

NON STORAGE UNIT

Aquatherm Water/Water non-storage calorifiers are designed in accordance with BS.853.90 & BS.3274. They are available in 17 standard sizes. The standard construction is of carbon steel. The tubes are made of drawn copper. Other materials are available on request. Horizontal or vertical mounting.

TECHNICAL

Our technical sales office will be pleased to discuss your requirements.

Contact our office if your requirement is not included in our standard range.

We can arrange for the following:

- 1 Secondary temperatures other than 82°C /71°C.
- 2 Super heated steam
- 3 Duty exceeds 3,000Kw.
- 4 Non standard materials are required i.e. stainless steel.
- 5 Restricted plant room space.
- 6 Made to measure replacement

SIZING

Simply draw a vertical line from your AMTD and horizontal line from the required output. The two lines will intersect below the performance line for the correct calorifier. The larger calorifier must always be selected.

UNIT SELECTION

To Calculate the Arithmetic Mean Temperature Difference (AMTD)

$$\frac{\text{PRIMARY TEMP } ^\circ\text{C FLOW} + \text{RETURN}}{2} - \frac{\text{PRIMARY TEMP } ^\circ\text{C FLOW} + \text{RETURN}}{2}$$

Example

A duty of 1200Kw is required giving secondary water. 82° flow and 71° return. Primary water available at 150°C flow and 120°C return.

$$\frac{150 + 120}{2} - \frac{82 + 71}{2} = 58^\circ\text{C}$$

To Calculate the Primary Water Flow Rate

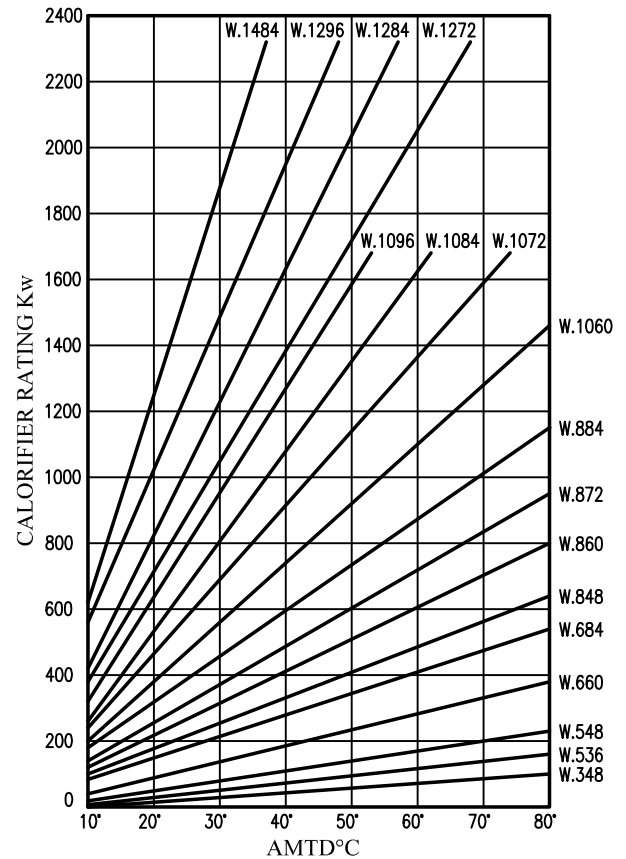
Mean Temperature Difference (AMTD)

$$\frac{\text{OUTPUT (Kw)}}{^\circ\text{C FLOW} - ^\circ\text{C RETURN} \times 4.18}$$

Example $\frac{1200}{(150-120) \times 4.18} = 9.57 \text{ L/Sec}$

Using the primary flow rate chart we can determine that our example unit is of 2 pass construction

FOR USE WITH SECONDARY WATER TEMPS
82C / 71C RETURN. USE THIS CHART ONLY
WHEN T2-T1 IS GREATER THAN 8.5°C



MAXIMUM PRIMARY WATER FLOW RATES

UNIT	PRIMARY FLOW Litres/Sec	
	2 PASS	4 PASS
W.348	0.8	0.4
W.536	1.8	0.9
W.548	1.8	0.9
W.660	2.4	1.2
W.684	2.4	1.2
W.848	5.4	2.7
W.860	5.4	2.7
W.872	5.4	2.7
W.884	5.4	2.7
W.1060	10.2	5.1
W.1072	10.2	5.1
W.1084	10.2	5.1
W.1096	10.2	5.1
W.1272	15.6	7.8
W.1284	15.6	7.8
W.1296	15.6	7.8
W.1486	19.8	9.9

**AQUATHERM HEAT
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TITLE				WATER/WATER NON STORAGE HEAT EXCHANGER	
PRODUCT RANGE				MALVERN	
DRAWN	B.J.A.	DATE	23.05.09	THIRD ANGLE PROJECTION	
REVISION	A	SCALE	NTS	DRAWING No.	W348/W1486
				SHEET	2 OF 2