

TUBULAR STEAM HEATER

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



Dimensions overview for type Ø129 & Ø209 - 40bar[g]

Tubular steam heaters 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 Steam Heaters manufactured by Wila A/S under the category "TSHA" 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 steam to fluid heat transfer 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 outside surface roughness is $\leq 1,6\mu\text{m}$ and the internal tube side surface roughness is $\leq 0,8\mu\text{m}$. **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 $\varnothing 129 \times 2$ 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). For (dangerous fluids) group I restrictions may apply.
- 3-A Sanitary Standards 00-01 / I2-08

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.

TSHA-xx-xxx-40

TSHA	Tubular Steam Heater with 3A certificate	
xx	01, 02, 03, 04, 06, 08 *	Indicates the heat transfer surface area in m ² .
xxx	Either 129 or 209 *	Indicates the heat exchanger shell diameter in mm.
40	The heat exchanger is designed for pressure up to 40 bar.	

* Other versions are available.

TSHA-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	Ø101.6 – Ø76.1 – Ø63.5	In accordance with ISO 2852-2
Ø209mm	DN150 – DN125 – DN100	in accordance with DIN 32676-A
Ø209mm	Ø101.6	in accordance with ISO 2852-2

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

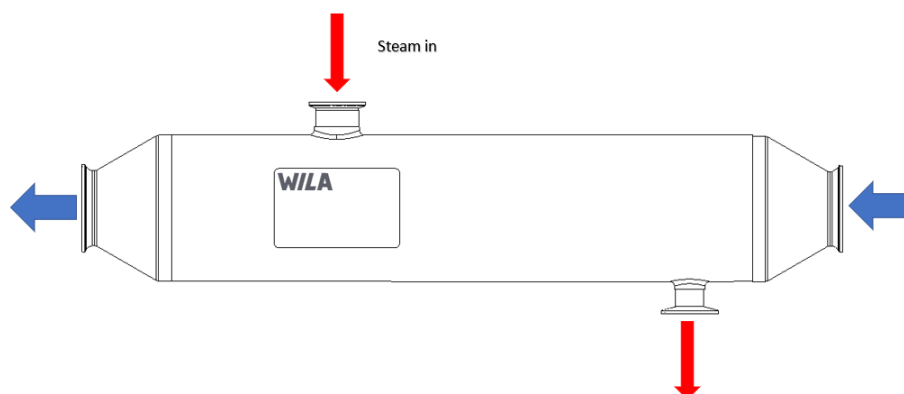
DN80 – DN65 – DN50 – DN40 – DN25	in accordance with DIN 32676-A
Ø76.1 – Ø63.5 – Ø51 – Ø38 – Ø25	in accordance with ISO 2852-2
DN80 (82) – DN65 (70) – DN50 (54) – DN40 (43) – DN25 (28) *	in accordance with DIN 2633 / EN 1092 Type 11

* Numbers in parentheses are numbers used in the unit codes on following pages.

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

Connections

Always follow your fitting supplier guidelines and local legislations. SSH clamping rings (or similar) are recommended. For steam connections the outlet should always be at the lowest point.



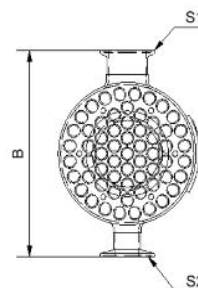
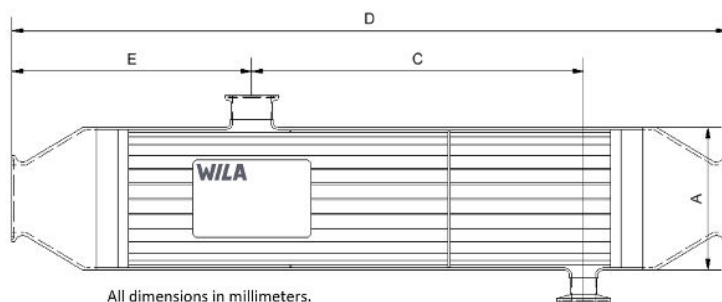
Service side limits

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:

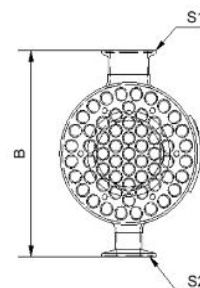
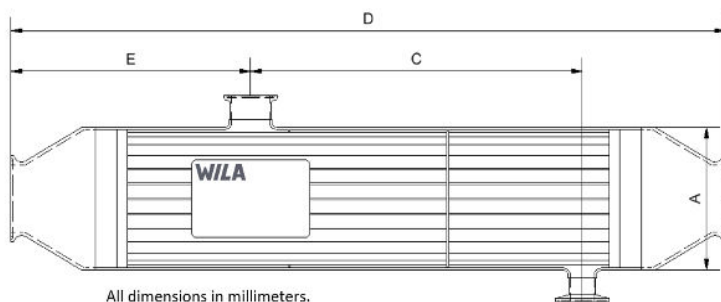
1. For heat exchanger size 1 m² these limits are respectively 10 bar[g] and 185°C
2. For heat exchanger size 2 m² these limits are respectively 8 bar[g] and 176°C
3. For heat exchanger size 3 m² these limits are respectively 6 bar[g] and 165°C
4. For heat exchanger size 4 m² these limits are respectively 4 bar[g] and 152°C
5. For heat exchanger size 6 m² these limits are respectively 3 bar[g] and 144°C
6. For heat exchanger size 8 m² these limits are respectively 2.3 bar[g] and 136°C

Note:

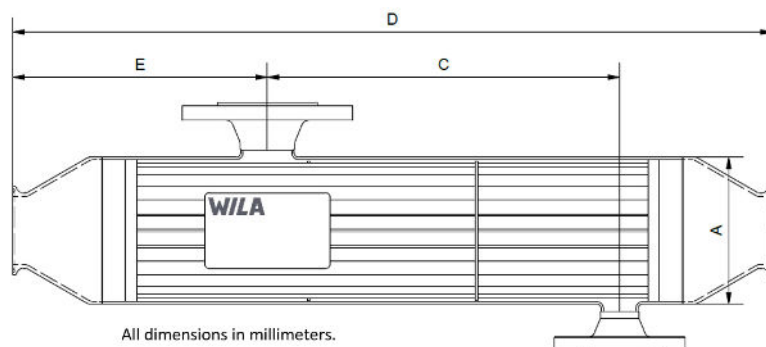
In the following group tables 'Tube bank' is data on the product tubes running paralell inside the shell.



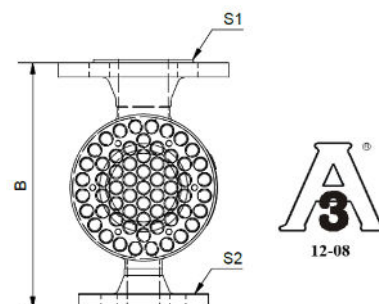
TSHA-01-129-40 (section 1 of 2)		40 barg / 85°C		10 bar[g] / 185°C			Maximum pressure / temperature			
		Volume 4.5 liters		Volume 2.5 liters			316L Concentric		Dry weight 14 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-80	W-036972	DN125	Ø129	DN80	DN40	192	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-80	W-036973	DN100	Ø129	DN80	DN40	192	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-80	W-036974	Ø101.6	Ø129	DN80	DN40	192	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-80	W-036975	DN80	Ø129	DN80	DN40	192	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-80	W-036976	Ø76.1	Ø129	DN80	DN40	192	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-80	W-036977	DN65	Ø129	DN80	DN40	192	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-80	W-036978	Ø63.5	Ø129	DN80	DN40	192	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-76	W-036979	DN125	Ø129	Ø76.1	Ø38	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-76	W-036980	DN100	Ø129	Ø76.1	Ø38	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-76	W-036981	Ø101.6	Ø129	Ø76.1	Ø38	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-76	W-036982	DN80	Ø129	Ø76.1	Ø38	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-76	W-036983	Ø76.1	Ø129	Ø76.1	Ø38	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-76	W-036984	DN65	Ø129	Ø76.1	Ø38	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-76	W-036985	Ø63.5	Ø129	Ø76.1	Ø38	186	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-65	W-036986	DN125	Ø129	DN65	DN40	192	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-65	W-036987	DN100	Ø129	DN65	DN40	192	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-65	W-036988	Ø101.6	Ø129	DN65	DN40	192	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-65	W-036989	DN80	Ø129	DN65	DN40	192	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-65	W-036990	Ø76.1	Ø129	DN65	DN40	192	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-65	W-036991	DN65	Ø129	DN65	DN40	192	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-65	W-036992	Ø63.5	Ø129	DN65	DN40	192	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-63	W-036993	DN125	Ø129	Ø63.5	Ø38	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-63	W-036994	DN100	Ø129	Ø63.5	Ø38	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-63	W-036995	Ø101.6	Ø129	Ø63.5	Ø38	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-63	W-036996	DN80	Ø129	Ø63.5	Ø38	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-63	W-036997	Ø76.1	Ø129	Ø63.5	Ø38	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-63	W-036998	DN65	Ø129	Ø63.5	Ø38	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-63	W-036999	Ø63.5	Ø129	Ø63.5	Ø38	186	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-50	W-037000	DN125	Ø129	DN50	DN25	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-50	W-037001	DN100	Ø129	DN50	DN25	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-50	W-037002	Ø101.6	Ø129	DN50	DN25	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-50	W-037003	DN80	Ø129	DN50	DN25	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-50	W-037004	Ø76.1	Ø129	DN50	DN25	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-50	W-037005	DN65	Ø129	DN50	DN25	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-50	W-037006	Ø63.5	Ø129	DN50	DN25	186	310	668	224	61 pc Ø12x1mm



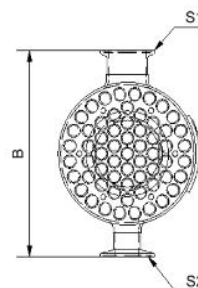
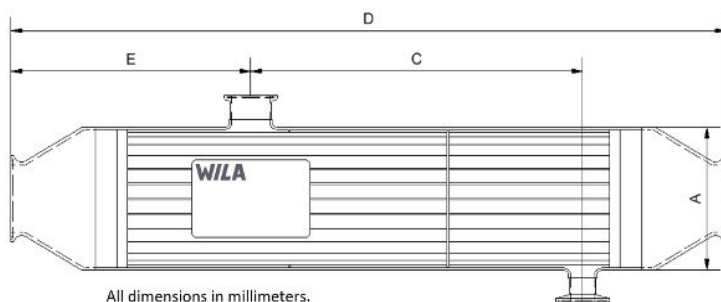
TSHA-01-129-40 (section 2 of 2)		40 barg / 85°C		10 bar[g] / 185°C			Maximum pressure / temperature			
		Volume 4.5 liters		Volume 2.5 liters			316L Concentric		Dry weight 14 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-51	W-037007	DN125	Ø129	Ø51	Ø25	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-51	W-037008	DN100	Ø129	Ø51	Ø25	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-51	W-037009	Ø101.6	Ø129	Ø51	Ø25	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-51	W-037010	DN80	Ø129	Ø51	Ø25	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-51	W-037011	Ø76.1	Ø129	Ø51	Ø25	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-51	W-037012	DN65	Ø129	Ø51	Ø25	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-51	W-037013	Ø63.5	Ø129	Ø51	Ø25	186	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-40	W-037014	DN125	Ø129	DN40	DN25	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-40	W-037015	DN100	Ø129	DN40	DN25	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-40	W-037016	Ø101.6	Ø129	DN40	DN25	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-40	W-037017	DN80	Ø129	DN40	DN25	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-40	W-037018	Ø76.1	Ø129	DN40	DN25	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-40	W-037019	DN65	Ø129	DN40	DN25	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-40	W-037020	Ø63.5	Ø129	DN40	DN25	186	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-38	W-037021	DN125	Ø129	Ø38	Ø25	186	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-38	W-037022	DN100	Ø129	Ø38	Ø25	186	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-38	W-037023	Ø101.6	Ø129	Ø38	Ø25	186	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-38	W-037024	DN80	Ø129	Ø38	Ø25	186	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-38	W-037025	Ø76.1	Ø129	Ø38	Ø25	186	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-38	W-037026	DN65	Ø129	Ø38	Ø25	186	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-38	W-038708	Ø63.5	Ø129	Ø38	Ø25	186	310	668	224	61 pc Ø12x1mm



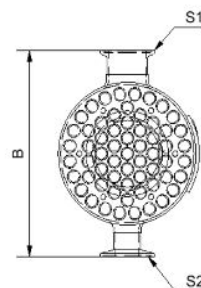
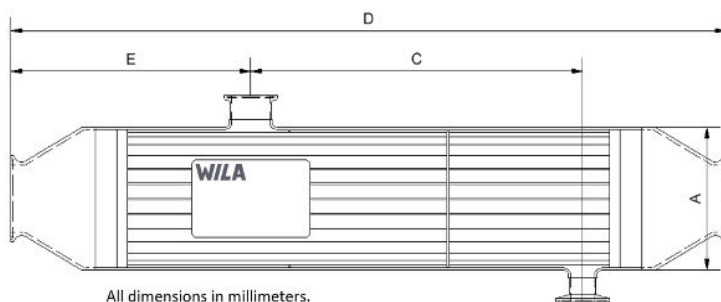
All dimensions in millimeters.



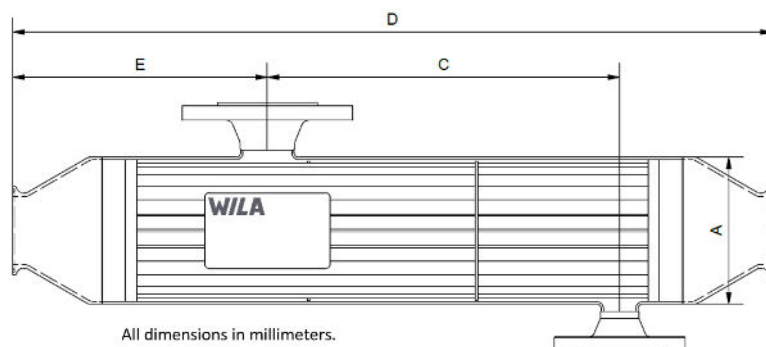
TSHA-01-129-40-F		40 barg / 85°C		10 bar[g] / 185°C			Maximum pressure / temperature			
		Volume 4.5 liters		Volume 2.5 liters			316L Concentric		Dry weight 14 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-82F	W-037188	DN125	Ø129	DN80	DN40	229	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-82F	W-037189	DN100	Ø129	DN80	DN40	229	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-82F	W-037190	Ø101.6	Ø129	DN80	DN40	229	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-82F	W-037191	DN80	Ø129	DN80	DN40	229	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-82F	W-037192	Ø76.1	Ø129	DN80	DN40	229	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-82F	W-037193	DN65	Ø129	DN80	DN40	229	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-82F	W-037194	Ø63.5	Ø129	DN80	DN40	229	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-70F	W-037195	DN125	Ø129	DN65	DN40	224	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-70F	W-037196	DN100	Ø129	DN65	DN40	224	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-70F	W-037197	Ø101.6	Ø129	DN65	DN40	224	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-70F	W-037198	DN80	Ø129	DN65	DN40	224	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-70F	W-037199	Ø76.1	Ø129	DN65	DN40	224	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-70F	W-037200	DN65	Ø129	DN65	DN40	224	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-70F	W-037201	Ø63.5	Ø129	DN65	DN40	224	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-54F	W-037202	DN125	Ø129	DN50	DN25	221	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-54F	W-037203	DN100	Ø129	DN50	DN25	221	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-54F	W-037204	Ø101.6	Ø129	DN50	DN25	221	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-54F	W-037205	DN80	Ø129	DN50	DN25	221	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-54F	W-037206	Ø76.1	Ø129	DN50	DN25	221	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-54F	W-037207	DN65	Ø129	DN50	DN25	221	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-54F	W-037208	Ø63.5	Ø129	DN50	DN25	221	310	668	224	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-129-125-43F	W-037209	DN125	Ø129	DN40	DN25	218	310	566	173	61 pc Ø12x1mm
TSHA-01-129-100-43F	W-037210	DN100	Ø129	DN40	DN25	218	310	604	192	61 pc Ø12x1mm
TSHA-01-129-101-43F	W-037217	Ø101.6	Ø129	DN40	DN25	218	310	600	190	61 pc Ø12x1mm
TSHA-01-129-080-43F	W-037218	DN80	Ø129	DN40	DN25	218	310	622	201	61 pc Ø12x1mm
TSHA-01-129-076-43F	W-037219	Ø76.1	Ø129	DN40	DN25	218	310	646	213	61 pc Ø12x1mm
TSHA-01-129-065-43F	W-037220	DN65	Ø129	DN40	DN25	218	310	650	215	61 pc Ø12x1mm
TSHA-01-129-063-43F	W-037221	Ø63.5	Ø129	DN40	DN25	218	310	668	224	61 pc Ø12x1mm



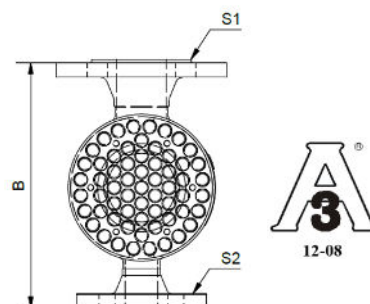
TSHA-02-129-40 (section 1 of 2)		40 barg / 85°C		8 bar[g] / 176°C			Maximum pressure / temperature			
		Volume 6.5 liters		Volume 5 liters			316L Concentric		Dry weight 26 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-80	W-037044	DN125	Ø129	DN80	DN40	192	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-80	W-037045	DN100	Ø129	DN80	DN40	192	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-80	W-037046	Ø101.6	Ø129	DN80	DN40	192	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-80	W-037047	DN80	Ø129	DN80	DN40	192	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-80	W-037048	Ø76.1	Ø129	DN80	DN40	192	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-80	W-037049	DN65	Ø129	DN80	DN40	192	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-80	W-037050	Ø63.5	Ø129	DN80	DN40	192	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-76	W-037051	DN125	Ø129	Ø76.1	Ø38	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-76	W-037052	DN100	Ø129	Ø76.1	Ø38	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-76	W-037053	Ø101.6	Ø129	Ø76.1	Ø38	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-76	W-037054	DN80	Ø129	Ø76.1	Ø38	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-76	W-037055	Ø76.1	Ø129	Ø76.1	Ø38	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-76	W-037056	DN65	Ø129	Ø76.1	Ø38	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-76	W-037057	Ø63.5	Ø129	Ø76.1	Ø38	186	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-65	W-037058	DN125	Ø129	DN65	DN40	192	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-65	W-037059	DN100	Ø129	DN65	DN40	192	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-65	W-037060	Ø101.6	Ø129	DN65	DN40	192	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-65	W-037061	DN80	Ø129	DN65	DN40	192	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-65	W-037062	Ø76.1	Ø129	DN65	DN40	192	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-65	W-037063	DN65	Ø129	DN65	DN40	192	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-65	W-037064	Ø63.5	Ø129	DN65	DN40	192	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-63	W-037065	DN125	Ø129	Ø63.5	Ø38	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-63	W-037066	DN100	Ø129	Ø63.5	Ø38	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-63	W-037067	Ø101.6	Ø129	Ø63.5	Ø38	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-63	W-037068	DN80	Ø129	Ø63.5	Ø38	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-63	W-037069	Ø76.1	Ø129	Ø63.5	Ø38	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-63	W-037070	DN65	Ø129	Ø63.5	Ø38	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-63	W-037071	Ø63.5	Ø129	Ø63.5	Ø38	186	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-50	W-037072	DN125	Ø129	DN50	DN25	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-50	W-037073	DN100	Ø129	DN50	DN25	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-50	W-037074	Ø101.6	Ø129	DN50	DN25	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-50	W-037075	DN80	Ø129	DN50	DN25	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-50	W-037076	Ø76.1	Ø129	DN50	DN25	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-50	W-037077	DN65	Ø129	DN50	DN25	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-50	W-037078	Ø63.5	Ø129	DN50	DN25	186	655	1148	359	61 pc Ø12x1mm



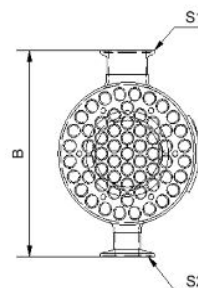
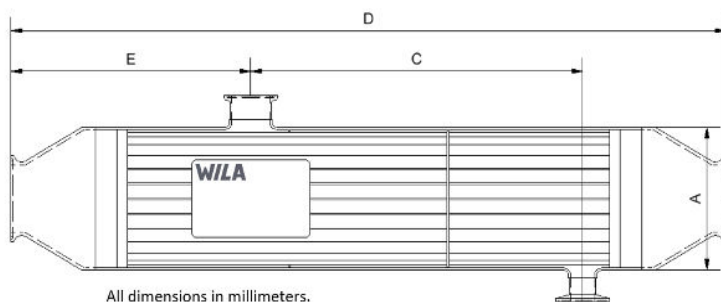
TSHA-02-129-40 (section 2 of 2)		40 barg / 85°C		8 bar[g] / 176°C			Maximum pressure / temperature			
		Volume 6.5 liters		Volume 5 liters			316L Concentric		Dry weight 26 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-51	W-037079	DN125	Ø129	Ø51	Ø25	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-51	W-037080	DN100	Ø129	Ø51	Ø25	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-51	W-032009	Ø101.6	Ø129	Ø51	Ø25	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-51	W-037082	DN80	Ø129	Ø51	Ø25	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-51	W-037083	Ø76.1	Ø129	Ø51	Ø25	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-51	W-037084	DN65	Ø129	Ø51	Ø25	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-51	W-037085	Ø63.5	Ø129	Ø51	Ø25	186	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-40	W-037086	DN125	Ø129	DN40	DN25	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-40	W-037087	DN100	Ø129	DN40	DN25	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-40	W-037088	Ø101.6	Ø129	DN40	DN25	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-40	W-037089	DN80	Ø129	DN40	DN25	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-40	W-037090	Ø76.1	Ø129	DN40	DN25	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-40	W-037091	DN65	Ø129	DN40	DN25	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-40	W-037092	Ø63.5	Ø129	DN40	DN25	186	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-38	W-037093	DN125	Ø129	Ø38	Ø25	186	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-38	W-037094	DN100	Ø129	Ø38	Ø25	186	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-38	W-037095	Ø101.6	Ø129	Ø38	Ø25	186	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-38	W-037096	DN80	Ø129	Ø38	Ø25	186	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-38	W-037097	Ø76.1	Ø129	Ø38	Ø25	186	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-38	W-037098	DN65	Ø129	Ø38	Ø25	186	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-38	W-037099	Ø63.5	Ø129	Ø38	Ø25	186	655	1148	359	61 pc Ø12x1mm



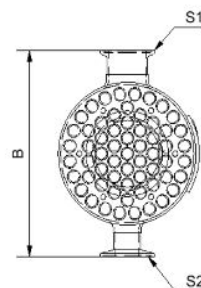
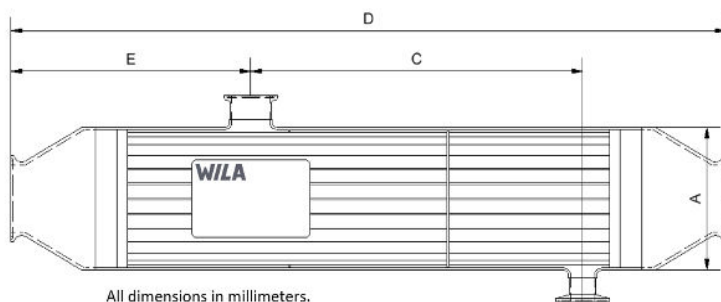
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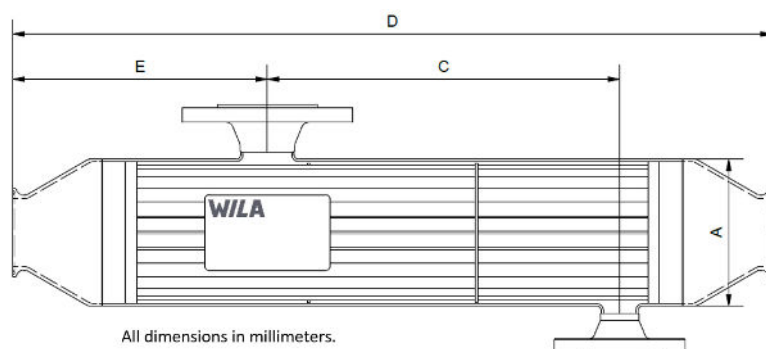
TSHA-02-129-40-F		40 barg / 85°C		8 bar[g] / 176°C			Maximum pressure / temperature			
		Volume 6.5 liters		Volume 5 liters			316L Concentric		Dry weight 26 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-82F	W-037222	DN125	Ø129	DN80	DN40	229	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-82F	W-037223	DN100	Ø129	DN80	DN40	229	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-82F	W-037224	Ø101.6	Ø129	DN80	DN40	229	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-82F	W-037225	DN80	Ø129	DN80	DN40	229	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-82F	W-037226	Ø76.1	Ø129	DN80	DN40	229	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-82F	W-037227	DN65	Ø129	DN80	DN40	229	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-82F	W-037228	Ø63.5	Ø129	DN80	DN40	229	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-70F	W-037229	DN125	Ø129	DN65	DN40	224	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-70F	W-037230	DN100	Ø129	DN65	DN40	224	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-70F	W-037231	Ø101.6	Ø129	DN65	DN40	224	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-70F	W-037232	DN80	Ø129	DN65	DN40	224	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-70F	W-037233	Ø76.1	Ø129	DN65	DN40	224	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-70F	W-037234	DN65	Ø129	DN65	DN40	224	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-70F	W-037235	Ø63.5	Ø129	DN65	DN40	224	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-54F	W-037236	DN125	Ø129	DN50	DN25	221	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-54F	W-037237	DN100	Ø129	DN50	DN25	221	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-54F	W-037238	Ø101.6	Ø129	DN50	DN25	221	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-54F	W-037239	DN80	Ø129	DN50	DN25	221	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-54F	W-037240	Ø76.1	Ø129	DN50	DN25	221	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-54F	W-037241	DN65	Ø129	DN50	DN25	221	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-54F	W-037242	Ø63.5	Ø129	DN50	DN25	221	655	1148	359	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-129-125-43F	W-037243	DN125	Ø129	DN40	DN25	218	655	1046	308	61 pc Ø12x1mm
TSHA-02-129-100-43F	W-037244	DN100	Ø129	DN40	DN25	218	655	1084	327	61 pc Ø12x1mm
TSHA-02-129-101-43F	W-037245	Ø101.6	Ø129	DN40	DN25	218	655	1080	325	61 pc Ø12x1mm
TSHA-02-129-080-43F	W-037246	DN80	Ø129	DN40	DN25	218	655	1102	336	61 pc Ø12x1mm
TSHA-02-129-076-43F	W-037247	Ø76.1	Ø129	DN40	DN25	218	655	1126	348	61 pc Ø12x1mm
TSHA-02-129-065-43F	W-037248	DN65	Ø129	DN40	DN25	218	655	1130	350	61 pc Ø12x1mm
TSHA-02-129-063-43F	W-037249	Ø63.5	Ø129	DN40	DN25	218	655	1148	359	61 pc Ø12x1mm



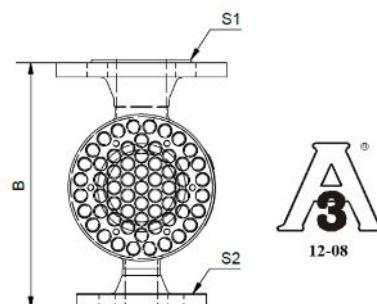
TSHA-03-129-40 (section 1 of 2)		40 barg / 85°C		6 bar[g] / 165°C			Maximum pressure / temperature			
		Volume 9 liters		Volume 7.5 liters			316L Concentric		Dry weight 37 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-80	W-037116	DN125	Ø129	DN80	DN40	192	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-80	W-037117	DN100	Ø129	DN80	DN40	192	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-80	W-037118	Ø101.6	Ø129	DN80	DN40	192	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-80	W-037119	DN80	Ø129	DN80	DN40	192	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-80	W-037120	Ø76.1	Ø129	DN80	DN40	192	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-80	W-037121	DN65	Ø129	DN80	DN40	192	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-80	W-037122	Ø63.5	Ø129	DN80	DN40	192	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-76	W-037123	DN125	Ø129	Ø76.1	Ø38	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-76	W-037124	DN100	Ø129	Ø76.1	Ø38	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-76	W-037125	Ø101.6	Ø129	Ø76.1	Ø38	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-76	W-037126	DN80	Ø129	Ø76.1	Ø38	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-76	W-037127	Ø76.1	Ø129	Ø76.1	Ø38	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-76	W-037128	DN65	Ø129	Ø76.1	Ø38	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-76	W-037129	Ø63.5	Ø129	Ø76.1	Ø38	186	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-65	W-037130	DN125	Ø129	DN65	DN40	192	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-65	W-037131	DN100	Ø129	DN65	DN40	192	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-65	W-037132	Ø101.6	Ø129	DN65	DN40	192	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-65	W-037133	DN80	Ø129	DN65	DN40	192	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-65	W-037134	Ø76.1	Ø129	DN65	DN40	192	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-65	W-037135	DN65	Ø129	DN65	DN40	192	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-65	W-037136	Ø63.5	Ø129	DN65	DN40	192	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-63	W-037137	DN125	Ø129	Ø63.5	Ø38	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-63	W-037138	DN100	Ø129	Ø63.5	Ø38	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-63	W-037139	Ø101.6	Ø129	Ø63.5	Ø38	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-63	W-037140	DN80	Ø129	Ø63.5	Ø38	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-63	W-037141	Ø76.1	Ø129	Ø63.5	Ø38	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-63	W-037142	DN65	Ø129	Ø63.5	Ø38	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-63	W-037143	Ø63.5	Ø129	Ø63.5	Ø38	186	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-50	W-037144	DN125	Ø129	DN50	DN25	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-50	W-037145	DN100	Ø129	DN50	DN25	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-50	W-037146	Ø101.6	Ø129	DN50	DN25	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-50	W-037147	DN80	Ø129	DN50	DN25	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-50	W-037148	Ø76.1	Ø129	DN50	DN25	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-50	W-037149	DN65	Ø129	DN50	DN25	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-50	W-037150	Ø63.5	Ø129	DN50	DN25	186	1020	1648	489	61 pc Ø12x1mm



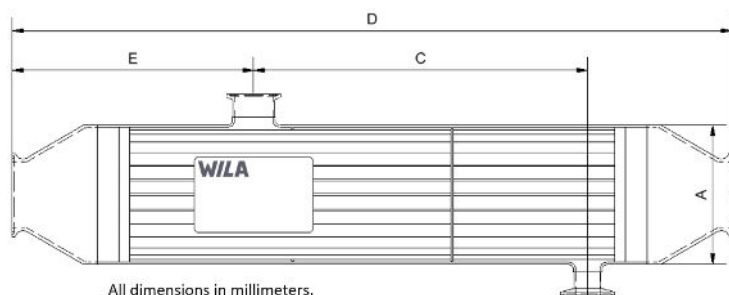
TSHA-03-129-40 (section 2 of 2)		40 barg / 85°C		6 bar[g] / 165°C			Maximum pressure / temperature			
		Volume 9 liters		Volume 7.5 liters			316L Concentric		Dry weight 37 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-51	W-037151	DN125	Ø129	Ø51	Ø25	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-51	W-037152	DN100	Ø129	Ø51	Ø25	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-51	W-037153	Ø101.6	Ø129	Ø51	Ø25	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-51	W-037154	DN80	Ø129	Ø51	Ø25	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-51	W-037155	Ø76.1	Ø129	Ø51	Ø25	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-51	W-037156	DN65	Ø129	Ø51	Ø25	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-51	W-037157	Ø63.5	Ø129	Ø51	Ø25	186	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-40	W-037158	DN125	Ø129	DN40	DN25	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-40	W-037159	DN100	Ø129	DN40	DN25	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-40	W-037160	Ø101.6	Ø129	DN40	DN25	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-40	W-037161	DN80	Ø129	DN40	DN25	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-40	W-037162	Ø76.1	Ø129	DN40	DN25	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-40	W-037163	DN65	Ø129	DN40	DN25	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-40	W-037164	Ø63.5	Ø129	DN40	DN25	186	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-38	W-037165	DN125	Ø129	Ø38	Ø25	186	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-38	W-037166	DN100	Ø129	Ø38	Ø25	186	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-38	W-037167	Ø101.6	Ø129	Ø38	Ø25	186	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-38	W-037168	DN80	Ø129	Ø38	Ø25	186	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-38	W-037169	Ø76.1	Ø129	Ø38	Ø25	186	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-38	W-037170	DN65	Ø129	Ø38	Ø25	186	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-38	W-037171	Ø63.5	Ø129	Ø38	Ø25	186	1020	1648	489	61 pc Ø12x1mm



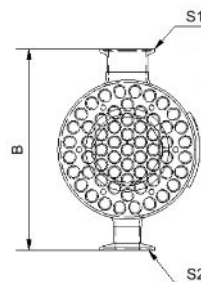
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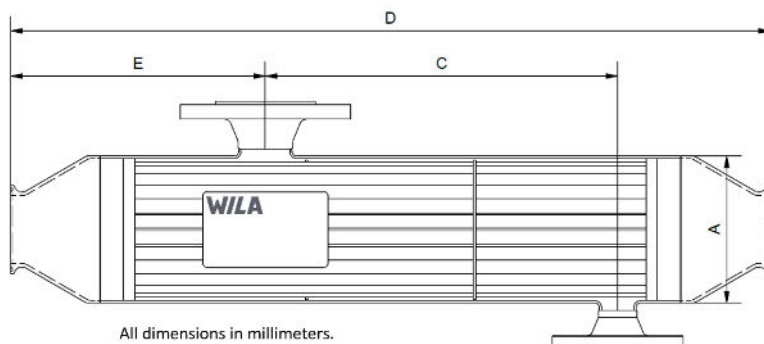
TSHA-03-129-40-F		40 barg / 85°C		6 bar[g] / 165°C		Maximum pressure / temperature				
		Volume 9 liters		Volume 7.5 liters		316L Concentric		Dry weight 37 kg		
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-82F	W-037250	DN125	Ø129	DN80	DN40	229	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-82F	W-037251	DN100	Ø129	DN80	DN40	229	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-82F	W-037252	Ø101.6	Ø129	DN80	DN40	229	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-82F	W-037253	DN80	Ø129	DN80	DN40	229	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-82F	W-037254	Ø76.1	Ø129	DN80	DN40	229	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-82F	W-037255	DN65	Ø129	DN80	DN40	229	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-82F	W-037256	Ø63.5	Ø129	DN80	DN40	229	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-70F	W-037257	DN125	Ø129	DN65	DN40	224	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-70F	W-037258	DN100	Ø129	DN65	DN40	224	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-70F	W-037259	Ø101.6	Ø129	DN65	DN40	224	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-70F	W-037260	DN80	Ø129	DN65	DN40	224	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-70F	W-037261	Ø76.1	Ø129	DN65	DN40	224	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-70F	W-037262	DN65	Ø129	DN65	DN40	224	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-70F	W-037263	Ø63.5	Ø129	DN65	DN40	224	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-54F	W-037264	DN125	Ø129	DN50	DN25	221	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-54F	W-037265	DN100	Ø129	DN50	DN25	221	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-54F	W-037266	Ø101.6	Ø129	DN50	DN25	221	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-54F	W-037267	DN80	Ø129	DN50	DN25	221	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-54F	W-037268	Ø76.1	Ø129	DN50	DN25	221	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-54F	W-037269	DN65	Ø129	DN50	DN25	221	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-54F	W-037270	Ø63.5	Ø129	DN50	DN25	221	1020	1648	489	61 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-129-125-43F	W-037271	DN125	Ø129	DN40	DN25	218	1020	1546	438	61 pc Ø12x1mm
TSHA-03-129-100-43F	W-037272	DN100	Ø129	DN40	DN25	218	1020	1584	457	61 pc Ø12x1mm
TSHA-03-129-101-43F	W-037273	Ø101.6	Ø129	DN40	DN25	218	1020	1580	455	61 pc Ø12x1mm
TSHA-03-129-080-43F	W-037274	DN80	Ø129	DN40	DN25	218	1020	1602	466	61 pc Ø12x1mm
TSHA-03-129-076-43F	W-037275	Ø76.1	Ø129	DN40	DN25	218	1020	1626	478	61 pc Ø12x1mm
TSHA-03-129-065-43F	W-037276	DN65	Ø129	DN40	DN25	218	1020	1630	480	61 pc Ø12x1mm
TSHA-03-129-063-43F	W-037277	Ø63.5	Ø129	DN40	DN25	218	1020	1648	489	61 pc Ø12x1mm



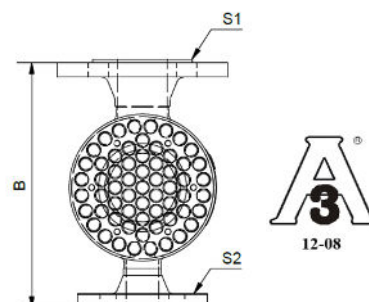
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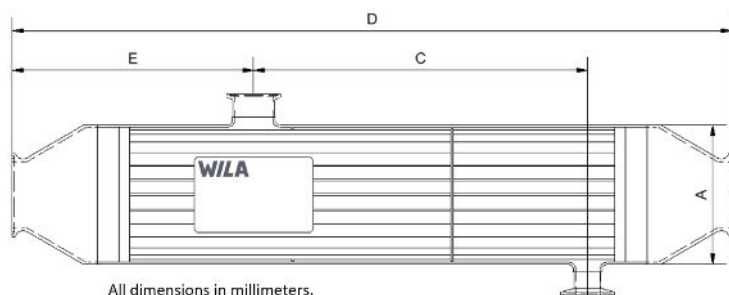
TSHA-01-209-40		40 barg / 85°C		10 bar[g] / 185°C			Maximum pressure / temperature			
		Volume 8.5 liters		Volume 2.5 liters			316L Concentric		Dry weight 19 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-50	W-037278	DN150	Ø209	DN50	DN25	266	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-50	W-037279	DN125	Ø209	DN50	DN25	266	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-50	W-037280	DN100	Ø209	DN50	DN25	266	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-50	W-037281	Ø101.6	Ø209	DN50	DN25	266	90	467	201	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-51	W-037282	DN150	Ø209	Ø51	Ø25	266	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-51	W-037283	DN125	Ø209	Ø51	Ø25	266	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-51	W-037284	DN100	Ø209	Ø51	Ø25	266	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-51	W-037285	Ø101.6	Ø209	Ø51	Ø25	266	90	467	201	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-40	W-037286	DN150	Ø209	DN40	DN25	266	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-40	W-037287	DN125	Ø209	DN40	DN25	266	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-40	W-037288	DN100	Ø209	DN40	DN25	266	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-40	W-037289	Ø101.6	Ø209	DN40	DN25	266	90	467	201	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-38	W-037290	DN150	Ø209	Ø38	Ø25	266	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-38	W-037291	DN125	Ø209	Ø38	Ø25	266	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-38	W-037292	DN100	Ø209	Ø38	Ø25	266	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-38	W-037293	Ø101.6	Ø209	Ø38	Ø25	266	90	467	201	163 pc Ø12x1mm



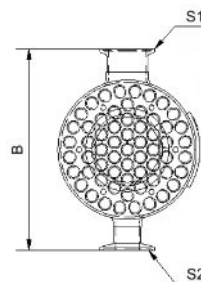
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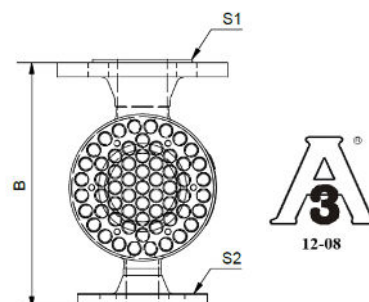
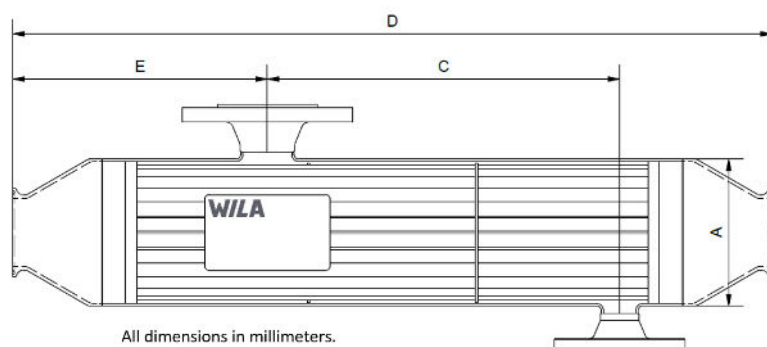
TSHA-01-209-40-F		40 barg / 85°C		10 bar[g] / 185°C			Maximum pressure / temperature			
		Volume 8.5 liters		Volume 2.5 liters			316L Concentric		Dry weight 19 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-54F	W-037520	DN150	Ø209	DN50	DN25	301	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-54F	W-037521	DN125	Ø209	DN50	DN25	301	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-54F	W-037522	DN100	Ø209	DN50	DN25	301	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-54F	W-037523	Ø101.6	Ø209	DN50	DN25	301	90	467	201	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-01-209-150-43F	W-037524	DN150	Ø209	DN40	DN25	298	90	383	159	163 pc Ø12x1mm
TSHA-01-209-125-43F	W-037525	DN125	Ø209	DN40	DN25	298	90	427	181	163 pc Ø12x1mm
TSHA-01-209-100-43F	W-037526	DN100	Ø209	DN40	DN25	298	90	467	201	163 pc Ø12x1mm
TSHA-01-209-101-43F	W-037527	Ø101.6	Ø209	DN40	DN25	298	90	467	201	163 pc Ø12x1mm



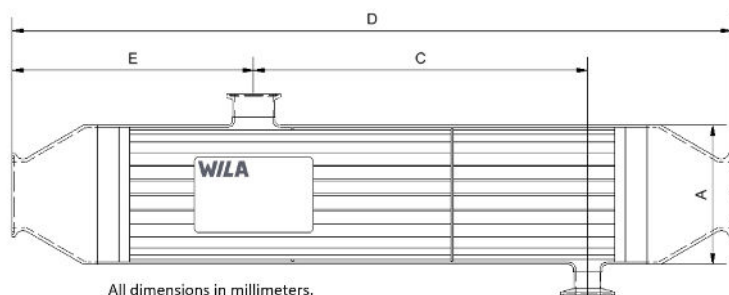
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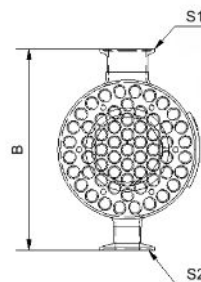
TSHA-02-209-40		40 barg / 85°C		8 bar[g] / 176°C			Maximum pressure / temperature			
		Volume 11 liters		Volume 5 liters			316L Concentric		Dry weight 31 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-80	W-037300	DN150	Ø209	DN80	DN40	272	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-80	W-037301	DN125	Ø209	DN80	DN40	272	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-80	W-037302	DN100	Ø209	DN80	DN40	272	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-80	W-037303	Ø101.6	Ø209	DN80	DN40	272	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	C	C	D	E	Tube bank
TSHA-02-209-150-76	W-037304	DN150	Ø209	Ø76.1	Ø38	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-76	W-037305	DN125	Ø209	Ø76.1	Ø38	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-76	W-037306	DN100	Ø209	Ø76.1	Ø38	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-76	W-037307	Ø101.6	Ø209	Ø76.1	Ø38	266	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-65	W-037308	DN150	Ø209	DN65	DN40	272	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-65	W-037309	DN125	Ø209	DN65	DN40	272	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-65	W-037310	DN100	Ø209	DN65	DN40	272	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-65	W-037311	Ø101.6	Ø209	DN65	DN40	272	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-63	W-037312	DN150	Ø209	Ø63.5	Ø38	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-63	W-037313	DN125	Ø209	Ø63.5	Ø38	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-63	W-037314	DN100	Ø209	Ø63.5	Ø38	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-63	W-037315	Ø101.6	Ø209	Ø63.5	Ø38	266	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-50	W-037316	DN150	Ø209	DN50	DN25	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-50	W-037317	DN125	Ø209	DN50	DN25	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-50	W-037318	DN100	Ø209	DN50	DN25	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-50	W-037319	Ø101.6	Ø209	DN50	DN25	266	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-51	W-037320	DN150	Ø209	Ø51	Ø25	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-51	W-037321	DN125	Ø209	Ø51	Ø25	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-51	W-037322	DN100	Ø209	Ø51	Ø25	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-51	W-037323	Ø101.6	Ø209	Ø51	Ø25	266	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-40	W-037324	DN150	Ø209	DN40	DN25	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-40	W-037325	DN125	Ø209	DN40	DN25	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-40	W-037326	DN100	Ø209	DN40	DN25	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-40	W-037327	Ø101.6	Ø209	DN40	DN25	266	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-38	W-037328	DN150	Ø209	Ø38	Ø25	266	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-38	W-037329	DN125	Ø209	Ø38	Ø25	266	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-38	W-037330	DN100	Ø209	Ø38	Ø25	266	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-38	W-037331	Ø101.6	Ø209	Ø38	Ø25	266	255	652	221	163 pc Ø12x1mm



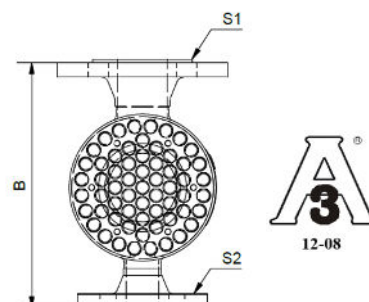
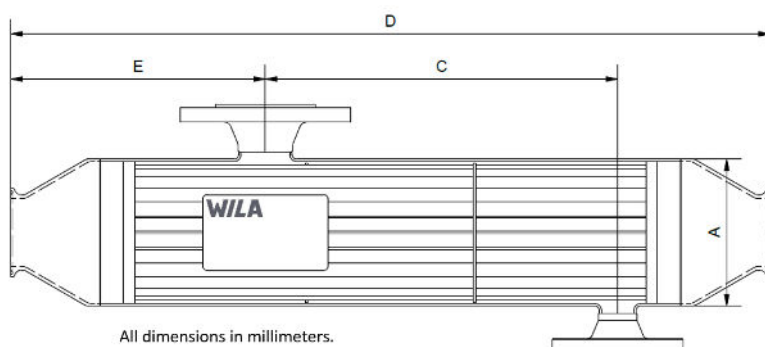
TSHA-02-209-40-F		40 barg / 85°C		8 bar[g] / 176°C			Maximum pressure / temperature			
		Volume 11 liters		Volume 5 liters			316L Concentric		Dry weight 31 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-82F	W-037528	DN150	Ø209	DN80	DN40	309	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-82F	W-037529	DN125	Ø209	DN80	DN40	309	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-82F	W-037530	DN100	Ø209	DN80	DN40	309	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-82F	W-037531	Ø101.6	Ø209	DN80	DN40	309	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-70F	W-037532	DN150	Ø209	DN65	DN40	304	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-70F	W-037533	DN125	Ø209	DN65	DN40	304	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-70F	W-037534	DN100	Ø209	DN65	DN40	304	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-70F	W-037535	Ø101.6	Ø209	DN65	DN40	304	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-54F	W-037536	DN150	Ø209	DN50	DN25	301	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-54F	W-037537	DN125	Ø209	DN50	DN25	301	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-54F	W-037538	DN100	Ø209	DN50	DN25	301	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-54F	W-037539	Ø101.6	Ø209	DN50	DN25	301	255	652	221	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-02-209-150-43F	W-037540	DN150	Ø209	DN40	DN25	298	255	568	179	163 pc Ø12x1mm
TSHA-02-209-125-43F	W-037541	DN125	Ø209	DN40	DN25	298	255	612	201	163 pc Ø12x1mm
TSHA-02-209-100-43F	W-037542	DN100	Ø209	DN40	DN25	298	255	652	221	163 pc Ø12x1mm
TSHA-02-209-101-43F	W-037543	Ø101.6	Ø209	DN40	DN25	298	255	652	221	163 pc Ø12x1mm



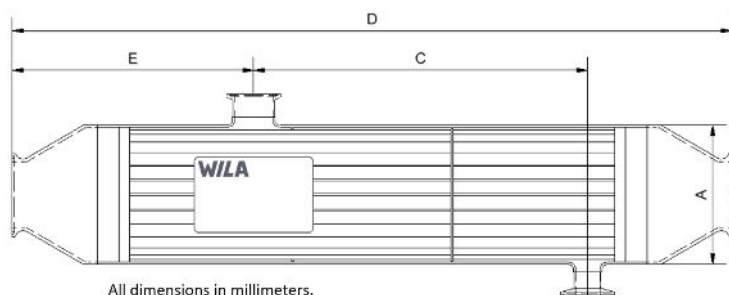
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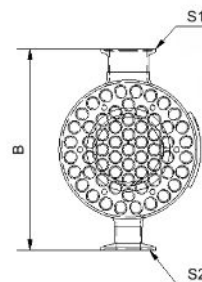
TSHA-03-209-40		40 barg / 85°C		6 bar[g] / 165°C			Maximum pressure / temperature			
		Volume 14 liters		Volume 8.3 liters			316L Concentric		Dry weight 44 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-80	W-037344	DN150	Ø209	DN80	DN40	272	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-80	W-037345	DN125	Ø209	DN80	DN40	272	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-80	W-037346	DN100	Ø209	DN80	DN40	272	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-80	W-037347	Ø101.6	Ø209	DN80	DN40	272	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	C	C	D	E	Tube bank
TSHA-03-209-150-76	W-037348	DN150	Ø209	Ø76.1	Ø38	266	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-76	W-037349	DN125	Ø209	Ø76.1	Ø38	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-76	W-037350	DN100	Ø209	Ø76.1	Ø38	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-76	W-037351	Ø101.6	Ø209	Ø76.1	Ø38	266	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-65	W-037352	DN150	Ø209	DN65	DN40	272	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-65	W-037353	DN125	Ø209	DN65	DN40	272	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-65	W-037354	DN100	Ø209	DN65	DN40	272	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-65	W-037355	Ø101.6	Ø209	DN65	DN40	272	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-63	W-037356	DN150	Ø209	Ø63.5	Ø38	266	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-63	W-037357	DN125	Ø209	Ø63.5	Ø38	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-63	W-037358	DN100	Ø209	Ø63.5	Ø38	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-63	W-037359	Ø101.6	Ø209	Ø63.5	Ø38	266	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-50	W-037360	DN150	Ø209	DN50	DN25	266	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-50	W-037361	DN125	Ø209	DN50	DN25	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-50	W-037362	DN100	Ø209	DN50	DN25	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-50	W-037363	Ø101.6	Ø209	DN50	DN25	266	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-51	W-037364	DN150	Ø209	Ø51	Ø25	266	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-51	W-037365	DN125	Ø209	Ø51	Ø25	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-51	W-037366	DN100	Ø209	Ø51	Ø25	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-51	W-037367	Ø101.6	Ø209	Ø51	Ø25	266	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-40	W-037368	DN150	Ø209	DN40	DN25	266	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-40	W-037369	DN125	Ø209	DN40	DN25	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-40	W-037370	DN100	Ø209	DN40	DN25	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-40	W-037371	Ø101.6	Ø209	DN40	DN25	266	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-38	W-037372	DN150	Ø209	Ø38	Ø25	266	405	877	249	163 pc Ø12x1mm
TSHA-03-209-125-38	W-037373	DN125	Ø209	Ø38	Ø25	266	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-38	W-037374	DN100	Ø209	Ø38	Ø25	266	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-38	W-037375	Ø101.6	Ø209	Ø38	Ø25	266	405	872	291	163 pc Ø12x1mm



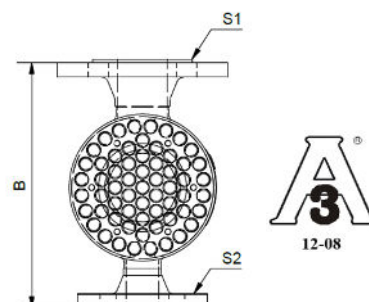
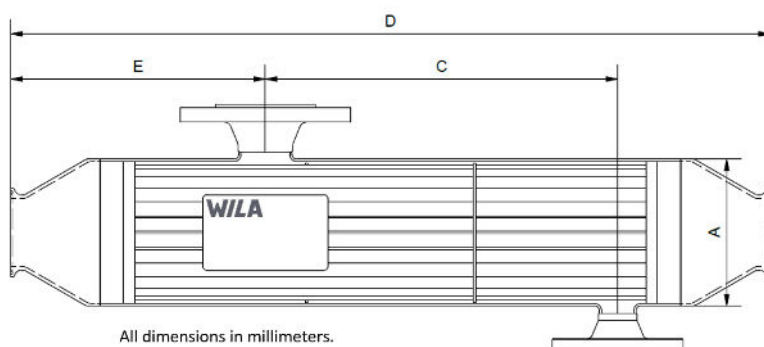
TSHA-03-209-40F		40 barg / 85°C		6 bar[g] / 165°C			Maximum pressure / temperature			
		Volume 14 liters		Volume 8.3 liters			316L Concentric		Dry weight 44 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-82F	W-037544	DN150	Ø209	DN80	DN40	309	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-82F	W-037545	DN125	Ø209	DN80	DN40	309	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-82F	W-037546	DN100	Ø209	DN80	DN40	309	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-82F	W-037547	Ø101.6	Ø209	DN80	DN40	309	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-70F	W-037548	DN150	Ø209	DN65	DN40	304	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-70F	W-037549	DN125	Ø209	DN65	DN40	304	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-70F	W-037550	DN100	Ø209	DN65	DN40	304	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-70F	W-037551	Ø101.6	Ø209	DN65	DN40	304	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-54F	W-037552	DN150	Ø209	DN50	DN25	301	405	788	249	163 pc Ø12x1mm
TSHA-03-209-125-54F	W-037553	DN125	Ø209	DN50	DN25	301	405	832	271	163 pc Ø12x1mm
TSHA-03-209-100-54F	W-037554	DN100	Ø209	DN50	DN25	301	405	872	291	163 pc Ø12x1mm
TSHA-03-209-101-54F	W-037555	Ø101.6	Ø209	DN50	DN25	301	405	872	291	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-03-209-150-43F	W-037556	DN150	Ø209	DN40	DN25	298	255	788	249	163 pc Ø12x1mm
TSHA-03-209-125-43F	W-037557	DN125	Ø209	DN40	DN25	298	255	832	271	163 pc Ø12x1mm
TSHA-03-209-100-43F	W-037558	DN100	Ø209	DN40	DN25	298	255	872	291	163 pc Ø12x1mm
TSHA-03-209-101-43F	W-037559	Ø101.6	Ø209	DN40	DN25	298	255	872	291	163 pc Ø12x1mm



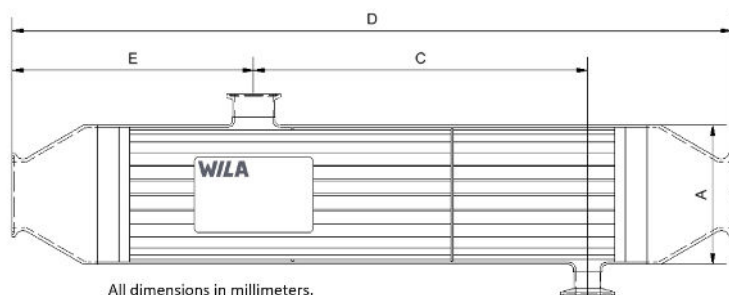
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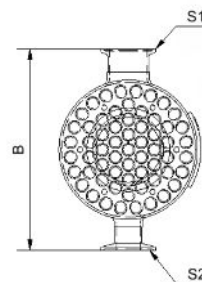
TSHA-04-209-40		40 barg / 85°C		4 bar[g] / 152°C			Maximum pressure / temperature			
		Volume 15.5 liters		Volume 10.5 liters			316L Concentric		Dry weight 53 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-80	W-037388	DN150	Ø209	DN80	DN40	272	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-80	W-037389	DN125	Ø209	DN80	DN40	272	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-80	W-037390	DN100	Ø209	DN80	DN40	272	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-80	W-037391	Ø101.6	Ø209	DN80	DN40	272	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	C	C	D	E	Tube bank
TSHA-04-209-150-76	W-037392	DN150	Ø209	Ø76.1	Ø38	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-76	W-037393	DN125	Ø209	Ø76.1	Ø38	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-76	W-037394	DN100	Ø209	Ø76.1	Ø38	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-76	W-038702	Ø101.6	Ø209	Ø76.1	Ø38	266	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-65	W-037396	DN150	Ø209	DN65	DN40	272	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-65	W-037397	DN125	Ø209	DN65	DN40	272	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-65	W-037398	DN100	Ø209	DN65	DN40	272	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-65	W-037399	Ø101.6	Ø209	DN65	DN40	272	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-63	W-037400	DN150	Ø209	Ø63.5	Ø38	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-63	W-037401	DN125	Ø209	Ø63.5	Ø38	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-63	W-037402	DN100	Ø209	Ø63.5	Ø38	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-63	W-037403	Ø101.6	Ø209	Ø63.5	Ø38	266	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-50	W-037404	DN150	Ø209	DN50	DN25	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-50	W-037405	DN125	Ø209	DN50	DN25	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-50	W-037406	DN100	Ø209	DN50	DN25	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-50	W-037407	Ø101.6	Ø209	DN50	DN25	266	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-51	W-037408	DN150	Ø209	Ø51	Ø25	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-51	W-037409	DN125	Ø209	Ø51	Ø25	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-51	W-037410	DN100	Ø209	Ø51	Ø25	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-51	W-037411	Ø101.6	Ø209	Ø51	Ø25	266	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-40	W-037412	DN150	Ø209	DN40	DN25	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-40	W-037413	DN125	Ø209	DN40	DN25	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-40	W-037414	DN100	Ø209	DN40	DN25	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-40	W-037415	Ø101.6	Ø209	DN40	DN25	266	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-38	W-037416	DN150	Ø209	Ø38	Ø25	266	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-38	W-037417	DN125	Ø209	Ø38	Ø25	266	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-38	W-037418	DN100	Ø209	Ø38	Ø25	266	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-38	W-037419	Ø101.6	Ø209	Ø38	Ø25	266	500	1019	343	163 pc Ø12x1mm



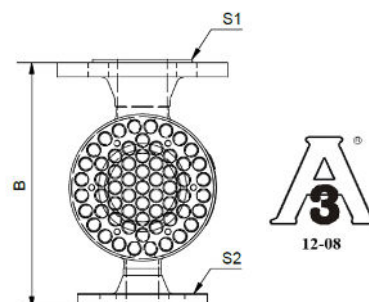
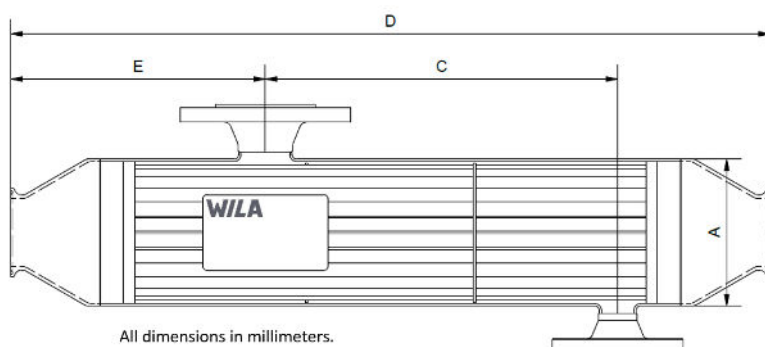
TSHA-04-209-40-F		40 barg / 85°C		4 bar[g] / 152°C			Maximum pressure / temperature			
		Volume 15.5 liters		Volume 10.5 liters			316L Concentric		Dry weight 53 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-82F	W-037560	DN150	Ø209	DN80	DN40	309	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-82F	W-037561	DN125	Ø209	DN80	DN40	309	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-82F	W-037562	DN100	Ø209	DN80	DN40	309	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-82F	W-037563	Ø101.6	Ø209	DN80	DN40	309	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-70F	W-037564	DN150	Ø209	DN65	DN40	304	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-70F	W-037565	DN125	Ø209	DN65	DN40	304	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-70F	W-037566	DN100	Ø209	DN65	DN40	304	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-70F	W-037567	Ø101.6	Ø209	DN65	DN40	304	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-54F	W-037568	DN150	Ø209	DN50	DN25	301	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-54F	W-037569	DN125	Ø209	DN50	DN25	301	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-54F	W-037570	DN100	Ø209	DN50	DN25	301	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-54F	W-037571	Ø101.6	Ø209	DN50	DN25	301	500	1019	343	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-04-209-150-43F	W-037572	DN150	Ø209	DN40	DN25	298	500	935	301	163 pc Ø12x1mm
TSHA-04-209-125-43F	W-037573	DN125	Ø209	DN40	DN25	298	500	979	323	163 pc Ø12x1mm
TSHA-04-209-100-43F	W-037574	DN100	Ø209	DN40	DN25	298	500	1019	343	163 pc Ø12x1mm
TSHA-04-209-101-43F	W-037575	Ø101.6	Ø209	DN40	DN25	298	500	1019	343	163 pc Ø12x1mm



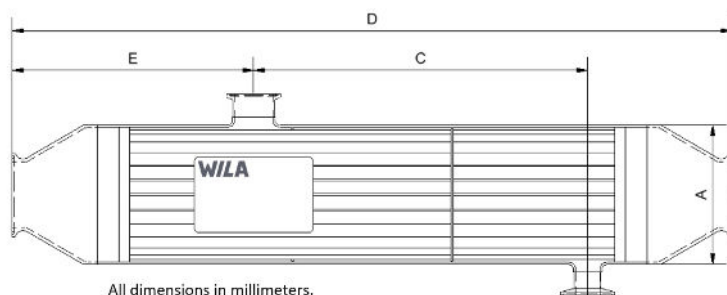
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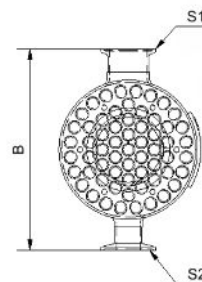
TSHA-06-209-40		40 barg / 85°C		3 bar[g] / 144°C			Maximum pressure / temperature			
		Volume 20 liters		Volume 15.5 liters			316L Concentric		Dry weight 76 kg	
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-80	W-037432	DN150	Ø209	DN80	DN40	272	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-80	W-037433	DN125	Ø209	DN80	DN40	272	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-80	W-037434	DN100	Ø209	DN80	DN40	272	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-80	W-037435	Ø101.6	Ø209	DN80	DN40	272	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	C	C	D	E	Tube bank
TSHA-06-209-150-76	W-037436	DN150	Ø209	Ø76.1	Ø38	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-76	W-037437	DN125	Ø209	Ø76.1	Ø38	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-76	W-037438	DN100	Ø209	Ø76.1	Ø38	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-76	W-037439	Ø101.6	Ø209	Ø76.1	Ø38	266	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-65	W-037440	DN150	Ø209	DN65	DN40	272	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-65	W-037441	DN125	Ø209	DN65	DN40	272	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-65	W-037442	DN100	Ø209	DN65	DN40	272	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-65	W-037443	Ø101.6	Ø209	DN65	DN40	272	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-63	W-037444	DN150	Ø209	Ø63.5	Ø38	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-63	W-037445	DN125	Ø209	Ø63.5	Ø38	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-63	W-037446	DN100	Ø209	Ø63.5	Ø38	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-63	W-037447	Ø101.6	Ø209	Ø63.5	Ø38	266	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-50	W-037448	DN150	Ø209	DN50	DN25	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-50	W-037449	DN125	Ø209	DN50	DN25	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-50	W-037450	DN100	Ø209	DN50	DN25	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-50	W-037451	Ø101.6	Ø209	DN50	DN25	266	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-51	W-037452	DN150	Ø209	Ø51	Ø25	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-51	W-037453	DN125	Ø209	Ø51	Ø25	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-51	W-037454	DN100	Ø209	Ø51	Ø25	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-51	W-037455	Ø101.6	Ø209	Ø51	Ø25	266	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-40	W-037456	DN150	Ø209	DN40	DN25	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-40	W-037457	DN125	Ø209	DN40	DN25	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-40	W-037458	DN100	Ø209	DN40	DN25	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-40	W-037459	Ø101.6	Ø209	DN40	DN25	266	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-38	W-037460	DN150	Ø209	Ø38	Ø25	266	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-38	W-037461	DN125	Ø209	Ø38	Ø25	266	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-38	W-037462	DN100	Ø209	Ø38	Ø25	266	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-38	W-037463	Ø101.6	Ø209	Ø38	Ø25	266	685	1399	538	163 pc Ø12x1mm



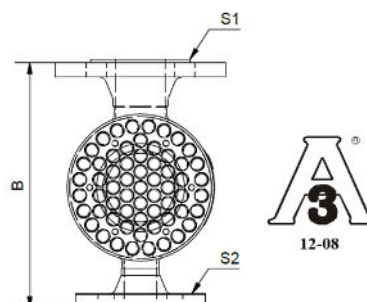
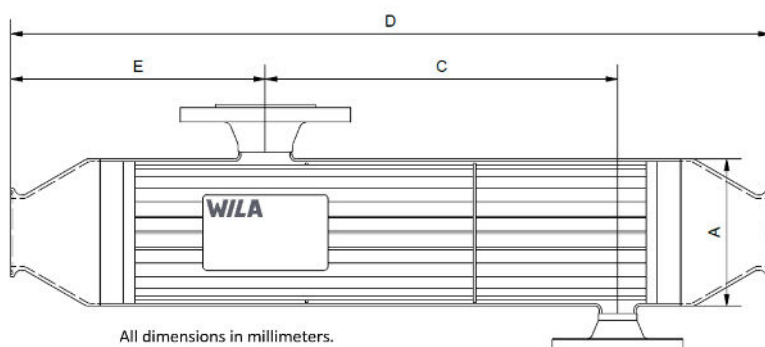
TSHA-06-209-40-F		40 barg / 85°C		3 bar[g] / 144°C		Maximum pressure / temperature				
		Volume 20 liters		Volume 15.5 liters		316L Concentric		Dry weight 76 kg		
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-82F	W-037576	DN150	Ø209	DN80	DN40	309	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-82F	W-037577	DN125	Ø209	DN80	DN40	309	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-82F	W-037578	DN100	Ø209	DN80	DN40	309	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-82F	W-037579	Ø101.6	Ø209	DN80	DN40	309	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-70F	W-037580	DN150	Ø209	DN65	DN40	304	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-70F	W-037581	DN125	Ø209	DN65	DN40	304	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-70F	W-037582	DN100	Ø209	DN65	DN40	304	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-70F	W-037583	Ø101.6	Ø209	DN65	DN40	304	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-54F	W-037584	DN150	Ø209	DN50	DN25	301	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-54F	W-037585	DN125	Ø209	DN50	DN25	301	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-54F	W-037586	DN100	Ø209	DN50	DN25	301	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-54F	W-037587	Ø101.6	Ø209	DN50	DN25	301	685	1399	538	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-06-209-150-43F	W-037588	DN150	Ø209	DN40	DN25	298	685	1315	496	163 pc Ø12x1mm
TSHA-06-209-125-43F	W-037589	DN125	Ø209	DN40	DN25	298	685	1359	518	163 pc Ø12x1mm
TSHA-06-209-100-43F	W-037590	DN100	Ø209	DN40	DN25	298	685	1399	538	163 pc Ø12x1mm
TSHA-06-209-101-43F	W-037591	Ø101.6	Ø209	DN40	DN25	298	685	1399	538	163 pc Ø12x1mm



All dimensions in millimeters.



TSHA-08-209-40		40 barg / 85°C		2.3 bar[g] / 136°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	E	Tube bank
TSHA-08-209-150-80	W-037476	DN150	Ø209	DN80	DN40	272	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-80	W-037477	DN125	Ø209	DN80	DN40	272	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-80	W-037478	DN100	Ø209	DN80	DN40	272	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-80	W-037479	Ø101.6	Ø209	DN80	DN40	272	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	C	C	D	E	Tube bank
TSHA-08-209-150-76	W-037480	DN150	Ø209	Ø76.1	Ø38	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-76	W-037481	DN125	Ø209	Ø76.1	Ø38	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-76	W-037482	DN100	Ø209	Ø76.1	Ø38	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-76	W-037483	Ø101.6	Ø209	Ø76.1	Ø38	266	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-65	W-037484	DN150	Ø209	DN65	DN40	272	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-65	W-037485	DN125	Ø209	DN65	DN40	272	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-65	W-037486	DN100	Ø209	DN65	DN40	272	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-65	W-037487	Ø101.6	Ø209	DN65	DN40	272	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-63	W-037488	DN150	Ø209	Ø63.5	Ø38	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-63	W-037489	DN125	Ø209	Ø63.5	Ø38	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-63	W-037490	DN100	Ø209	Ø63.5	Ø38	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-63	W-037491	Ø101.6	Ø209	Ø63.5	Ø38	266	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-50	W-037492	DN150	Ø209	DN50	DN25	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-50	W-037493	DN125	Ø209	DN50	DN25	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-50	W-037494	DN100	Ø209	DN50	DN25	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-50	W-037495	Ø101.6	Ø209	DN50	DN25	266	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-51	W-037496	DN150	Ø209	Ø51	Ø25	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-51	W-037497	DN125	Ø209	Ø51	Ø25	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-51	W-037498	DN100	Ø209	Ø51	Ø25	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-51	W-037499	Ø101.6	Ø209	Ø51	Ø25	266	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-40	W-037500	DN150	Ø209	DN40	DN25	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-40	W-037501	DN125	Ø209	DN40	DN25	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-40	W-037502	DN100	Ø209	DN40	DN25	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-40	W-037503	Ø101.6	Ø209	DN40	DN25	266	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-38	W-037504	DN150	Ø209	Ø38	Ø25	266	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-38	W-037505	DN125	Ø209	Ø38	Ø25	266	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-38	W-037506	DN100	Ø209	Ø38	Ø25	266	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-38	W-037507	Ø101.6	Ø209	Ø38	Ø25	266	955	1814	683	163 pc Ø12x1mm



TSHA-08-209-40-F		40 barg / 85°C		2.3 bar[g] / 136°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	E	Tube bank
TSHA-08-209-150-82F	W-037592	DN150	Ø209	DN80	DN40	309	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-82F	W-037593	DN125	Ø209	DN80	DN40	309	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-82F	W-037594	DN100	Ø209	DN80	DN40	309	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-82F	W-037595	Ø101.6	Ø209	DN80	DN40	309	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-70F	W-037596	DN150	Ø209	DN65	DN40	304	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-70F	W-037597	DN125	Ø209	DN65	DN40	304	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-70F	W-037598	DN100	Ø209	DN65	DN40	304	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-70F	W-037599	Ø101.6	Ø209	DN65	DN40	304	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-54F	W-037600	DN150	Ø209	DN50	DN25	301	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-54F	W-037601	DN125	Ø209	DN50	DN25	301	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-54F	W-037602	DN100	Ø209	DN50	DN25	301	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-54F	W-037603	Ø101.6	Ø209	DN50	DN25	301	955	1814	683	163 pc Ø12x1mm
Stock number	Drawing number	P1/P2	A	S1	S2	B	C	D	E	Tube bank
TSHA-08-209-150-43F	W-037604	DN150	Ø209	DN40	DN25	298	955	1730	641	163 pc Ø12x1mm
TSHA-08-209-125-43F	W-037605	DN125	Ø209	DN40	DN25	298	955	1774	663	163 pc Ø12x1mm
TSHA-08-209-100-43F	W-037606	DN100	Ø209	DN40	DN25	298	955	1814	683	163 pc Ø12x1mm
TSHA-08-209-101-43F	W-037607	Ø101.6	Ø209	DN40	DN25	298	955	1814	683	163 pc Ø12x1mm