

## Fact Sheet 2 - How to Control Finished Dough Temperature



The ability to have all of your dough's come from the dough mixer at a pre-specified temperature is an important part of dough management and consistent dough quality or performance. It is important to keep this temperature in the range of 28°C – 30°C. This is to maximize the control of fermentation during the early stages of processing.

The best way to ensure that the finished dough temperature is correct is to adjust the water temperature. To get the dough temperature right we use the **simple factor** - quite simply a number which can be used to calculate the required water temperature as follows:

### Simple Factor (Mixer Value) – Flour/Room Temperature = Water Temperature

- The simple factor is a constant which is determined for each mixer and varies from mixer to mixer. Typical mixer values are as follows;

<b>Spiral Mixer</b>	<b>40</b>
<b>Tweedy Mixer</b>	<b>30</b>
<b>Two-arm Mixer</b>	<b>50</b>

- If you store your flour in the same general location as where your mixer is located, room temperature and flour temperature will be essentially the same.

So for a spiral mixer, if the flour/room temperature is 22°C the required water temperature would be:

### Simple Factor (Mixer Value) – Flour/Room Temperature = Water Temperature

$$40 \quad - \quad 22 \quad = \quad 18^{\circ}\text{c}$$

It is important to note that this approach does not necessarily always give a 100% correct answer, but it does give a very consistent and useful starting point. If in the above example the finished dough temperature ends up too high with a water temperature of 18°C, then a slightly lower temperature should be tried and vice versa.

By using the chart provided, all you will have to do is to look at your numbers, pick the room temperature closest to one of your calculations and use that desired water temperature.



## Water Temperature Calculator

<b>Spiral Mixer (Factor = 40)</b>	
<b>Room and Flour Temperature (°C)</b>	<b>Required Water Temperature (°C)</b>
17	23
18	22
19	21
20	20
21	19
22	18
23	17
24	16
25	15
26	14
27	13
28	12
29	11
30	10