

# JAD

SHELL & COIL  
HEAT EXCHANGERS



# JAD

## HEAT EXCHANGERS

The design and performance of JAD shell and tube heat exchangers make them perfect for the most demanding applications.

Their sizes, compact in relation to the heat exchange area, and consequently the high performance as compared to the standard solutions, are appreciated by many installers and users. Made entirely of stainless steel, they offer a durable and sturdy design. Due to their design flexibility, they may become a part of most heat transfer systems. Thanks to their properties, JAD exchangers are most often used in heating installations and heating substations, while JAD X – in installations with high requirements.



## WHY CHOOSE **HEXONIC** JAD SHELL & COIL HEAT EXCHANGERS?



### SPACE SAVING

Compact dimensions and vertical installation reduces space required for installation.



### HIGH EFFICIENCY

Higher heat transfer coefficient – corrugated tubes promote flow turbulence and thus intensify heat exchange.



### LOW MAINTENANCE COSTS

X-shaped connections and corrugated tubes make the exchangers more resistant to fouling.



### WIDE APPLICATION

Wide range of temperature and pressure, flow velocity and media.



### NON-DISMOUNTABLE WELDED CONSTRUCTION

makes the shell and coil heat exchanger very durable.



### MADE OF HIGH-ALLOY AUSTENITIC STAINLESS STEEL

makes the JAD heat exchanger resistant to corrosion.



### CERTIFICATES AND NORMS

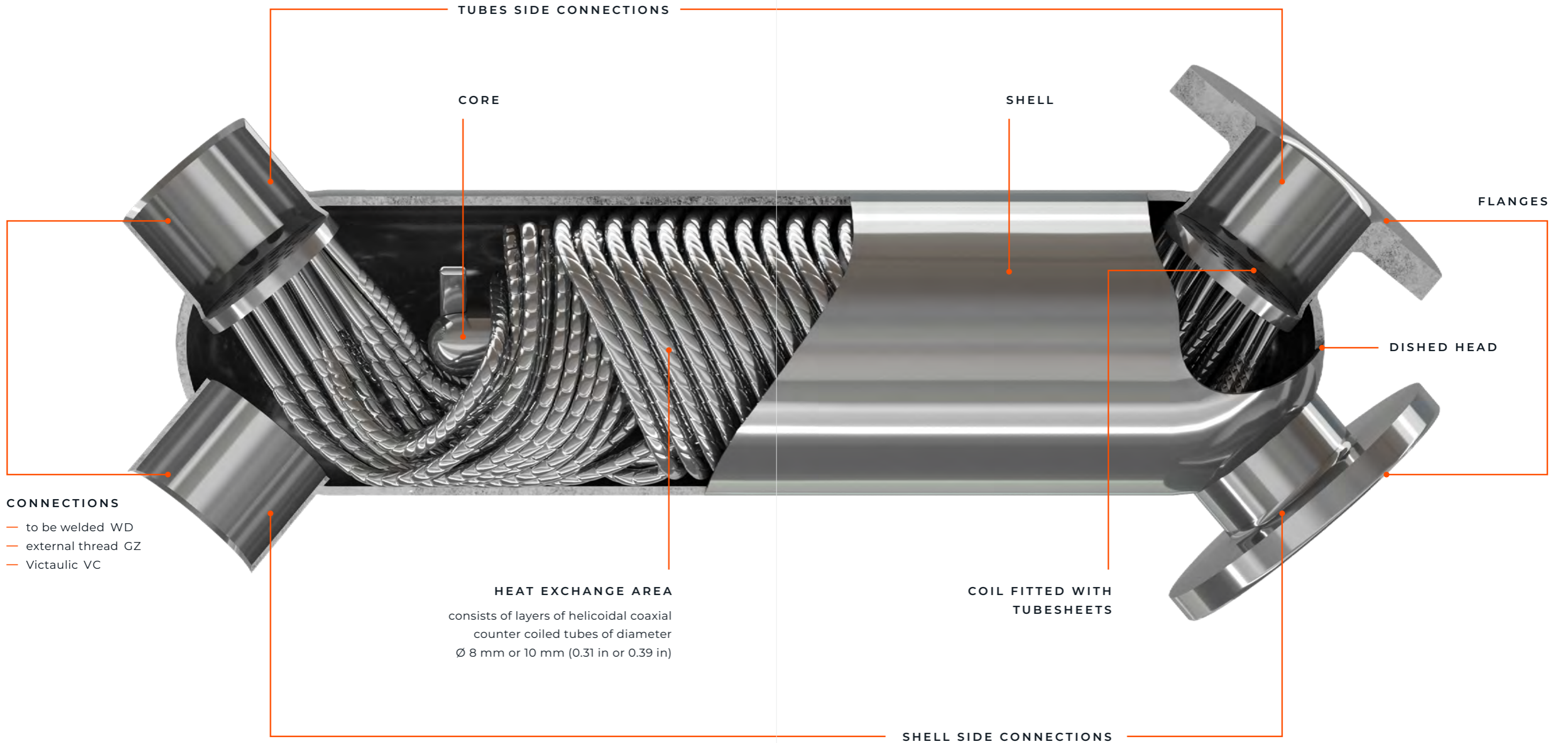
manufactured in accordance with ASME, PED.

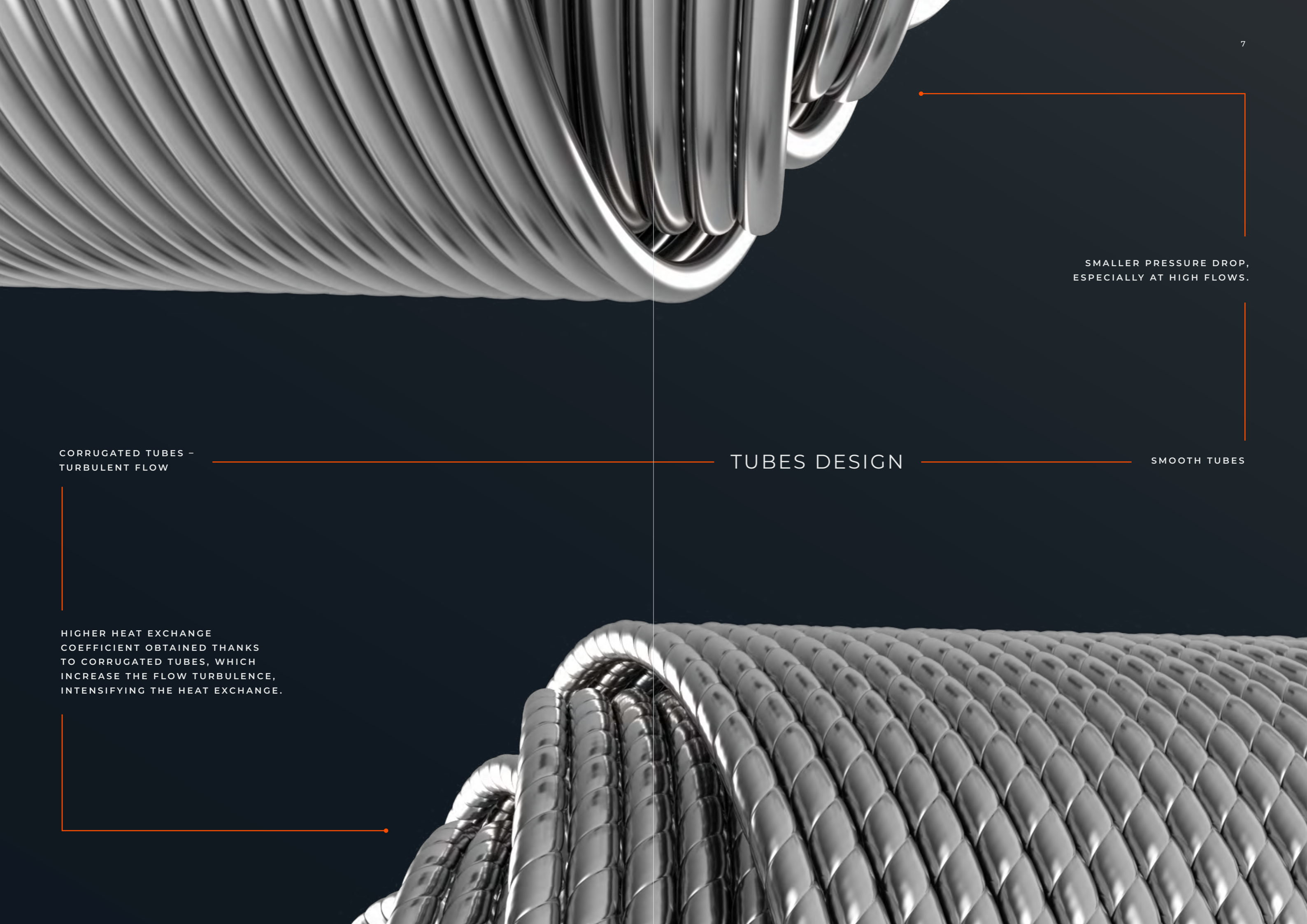


### EASY SELECTION

with user-friendly CAIRO Selection Software.

# JAD DESIGN





SMALLER PRESSURE DROP,  
ESPECIALLY AT HIGH FLOWS.

## TUBES DESIGN

CORRUGATED TUBES -  
TURBULENT FLOW

SMOOTH TUBES

HIGHER HEAT EXCHANGE  
COEFFICIENT OBTAINED THANKS  
TO CORRUGATED TUBES, WHICH  
INCREASE THE FLOW TURBULENCE,  
INTENSIFYING THE HEAT EXCHANGE.

APPLICATION



HEAT EXCHANGE IN INDUSTRIAL PROCESSES



CHEMICAL AND FOOD INDUSTRY



DISTRICT HEATING SUBSTATIONS



CONDENSERS



VENTILATION SYSTEMS



EVAPORATORS



AIR-CONDITIONING SYSTEMS



ECONOMIZERS



HEATING SYSTEMS



## K

## SHELL &amp; COIL HEAT EXCHANGERS



## TECHNICAL DATA

## MATERIALS

- STAINLESS STEEL
- FLANGES:  
STAINLESS STEEL (SS)  
OR CARBON STEEL (CS)

## EXEMPLARY MEDIA

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- GROUP II FLUIDS
- OTHER (CONSULT THE MANUFACTURER)

## WORKING PARAMETERS

## TUBES

- MAX. TEMPERATURE
- EE — 165°C / 329°F
  - FF — 200°C / 392°F
  - MF — 250°C / 482°F

## MAX. PRESSURE

- EE — 16 BAR / 232 PSI
- FF — 16 BAR / 232 PSI
- MF — 25 BAR / 363 PSI

## SHELL

- MAX. TEMPERATURE
- EE — 165°C / 329°F
  - FF — 200°C / 392°F
  - MF — 200°C / 392°F

## MAX. PRESSURE

- (EE, FF, MF)
- 16 BAR / 232 PSI

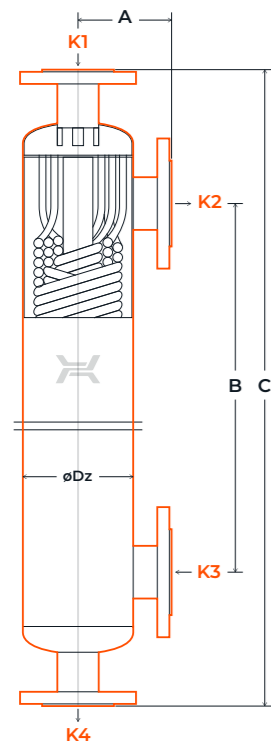
## CONNECTIONS

Type JAD (K)	Type of connections				Connection size
	Flange CS	Flange SS	WD	GZ	
3.18	+	+	+	+	DN32 / DN40
5.36	+	+	+	+	DN40 / DN65
6.50	+	+	+	+	DN50 / DN65
6.50.10	+	+	+	+	DN50 / DN65
14.163	+	+			DN50 / DN65
14.163.10	+	+			DN100 / DN150
15.177.10	+	+			DN100 / DN150
15.177.10.75	+	+			DN200 / DN150
15.177.10.100	+	+			DN200 / DN150
26.480	+	+			DN250 / DN200

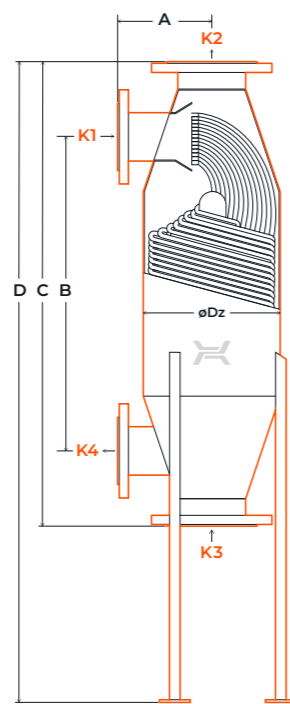
SS – stainless steel | CS – carbon steel | WD – connection to be welded | GZ – external thread

STANDARD LOCATION OF CONNECTIONS (IN COUNTERFLOW):

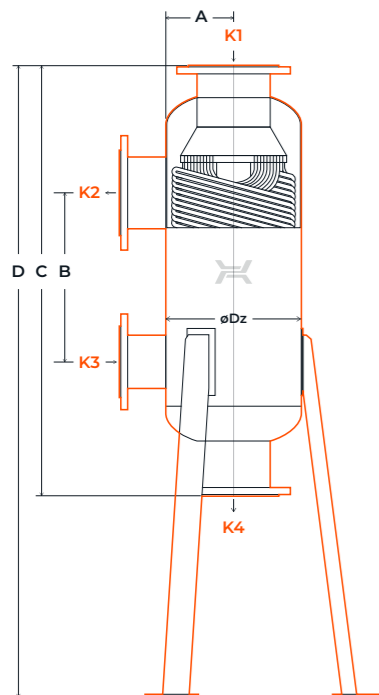
K1 / K4 — inlet / outlet hot side  
 K3 / K2 — inlet / outlet cold side



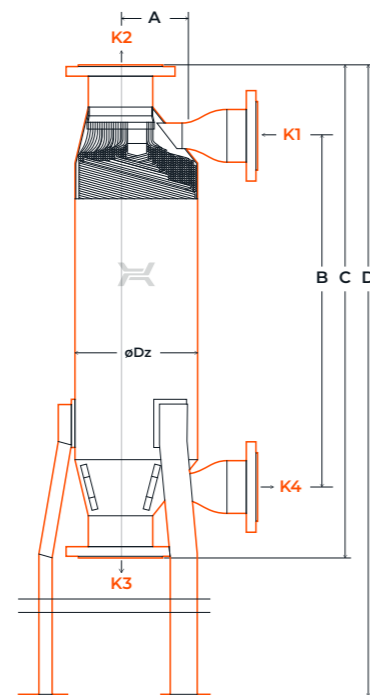
JAD (K) 3.18    JAD (K) 6.50  
 JAD (K) 5.36    JAD (K) 6.50.10



JAD (K) 14.163  
 JAD (K) 14.163.10



JAD (K) 15.177.10    JAD (K) 15.177.10.75  
 JAD (K) 15.177.10.100



JAD (K) 26.480

TECHNICAL PARAMETERS

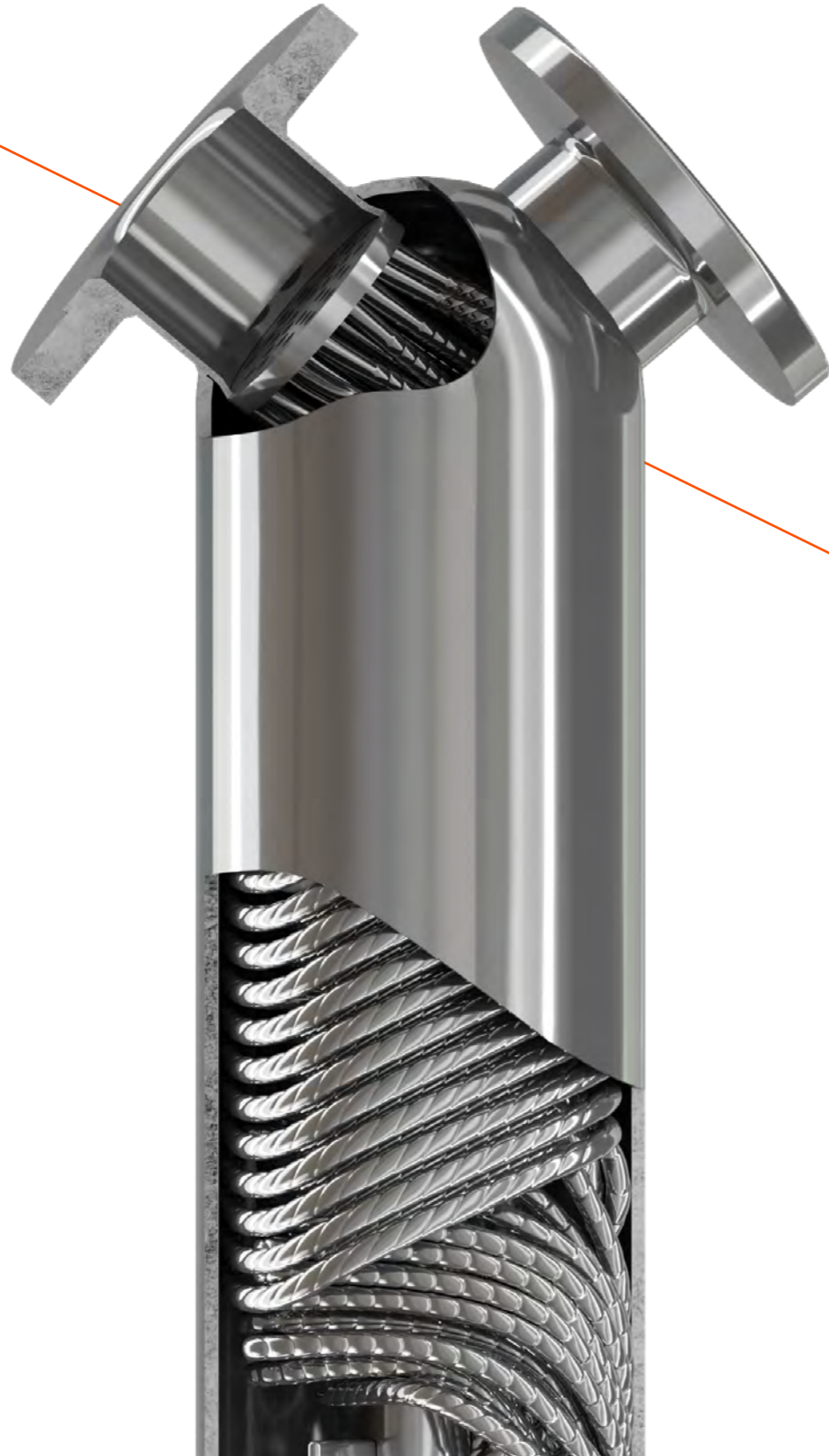
Type JAD (K)	Dimensions								Heat exchange area		Tube diameter		Weight		Tube side capacity		Shell side capacity			
	A	B	C	D	øDz															
	mm	in	mm	in	mm	in	mm	in	mm	in	m <sup>2</sup>	ft <sup>2</sup>	mm	in	kg	lb	l	gal	l	gal
3.18	114	4.5	1 260	49.6	1 604	63.2	-	-	101,6	4	2,2	23.7	8	0.3	26	57.3	4,8	1.3	5	1.3
5.36	132	5.2	1 220	48	1 604	63.2	-	-	139,7	5.5	3,6	38.7	8	0.3	42,5	93.7	7,8	2.1	9,5	2.5
6.50	136	5.4	1 220	48	1 604	63.2	-	-	159	6.3	5,7	61.3	8	0.3	49,5	109.1	11,4	3	12,8	3.4
6.50.10	136	5.4	1 220	48	1 604	63.2	-	-	159	6.3	4,8	51.7	10	0.4	48,5	106.9	10,8	2.9	13,4	3.5
14.163	220	8.7	1 467	57.8	1 820	71.7	2 238	88.1	323,9	12.8	24,7	265.8	8	0.3	192,0	423.3	39,4	10.4	48,6	12.8
14.163.10	220	8.7	1 467	57.8	1 820	71.7	2 238	88.1	323,9	12.8	18,2	195.8	10	0.4	165,8	365.5	47,4	12.5	50	13.2
15.177.10	340	13.4	1 235	48.6	2 037	80.2	2 640	103.9	406,4	16	35,5	382	10	0.4	349,8	771.2	81,1	21.4	128,8	34
15.177.10.75	340	13.4	485	19.1	1 287	50.7	1 890	74.4	406,4	16	16,5	177.5	10	0.4	225	496	51,8	13.7	65	17.2
15.177.10.100	340	13.4	735	28.9	1 537	60.5	2 140	84.3	406,4	16	22,5	242.1	10	0.4	268	590.8	65,5	17.3	91	24
26.480	560	22.1	1 460	57.5	2 040	80.3	2 890	113.8	508	20	77,4	832.8	8	0.3	661	1 457.6	154,7	40.9	145,3	38.4

\* Weight for FF version with flanges. | Manufacture type: STA – shell 304L [18-10 (steel: 1.4307)], connections 321 [18-10 (steel: 1.4541)].  
 All dimensions and technical data are approximate only and may be changed without further notice.



# X (K)

## SHELL & COIL HEAT EXCHANGERS



### MATERIALS

- STAINLESS STEEL
- FLANGES:  
STAINLESS STEEL (SS)  
OR CARBON STEEL (CS)

### EXEMPLARY MEDIA

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- GROUP II FLUIDS
- OTHER (CONSULT THE MANUFACTURER)

### WORKING PARAMETERS

#### TUBES

- MAX. TEMPERATURE
- FF — 200°C / 392°F
  - MF — 250°C / 482°F
  - BF — 200°C / 392°F

#### MAX. PRESSURE

- FF — 16 BAR / 232 PSI
- MF — 25 BAR / 363 PSI
- BF — 35 BAR / 507 PSI

#### SHELL

- MAX. TEMPERATURE (FF, MF, BF) — 200°C / 392°F

#### MAX. PRESSURE (FF, MF, B F)

- 16 BAR / 232 PSI

## CONNECTIONS

Type JAD X (K)	Type of connections					Connection size
	Flange CS	Flange SS	WD	GZ	VC	
2.11	+	+	+	+	+	DN40; OD 48,3 mm
2.11.08.68	+	+	+	+	+	DN40; OD 48,3 mm
3.18	+	+	+	+	+	DN50; OD 60,3 mm
3.18.08.75	+	+	+	+	+	DN50; OD 60,3 mm
5.38	+	+	+	+	+	DN65; OD 76,1 mm
5.38.08.71	+	+	+	+	+	DN65; OD 76,1 mm
6.50	+	+	+	+	+	DN80; OD 88,9 mm
6.50.08.72	+	+	+	+	+	DN80; OD 88,9 mm
6.50.10	+	+	+	+	+	DN80; OD 88,9 mm
9.88	+	+	+	+	+	DN100; OD 114,3 mm
9.88.08.65	+	+	+	+	+	DN100; OD 114,3 mm
9.88.08.85	+	+	+	+	+	DN100; OD 114,3 mm
9.88.10	+	+	+	+	+	DN100; OD 114,3 mm
12.114	+	+	+	+	+	DN125; OD 139,7mm
12.114.08.50	+	+	+	+	+	DN125; OD 139,7mm
12.114.08.60	+	+	+	+	+	DN125; OD 139,7mm
12.114.08.75	+	+	+	+	+	DN125; OD 139,7mm
12.114.10	+	+	+	+	+	DN125; OD 139,7mm
17.217	+	+	+	+	+	DN150; OD 159,0 mm
17.217.10	+	+	+	+	+	DN150; OD 159,0 mm

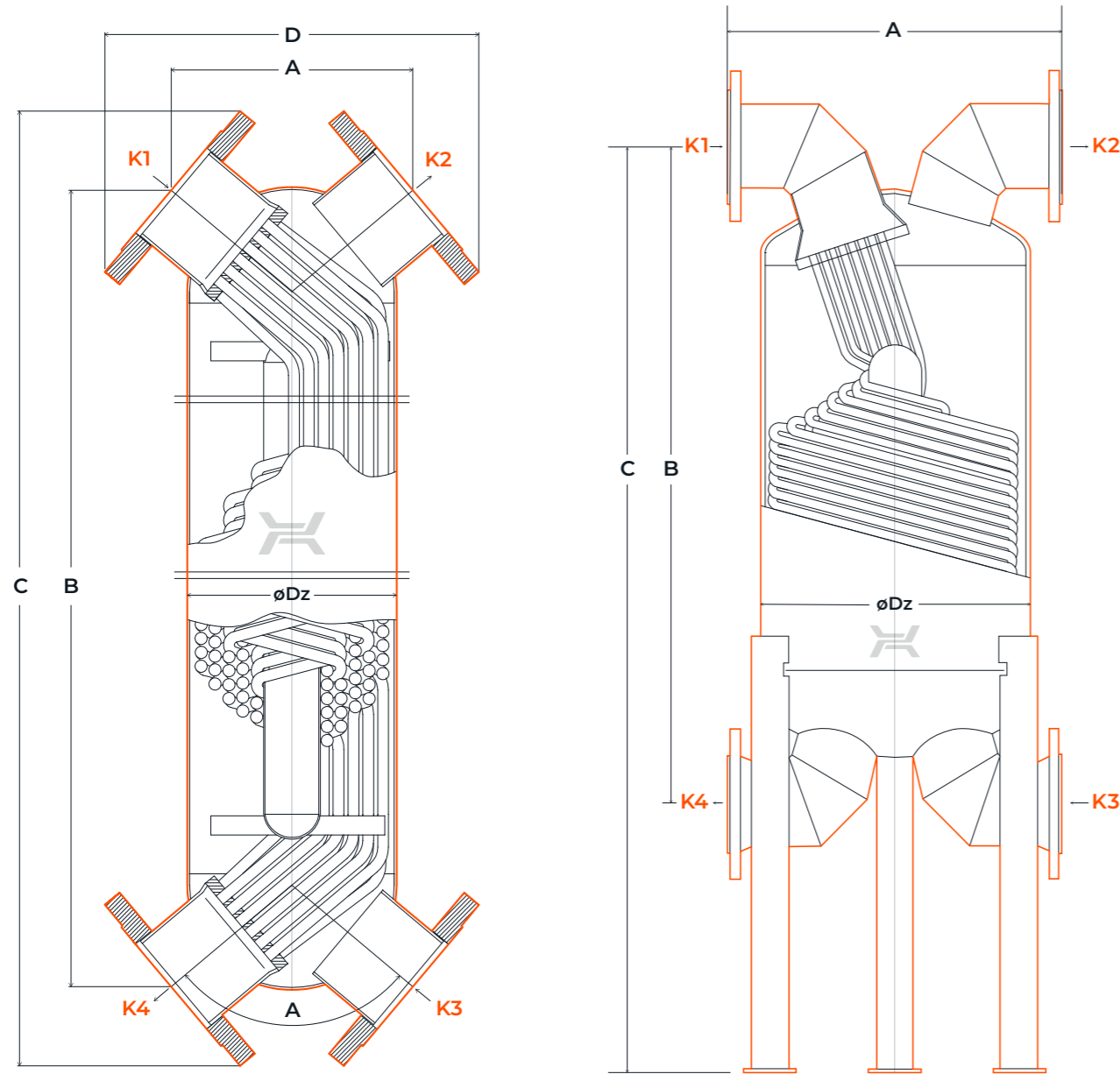
SS – stainless steel | CS – carbon steel | WD – connection to be welded | GZ – external thread | VC – Victaulic



# TECHNICAL DATA

## STANDARD LOCATION OF CONNECTIONS (IN COUNTERFLOW)

K1 / K4 — inlet / outlet hot side  
 K3 / K2 — inlet / outlet cold side



- |                      |                      |                        |
|----------------------|----------------------|------------------------|
| JAD X (K) 2.11       | JAD X (K) 6.50       | JAD X (K) 9.88.10      |
| JAD X (K) 2.11.08.68 | JAD X (K) 6.50.08.72 | JAD X (K) 12.114       |
| JAD X (K) 3.18       | JAD X (K) 6.50.10    | JAD X (K) 12.114.08.50 |
| JAD X (K) 3.18.08.75 | JAD X (K) 9.88       | JAD X (K) 12.114.08.60 |
| JAD X (K) 5.38       | JAD X (K) 9.88.08.65 | JAD X (K) 12.114.08.75 |
| JAD X (K) 5.38.08.71 | JAD X (K) 9.88.08.85 | JAD X (K) 12.114.10    |

- JAD X (K) 17.217  
 JAD X (K) 17.217.10

# TECHNICAL PARAMETERS

JAD X (K) Type	Dimensions										Heat exchange area		Tube diameter		Weight		Tube side capacity		Shell side capacity		
	A		B		C		D		ØDz		alfa	m <sup>2</sup>	ft <sup>2</sup>	mm	in	kg	lb	l	gal	l	gal
	mm	in	mm	in	mm	in	mm	in	mm	in											
2.11	160	6.3	1513	59.6	1625	64	253	10	80	3.2	100	1.2	12.9	8	0.3	19.6	43.2	2.3	0.6	2.6	0.7
2.11.08.68	160	6.3	835	32.9	942	37.1	253	10	80	3.2	100	0.6	6.5	8	0.3	14.5	32	1.2	0.3	1.2	0.3
3.18	172	6.8	1510	59.5	1634	64.3	278	10.9	101.6	4	100	2	21.5	8	0.3	27.1	59.8	4	1.1	5	1.3
3.18.08.75	172	6.8	917	36.1	1041	41	278	10.9	101.6	4	100	1.2	12.9	8	0.3	21.1	46.5	2.6	0.7	2.5	0.7
5.38	201	7.9	1510	59.5	1649	64.9	317	12.5	139.7	5.5	100	4	43	8	0.3	42.4	93.5	6.6	1.7	11.2	3
5.38.08.71	201	7.9	908	35.8	1047	41.2	317	12.5	139.7	5.5	100	2.3	24.8	8	0.3	30.5	67.2	4	1.1	6.8	1.8
6.50	206	8.1	1492	58.7	1653	65.1	341	13.4	159	6.3	100	5.3	57	8	0.3	51.9	114.4	11.2	3	13.6	3.6
6.50.08.72	206	8.1	907	35.7	1068	42.1	341	13.4	159	6.3	100	3.1	33.4	8	0.3	37.3	82.2	4.6	1.2	9.9	2.6
6.50.10	206	8.1	1492	58.7	1653	65.1	341	13.4	159	6.3	100	5.1	54.9	10	0.4	50.9	112.2	14.2	3.8	10.6	2.8
9.88	253	10	1481	58.3	1645	64.8	390	15.4	219.1	8.6	100	10.7	115.1	8	0.3	84.2	185.6	16	4.2	29	7.7
9.88.08.65	253	10	886	34.9	1050	41.3	390	15.4	219.1	8.6	100	4.9	52.7	8	0.3	52.1	114.9	6.6	1.7	20.8	5.5
9.88.08.85	253	10	1086	42.8	1250	49.2	390	15.4	219.1	8.6	100	6.2	66.7	8	0.3	60.1	132.5	8.2	2.2	25	6.6
9.88.10	253	10	1481	58.3	1645	64.8	390	15.4	219.1	8.6	100	8.3	89.3	10	0.4	76.2	168	13	3.4	32	8.5
12.114	344	13.5	1681	66.2	1883	74.1	484	19.1	273	10.8	110	18.4	198	8	0.3	140.2	309.1	20.1	5.3	54.2	14.3
12.114.08.50	344	13.5	781	30.8	983	38.7	484	19.1	273	10.8	110	6.3	67.8	8	0.3	71.2	157	8	2.1	29	7.7
12.114.08.60	344	13.5	881	34.7	1083	42.6	484	19.1	273	10.8	110	6.5	69.9	8	0.3	73.8	162.7	9	2.4	34	9
12.114.08.75	344	13.5	1031	40.6	1233	48.5	484	19.1	273	10.8	110	8.8	94.7	8	0.3	86.6	190.9	10	2.6	38.5	10.2
12.114.10	344	13.5	1681	66.2	1883	74.1	484	19.1	273	10.8	110	14.9	160.3	10	0.4	127.7	281.5	19.3	5.1	55	14.5
17.217	670	26.4	1855	73	2364	93.1	-	-	508	20	36	58.4	628.4	8	0.3	487.5	1074.8	85.1	22.5	240	63.4
17.217.10	670	26.4	1855	73	2364	93.1	-	-	508	20	36	39	419.6	10	0.4	454.1	1001.1	77.6	20.5	239	63.1

\* Weight for FF version with flanges. | Manufacture type: STA – shell 304L [18-10 (steel: 1.4307)], connections 321 [18-10 (steel: 1.4541)], PRO – 316L [17-12-2.5 (steel: 1.4404)]  
 All dimensions and technical data are approximate only and may be changed without further notice.

# S / H

## SHELL & COIL HEAT EXCHANGERS



## TECHNICAL DATA

### WORKING PARAMETERS

#### TUBES

##### S

MAX. TEMPERATURE

EE — 165°C / 329°F

FF — 200°C / 392°F

MAX. PRESSURE

(EE, FF) — 16 BAR / 232 PSI

##### H

MAX. TEMPERATURE FF — 200°C / 392°F

MAX. PRESSURE FF — 16 BAR / 232 PSI

#### SHELL

##### S

MAX. TEMPERATURE

EE — 165°C / 329°F

FF — 200°C / 392°F

MAX. PRESSURE

(EE, FF) — 16 BAR / 232 PSI

##### H

MAX. TEMPERATURE FF — 200°C / 392°F

MAX. PRESSURE FF — 16 BAR / 232 PSI

### MATERIALS

- STAINLESS STEEL
- FLANGES:  
STAINLESS STEEL (SS)  
OR CARBON STEEL (CS)

### EXEMPLARY MEDIA

- WATER
- PROPYLENE GLYCOL  
SOLUTIONS
- GROUP II FLUIDS
- OTHER (CONSULT  
THE MANUFACTURER)

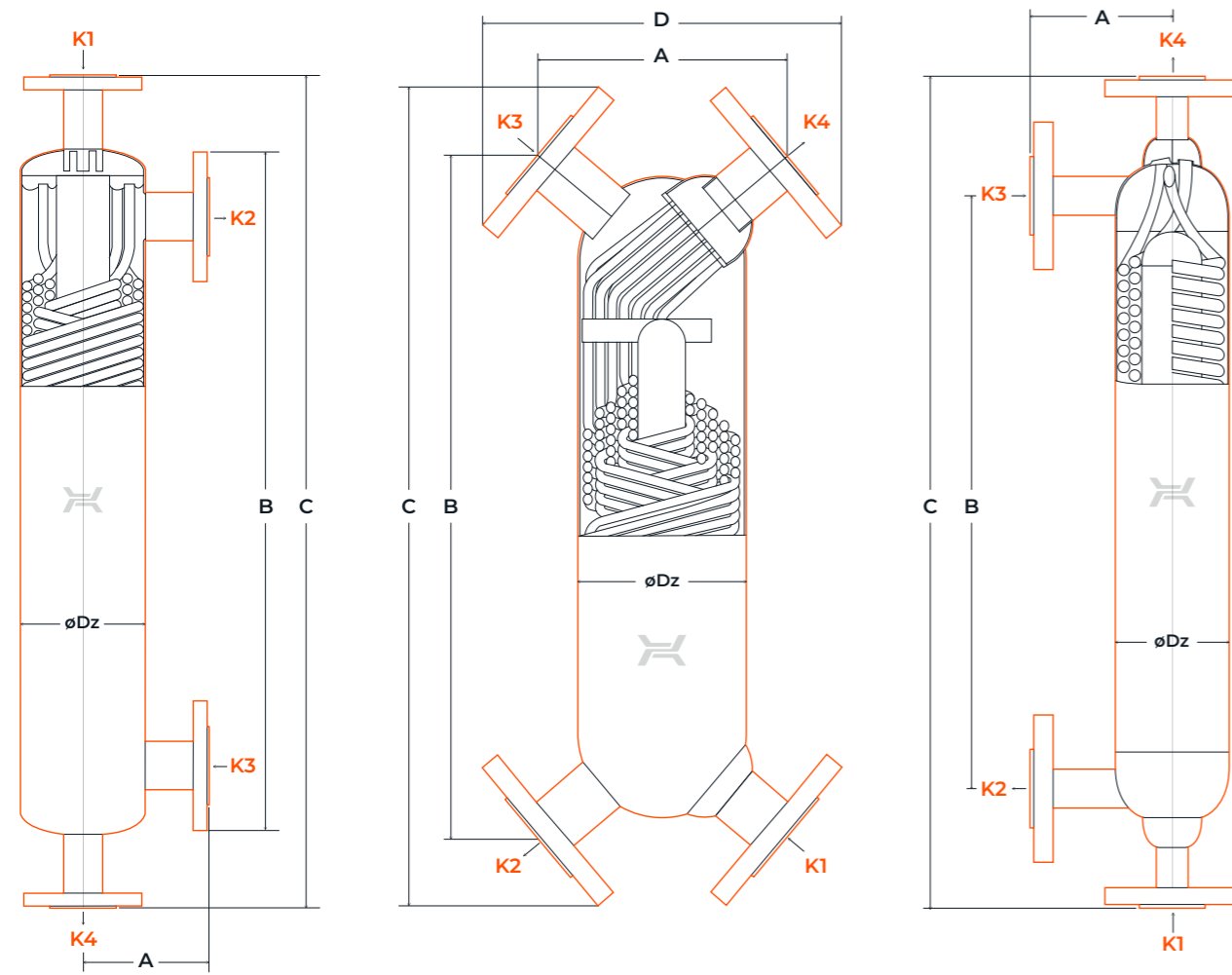
## CONNECTIONS

Type	Type of connections				Connection size
	Flange CS	Flange SS	WD	GZ	
S1 (K)	+	+	+	+	DN40
S0 X (K)	+	+	+	+	DN40
S1 X (K)	+	+	+	+	DN50 / DN65
H0 K	+	+	+	+	G ½" / G ¾"; DN15 / DN20
H1 K	+	+	+	+	G ½" / G ¾"; DN15 / DN20
H2 K	+	+	+	+	G 1" / G 1½"; DN25 / DN25

SS – stainless steel | CS – carbon steel | WD – connection to be welded | GZ – external thread

STANDARD LOCATION OF CONNECTIONS (IN COUNTERFLOW):

K1 / K4 — inlet / outlet hot side  
 K3 / K2 — inlet / outlet cold side



S 1 (K)

S 0 X (K)  
 S 1 X (K)

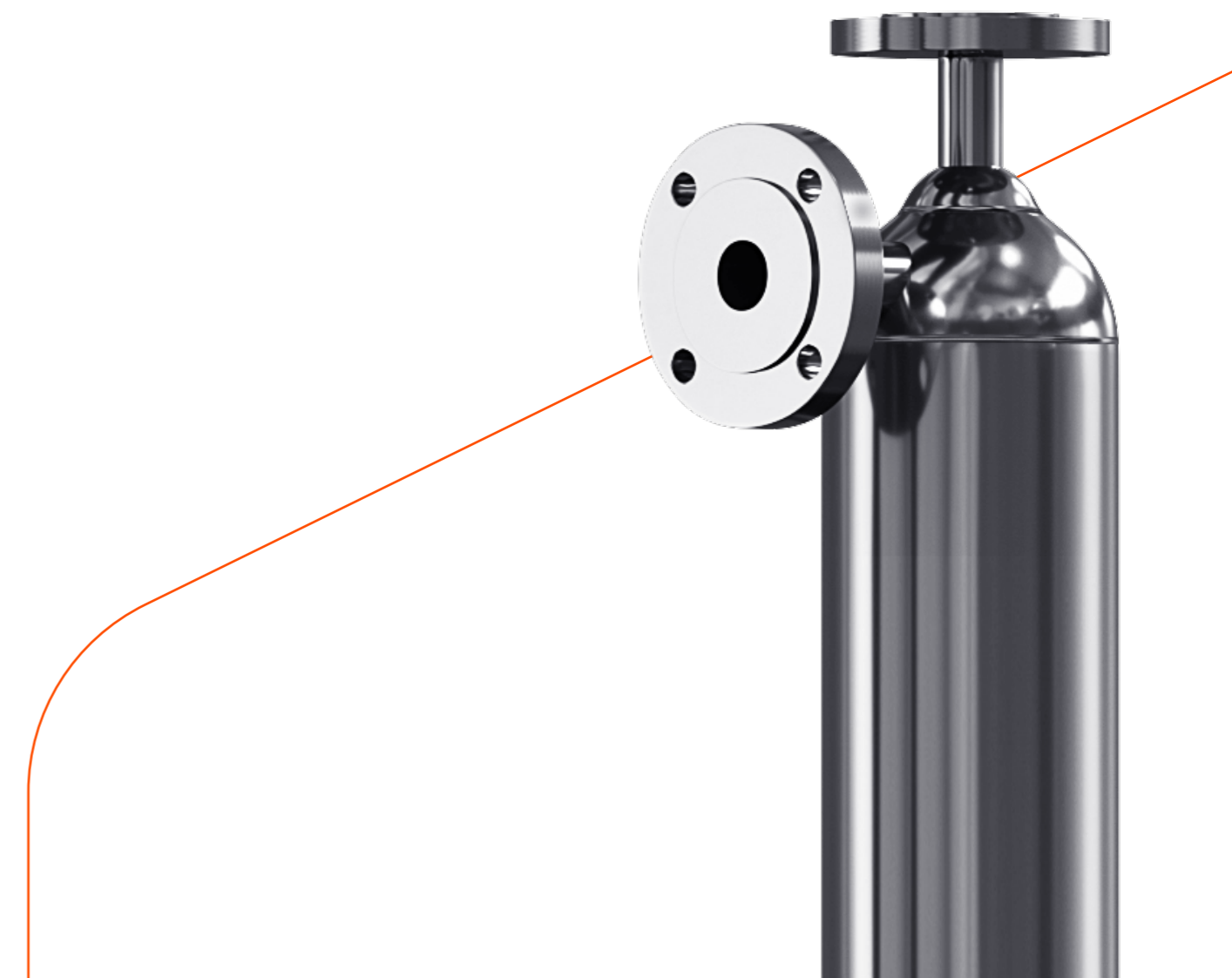
H 0 (K)  
 H 1 (K)  
 H 2 (K)

TECHNICAL PARAMETERS

Type	Dimensions											Heat exchange area		Tube diameter		Weight		Tube side capacity		Shell side capacity		
	A		B		C		D		øDz		alfa											
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	m <sup>2</sup>	ft <sup>2</sup>	mm	in	kg	lb	l	gal	l	gal
S 1 (K)	160	6.3	700	27.56	1 060	41.73	-	-	159	6.26	-	-	3,0	32.29	8	0.31	32	70.55	6,2	1.64	8,1	2.14
S 0 X (K)	204	8.03	911	35.87	1 026	40.39	300	11.81	139,7	5.5	100	3.94	2,3	24.76	8	0.31	24	52.91	3,3	0.87	6,2	1.64
S 1 X (K)	206	8.11	993	39.09	1 108	43.62	302	11.89	159	6.26	100	3.94	3,1	33.37	8	0.31	22	48.5	4,5	1.19	9,8	2.59
H 0 (K)	100	3.9	418	16.5	585	23	-	-	80	3.1	-	-	0,3	3.12	8	0.3	7,1	15.7	0,5	0.1	1	0.3
H 1 (K)	110	4.3	618	24.3	800	31.5	-	-	101,6	4	-	-	0,8	8.61	8	0.3	10,3	22.7	1,1	0.3	2,4	0.6
H 2 (K)	110	4.3	890	35	1 060	41.7	-	-	101,6	4	-	-	1,3	14.21	8	0.3	13,4	29.5	1,9	0.5	3	0.8

\* Weight for FF version with flanges. | Manufacture type: STA – shell 304L [18-10 (steel: 1.4307)], connections 321 [18-10 (steel: 1.4541)].

All dimensions and technical data are approximate only and may be changed without further notice.



## EXEMPLAR DESIGNATION

JAD XK 2.11.08.68 FF.PRO.SS

heat  
exchanger type

exchanger  
size

shell length

working  
parameters

material of flanges:  
SS – stainless steel,  
CS – carbon steel;  
WD – to be welded,  
VC – Victaulic,  
GZ – external thread

K – coil made  
of corrugated tubes,  
without letter K – coil  
made of smooth tubes

tube diameter [mm];  
lack of designation means  
tubes diameter is 8 mm

material group  
(PRO or STA):  
PRO – 316L/1.4404;  
STA – shell 304L/1.4307,  
tubes 321/1.4541

## PRODUCT LINE



## ACCESORIES

## MOUNTING BRACKETS

- DEDICATED FOR JAD X AND JAD
- MADE OF STAINLESS STEEL



## INSULATION

AMWI  
INSULATION FOR JAD HEAT EXCHANGERS

MADE OF MINERAL WOOL COVERED WITH ALUMINIUM. PARTS OF THE INSULATION ARE JOINED USING FASTENERS, FACILITATING ITS INSTALLATION.

- MAX. OPERATING TEMPERATURE: 250°C / 482°F
- THICKNESS: 80 MM / 3.15 IN
- HEAT CONDUCTIVITY: 0,035 W/MK / 0.02 BTU/FT. HOUR °F



**ATTENTION! THE INSULATION MAY ALSO WITHSTAND 350°C / 662°F**

PFI  
INSULATION FOR JAD HEAT EXCHANGERS

MADE OF POLYURETHANE FOAM. THE TWO PARTS OF THE INSULATION ARE JOINED WITH BANDS, WHICH FACILITATES THEIR INSTALLATION AND DISASSEMBLY.

- MAX. OPERATING TEMPERATURE: 135°C / 275°F
- THICKNESS: 30 MM / 1.18 IN
- HEAT CONDUCTIVITY:  
0,024 W/MK / 0.014 BTU/FT. HOUR °F



