

# POOL

## HEAT EXCHANGERS



# POOL HEAT EXCHANGERS

Special design of our pool heat exchangers boosts heat transfer and delivers better utilization of heat source. Equipped with straight tubes all of the models ensure low pressure loss thus saving energy. Corrugated straight tubes promote turbulent flow which further intensifies heat exchange and helps reduce fouling.

Cutting-edge technology and durable materials such as titanium and stainless steel, make our heat exchangers resistant to corrosive environments. They can be used with all types of pool water – either treated or salt.



## WHY CHOOSE **HEXONIC** POOL HEAT EXCHANGERS?



HIGH  
PERFORMANCE



EASY  
INSTALLATION



OUTSTANDING  
RELIABILITY



COMPATIBLE WITH  
ALL TYPES OF POOL  
INSTALLATIONS



COMPATIBLE  
WITH ALL TYPES  
OF HEATING



USER-FRIENDLY CAIRO  
SELECTION SOFTWARE MAKES  
THE SELECTION PROCESS EASY

# HEAT EXCHANGERS

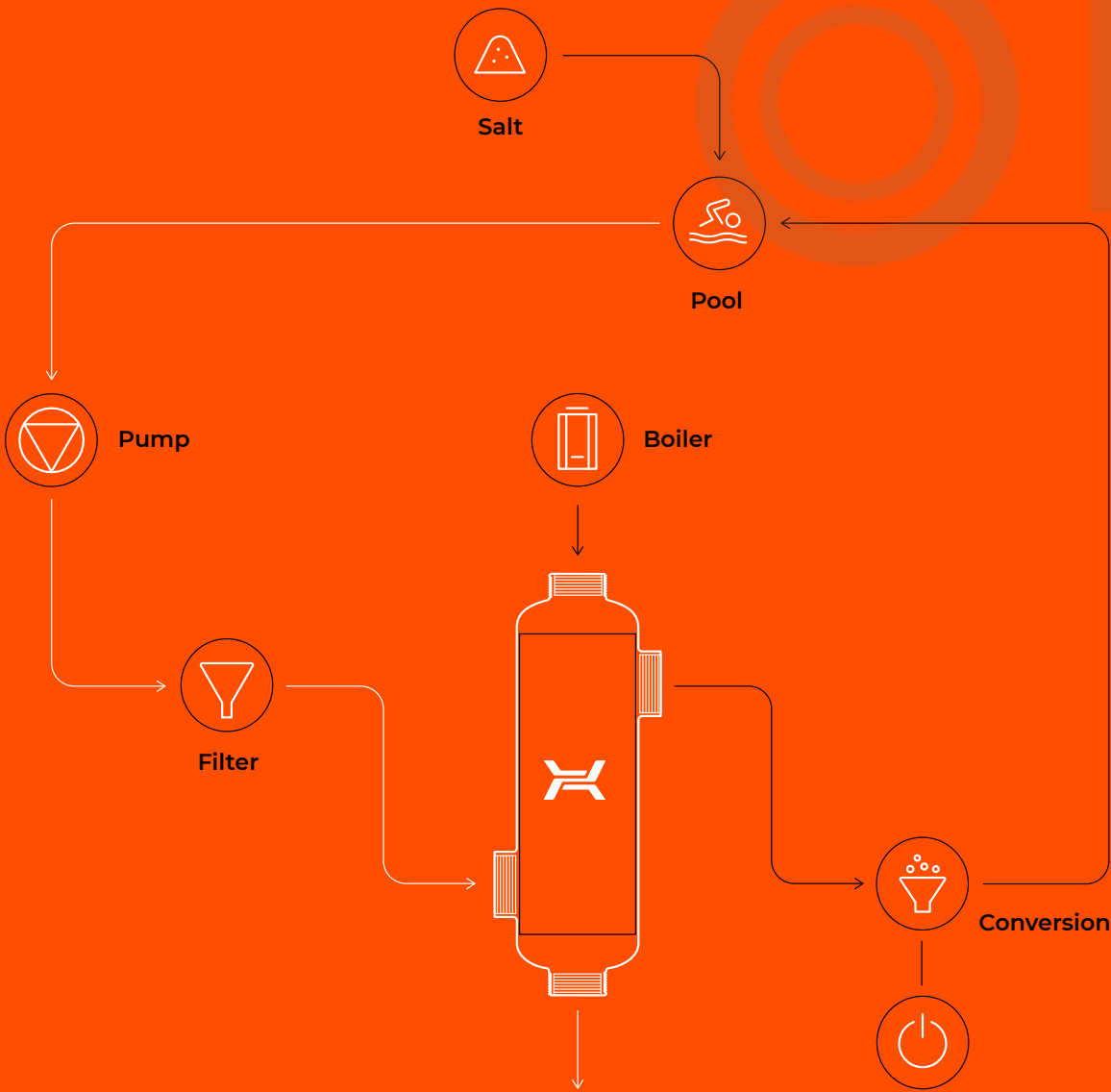


DIAGRAM OF SALT WATER POOL WITH A HEXONIC POOL HEAT EXCHANGER

## APPLIANCE

| Pool                | HEAT EXCHANGER TYPE |     |     |     |
|---------------------|---------------------|-----|-----|-----|
|                     | B                   | REV | TI  | JAG |
| Public pool         | 💧💧                  | 💧💧  | 💧   | 💧💧  |
| Private pool        | 💧💧                  | 💧💧  | 💧   | 💧   |
| Olympic-size pool   | 💧💧                  | 💧💧  | 💧   | 💧💧💧 |
| Kids' pool          | 💧💧                  | 💧💧  | 💧   | 💧   |
| Hot tubs /SPA pools | 💧                   | 💧💧  | 💧💧  | 💧   |
| Salt water pool     | —                   | 💧💧💧 | 💧💧💧 | 💧   |
| Water park          | 💧💧                  | 💧💧  | 💧   | 💧💧💧 |

| Heat source type  | HEAT EXCHANGER TYPE |     |     |     |
|-------------------|---------------------|-----|-----|-----|
|                   | B                   | REV | TI  | JAG |
| Condensing boiler | 💧                   | 💧💧  | 💧   | 💧💧  |
| Coal boiler       | 💧💧                  | 💧💧  | 💧   | 💧   |
| Geothermal water  | —                   | 💧💧  | 💧💧💧 | 💧   |
| Heat pump         | 💧                   | 💧💧  | 💧   | 💧💧  |
| Solar system      | 💧                   | 💧💧  | 💧   | 💧💧  |
| District heating  | 💧💧                  | 💧💧  | 💧   | 💧💧  |

💧 possibility    💧💧 best choice    💧💧💧 necessity

## B

## POOL HEAT EXCHANGERS

B pool heat exchangers are characterized by high thermal efficiency. They are the perfect solution in high-flow systems, in particular pool systems of different types and sizes.

B type exchangers are shell and tube exchangers equipped with straight corrugated tubes. They can be used in systems with high medium flow in comparison to transferred thermal power. It is a proven solution for pool and solar systems or small oil preheating systems.

The use of corrugated tubes intensifies heat exchange and increases self-cleaning possibilities. Compact, welded B type exchangers are highly durable and reliable.

## DESIGN



HIGH VOLUME FLOW  
AT LOW PRESSURE LOSS;  
NO NEED OF BY-PASS



COMPACT SIZE



CORRUGATED  
TUBES INTENSIFY  
HEAT EXCHANGE  
AND REDUCE  
FOULING



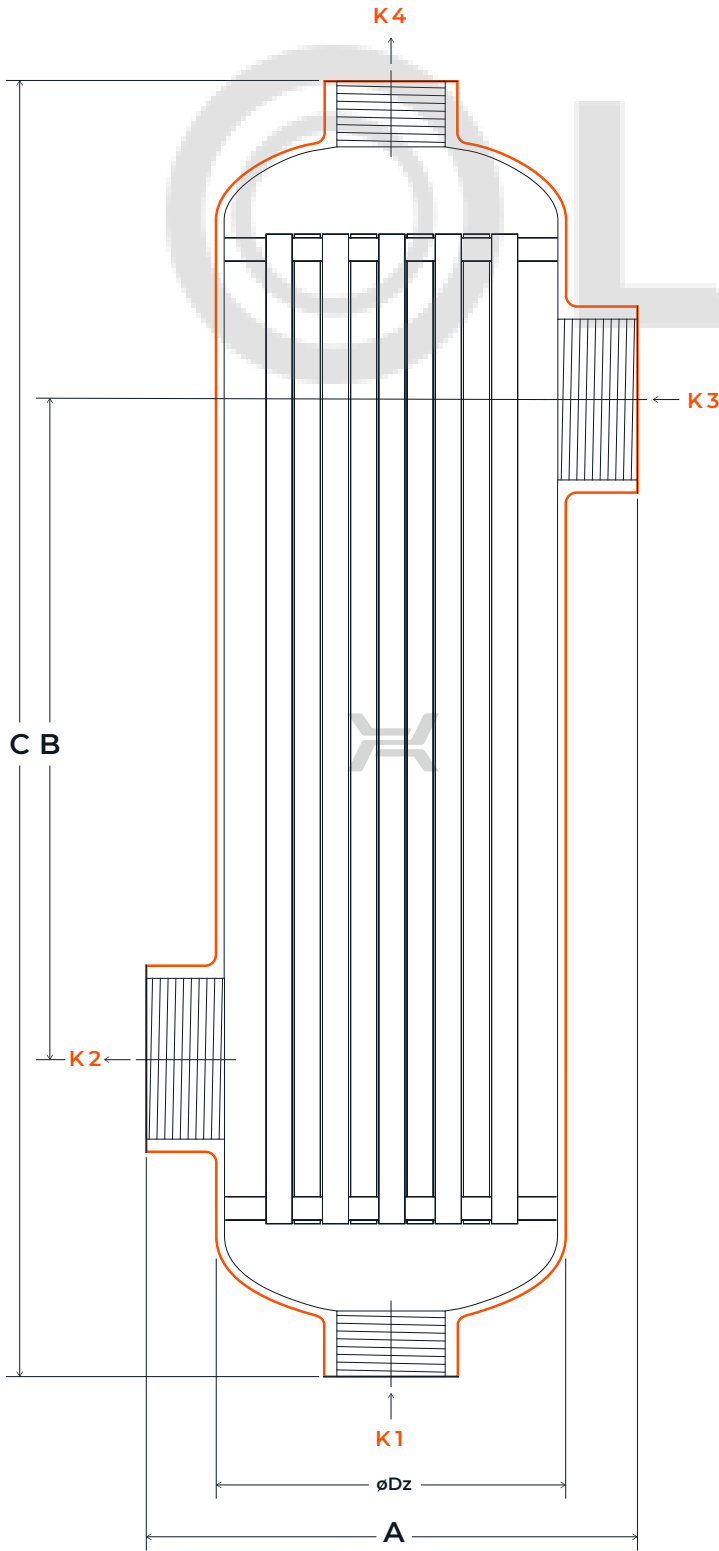
RESISTANCE  
TO AGGRESSIVE  
SUBSTANCES  
IN POOL WATER  
(E.G. FLUORINE,  
CHLORINE)



TECHNICAL DATA

STANDARD LOCATION OF CONNECTIONS

- K1 / K4 — inlet / outlet heat source – internal thread
- K3 / K2 — inlet / outlet pool water – internal thread



| Type  | Connection size |        |
|-------|-----------------|--------|
|       | K1, K4          | K2, K3 |
| B180  | 1"              | 1 ½"   |
| B250  | 1"              | 1 ½"   |
| B300  | 1"              | 1 ½"   |
| B500  | 1"              | 2"     |
| B1000 | 2"              | 2"     |

WORKING PARAMETERS

MAX. TEMPERATURE — 329°F  
MAX. PRESSURE — 232 PSI

TECHNICAL PARAMETERS

| Type  | Dimensions |      |      |     | Heat exchange area | Tube diameter | Weight | Tube side capacity | Shell side capacity |
|-------|------------|------|------|-----|--------------------|---------------|--------|--------------------|---------------------|
|       | A          | B    | C    | øDz |                    |               |        |                    |                     |
|       | in         | in   | in   | in  | ft²                | in            | lb     | gal                | gal                 |
| B180  | 5.7        | 7.6  | 14.9 | 4.0 | 4.3                | 0.3           | 10.8   | 0.3                | 0.3                 |
| B250  | 5.7        | 12.7 | 20.0 | 4.0 | 6.4                | 0.3           | 14.1   | 0.3                | 0.5                 |
| B300  | 5.7        | 17.8 | 25.1 | 4.0 | 8.5                | 0.3           | 17.6   | 0.4                | 0.6                 |
| B500  | 5.7        | 34.8 | 43.4 | 4.0 | 15.7               | 0.3           | 29.7   | 0.7                | 1.2                 |
| B1000 | 7.5        | 26.8 | 37.1 | 5.6 | 22.2               | 0.3           | 45.6   | 1.1                | 2                   |

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

MAX. HEAT LOAD

| MAX. HEAT LOAD                |                              |           |        |           |        |
|-------------------------------|------------------------------|-----------|--------|-----------|--------|
| Heat source temperature inlet | Pool water temperature inlet | B180      |        | B250      |        |
| °F                            | °F                           | kBtu/h    | kBtu/h | kBtu/h    | kBtu/h |
| 104                           | 68                           | 55        | 68     | 75        | 85     |
| 122                           | 68                           | 89        | 109    | 122       | 145    |
| 140                           | 68                           | 122       | 150    | 170       | 200    |
| 158                           | 68                           | 155       | 190    | 220       | 260    |
| 176                           | 68                           | 190       | 230    | 265       | 315    |
| 194                           | 68                           | 225       | 270    | 315       | 375    |
|                               |                              | gal/h     | gal/h  | gal/h     | gal/h  |
| Pool water                    | Flow                         | 3 170     | 3 963  | 3 170     | 3 963  |
| Heat source                   |                              | 1 057     | 1 321  | 1 057     | 1 321  |
|                               |                              | psi       | psi    | psi       | psi    |
| Pool water                    | Pressure drop                | 1         | 1.6    | 1.5       | 2      |
| Heat source                   |                              | 0.3       | 0.4    | 0.4       | 0.7    |
| Pool capacity [1000 gal]      |                              | 10.6–14.5 |        | 14.5–19.8 |        |

| MAX. HEAT LOAD |        |           |        |        |        |        |
|----------------|--------|-----------|--------|--------|--------|--------|
| B300           |        | B500      |        | B1000  |        |        |
| kBtu/h         | kBtu/h | kBtu/h    | kBtu/h | kBtu/h | kBtu/h | kBtu/h |
| 85             | 120    | 150       | 170    | 255    | 255    | 425    |
| 145            | 190    | 240       | 275    | 375    | 410    | 680    |
| 210            | 255    | 330       | 375    | 495    | 565    | 940    |
| 270            | 325    | 415       | 480    | 615    | 715    | 1 195  |
| 330            | 390    | 505       | 580    | 735    | 870    | 1450   |
| 395            | 460    | 595       | 680    | 855    | 1 025  | 1 705  |
| gal/h          | gal/h  | gal/h     | gal/h  | gal/h  | gal/h  | gal/h  |
| 3 170          | 3 963  | 3 170     | 3 434  | 3 963  | 3 963  | 5 283  |
| 1 057          | 1 321  | 1 057     | 1 321  | 1 057  | 1 321  | 2 642  |
| psi            | psi    | psi       | psi    | psi    | psi    | psi    |
| 1.7            | 2.6    | 2.8       | 3.2    | 1      | 1      | 1.7    |
| 0.6            | 0.9    | 0.7       | 1      | 0.3    | 0.4    | 1.3    |
| 19.8–23.8      |        | 23.8–42.3 |        | 37–74  |        |        |

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

# REV

## POOL HEAT EXCHANGERS

REV pool heat exchangers achieve very high heat exchange coefficient thanks to the 3-pass tube bundle.

REV heat exchangers are intended for use mainly in swimming pool installations. The main priority in their design was to improve heat exchange conditions. This was achieved by using the 3-pass design of the tube bundle, which results in better utilization of source thermal power. Additionally, thanks to the short path of pool water (heated medium) through the exchanger, the flow speed remains high.

Corrugated tubes increase flow turbulence, which further intensifies heat transfer. REV heat exchangers are made in two material versions – stainless steel or titanium. REV works perfectly with heat pumps, solar panels, but also standard heat sources, e.g. gas-fired boilers.

### DESIGN

EXTERNAL  
THREADS

RETURN  
DISHED  
HEAD

INTERNAL  
THREADS

3-PASS  
CORRUGATED  
TUBE BUNDLE

SHELL

SALT WATER



UNIQUE 3-PASS TUBE BUNDLE ENABLES BETTER UTILIZATION OF THE HEAT SOURCE AND CREATES EXCEPTIONAL HEAT EXCHANGE RESULTS



LITTLE PRESSURE LOSS ON THE SHELL SIDE (POOL WATER)



EXCELLENT TO WORK WITH HEAT PUMPS AND SOLAR PANELS



TITANIUM VERSIONS – SUITABLE FOR SALT WATER POOLS



CORRUGATED TUBES INCREASE FLOW TURBULENCE WHICH FURTHER INTENSIFIES HEAT EXCHANGE



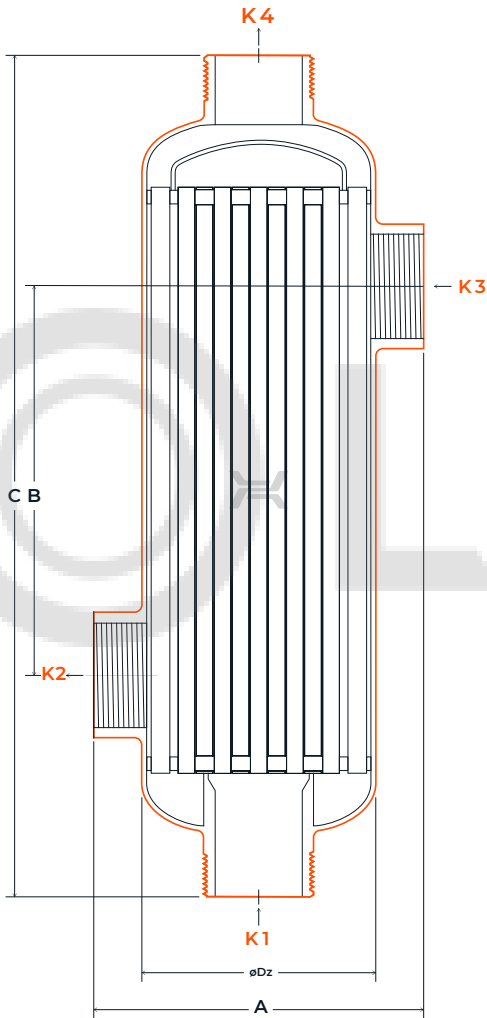
TECHNICAL DATA

STANDARD LOCATION OF CONNECTIONS

- K1 / K4 — inlet / outlet heat source  
external thread G1½"
- K3 / K2 — inlet / outlet pool water  
internal thread G1½"

WORKING PARAMETERS

- MAX. TEMPERATURE — 302°F
- MIN. TEMPERATURE — -4°F
- MAX. PRESSURE — 232 PSI



TECHNICAL PARAMETERS

| Type    | Dimensions |      |      |     | Heat exchange area | Tube diameter | Weight | Tube side capacity | Shell side capacity |
|---------|------------|------|------|-----|--------------------|---------------|--------|--------------------|---------------------|
|         | A          | B    | C    | ØDz |                    |               |        |                    |                     |
|         | in         | in   | in   | in  | ft²                | in            | lb     | gal                | gal                 |
| REV250  | 5.7        | 6.7  | 14.5 | 4   | 3.4                | 0.3           | 5.5    | 0.2                | 0.3                 |
| REV350  | 5.7        | 10.6 | 18.4 | 4   | 4.7                | 0.3           | 6.8    | 0.3                | 0.5                 |
| REV500  | 5.7        | 16.5 | 24.3 | 4   | 6.9                | 0.3           | 8.6    | 0.4                | 0.6                 |
| REV750  | 5.7        | 26.4 | 34.2 | 4   | 10.3               | 0.3           | 11.7   | 0.5                | 0.9                 |
| REV1000 | 5.7        | 36.2 | 44   | 4   | 13.8               | 0.3           | 14.8   | 0.6                | 1.3                 |

MAX. HEAT LOAD

| MAX. HEAT LOAD                |                              |          |        |        |        |         |
|-------------------------------|------------------------------|----------|--------|--------|--------|---------|
| Heat source temperature inlet | Pool water temperature inlet | REV250   | REV350 | REV500 | REV750 | REV1000 |
| °F                            | °F                           | kBtu/h   | kBtu/h | kBtu/h | kBtu/h | kBtu/h  |
| 104                           | 90                           | 38       | 58     | 75     | 110    | 125     |
|                               | 86                           | 48       | 68     | 92     | 135    | 155     |
| 122                           | 90                           | 89       | 130    | 170    | 145    | 285     |
|                               | 86                           | 100      | 145    | 188    | 270    | 315     |
| 140                           | 97                           | 125      | 175    | 230    | 330    | 375     |
|                               | 100                          | 115      | 165    | 215    | 300    | 360     |
|                               |                              | gal/h    | gal/h  | gal/h  | gal/h  | gal/h   |
| Pool water                    | Flow                         | 2 642    | 2 642  | 3 170  | 3 434  | 3 963   |
| Heat source                   |                              | 793      | 925    | 925    | 1 057  | 1 057   |
|                               |                              | psi      | psi    | psi    | psi    | psi     |
| Pool water                    | Pressure drop                | 2.9      | 2.9    | 4.2    | 4.9    | 6.5     |
| Heat source                   |                              | 1.7      | 2.5    | 2.9    | 4.4    | 5.1     |
| Pool capacity [1000 gal]      |                              | 8.8–15.5 | 13–22  | 18–26  | 24–35  | 33–44   |

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

# TI

## POOL HEAT EXCHANGERS

TI titanium pool exchangers are intended for use in pool systems with salt water.

TI type exchangers are titanium exchangers intended for use in particular in demanding pool systems with mostly salt water. The use of titanium makes TI resistant to aggressive substances, such as salt, chlorine and fluorine, as well as high pressure and temperature.

The design of the exchangers makes them suited to operate in high-flow systems. Corrugated tubes cause turbulent flow, which intensifies heat exchange and reduces the possibility of sediment accumulation.

### DESIGN



SALT WATER



CORRUGATED TUBES  
INTENSIFY HEAT  
EXCHANGE AND  
REDUCE FOULING



HIGH VOLUME FLOW  
AT LOW PRESSURE LOSS;  
NO NEED OF BY-PASS



RESISTANCE  
TO AGGRESSIVE  
SUBSTANCES  
IN POOL WATER  
(E.G. FLUORINE,  
CHLORINE)



SUITABLE FOR USE  
WITH SALT WATER



COMPACT SIZE



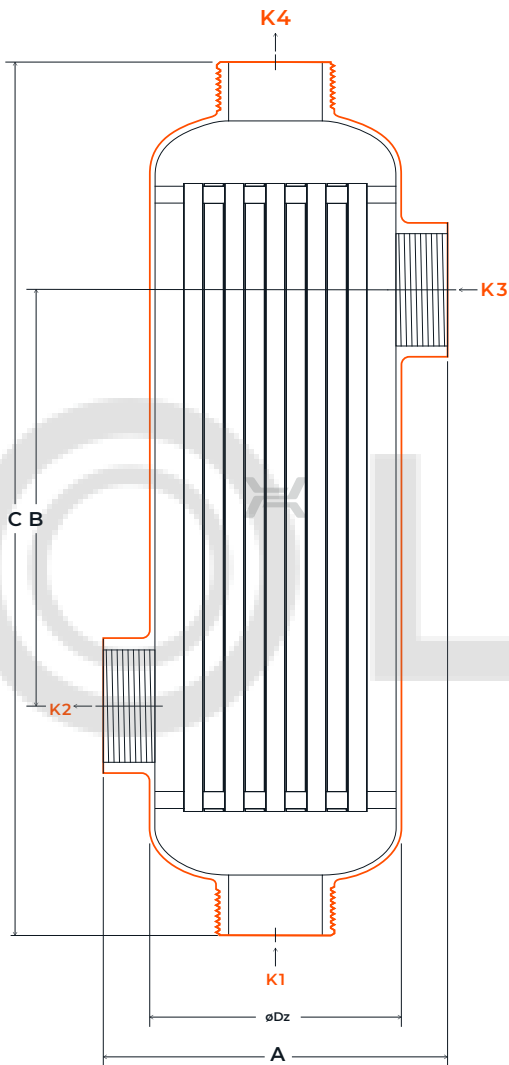
TECHNICAL DATA

STANDARD LOCATION OF CONNECTIONS

- K1 / K4 — inlet / outlet heat source  
external thread G1½"
- K3 / K2 — inlet / outlet pool water  
internal thread G1½"

WORKING PARAMETERS

MAX. TEMPERATURE — 230 °F  
MAX. PRESSURE — 232 PSI



TECHNICAL PARAMETERS

| Type   | Dimensions |       |       |     | Heat exchange area | Tube diameter | Weight | Tube side capacity | Shell side capacity |
|--------|------------|-------|-------|-----|--------------------|---------------|--------|--------------------|---------------------|
|        | A          | B     | C     | ØDz |                    |               |        |                    |                     |
|        | in         | in    | in    | in  | ft²                | in            | lb     | gal                | gal                 |
| Ti250  | 5.7        | 6.7   | 14.5  | 4   | 4                  | 0.3           | 5.4    | 0.3                | 0.3                 |
| Ti350  | 5.7        | 10.6  | 18.4  | 4   | 5.5                | 0.3           | 6.8    | 0.3                | 0.5                 |
| Ti500  | 5.7        | 16.5  | 24.3  | 4   | 8                  | 0.3           | 8.8    | 0.4                | 0.6                 |
| Ti750  | 5.7        | 26.4  | 34.2  | 4   | 11.9               | 0.3           | 11.9   | 0.6                | 0.9                 |
| Ti1000 | 5.7        | 36.2  | 44    | 4   | 15.9               | 0.3           | 15.2   | 0.7                | 1.2                 |
| Ti2000 | 8.03       | 33.74 | 44.92 | 5.5 | 25.8               | 0.3           | 26.46  | 1.45               | 2.52                |

MAX. HEAT LOAD

| MAX. HEAT LOAD                |                              |          |         |        |           |         |
|-------------------------------|------------------------------|----------|---------|--------|-----------|---------|
| Heat source temperature inlet | Pool water temperature inlet | Ti250    | Ti350   | Ti500  | Ti750     | Ti1000  |
| °F                            | °F                           | kBtu/h   | kBtu/h  | kBtu/h | kBtu/h    | kBtu/h  |
| 122                           | 90                           | 44       | 82      | 130    | 185       | 235     |
|                               | 100                          | 31       | 51      | 89     | 120       | 165     |
| 140                           | 90                           | 78       | 126     | 225    | 295       | 390     |
|                               | 100                          | 61       | 102     | 170    | 240       | 305     |
| 158                           | 90                           | 113      | 180     | 310    | 410       | 540     |
|                               | 100                          | 96       | 155     | 265    | 340       | 465     |
|                               |                              | gal/h    | gal/h   | gal/h  | gal/h     | gal/h   |
| Pool water                    | Flow                         | 3 170    | 3 963   | 6 340  | 5 283     | 4 491   |
| Heat source                   |                              | 793      | 1 057   | 1 321  | 1 321     | 1 453   |
|                               |                              | psi      | psi     | psi    | psi       | psi     |
| Pool water                    | Pressure drop                | 1.3      | 2.6     | 8.4    | 8.6       | 8.4     |
| Heat source                   |                              | 0.1      | 0.3     | 0.6    | 0.9       | 1       |
| Pool capacity [1000 gal]      |                              | 8.8–15.5 | 15.5–24 | 20–33  | 28.5–39.5 | 35–48.5 |

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

# JAG

## PLATE & FRAME HEAT EXCHANGERS

From the passion for innovation a new product has been born – JAG Plate Heat Exchanger with inventive jagged pattern of a heating plate. Breaking new ground solution brings not only enhanced flow turbulence but also increased heat exchange area. Together it gives more compact, lighter but most of all more efficient device which can be customized to your individual requirements. Highly efficient JAG Plate Heat Exchanger will become a long-life dependable solution for your applications.

SALT WATER



INNOVATIVE  
CORRUGATION  
DESIGN

10%↑

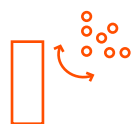
UP TO 10% HIGHER  
HEAT TRANSFER  
EFFICIENCY



ENHANCED FLOW  
TURBULENCE

10%↓

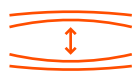
UP TO 10% LOWER  
PRESSURE DROP FOR  
HIGH FLOW PATTERN



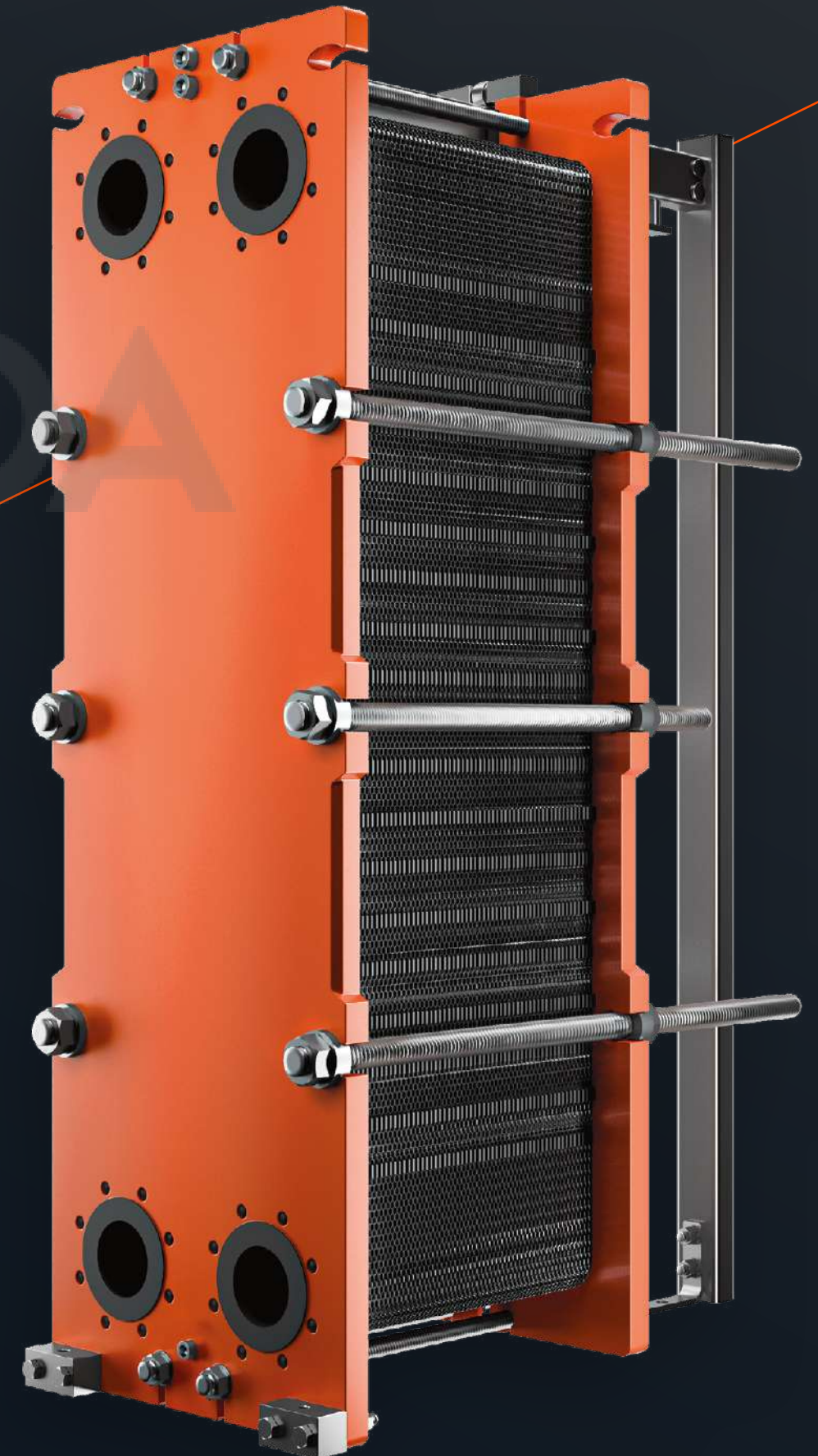
DECREASED  
FOULING



INCREASED HEAT  
EXCHANGE AREA



INCREASED PLATE  
DURABILITY

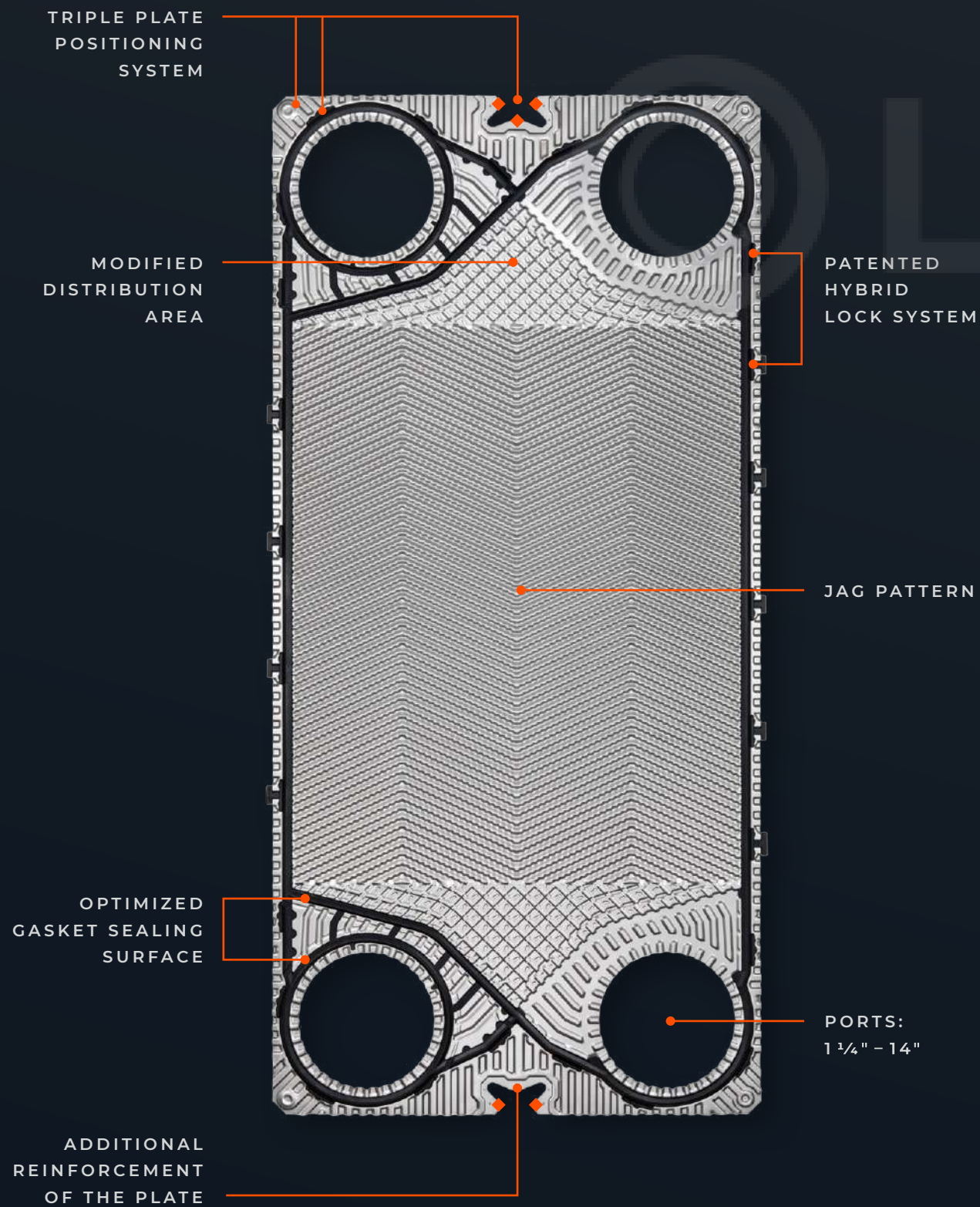


JAG DESIGN



## JAG PLATE REINVENTED

◆ FIVE POINT STELLAR SUSPENDING  
AND ALIGNING SYSTEM



## GASKETS PATENTED HYBRID LOCK SYSTEM

New construction of the patented gasket features two locking methods and an optimized unique shape. The hybrid lock system makes the mounting easier, quicker, and more stable throughout the exchanger assembly process. The innovative shape provides superior sealing capacity even in high pressure applications.



TECHNICAL DATA

STANDARD LOCATION  
OF CONNECTIONS – SINGLE PASS:

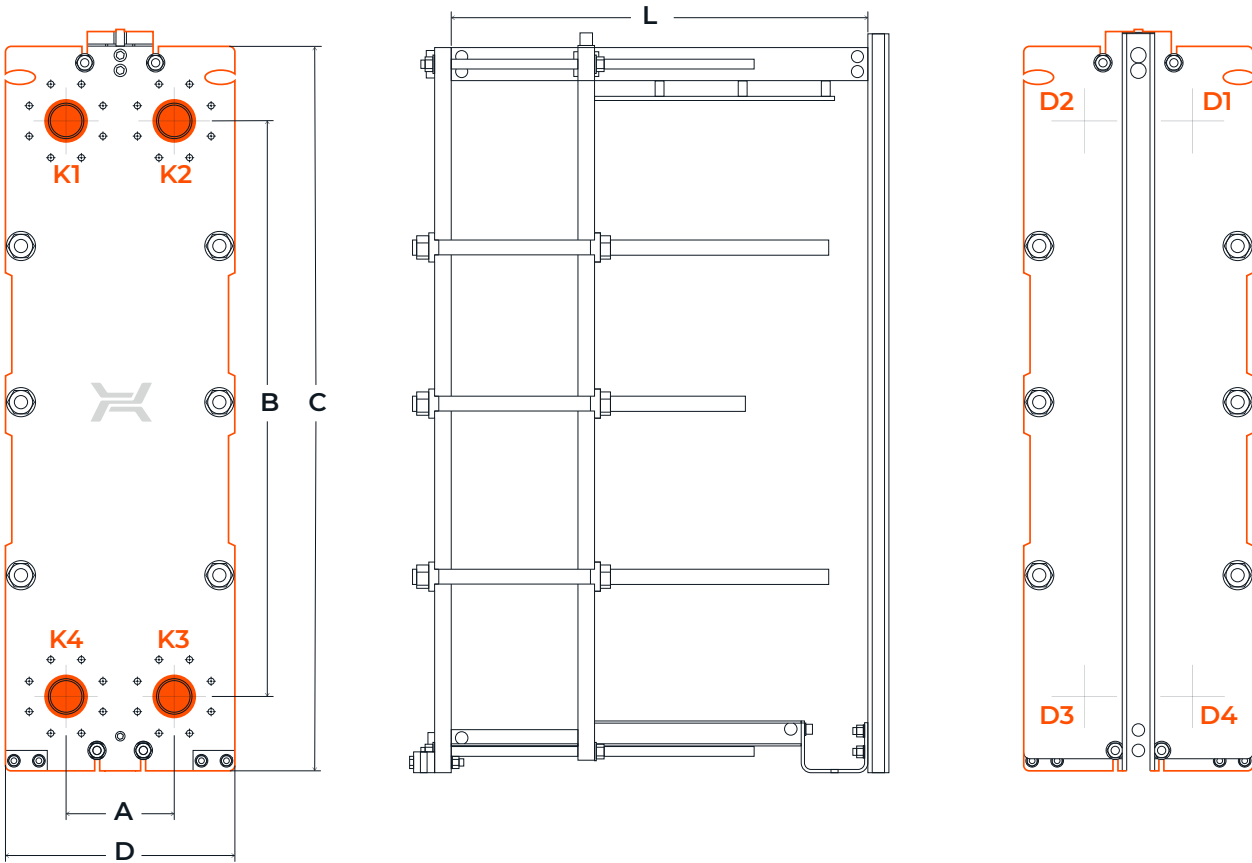
K1 / K4 — inlet / outlet heat source  
K3 / K2 — inlet / outlet pool water

STANDARD LOCATION  
OF CONNECTIONS – DOUBLE PASS:

D4 / K4 — inlet / outlet heat source  
K3 / D3 — inlet / outlet pool water

WORKING  
PARAMETERS

MAX. PRESSURE — 150, 250, 300, 400 PSI  
MAX. TEMPERATURE — 300°F  
MIN. TEMPERATURE — -4°F



TECHNICAL PARAMETERS

| JAG Type | Dimensions |      |      |       |        | Max.<br>n° of plates | Connection size |
|----------|------------|------|------|-------|--------|----------------------|-----------------|
|          | A          | B    | C    | D     | L max. |                      |                 |
|          | in         | in   | in   | in    | in     |                      | in              |
| JFA-003  | 2.8        | 9.8  | 15.7 | 8.3   | 21.7   | 85                   | 1 1/4" NPT      |
| JFB-010  | 5.2        | 15.7 | 23   | 12.4  | 41.5   | 145                  | 2" NPT          |
| JFC-015  | 8.5        | 15.4 | 26.4 | 17.3  | 41.9   | 180                  | 3"              |
| JFD-030  | 10.2       | 28.7 | 42.9 | 21.7  | 121.7  | 600                  | 4"              |
| JFE-045  | 12.8       | 35.4 | 52.6 | 25.82 | 162.6  | 800                  | 6"              |
| JFG-100  | 17.9       | 55.1 | 80.9 | 36.02 | 242.1  | 1 200                | 10"             |

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

Flanges ASME B16.5

MAX. HEAT LOAD

| JAG Type         | The power<br>of heat source | Heat source<br>temperature | Pool volume | Pool water<br>temperature | Water flow     |           |
|------------------|-----------------------------|----------------------------|-------------|---------------------------|----------------|-----------|
|                  |                             |                            |             |                           | Source of heat | Pool      |
|                  | hp                          | °F                         | gal         | °F                        | gal/h          | gal/h     |
| JFA-003-P10-10H  | 13.41                       | 104                        | 3 962.58    | 89,6                      | 330.2          | 792.5     |
| JFA-003-P10-18H  | 20.12                       | 104                        | 7 925.16    | 89,6                      | 488.7          | 1 585.0   |
| JFA-003-P10-32H  | 26.82                       | 104                        | 13 208.6    | 89,6                      | 660.4          | 2 641.7   |
| JFA-003-P10-40H  | 33.53                       | 122                        | 15 850.3    | 89,6                      | 383.0          | 3 170.1   |
| JFB-010-P10-16L  | 46.94                       | 122                        | 23 775.5    | 89,6                      | 541.6          | 4 755.1   |
| JFB-010-P10-22L  | 67.05                       | 122                        | 36 984.1    | 89,6                      | 766.1          | 7 396.8   |
| JFC-015-P10-16L  | 100.58                      | 140                        | 52 834.4    | 89,6                      | 871.8          | 10 566.9  |
| JFC-015-P10-22L  | 134.1                       | 140                        | 71 326.5    | 89,6                      | 1 162.4        | 14 265.3  |
| JFC-015-P10-34L  | 201.15                      | 140                        | 105 669     | 89,6                      | 1 743.5        | 21 133.8  |
| JFD-030-P10-54L  | 268.2                       | 140                        | 145 295     | 89,6                      | 2 324.7        | 29 323.1  |
| JFD-030-P10-68L  | 335.26                      | 140                        | 171 712     | 89,6                      | 2 905.9        | 34 342.4  |
| JFE-045-P10-52L  | 469.36                      | 158                        | 264 172     | 89,6                      | 4 068.2        | 52 834.4  |
| JFE-045-P10-76L  | 670.51                      | 158                        | 369 840.9   | 89,6                      | 5 811.8        | 74 232.3  |
| JFG-100-P10-100L | 1 005.77                    | 158                        | 554 761.3   | 89,6                      | 8 744.1        | 111 216.4 |
| JFG-100-P10-134L | 1 341.02                    | 158                        | 739 681.7   | 89,6                      | 11 649.9       | 148 464.7 |

