85°C		8 bar[g] / 176°C		Maximum pressure / Maximum temperature		
		Volume 6.5 liters		Volume 5 liters		316L Concentric	Dry weight 26 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-129-125-51	W-034627	DN125	Ø129	Ø51	186	870	1046	61 pc Ø12x1mm
THEA-02-129-100-51	W-034628	DN100	Ø129	Ø51	186	870	1084	61 pc Ø12x1mm
THEA-02-129-101-51	W-031892	Ø101.6	Ø129	Ø51	186	870	1080	61 pc Ø12x1mm
THEA-02-129-080-51	W-034630	DN80	Ø129	Ø51	186	870	1102	61 pc Ø12x1mm
THEA-02-129-076-51	W-034631	Ø76.1	Ø129	Ø51	186	870	1126	61 pc Ø12x1mm
THEA-02-129-065-51	W-034632	DN65	Ø129	Ø51	186	870	1130	61 pc Ø12x1mm
THEA-02-129-063-51	W-034633	Ø63.5	Ø129	Ø51	186	870	1148	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-129-125-38	W-034634	DN125	Ø129	Ø38	186	870	1046	61 pc Ø12x1mm
THEA-02-129-100-38	W-034635	DN100	Ø129	Ø38	186	870	1084	61 pc Ø12x1mm
THEA-02-129-101-38	W-031916	Ø101.6	Ø129	Ø38	186	870	1080	61 pc Ø12x1mm
THEA-02-129-080-38	W-034637	DN80	Ø129	Ø38	186	870	1102	61 pc Ø12x1mm
THEA-02-129-076-38	W-034638	Ø76.1	Ø129	Ø38	186	870	1126	61 pc Ø12x1mm
THEA-02-129-065-38	W-034639	DN65	Ø129	Ø38	186	870	1130	61 pc Ø12x1mm
THEA-02-129-063-38	W-034640	Ø63.5	Ø129	Ø38	186	870	1148	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-129-125-50	W-034641	DN125	Ø129	DN50	186	870	1046	61 pc Ø12x1mm
THEA-02-129-100-50	W-034642	DN100	Ø129	DN50	186	870	1084	61 pc Ø12x1mm
THEA-02-129-101-50	W-034643	Ø101.6	Ø129	DN50	186	870	1080	61 pc Ø12x1mm
THEA-02-129-080-50	W-034644	DN80	Ø129	DN50	186	870	1102	61 pc Ø12x1mm
THEA-02-129-076-50	W-034645	Ø76.1	Ø129	DN50	186	870	1126	61 pc Ø12x1mm
THEA-02-129-065-50	W-034646	DN65	Ø129	DN50	186	870	1130	61 pc Ø12x1mm
THEA-02-129-063-50	W-034647	Ø63.5	Ø129	DN50	186	870	1148	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-129-125-40	W-034648	DN125	Ø129	DN40	186	870	1046	61 pc Ø12x1mm
THEA-02-129-100-40	W-034649	DN100	Ø129	DN40	186	870	1084	61 pc Ø12x1mm
THEA-02-129-101-40	W-034650	Ø101.6	Ø129	DN40	186	870	1080	61 pc Ø12x1mm
THEA-02-129-080-40	W-034651	DN80	Ø129	DN40	186	870	1102	61 pc Ø12x1mm
THEA-02-129-076-40	W-034652	Ø76.1	Ø129	DN40	186	870	1126	61 pc Ø12x1mm
THEA-02-129-065-40	W-034653	DN65	Ø129	DN40	186	870	1130	61 pc Ø12x1mm
THEA-02-129-063-40	W-034654	Ø63.5	Ø129	DN40	186	870	1148	61 pc Ø12x1mm



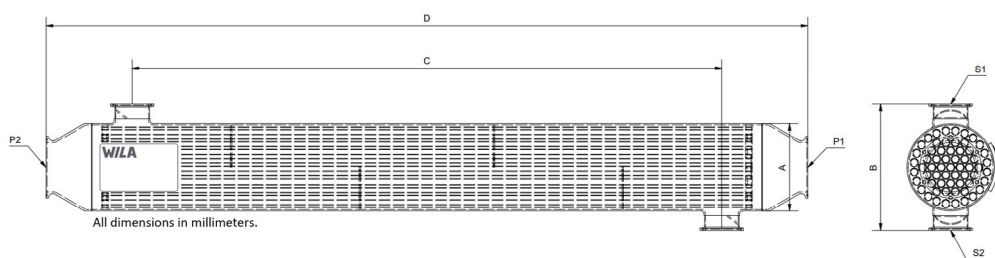
THEA-03-129-40		40 barg / 85°C		6 bar[g] / 165°C		Maximum pressure / Maximum temperature		
		Volume 9 liters		Volume 7.5 liters		316L Concentric	Dry weight 37 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-129-125-51	W-034663	DN125	Ø129	Ø51	186	1360	1546	61 pc Ø12x1mm
THEA-03-129-100-51	W-034664	DN100	Ø129	Ø51	186	1360	1584	61 pc Ø12x1mm
THEA-03-129-101-51	W-034665	Ø101.6	Ø129	Ø51	186	1360	1580	61 pc Ø12x1mm
THEA-03-129-080-51	W-034666	DN80	Ø129	Ø51	186	1360	1602	61 pc Ø12x1mm
THEA-03-129-076-51	W-034667	Ø76.1	Ø129	Ø51	186	1360	1626	61 pc Ø12x1mm
THEA-03-129-065-51	W-034668	DN65	Ø129	Ø51	186	1360	1630	61 pc Ø12x1mm
THEA-03-129-063-51	W-034669	Ø63.5	Ø129	Ø51	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-129-125-38	W-034670	DN125	Ø129	Ø38	186	1360	1546	61 pc Ø12x1mm
THEA-03-129-100-38	W-034671	DN100	Ø129	Ø38	186	1360	1584	61 pc Ø12x1mm
THEA-03-129-101-38	W-034672	Ø101.6	Ø129	Ø38	186	1360	1580	61 pc Ø12x1mm
THEA-03-129-080-38	W-034673	DN80	Ø129	Ø38	186	1360	1602	61 pc Ø12x1mm
THEA-03-129-076-38	W-034674	Ø76.1	Ø129	Ø38	186	1360	1626	61 pc Ø12x1mm
THEA-03-129-065-38	W-034675	DN65	Ø129	Ø38	186	1360	1630	61 pc Ø12x1mm
THEA-03-129-063-38	W-034676	Ø63.5	Ø129	Ø38	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-129-125-50	W-034677	DN125	Ø129	DN50	186	1360	1546	61 pc Ø12x1mm
THEA-03-129-100-50	W-034678	DN100	Ø129	DN50	186	1360	1584	61 pc Ø12x1mm
THEA-03-129-101-50	W-034679	Ø101.6	Ø129	DN50	186	1360	1580	61 pc Ø12x1mm
THEA-03-129-080-50	W-034680	DN80	Ø129	DN50	186	1360	1602	61 pc Ø12x1mm
THEA-03-129-076-50	W-034681	Ø76.1	Ø129	DN50	186	1360	1626	61 pc Ø12x1mm
THEA-03-129-065-50	W-034682	DN65	Ø129	DN50	186	1360	1630	61 pc Ø12x1mm
THEA-03-129-063-50	W-034683	Ø63.5	Ø129	DN50	186	1360	1648	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-129-125-40	W-034684	DN125	Ø129	DN40	186	1360	1546	61 pc Ø12x1mm
THEA-03-129-100-40	W-034685	DN100	Ø129	DN40	186	1360	1584	61 pc Ø12x1mm
THEA-03-129-101-40	W-034686	Ø101.6	Ø129	DN40	186	1360	1580	61 pc Ø12x1mm
THEA-03-129-080-40	W-034687	DN80	Ø129	DN40	186	1360	1602	61 pc Ø12x1mm
THEA-03-129-076-40	W-034688	Ø76.1	Ø129	DN40	186	1360	1626	61 pc Ø12x1mm
THEA-03-129-065-40	W-034689	DN65	Ø129	DN40	186	1360	1630	61 pc Ø12x1mm
THEA-03-129-063-40	W-034690	Ø63.5	Ø129	DN40	186	1360	1648	61 pc Ø12x1mm



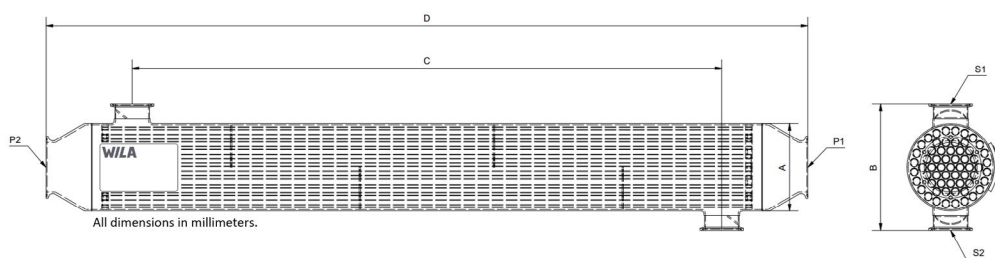
THEA-01-209-40		40 barg / 85°C		10 bar[g] / 185°C		Maximum pressure / Maximum temperature		
		Volume 8.5 liters		Volume 2.5 liters		316L Concentric	Dry weight 19kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-209-150-51	W-034699	DN150	Ø209	Ø51	266	100	383	163 pc Ø12x1mm
THEA-01-209-125-51	W-034700	DN125	Ø209	Ø51	266	100	427	163 pc Ø12x1mm
THEA-01-209-100-51	W-034701	DN100	Ø209	Ø51	266	100	467	163 pc Ø12x1mm
THEA-01-209-101-51	W-034702	Ø101.6	Ø209	Ø51	266	100	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-209-150-38	W-034703	DN150	Ø209	Ø38	266	100	383	163 pc Ø12x1mm
THEA-01-209-125-38	W-034704	DN125	Ø209	Ø38	266	100	427	163 pc Ø12x1mm
THEA-01-209-100-38	W-034705	DN100	Ø209	Ø38	266	100	467	163 pc Ø12x1mm
THEA-01-209-101-38	W-034706	Ø101.6	Ø209	Ø38	266	100	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-209-150-50	W-034707	DN150	Ø209	DN50	266	100	383	163 pc Ø12x1mm
THEA-01-209-125-50	W-034708	DN125	Ø209	DN50	266	100	427	163 pc Ø12x1mm
THEA-01-209-100-50	W-034709	DN100	Ø209	DN50	266	100	467	163 pc Ø12x1mm
THEA-01-209-101-50	W-034710	Ø101.6	Ø209	DN50	266	100	467	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-01-209-150-40	W-034711	DN150	Ø209	DN40	266	100	383	163 pc Ø12x1mm
THEA-01-209-125-40	W-034712	DN125	Ø209	DN40	266	100	427	163 pc Ø12x1mm
THEA-01-209-100-40	W-034713	DN100	Ø209	DN40	266	100	467	163 pc Ø12x1mm
THEA-01-209-101-40	W-034714	Ø101.6	Ø209	DN40	266	100	467	163 pc Ø12x1mm



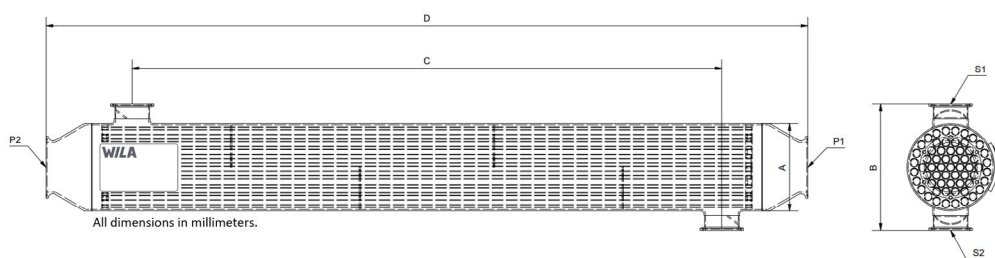
THEA-02-209-40		40 barg / 85°C		8 bar[g] / 176°C		Maximum pressure / Maximum temperature		
		Volume 11 liters		Volume 5 liters		316L Concentric	Dry weight 31 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-209-150-51	W-034721	DN150	Ø209	Ø51	266	290	568	163 pc Ø12x1mm
THEA-02-209-125-51	W-034722	DN125	Ø209	Ø51	266	290	612	163 pc Ø12x1mm
THEA-02-209-100-51	W-034723	DN100	Ø209	Ø51	266	290	652	163 pc Ø12x1mm
THEA-02-209-101-51	W-034724	Ø101.6	Ø209	Ø51	266	290	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-209-150-38	W-034725	DN150	Ø209	Ø38	266	290	568	163 pc Ø12x1mm
THEA-02-209-125-38	W-034726	DN125	Ø209	Ø38	266	290	612	163 pc Ø12x1mm
THEA-02-209-100-38	W-034727	DN100	Ø209	Ø38	266	290	652	163 pc Ø12x1mm
THEA-02-209-101-38	W-034728	Ø101.6	Ø209	Ø38	266	290	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-209-150-50	W-034729	DN150	Ø209	DN50	266	290	568	163 pc Ø12x1mm
THEA-02-209-125-50	W-034730	DN125	Ø209	DN50	266	290	612	163 pc Ø12x1mm
THEA-02-209-100-50	W-034731	DN100	Ø209	DN50	266	290	652	163 pc Ø12x1mm
THEA-02-209-101-50	W-034732	Ø101.6	Ø209	DN50	266	290	652	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-02-209-150-40	W-034733	DN150	Ø209	DN40	266	290	568	163 pc Ø12x1mm
THEA-02-209-125-40	W-034734	DN125	Ø209	DN40	266	290	612	163 pc Ø12x1mm
THEA-02-209-100-40	W-034735	DN100	Ø209	DN40	266	290	652	163 pc Ø12x1mm
THEA-02-209-101-40	W-034736	Ø101.6	Ø209	DN40	266	290	652	163 pc Ø12x1mm



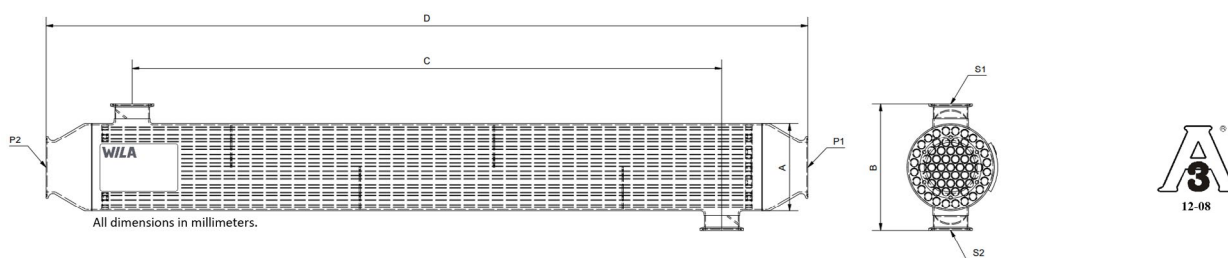
THEA-03-209-40		40 barg / 85°C		6 bar[g] / 165°C		Maximum pressure / Maximum temperature		
		Volume 14 liters		Volume 8.3 liters		316L Concentric	Dry weight 44 kg	
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-209-150-51	W-034743	DN150	Ø209	Ø51	266	510	788	163 pc Ø12x1mm
THEA-03-209-125-51	W-034744	DN125	Ø209	Ø51	266	510	832	163 pc Ø12x1mm
THEA-03-209-100-51	W-034745	DN100	Ø209	Ø51	266	510	872	163 pc Ø12x1mm
THEA-03-209-101-51	W-034746	Ø101.6	Ø209	Ø51	266	510	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-209-150-38	W-034747	DN150	Ø209	Ø38	266	510	788	163 pc Ø12x1mm
THEA-03-209-125-38	W-034748	DN125	Ø209	Ø38	266	510	832	163 pc Ø12x1mm
THEA-03-209-100-38	W-034749	DN100	Ø209	Ø38	266	510	872	163 pc Ø12x1mm
THEA-03-209-101-38	W-034750	Ø101.6	Ø209	Ø38	266	510	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-209-150-50	W-034751	DN150	Ø209	DN50	266	510	788	163 pc Ø12x1mm
THEA-03-209-125-50	W-034752	DN125	Ø209	DN50	266	510	832	163 pc Ø12x1mm
THEA-03-209-100-50	W-034753	DN100	Ø209	DN50	266	510	872	163 pc Ø12x1mm
THEA-03-209-101-50	W-034754	Ø101.6	Ø209	DN50	266	510	872	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-03-209-150-40	W-034755	DN150	Ø209	DN40	266	510	788	163 pc Ø12x1mm
THEA-03-209-125-40	W-034756	DN125	Ø209	DN40	266	510	832	163 pc Ø12x1mm
THEA-03-209-100-40	W-034757	DN100	Ø209	DN40	266	510	872	163 pc Ø12x1mm
THEA-03-209-101-40	W-034758	Ø101.6	Ø209	DN40	266	510	872	163 pc Ø12x1mm



THEA-04-209-40		40 barg / 85°C		3 bar[g] / 144°C		Maximum pressure / Maximum 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
THEA-04-209-150-51	W-034765	DN150	Ø209	Ø51	266	650	935	163 pc Ø12x1mm
THEA-04-209-125-51	W-034766	DN125	Ø209	Ø51	266	650	979	163 pc Ø12x1mm
THEA-04-209-100-51	W-034767	DN100	Ø209	Ø51	266	650	1019	163 pc Ø12x1mm
THEA-04-209-101-51	W-034768	Ø101.6	Ø209	Ø51	266	650	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-04-209-150-38	W-034769	DN150	Ø209	Ø38	266	650	935	163 pc Ø12x1mm
THEA-04-209-125-38	W-034770	DN125	Ø209	Ø38	266	650	979	163 pc Ø12x1mm
THEA-04-209-100-38	W-034771	DN100	Ø209	Ø38	266	650	1019	163 pc Ø12x1mm
THEA-04-209-101-38	W-034772	Ø101.6	Ø209	Ø38	266	650	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-04-209-150-50	W-034773	DN150	Ø209	DN50	266	650	935	163 pc Ø12x1mm
THEA-04-209-125-50	W-034774	DN125	Ø209	DN50	266	650	979	163 pc Ø12x1mm
THEA-04-209-100-50	W-034775	DN100	Ø209	DN50	266	650	1019	163 pc Ø12x1mm
THEA-04-209-101-50	W-034776	Ø101.6	Ø209	DN50	266	650	1019	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-04-209-150-40	W-034777	DN150	Ø209	DN40	266	650	935	163 pc Ø12x1mm
THEA-04-209-125-40	W-034778	DN125	Ø209	DN40	266	650	979	163 pc Ø12x1mm
THEA-04-209-100-40	W-034779	DN100	Ø209	DN40	266	650	1019	163 pc Ø12x1mm
THEA-04-209-101-40	W-034780	Ø101.6	Ø209	DN40	266	650	1019	163 pc Ø12x1mm



THEA-06-209-40		40 barg / 85°C		3 bar[g] / 144°C		Maximum pressure / Maximum 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
THEA-06-209-150-51	W-034787	DN150	Ø209	Ø51	266	1030	1315	163 pc Ø12x1mm
THEA-06-209-125-51	W-034003	DN125	Ø209	Ø51	266	1030	1359	163 pc Ø12x1mm
THEA-06-209-100-51	W-034789	DN100	Ø209	Ø51	266	1030	1399	163 pc Ø12x1mm
THEA-06-209-101-51	W-034790	Ø101.6	Ø209	Ø51	266	1030	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-06-209-150-38	W-034791	DN150	Ø209	Ø38	266	1030	1315	163 pc Ø12x1mm
THEA-06-209-125-38	W-034792	DN125	Ø209	Ø38	266	1030	1359	163 pc Ø12x1mm
THEA-06-209-100-38	W-034793	DN100	Ø209	Ø38	266	1030	1399	163 pc Ø12x1mm
THEA-06-209-101-38	W-034794	Ø101.6	Ø209	Ø38	266	1030	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-06-209-150-50	W-034795	DN150	Ø209	DN50	266	1030	1315	163 pc Ø12x1mm
THEA-06-209-125-50	W-034796	DN125	Ø209	DN50	266	1030	1359	163 pc Ø12x1mm
THEA-06-209-100-50	W-034797	DN100	Ø209	DN50	266	1030	1399	163 pc Ø12x1mm
THEA-06-209-101-50	W-034798	Ø101.6	Ø209	DN50	266	1030	1399	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-06-209-150-40	W-034799	DN150	Ø209	DN40	266	1030	1315	163 pc Ø12x1mm
THEA-06-209-125-40	W-034800	DN125	Ø209	DN40	266	1030	1359	163 pc Ø12x1mm
THEA-06-209-100-40	W-034801	DN100	Ø209	DN40	266	1030	1399	163 pc Ø12x1mm
THEA-06-209-101-40	W-034802	Ø101.6	Ø209	DN40	266	1030	1399	163 pc Ø12x1mm



THEA-08-209-40		40 barg / 85°C		2.3 bar[g] / 136°C		Maximum pressure / Maximum 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
THEA-08-209-150-51	W-034809	DN150	Ø209	Ø51	266	1450	1730	163 pc Ø12x1mm
THEA-08-209-125-51	W-034810	DN125	Ø209	Ø51	266	1450	1774	163 pc Ø12x1mm
THEA-08-209-100-51	W-034811	DN100	Ø209	Ø51	266	1450	1814	163 pc Ø12x1mm
THEA-08-209-101-51	W-032213	Ø101.6	Ø209	Ø51	266	1450	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-08-209-150-38	W-034813	DN150	Ø209	Ø38	266	1450	1730	163 pc Ø12x1mm
THEA-08-209-125-38	W-034814	DN125	Ø209	Ø38	266	1450	1774	163 pc Ø12x1mm
THEA-08-209-100-38	W-034815	DN100	Ø209	Ø38	266	1450	1814	163 pc Ø12x1mm
THEA-08-209-101-38	W-034816	Ø101.6	Ø209	Ø38	266	1450	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-08-209-150-50	W-034817	DN150	Ø209	DN50	266	1450	1730	163 pc Ø12x1mm
THEA-08-209-125-50	W-034818	DN125	Ø209	DN50	266	1450	1774	163 pc Ø12x1mm
THEA-08-209-100-50	W-034819	DN100	Ø209	DN50	266	1450	1814	163 pc Ø12x1mm
THEA-08-209-101-50	W-034820	Ø101.6	Ø209	DN50	266	1450	1814	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1/S2	B	C	D	Tube bank
THEA-08-209-150-40	W-034821	DN150	Ø209	DN40	266	1450	1730	163 pc Ø12x1mm
THEA-08-209-125-40	W-034822	DN125	Ø209	DN40	266	1450	1774	163 pc Ø12x1mm
THEA-08-209-100-40	W-034823	DN100	Ø209	DN40	266	1450	1814	163 pc Ø12x1mm
THEA-08-209-101-40	W-034824	Ø101.6	Ø209	DN40	266	1450	1814	163 pc Ø12x1mm