MIXERS - UNDERSTANDING ABSORPTION RATIO

Understanding absorption ratios is the best way to determine the right mixer size for your operation. The recommended maximum mixer capacity depends on the moisture content of the ingredients and application.

EXAMPLE 1:

Recipe calls for 1 gallon of water and 20 lbs. of flour, you would calculate:

1 gallon X 8.33 lbs/gallon = 8.33 lbs. of water.
8.33 divided by 20 lbs. of water = 42% absorption ratio.

8.33 LBS WATER ÷ **20 LBS** FLOUR = **42% AR** ABORSORPTION RATIO

EXAMPLE 2:

Recipe calls for 3 gallons of water and 50 lbs. of flour, you would calculate:

3 gallons X 8.33 lbs/gallon = 25 lbs. of water.
25 divided by 50 lbs. = 50% absorption ratio.

25 LBS WATER ÷ **50 LBS** FLOUR = **50% AR** ABORSORPTION RATIO

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Recommended Maximum Capacities—dough capacities based on 70°F water and 12% flour moisture.

Product	Absorption Rate	HL120	HL200	HL300	HL400	HL600	HL662	HL800	HL1400
CAPACITY OF BOWL (QTS. LIQUID)		12	20	30	40	60	60	80	140
Dough, Bread or Roll (Lt.-Med.)	60%	13 lbs.*	25 lbs.*	45 lbs.*	45 lbs.*	80 lbs.*	90 lbs.*	170 lbs.*	210 lbs.*
Dough, Heavy Bread	55%	8 lbs.*	15 lbs.*	30 lbs.*	35 lbs.*	60 lbs.*	85 lbs.*	140 lbs.*	175 lbs.*
Dough, Thin Pizza**	40%	5 lbs.*	9 lbs.*	14 lbs.*	25 lbs.*	40 lbs.*	60*/40 lbs.**	85 lbs.*	135 lbs.*
Dough, Med. Pizza**	50%	6 lbs.*	10 lbs.*	20 lbs.*	32 lbs.*	70 lbs.*	90*/70 lbs.**	155 lbs.*	190 lbs.*
Dough, Thick Pizza**	60%	11 lbs.*	20 lbs.*	40 lbs.*	45 lbs.*	70 lbs.**	90 lbs.**	155 lbs.*	190 lbs.*
Dough, Raised Donut	65%	4 lbs.*	9 lbs.*	15 lbs.*	25 lbs.**	30 lbs.***	75 lbs.**	60 lbs.***	100 lbs.***
Dough, Whole Wheat	70%	11 lbs.*	20 lbs.*	40 lbs.*	45 lbs.*	70 lbs.*	90 lbs.*	150 lbs.*	185 lbs.*

* 1st Speed
** 2nd Speed - (should never be used on 50% AR or lower product with the exception of the HL662)
*** 3rd Speed
Use of ice requires a 10% reduction in batch size.

Click here for Full Capacity Chart

The thicker the dough, the higher the AR%. The higher the AR, the more power and capacity is needed in a mixer.

EXAMPLE 1:

**Visual purposes only. Not actual representation.*

If someone has a 50% AR dough and they have a **HL200 mixer**, the most they could mix at one time would be **10 lbs.**

EXAMPLE 2:

**Visual purposes only. Not actual representation.*

If someone has a 70% AR dough and they have a **HL600 mixer**, the most they could mix at one time would be **70 lbs**.

Note: If water temperature is under 55°F or if 25% or more of the water is ice, reduce batch size by reducing the flour by 25 lb. and reduce other ingredients accordingly. Cold water or ice causes dough to be stiff and hard to mix, increasing the load on the mixer transmission and motor.