

По вопросам продаж и поддержки обращайтесь:

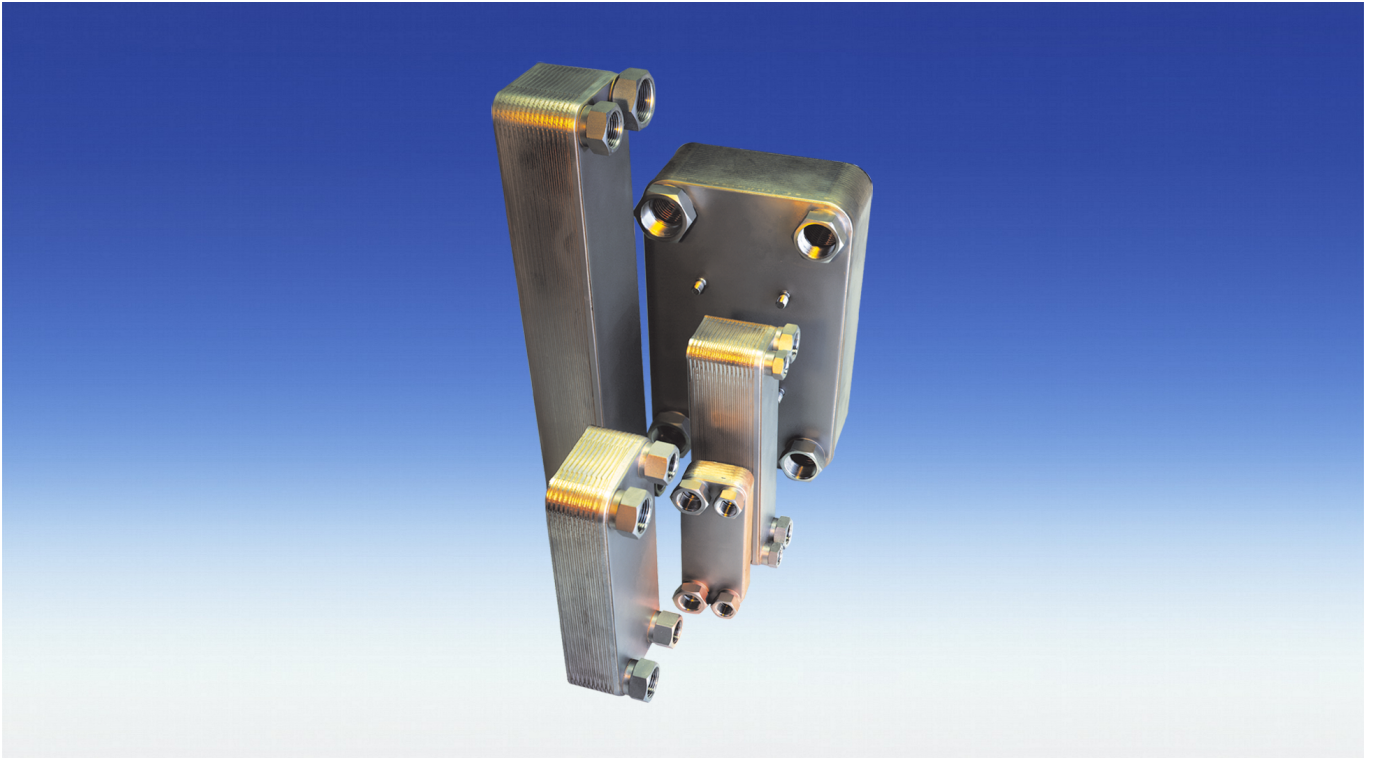
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| Астана (7172)727-132 | Красноярск (391)204-63-61 | Самара (846)206-03-16 |
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| Брянск (4832)59-03-52 | Липецк (4742)52-20-81 | Саратов (845)249-38-78 |
| Владивосток (423)249-28-31 | Магнитогорск (3519)55-03-13 | Смоленск (4812)29-41-54 |
| Волгоград (844)278-03-48 | Москва (495)268-04-70 | Сочи (862)225-72-31 |
| Вологда (8172)26-41-59 | Мурманск (8152)59-64-93 | Ставрополь (8652)20-65-13 |
| Воронеж (473)204-51-73 | Набережные Челны (8552)20-53-41 | Тверь (4822)63-31-35 |
| Екатеринбург (343)384-55-89 | Нижний Новгород (831)429-08-12 | Томск (3822)98-41-53 |
| Иваново (4932)77-34-06 | Новокузнецк (3843)20-46-81 | Тула (4872)74-02-29 |
| Ижевск (3412)26-03-58 | Новосибирск (383)227-86-73 | Тюмень (3452)66-21-18 |
| Казань (843)206-01-48 | Орел (4862)44-53-42 | Ульяновск (8422)24-23-59 |
| Калининград (4012)72-03-81 | Оренбург (3532)37-68-04 | Уфа (347)229-48-12 |
| Калуга (4842)92-23-67 | Пенза (8412)22-31-16 | Челябинск (351)202-03-61 |
| Кемерово (3842)65-04-62 | Пермь (342)205-81-47 | Череповец (8202)49-02-64 |
| Киров (8332)68-02-04 | Ростов-на-Дону (863)308-18-15 | Ярославль (4852)69-52-93 |

Единый адрес: beh@nt-rt.ru **Веб-сайт:** www.bhr.nt-rt.ru

Водяные теплообменники BWT Buhler

Heat exchangers

BWT



- High exchange efficiency
- Equally distributed turbulent flow
- Little installation space required
- High pressure resistance
- Low water consumption
- Maintenance free
- Broad temperature range
- Easy installation

Introduction and description

Why coolers?

There are basically two main concepts in the development of fluid power systems.

One is to design systems without using a cooler, and if operational conditions show that the system needs a cooler, install it later at additional costs. This understandably then often calls for compromises, making the system more expensive.

The other concept recognizes that a system originally designed with an integrated cooler needs less installation space and is a better choice with respect to construction and system costs.

Why Bühler?

Using an oil/water cooler nowadays requires paying great attention to low water consumption. The tube bundle heat exchangers Bühler had been selling for decades could not meet this requirements, resulting in our search for a new exchanger concept for hydraulics.

Soldered plate heat exchangers meet these requirements outstandingly and further offer other advantages such as requiring little installation space and the high pressure resistance.

Together with a well-known manufacturer, Bühler implemented these findings in a comprehensive product line customised for the requirements in fluid control.

If our standard range of products does not include the right solution for your application, we will gladly develop a custom solution for you.

Use the data in this leaflet to determine a suitable cooler for your application. However, we do recommend using our calculator to configure your cooler. This will allow you to optimise it whilst incorporating various parameters.



Construction and application

BWT plate heat exchangers are made from patterned stainless steel plates. The direction of the pattern varies from plate to plate, yielding a large number of contacts on the back of the pattern. When the plates are soldered the contacts also connect, forming an extremely compact, pressure-resistant set of plates. And yet virtually the entire material are available for heat exchange.

Function

Compared to other systems the interior geometry of the BWT ensures a turbulent flow, yielding high heat transfer coefficients when using the limits for low flow rates, thus flow speeds, in the configuration. This excludes Zones with a low speed, maintaining an extremely equally distributed flow across the entire exchanger surface. The materials used result in dense, smooth exchanger plate surfaces, significantly reducing the risk of possible corrosion.

These design features of the BWT plate heat exchangers virtually eliminate the risk of deposits within the exchanger.

Planning information

Set-up

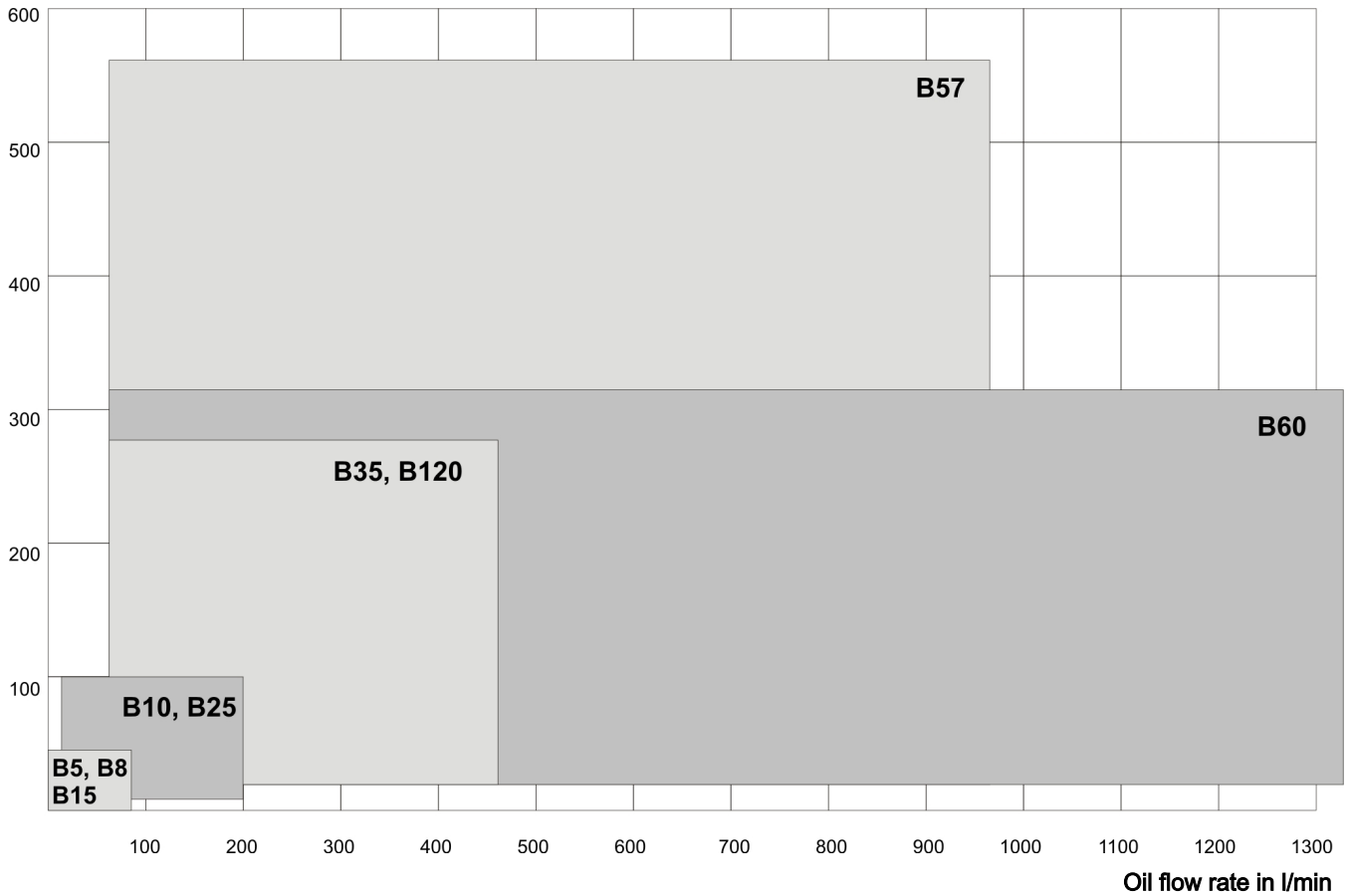
The coolers should be installed providing easy accessible and visibility. Any installation position is permitted and may be adapted to the installation conditions. However, the cooler should not be installed on its back.

Secure the plate heat exchanger with the bracket sold as an accessory. The connection lines must be installed free from tension and vibration. We recommend installing tubes or compensators.

Prevent freezing when installed outdoors.

Cooling capacity comparison for the various BWT lines

Cooling performance in kW



The diagram above shows the applications of the various base types.

A configuration program for custom specifications (optimising the water consumption or optimising the dimensions) is available on request.

Approvals

BWT plate coolers are approved by the following authorities:

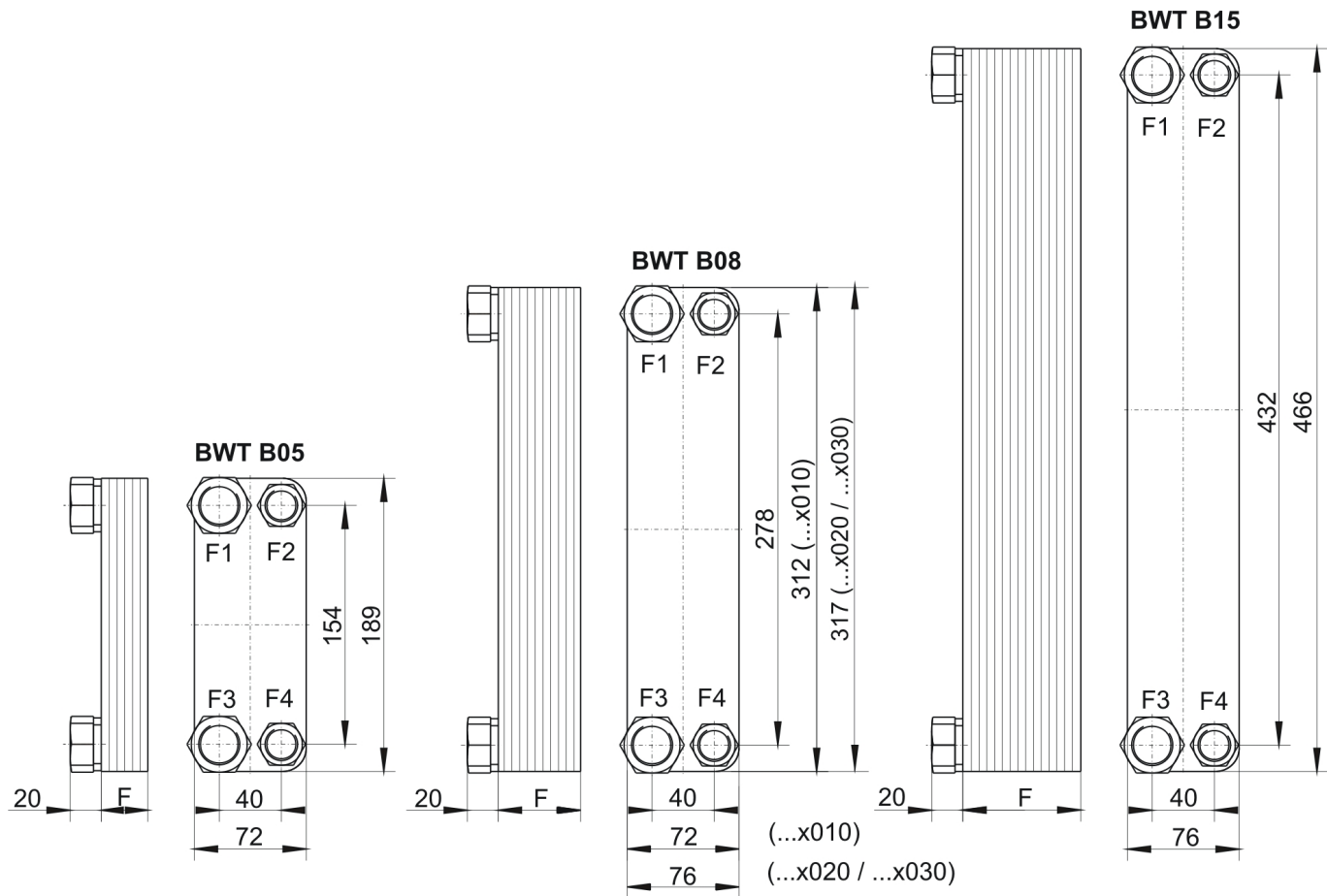
| | |
|-------------|---|
| Sweden | Statens Anläggningsprovning (SA) |
| Norway | Kjelkontrollen |
| Canada | Canadian Standard Association (CSA) |
| Germany | Technischer Überwachungsverein (TÜV) |
| USA | Underwriters Laboratories (UL) |
| Finland | Teknillinen Tarkastuskeskus (TK) |
| Switzerland | Schweizerischer Verein des Gas- und Wasserfaches (SVGW) |
| EU | TRB801 No. 25 |

Bühler is ISO 9001 certified

Technical data BWT

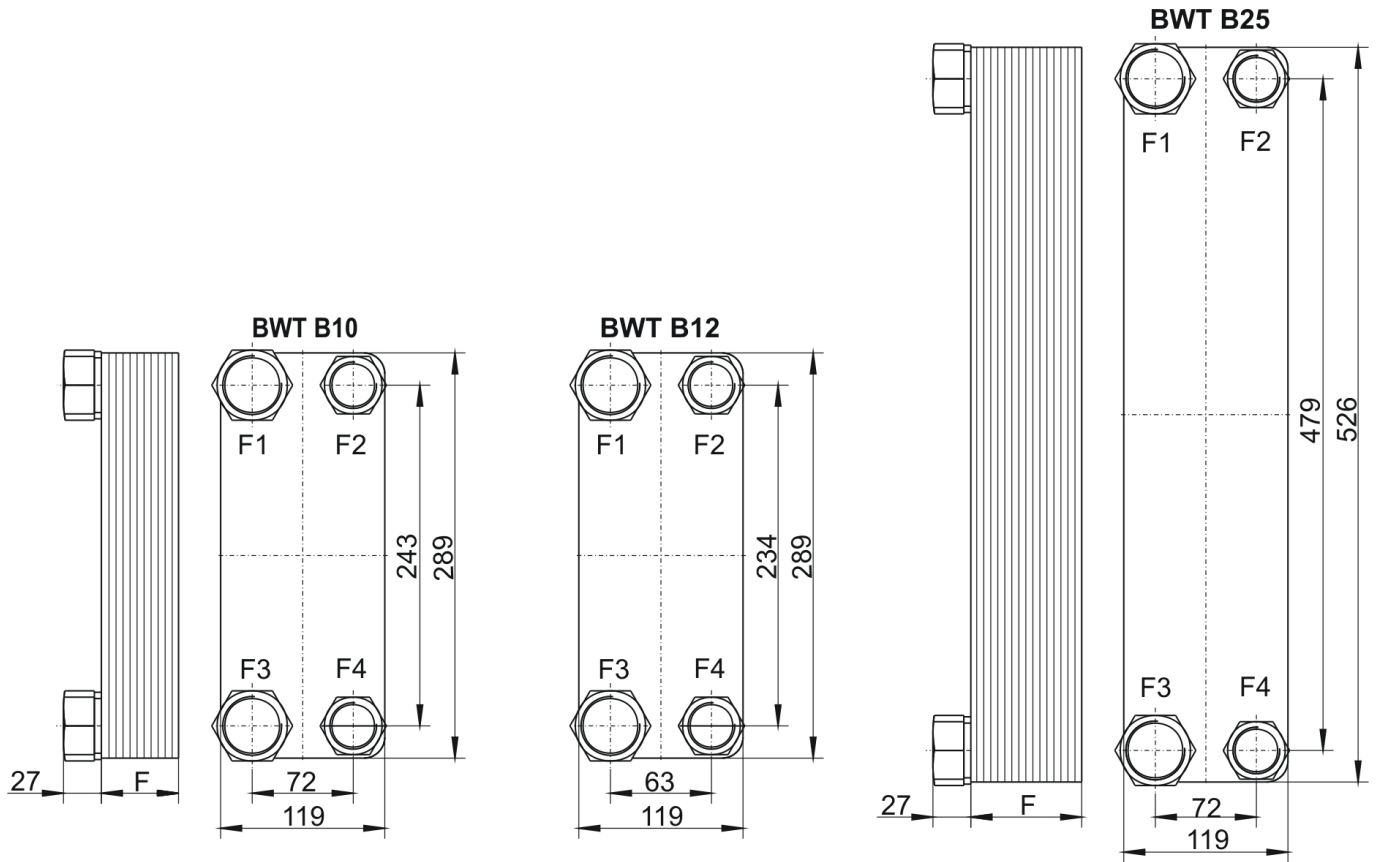
| Technical Data | |
|--|---|
| Material | Stainless steel 1.4401, Cu 99.9% and Cu-free soldering material. Also use Cu-free soldering material in for special models B5 - B28, see data sheet 340005. Flange B57 + B60 and up in Swedish standard SS 2172, DIN 17175. |
| Operating pressure static: dynamic: | max. 30 bar 20 bar at 5 MM load cycle, 3 Hz |
| Operating oil temperature | max. +185 °C |

B05 / B08 / B15



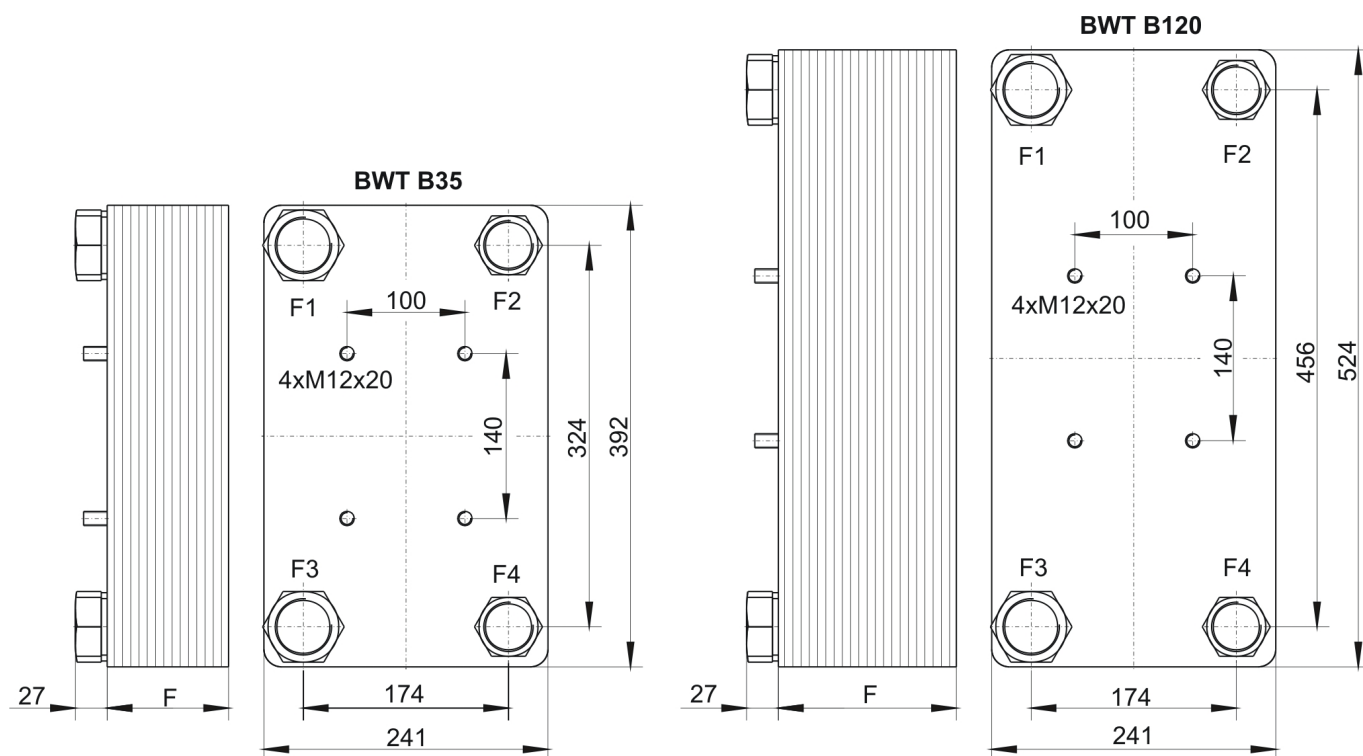
| Type | Item no. | F (mm) | Cooling capacity (kW) | Oil connection F3, F1 | Water connection F2, F4 | Weight (kg – net) | Volume (Litre) |
|-------------|----------|--------|-----------------------|-----------------------|-------------------------|-------------------|----------------|
| BWT B05x010 | 3405010 | 30 | 1.5 - 5.0 | G ¾ 36 mm | G ½ 27 mm | 1.0 | 0.1 |
| BWT B05x020 | 3405020 | 53 | 1.5 - 11 | G ¾ 36 mm | G ½ 27 mm | 1.5 | 0.2 |
| BWT B08x010 | 3408010 | 30 | 2.5 - 6.0 | G ¾ 36 mm | G ½ 27 mm | 1.6 | 0.5 |
| BWT B08x020 | 34080200 | 53 | 5.0 - 16 | G ¾ 36 mm | G ½ 27 mm | 2.0 | 1.0 |
| BWT B08x030 | 34080300 | 76 | 10 - 25 | G ¾ 36 mm | G ½ 27 mm | 3.0 | 1.5 |
| BWT B15x030 | 3415030 | 76 | 6.0 - 30 | G ¾ 36 mm | G ½ 27 mm | 4.0 | 2.0 |

B10 / B12 / B25



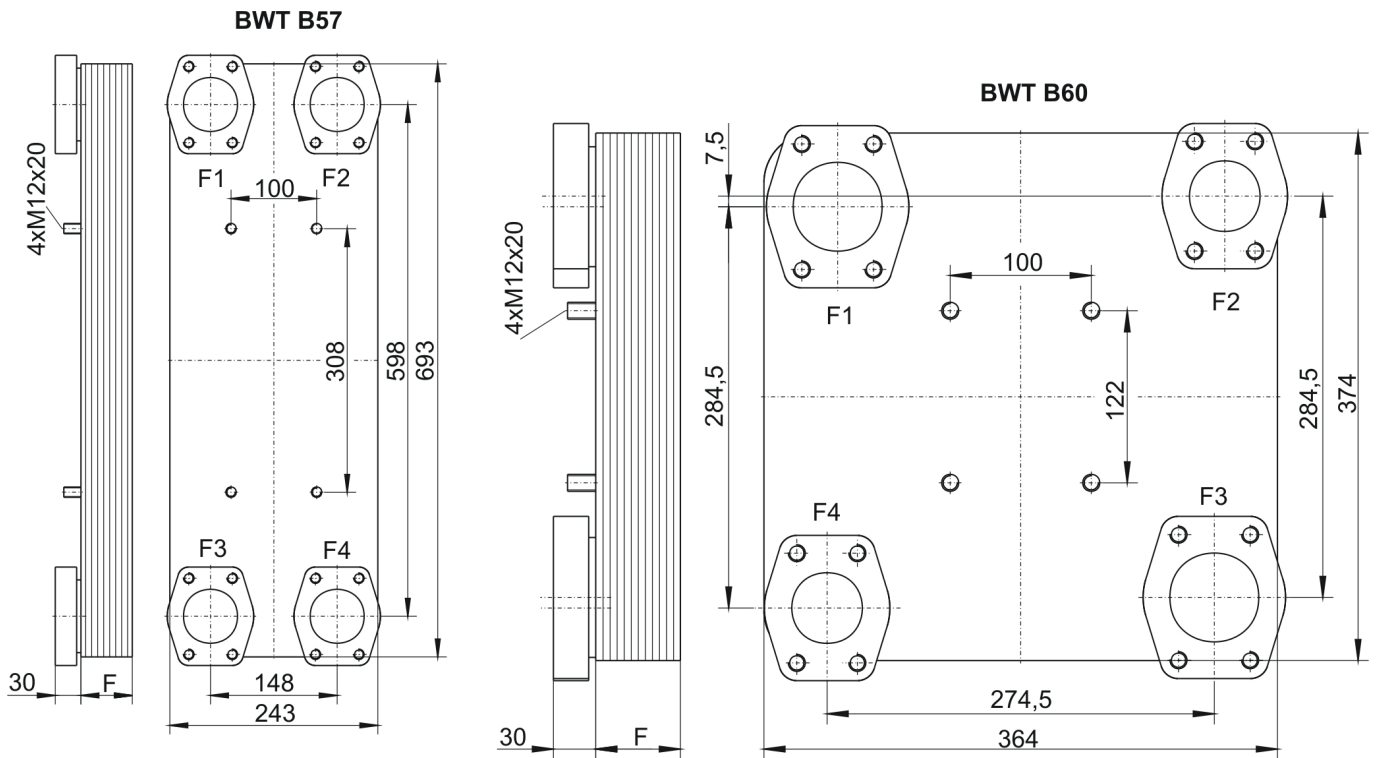
| Type | Item no. | F (mm) | Cooling capacity (kW) | Oil connection F3, F1 | Water connection F2, F4 | Weight (kg – net) | Volume (Litre) |
|--------------|----------|--------|-----------------------|-----------------------|-------------------------|-------------------|----------------|
| BWT B10x020 | 3410020 | 49 | 5 – 25 | G 1 41 mm | G ¼ 36 mm | 4.0 | 1.0 |
| BWT B10x030 | 3410030 | 72 | 10 - 40 | G 1 41 mm | G ¼ 36 mm | 5.0 | 1.5 |
| BWT B10x040 | 3410040 | 94 | 10 - 50 | G 1 41 mm | G ¼ 36 mm | 7.0 | 2.0 |
| BWT B10x050 | 3410050 | 116 | 15 - 60 | G 1 ¼ 50 mm | G 1 41 mm | 8.0 | 3.0 |
| BWT B10x070 | 3410070 | 161 | 20 - 65 | G 1 ¼ 50 mm | G 1 41 mm | 10.0 | 3.5 |
| BWT B10x090 | 3410090 | 206 | 20 - 80 | G 1 ¼ 50 mm | G 1 41 mm | 13.0 | 4.0 |
| BWT B12Hx060 | 3412060 | 145 | 35 - 85 | G 1 ¼ 50 mm | G 1 41 mm | 13.5 | 4.3 |
| BWT B25x030 | 3425030 | 72 | 13 - 45 | G 1 ¼ 50 mm | G 1 41 mm | 10.0 | 2.0 |
| BWT B25x040 | 3425040 | 94 | 13 - 65 | G 1 ¼ 50 mm | G 1 41 mm | 12.0 | 3.0 |
| BWT B25x060 | 3425060 | 139 | 20 - 90 | G 1 ¼ 50 mm | G 1 41 mm | 17.0 | 5.0 |
| BWT B25x080 | 3425080 | 184 | 25 - 105 | G 1 ¼ 50 mm | G 1 41 mm | 21.0 | 7.0 |

B35 / B120



| Type | Item no. | F (mm) | Cooling capacity (kW) | Oil connection F3, F1 | Water connection F2, F4 | Weight (kg – net) | Volume (Litre) |
|--------------|----------|--------|-----------------------|-----------------------|-------------------------|-------------------|----------------|
| BWT B35x040 | 3435040 | 103 | 30-105 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 18.0 | 5.0 |
| BWT B35x050 | 3435050 | 127 | 55-145 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 21.0 | 7.0 |
| BWT B35x060 | 3435060 | 151 | 55-155 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 24.0 | 8.0 |
| BWT B35x090 | 3435090 | 223 | 55-175 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 34.0 | 12.0 |
| BWT B120x040 | 3445040 | 103 | 40-125 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 23.0 | 6.0 |
| BWT B120x060 | 3445060 | 151 | 55-190 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 31.0 | 10.0 |
| BWT B120x080 | 3445080 | 199 | 65-245 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 40.0 | 14.0 |
| BWT B120x120 | 3445120 | 295 | 135-280 | G 1 ½ 60 mm | G 1 ¼ 50 mm | 57.0 | 21.0 |

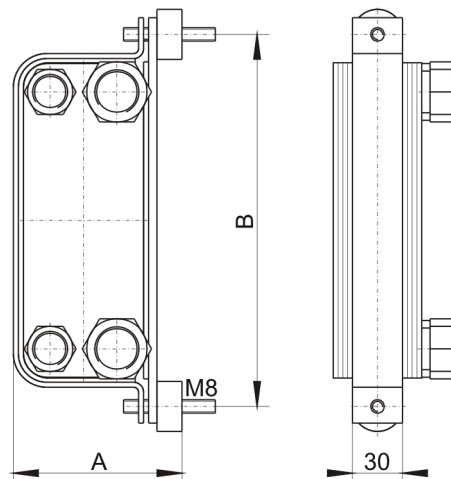
B57 / B60



| Type | Item no. | F (mm) | Cooling capacity (kW) | Oil connection F3, F1 | Water connection F2, F4 | Weight (kg – net) | Volume (Litre) |
|-------------|----------|--------|-----------------------|-----------------------|-------------------------|-------------------|----------------|
| BWT B57x040 | 3457040 | 113 | 39 - 160 | SAE 2 ½ * | SAE 2 ½ | 39 | 13 |
| BWT B57x060 | 3457060 | 162 | 74 - 232 | SAE 2 ½ * | SAE 2 ½ | 50 | 20 |
| BWT B57x080 | 3457080 | 211 | 79 - 327 | SAE 2 ½ * | SAE 2 ½ | 61 | 26 |
| BWT B57x100 | 3457100 | 259 | 84 - 424 | SAE 2 ½ * | SAE 2 ½ | 73 | 33 |
| BWT B57x120 | 3457120 | 308 | 89 - 494 | SAE 2 ½ * | SAE 2 ½ | 84 | 40 |
| BWT B57x140 | 3457140 | 357 | 93 - 566 | SAE 2 ½ * | SAE 2 ½ | 95 | 46 |
| BWT B60x040 | 3460040 | 104 | 30 - 113 | SAE 2 ½ * | SAE 2 | 33 | 9 |
| BWT B60x060 | 3460060 | 147 | 35 - 165 | SAE 2 ½ * | SAE 2 | 42 | 13 |
| BWT B60x080 | 3460080 | 190 | 40 - 216 | SAE 2 ½ * | SAE 2 | 52 | 17 |
| BWT B60x100 | 3460100 | 232 | 43 - 267 | SAE 2 ½ * | SAE 2 | 61 | 22 |
| BWT B60x120 | 3460120 | 275 | 56 - 301 | SAE 2 ½ * | SAE 2 | 70 | 26 |
| BWT B60x140 | 3460140 | 318 | 76 - 316 | SAE 2 ½ * | SAE 2 | 80 | 31 |

* SAE connections at pressure range 3000 PSI

Mounting brackets



| Type | Part no. | A | B | for BWT type |
|-------|----------|-----|-----|-----------------|
| BB05 | 34BB05 | 104 | 223 | |
| BB08 | 34BB08 | 104 | 347 | B08 x 010 |
| BB080 | 34BB080 | 108 | 355 | B08 x 020 x 030 |
| BB15 | 34BB15 | 104 | 501 | |
| BB10 | 34BB10 | 151 | 323 | |
| BB25 | 34BB25 | 151 | 561 | |
| BB35 | 34BB35 | 273 | 426 | |
| BB 45 | 34BB45 | 273 | 558 | |

NOTICE! We recommend using two brackets for the types B35-090 and B120-060 up to B120-120.

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